MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 1

March 2019

LIST OF TABLES

REVISED Table 1.2-1

MVP Southgate Project Pipeline Facilities

Approximate Milepost[a/]	Pipeline / Diameter	County, State	Approximate Length (miles)
0.0 – 0.5	H-605 Pipeline / 24-inch	Pittsylvania, VA	0.5
0.0RR – 26.1	H-650 Pipeline/ 24-inch	Pittsylvania, VA	26.1
26.1 – 30.4	H-650 Pipeline / 24-inch	Rockingham, NC	4.3
30.4 – 52.6	H-650 Pipeline / 16-inch	Rockingham, NC	22.2
52.6 – 73.2RR	H-650 Pipeline / 16-inch	Alamance, NC	20.6
		Total (H-605 and H-650 pipelines)	**73.7**

a/ Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

REVISED Table 1.2-2

MVP Southgate Project Aboveground Facilities

Compressor Station

Facility	Approximate Milepost a/	County, State	Nominal HP	Suction PSIG	Discharge PSIG
Lambert Compressor Station	0.0RR	Pittsylvania, VA	28,915	780	900

Pig Launchers/Receivers

Launcher/Receiver	Approximate Milepost a/	Associated Facility
Pig Launcher	0.0RR	Lambert Compressor Station
Pig Receiver	30.4	T-15 Dan River Interconnect
Pig Launcher	30.4	T-15 Dan River Interconnect
Pig Receiver	73.2RR	T-21 Haw River Interconnect

Meter Stations	Approximate Milepost a/
Lambert Interconnect	0.0RR
LN 3600 Interconnect	28.2
T-15 Dan River Interconnect	30.4
T-21 Haw River Interconnect	73.2RR

a/Mileposts are on the H-650 pipeline.

Note: Southgate Project Mainline Valve Locations are shown on Table 1.2-3. Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

REVISED Table 1.2-3

MVP Southgate Project Mainline Valve Locations a/

Name	County, State	Approximate Milepost Location b/
MLV 1 / Lambert Compressor Station & Interconnect	Pittsylvania, VA	0.0RR
MLV 2	Pittsylvania, VA	7.4
MLV 3	Pittsylvania, VA	18.3
MLV 4 / T-15 Dan River Interconnect	Rockingham, NC	30.4
MLV 5	Rockingham, NC	42.2
MLV 6	Alamance, NC	55.1
MLV 7	Alamance, NC	68.2
MLV 8 / T-21 Haw River Interconnect	Alamance, NC	73.2RR

a/ Mainline Valves ("MLV's") will be 30 feet by 30 feet in area and will be wholly contained within the permanent right-of-way. Mainline valves at the Lambert Compressor Station / Interconnect, the T-15 Dan River Interconnect, and T-21 Haw River Interconnect will be located within the fence line of those facilities.

b/ Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

#114 - REVISED Table 1.3-1

Land Requirements for the MVP Southgate Project Pipeline/Associated Workspace

Facility	Land Required for Construction (acres)	Land Required for Operation (acres)
H-605 Pipeline a/	5.2	2.7
H-650 Pipeline a/	846.0	421.5
Additional Temporary Workspace	263.5	0.0
Cathodic Protection b/	4.0	4.0
Contractor Yards	104.9	0.0
Access Roads c/	127.2	9.8
Total Project Pipeline / Associated Workspace d/	**1,350.7**	**438.2**

a/ Acreage based on 100-foot construction right-of-way and 50-foot permanent right-of-way.

b/ Acreage includes alternative groundbed locations, which have been identified in the event that the primary locations are deemed unsuitable. Final groundbed locations will be determined prior to the commencement of construction.

c/ Acreage based on a 25-foot road width for temporary and permanent access roads. Includes access roads for aboveground facilities.

d/ Sums may not equal the total of addends due to rounding. Addends consist of six-decimal digits.

REVISED Table 1.3-2

Land Requirements for the MVP Southgate Project Aboveground Facilities

Facility Name	Approximate MP	Land Required for Construction (acres)	Land Required for Operation (acres)
Compressor Station			
Lambert Compressor Station	0.0RR	20.5	11.7
Meter Stations			
Lambert Interconnect a/	0.0RR	0.0	0.0
LN 3600 Interconnect	28.2	4.8	0.7
T-15 Dan River Interconnect	30.4	5.2	0.8
T-21 Haw River Interconnect	73.2RR	1.4	0.6
Pig Launcher/Receiver b/			
Mainline Valves			
MLVs 2, 3, 5, 6, 7	Various c/	0.1	0.1
Total d/	---	32.0	13.9

Note: MPs are on the H-650 pipeline. Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment. Impact calculations do not include associated access roads.

a/ The Lambert Interconnect will be within the Lambert Compressor Station site; therefore, acreage calculations for the Lambert Interconnect are included with the Lambert Compressor Station.

b/ Pig launchers will be within aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for the pig launchers and receivers are included with those facilities.

c/ See Table 1.2-3 for milepost locations of mainline valves ("MLV"). The land required for MLVs 2, 3, 5, 6, and 7 has been pulled out of the land requirements for pipeline operation (i.e., there is no overlap in acres for these facilities).

d/ Sums may not equal the total of addends due to rounding. Addends consist of six-decimal digits.

#2a and #2b - REVISED Table 1.3-4

Contractor Yards along the MVP Southgate Project Pipeline

Name	Type	Approx. MP	County	State	Municipality	Parcel	Current Landowner Status	Land Use a/	Total Acres	Justification for forest clearing
CY-01	Contractor Yard / Laydown Yard	0.0 on H-605	Pittsylvania	VA	Chatham	VA-PI-001.000	MVP owned property; environmental survey complete	FW, OL, CI	39.3 (Forest to be cleared 31.7)	Needed for staging and storage of pipe and equipment. Property owned by MVP, eliminates direct impact on landowners.
CY-03	Contractor Yard / Laydown Yard	13 miles East of 20.5	Pittsylvania	VA	Danville	VA-PI-142.200.CY	VA-PI-142.200.CY - Survey permission granted; no environmental survey to date	FW, OL, CI	26.0 (Forest to be cleared 4.2)	Needed for staging and storage of pipe and equipment. The property is developed with a manufacturing building and is zoned (M-1) Industrial District, Light Industry.
CY-04	Contractor Yard / Laydown Yard	2.8 miles West of 28.5	Rockingham	NC	Eden	NC-RO-014.600.CY	Survey permission granted; environmental survey complete	OL	3.8	Not applicable
CY-05	Contractor Yard / Laydown Yard	3.6 miles West of 28.3	Rockingham	NC	Eden	NC-RO-001.200.CY NC-RO-001.300.CY NC-RO-001.400.CY	Survey permission granted; environmental survey complete	CI, OL	19.8	Not applicable
CY-08	Contractor Yard / Laydown Yard	2.9 miles West of 44.6	Rockingham	NC	Reidsville	NC-RO-136.100.CY NC-RO-136.300.CY	Survey permission granted; environmental survey complete	OL, CI	11.5	Not applicable
CY-09	Contractor Yard / Laydown Yard	15.9 miles West of 68.2	Guilford	NC	McLeansville	NC-GU-001.200.CY	Survey permission granted; environmental survey complete	OL, FW	4.6 (Forest to be cleared 0.2)	Needed for staging and storage of pipe and equipment. Forest clearing for this yard has been minimized to the extent practicable. Clearing reduced from 4.7 acres to 0.2.
								Total	**104.9**	

a/ CI = Commercial / Industrial; FW = Upland Forest / Woodland; OL = Upland Open Land

REVISED Table 1.10-2

Projects with Potential Cumulative Impacts

Project	Description	County/ State	Shared Watershed (5th Level/ HUC10)	Shared Watershed (Level/HUC12)	Shared Air Quality Control Region	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Energy Projects										
Reidsville Energy Center	NTE Energy is developing and plans to construct, own and operate the Reidsville Energy Center, an approximately 500 MW natural gas electric generating facility in Rockingham County, North Carolina.	Rockingham, climaNC	NA	Jacobs Creek	81.150 Northern Piedmont	12 miles	West	Construction to start Summer 2019, pending financing	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	FERC, State and Local
Virginia Southside Expansion 1,454.3 acres for Construction 119.0 acres for operation	100 miles of new 24-inch diameter pipeline extending from the Transco mainline in Pittsylvania County, Va., and into Halifax, Charlotte, Mecklenburg, and terminating in Brunswick County, Va. Also construction of a 21,800 hp compressor station in Pittsylvania County, VA.	Pittsylvania County, VA	Cherrystone Creek-Banister River, Stinking River-Banister River	Shockoe Creek-Banister River	81.143 Central Virginia	2 miles	North	In-service September 2015	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	FERC, State and Local
Transco Southeastern Trail 466 acres construction 42.6 acres for operation	Transco Southeastern Trail expansion project will consist of 7.7 miles of 42-in. pipeline looping facilities in Virginia, horsepower additions at existing compressor stations in Virginia, and piping and valve modifications on other existing facilities in South Carolina, Georgia, and Louisiana to allow for bidirectional flow. Compressor Station 165 upgrade in Chatham, VA within Pittsylvania County, VA.	Various; Pittsylvania County, VA	Cherrystone Creek-Banister River	Cherrystone Creek	81.143 Central Virginia	<5 miles	West	FERC Application Filed April 2018; Construction to start August 2019	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	FERC, State and Local
Mountain Valley Pipeline 6,362.5 acres for construction 2,116.5 acres for operation	Natural gas pipeline system that spans approximately 303 miles from northwestern West Virginia to southern Virginia	Various; ends at Pittsylvania, VA	Cherrystone Creek-Banister River (33.2 acres overlap, 2 perennial stream crossings and 1 intermittent stream crossing in common with the Project) Stinking River-Banister River (9.2 acres overlap, no common stream crossings)	Cherrystone Creek (33.2 acres overlap, 2 perennial stream crossings, and one intermittent stream crossing in common with the Project) Shockoe Creek-Banister River (9.2 acres overlap, no common stream crossings)	81.143 Central Virginia	0 miles	North	Under Construction; 2019 In-Service Date anticipated	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Land Use, Air and Noise	FERC, State and Local
Transco Appalachian Connector	Williams has proposed to link up its Transco pipeline system directly into the Marcellus/Utica via the Appalachian Connector Project. From Claington OH to Chatham, VA.	Various; ends at Pittsylvania, VA	Cherrystone Creek – Banister River	Town Creek – Dan River	81.143 Central Virginia	3 miles	West	In Development; 2020 in-service date anticipated	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	FERC, State and Local
Sigora Solar	7.44Kw Solar Farm – 2144 Waterview Drive, Graham, NC 27253	Alamance, NC	Back Creek – Haw River	Boyds Creek Haw River	81.150 Northern Piedmont	1.5 miles	Southeast	Application filed 2019	Soils and Sediments, Water Resources and Wetlands, Visual Resources, Vegetation and Wildlife, Air and Noise	Federal, State and Local
Kimrey Road Solar	Kimrey Road Solar Farm – 1900 Kimrey Road, Haw River, NC	Alamance, NC	Back Creek – Haw River	Lower Back Creek	81.150 Northern Piedmont	1.5 miles	East	In Development; Application filed 2016. Pending intent to construct approval	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	Federal, State and Local
Southwick Solar Farm, LLC	Southwick Solar Farm – 3058 Boywood Road, Graham, NC	Alamance, NC	Cane Creek – Haw River	Meadow Creek – Haw River	81.150 Northern Piedmont	2.5 miles	South	Application filed 2017; pending planning site review	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	Federal, Stata and Local
Woodgriff Solar	Woodgriff Solar Farm, 221 Southern High School Road, Graham NC	Alamance, NC	Big Alamance Creek	Lower Big Alamance Creek	81.150 Northern Piedmont	3.2 miles	Southwest	Intent to construct permit expires June, 2019	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	Federal, State and Local
Williamsburg Solar, LLC 340.9 acres	Cypress Creek Renewables Williamsburg Solar, LLC 174,000 MW 600 acre solar farm. Adjacent to Project at MP 50	Rockingham, NC	Headwaters Haw River (2.1 acres overlap, no NHD stream crossings)	Giles Creek Haw River (1.5 acres overlap, no NHD stream crossings) Town of Altamahaw-Haw River (0.6 acre overlap, no NHD stream crossings)	81.150 Northern Piedmont	0 miles	East/West	Permitted; Construction to begin in 2019	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	Federal, State and Local
Husky Solar, LLC 29.1 acres	Husky Solar Farm, a 35- acre, 7.02 megawatt DC solar photovoltaic facility located on both sides of North Carolina Highway 87 adjacent to Project at MP 49	Rockingham, NC	Headwaters Haw River (0.8 acre overlap, no NHD stream crossings)	Giles Creek-Haw River (0.8 acre overlap, no NHD stream crossings)	81.150 Northern Piedmont	0 miles	North/South	In operation; Permitted prior to 2015	Soils and Sediments, Water Resources and Wetlands, Visual Resources, Vegetation and Wildlife, Air and Noise	Federal, State and Local

REVISED Table 1.10-2

Projects with Potential Cumulative Impacts

Project	Description	County/ State	Shared Watershed (5th Level/ HUC10)	Shared Watershed (Level/HUC12)	Shared Air Quality Control Region	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Transportation Projects										
Route 58 over Route 311	About 3.3 million in upgrades to the intersection of Berry Hill Road and U.S. 58 West of Danville to accommodate traffic for the nearby Berry Hill Road industrial Park	Pittsylvania County, VA	Wolf Island Creek-Dan River	Lower Sandy River	81.143 Central Virginia	2 miles	East	Planning	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Berry Hill Road	Reconstruction of Berry Hill Road in order to accommodate more traffic- 23.7 million	Pittsylvania County, VA	Wolf Island Creek-Dan River, Cascade Creek-Dan River	Trotters Creek - Dan River	81.143 Central Virginia	2 miles	East	Planning	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Stony Mill Road	The construction of a single lane roundabout at the intersection of Stony Mill Road and Tunstall High Road- 2.2 million	Pittsylvania County, VA	Wolf Island Creek-Dan River	Lower Sandy River	81.143 Central Virginia	0.5 mile	East	Planning	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Mount Cross Road	A two-phase plan to widen Mount Cross Road to the city limits, making the road a five-lane section with a two-way center turn lane with a new park and ride lot and sidewalk - 17 million	Pittsylvania County, VA	Wolf Island Creek-Dan River	Sandy Creek (West) – Dan River	81.143 Central Virginia	5 miles	East	Planning	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Climax Road	Widening Climax Road to a minimum of 20 feet to accommodate traffic- 1.3 million	Pittsylvania County, VA	N/A	Cherrystone Creek	81.143 Central Virginia	12 miles	Northwest	Planning	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
U. S. Route 29 South over Norfolk Southern Railroad	Replacement of the structurally deficient bridge on U.S. Route 29 South over Norfolk Southern Railroad with approaches on this Principal Rural Arterial roadway in Pittsylvania County	Pittsylvania County, VA	Cherrystone Creek-Banister River	Danville - Dan River	81.143 Central Virginia	10 miles	East	Complete 2017	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife	State and Local
Future I-73	Construction of a 9.4-mile, four-lane interstate from Joseph M. Bryan Boulevard/Airport Parkway interchange to U.S. 220 near the Haw River	Guilford, NC	Reedy Fork	Reedy Fork- Lake Brandt	81.150 Northern Piedmont	25 miles	West	Complete October 2017	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife	State and Local
Greensboro Urban Loop	Completion of the Greensboro Urban Loop to help relieve I-40 congestion at I-85 Business and U.S. routes 29, 70, 220 and 421	Guilford, NC	Reedy Fork	South Buffalo Creek	81.150 Northern Piedmont	10 miles	West	Under Construction	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Air and Noise	State and Local
Big Mill Farm/Hopkins Road Improvements	Proposed widening of Big Mill Farm Road and Hopkins Road in Kernersville from Business 40/U.S. 421 to West Mountain Street (N.C. 66) and construction of an interchange at Business 40/U.S. 421	Forsyth, NC	NA	NA	81.150 Northern Piedmont	33 miles	West	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Macy Grove Road Improvements	Proposed improvements and an extension to Macy Grove Road in Forsyth and Guilford counties	Forsyth/Guilford, NC	Reedy Fork	NA	81.150 Northern Piedmont	32 miles	West	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
NC 119 Relocation	Proposed relocation of a portion of N.C. 119 in Mebane – from I-85 to existing the N.C. 119 near Mrs. White Lane	Alamance, NC	Back Creek-Haw River	Upper Back Creek	81.150 Northern Piedmont	5 miles	East	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
N.C. 62 Widening - Ramada Road to U.S. 70	Proposed widening an approximately 1-mile stretch of N.C. 62 to improve traffic flow and safety	Alamance, NC	Back Creek-Haw Rive	Lower Big Alamance Creek	81.150 Northern Piedmont	4 miles	West	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
U.S. 158 (Reidsville Road) Improvements	Proposed 18.8-mile widening of U.S. 158 from U.S. 421/Business 40 in Winston-Salem to U.S. 220 in Guilford County	Guilford, NC	Headwaters Haw River	Mears Fork – Haw River	81.150 Northern Piedmont	18 miles	West	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Commercial, Industrial, Residential Projects										
Berry Hill Industrial Park 133 acres	A 3,500 acres mega-park owned by Danville and Pittsylvania Counties through the Regional Industrial Facilities Act. Phase I activities began in March 2017 and include approximately 133 acres of site preparation. Schedule for additional phases is unknown.	Pittsylvania County, VA	Wolf Island Creek-Dan River, Cascade Creek-Dan River	Trotters Creek – Dan River	81.143 Central Virginia	1.3 miles	East	In Development	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife, Land Use, Air and Noise	State and Local
Panaceutics Research and Development Facility	Panaceutics, a manufacturer of personalized medicine and nutrition solutions, will invest $5.8 million to establish a research and development and high-tech manufacturing facility in the Ringgold East Industrial Park in Pittsylvania County, Virginia.	Pittsylvania, VA	Hogans Creek-Dan River	Fall Creek	81.143 Central Virginia	10 miles	East	Under Construction	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Carter Ridge	Carter Ridge new construction homes, Carter Ridge Drive, Reidsville, NC	Rockingham, NC	NA	Little Troublesome Creek	81.150 Northern Piedmont	5 miles	West	Under Construction	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife	State and Local
LGI Homes- Bedford Hills	New construction housing development single family homes near 111 Pillow Ln., Burlington, NC	Alamance, NC	Back Creek-Haw River	Lower Back Creek	81.150 Northern Piedmont	1.5 miles	East	Under Construction	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife	State and Local

REVISED Table 1.10-2

Projects with Potential Cumulative Impacts

Project	Description	County/ State	Shared Watershed (5th Level/ HUC10)	Shared Watershed (Level/HUC12)	Shared Air Quality Control Region	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Forest Creek	New construction housing development 5 new homes in development	Alamance, NC	Back Creek-Haw River	Travis Creek – Haw River	81.150 Northern Piedmont	3.5 miles	Southwest	Under Construction	Soils and Sediments, Water Resources and Wetlands, Vegetation and Wildlife	State and Local
Brassfield Meadows	New construction housing development; 18 units	Alamance, NC	Back Creek – Haw River	Boyds Creek – Haw River	81.150 Northern Piedmont	1.7 miles	South	Under Construction	Soils and Sediments, Water Resources, and Wetlands, Vegetation and Wildlife	State and Local

NEW Table 12-1

Cumulative Impacts Within HUC-10 Watersheds Affected by the Project

HUC 10 Watershed Name (Number)	HUC 10 Watershed Acres	MVP Southgate Project											Other Relevant Projects a/										
		Total Southgate Project			Upland Forest / Woodland b/		Wetlands c/						Total Other Relevant Projects			Upland Forest / Woodland b/		Wetlands c/					
							Palustrine Emergent (PEM)		Palustrine Forested (PFO)		Palustrine Scrub-Shrub (PSS)							Palustrine Emergent (PEM)		Palustrine Forested (PFO)		Palustrine Scrub-Shrub (PSS)	
		Percent of Watershed Impacted d/	Construction e/	Operation f/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Percent of Watershed Impacted b/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Cascade Creek-Dan River (0301010309)	49,809.8	*0.2%*	105.0	36.7	70.9	27.2	0.4	<0.1	0.5	0.2	0.0	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cherrystone Creek-Banister River (0301010501)	88,668.2	*0.3%*	243.9	75.2	95.2	26.0	5.8	0.7	3.5	1.4	0.6	0.1	*<0.1%*	27.3	1.1	27.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Hogans Creek-Dan River (0301010401)	52,924.8	*<0.1%*	26.1	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stinking River-Banister River (0301010502)	148,876.8	*<0.1%*	11.0	1.4	7.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	*<0.1%*	7.3	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wolf Island Creek-Dan River (0301010310)	97,896.4	*0.2%*	153.2	54.8	55.7	22.3	0.1	<0.1	0.4	0.1	0.1	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Virginia Total:	**438,176.1**	***0.1%***	**539.2**	**168.0**	**233.5**	**75.6**	**6.3**	**0.7**	**4.4**	**1.7**	**0.7**	**0.1**	***<0.1%***	**34.5**	**1.1**	**34.5**	**1.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Back Creek-Haw River (0303000204)	160,350.9	*0.2%*	284.7	105.2	135.1	55.5	1.1	<0.1	2.7	1.1	0.1	<0.1	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Big Alamance Creek (0303000203)	167,769.5	*<0.1%*	4.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cascade Creek-Dan River (0301010309)	83,792.7	*0.3%*	262.3	79.9	118.6	46.6	5.8	0.4	3.3	1.2	0.3	<0.1	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Headwaters Haw River (0303000202)	120,671.8	*0.1%*	136.4	45.2	45.6	16.4	0.4	0.0	0.4	0.1	0.1	<0.1	*<0.1%*	0.9	0.1	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Hogans Creek-Dan River (0301010401)	128,257.4	*0.1%*	150.1	53.8	86.3	33.4	0.1	<0.1	0.2	0.1	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower Smith River (0301010308)	6,785.5	*0.1%*	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North Carolina Total:	**667,627.8**	***0.1%***	**843.5**	**284.0**	**385.8**	**151.8**	**7.3**	**0.6**	**6.7**	**2.5**	**0.5**	**0.1**	*<0.1%*	**0.9**	**0.1**	**0.9**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
HUC10 Impact Total g/:	**1,105,803.8**	***0.1%***	**1,382.7**	**452.1**	**619.3**	**227.4**	**13.6**	**1.3**	**11.0**	**4.2**	**1.2**	**0.1**	***<0.1%***	**35.4**	**1.3**	**35.4**	**1.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

a/ Includes other projects from Table 1.10-2 that overlap with the Southgate Project Workspace (i.e., the Mountain Valley Pipeline, Cypress Creek Renewables Solar Farm, and Husky Solar Farm). Impact acres for the Cypress Creek Renewable Solar Farm and the Husky Solar Farm were digitized from project mapping available on the North Carolina Public Utilities Commission website.

b/ Upland forest not being used for specific commercial purposes.

c/ Palustrine forested, Palustrine scrub-shrub, and Palustrine emergent wetlands as identified in Resource Report 2.

d/ Percent of watershed impacted is based on the acres of the HUC 10 watershed in the applicable state, and the construction acres for the Project and the other relevant projects within the applicable HUC 10 watershed.

e/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points are not included in this acreage. Acreage includes a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire.

f/ Includes only the operation footprint of the Project facilities, the 50-foot-wide permanent pipeline right-of-way in uplands, except in wetland areas where the operation width has been reduced to 10 feet in emergent wetlands, scrub shrub wetlands, and within 25 feet of waterbodies; and 30 feet in forested wetlands. The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

g/ Sums of addends may not equal totals due to rounding.

NEW Table 12-2

Cumulative Impacts Within HUC-12 Watersheds Affected by the Project

HUC 12 Watershed Name (Number)	HUC 12 Watershed Acres	MVP Southgate Project											Other Relevant Projects a/										
		Total Southgate Project			Upland Forest / Woodland b/		Wetlands c/						Total Other Relevant Projects			Upland Forest / Woodland b/		Wetlands c/					
							Palustrine Emergent (PEM)		Palustrine Forested (PFO)		Palustrine Scrub-Shrub (PSS)							Palustrine Emergent (PEM)		Palustrine Forested (PFO)		Palustrine Scrub-Shrub (PSS)	
		Percent of Watershed Impacted d/	Construction e/	Operation f/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Percent of Watershed Impacted b/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
Cane Creek-Dan River (030101040109)	14,461.8	*0.2%*	26.1	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cherrystone Creek (030101050104)	29,131.7	*0.4%*	105.3	29.6	46.4	10.4	5.1	0.7	1.2	0.5	0.6	0.1	*0.1%*	27.3	1.1	27.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Lower Sandy River (030101031003)	34,709.0	*0.2%*	83.4	29.7	26.4	10.2	0.1	<0.1	<0.1	0.0	0.1	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sandy Creek (West)-Dan River (030101031004)	20,670.4	*0.3%*	69.8	25.1	29.3	12.1	<0.1	0.0	0.4	0.1	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shockoe Creek-Banister River (030101050203)	18,805.6	*0.1%*	11.0	1.4	7.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	*<0.1%*	7.3	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trotters Creek-Dan River (030101030903)	18,049.6	*0.6%*	105.0	36.7	70.9	27.2	0.4	<0.1	0.5	0.2	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
White Oak Creek-Banister River (030101050103)	23,127.8	*0.6%*	138.5	45.6	48.8	15.6	0.6	<0.1	2.3	0.9	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Virginia Total:	**158,956.0**	***0.3%***	**539.2**	**168.0**	**233.5**	**75.6**	**6.3**	**0.7**	**4.4**	**1.7**	**0.7**	**0.1**	***0.0%***	**34.5**	**1.1**	**34.5**	**1.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Boyds Creek-Haw River (030300020408)	19,153.0	*0.7%*	132.0	47.2	78.7	31.3	0.7	<0.1	0.3	0.1	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cascade Creek (030101030902)	6,121.3	*1.0%*	59.8	11.1	6.0	2.6	4.3	0.3	0.1	0.0	<0.1	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fall Creek-Smith River (030101030807)	6,738.9	*0.1%*	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Giles Creek-Haw River (030300020206)	10,519.9	*0.2%*	17.5	6.7	6.0	2.3	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	*<0.1%*	0.5	0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Lick Fork (030101040103)	12,923.0	*0.4%*	46.6	16.9	28.7	10.9	0.1	<0.1	0.2	0.1	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Little Troublesome Creek (030300020205)	8,323.9	*0.1%*	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower Back Creek (030300020407)	*21,357.5*	*0.0%*	6.4	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower Little Alamance Creek (030300020303)	19,489.7	*0.0%*	4.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stony Creek-Stony Creek Reservoir (030300020403)	20,308.4	*0.2%*	48.8	17.6	24.0	9.6	<0.1	0.0	0.6	0.2	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Town Creek-Dan River (030101030901)	22,520.2	*0.6%*	142.5	47.8	77.1	30.7	1.1	0.1	2.9	1.0	0.2	<0.1	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Town of Altamahaw-Haw River (030300020207)	13,012.8	*0.8%*	107.3	38.4	39.6	14.1	0.3	<0.1	0.4	0.1	<0.1	0.0	*<0.1%*	0.4	<0.1	0.4	<0.1	0.0	0.0	0.0	0.0	0.0	0.0
Travis Creek-Haw River (030300020404)	22,306.2	*0.4%*	97.5	38.6	32.5	14.6	0.4	<0.1	1.8	0.8	0.1	<0.1	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trotters Creek-Dan River (030101030903)	9,738.4	*0.0%*	4.0	1.0	2.4	0.6	<0.1	0.0	<0.1	<0.1	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upper Hogans Creek (030101040104)	29,143.8	*0.4%*	103.5	36.8	57.6	22.4	0.0	0.0	0.1	<0.1	0.0	0.0	*0.0%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upper Wolf Island Creek (030101030904)	18,148.1	*0.3%*	56.0	20.0	33.1	12.8	0.4	0.0	0.3	0.2	0.1	0.0	*<0.1%*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North Carolina Total:	**239,805.1**	***0.4%***	**843.5**	**284.0**	**385.8**	**151.8**	**7.3**	**0.6**	**6.7**	**2.5**	**0.5**	**0.1**	***<0.1%***	**0.9**	**0.1**	**0.9**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
HUC12 Impact Total:	**398,761.0**	***0.3%***	**1,382.7**	**452.1**	**619.3**	**227.4**	**13.6**	**1.3**	**11.0**	**4.2**	**1.2**	**0.1**	***<0.1%***	**35.4**	**1.3**	**35.4**	**1.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

NEW Table 12-2

Cumulative Impacts Within HUC-12 Watersheds Affected by the Project

HUC 12 Watershed Name (Number)	HUC 12 Watershed Acres	MVP Southgate Project										Other Relevant Projects a/									
		Total Southgate Project			Upland Forest / Woodland b/		Wetlands c/					Total Other Relevant Projects			Upland Forest / Woodland b/		Wetlands c/				
							Palustrine Emergent (PEM)		Palustrine Forested (PFO)		Palustrine Scrub-Shrub (PSS)						Palustrine Emergent (PEM)		Palustrine Forested (PFO)		Palustrine Scrub-Shrub (PSS)	
		Percent of Watershed Impacted d/	Construction e/	Operation f/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Percent of Watershed Impacted b/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation

a/ Includes other projects from Table 1.10-2 that overlap with the Southgate Project Workspace (i.e., the Mountain Valley Pipeline, Cypress Creek Renewables Solar Farm, and Husky Solar Farm). Impact acres for the Cypress Creek Renewable Solar Farm and the Husky Solar Farm were digitized from project mapping available on the North Carolina Public Utilities Commission website.

b/ Upland forest not being used for specific commercial purposes.

c/ Palustrine forested, Palustrine scrub-shrub, and Palustrine emergent wetlands as identified in Resource Report 2.

d/ Percent of watershed impacted is based on the acres of the HUC 10 watershed in the applicable state, and the construction acres for the Project and the other relevant projects within the applicable HUC 10 watershed.

e/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points are not included in this acreage. Acreage includes a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire.

f/ Includes only the operation footprint of the Project facilities, the 50-foot-wide permanent pipeline right-of-way in uplands, except in wetland areas where the operation width has been reduced to 10 feet in emergent wetlands, scrub shrub wetlands, and within 25 feet of waterbodies; and 30 feet in forested wetlands. The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

g/ Sums of addends may not equal totals due to rounding.

REVISED Appendix 1-D

Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
H-605 Pipeline						
Pittsylvania, VA	0.0	1000	VA-PI-001.000 & VA-PI-002.000	0.83	FW	materials, parking, turn around, pipe staging
Pittsylvania, VA	0.0	1000A	VA-PI-001.000	1.05	FW, OL	parking, pipe staging, frac tanks for hydro test, materials
Pittsylvania, VA	0.1	1001	VA-PI-002.000	0.23	FW	materials, pumps, mats, pipe fab
Pittsylvania, VA	0.3	1001A	VA-PI-002.000	0.40	FW, OL	materials, equipment, pipe staging, pipe fab, mats
H-650 Pipeline						
Pittsylvania, VA	0.4	1001B	VA-PI-002.000	0.80	FW, AG, OL	materials, equipment, dumpsters for spoils from hydrovac around Transco line, parking, pipe
Pittsylvania, VA	0.1	1001F	VA-PI-002.000	0.20	FW	material, equipment, mats
Pittsylvania, VA	0.2	1008	VA-PI-002.000	0.20	FW	material, equipment, mats, pumps
Pittsylvania, VA	0.3	1009	VA-PI-002.000	0.23	FW	material, pumps, mats
Pittsylvania, VA	0.5	1010	VA-PI-003.000	0.30	FW, OL	material, pumps, mats
Pittsylvania, VA	0.6	1012	VA-PI-003.000	0.36	OL	material, parking, equipment
Pittsylvania, VA	0.7	1013	VA-PI-005.000	0.50	OL	material, equipment, boring equipment
Pittsylvania, VA	0.8	1014	VA-PI-005.000	0.52	OL	material, pipe, boring equipment, parking
Pittsylvania, VA	0.9	1015	VA-PI-006.000	0.50	OL, SC	material, pipe, boring equipment, parking
Pittsylvania, VA	1.0	1016	VA-PI-008.000	0.46	AG	material, pipe, mats, pumps, equipment
Pittsylvania, VA	1.2	1017	VA-PI-009.000	0.51	OL	material, pipe, mats, pumps, equipment
Pittsylvania, VA	1.2	1018	VA-PI-009.000	0.31	OL, RD	mats, material, parking, pipe
Pittsylvania, VA	1.2	1019	VA-PI-009.000	0.11	OL	turn around for trucks, material.
Pittsylvania, VA	1.3	1020	VA-PI-009.000	0.63	FW, OL	material, pumps, mats, pipe
Pittsylvania, VA	1.6	1022	VA-PI-010.000	0.47	OL	parking, material, mats, equipment
Pittsylvania, VA	1.7	1023	VA-PI-010.000	0.07	OL	materials, equipment
Pittsylvania, VA	1.7	1024	VA-PI-010.000	0.14	OL	materials, pumps, mats

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	2.3	1025A	VA-PI-012.000	1.30	FW, OL	materials, pumps, mats, equipment, pipe
Pittsylvania, VA	2.8	1026	VA-PI-014.000	0.13	OL	materials, equipment, pipe
Pittsylvania, VA	2.8	1027	VA-PI-015.000	0.21	AG	materials, equipment, pipe
Pittsylvania, VA	2.9	1028	VA-PI-015.000	0.49	AG	material, parking, equipment, pipe
Pittsylvania, VA	2.9	1029	VA-PI-016.000	0.14	AG	materials, equipment
Pittsylvania, VA	3.0	1030	VA-PI-018.000	0.51	AG	boring equipment, materials, parking
Pittsylvania, VA	3.2	1031	VA-PI-022.000	0.45	OL	materials, pumps, mats, pipe
Pittsylvania, VA	3.3	1032	VA-PI-023.000	0.51	FW, OL, AG	materials, pumps, mats, pipe
Pittsylvania, VA	3.4	1033	VA-PI-023.000	0.12	AG	turn around, materials, equipment
Pittsylvania, VA	3.4	1034	VA-PI-023.000	0.09	AG	turn around, materials, equipment
Pittsylvania, VA	3.5	1035	VA-PI-023.000	0.29	FW, AG	pumps, mats, equipment
Pittsylvania, VA	3.6	1036	VA-PI-022.000	0.19	FW, AG	pumps, mats, equipment
Pittsylvania, VA	3.7RR	1037	VA-PI-022.000	0.17	AG	materials, parking, turn around,
Pittsylvania, VA	3.8RR	1037A	VA-PI-025.000	0.39	AG	materials, equipment, pipe
Pittsylvania, VA	4.0	1038	VA-PI-025.000	0.22	AG	pumps, mats, equipment
Pittsylvania, VA	4.1	1039	VA-PI-025.000	0.35	FW, AG	pumps, mats, equipment
Pittsylvania, VA	4.1	1040	VA-PI-026.000	0.22	AG	pumps, mats, equipment
Pittsylvania, VA	4.2	1041	VA-PI-026.000	0.21	AG	boring equipment, materials, parking
Pittsylvania, VA	4.3	1042	VA-PI-030.000	0.15	OL	boring equipment, materials, parking, pipe
Pittsylvania, VA	4.3	1043	VA-PI-031.000	0.28	FW, OL	boring equipment, materials, parking, pipe
Pittsylvania, VA	4.3	1044	VA-PI-030.001	0.31	FW	boring equipment, materials, parking, pipe
Pittsylvania, VA	4.4	1045	VA-PI-032.000	0.62	FW, OL	fab sections, equipment, materials, parking

REVISED Appendix 1-D

Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	4.4	1046	VA-PI-032.000	0.64	FW, OL	fab sections, equipment, materials, parking
Pittsylvania, VA	4.6	1047	VA-PI-033.000	1.25	FW, OL	Staging for storage of materials and turn around.
Pittsylvania, VA	4.7	1048	VA-PI-032.000	0.45	FW, OL	Staging for materials, equipment and timber mat storage for pipeline crossing.
Pittsylvania, VA	4.8	1049	VA-PI-032.000	0.46	FW	pumps, mats, equipment, material
Pittsylvania, VA	5.0	1050	VA-PI-034.000	0.11	FW	pumps, mats, equipment, material
Pittsylvania, VA	5.1	1051	VA-PI-034.000	0.70	FW, OL	Staging for storage of materials and timber for wetland crossing.
Pittsylvania, VA	5.2	1052	VA-PI-034.000	0.46	FW, WL	boring equipment, pipe, materials
Pittsylvania, VA	5.3	1053	VA-PI-035.000	0.49	FW	boring equipment, pipe, materials
Pittsylvania, VA	5.6	1054	VA-PI-036.000	0.69	FW, OL	pipe, materials, turn around, parking
Pittsylvania, VA	5.8	1055	VA-PI-036.000	1.06	FW, OL	pipe, materials, turn around, parking
Pittsylvania, VA	5.9	1056	VA-PI-036.000	0.40	OL, CI	Staging for materials, equipment and timber mats for pipeline crossing.
Pittsylvania, VA	6.0	1057	VA-PI-036.000	0.55	FW	pumps, mats, equipment, material
Pittsylvania, VA	6.1	1058	VA-PI-036.000	0.25	FW	pumps, mats, equipment, material
Pittsylvania, VA	6.2	1059	VA-PI-036.000	0.46	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	6.2	1060	VA-PI-037.000	0.55	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	6.2	1061	VA-PI-037.000	0.83	OL	parking, mats, material, pipe
Pittsylvania, VA	6.5	1062	VA-PI-037.000	0.46	FW	pumps, mats, equipment, material
Pittsylvania, VA	6.7	1063	VA-PI-038.000	0.46	FW	pumps, mats, equipment, material
Pittsylvania, VA	6.8	1064	VA-PI-038.000	0.25	FW, OL	Staging for timber mats for pipeline crossing.
Pittsylvania, VA	6.9	1065	VA-PI-039.000	0.53	FW	pumps, mats, equipment, material

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	7.0	1066	VA-PI-040.000	0.32	FW	pumps, mats, equipment, material
Pittsylvania, VA	7.1	1067	VA-PI-040.000	1.20	FW, OL, AG	pipe, materials, parking, equipment
Pittsylvania, VA	7.2	1068	VA-PI-041.000	0.45	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	7.4	1069	VA-PI-042.000	0.24	FW	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	7.4	1070	VA-PI-044.000	0.48	OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	7.6	1071	VA-PI-044.000	0.26	FW	pumps, mats, equipment, material
Pittsylvania, VA	7.6	1072	VA-PI-044.000	0.23	FW	pumps, mats, equipment, material
Pittsylvania, VA	7.9	1074	VA-PI-045.000	0.47	OL	pumps, mats, equipment, material
Pittsylvania, VA	8.0	1075	VA-PI-045.000	0.27	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	8.1	1076	VA-PI-045.000	0.45	OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	8.1	1077	VA-PI-046.000	0.32	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	8.2	1078	VA-PI-047.000	0.34	FW, OL	Area for storage and turn around for large trucks.
Pittsylvania, VA	8.4	1079	VA-PI-048.000	0.52	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	8.5	1080	VA-PI-048.000	0.63	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	8.6	1081	VA-PI-048.000	0.52	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	8.9	1082	VA-PI-050.000	0.87	OL	parking, pipe storage, material storage
Pittsylvania, VA	9.0	1083	VA-PI-050.000 VA-PI-051.000	0.66	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	9.1	1084	VA-PI-052.000	0.31	FW, OL, AG	Staging for storage of materials and timber mats for wetland and stream crossing.
Pittsylvania, VA	9.3	1085	VA-PI-052.000	0.37	AG	pipe, materials, parking, equipment, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	9.4	1086	VA-PI-053.000	0.46	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	9.6	1088	VA-PI-053.000	0.20	FW, AG	turn around for trucks, material
Pittsylvania, VA	9.7	1088A	VA-PI-053.000	0.51	FW	materials, equipment, pipe
Pittsylvania, VA	9.8	1088B	VA-PI-053.000	0.85	FW, OL, AG	pumps, mats, equipment, material
Pittsylvania, VA	9.9	1089	VA-PI-053.000	0.23	FW	pumps, mats, equipment, material
Pittsylvania, VA	10.0	1090	VA-PI-053.000	0.61	FW	pumps, mats, equipment, material
Pittsylvania, VA	10.1	1091	VA-PI-055.000	0.23	FW	pumps, mats, equipment, material
Pittsylvania, VA	10.1	1092	VA-PI-055.000	0.23	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	10.3	1093	VA-PI-061.000	0.69	OL	parking, pipe storage, material storage
Pittsylvania, VA	10.8	1094	VA-PI-075.000	0.67	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	10.8	1095	VA-PI-075.000	0.49	OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	10.9	1095A	VA-PI-075.000	0.77	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	11.1	1096	VA-PI-075.000	1.14	OL	parking, pipe storage, material storage
Pittsylvania, VA	11.4	1097	VA-PI-076.000	0.37	FW	pumps, mats, equipment, material
Pittsylvania, VA	11.4	1098	VA-PI-076.000	0.51	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	11.6	1099	VA-PI-076.000	0.48	FW	pumps, mats, equipment, material
Pittsylvania, VA	11.7	1100	VA-PI-077.000	0.36	FW	pumps, mats, equipment, material
Pittsylvania, VA	11.9	1101	VA-PI-077.000	0.47	FW	pumps, mats, equipment, material
Pittsylvania, VA	12.0	1103	VA-PI-077.000	0.69	FW, OL	materials, pipe, equipment
Pittsylvania, VA	12.3	1105	VA-PI-079.000	0.52	AG	pipe, materials, parking, equipment, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	12.4	1106	VA-PI-082.000	0.28	FW, AG	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	12.5	1106A	VA-PI-082.000	0.23	AG	materials, pipe, equipment
Pittsylvania, VA	12.7	1107	VA-PI-082.000	0.97	FW, AG	materials, pipe, equipment
Pittsylvania, VA	12.7	1108	VA-PI-082.000	0.26	FW	pumps, mats, equipment, material
Pittsylvania, VA	12.8	1109	VA-PI-084.000	0.46	FW	pumps, mats, equipment, material
Pittsylvania, VA	13.1	1110	VA-PI-084.000	0.46	FW, OL	materials, pipe, equipment
Pittsylvania, VA	13.3	1111	VA-PI-085.000	0.26	FW, OL	materials, pipe, equipment
Pittsylvania, VA	13.4	1112	VA-PI-087.000	0.43	OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	13.4	1112A	VA-PI-087.000	0.11	OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	13.4	1113	VA-PI-089.000	0.09	FW, OL	material, pumps, mats, pipe, boring equipment
Pittsylvania, VA	13.5	1114	VA-PI-090.000	0.44	FW	pumps, mats, equipment, material
Pittsylvania, VA	13.7	1115	VA-PI-091.000	0.23	FW, OL	Staging and storage of materials (e.g. pipe and fittings) and turn around for delivery trucks.
Pittsylvania, VA	14.1	1116	VA-PI-092.000	0.54	OL	materials, pipe, equipment
Pittsylvania, VA	14.2	1117	VA-PI-094.000	0.46	FW	pumps, mats, equipment, material
Pittsylvania, VA	14.3	1118	VA-PI-094.000	0.51	FW	pumps, mats, equipment, material
Pittsylvania, VA	14.7	1118A	VA-PI-094.000	0.41	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	14.8	1118B	VA-PI-096.000	0.46	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	14.8	1119	VA-PI-096.000	0.47	OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	14.9	1120	VA-PI-099.000	0.35	AG	pipe, materials, parking, equipment, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	15.2	1120A	VA-PI-100.000	0.21	AG	pumps, mats, equipment, material
Pittsylvania, VA	15.2	1120B	VA-PI-100.000	0.39	AG	pumps, mats, equipment, material
Pittsylvania, VA	15.3	1120C	VA-PI-100.000	0.38	FW, AG	pumps, mats, equipment, material
Pittsylvania, VA	15.6	1122	VA-PI-101.000	0.64	FW, OL	pumps, mats, equipment, material
Pittsylvania, VA	15.7	1123	VA-PI-102.000	0.52	FW	pumps, mats, equipment, material
Pittsylvania, VA	15.8	1124	VA-PI-103.000	0.90	FW, OL	Staging and storage of materials and timber mats for stream crossing and PI. Also, for pipe storage.
Pittsylvania, VA	16.0	1126	VA-PI-106.000	0.43	FW, OL	Staging for materials, equipment, and timber mats for stream crossing and Mt. Cross Road crossing.
Pittsylvania, VA	16.0	1126A	VA-PI-106.000	0.23	FW, OL	materials, pipe, equipment
Pittsylvania, VA	16.0	1127	VA-PI-106.000	0.54	FW, AG	pumps, mats, equipment, material
Pittsylvania, VA	16.1	1128	VA-PI-106.000	0.21	FW, AG	pumps, mats, equipment, material
Pittsylvania, VA	16.3	1129	VA-PI-107.000	0.46	AG, RD	materials, pipe, equipment
Pittsylvania, VA	16.4	1130	VA-PI-111.000	0.30	AG, RD	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	16.5	1131	VA-PI-115.000	0.55	FW, AG	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	16.6	1131A	VA-PI-115.000	0.23	AG	pumps, mats, equipment, material
Pittsylvania, VA	16.7	1132	VA-PI-115.000	0.07	FW, OL, AG	pumps, mats, equipment, material
Pittsylvania, VA	16.8	1133	VA-PI-115.000	0.06	FW, AG	pumps, mats, equipment, material
Pittsylvania, VA	16.9	1134	VA-PI-115.000	0.66	AG	pumps, mats, equipment, material, pipe
Pittsylvania, VA	17.2	1135	VA-PI-118.000	0.88	FW, OL, AG	pumps, mats, equipment, material, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	17.4	1136	VA-PI-118.000	0.62	OL	pumps, mats, equipment, material, pipe
Pittsylvania, VA	17.5	1136A	VA-PI-118.000	0.10	FW, OL	pumps, mats, equipment, material, pipe
Pittsylvania, VA	17.3	1137	VA-PI-118.000	0.11	FW, OL	pumps, mats, equipment, material, pipe
Pittsylvania, VA	17.7	1138	VA-PI-119.000	0.55	FW	pumps, mats, equipment, material, pipe
Pittsylvania, VA	17.8	1139	VA-PI-120.000	0.46	FW	pumps, mats, equipment, material, pipe
Pittsylvania, VA	18.0	1140	VA-PI-120.000	0.47	FW	Staging and storage of materials, timber mats and equipment for stream crossing.
Pittsylvania, VA	18.1	1141	VA-PI-120.000	0.61	FW, OL	pumps, mats, equipment, material, pipe
Pittsylvania, VA	18.2	1142	VA-PI-120.000	0.47	OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	18.3	1143	VA-PI-124.000	0.45	AG	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	18.7	1144	VA-PI-128.000	0.57	FW, OL	materials, pipe, equipment
Pittsylvania, VA	18.9	1145	VA-PI-128.000	0.62	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	19.0	1146	VA-PI-130.000	0.41	FW, OL, AG	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	19.2	1146A	VA-PI-132.000	0.17	RD	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	19.3	1147	VA-PI-135.000	0.32	FW, AG	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	19.4	1147A	VA-PI-137.100	0.27	FW, AG	materials, pipe, equipment
Pittsylvania, VA	19.7	1148	VA-PI-144.000	0.23	FW	material, pumps, mats, pipe
Pittsylvania, VA	19.8	1149	VA-PI-150.000	0.23	FW, OL	material, pumps, mats, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	19.9	1150	VA-PI-150.100	2.03	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	19.9	1151	VA-PI-151.000	0.27	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	20.0	1152	VA-PI-152.000	0.50	OL, CI	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	20.3	1158	VA-PI-160.000	0.46	AG	material, pumps, mats, pipe
Pittsylvania, VA	20.4	1160	VA-PI-160.000	0.66	OL, AG	Staging and storage of materials, timber mats and equipment for stream crossing.
Pittsylvania, VA	20.6	1161	VA-PI-160.000	0.46	FW, OL, AG	material, pumps, mats, pipe
Pittsylvania, VA	20.6	1162	VA-PI-160.000	0.37	OL	material, pumps, mats, pipe
Pittsylvania, VA	20.9	1163	VA-PI-162.000	0.46	FW, AG	material, pumps, mats, pipe
Pittsylvania, VA	21.0	1164	VA-PI-162.000	0.65	FW	material, pumps, mats, pipe
Pittsylvania, VA	21.2	1165	VA-PI-164.000	0.46	FW, OL	material, pumps, mats, pipe
Pittsylvania, VA	21.3	1166	VA-PI-163.000	0.46	FW, OL	material, pumps, mats, pipe
Pittsylvania, VA	21.6	1167	VA-PI-165.000	0.11	FW	turn around for trucks, material
Pittsylvania, VA	21.7	1168	VA-PI-165.000	0.88	FW, OL	Staging and storage of materials (e.g. pipe) and timber mats for pipeline crossing.
Pittsylvania, VA	22.0	1169	VA-PI-169.000	0.15	RD	material, pumps, mats, pipe, boring equipment
Pittsylvania, VA	22.1	1170	VA-PI-171.000	0.46	FW, OL	material, pumps, mats, pipe, boring equipment
Pittsylvania, VA	22.2	1170A	VA-PI-171.000	0.41	FW	material, pumps, mats, pipe
Pittsylvania, VA	22.4	1171	VA-PI-173.000	0.34	FW, OL	turn around for trucks, material
Pittsylvania, VA	22.4	1173	VA-PI-173.000	0.34	FW, OL	materials, pipe, equipment
Pittsylvania, VA	22.6	1175	VA-PI-173.000	0.34	FW, OL	materials, pipe, equipment
Pittsylvania, VA	22.7	1176	VA-PI-173.000	0.34	FW, OL	materials, pipe, equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	23.0	1177	VA-PI-174.000	0.46	FW	material, pumps, mats, pipe
Pittsylvania, VA	23.0	1178	VA-PI-174.000	0.21	FW, OL	Staging and storage of materials and timber mats for foreign pipeline crossing.
Pittsylvania, VA	23.0	1179	VA-PI-174.000	0.36	FW	material, pumps, mats, pipe
Pittsylvania, VA	23.1	1180	VA-PI-174.000	0.46	FW	material, pumps, mats, pipe
Pittsylvania, VA	23.2	1181	VA-PI-174.000	0.40	FW	material, pumps, mats, pipe
Pittsylvania, VA	23.5	1183	VA-PI-175.000	0.46	FW	material, pumps, mats, pipe
Pittsylvania, VA	23.6	1184	VA-PI-175.000	0.40	FW	material, pumps, mats, pipe
Pittsylvania, VA	23.7	1185	VA-PI-175.000	0.47	FW	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	23.7	1186	VA-PI-178.000	0.48	FW, OL	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	23.8	1187	VA-PI-178.000	0.23	FW	material, pumps, mats, pipe
Pittsylvania, VA	23.9	1188	VA-PI-178.000	0.23	FW	material, pumps, mats, pipe
Pittsylvania, VA	24.0	1189	VA-PI-178.000	0.46	FW	material, pumps, mats, pipe
Pittsylvania, VA	24.1	1190	VA-PI-178.000	0.69	FW, OL	Area for material storage and turn around for large trucks.
Pittsylvania, VA	24.3	1191	VA-PI-178.000	0.46	FW	material, pumps, mats, pipe
Pittsylvania, VA	24.4	1192	VA-PI-178.000	0.43	FW	material, pumps, mats, pipe
Pittsylvania, VA	24.6	1193	VA-PI-178.000	0.92	FW, OL	Area for material storage and turn around for large trucks.
Pittsylvania, VA	24.8	1194	VA-PI-178.000	0.23	FW	material, pumps, mats, pipe
Pittsylvania, VA	24.8	1195	VA-PI-179.000	1.02	FW, OL	Area for material storage and turn around for large trucks
Pittsylvania, VA	24.9	1196	VA-PI-179.000	0.47	FW	pipe, materials, parking, equipment, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Pittsylvania, VA	25.0	1197	VA-PI-180.000	0.45	FW	pipe, materials, parking, equipment, boring equipment
Pittsylvania, VA	25.1	1198	VA-PI-180.000	0.69	FW, OL	Area for material storage and turn around for large trucks.
Pittsylvania, VA	25.2	1200	VA-PI-180.000	0.23	FW	material, pumps, mats, pipe
Pittsylvania, VA	25.7	1201	VA-PI-180.000	0.46	FW, OL	material, pumps, mats, pipe
Pittsylvania, VA	25.7	1202	VA-PI-180.000	0.46	FW	material, pumps, mats, pipe
Pittsylvania, VA	25.8	1203	VA-PI-180.000	0.35	FW	material, pumps, mats, pipe
Pittsylvania, VA	25.9	1204	VA-PI-180.000	0.46	FW	material, pumps, mats, pipe
Pittsylvania, VA	26.0	1205	VA-PI-180.000	0.46	FW	Area for material storage and turn around for large trucks.
Rockingham, NC	26.2	1206	NC-RO-001.000	0.53	FW, OL	Staging for storage of equipment, materials and timber mats for wetland crossing and Buffalo Road crossing.
Rockingham, NC	26.3	1207	NC-RO-002.000	0.37	FW	pipe, materials, parking, equipment, boring equipment
Rockingham, NC	26.5	1208	NC-RO-002.000	0.46	FW	pipe, materials, parking, equipment, boring equipment
Rockingham, NC	26.6	1209	NC-RO-004.000	0.53	OL	pipe, materials, parking, equipment, boring equipment
Rockingham, NC	26.6	1209A	NC-RO-004.000	0.06	RD	parking, pipe storage, material storage
Rockingham, NC	26.6	1210	NC-RO-004.000	0.46	OL	parking, pipe storage, material storage
Rockingham, NC	26.8	1211	NC-RO-004.000	1.25	FW, OL	parking, pipe storage, material storage
Rockingham, NC	26.7	1211A	NC-RO-004.000	0.06	OL	pipe, materials, parking, equipment, boring equipment
Rockingham, NC	26.9	1212	NC-RO-004.000	0.13	FW	pipe, materials, parking, equipment, boring equipment
Rockingham, NC	27.0	1213	NC-RO-005.000	0.45	AG	pipe, materials, parking, equipment, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	27.0	1213A	NC-RO-005.000	1.02	AG, OL, RD	parking, pipe storage, material storage
Rockingham, NC	27.1	1213B	NC-RO-005.000	0.24	OL	material, pumps, mats, pipe
Rockingham, NC	27.1	1213C	NC-RO-005.000	0.22	WL	material, pumps, mats, pipe
Rockingham, NC	27.2	1213D	NC-RO-005.000	0.69	WL	material, pumps, mats, pipe
Rockingham, NC	27.4	1213E	NC-RO-006.000	0.46	AG, OL	parking, pipe storage, material storage
Rockingham, NC	27.4	1218	NC-RO-006.000	0.39	AG, OL	parking, pipe storage, material storage
Rockingham, NC	27.6	1222	NC-RO-006.000	0.76	OL, WL	materials, pipe, equipment
Rockingham, NC	27.8	1224	NC-RO-006.000	0.92	AG	materials, pipe, equipment
Rockingham, NC	28.3	1230	NC-RO-006.000	0.99	FW, OL	materials, pipe, equipment
Rockingham, NC	28.5	1231	NC-RO-006.000	0.23	FW, OL	material, pumps, mats, pipe
Rockingham, NC	28.6	1232	NC-RO-006.000	0.93	FW, OL	Staging and storage of materials, equipment and timber mats for pipeline crossing. Also used for pipe storage.
Rockingham, NC	28.6	1233	NC-RO-006.000	0.46	FW	materials, pipe, equipment
Rockingham, NC	28.7	1234	NC-RO-007.000	0.46	FW	materials, pipe, equipment
Rockingham, NC	28.8	1235	NC-RO-007.000	0.46	FW, OL	materials, pipe, equipment
Rockingham, NC	28.9	1236	NC-RO-007.000	0.46	FW	material, pumps, mats, pipe
Rockingham, NC	29.0	1237	NC-RO-007.000	0.46	FW	material, pumps, mats, pipe
Rockingham, NC	29.1	1238	NC-RO-007.000	0.23	FW	material, pumps, mats, pipe
Rockingham, NC	29.2	1239	NC-RO-007.000	0.49	FW, OL	Staging and storage of materials, equipment and timber mats for pipeline crossing.
Rockingham, NC	29.2	1240	NC-RO-007.000	0.46	FW, OL	materials, pipe, equipment
Rockingham, NC	29.3RR	1240A	NC-RO-007.000	0.93	FW, OL	materials, pipe, equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	29.4RR	1240B	NC-RO-007.000	0.25	FW	materials, pipe, equipment
Rockingham, NC	29.6	1241	NC-RO-007.000	0.23	FW	material, pumps, mats, pipe
Rockingham, NC	29.6	1242	NC-RO-007.000	0.46	FW, OL	Staging and storage of materials, equipment and timber mats for pipeline crossing. Area may also be used for contractor parking.
Rockingham, NC	29.6	1243	NC-RO-007.000	0.75	AG	material, pumps, mats, pipe
Rockingham, NC	29.9	1244	NC-RO-011.000	2.13	FW, OL, AG, WL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	29.9	1244A	NC-RO-011.000	0.51	AG, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	29.9	1247	NC-RO-011.000	0.39	AG	materials, pipe, equipment
Rockingham, NC	30.0	1247A	NC-RO-011.000	0.03	AG, OL	materials, pipe, equipment
Rockingham, NC	30.5	1250	NC-RO-015.000	0.18	OL, CI, WL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	30.5	1252	NC-RO-018.000	0.12	OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	30.6	1252A	NC-RO-019.000	0.28	OL	materials, pipe, equipment
Rockingham, NC	30.7	1253	NC-RO-022.000	0.40	FW, OL	materials, pipe, equipment
Rockingham, NC	31.0	1253A	NC-RO-025.000	0.59	FW, OL	materials, pipe, equipment
Rockingham, NC	31.1	1253B	NC-RO-025.000	0.04	FW	material, mats, pumps, pipe
Rockingham, NC	31.1	1253C	NC-RO-025.000	0.22	FW	material, mats, pumps, pipe
Rockingham, NC	31.2	1258	NC-RO-025.000	0.36	FW, OL	materials, pipe, equipment
Rockingham, NC	31.3	1259	NC-RO-025.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	31.3	1260	NC-RO-027.000	0.25	FW	material, mats, pumps, pipe
Rockingham, NC	31.7	1261	NC-RO-033.000	0.62	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	31.8	1262	NC-RO-033.000	0.53	FW, OL	materials, pipe, equipment
Rockingham, NC	32.0	1263	NC-RO-035.000	0.17	FW, OL	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	32.2	1265	NC-RO-037.000	0.17	FW, OL	material, mats, pumps, pipe
Rockingham, NC	32.3	1266	NC-RO-038.000	0.46	OL	material, mats, pumps, pipe
Rockingham, NC	32.4	1267	NC-RO-038.000	0.57	OL	materials, pipe, equipment
Rockingham, NC	32.5	1268	NC-RO-038.000	0.34	OL	materials, pipe, equipment
Rockingham, NC	32.6	1269	NC-RO-038.000	0.46	FW, OL	materials, pipe, equipment
Rockingham, NC	32.8	1270	NC-RO-039.000	0.74	FW	materials, pipe, equipment
Rockingham, NC	32.8	1271	NC-RO-040.000	0.27	FW	Staging and storage of materials, equipment and timber mats for PI work and pipeline crossing. Area may also be used for contractor parking.
Rockingham, NC	32.8	1272	NC-RO-039.000	0.37	FW, OL	Staging and storage of materials, equipment and timber mats for PI work and pipeline crossing. Area may also be used for contractor parking.
Rockingham, NC	32.9	1273	NC-RO-040.000	0.23	FW, OL	material, mats, pumps, pipe
Rockingham, NC	33.0	1274	NC-RO-040.000	0.19	FW, OL	material, mats, pumps, pipe
Rockingham, NC	33.1	1275	NC-RO-041.000	0.17	OL	material, mats, pumps, pipe
Rockingham, NC	33.2	1276	NC-RO-041.000	0.31	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	33.2	1277	NC-RO-041.000	0.18	FW	material, pumps, mats, pipe, boring equipment
Rockingham, NC	33.2	1278	NC-RO-042.000	0.19	FW	material, pumps, mats, pipe, boring equipment
Rockingham, NC	33.3	1279	NC-RO-042.000	0.27	FW	material, mats, pumps, pipe
Rockingham, NC	33.4	1280	NC-RO-042.000	0.49	FW	material, mats, pumps, pipe
Rockingham, NC	33.4	1280A	NC-RO-043.000.ABU	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	33.5	1281	NC-RO-044.000	0.23	FW	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	33.6	1282	NC-RO-044.000	0.46	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	33.7	1283	NC-RO-042.000	0.29	FW	material, mats, pumps, pipe
Rockingham, NC	33.8	1284	NC-RO-042.000	0.52	FW	material, mats, pumps, pipe
Rockingham, NC	33.9	1285	NC-RO-045.000	0.46	FW	material, mats, pumps, pipe
Rockingham, NC	34.0	1286	NC-RO-045.000	0.46	FW, OL	material, mats, pumps, pipe
Rockingham, NC	34.1	1287	NC-RO-045.000	0.46	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	34.2RR	1288	NC-RO-047.000	0.25	FW	material, mats, pumps, pipe
Rockingham, NC	34.3	1289	NC-RO-047.000	0.52	OL	materials, pipe, equipment
Rockingham, NC	34.5	1290	NC-RO-051.000	0.48	FW	material, mats, pumps, pipe
Rockingham, NC	34.6	1291	NC-RO-051.000	0.44	FW	material, mats, pumps, pipe
Rockingham, NC	34.7	1293	NC-RO-054.000	0.47	FW	material, mats, pumps, pipe
Rockingham, NC	34.8	1294	NC-RO-054.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	34.8	1296	NC-RO-054.000	0.46	FW	material, mats, pumps, pipe
Rockingham, NC	35.0	1297	NC-RO-054.000	0.57	FW	material, mats, pumps, pipe
Rockingham, NC	35.1	1297A	NC-RO-057.000	0.46	FW	material, mats, pumps, pipe
Rockingham, NC	35.2	1297B	NC-RO-057.000	0.48	FW	material, mats, pumps, pipe
Rockingham, NC	35.4	1299	NC-RO-057.000	0.51	FW, OL	materials, pipe, equipment
Rockingham, NC	35.4	1300	NC-RO-057.000	0.40	FW, OL	Staging and storage of materials, equipment and timber mats for PI work and pipeline crossing. Area may also be used for contractor parking.

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	35.7	1301	NC-RO-058.000	0.37	FW, AG	materials, pipe, equipment
Rockingham, NC	35.9	1302	NC-RO-058.000	0.40	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	35.9	1303	NC-RO-058.000	0.41	FW, OL	materials, pipe, equipment
Rockingham, NC	36.0	1303A	NC-RO-061.000	0.17	FW, OL	material, mats, pumps, pipe
Rockingham, NC	36.2	1305	NC-RO-061.000	0.46	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	36.3	1306	NC-RO-061.000	0.25	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	36.3	1307	NC-RO-061.000	0.18	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	36.3	1308	NC-RO-063.000	0.25	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	36.3	1309	NC-RO-062.000	0.18	FW, AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	36.3	1310	NC-RO-063.000	0.40	FW, AG	materials, pipe, equipment
Rockingham, NC	36.6	1311	NC-RO-063.000	0.24	OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	36.6	1312	NC-RO-063.000	0.18	OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	36.6	1313	NC-RO-067.000.ABU	0.13	FW, RD	material, pumps, mats, pipe, boring equipment
Rockingham, NC	36.8	1315	NC-RO-068.000	0.38	FW, AG	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	36.8	1316	NC-RO-068.000	0.23	FW, AG	materials, pipe, equipment
Rockingham, NC	37.0	1316A	NC-RO-069.000	0.16	OL	materials, pipe, equipment
Rockingham, NC	37.1	1317	NC-RO-069.000	0.46	OL	materials, pipe, equipment
Rockingham, NC	37.1	1318	NC-RO-072.000	0.23	FW	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	37.2	1319	NC-RO-072.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	37.2	1320	NC-RO-072.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	37.3	1321	NC-RO-073.000	0.26	FW	material, mats, pumps, pipe
Rockingham, NC	37.6	1324	NC-RO-077.000	0.53	OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	37.8	1324A	NC-RO-080.000	0.44	FW, OL	materials, pipe, equipment
Rockingham, NC	37.8	1326	NC-RO-080.000	0.54	FW, OL	materials, pipe, equipment
Rockingham, NC	37.9	1327	NC-RO-083.000	0.42	FW, RD	materials, pipe, equipment
Rockingham, NC	38.0	1328	NC-RO-084.000	0.76	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	38.2	1329	NC-RO-086.000	0.29	OL	materials, pipe, equipment
Rockingham, NC	38.2	1330	NC-RO-087.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	38.3	1331	NC-RO-088.000	0.25	FW	materials, pipe, equipment
Rockingham, NC	38.4	1332	NC-RO-089.000	0.53	FW	material, mats, pumps, pipe
Rockingham, NC	38.6	1333	NC-RO-089.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	38.6	1334	NC-RO-089.000	0.40	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	38.8	1335	NC-RO-090.000	0.28	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	38.8	1336	NC-RO-090.000	0.40	FW, OL,	material, pumps, mats, pipe, boring equipment
Rockingham, NC	38.8	1337	NC-RO-091.000	0.24	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	38.9	1338	NC-RO-091.000	0.35	FW, OL	material, pumps, mats, pipe, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	38.9	1339	NC-RO-091.000	0.52	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	39.0	1340	NC-RO-091.000	0.45	FW	material, mats, pumps, pipe
Rockingham, NC	39.1	1341	NC-RO-092.000	0.25	FW, OL	material, mats, pumps, pipe
Rockingham, NC	39.1	1342	NC-RO-092.000	0.19	FW	material, mats, pumps, pipe
Rockingham, NC	39.2	1342A	NC-RO-092.000	0.06	FW	material, mats, pumps, pipe
Rockingham, NC	39.3	1343	NC-RO-094.000	0.13	AG	material, mats, pumps, pipe
Rockingham, NC	39.6	1344	NC-RO-095.000	0.60	FW, OL, RD	Staging and storage of materials and equipment near stream crossing.
Rockingham, NC	39.7	1345	NC-RO-095.000	0.12	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	39.7	1346	NC-RO-100.000	0.30	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	39.7	1347	NC-RO-100.000	0.57	FW, OL	Staging and storage of materials, equipment for PI work and bore at railroad.
Rockingham, NC	39.9	1348	NC-RO-100.000	0.39	FW	materials, pipe, equipment
Rockingham, NC	40.0	1349	NC-RO-099.000.AR	0.70	FW, OL	materials, pipe, equipment
Rockingham, NC	40.1	1350	NC-RO-101.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	40.2	1351	NC-RO-101.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	40.2	1352	NC-RO-101.000	0.24	FW	material, mats, pumps, pipe
Rockingham, NC	40.3	1353	NC-RO-103.000	0.11	RD	material, pumps, mats, pipe, boring equipment
Rockingham, NC	40.4	1354	NC-RO-104.000	0.45	FW, OL, AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	40.5	1355	NC-RO-106.000	0.44	AG	materials, pipe, equipment
Rockingham, NC	40.5	1356	NC-RO-108.000	0.23	FW	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	40.6	1357	NC-RO-108.000	0.22	FW	material, mats, pumps, pipe
Rockingham, NC	40.6	1358	NC-RO-108.000	0.29	FW	material, mats, pumps, pipe
Rockingham, NC	40.7	1359	NC-RO-109.000	0.50	FW	materials, pipe, equipment
Rockingham, NC	40.8	1360	NC-RO-109.000	0.27	FW	material, mats, pumps, pipe
Rockingham, NC	40.8	1361	NC-RO-109.000	0.18	FW	material, mats, pumps, pipe
Rockingham, NC	40.8	1362	NC-RO-109.000	0.40	FW	materials, pipe, equipment
Rockingham, NC	40.9	1363	NC-RO-109.000	0.35	FW, OL	Staging and storage of materials, equipment and turn around for large trucks.
Rockingham, NC	41.1	1364	NC-RO-110.000	0.46	FW	material, mats, pumps, pipe
Rockingham, NC	41.2	1366	NC-RO-111.000	0.53	FW	material, mats, pumps, pipe
Rockingham, NC	41.4	1367	NC-RO-111.000	0.85	FW, OL	Staging and storage of materials, equipment and turn around for large trucks.
Rockingham, NC	41.5	1368	NC-RO-111.000	0.42	FW	material, pumps, mats, pipe, boring equipment
Rockingham, NC	41.6	1369	NC-RO-112.000	0.28	FW	material, pumps, mats, pipe, boring equipment
Rockingham, NC	41.8	1371	NC-RO-112.000	0.45	OL	material, mats, pumps, pipe
Rockingham, NC	41.8	1373	NC-RO-113.000	0.52	FW	material, mats, pumps, pipe
Rockingham, NC	41.9	1374	NC-RO-113.000	0.44	FW, OL	materials, pipe, equipment
Rockingham, NC	42.2	1376	NC-RO-112.000	0.59	OL, CI	material, pumps, mats, pipe, boring equipment
Rockingham, NC	42.2	1377	NC-RO-112.200	0.17	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	42.3	1378	NC-RO-112.200	0.09	FW	materials, pipe, equipment
Rockingham, NC	42.4	1379	NC-RO-117.000	0.26	FW, OL	Staging and storage of materials, equipment and turn around for large trucks.
Rockingham, NC	42.5	1380	NC-RO-117.000	0.82	FW, OL	materials, pipe, equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	43.1	1383	NC-RO-117.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	43.1	1384	NC-RO-118.000.ABU	0.14	FW, OL, RD	material, pumps, mats, pipe, boring equipment
Rockingham, NC	43.2	1385	NC-RO-122.000	0.52	FW, OL	Staging and storage of materials, equipment for bore of Brooks Road. Also allows for safer entry and exit onto Brooks Road.
Rockingham, NC	43.3	1386	NC-RO-122.000	0.23	FW, OL	material, mats, pumps, pipe
Rockingham, NC	43.3	1389	NC-RO-122.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	43.4	1390	NC-RO-122.000	0.30	FW, OL	Staging and storage of materials and equipment for road crossing.
Rockingham, NC	43.4	1391	NC-RO-122.000	0.24	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	43.4	1392	NC-RO-122.100	0.38	OL	Staging and storage of materials and equipment for road crossing.
Rockingham, NC	43.4	1393	NC-RO-122.100	0.27	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	43.7	1394	NC-RO-126.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	43.8	1395	NC-RO-133.200	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	43.8	1396	NC-RO-133.200	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	43.9	1397	NC-RO-133.200	0.40	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
Rockingham, NC	44.0	1401	NC-RO-133.000	0.23	FW, OL	materials, pipe, equipment
Rockingham, NC	44.1	1402	NC-RO-133.000	0.14	FW, OL	material, mats, pumps, pipe
Rockingham, NC	44.1	1403	NC-RO-133.000	0.26	FW, OL	Staging and storage of materials, equipment and timber mats for wetland crossings.
Rockingham, NC	44.2	1404	NC-RO-133.000	0.59	FW, OL	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	44.4	1404A	NC-RO-135.000	0.46	FW, OL, RD	materials, pipe, equipment
Rockingham, NC	44.5	1407	NC-RO-136.000	0.46	FW, AG	materials, pipe, equipment
Rockingham, NC	44.6	1407A	NC-RO-137.000	0.46	FW, OL	materials, pipe, equipment
Rockingham, NC	44.8	1408	NC-RO-138.000	0.56	FW, OL, AG	Staging and storage of materials, equipment for PI work and power line crossing.
Rockingham, NC	44.9	1409	NC-RO-138.000	0.09	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	44.9	1410	NC-RO-138.000	0.59	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	44.9	1411	NC-RO-139.000	0.46	FW, AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	44.9	1412	NC-RO-139.000	0.15	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	45.0	1413	NC-RO-139.000	0.11	FW, AG	materials, pipe, equipment
Rockingham, NC	45.3	1414	NC-RO-139.000	0.51	FW, AG	materials, pipe, equipment, parking
Rockingham, NC	45.6	1415	NC-RO-140.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	45.7	1416	NC-RO-142.000	0.44	FW, OL	material, mats, pumps, pipe
Rockingham, NC	45.8	1417	NC-RO-142.000	0.51	OL	material, mats, pumps, pipe
Rockingham, NC	45.8	1418	NC-RO-142.000	0.17	FW	material, mats, pumps, pipe
Rockingham, NC	45.8	1419	NC-RO-142.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	46.1	1420	NC-RO-143.000	0.48	AG, OL	materials, pipe, equipment, parking
Rockingham, NC	46.3	1421	NC-RO-143.000	0.39	FW, AG, OL	materials, pipe, equipment
Rockingham, NC	46.4	1422	NC-RO-146.100	0.23	FW	materials, pipe, equipment
Rockingham, NC	46.4	1423	NC-RO-146.100	0.30	FW	material, mats, pumps, pipe
Rockingham, NC	46.5	1423A	NC-RO-146.100	0.23	OL	material, mats, pumps, pipe
Rockingham, NC	46.7	1426	NC-RO-148.500	1.29	FW, AG, OL	materials, pipe, equipment, parking
Rockingham, NC	47.0	1427	NC-RO-148.500	0.23	FW	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	47.0	1428	NC-RO-148.500	0.16	FW	material, mats, pumps, pipe
Rockingham, NC	47.0	1429	NC-RO-149.000	0.48	OL	material, mats, pumps, pipe
Rockingham, NC	47.1	1431	NC-RO-149.000	0.76	FW, OL	materials, pipe, equipment
Rockingham, NC	47.3	1432	NC-RO-153.000	0.42	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking
Rockingham, NC	47.4	1433	NC-RO-153.000	0.17	FW	material, mats, pumps, pipe
Rockingham, NC	47.4	1434	NC-RO-153.000	0.15	FW	material, mats, pumps, pipe
Rockingham, NC	47.5	1435	NC-RO-154.000	0.32	FW	material, mats, pumps, pipe
Rockingham, NC	47.6	1436	NC-RO-154.000	0.56	FW	material, mats, pumps, pipe
Rockingham, NC	47.6	1437	NC-RO-154.000	0.58	FW	material, mats, pumps, pipe
Rockingham, NC	47.7	1438	NC-RO-154.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	47.7	1438A	NC-RO-155.000	0.21	FW	material, mats, pumps, pipe
Rockingham, NC	47.8	1439	NC-RO-155.000	0.06	FW	materials, pipe, equipment
Rockingham, NC	47.8	1440	NC-RO-155.000	0.57	FW	materials, pipe, equipment
Rockingham, NC	47.9	1441	NC-RO-155.000	0.06	FW	materials, pipe, equipment
Rockingham, NC	47.9	1442	NC-RO-155.000	0.40	FW	materials, pipe, equipment
Rockingham, NC	48.2	1443	NC-RO-156.000	1.50	AG	materials, pipe, equipment
Rockingham, NC	48.4	1444	NC-RO-157.000	0.35	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	48.4	1445	NC-RO-156.000	0.26	FW, AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	48.4	1446	NC-RO-160.000	0.23	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	48.6	1447	NC-RO-160.000	0.22	FW, AG, OL	Staging and storage of materials, equipment and timber mats for wetland crossings.

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	48.6	1448	NC-RO-162.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	48.7	1449	NC-RO-162.000	0.29	FW, CI	material, mats, pumps, pipe
Rockingham, NC	48.7	1450	NC-RO-162.000	0.46	FW, OL	material, mats, pumps, pipe
Rockingham, NC	49.1	1451	NC-RO-162.000	0.20	FW, RD	material, pumps, mats, pipe, boring equipment
Rockingham, NC	49.1	1452	NC-RO-165.000	0.47	OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	49.2	1454	NC-RO-165.000	0.31	FW, OL	Staging and storage of materials, equipment and timber mats for wetland crossings. Also will be utilized for large truck turnaround and employee parking.
Rockingham, NC	49.5	1456	NC-RO-168.000	0.51	OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	49.5	1457	NC-RO-169.000	0.32	FW	material, pumps, mats, pipe, boring equipment
Rockingham, NC	49.6	1458	NC-RO-169.000	0.39	FW	materials, pipe, equipment
Rockingham, NC	49.7	1459	NC-RO-170.000	0.40	FW, OL	materials, pipe, equipment
Rockingham, NC	49.8	1460	NC-RO-171.000	0.32	FW, OL	Staging and storage of materials, equipment and turn around for large trucks.
Rockingham, NC	49.8	1461	NC-RO-171.000	0.46	FW	material, mats, pumps, pipe
Rockingham, NC	50.0	1462	NC-RO-173.000	0.61	FW, OL	material, mats, pumps, pipe
Rockingham, NC	50.2	1462A	NC-RO-174.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	50.3	1463	NC-RO-175.000	0.46	FW, OL	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking
Rockingham, NC	50.7	1463A	NC-RO-179.000	0.46	FW, OL	material, mats, pumps, pipe
Rockingham, NC	51.2	1464	NC-RO-181.000	0.25	FW, AG	material, mats, pumps, pipe
Rockingham, NC	51.3	1465	NC-RO-181.000	0.62	OL, AG	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Rockingham, NC	51.4	1466	NC-RO-181.000	0.52	FW, OL, AG	Staging and storage of materials, equipment and timber mats for wetland crossing. Area may also be used as turnaround for large trucks.
Rockingham, NC	51.6	1467	NC-RO-181.000	0.74	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	51.7	1469	NC-RO-183.000	0.52	AG	material, pumps, mats, pipe, boring equipment
Rockingham, NC	52.0	1472	NC-RO-184.000	0.50	FW, OL	material, pumps, mats, pipe, boring equipment
Rockingham, NC	52.1	1473	NC-RO-185.000	0.23	FW	material, mats, pumps, pipe
Rockingham, NC	52.2	1474	NC-GU-001.000	0.46	FW, OL	Staging and storage of materials, equipment and timber mats for wetland crossing. Area may also be used as turnaround for large trucks.
Rockingham, NC	52.3	1475	NC-GU-001.000	0.68	FW, OL	Staging and storage of materials, equipment and timber mats for wetland crossing. Area may also be used as turnaround for large trucks
Rockingham, NC	52.4	1475A	NC-GU-001.000	0.11	FW, AG	material, mats, pumps, pipe
Rockingham, NC	52.6	1478	NC-RO-186.000	0.41	FW, OL, CI	materials, pipe, equipment
Alamance, NC	52.6	1478	NC-AL-000.005	0.14	FW, OL	materials, pipe, equipment
Alamance, NC	52.7	1480	NC-AL-000.005	0.33	FW	materials, pipe, equipment
Alamance, NC	52.7	1481	NC-AL-000.005	0.17	FW	material, mats, pumps, pipe
Alamance, NC	52.8	1482	NC-AL-000.015	0.28	FW, RD	material, mats, pumps, pipe
Alamance, NC	52.9	1483	NC-AL-000.020	0.19	FW	materials, pipe, equipment
Alamance, NC	53.0	1484	NC-AL-000.045	0.52	FW, OL, RD	Staging and storage of materials and equipment for road crossing.
Alamance, NC	53.1	1485	NC-AL-000.050	0.62	FW, AG	material, pumps, mats, pipe, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	53.3	1486	NC-AL-000.055	0.57	FW, OL, AG	Staging and storage of materials and equipment for road crossing.
Alamance, NC	53.3	1487	NC-AL-000.065	0.23	FW, SC	material, pumps, mats, pipe, boring equipment
Alamance, NC	53.5	1489	NC-AL-000.065	0.31	FW, SC, RD	materials, pipe, equipment
Alamance, NC	53.6	1492	NC-AL-000.065	0.46	SC, RD	materials, pipe, equipment
Alamance, NC	53.8	1493	NC-AL-003.000	0.52	FW, OL, AG	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks.
Alamance, NC	53.9	1494	NC-AL-005.000	0.46	FW, OL	material, mats, pumps, pipe
Alamance, NC	54.1	1496	NC-AL-005.000	0.47	AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	54.1	1497	NC-AL-006.000	0.47	AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	54.3	1498	NC-AL-006.000	0.54	AG	material, pipe, equipment, parking.
Alamance, NC	54.4	1499	NC-AL-006.000	0.82	FW, AG	material, mats, pumps, pipe
Alamance, NC	54.6	1500	NC-AL-007.000	0.78	FW	material, mats, pumps, pipe
Alamance, NC	54.7	1502	NC-AL-007.000	0.63	FW, AG	material, mats, pumps, pipe
Alamance, NC	54.9	1503	NC-AL-008.000	0.46	OL, AG	material, mats, pumps, pipe
Alamance, NC	55.0	1504	NC-AL-009.000	0.43	FW	material, mats, pumps, pipe
Alamance, NC	55.0	1505	NC-AL-009.000	0.13	AG, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	55.1	1506	NC-AL-009.000	0.39	AG, FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	55.1	1507	NC-AL-010.000	0.27	AG	materials, pipe, equipment
Alamance, NC	55.2	1508	NC-AL-010.000	0.46	OL, AG	material, mats, pumps, pipe
Alamance, NC	55.3	1509	NC-AL-010.000	0.47	FW	material, mats, pumps, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	55.5	1511	NC-AL-018.000	0.99	FW, AG,	Staging and storage of materials, equipment and timber mats for wetland crossing.
Alamance, NC	55.7	1514	NC-AL-022.000	0.32	FW	material, pumps, mats, pipe, boring equipment
Alamance, NC	55.8	1515	NC-AL-022.000	1.03	FW, AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	56.0	1516	NC-AL-025.000	0.46	FW, AG	materials, pipe, equipment
Alamance, NC	56.3	1518	NC-AL-025.000	0.54	OL, FW, AG	materials, pipe, equipment
Alamance, NC	56.3	1519	NC-AL-027.000	0.13	FW	material, pumps, mats, pipe, boring equipment
Alamance, NC	56.4	1521	NC-AL-028.000	0.09	FW	material, pumps, mats, pipe, boring equipment
Alamance, NC	56.6	1522	NC-AL-028.000	0.20	FW	material, mats, pumps, pipe, equipment
Alamance, NC	56.7	1524	NC-AL-028.000	0.46	OL, FW, AG	material, mats, pumps, pipe, equipment
Alamance, NC	56.8	1524A	NC-AL-033.000	0.22	OL, FW	material, mats, pumps, pipe, equipment
Alamance, NC	56.9	1526	NC-AL-036.000	0.65	AG	material, mats, pumps, pipe, equipment
Alamance, NC	57.0	1527	NC-AL-037.000	0.12	FW	material, mats, pumps, pipe, equipment
Alamance, NC	57.1	1529	NC-AL-039.000	0.49	FW	material, mats, pumps, pipe, equipment
Alamance, NC	57.3	1530	NC-AL-039.000	0.05	RD	materials, pipe, equipment
Alamance, NC	57.3	1531	NC-AL-039.000	0.38	FW, OL	materials, pipe, equipment
Alamance, NC	57.4	1532	NC-AL-041.000	0.45	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	57.5	1533	NC-AL-042.000	0.15	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	57.5	1533A	NC-AL-042.000	0.61	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	57.6	1533B	NC-AL-043.000	0.46	FW, OL, AG	material, mats, pumps, pipe, equipment
Alamance, NC	57.7	1535	NC-AL-043.000	0.41	FW, OL	Staging and storage of materials, equipment and turn around for large trucks.
Alamance, NC	57.8	1536	NC-AL-043.000	0.22	RD	material, pumps, mats, pipe, boring equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	57.8	1537	NC-AL-044.000	0.24	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	57.9	1538	NC-AL-046.000	0.34	OL	material, mats, pumps, pipe, equipment
Alamance, NC	57.9	1539	NC-AL-046.000	0.15	OL	material, mats, pumps, pipe, equipment
Alamance, NC	58.1	1540	NC-AL-046.000	0.46	OL	material, mats, pumps, pipe, equipment
Alamance, NC	58.3	1540A	NC-AL-050.000	0.41	OL	materials, pipe, equipment
Alamance, NC	58.4	1541	NC-AL-050.000	0.27	FW, OL	materials, pipe, equipment
Alamance, NC	58.6	1542	NC-AL-051.000	0.23	FW	material, mats, pumps, pipe, equipment
Alamance, NC	58.6	1543	NC-AL-051.000	0.23	FW	material, mats, pumps, pipe, equipment
Alamance, NC	58.7	1544	NC-AL-052.000	0.23	FW	material, mats, pumps, pipe, equipment
Alamance, NC	58.7	1545	NC-AL-052.000	0.21	FW	material, mats, pumps, pipe, equipment
Alamance, NC	58.8	1546	NC-AL-052.000	0.41	FW, OL	Staging and storage of materials, equipment and turn around for large trucks.
Alamance, NC	59.1	1548	NC-AL-054.000	0.44	FW, OL, RD	material, pumps, mats, pipe, boring equipment
Alamance, NC	59.1	1549	NC-AL-054.000	0.34	FW, RD	material, pumps, mats, pipe, boring equipment
Alamance, NC	59.2	1550	NC-AL-058.000	0.32	OL, RD	material, pumps, mats, pipe, boring equipment
Alamance, NC	59.3	1551	NC-AL-057.000	0.41	FW	materials, pipe, equipment
Alamance, NC	59.6	1552	NC-AL-064.000	0.39	FW, OL	materials, pipe, equipment
Alamance, NC	59.6	1553	NC-AL-064.000	0.49	FW, OL	materials, pipe, equipment
Alamance, NC	59.7	1554	NC-AL-064.000	0.26	FW, OL	material, mats, pumps, pipe, equipment
Alamance, NC	60.0	1555	NC-AL-066.000	0.64	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	60.0	1556	NC-AL-067.000	0.49	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	60.2	1557	NC-AL-068.000	0.40	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	60.4	1558	NC-AL-070.000	0.46	FW, OL	materials, pipe, equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	60.7	1559	NC-AL-075.000	0.23	FW	material, mats, pumps, pipe, equipment
Alamance, NC	60.7	1560	NC-AL-075.000	0.23	FW	material, mats, pumps, pipe, equipment
Alamance, NC	60.8	1561	NC-AL-074.000	0.23	OL	material, mats, pumps, pipe, equipment
Alamance, NC	61.1	1561A	NC-AL-076.100.AR	2.04	AG	materials, pipe, equipment
Alamance, NC	61.4	1562	NC-AL-077.000	0.22	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	61.4	1563	NC-AL-081.000	0.35	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	61.4	1564	NC-AL-081.000	0.45	FW, OL, AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	61.4	1565	NC-AL-081.000	0.38	OL, AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	61.5	1566	NC-AL-081.000	0.37	OL, AG	materials, pipe, equipment
Alamance, NC	61.7	1567	NC-AL-081.000	0.23	FW, OL	materials, pipe, equipment
Alamance, NC	61.8	1568	NC-AL-081.000	0.53	OL	material, mats, pumps, pipe, equipment
Alamance, NC	62.2	1569	NC-AL-084.000	0.39	FW, OL, AG	materials, pipe, equipment
Alamance, NC	62.2	1569A	NC-AL-084.000	0.37	AG	materials, pipe, equipment
Alamance, NC	62.4	1571	NC-AL-085.000	0.54	FW, OL	material, mats, pumps, pipe, equipment
Alamance, NC	62.5	1572	NC-AL-086.000	0.27	OL	material, mats, pumps, pipe, equipment
Alamance, NC	62.6	1573	NC-AL-086.000	0.23	OL	material, mats, pumps, pipe, equipment
Alamance, NC	62.7	1574	NC-AL-086.000	0.20	OL	material, mats, pumps, pipe, equipment
Alamance, NC	62.8	1575	NC-AL-089.000	0.58	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	62.8	1576	NC-AL-093.000	0.24	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	63.0	1577	NC-AL-093.000	0.41	FW	material, mats, pumps, pipe, equipment
Alamance, NC	63.1	1580	NC-AL-096.000	0.41	FW	material, mats, pumps, pipe, equipment
Alamance, NC	63.2	1581	NC-AL-097.000	0.39	FW, AG	material, mats, pumps, pipe, equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	63.4	1582	NC-AL-101.000.AR	0.64	FW, OL, AG	Staging and storage of materials and equipment for HDD. Area may also be used as turnaround for large trucks.
Alamance, NC	63.8	1584	NC-AL-103.000	1.15	FW, OL, SC	Staging and storage of materials and equipment for HDD. Area may also be used as turnaround for large trucks
Alamance, NC	63.8	1585	NC-AL-104.000	0.46	FW	material, mats, pumps, pipe, equipment
Alamance, NC	63.9	1587	NC-AL-103.000	0.19	FW, SC	material, mats, pumps, pipe, equipment
Alamance, NC	64.0	1588	NC-AL-103.000	0.33	FW, SC	material, mats, pumps, pipe, equipment
Alamance, NC	64.4	1588A	MVF-NC-AL-002.000	0.23	FW	material, mats, pumps, pipe, equipment
Alamance, NC	64.5	1588B	MVF-NC-AL-004.000	0.23	FW	material, mats, pumps, pipe, equipment
Alamance, NC	64.8	1588C	MVF-NC-AL-005.000	0.29	FW	material, pumps, mats, pipe, boring equipment
Alamance, NC	64.8	1588D	MVF-NC-AL-005.000	0.29	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	64.8	1588E	MVF-NC-AL-007.000	0.38	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	64.8	1588F	MVF-NC-AL-007.000	0.10	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	65.2RR	1588FF	MVF-NC-AL-007.000	0.43	OL	material, pipe, equipment
Alamance, NC	65.2RR	1588G	MVF-NC-AL-007.000	0.52	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	65.3RR	1588H	MVF-NC-AL-007.000	0.27	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	65.3RR	1588I	MVF-NC-AL-012.000.ABU	0.07	FW, OL, AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	65.3RR	1588J	MVF-NC-AL-011.000	0.33	OL, AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	65.5RR	1588JJ	MVF-NC-AL-011.000	0.35	FW, AG	material, pipe, equipment
Alamance, NC	65.5RR	1588K	MVF-NC-AL-013.000	0.80	FW, OL, WL	material, mats, pipe, equipment
Alamance, NC	65.6	1588L	NC-AL-119.000	0.46	FW, OL	material, mats, pumps, pipe, equipment

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	66.1	1588M	FA34-AL-001.000	0.23	AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.1	1588N	FA34-AL-001.000	0.21	AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.1	1588O	FA3-AL-003.000	0.24	AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.1	1588P	FA3-AL-002.000	0.22	OL, AG	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.2	1588Q	FA3-AL-003.000	0.58	RD, OL, AG	materials, pipe, equipment
Alamance, NC	66.4	1588R	FA3-AL-005.000	0.33	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.4	1588S	FA3-AL-005.000	0.32	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.4	1588T	FA3-AL-006.000	0.25	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.4	1588U	FA3-AL-006.000	0.27	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	66.7	1588V	FA3-AL-009.000	0.51	OL	materials, pipe, equipment
Alamance, NC	66.7	1588W	FA3-AL-010.000	0.74	FW, OL	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking.
Alamance, NC	66.8	1588X	NC-AL-128.000	0.20	FW, OL	materials, pipe, equipment
Alamance, NC	66.8	1588Y	NC-AL-128.000	0.46	FW, OL	material, pumps, mats, pipe
Alamance, NC	67.3	1588Z	NC-AL-128.000	0.46	FW	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking.
Alamance, NC	67.6	1619	NC-AL-135.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	67.6	1619A	NC-AL-135.000	0.20	FW	material, pumps, mats, pipe
Alamance, NC	67.6	1619B	NC-AL-137.000	0.20	FW, OL	material, pumps, mats, pipe
Alamance, NC	67.6	1620	NC-AL-137.000	0.23	FW, OL	material, pumps, mats, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	68.0	1621	NC-AL-139.000	0.78	FW, OL	materials, pipe, equipment
Alamance, NC	68.0	1622	NC-AL-139.000	0.69	FW, OL	materials, pipe, equipment
Alamance, NC	68.1	1622A	NC-AL-141.000	0.12	FW	material, pumps, mats, pipe
Alamance, NC	68.1	1623	NC-AL-141.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	68.1	1623A	NC-AL-142.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	68.1	1624	NC-AL-142.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	68.2	1625	NC-AL-142.000	0.45	FW, OL, RD	materials, pipe, equipment
Alamance, NC	68.2	1627	NC-AL-142.000	0.22	FW	materials, pipe, equipment
Alamance, NC	68.2	1627A	NC-AL-143.000	0.06	OL	materials, pipe, equipment
Alamance, NC	68.3	1628	NC-AL-143.000	0.23	FW, OL	materials, pipe, equipment
Alamance, NC	68.3	1629	NC-AL-143.000	0.20	FW	material, pumps, mats, pipe
Alamance, NC	68.3	1630	NC-AL-143.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	68.3	1631	NC-AL-143.000	0.20	FW	material, pumps, mats, pipe
Alamance, NC	68.4	1632	NC-AL-143.000	0.22	FW, SC	material, pumps, mats, pipe
Alamance, NC	68.4	1633	NC-AL-143.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	68.4	1634	NC-AL-143.000	0.22	FW	material, pumps, mats, pipe
Alamance, NC	68.5	1635	NC-AL-145.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	68.6	1636	NC-AL-144.000	0.23	FW, OL	material, pumps, mats, pipe
Alamance, NC	68.6	1637	NC-AL-144.000	0.11	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	68.7	1639	NC-AL-148.000	0.29	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	68.8	1640	NC-AL-148.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	68.8	1641	NC-AL-148.000	0.22	FW	material, pumps, mats, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	68.8	1643	NC-AL-148.000	0.08	FW, OL	material, pumps, mats, pipe
Alamance, NC	68.9	1644	NC-AL-148.000	0.48	FW, OL	material, pumps, mats, pipe
Alamance, NC	68.9	1645	NC-AL-148.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	69.0	1646	NC-AL-149.000	0.52	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.0	1647	NC-AL-149.000	0.18	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.0	1648	NC-AL-149.000	0.53	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.1	1649	NC-AL-150.000	0.10	FW, RD	material, pumps, mats, pipe
Alamance, NC	69.2	1650	NC-AL-151.000	0.29	OL	material, pumps, mats, pipe
Alamance, NC	69.3	1651	NC-AL-164.000.ABU	0.26	FW	material, pumps, mats, pipe
Alamance, NC	69.4	1652	NC-AL-161.000	0.17	FW, OL	material, pumps, mats, pipe
Alamance, NC	69.5	1653	NC-AL-166.000	0.50	FW	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks.
Alamance, NC	69.7	1653A	NC-AL-179.000.ABU	0.93	FW, OL, RD, CI, WL	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.7	1653B	NC-AL-176.000.ABU	0.32	CI	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.8	1653C	NC-AL-180.000.ABU	0.40	FW, OL, RD	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.8	1653D	NC-AL-183.000.ABU	0.45	FW, OL, CI	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.8	1653E	NC-AL-184.000	0.26	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	69.9	1653F	NC-AL-184.000	0.24	FW	materials, pipe, equipment
Alamance, NC	70.2	1661	NC-AL-184.000	0.20	FW	material, pumps, mats, pipe
Alamance, NC	70.3	1662	NC-AL-186.000	0.20	FW, OL	material, pumps, mats, pipe
Alamance, NC	70.4	1663	NC-AL-186.000	0.20	FW	material, pumps, mats, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	70.4	1664	NC-AL-188.000	0.20	FW	material, pumps, mats, pipe
Alamance, NC	70.6	1665	NC-AL-188.000	0.20	FW	material, pumps, mats, pipe
Alamance, NC	70.7	1666	NC-AL-188.000	0.20	FW	material, pumps, mats, pipe
Alamance, NC	70.7	1667	NC-AL-189.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	70.8	1668	NC-AL-189.000	0.57	FW, OL	material, pumps, mats, pipe
Alamance, NC	70.9	1669	NC-AL-191.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	70.9	1670	NC-AL-191.000	0.59	FW, OL	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking
Alamance, NC	71.0	1672	NC-AL-191.000	0.19	FW	material, pumps, mats, pipe, boring equipment
Alamance, NC	71.0	1674	NC-AL-191.100.AR	0.09	OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	71.1	1675	NC-AL-191.000	0.23	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	71.3	1676	NC-AL-191.000	0.50	FW	Staging and storage of materials, equipment and timber mats for road crossing.
Alamance, NC	71.3	1677	NC-AL-191.000	0.51	FW	material, pumps, mats, pipe, boring equipment
Alamance, NC	71.4	1678	NC-AL-192.000	0.71	FW, OL	material, pumps, mats, pipe, boring equipment
Alamance, NC	71.7	1679	NC-AL-192.000	0.60	FW, OL	material, pumps, mats, pipe
Alamance, NC	71.8	1680	NC-AL-193.000	0.50	FW	material, pumps, mats, pipe
Alamance, NC	71.9	1681	NC-AL-194.000	0.57	FW, OL	materials, pipe, equipment
Alamance, NC	72.0	1683	NC-AL-194.000	0.24	FW, OL	materials, pipe, equipment
Alamance, NC	72.1	1684	NC-AL-199.000	0.21	FW, OL	material, pumps, mats, pipe
Alamance, NC	72.2	1685	NC-AL-196.000	0.23	FW	material, pumps, mats, pipe

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
Alamance, NC	72.2	1686	NC-AL-197.000	0.36	FW, OL	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks.
Alamance, NC	72.3	1680A	NC-AL-198.000	0.26	FW	materials, pipe, equipment
Alamance, NC	72.4	1688	NC-AL-199.000	1.00	FW, OL	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking.
Alamance, NC	72.5	1688A	NC-AL-199.000	0.13	FW	material, pumps, mats, pipe
Alamance, NC	72.6	1688B	NC-AL-199.000	0.23	FW	material, pumps, mats, pipe
Alamance, NC	72.7	1689	NC-AL-200.000	0.23	FW	materials, pipe, equipment
Alamance, NC	72.8	1689A	NC-AL-204.000	0.15	FW, RD	materials, pipe, equipment
Alamance, NC	72.9	1690	NC-AL-207.000	0.21	FW, OL	material, pumps, mats, pipe, boring equipment, parking
Alamance, NC	72.9	1691	NC-AL-207.000	0.06	FW, OL, RD	material, pumps, mats, pipe, boring equipment, parking
Alamance, NC	73.0	1692	NC-AL-210.000	3.55	OL, CI, WL	material, pumps, mats, pipe, boring equipment, parking
Alamance, NC	73.0	1692A	NC-AL-210.000	0.69	OL, CI, WL	material, pumps, mats, pipe, boring equipment
			Total ATWS Acres Pipeline c/	**263.50**		
Lambert Compressor Station & Interconnect / MLV 1						
Pittsylvania, VA	0.4	1001C	VA-PI-002.000, VA-PI-002.000, VA-PI-001.200.AR	0.90	FW, AG, OL	equipment, parking, materials, turn around for unload of materials, pipe, fab yard.
Pittsylvania, VA	0.4	1001D	VA-PI-002.000	0.77	FW, AG, OL	pipe, materials, parking, work trailers,
Pittsylvania, VA	0.0	1001E	VA-PI-002.000	7.10	FW, AG, OL	parking, pipe storage, material storage

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Additional Temporary Workspace Areas Associated with Construction of MVP Southgate Project

County State	Milepost	Name ID Number a/	Ownership	Area (Acres)	Current Land Use b/	Purpose
LN 3600 Interconnect						
Rockingham, NC	28.0	1224A	NC-RO-006.000	2.02	OL, AG, WL	material, mats, pipe
Rockingham, NC	28.1	1224B	NC-RO-006.000	1.79	OL, SC	materials, pipe, equipment
Rockingham, NC	28.2	1229	NC-RO-006.000	0.30	FW, OL	materials, pipe, equipment
T-15 Dan River Interconnect / MLV 4						
Rockingham, NC	30.4	1249	NC-RO-014.000	4.34	OL, WL, AG	Staging and for materials, equipment and drill support Area may also be used for contractor parking.
Rockingham, NC	30.4	1251	NC-RO-016.000	0.06	OL, WL	material, mats, pumps, pipe
T-21 Haw River Interconnect / MLV 8						
Alamance, NC	73.1RR	1692B	NC-AL-210.000	0.71	OL	material, pumps, mats, pipe
Alamance, NC	73.2RR	1692C	NC-AL-210.000	0.02	OL	material, pumps, mats, pipe, boring equipment, parking
Alamance, NC	73.2RR	1692D	NC-AL-210.000	0.07	OL	material, pumps, mats, pipe, boring equipment, parking
			Total ATWS Acres Aboveground Facilities c/	**18.09**		

Note:

Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

a/ Includes additional temporary workspace ("ATWS") areas for the H-605 pipeline, the H-650 pipeline, and aboveground facilities.

b/ AG = Agricultural; CI = Commercial / Industrial; FW = Upland Forest / Woodland; OL = Upland Open Land; RD = Residential; SC = Silviculture; WL = Wetland.

c/ Totals may not equal the sum of addends due to rounding. Addends consists of 6-decimal digits.

REVISED Appendix 1-E1

Existing Utility Corridors Adjacent to the MVP Southgate Project

Begin MP	End MP	Name	Type	Distance (Miles)	Off-Set between Pipe and Edge of Right-of-way	Construction Right-of-way Overlap
H-605 Pipeline						
0.0	0.0	Mountain Valley Pipeline	Pipeline Transmission	0.0	20	125
0.3	0.4	Williams Transco	Pipeline Transmission	0.1	20	150
H-650 Pipeline						
0.1	3.4	Williams Transco	Pipeline Transmission	3.3	25	15
4.4	5.0	Williams Transco	Pipeline Transmission	0.6	25	15
5.3	9.2	Williams Transco	Pipeline Transmission	4.0	25	15
9.4	9.7	Williams Transco	Pipeline Transmission	0.3	25	15
10.1	11.0	Williams Transco	Pipeline Transmission	0.9	25	15
11.5	11.7	Williams Transco	Pipeline Transmission	0.2	25	15
11.8	13.1	Williams Transco	Pipeline Transmission	1.2	25	15
14.1	14.7	Williams Transco	Pipeline Transmission	0.6	25	15
15.6	15.9	Williams Transco	Pipeline Transmission	0.3	25	15
16.0	16.5	Williams Transco	Pipeline Transmission	0.5	25	15
17.5	26.1	Williams Transco	Pipeline Transmission	8.6	25	15
26.1	29.3	Williams Transco	Pipeline Transmission	3.2	25	15
30.0	30.7	Williams Transco	Pipeline Transmission	0.8	25	15
31.7	32.0	Williams Transco	Pipeline Transmission	0.3	25	15
32.1	32.8	Williams Transco	Pipeline Transmission	0.7	25	15
33.2	35.4	Duke Power Co	Electric Transmission	2.2	0	15
37.8	38.0	Williams Transco	Pipeline Transmission	0.2	25	15
38.3	38.5	Duke Power Co	Electric Transmission	0.3	0	15
38.9	39.0	Duke Power Co	Electric Transmission	0.2	0	15
40.7	40.7	Duke Power Co	Electric Transmission	0.1	0	15
40.8	41.6	Duke Power Co	Electric Transmission	0.8	0	15
41.7	41.9	Duke Power Co	Electric Transmission	0.2	0	15
42.6	43.0	Duke Power Co	Electric Transmission	0.4	0	15
44.1	44.8	Duke Power Co	Electric Transmission	0.7	0	35
45.5	45.7	Duke Power Co	Electric Transmission	0.2	0	35
49.1	52.3	Duke Power Co	Electric Transmission	3.2	0	35
53.1	55.0	Duke Power Co	Electric Transmission	2.0	0	35
55.6	57.4	Duke Power Co	Electric Transmission	1.8	0	35
57.7	57.9	Duke Power Co	Electric Transmission	0.2	0	15
58.2	58.2	Duke Power Co	Electric Transmission	0.1	0	35
59.6	60.1	Williams Transco	Pipeline Transmission	0.5	0	15

REVISED Appendix 1-E2 Deviations from Existing Corridors Along the MVP Southgate Project			
Begin MP	**End MP**	**Distance (Miles)**	**Reasons for Deviation**
H-605 Pipeline			
0.0	0.3	0.3	Location of compressor station
0.4	0.5	0.1	Location of compressor station
H-650 Pipeline			
0.0	0.1	0.1	Terrain and location of pipeline starting point
3.4	4.4	1.0	Pond, home site
5.0	5.3	0.3	Large stream & Wetland
9.2	9.4	0.1	Existing pipeline facility
9.7	10.1	0.4	Avoid sensitive resource area and less impact to stream
11.0	11.5	0.5	Terrain, stream
11.7	11.8	0.2	Avoid sensitive resource area
13.1	14.1	1.04	Multiple Homes, terrain
14.7	15.6	0.9	Home site, pond
15.9	16.0	0.1	Avoid sensitive resource area
16.5	17.5	1.0	Road crossing, home sites
29.3	30.0	0.7	Terrain
30.7	31.7	1.0	Avoid sensitive resource area
32.0	32.1	0.1	Avoid Stream Impact
32.8	33.2	0.4	Avoid large Wetland and Stream Impacts
35.4	37.8	2.5	Pond, wetland, terrain, home sites
37.8	38.3	0.5	Terrain, home site
38.5	38.9	0.3	Terrain, large wetland, road crossing angle
39.0	40.7	1.6	Less stream impact, terrain, power substation, home sites
40.7	40.8	0.1	Terrain
41.6	41.7	0.1	Conventional Bore, crossing angle, terrain
41.9	42.6	0.6	Convenient store
43.0	44.1	1.2	Home sites, terrain
44.8	45.5	0.7	Home sites, terrain
45.7	49.1	3.4	Terrain, pond, electrical substation, home sites, solar panel farm
52.3	53.1	0.7	Buildings, homes sites
55.0	55.6	0.6	Home sites
57.4	57.7	0.4	Pond, terrain
57.9	58.2	0.3	Pond
58.2	59.5	1.3	Home sites, terrain
60.1	73.1	13.0	Ponds, home sites, terrain

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Proposed New, Improved, and Private Access Roads for the MVP Southgate Project

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
Virginia												
TAR	TA-PI-000	0.0	Existing	Temporary	Mountain Valley Pipeline, LLC	25	334	Gr	FW, OL	G, S	0.19	0.00
TAR	TA-PI-000A	0.0	Existing	Temporary	Mountain Valley Pipeline, LLC	25	12	G	CI, OL	S, W	0.02	0.00
TAR	TA-PI-000B	CY-03	Existing	Temporary	Private	25	62	A	CI	None	0.10	0.00
PAR	PA-PI-001A	0.0	Existing	Permanent	Transcontinental Gas Pipeline Company, LLC Private Mountain Valley Pipeline, LLC	25	3,028	A, G, D	AG, CI, FW, OL	S, W	1.46	1.46
PAR	PA-PI-001B	0.0	New	Permanent	Transcontinental Gas Pipeline Company, LLC Private Mountain Valley Pipeline, LLC	25	827	Gr	AG, FW, OL	S, W	0.49	0.49
PAR	PA-PI-001C	0.0	Existing	Permanent	Private	25	713	D	OL	S, W	0.34	0.34
TAR	TA-PI-003	1.2	Existing	Temporary	Private	25	2,369	G, Gr	CI, OL, RD	S, W	1.38	0.00
TAR	TA-PI-004	1.6	Existing	Temporary	Private	25	2,874	D	CI, FW, OL, RD	S, W	1.71	0.00
TAR	TA-PI-005	2.3	Existing	Temporary	Private	25	3,736	G, D, Gr	CI, FW, OL, OW, RD, WL	S, C, W	2.17	0.00
TAR	TA-PI-006	3.4	Existing	Temporary	Private	25	1,285	G, D, Gr	AG, CI, OL	S, C, W	0.75	0.00
TAR	TA-PI-006A	3.7RR	Existing	Temporary	Private	25	3,498	D	AG, CI, FW, OL	S, W	2.01	0.00
TAR	TA-PI-007	4.6	Existing	Temporary	Private	25	896	G, D, Gr	OL, RD	S, W	0.53	0.00
TAR	TA-PI-008	4.5	Existing	Temporary	Private	25	304	G	CI, RD	S, W	0.17	0.00
TAR	TA-PI-009	4.8	Existing	Temporary	Private	25	3,961	G	CI, FW, OL	S, W	2.28	0.00
TAR	TA-PI-011	5.1	Existing	Temporary	Private	25	5,364	D	AG, CI, FW, OL, RD, WL	S, W	3.09	0.00
TAR	TA-PI-015	5.6	Existing	Temporary	Pittsylvania County, VA	25	1,076	G	FW, OL	S, W	0.62	0.00
TAR	TA-PI-016	5.9	Existing	Temporary	Pittsylvania County, VA	25	3,461	G, Gr	CI, FW, OL	S, W	1.99	0.00
TAR	TA-PI-017	6.2	Existing	Temporary	Pittsylvania County, VA	25	823	G	CI, OL	S, W	0.51	0.00
TAR	TA-PI-018	6.8	Existing	Temporary	Private	25	1,530	D	FW, OL	S, W	0.89	0.00
PAR	PA-PI-018A	7.2	New	Permanent	Private	25	18	Gr	CI, OL	S, W	0.00	0.00
PAR	PA-PI-018B	7.4	New	Permanent	Private	25	50	Gr	CI	S, W	0.03	0.03
TAR	TA-PI-021	8.2	Existing	Temporary	Private	25	414	D	CI, FW, OL	S, W	0.25	0.00

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State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
TAR	TA-PI-022	8.5	Existing	Temporary	Private	25	2,071	D	FW, OL, RD	S, W	1.19	0.00
TAR	TA-PI-023	8.9	Existing	Temporary	Private	25	2,121	G	AG, CI, FW, OL, RD	S, W	1.23	0.00
TAR	TA-PI-024	9.1	Existing	Temporary	Private	25	1,396	G, D, Gr	AG, FW, OL	S, W	0.81	0.00
TAR	TA-PI-025	9.6	Existing	Temporary	Private	25	2,226	D, Gr	AG, CI, FW, OL	S, W	1.37	0.00
TAR	TA-PI-026B	10.3	New	Temporary	Private	25	31	D, Gr	CI, OL	S, W	0.03	0.00
PAR	PA-PI-026C	10.7	New	Permanent	Independent Timber, Inc.	25	30	Gr	OL	S, W	0.01	0.01
TAR	TA-PI-027	11.1	Existing	Temporary	Independent Timber, Inc.	25	1,590	G, D	FW, OL	S, W	0.92	0.00
PAR	PA-PI-029	12.4	Existing	Permanent	Private	25	214	G	AG, CI, OL	S	0.13	0.13
TAR	TA-PI-032	13.0	Existing	Temporary	Private	25	1,052	G	OL	S, W	0.60	0.00
TAR	TA-PI-033	13.2	Existing	Temporary	Private	25	735	G	FW, OL	S, W	0.43	0.00
TAR	TA-PI-034	13.7	Existing	Temporary	Private	25	2,643	G, D, Gr	CI, FW, OL, OW	S, W	1.53	0.00
TAR	TA-PI-035	14.1	Existing	Temporary	Private	25	4,378	D, Gr	AG, FW, OL, OW, RD	S, W	2.52	0.00
TAR	TA-PI-036	14.9	Existing	Temporary	Private	25	199	G	AG	S, W	0.11	0.00
TAR	TA-PI-037	15.2	Existing	Temporary	Private	25	1,809	G	AG, CI, OL	S, W	1.05	0.00
TAR	TA-PI-038	15.8	Existing	Temporary	Private	25	1,053	G, Gr	FW, OL, OW, RD	S, W	0.65	0.00
TAR	TA-PI-039	16	Existing	Temporary	Private	25	573	G	AG, CI, FW, OL, RD	S, W	0.34	0.00
TAR	TA-PI-041	16.7	Existing	Temporary	Private	25	639	G	FW, OL, RD	S, W	0.38	0.00
TAR	TA-PI-042	16.7	Existing	Temporary	Private	25	2,509	G, D	AG, CI, FW, OL	S, W	1.45	0.00
TAR	TA-PI-043	17.2	Existing	Temporary	Private	25	2,123	D	AG, CI, FW, OL, OW, RD	S, W	1.23	0.00
TAR	TA-PI-046	18.0	Existing	Temporary	Private	25	1,543	G, D, Gr	AG, CI, FW, OL	S, W	0.89	0.00
PAR	PA-PI-046A	18.3	New	Permanent	Private	25	24	Gr	AG, CI	S, W	0.02	0.02

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State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
TAR	TA-PI-048	18.7	Existing	Temporary	Private	25	1,289	G, D, Gr	AG, CI, FW, OL, RD	S, W	0.74	0.00
TAR	TA-PI-049	19.5	Existing	Temporary	Private	25	273	G	OL, RD	S, W	0.17	0.00
TAR	TA-PI-050	19.9	Existing	Temporary	Private	25	307	A	CI, OL	None	0.19	0.00
TAR	TA-PI-051A	20.2	Existing	Temporary	Private	25	94	D	CI, RD	S, W	0.05	0.00
TAR	TA-PI-052	20.4	Existing	Temporary	Private	25	2,871	D	AG, CI, FW, OL	S, W, C	1.66	0.00
PAR	PA-PI-053	21.1	Existing	Permanent	Private	25	744	G, Gr	OL, RD	S, W	0.43	0.43
TAR	TA-PI-055	21.6	Existing	Temporary	Private	25	2,938	G, D, Gr	AG, CI, FW, OL, RD	S, W	1.71	0.00
TAR	TA-PI-061	23.0	Existing	Temporary	Danville-Pittsylvania Regional Industrial Facility Authority	25	4,103	G, D, Gr	FW, OL, OW, WL	S, W, C	2.36	0.00
TAR	TA-PI-063	24.0	Existing	Temporary	Danville-Pittsylvania Regional Industrial Facility Authority	25	2,750	G, D, Gr	CI, FW, OL, OW	S, W, C	1.59	0.00
TAR	TA-PI-064	24.6	Existing	Temporary	Danville-Pittsylvania Regional Industrial Facility Authority	25	2,669	G, D, Gr	CI, FW, OL	S, W	1.54	0.00
TAR	TA-PI-066	24.8	Existing	Temporary	Private	25	2,345	G, D, Gr	CI, FW, OL	S, W	1.38	0.00
TAR	TA-PI-067	25.1	Existing	Temporary	Private	25	1,917	G, D, Gr	FW, OL, OW, WL	S, W	1.19	0.00
TAR	TA-PI-068	26.0	Existing	Temporary	Private	25	1,202	D	FW, OL	S, W	0.23	0.00
										Virginia Subtotal:	51.08	2.91
North Carolina												
TAR	TA-PI-068	26.0	Existing	Temporary	Private	25	731	D	FW, WL	S, W	0.48	0.00
TAR	TA-RO-070	26.2	Existing	Temporary	Private	25	513	G, D, Gr	FW, OL	S, W	0.30	0.00
TAR	TA-RO-071	26.7	Existing	Temporary	Private	25	3,340	G, D	CI, FW, OL, RD	S, W	2.00	0.00
TAR	TA-RO-072	26.9	Existing	Temporary	Private	25	1,040	G	CI, FW, OL, RD	S, W	0.61	0.00
TAR	TA-RO-072A	27.0	New	Temporary	Private	25	226	Gr	AG, OL, RD	S, W	0.14	0.00
TAR	TA-RO-073	27.1	Existing	Temporary	Private	25	1,349	G, D, Gr	AG, CI, FW, OL, WL	S, W	0.80	0.00
TAR	TA-RO-073A	27.4	Existing	Temporary	Private	25	2,772	G, D, Gr	AG, CI, OL, OW, WL	S, W	1.67	0.00

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State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
TAR	TA-RO-075	27.8	Existing	Temporary	Private	25	2,206	G, D, Gr	AG, OL, WL	S, W	1.27	0.00
PAR	PA-RO-000	28.2	Existing	Permanent	Private	25	4,956	G, Gr	CI, FW, OL, WL	S, W	2.86	2.86
TAR	TA-RO-000A	CY-08	Existing	Temporary	Private	25	344	A	CI, OL	None	0.21	0.00
TAR	TA-RO-076	28.6	Existing	Temporary	Private	25	2,477	G, D	FW, OL	S, W	1.43	0.00
TAR	TA-RO-078	29.2	Existing	Temporary	Private	25	2,209	C, G, D	CI, FW, OL, RD	S, W	1.29	0.00
TAR	TA-RO-079	29.6	Existing	Temporary	Private	25	288	G, D, Gr	AG, OL	S, W	0.17	0.00
TAR	TA-RO-079A	29.6	Existing	Temporary	Private	25	1,832	G, D, Gr	OL, RD	S, W	1.06	0.00
TAR	TA-RO-080	29.9	Existing	Temporary	Private	25	3,587	G, D, Gr	AG, CI, OL, RD	S, W	2.08	0.00
TAR	TA-RO-081	30.4	New	Temporary	Private	25	17	G	OL	S, W	0.02	0.00
PAR	PA-RO-082	30.4	Existing	Permanent	Public Service Company Of North Carolina, Inc	25	161	G	CI, OL, WL	S, W	0.12	0.12
PAR	PA-RO-082A	30.4	Existing	Permanent	Public Service Company Of North Carolina, Inc	25	115	G	CI, OL	S,W	0.06	0.06
TAR	TA-RO-082A	CY-04	Existing	Temporary	Private	25	413	Gr	CI, OL	S, W	0.25	0.00
TAR	TA-RO-082C	CY-05	Existing	Temporary	Private	25	8	C	CI	None	0.02	0.00
TAR	TA-RO-082D	CY-05	Existing	Temporary	Private	25	6	A	CI	None	0.01	0.00
TAR	TA-RO-082E	CY-05	Existing	Temporary	Private	25	7	A	CI	None	0.01	0.00
TAR	TA-RO-084	31.7	New	Temporary	Private	25	93	Gr	CI, OL	S, W	0.06	0.00
TAR	TA-RO-085	32.4	Existing	Temporary	Private	25	3,670	G, D	CI, FW, OL, RD	S, W	2.12	0.00
TAR	TA-RO-086	32.5	Existing	Temporary	Private	25	370	D	OL	S, W	0.29	0.00
TAR	TA-RO-087	32.8	Existing	Temporary	Private	25	2,654	G, D, Gr	FW, OL, RD	S, W	1.54	0.00
TAR	TA-RO-088	33.6	Existing	Temporary	Private	25	1,752	G, D, Gr	CI, FW, OL, RD	S, W	1.03	0.00
TAR	TA-RO-089	34.1	Existing	Temporary	Private	25	1,812	G, Gr	CI, FW, OL, RD	S, W	1.05	0.00
TAR	TA-RO-091	34.7	Existing	Temporary	Private	25	1,001	D	FW, OL	S, W	0.58	0.00
TAR	TA-RO-092	35.4	Existing	Temporary	Private	25	867	G, D	FW, OL, RD	S, W	0.51	0.00
TAR	TA-RO-093	35.7	Existing	Temporary	Private	25	732	D	AG, CI, FW, OL	S, W	0.42	0.00
TAR	TA-RO-094	35.9	Existing	Temporary	Private	25	778	D	AG, FW, OL	S, W	0.46	0.00

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State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
TAR	TA-RO-095	36.2	Existing	Temporary	Private	25	611	G, D	AG, FW, OL	S, W	0.36	0.00
TAR	TA-RO-099	36.7	Existing	Temporary	Private	25	744	D	AG, CI, FW, RD	S, W	0.44	0.00
TAR	TA-RO-100	37.1	Existing	Temporary	Private	25	1,936	D	FW, OL	S, W	1.12	0.00
TAR	TA-RO-102	37.6	Existing	Temporary	Private	25	1,532	A, G, D, Gr	OL, RD	S, W	0.89	0.00
TAR	TA-RO-103	38.1	Existing	Temporary	Private	25	1,440	G, D	FW, OL, RD	S, W	0.87	0.00
TAR	TA-RO-104	38.6	Existing	Temporary	Private	25	352	D	CI, FW, OL	S, W	0.21	0.00
TAR	TA-RO-106	38.9	Existing	Temporary	City Of Reidsville	25	426	G	FW, OL	S, W	0.25	0.00
TAR	TA-RO-107	39.4	Existing	Temporary	Private	25	1,950	D	AG, CI, FW, OL, RD	S, W	1.13	0.00
TAR	TA-RO-108	39.6	New	Temporary	Private	25	195	Gr	FW, OL	S, W	0.12	0.00
PAR	PA-RO-109	39.7	Existing	Permanent	Private Duke Power Company	25	1,153	G	CI, OL	S, W	0.67	0.67
TAR	TA-RO-111	40.9	Existing	Temporary	Private	25	4,482	G, D, Gr	AG, CI, FW, OL, RD	S, W	2.58	0.00
TAR	TA-RO-112	41.4	Existing	Temporary	Private	25	3,433	G, D	CI, FW, OL	S, W	1.97	0.00
TAR	TA-RO-113	41.8	Existing	Temporary	Private	25	162	D, Gr	FW, OL	S, W	0.11	0.00
PAR	PA-RO-113A	41.8	Existing	Permanent	Private	25	1,982	D, Gr	FW, OL, WL	S, W	1.09	1.09
PAR	PA-RO-114A	42.2	New	Permanent	Private	25	83	Gr	CI, FW, OL	S, W	0.05	0.05
TAR	TA-RO-115	42.4	Existing	Temporary	Private	25	585	G	CI, FW, OL, RD	S, W	0.34	0.00
TAR	TA-RO-115A	43.2	New	Temporary	Private Duke Power Company	25	87	G, Gr	CI, FW, OL	S, W	0.06	0.00
TAR	TA-RO-117	43.4	New	Temporary	Private	25	44	Gr	CI, OL	S, W	0.03	0.00
TAR	TA-RO-118	43.4	New	Temporary	Private	25	148	Gr	CI, OL	S, W	0.09	0.00
TAR	TA-RO-119	43.9	Existing	Temporary	Private	25	1,889	G, D	CI, FW, OL, RD	S, W	1.11	0.00
TAR	TA-RO-122	44.1	Existing	Temporary	Private	25	1,845	G, D	CI, FW, OL, RD	S, W	1.09	0.00
TAR	TA-RO-124	44.8	Existing	Temporary	Private	25	252	D	AG, CI, FW, OL	S, W	0.15	0.00

#34 - REVISED Appendix 1-F

Proposed New, Improved, and Private Access Roads for the MVP Southgate Project

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
PAR	PA-RO-124A	44.9	New	Permanent	Private	25	27	Gr	AG, CI	S, W	0.01	0.01
TAR	TA-RO-125	45.0	New	Temporary	Private	25	227	Gr	AG, FW	S, W	0.14	0.00
TAR	TA-RO-126	45.3	Existing	Temporary	Private	25	2,268	D	AG, FW, OL, RD	S, W	1.31	0.00
TAR	TA-RO-127	46.1	Existing	Temporary	Private	25	2,143	G, D	AG, FW, OL, RD	S, W	1.23	0.00
TAR	TA-RO-129	46.8	Existing	Temporary	Private	25	1,636	G, D	AG, CI, FW, OL	S, W	0.96	0.00
TAR	TA-RO-130	47.3	Existing	Temporary	Private	25	2,200	G, D	CI, FW, OL, RD	S, W	1.27	0.00
TAR	TA-RO-131	48.2	Existing	Temporary	Private	25	1,859	G, D, Gr	AG, OL	S, W	1.08	0.00
TAR	TA-RO-133	48.6	Existing	Temporary	Duke Power Company Private	25	1,207	D, Gr	AG, CI, FW, OL	S, W	0.72	0.00
TAR	TA-RO-134	48.9	Existing	Temporary	Private	25	26	G	CI	S, W	0.03	0.00
TAR	TA-RO-135	49.2	Existing	Temporary	Private	25	446	D	CI, OL	S, W	0.27	0.00
TAR	TA-RO-136	49.5	New	Temporary	Private	25	134	Gr	OL	S, W	0.09	0.00
TAR	TA-RO-138	49.8	Existing	Temporary	Private	25	858	D, Gr	FW, OL	S, W	0.49	0.00
TAR	TA-RO-139	50.3	Existing	Temporary	Private	25	2,833	D	AG, FW, OL	S, W	1.53	0.00
TAR	TA-RO-140	51.4	Existing	Temporary	Private	25	913	D	AG, FW, OL	S, W	0.53	0.00
TAR	TA-RO-141	51.6	Existing	Temporary	Private	25	471	D	AG, OL	S, W	0.28	0.00
TAR	TA-RO-142	51.7	Existing	Temporary	Private	25	657	D	AG, CI, OL	S, W	0.39	0.00
TAR	TA-RO-144	52.2	Existing	Temporary	Private	25	1,204	D	AG, FW, OL	S, W	0.71	0.00
TAR	TA-RO-145	52.3	Existing	Temporary	Private	25	600	D	FW, OL	S, W	0.36	0.00
TAR	TA-RO-146A	52.6	Existing	Temporary	Private	25	549	G	CI, OL	S, W	0.31	0.00
TAR	TA-GU-000	CY-09	Existing	Temporary	Private	25	23	G, D	OL	S, W	0.19	0.00
TAR	TA-AL-147	53.0	Existing	Temporary	Private	25	116	D	CI, FW, OL, RD	S, W	0.08	0.00
TAR	TA-AL-149	53.3	New	Temporary	Private	25	20	Gr	CI, OL	S, W	0.02	0.00
TAR	TA-AL-152	53.5	Existing	Temporary	Private	25	483	G	OL, RD, SC	S, W	0.29	0.00
TAR	TA-AL-153	53.8	Existing	Temporary	Private	25	1,411	D	AG, OL	S, W	0.82	0.00
TAR	TA-AL-154	54.3	Existing	Temporary	Private	25	2,294	D	AG, FW	S, W	1.34	0.00
TAR	TA-AL-155	54.7	Existing	Temporary	Private	25	3,351	D	AG, FW, OL, OW	S, W	1.95	0.00

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Proposed New, Improved, and Private Access Roads for the MVP Southgate Project

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
PAR	PA-AL-155A	55.1	New	Permanent	Private	25	40	Gr	AG, OL	S, W	0.03	0.03
TAR	TA-AL-156	55.5	Existing	Temporary	Private	25	599	D	AG, FW, OL	S, W	0.34	0.00
TAR	TA-AL-157	55.6	Existing	Temporary	Private	25	427	D	FW, OL	S, W	0.25	0.00
TAR	TA-AL-159	56.3	Existing	Temporary	Private	25	224	G	CI, FW, OL	S, W	0.14	0.00
TAR	TA-AL-159B	56.8	Existing	Temporary	Private	25	212	G, D, Gr	CI, OL	S, W	0.13	0.00
TAR	TA-AL-159A	56.9	Existing	Temporary	Private	25	1,816	A, G, Gr	CI, OL	S, W	1.06	0.00
TAR	TA-AL-161	57.7	New	Temporary	Private	25	651	G, Gr	FW, OL, RD	S, W	0.37	0.00
TAR	TA-AL-162	58.1	Existing	Temporary	Private	25	1,020	Gr, D	AG, FW, OL	S, W	0.59	0.00
TAR	TA-AL-163	58.4	Existing	Temporary	Private	25	1,044	OL, G	CI, OL	S, W	0.60	0.00
PAR	PA-AL-164	58.8	Existing	Permanent	Private	25	1,068	D	CI, FW, OL	S, W	0.61	0.61
TAR	TA-AL-165	60	New	Temporary	Private	25	151	Gr	CI, OL	S, W	0.10	0.00
PAR	PA-AL-166	60.3	Existing	Permanent	Private	25	144	Gr	CI, OL	S, W	0.09	0.09
TAR	TA-AL-167	61.1	Existing	Temporary	Private	25	739	D	AG, CI, FW, OL	S, W	0.43	0.00
TAR	TA-AL-168	61.6	Existing	Temporary	Private	25	578	G, Gr	AG, CI, FW, OL	S, W	0.34	0.00
TAR	TA-AL-169	62.4	Existing	Temporary	Private	25	1,945	D	FW, OL, OW, RD, WL	S, W	1.12	0.00
TAR	TA-AL-171	63.4	Existing	Temporary	Private	25	561	D, Gr	AG, OL	S, W	0.33	0.00
TAR	TA-AL-172	63.7	New	Temporary	Private	25	2,384	Gr	CI, FW, OL, SC	S, W	1.38	0.00
PAR	PA-AL-175A	64.8	New	Permanent	Private	25	40	Gr	CI, OL	S, W	0.01	0.01
TAR	TA-AL-179A	66.7	Existing	Temporary	Private	25	3,927	G, Gr	CI, FW, OL	S, W	2.25	0.00
TAR	TA-AL-180	67.3	New	Temporary	Private	25	2,269	G, Gr	AG, CI, FW, OL, RD	S, W	1.33	0.00
TAR	TA-AL-181	68.0	Existing	Temporary	Private	25	1,546	G, D	CI, FW, OL, RD	S, W	0.89	0.00
PAR	PA-AL-181A	68.2	Existing	Permanent	Private	25	2,089	G	FW, OL, RD	S, W	1.20	1.20
TAR	TA-AL-185	68.9	Existing	Temporary	Private	25	1,586	Gr	FW, OL	S, W	0.92	0.00

#34 - REVISED Appendix 1-F

Proposed New, Improved, and Private Access Roads for the MVP Southgate Project

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions		Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
						Width (feet)	Length (feet)					
TAR	TA-AL-186	69.2	Existing	Temporary	Private	25	11	G, Gr	FW, RD	S, W	0.02	0.00
TAR	TA-AL-187	69.5	Existing	Temporary	Private	25	1,258	A, G, Gr	CI, FW, RD	S, W	0.72	0.00
TAR	TA-AL-188	70.9	Existing	Temporary	Private	25	1,702	C, D	CI, FW, OL	S, W	1.02	0.00
TAR	TA-AL-189	71.2	Existing	Temporary	Private	25	2,151	Gr	FW, OL	S, W	1.32	0.00
TAR	TA-AL-190	71.5	Existing	Temporary	Alamance Community College	25	1,512	A, G, Gr	CI, FW, OL	S, W	0.88	0.00
TAR	TA-AL-192	72.2	Existing	Temporary	Private	25	1,275	G, D, Gr	CI, FW, OL, RD	S, W	0.74	0.00
TAR	TA-AL-193	72.4	Existing	Temporary	Private	25	1,293	Gr	CI, FW, OL	S, W	0.74	0.00
PAR	PA-AL-194	73.1RR	Existing	Permanent	Transcontinental Gas Pipeline Company, LLC Public Service Company Of North Carolina, Inc. Private	25	205	G	CI, FW, OL	S	0.12	0.12
										North Carolina Subtotal:	76.11	6.92
										PROJECT TOTAL:	127.19	9.82

Note: The totals shown in this table may not equal the sum of addends due to rounding.

a/ TAR=Temporary, PAR=Permanent Access Road.

b/ Milepost (MP) at final intersection of access road with construction workspace. Approximate MP rounded to the nearest tenth.

c/ Dominant surface condition provided. A=Asphalt, C=Concrete, G=Gravel, D=Dirt, Gr=Greenfield.

d/ AG = Agricultural; CI = Commercial / Industrial; FW = Upland Forest / Woodland; OL = Upland Open Land; OW = Open Water; RD = Residential; SC = Silviculture; WL = Wetland.
Where wetlands (WL) are identified within permanent access roads, permanent impacts are not anticipated, except for PA-RO-113A which may require a FERC variance. Final groundbed locations and permanent access to groundbeds for cathodic protection will be filed with the Commission, targeting May 2019.

e/ P=Paving, G=Grading, S=Stone, C=Culverts, W=Widening, R=Realignment. No improvements to occur within WLs crossed by the access road.

f/ Does not include area overlapping with pipeline, aboveground facility, or contractor/pipe storage yard construction workspaces.

g/ Does not include area overlapping with pipeline permanent right-of-way or aboveground facility permanent facility boundary (fence line/footprint). Only PARs will have an operational area impact.

REVISED Appendix 1-J Foreign Utility Lines Crossed by the MVP Southgate Project			
State, County	**Milepost**	**Type (Gas/Electric/Other)**	**Owner**
Virginia			
Pittsylvania	0.6	Electric	Appalachian Power Co.
Pittsylvania	2.9	Electric	Appalachian Power Co.
Pittsylvania	3.0	Electric	Appalachian Power Co.
Pittsylvania	3.3	Electric	Unknown
Pittsylvania	4.3	Electric	Appalachian Power Co.
Pittsylvania	4.4	Electric	Unknown
Pittsylvania	6.1	Electric	Dominion
Pittsylvania	7.2	Fiber Optic	C & P Telephone
Pittsylvania	7.2	Electric	Danville Utilities
Pittsylvania	7.2	Electric	Danville Utilities
Pittsylvania	7.4	Water	Unknown
Pittsylvania	7.4	Electric	Unknown
Pittsylvania	9.3	Gas	Columbia Gas
Pittsylvania	9.3	Electric	Danville Utilities
Pittsylvania	10.7	Electric	Danville Utilities
Pittsylvania	10.75	Electric	Danville Utilities
Pittsylvania	10.75	Electric	Danville Utilities
Pittsylvania	10.75	Fiber Optic	C&P Telephone
Pittsylvania	10.75	Electric	Danville Utilities
Pittsylvania	12.3	Electric	Unknown
Pittsylvania	12.4	Fiber Optic	Unknown
Pittsylvania	13.2	Electric	Duke
Pittsylvania	14.9	Electric	Unknown
Pittsylvania	15.9	Electric	Unknown
Pittsylvania	15.9	Electric	Unknown
Pittsylvania	16.4	Electric	Unknown
Pittsylvania	16.7	Electric	Appalachian Power Co.
Pittsylvania	16.7	Electric	American Electric
Pittsylvania	16.7	Electric	Unknown
Pittsylvania	18.3	Electric	City of Danville
Pittsylvania	18.3	Electric	Danville Utilities
Pittsylvania	18.3	Electric	Danville Utilities
Pittsylvania	19.05	Electric	Duke Power Co
Pittsylvania	19.2	Electric	Duke Power Co
Pittsylvania	19.2	Electric	Danville Utilities
Pittsylvania	19.2	Electric	Danville Utilities
Pittsylvania	19.4	Gas	Williams Transco
Pittsylvania	19.4	Gas	Williams Transco

REVISED Appendix 1-J Foreign Utility Lines Crossed by the MVP Southgate Project			
State, County	**Milepost**	**Type (Gas/Electric/Other)**	**Owner**
Pittsylvania	19.4	Gas	Williams Transco
Pittsylvania	19.4	Gas	Williams Transco
Pittsylvania	19.5	Electric	Danville Utilities
Pittsylvania	19.5	Electric	Danville Utilities
Pittsylvania	19.6	Electric	Danville Utilities
Pittsylvania	19.6	Electric	Danville Utilities
Pittsylvania	19.9	Gas	Williams Transco
Pittsylvania	19.9	Gas	Williams Transco
Pittsylvania	19.9	Gas	Williams Transco
Pittsylvania	19.9	Gas	Williams Transco
Pittsylvania	19.9	Electric	Unknown
Pittsylvania	20.0	Electric	Unknown
Pittsylvania	20.2	Electric	Duke Power Co
Pittsylvania	22.1	Electric	Unknown
Pittsylvania	23.7	Electric	Unknown
Pittsylvania	24.7	Electric	Danville Utilities
Pittsylvania	25.95	Electric	Enerco
North Carolina			
Rockingham	26.5	Electric	Unknown
Rockingham	26.9	Electric	Unknown
Rockingham	27.0	Gas	Williams Transco
Rockingham	27.0	Gas	Williams Transco
Rockingham	27.0	Gas	Williams Transco
Rockingham	27.0	Gas	Williams Transco
Rockingham	28.3	Gas	Williams Transco
Rockingham	28.3	Gas	Williams Transco
Rockingham	28.3	Gas	Williams Transco
Rockingham	30.3	Gas	Williams Transco
Rockingham	30.5	Electric	Duke Energy Carolinas
Rockingham	30.7	Electric	Duke Energy Carolinas
Rockingham	31.6	Electric	Duke Energy Carolinas
Rockingham	31.6	Electric	Duke Energy Carolinas
Rockingham	32.0	Electric	Duke Energy Carolinas
Rockingham	34.2RR	Electric	Duke Energy Carolinas
Rockingham	34.2RR	Electric	Duke Power Co
Rockingham	34.2RR	Electric	Duke Power Co
Rockingham	34.2RR	Electric	Duke Power Co
Rockingham	35.5	Electric	Duke Power Co
Rockingham	35.7	Electric	Duke Power Co

REVISED Appendix 1-J Foreign Utility Lines Crossed by the MVP Southgate Project			
State, County	**Milepost**	**Type (Gas/Electric/Other)**	**Owner**
Rockingham	36.2	Electric	Duke Power Co
Rockingham	36.6	Electric	Duke Power Co
Rockingham	37.8	Gas	Williams Transco
Rockingham	37.8	Gas	Williams Transco
Rockingham	38.3	Electric	Duke Power Co
Rockingham	38.3	Electric	Duke Power Co
Rockingham	38.3	Electric	Duke Power Co
Rockingham	38.3	Electric	Duke Power Co
Rockingham	38.9	Electric	Duke Power Co
Rockingham	38.9	Electric	Duke Power Co
Rockingham	39.4	Electric	Duke Power Co
Rockingham	39.4	Electric	Duke Power Co
Rockingham	39.7	Electric	Unknown
Rockingham	40.1	Electric	Duke Power Co
Rockingham	40.4	Electric	Duke Power Co
Rockingham	40.4	Electric	Duke Power Co
Rockingham	41.6	Electric	Duke Power Co
Rockingham	41.6	Electric	Duke Power Co
Rockingham	41.6	Electric	Duke Power Co
Rockingham	41.6	Electric	Duke Power Co
Rockingham	41.8	Electric	Duke Power Co
Rockingham	41.8	Electric	Duke Power Co
Rockingham	41.8	Electric	Duke Power Co
Rockingham	41.8	Electric	Duke Power Co
Rockingham	41.9	Electric	Duke Power Co
Rockingham	41.9	Electric	Duke Power Co
Rockingham	41.9	Electric	Duke Power Co
Rockingham	41.9	Electric	Duke Power Co
Rockingham	42.2	Electric	Unknown
Rockingham	42.2	Fiber Optic	Unknown
Rockingham	42.2	Telephone	Unknown
Rockingham	42.2	Telephone	Unknown
Rockingham	42.2	Fiber Optic	Unknown
Rockingham	42.2	Electric	Unknown
Rockingham	44.8	Electric	Duke Power Co
Rockingham	44.8	Electric	Duke Power Co
Rockingham	44.9	Electric	Unknown
Rockingham	48.4	Electric	Unknown
Rockingham	49.1	Electric	Duke Power Co

REVISED Appendix 1-J Foreign Utility Lines Crossed by the MVP Southgate Project			
State, County	**Milepost**	**Type (Gas/Electric/Other)**	**Owner**
Rockingham	49.1	Electric	Duke Power Co
Rockingham	49.1	Electric	Duke Power Co
Rockingham	49.1	Electric	Duke Power Co
Rockingham	49.1	Electric	Duke Power Co
Rockingham	49.7	Electric	Duke Power Co
Rockingham	49.7	Electric	Duke Power Co
Rockingham	49.7	Electric	Duke Power Co
Rockingham	49.7	Electric	Duke Power Co
Rockingham	51.0	Gas	Plantation
Rockingham	52.4	Electric	Duke Power Co
Rockingham	52.4	Electric	Duke Power Co
Rockingham	52.4	Electric	Duke Power Co
Rockingham	52.4	Electric	Duke Power Co
Alamance	53.1	Electric	Unknown
Alamance	53.3	Electric	Unknown
Alamance	53.5	Electric	Duke Power Co
Alamance	53.5	Electric	Duke Power Co
Alamance	54.1	Electric	Unknown
Alamance	55.1	Electric	Unknown
Alamance	55.6	Electric	Duke Power Co
Alamance	55.6	Electric	Duke Power Co
Alamance	55.7	Electric	Altamaha EMC Power
Alamance	55.7	Electric	Duke Power Co
Alamance	56.1	Fiber Optic	AT&T
Alamance	56.4	Electric	Duke Power Co
Alamance	57.5	Electric	Unknown
Alamance	57.7	Water	Private
Alamance	57.8	Electric	Duke Power Co
Alamance	57.8	Electric	Duke Power Co
Alamance	57.8	Electric	Unknown
Alamance	57.9	Electric	Unknown
Alamance	58.0	Fiber Optic	AT&T
Alamance	58.3	Electric	Duke Power Co
Alamance	58.3	Electric	Duke Power Co
Alamance	60.0	Electric	Duke Energy Carolinas
Alamance	62.8	Electric	Unknown
Alamance	62.8	Electric	Unknown
Alamance	63.1	Electric	Unknown
Alamance	68.6	Telephone	Unknown

REVISED Appendix 1-J Foreign Utility Lines Crossed by the MVP Southgate Project			
State, County	**Milepost**	**Type (Gas/Electric/Other)**	**Owner**
Alamance	68.6	Electric	Unknown
Alamance	68.8	Electric	Duke Power Co
Alamance	69.5	Electric	Duke Power Co
Alamance	69.6	Electric	Unknown
Alamance	69.6	Electric	Unknown
Alamance	70.6	Fiber Optic	AT&T
Alamance	70.6	Fiber Optic	AT&T
Alamance	70.8	Electric	Unknown
Alamance	70.8	Electric	Unknown
Alamance	70.8	Electric	Unknown
Alamance	71.6	Pipeline	Unknown
Alamance	71.7	Pipeline	Unknown
Alamance	72.9	Electric	Unknown
Alamance	72.9	Fiber Optic	Unknown
Alamance	73.0	Gas	Unknown
Alamance	73.2RR	Gas	PSNC
Alamance	73.2RR	Gas	PSNC
Alamance	73.2RR	Gas	PSNC

MVP Southgate Project

Docket No. CP19-14-000

Attachment 1-1

Landslide Mitigation Report

March 2019

LANDSLIDE MITIGATION REPORT

Mountain Valley Pipeline, LLC

MVP Southgate - H-605 and H-650 Pipelines

Revision: 0 3/26/2019

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

This report addresses potential post-construction landslide hazards for the pipeline listed below. The pipeline route was analyzed to determine if mitigation controls installed during construction are necessary to avoid potential landslide issues following construction. Potential landslide sites were identified by a desktop analysis that considered previous landslide activity, slope steepness, and sidehill construction. MVP Design Engineering has determined that the areas that are listed in Appendix A require additional controls to maintain slope stability. A summary of the required mitigation controls can be found in ***Section 4.0*** . These controls may be edited or removed based on changing construction practices through the design of the pipeline and/or field conditions at the time of construction. A plan depicting the extents of the controls for each site can be found in ***Appendix A*** , and details for the controls are provided in ***Appendix B*** .

Name of system: Mountain Valley Pipeline, LLC
Name of pipeline: MVP Southgate - H-605 and H-650 Pipelines
Length of pipeline: 73.55 miles

2.0 DESKTOP ANALYSIS

A desktop analysis was performed for the entire length of the pipeline route to identify areas most susceptible to landslide issues. The analysis considered three critical factors:

- Previous landslide activity: LIDAR and field verification were used to determine if there is evidence of movement on slopes crossed by the project.
- Steepness of slope: Portions of the pipeline which traverse slopes with an angle of inclination of 18 degrees or greater are considered to be in a steep slope area. A slope of 18 degrees is marginally stable with a typical low strength in-situ soil and is therefore used as the threshold for this analysis. Slopes were measured using LIDAR flown for the project. The steepness of the slope is measured without regard for the orientation of the pipeline (i.e., perpendicular to the contour lines even if the pipeline is sidehill).
- Sidehill construction: If the orientation of a segment of the pipeline is parallel or near parallel to the contour lines of a slope, then the segment is considered an area of sidehill construction.

3.0 PROPOSED MITIGATION CONTROLS

The following section provides a description of proposed mitigation controls. One or a combination of controls may be utilized and shall be based on the actual field conditions encountered. The comments column in Appendix A provides suggested controls based on the desktop analysis.

3.1 Surface and Subsurface Drainage Controls

• **Trench Breaker Daylight Drain (MVP-SG-35):** The trench breaker daylight drains will prevent saturation of the trench backfill by pulling groundwater moving along the trench to the surface. A 4" perforated pipe bedded in free-draining AASHTO #57 stone and wrapped in permeable geotextile filter fabric will be placed against the upslope face of a trench breaker (perpendicular to the pipeline) at the bottom of the trench underneath the pipeline. The perforated pipe will turn 90 degrees at the low point of the trench and daylight into a riprap apron to dissipate the flow of water.

• **Cutoff Drain (MVP-SG-36A/B and MVP-SG-37):** For sidehill construction, the cutoff drain works by catching or "cutting off" groundwater as it enters the ROW. The sidehill cutoff drains is a subsurface drain constructed of a 6" perforated pipe bedded in AASHTO #57 stone and wrapped in geotextile filter fabric. The drain is placed upslope of and parallel to the pipe for the specified length before turning downslope and daylighting near the edge of the ROW into riprap to dissipate the flow of water. For downhill construction, the cutoff drain is intended to cut off groundwater flowing along the ROW at specified location. The downhill cutoff drain will be identical to the sidehill cutoff drain, except that it will be oriented perpendicular to the pipelines. In both cases, the drain pipe will be solid and surrounded by typical trench backfill for the portion crossing the pipeline trench in order to prevent the migration of water from the drain pipe into the trench.

• **Transverse Trench Drain (MVP-SG-38A/B):** These drains are to be installed within the trench at specified intervals and/or at low points of sidehill construction. They are constructed by digging a small ditch extending from the pipeline trench to the edge of the ROW. The ditch will be lined with geotextile filter fabric and a 4" perforated pipe will be laid in the ditch and surrounded with AASHTO #57 stone. The remainder of the ditch will be filled with the same type of stone, to the top of the ditch, and then covered with backfill as required for grading purposes. The drain should form a 10 ft tee within the trench against the back (uphill side) of the trench. Where this drain crosses the pipeline trench, stone backfill in the drain will only extend to just below the bottom of the pipe, after which typical trench backfill will be used.

• **Rock Lined Swale (MVP-SG-39):** A small surface drainage ditch will be constructed to efficiently convey water across the pipeline ROW and into a wooded area off the ROW and prevent surface water from seeping into the ground and causing saturation of the ROW. The drainage ditch will be lined with geotextile filter fabric overlain by 6" to 12" rock (which can be sourced from excavated spoils).

• **Riprap Natural Drains (MVP-SG-40):** Where natural drains intersect the pipeline ROW, the drain shall be restored to its original dimensions and drainage path. The drain shall be lined with geotextile filter fabric overlain by 6" to 12" rock (which can be sourced from excavated spoils).

• **Riprap Slope Breakers (MVP-SG-41)**: Slope breakers (water bars) that may experience more constant or higher peak flows may be lined with riprap to ensure their long term integrity. Slope breakers receiving riprap treatment will be lined with 3" to 6" rock (which can be sourced from excavated spoils).

• **Trench Breaker Pass-through Drain (MVP-SG-43A/B):** The pass-through trench breaker drain is intended to prevent the buildup of water behind trench breakers which could saturate the slope and cause a slide. These pass-through drains will be installed on the same slopes as the trench breaker daylight drains and will provide a way for groundwater to reach the daylight drains and ultimately be pulled to the surface. The trench breaker pass-through drains will allow water to pass through the trench breaker using two 2" PVC pipes which will be placed near the bottom of the trench breaker.

• **Brow Ditch (MVP-SG-46):** The brow ditch is a rock lined ditch intended to catch surface water runoff and divert it around a protected area of the ROW. These are typically installed in sidehill sections oriented parallel to the pipeline at the uphill edge of the ROW to catch the water flowing from upslope of the ROW. The brow ditch will eventually turn and cross the ROW to safely carry the water to an exit point at the downhill edge of the ROW.

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• **Other (Site-Specific) Drainage Controls:** Depending on the site, this may consist of either grading the area to drain surface water runoff a certain direction or relocation of existing drainage controls (e.g., culverts). Design Engineering will come up with site-specific details for these items if required.

3.2 Stabilization Controls

• **Geogrid Reinforcement (MVP-SG-42A/B/C):** In areas where the existing grade of the slope is too steep to maintain long-term stability, layers of geogrid reinforcement may be placed during backfill operations to provide additional strength to the slope.

• **Highwall Revetment (MVP-SG-44A/B):** For near vertical slopes requiring additional trench stabilization measures sakrete highwall revetment may be used. The revetment is essentially acting as a concrete retaining wall, and therefore a footing in the form of a toe key and rebar will be utilized to help stabilize the wall. The trench may be filled with sandbags or crushed rock. Design Engineering shall determine or approve all materials used. Weephole drains should be installed at specified intervals to relieve water pressure from behind the revetment.

• **Steep Slope Revetment (MVP-SG-45):** For steep slopes requiring additional trench stabilization measures, sakrete trench breakers with a sakrete or riprap revetment may be used. The trench may be filled with sandbags or crushed rock, or in some cases native material. Design Engineering shall determine or approve all materials used and the spacing of the sakrete trench breakers. All sakrete breakers shall have drains installed.

• **Other (Site-Specific) Stabilization:** Depending on the site, this may involve regrading the slope to a more stable angle or installing some sort of engineered retaining structure (soil nails, soldier pile wall, gabions, etc.). Design Engineering will come up with site-specific details for these items if required.

3.3 Additional Measures

In addition to these site-specific controls, the following practices should be applied to the entire length of the pipeline:

• **Compact Slope Breakers:** All slope breakers (water bars) shall be compacted as specified in the ESCP drawings. Compaction can be achieved via bucket tamping with a hoe. This will help ensure that water bars maintain their intended drainage and are not deformed by freeze-thaw cycles.

• **Track-In Workspaces:** All workspaces on a hillside that have had fill temporarily placed during construction and then removed for backfill operations shall be tracked in. For sidehill construction areas, special attention shall be paid to the area where the cut and fill portions of the slope meet, as this is the most likely area for cracks to form. If this area is not tracked in, water can seep into the crack and may eventually destabilize the hillside.

Note that the information contained in this report is based upon the results of the desktop analysis and field-reported areas of concern received to date. **If additional areas of concern are encountered during construction, the author of this report should be contacted for guidance.**

3.4 Construction Considerations

Design Engineering recommends that the contractor submit to MVP a description of the construction means and methods for the areas identified in this report. The purpose of this is to allow MVP to determine if temporary construction conditions could lead to a slide.

APPENDIX A: SITE SPECIFIC MITIGATION CONTROLS

Line Name	Site ID	Sidehill	Steep Slope	Previous Landslide	Downslope Resource	Distance From Downslope Resource (ft.)	Approx. Milepost	Mitigation Controls (Appendix B)	Comments
H-650	SS-01		X		Stream	87.00	5.1	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 18 degrees (32%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H650	SS-02		X		Stream	9.00	7.90	MVP-SG-35	This pipeline segment is a steep planar segment with an average slope of 26 degrees (49%). Trees are well establised, with no visible signs of slope movement. Trench breaker daylight drains will be installed in the pipeline trench to prevent an accumulation of water behind the trench breakers which could saturate the local soil.
H-650	SS-03		X		Wetland	0.00	8.60	MVP-SG-35	This segement is a steep planar segment with an average slope of 25 degrees (47%) with localized segments of 28 degrees (53%). Daylight drains will be used behind sakrete trench breakers to provide additional stability to the slope. The drains will prevent accumulation of water behind the breakers. In the event that the trench breakers are within the stream buffer, sakrete will not be used.
H-650	SS-04		X	X	Wetland	10.00	9.97	MVP-SG-35	This segment is located on a steep area with an average slope of 30 degrees (58%) and previous landslide activity. Sakrete trench breakers with daylight drains will be utilized to stabilize the trench and previous landslide activity. In the event that the trench breakers are within the stream buffer, sakrete will not be used.
H-650	SS-05		X		Wetland	10.00	10.09	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a short 20 degree (36%) slope with well established vegetation and no evidence of movement. Where trench breakers are specified, trench breaker pass through drains and daylight drains will be utilized.
H-650	SS-06		X		Stream	57.00	12.79	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-07		X		Wetland	0.00	13.48	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep planar segment with an average slope of 26 degrees (49%). Trees are well establised, with no visible signs of slope movement. Trench breaker daylight drains will be installed in the pipeline trench to prevent an accumulation of water behind the trench breakers which could saturate the local soil.
H-650	SS-08		X		Stream	0.00	17.30	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a steep area with a stream at the very base of the hill. The hill has no evidence of movement. Trench breaker pass through and daylight drains will be used to keep the trench stable
H-650	SS-09		X		Wetland	27.00	18.03	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a 20 degree (36%) slope with well established vegetation and no evidence of movement. Where trench breakers are specified, trench breaker pass through drains and daylight drains will be utilized.
H-650	SH-10	X			Stream	1500.00	22.70	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on an 10 degree (17.6%) slope. A transverse trench drain will extend through the trench and sidehill cutoff drains will be utilized where seeps occur.

Line Name	Site ID	Sidehill	Steep Slope	Previous Landslide	Downslope Resource	Distance From Downslope Resource (ft.)	Approx. Milepost	Mitigation Controls (Appendix B)	Comments
H-650	SS-11		X		Stream	792.00	22.85	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 18 degrees (32%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SS-12		X		Stream	160.00	23.27	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 19 degrees (34%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-13		X		Stream	29.00	28.80	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a planar segment with no evidence of slope movement. Trench breaker daylight and pass through drains will be utilized in this area.
H-650	SS-14		X		Stream	334.00	29.40	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 19 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-15		X		Stream	0.00	31.08	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	Planar segment that is steep going down into a creek. No evidence of movement. Alternating trench breaker pass through and daylight drains will be utilized in this area
H-650	SS-16		X		Stream	5.00	31.10	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 21 degrees (38%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SS-17		X		Stream	14.50	31.10	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 21 degrees (38%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SS-18		X		Stream	5.00	31.30	MVP-SG-35	This segment is planar and has no evidence of movement. Trench breaker daylight drains will be used at every breaker to keep the trench dry and stable.Sakrete may be used if shallow bedrock is encountered, but will not be used within the stream buffer.
H-650	SS-19		X		Stream	20.00	31.30	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is planar and extends from SS-18 on the other side of the stream bank. The area is well vegetated and there is no evidence of movement. This 23 degree (42%) slope will utilize alternating trench breaker daylight drains and pass through drains.
H-650	SH-20	X			Stream	175.00	31.70	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 10 degree (17.6%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.
H-650	SS-21		X		Stream	68.20	32.50	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is planar with an average slope of 19 degrees (34%). The area is well vegetated and has no evidence of movement. Daylight and pass through drains will be utilized on this segment.

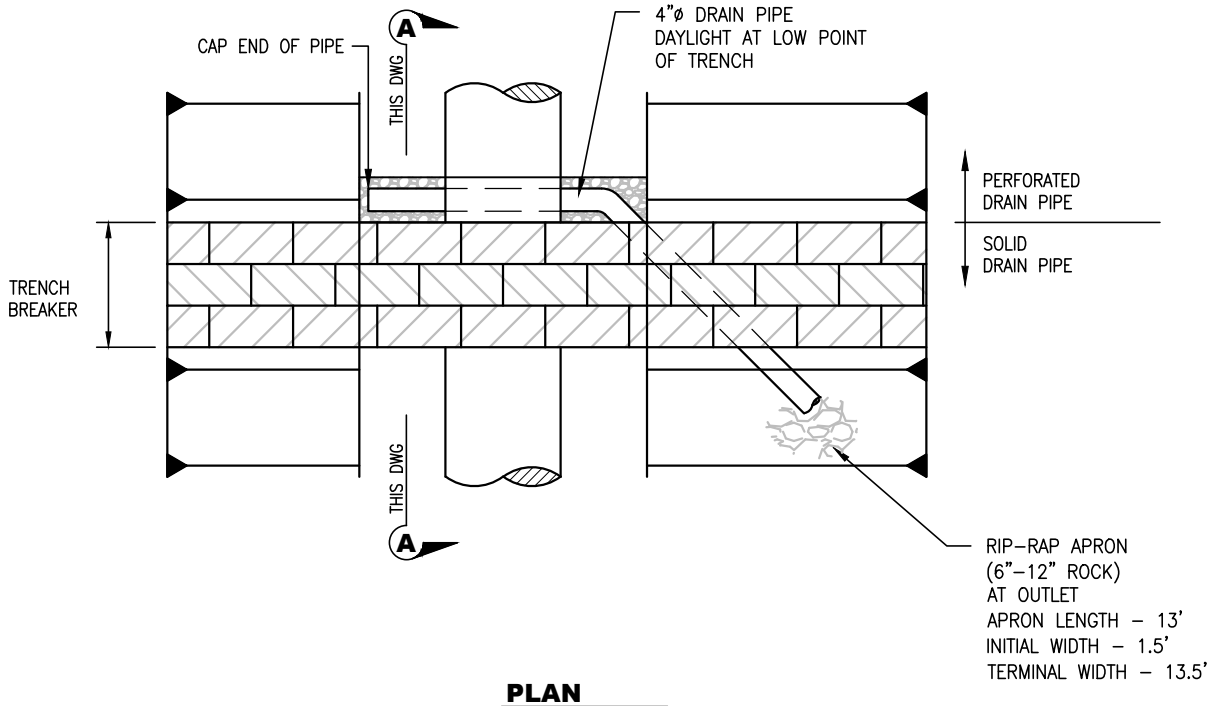
Line Name	Site ID	Sidehill	Steep Slope	Previous Landslide	Downslope Resource	Distance From Downslope Resource (ft.)	Approx. Milepost	Mitigation Controls (Appendix B)	Comments
H-650	SS-22		X		Wetland	39.00	32.60	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is planar with an average slope of 20 degrees (36%). There is no evidence of movement and the area is well vegetated. Pass through and daylight drains will be utilized in this segment.
H-650	SS-23	X			Stream	290.60	32.80	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on an 11 degree (19.4%) slope. A transverse trench drain will extend through the trench and sidehill cutoff drains will be utilized where seeps occur.
H-650	SS-24		X		Wetland	18.50	33.15	MVP-SG-45, MVP-SG-35	This segment is on a a very steep slope, with an average measurement of 31 degrees (%). While there is no evidence of movement currently, a riprap revetment will be utilized in this section with sakrete trench breakers to provide stability.
H-650	SS-25		X		Stream	50.00	33.35	MVP-SG-45, MVP-SG-35	This segment is on a very steep slope, with an average measurement of 31 degrees, with localized segments on as much as 37 degrees slope. This segment is near a stream and to preserve future slope stability, a riprap revetment with sakrete breakers should be used with daylight drains behind each trench breaker
H-650	SH-26	X			Wetland	234.00	33.35	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on an 12 degree (21%) slope. A transverse trench drain will extend through the trench and sidehill cutoff drains will be utilized where seeps occur.
H-650	SH-27	X			Wetland	212.00	33.68	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on an 11 degree (19.4%) slope. A transverse trench drain will extend through the trench and sidehill cutoff drains will be utilized where seeps occur.
H-650	SS-28		X		Wetland	0.00	33.69	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 18 degrees (32%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SS-29		X		Wetland	5.00	33.70	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 23 degrees (42%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SS-30		X		Stream	16.70	33.75	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep planar segment with an average slope of 25 degrees (47%). Trees are well establised, with no visible signs of slope movement. Trench breaker daylight drains will be installed in the pipeline trench to prevent an accumulation of water behind the trench breakers which could saturate the local soil.
H-650	SS-31		X		Stream	600.00	33.82	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SH-32	X			Stream	291.00	33.90	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on an 12 degree (21%) slope. A transverse trench drain will extend through the trench and sidehill cutoff drains will be utilized where seeps occur.
H-650	SS-33		X		Stream	16.00	34.20	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.

Line Name	Site ID	Sidehill	Steep Slope	Previous Landslide	Downslope Resource	Distance From Downslope Resource (ft.)	Approx. Milepost	Mitigation Controls (Appendix B)	Comments
H-650	SS-34		X		Stream	83.00	34.50	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 19 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-35		X		Stream	45.00	34.50	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SH-36	X			Stream	122.00	35.05	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 10 degree (17.6%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.
H-650	SS-37		X		Stream	0.00	36.00	MVP-SG-35	This segment has an average slope of 27 degrees (%) and doesn't have any evidence of movement. Trench breaker daylight drains will be used behind every breaker. If bedrock is encountered at shallow depths, sakrete may be used in lieu of sandbag breakers, however it will not be used within the stream buffer.
H-650	SS-38		X		Wetland	10.00	38.55	MVP-SG-45, MVP-SG-35	This planar segment has an average slope of 37 degrees. While the area is well vegetated, there is evidence of landslide activity. To stabilize the area, a riprap revetment using R4 riprap should be used in conjunction with sakrete trenchbreakers.
H-650	SS-39		X		Wetland	16.00	38.80	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 23 degrees (42%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SH-40	X			Stream	56.00	39.08	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on an 13 degree (23%) slope. A transverse trench drain will extend through the trench and sidehill cutoff drains will be utilized where seeps occur.
H-650	SS-32		X		Stream	0.00	40.58	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 19 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-41		X		Stream	0.00	40.58	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (34%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-42		X		Stream	34.00	40.75	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 22 degrees (40%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SS-43		X		Wetland	0.00	41.10	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 21 degrees (38%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SS-44		X		Stream	45.00	41.69	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-45		X		Stream	16.00	42.25	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 19 degrees (34%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SH-46	X			Home	150.00	42.37	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 10 degree (17.6%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.

Line Name	Site ID	Sidehill	Steep Slope	Previous Landslide	Downslope Resource	Distance From Downslope Resource (ft.)	Approx. Milepost	Mitigation Controls (Appendix B)	Comments
H-650	SH-47	X			Stream	148.00	44.10	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 12 degree (21%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.
H-650	SS-48		X		Stream	81.00	44.15	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-49		X		Stream	72.80	45.70	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SS-50		X		Stream	89.00	45.89	MVP-SG-35	This pipeline segment is a steep planar segment with an average slope of 28 degrees (51%). Trees are well establised, with no visible signs of slope movement. Trench breaker daylight drains will be installed in the pipeline trench to prevent an accumulation of water behind the trench breakers which could saturate the local soil. If bedrock is shallow, sakrete breakers may be used.
H-650	SS-51		X		Wetland	0.00	47.03	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This is a planar segment with no evidence of movement. Alternating trench breaker pass-through drains and daylight drains will be utlized to keep the trench dry
H-650	SS-52		X		Stream	45.00	47.40	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is located on a slope with an average inclination of 18 degrees (32%). Trench breaker pass through and daylight drains will be utilized in this location.
H-650	SH-53	X			Stream	183.00	47.45	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 10 degree (21%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.
H-650	SS-54		X		Stream	10.00	47.60	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This pipeline segment is a steep segment with an average slope of 21 degrees (38%). A trench breaker daylight drain will be utilized to prevent an accumulation of water behind the trench breaker. If more than one trench breaker is to be installed along this segment, alternating pass through drains and daylight drains will be utilized
H-650	SH-55	X			Home	411.00	49.70	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 10 degree (21%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.
H-650	SS-56		X		Stream	12.90	64.05	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is planar with an average slope of 19 degrees (34%). The area is well vegetated and has no evidence of movement. Daylight and pass through drains will be utilized on this segment.
H-650	SH-57	X			Stream	87.90	69.40	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on an 13 degree (23%) slope. A transverse trench drain will extend through the trench and sidehill cutoff drains will be utilized where seeps occur.
H-650	SH-58	X			Stream	360.00	70.60	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 11 degree (19.4%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.
H-650	SS-59		X		Stream	122.00	70.75	MVP-SG-35	This pipeline segment is a steep planar segment with an average slope of 29 degrees (49%). Trees are well establised, with no visible signs of slope movement. Trench breaker daylight drains will be installed in the pipeline trench to prevent an accumulation of water behind the trench breakers which could saturate the local soil. If
H-650	SH-60	X			River	186.00	71.20	MVP-SG-38A, MVP-38B, MVP-SG-36A	This segment is sidehill on a 15 degree (27%) slope with no movement present. Transverse trench drains should be utilized in the low portions of this sidehill segment to convey any accumulated water out of the trench.
H-650	SS-61		X		Stream	20.00	71.80	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is planar with an average slope of 20 degrees (36%). The area is well vegetated and has no evidence of movement. Daylight and pass through drains will be utilized on this segment.
H-650	SS-62		X		River	326.00	71.90	MVP-SG-35, MVP-SG-43A, MVP-SG-43B	This segment is planar with an average slope of 21 degrees (38%). The area is well vegetated and has no evidence of movement. Daylight and pass through drains will be utilized on this segment.

Line Name	Site ID	Sidehill	Steep Slope	Previous Landslide	Downslope Resource	Distance From Downslope Resource (ft.)	Approx. Milepost	Mitigation Controls (Appendix B)	Comments
H-650	SS-63		X		River	52.40	72.70	MVP-SG-35	This pipeline segment is a steep planar segment with an average slope of 30 degrees (47%). Trees are well establised, with no visible signs of slope movement. Trench breaker daylight drains will be installed in the pipeline trench to prevent an accumulation of water behind the trench breakers which could saturate the local soil. If bedrock is shallow, sakrete breakers may be used.

APPENDIX B
SLIDE MITIGATION DETAILS



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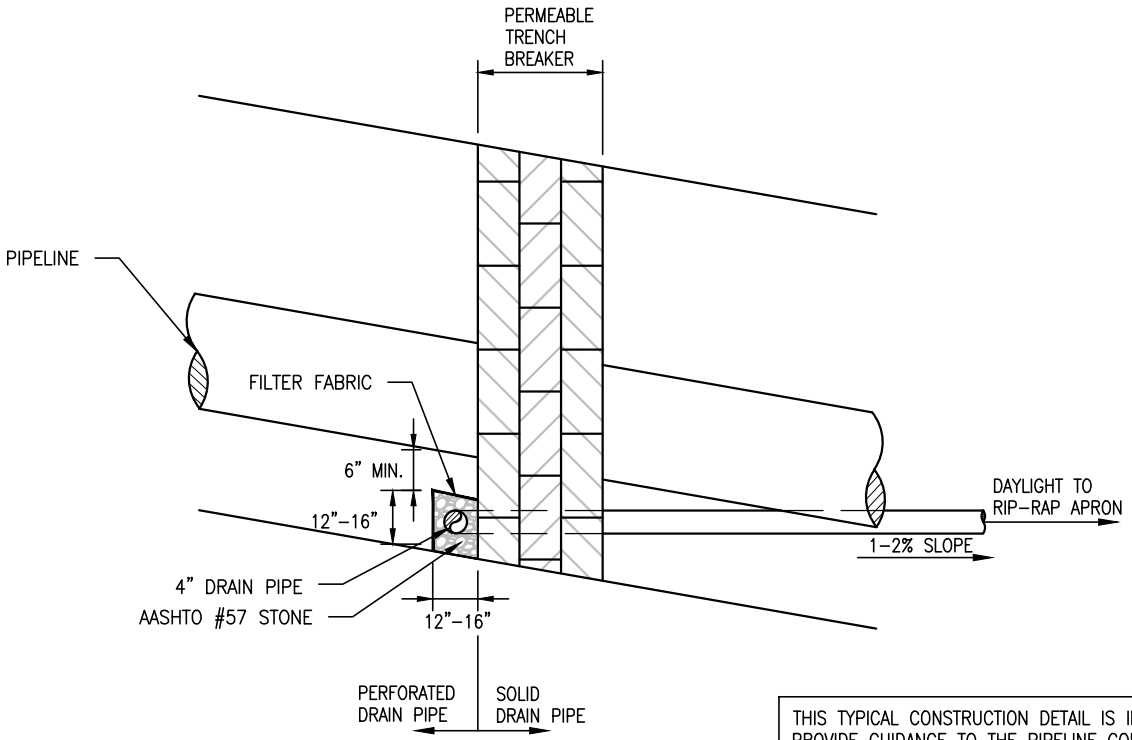


SECTION A-A
SCALE: NOT TO SCALE

THIS TYPICAL CONSTRUCTION DETAIL IS INTENDED TO PROVIDE GUIDANCE TO THE PIPELINE CONTRACTOR. THE ACTUAL CONSTRUCTION TECHNIQUES MAY DIFFER DEPENDING UPON FIELD CONDITIONS AND OR REGULATORY REQUIREMENTS.

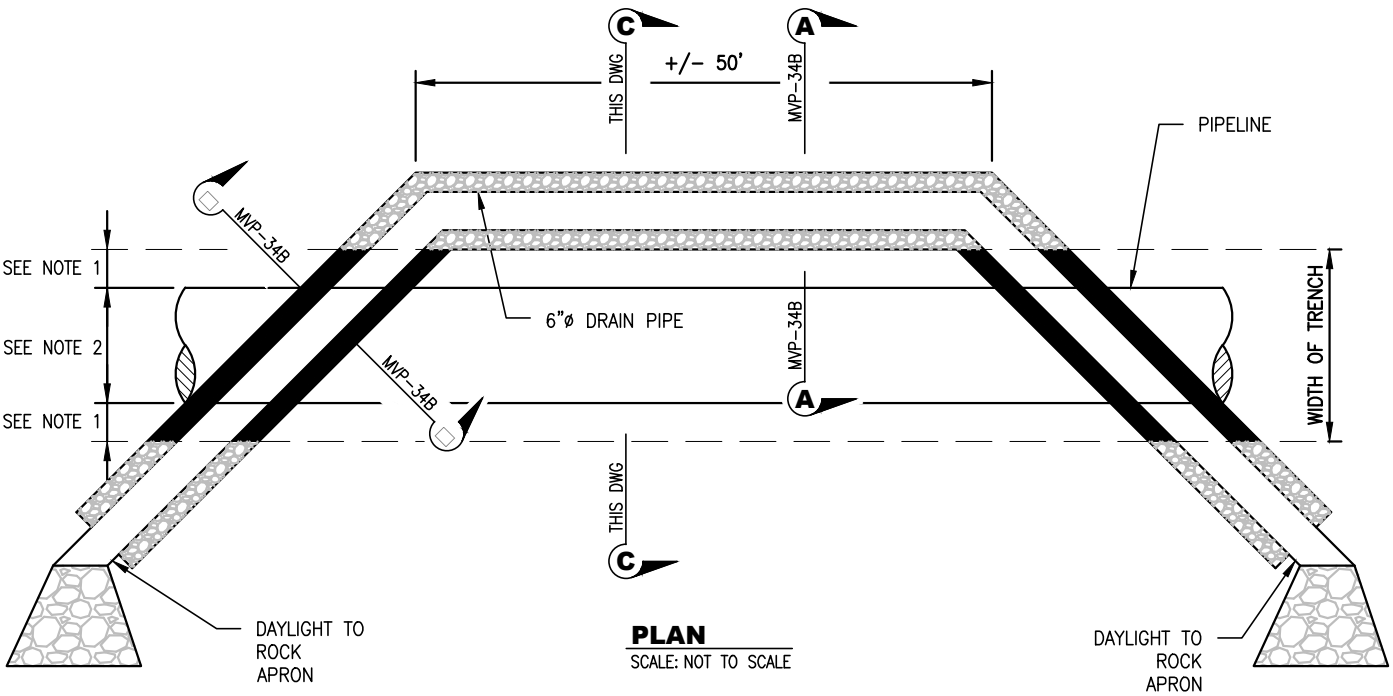
DRAWN	TRC	DATE	8/7/2018
CHECKED	XXX	DATE	X/X/2018
APP'D	XXX	DATE	X/X/2018
SCALE	N.T.S.	SHEET	1 OF 1
JOB NO.			
PROJECT ID:			
H-650-TYP			

Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

TRENCH BREAKER DAYLIGHT DRAIN

DRAWING NO.	REV.
MVP-SG-35	P1



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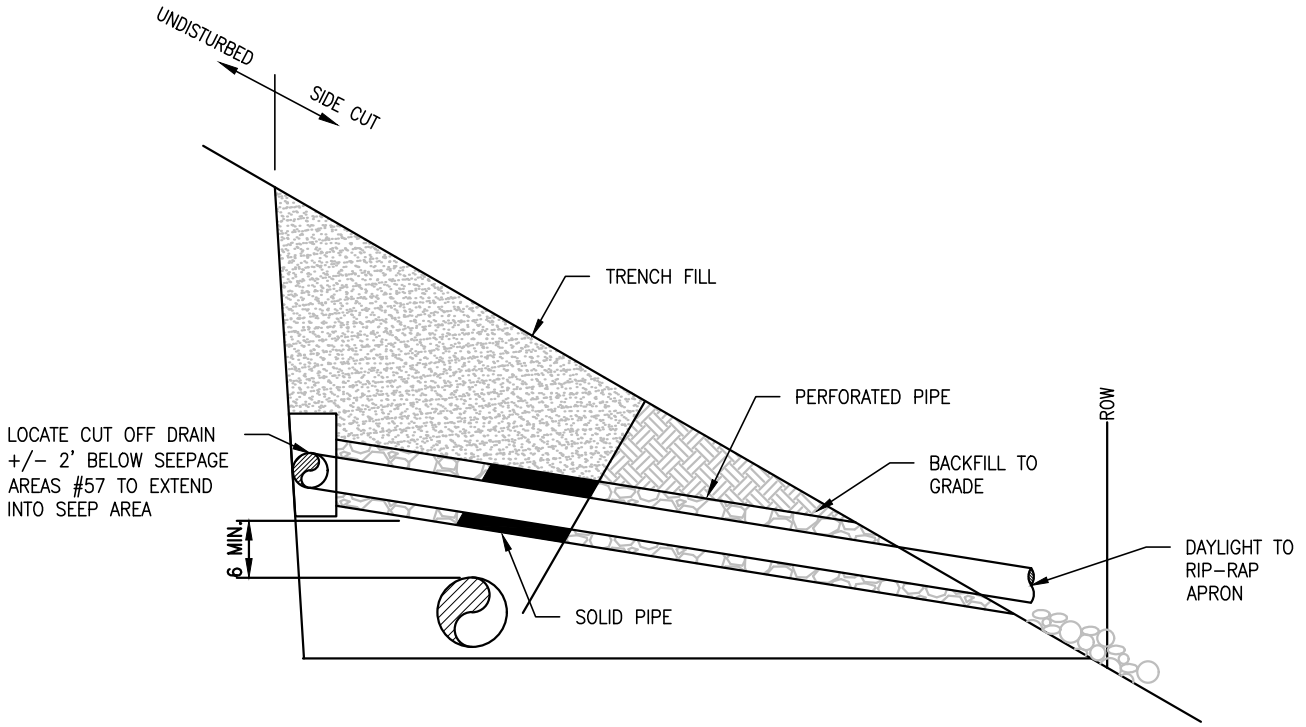

SECTION C-C
SCALE: NOT TO SCALE

NOTES:
1. PERFORATED PIPE SURROUNDED BY #57 STONE.
2. SOLID PIPE (IN TRENCH) SURROUNDED BY TRENCH BACKFILL.

THIS TYPICAL CONSTRUCTION DETAIL IS INTENDED TO PROVIDE GUIDANCE TO THE PIPELINE CONTRACTOR. THE ACTUAL CONSTRUCTION TECHNIQUES MAY DIFFER DEPENDING UPON FIELD CONDITIONS AND OR REGULATORY REQUIREMENTS.

DRAWN	TRC	DATE	8/7/2018
CHECKED	XXX	DATE	X/X/2018
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SCALE	N.T.S.	SHEET	1 OF 2
JOB NO.			
PROJECT ID:	H-650-TYP		

Mountain Valley PIPELINE LLC

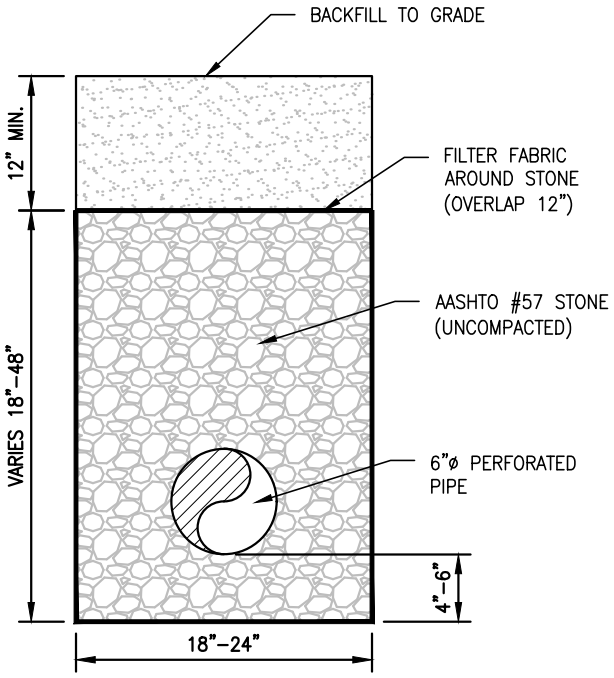
TYPICAL CONSTRUCTION DETAIL

CUTOFF DRAIN-SIDEHILL

DRAWING NO.	REV.
MVP-SG-36A	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

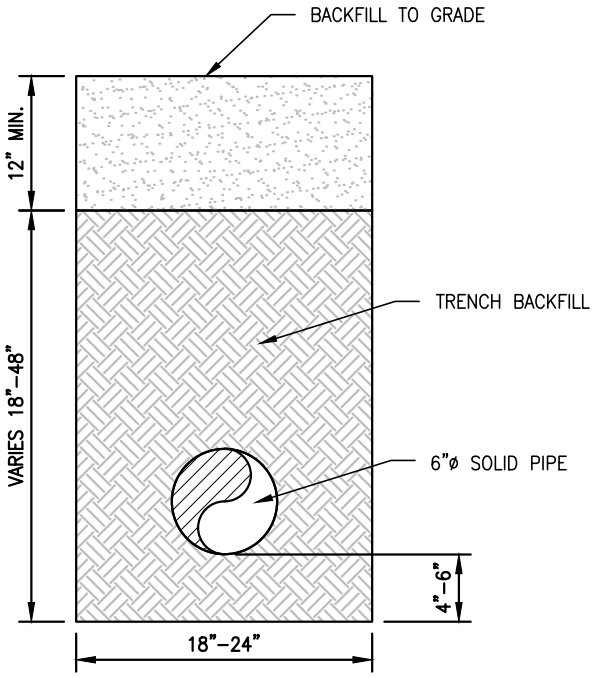
File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-36A.dwg



SECTION A A

SCALE: NOT TO SCALE

FROM MVP–34A



SECTION

SCALE: NOT TO SCALE

FROM MVP–34A

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SCALE	N.T.S.	SHEET	2 OF 2
JOB NO.			
PROJECT ID:			
H–650–TYP			

Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

CUTOFF DRAIN–SIDEHILL

DRAWING NO.	REV.
MVP–SG–36B	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

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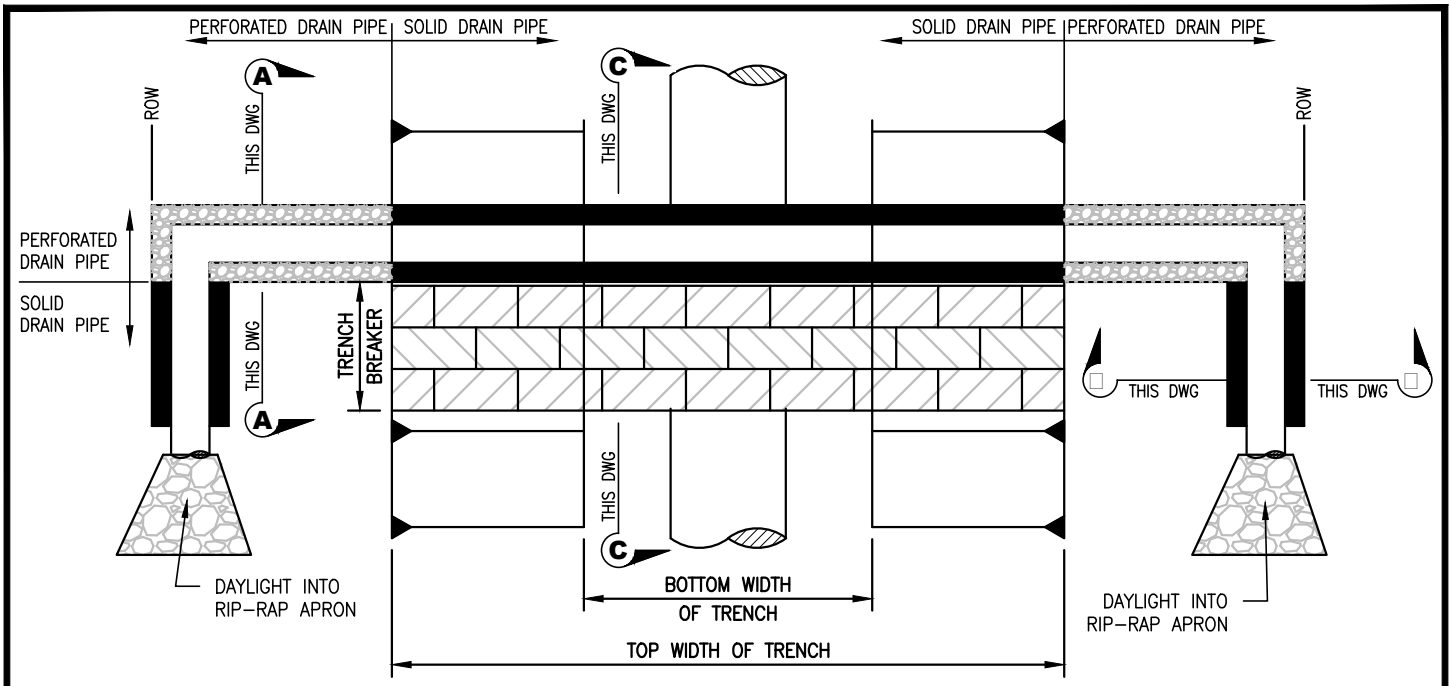

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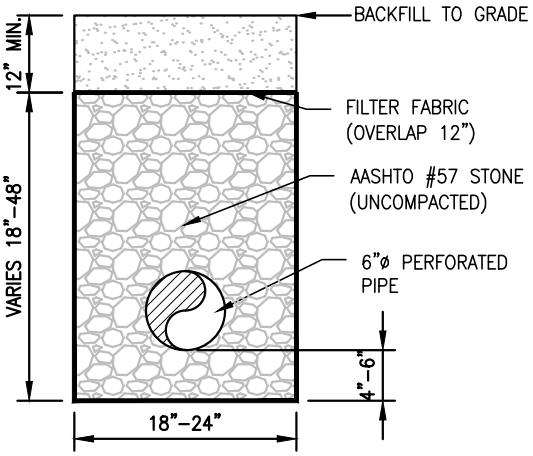

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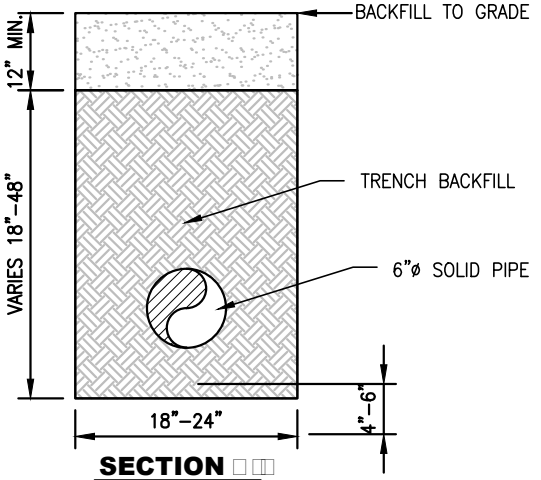

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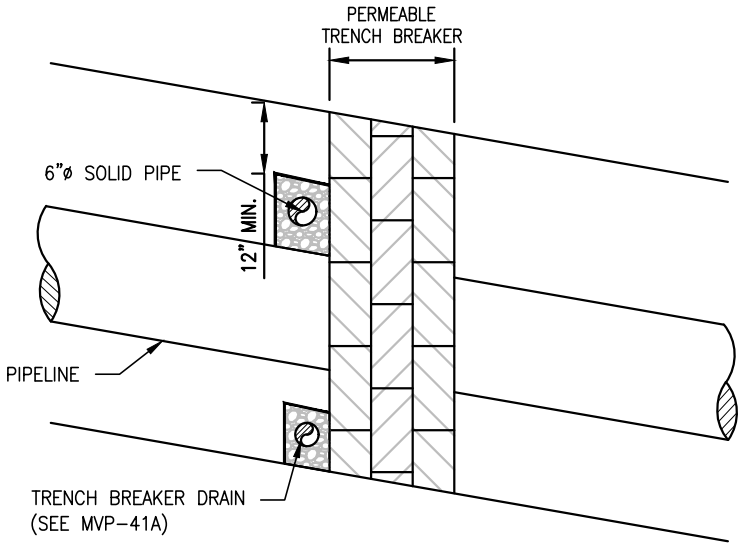
NOTES:
1. EACH CUTOFF DRAIN SHALL UTILIZE A TRENCH BREAKER DRAIN (SEE DETAIL 1) TO DRAIN THE TRENCH.



SECTION C-C
SCALE: NOT TO SCALE

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Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

CUTOFF DRAIN-PLANAR

DRAWING NO.	REV.
MVP-SG-37	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

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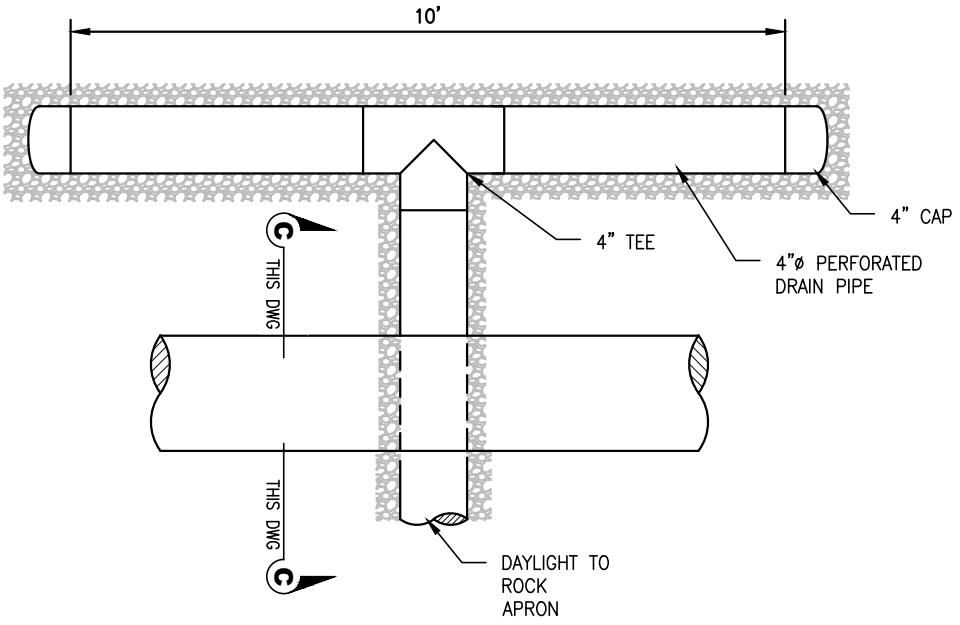

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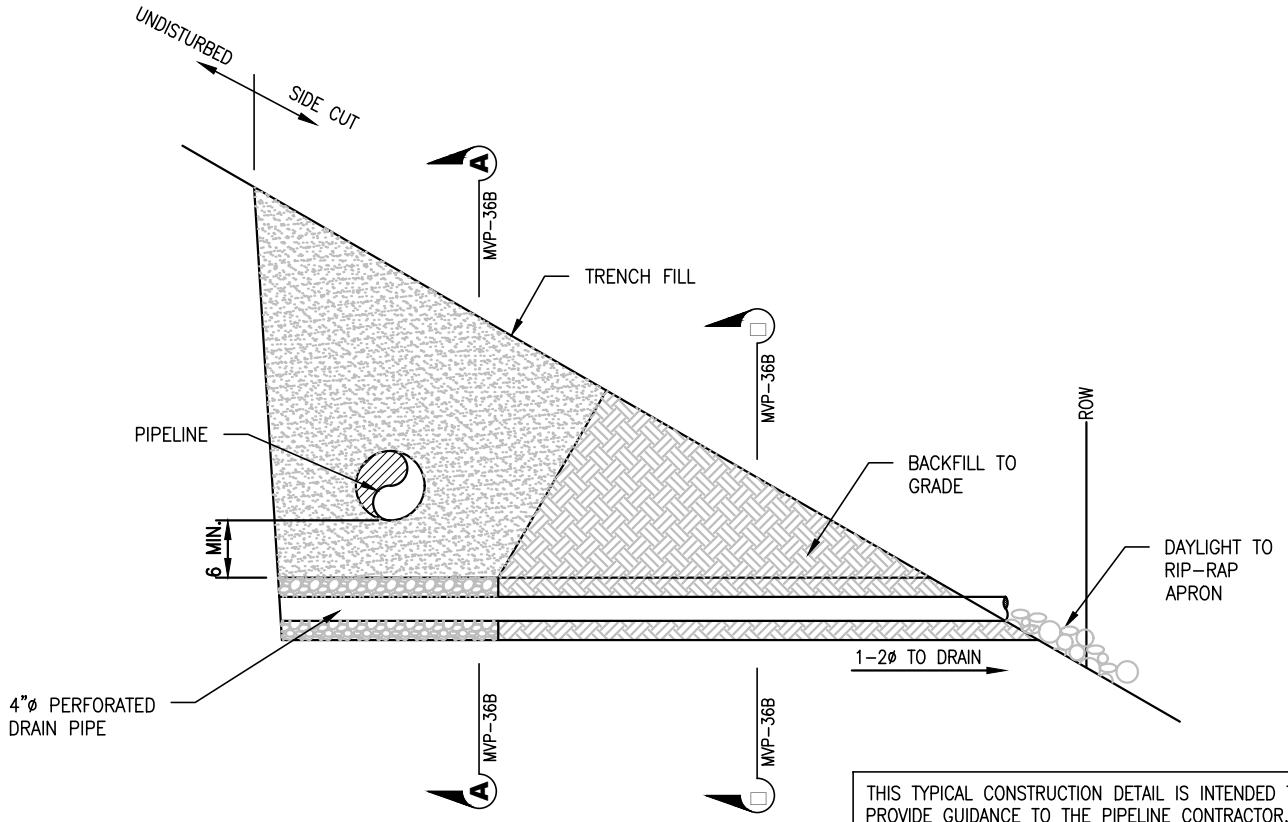
SCALE: NOT TO SCALE



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SCALE: NOT TO SCALE

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Mountain Valley PIPELINE LLC

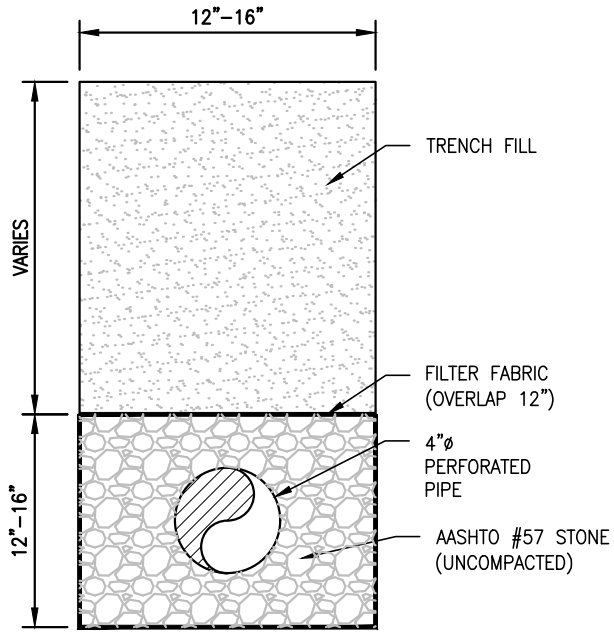
TYPICAL CONSTRUCTION DETAIL

TRANSVERSE TRENCH DRAIN

DRAWING NO.	REV.
MVP-SG-38A	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

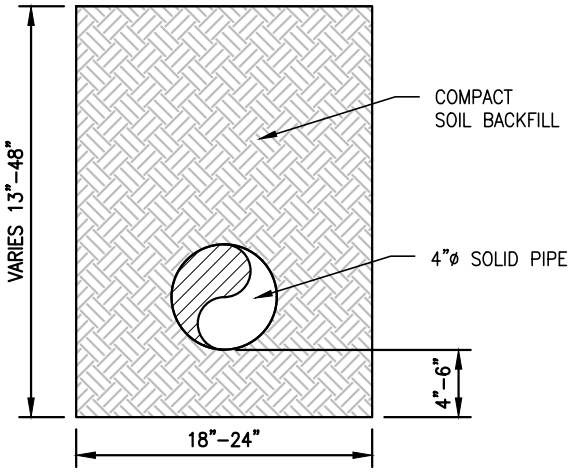
File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-38A.dwg



SECTION A A

SCALE: NOT TO SCALE

FROM MVP–36A



SECTION

SCALE: NOT TO SCALE

FROM MVP–36A

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Mountain Valley PIPELINE LLC

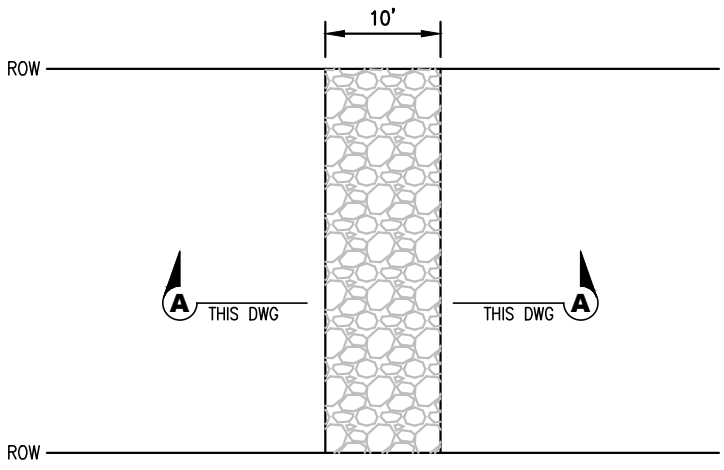
TYPICAL CONSTRUCTION DETAIL

TRANSVERSE TRENCH DRAIN

DRAWING NO.	REV.
MVP–38B	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-38B.dwg



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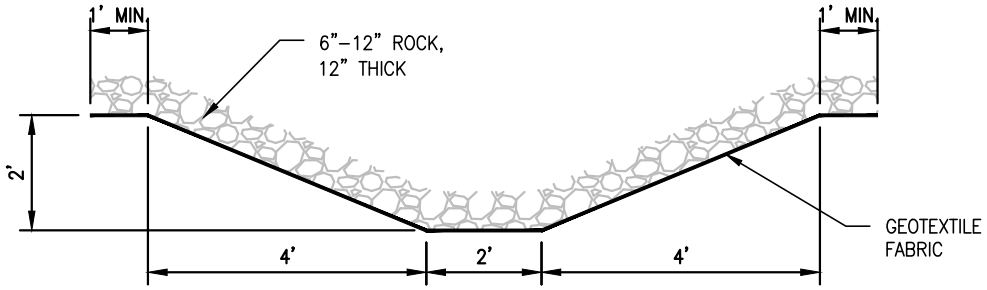

SECTION A–A
SCALE: NOT TO SCALE

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Mountain Valley PIPELINE LLC

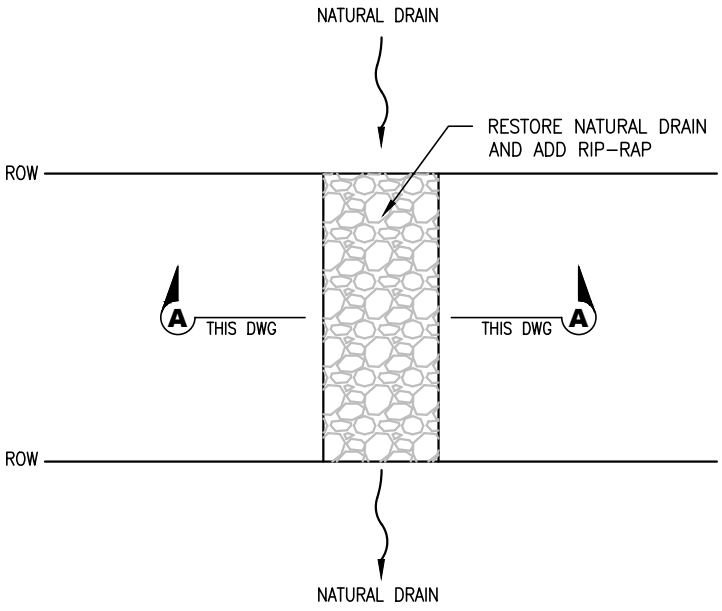
TYPICAL CONSTRUCTION DETAIL

ROCK LINED SWALE

DRAWING NO.	REV.
MVP–SG–39	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-39.dwg



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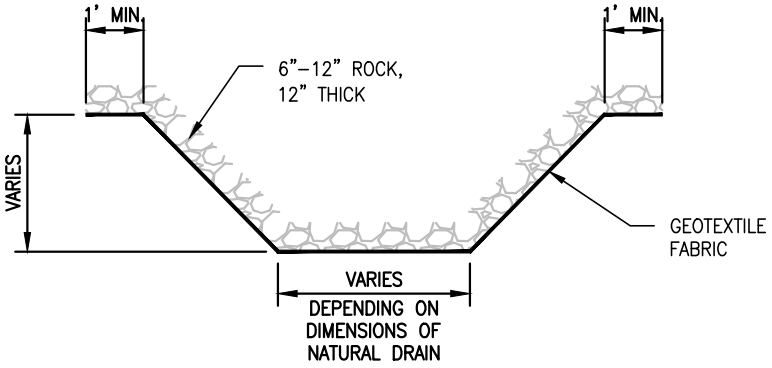

SECTION A-A
SCALE: NOT TO SCALE

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Mountain Valley PIPELINE LLC

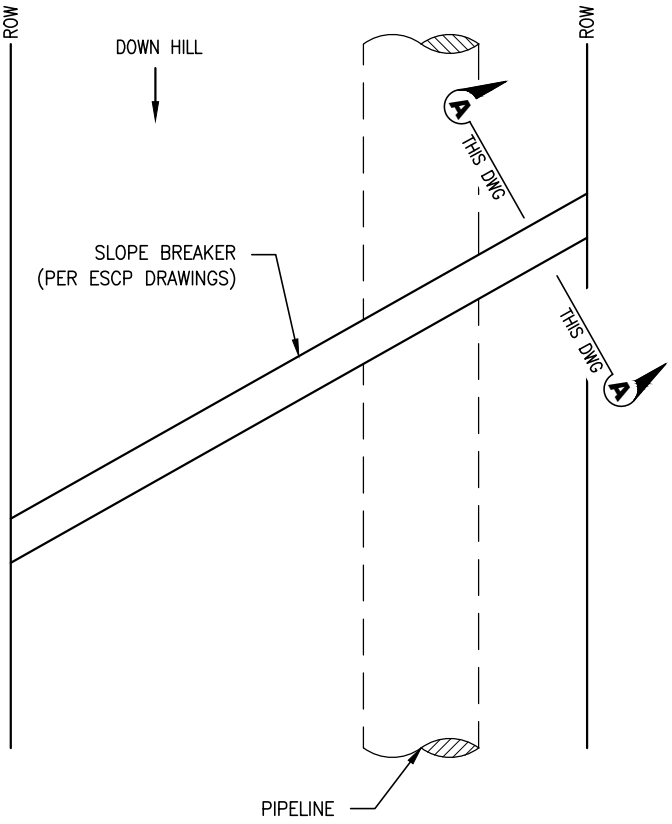
TYPICAL CONSTRUCTION DETAIL

RIP-RAP NATURAL DRAIN

DRAWING NO.	REV.
MVP-SG-40	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-40.dwg



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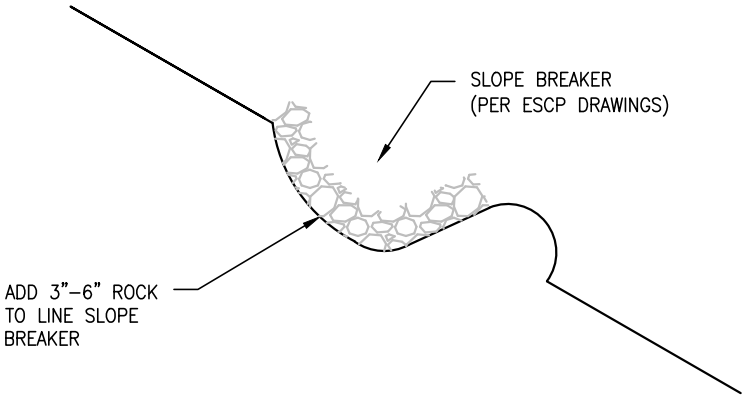

SECTION A–A
SCALE: NOT TO SCALE

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Mountain Valley PIPELINE LLC

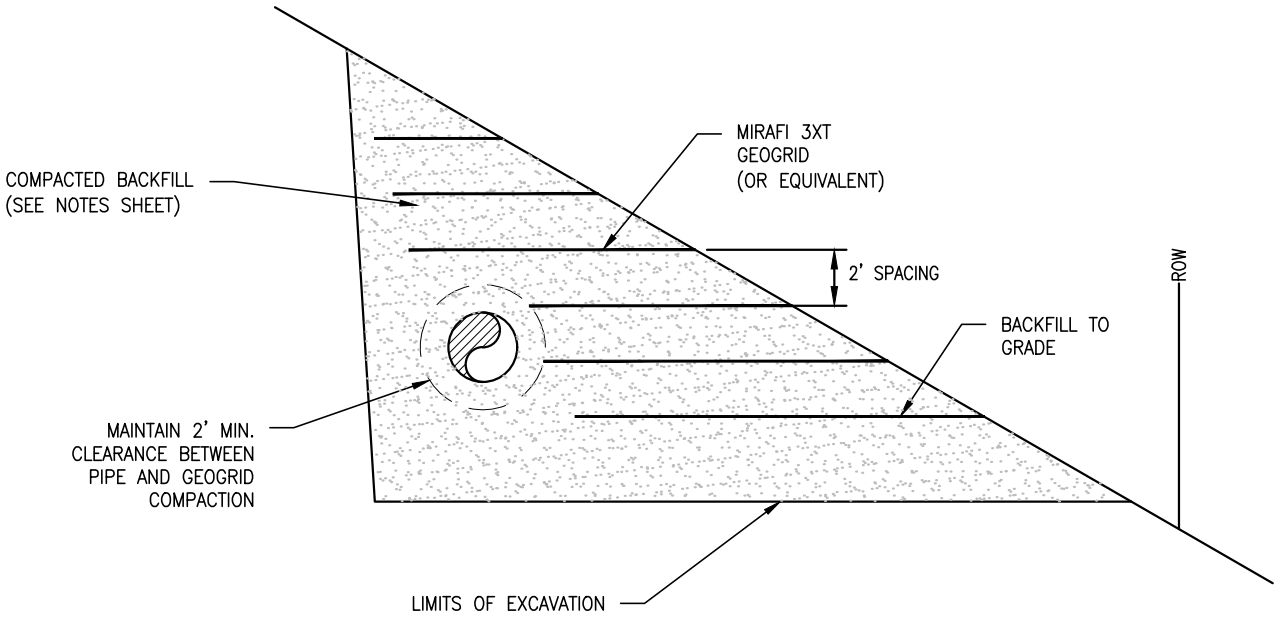
TYPICAL CONSTRUCTION DETAIL

RIP–RAP SLOPE BREAKERS

DRAWING NO.	REV.
MVP–SG–41	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:39 PM

File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-41.dwg



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PROJECT ID: H-650-TYP			

Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

GEOGRID-SIDEHILL

DRAWING NO.	REV.
MVP-SG-42A	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:40 PM

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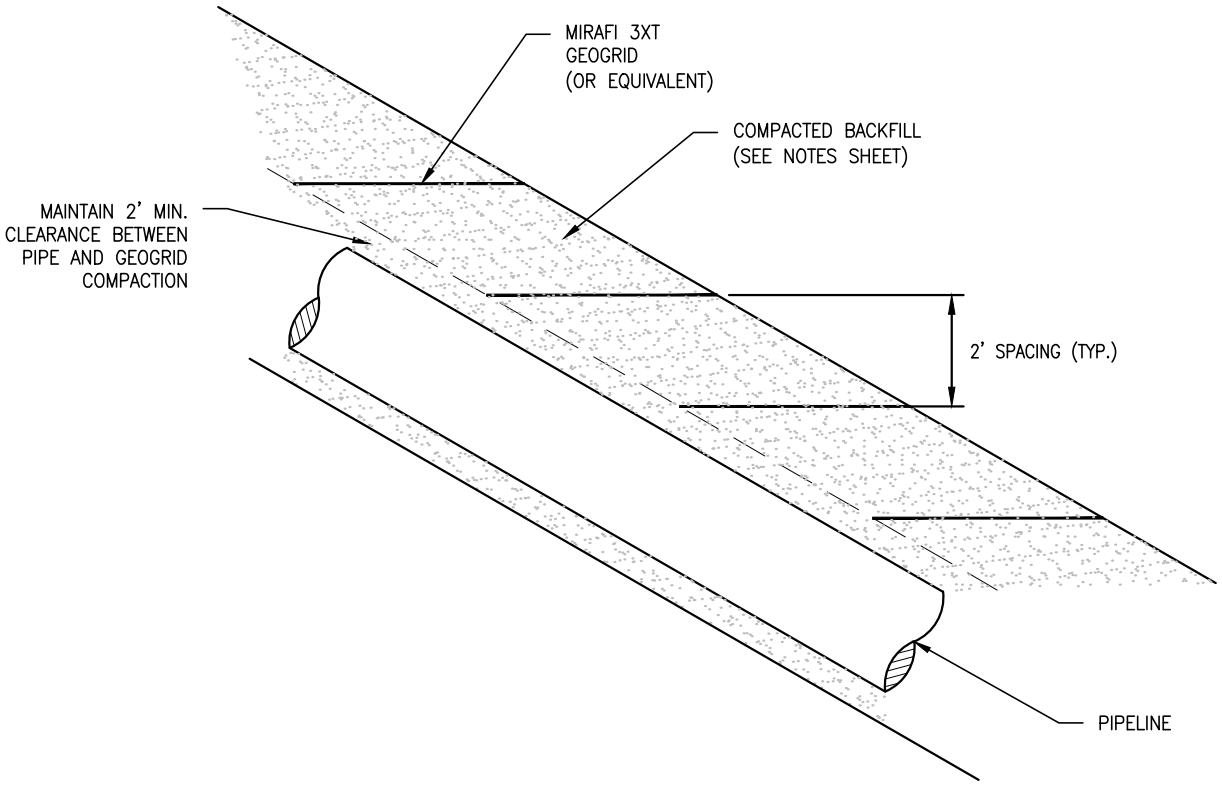

SECTION □ IE□

SCALE: NOT TO SCALE

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Mountain Valley PIPELINE LLC

SLIDE MITIGATION DETAIL

GEOGRID-PLANAR

DRAWING NO.	REV.
MVP-SG-42B	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:58 PM

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COMPACTION NOTES

1) ALL ROCKS LARGER THAN 6 INCHES IN SIZE, AND MORE THAN 10 PERCENT BY VOLUME SHOULD BE REMOVED AND PROPERLY DISPOSED FROM THE BACKFILL MATERIAL.
2) THE SUBGRADE AT THE BASE OF THE EXCAVATION SHOULD BE PROOFROLLED WITH A PNEUMATIC TIRED ROLLER OR VEHICLE.
3) THE EXCAVATED AREA SHALL BE BACKFILLED WITH THE CLEANED EXCAVATED SOIL MATERIAL AND COMPACTED IN PLACE.
4) BACKFILL OPERATIONS SHALL BE PERFORMED WHEN SOIL IS SUITABLE FOR COMPACTION (I.E., NOT IMMEDIATELY FOLLOWING A LARGE RAIN, SNOW, OR ICE EVENT). FROZEN FILL SHALL NOT BE USED.
5) THE BACKFILL SHALL BE PLACED IN COMPACTED LIFTS NO GREATER THAN 12 INCHES.
6) MAINTAIN A MINIMUM 2FT CLEARANCE BETWEEN COMPACTION ACTIVITY AND THE GAS PIPELINE.

GRAVEL DRAIN NOTES

1) GEOTEXTILE FABRIC SHALL BE TENCATE MIRAFI 140N OR APPROVED EQUIVALENT.
2) THE GEOTEXTILE FABRIC SHALL BE STORED UNDAMAGED PURSUANT TO MANUFACTURERS RECOMMENDATIONS.
3) DO NOT OPERATE CONSTRUCTION EQUIPMENT DIRECTLY ON THE GEOTEXTILE FABRIC.
4) DRAINAGE AGGREGATE SHALL MEET THE REQUIREMENTS OF AASHTO NO. 57 STONE.
5) DRAINAGE AGGREGATE SHALL NOT BE COMPACTED.

GEOGRID NOTES

1) GEOGRID REINFORCEMENT SHALL BE TENCATE MIRAFI 3XT OR APPROVED EQUIVALENT.
2) THE GEOGRID MATERIAL SHALL BE STORED UNDAMAGED PURSUANT TO MANUFACTURERS RECOMMENDATIONS.
3) GEOGRID SHALL BE PLACED HORIZONTALLY ON THE BACKFILL WITH THE PRINCIPAL STRENGTH DIRECTION PERPENDICULAR TO THE FACE OF THE SLOPE. ADJACENT PIECES OF PRIMARY GEOGRID SHALL NOT OVERLAP BUT ARE TO BE BUTTED SIDE TO SIDE.
4) REMOVE ALL SLACK IN THE GEOGRID MATERIAL AND ANCHOR AS NECESSARY WITH PINS, OR BAGS TO PREVENT SLACK FROM DEVELOPMENT DURING FILL PLACEMENT AND COMPACTION.
5) FILL IS TO BE PLACED AND SPREAD DIRECTLY ON THE GEOGRID MATERIAL WITH RUBBER TIRED EQUIPMENT ONLY. SPEEDS ARE TO BE KEPT SLOW WITH AS FEW STOPS AND TURNS AS PRACTICAL.
6) DO NOT OPERATE TRACKED EQUIPMENT DIRECTLY ON THE GEOGRID MATERIAL.
7) MAINTAIN A MINIMUM 2FT CLEARANCE BETWEEN GEOGRID MATERIAL AND THE GAS PIPELINE.

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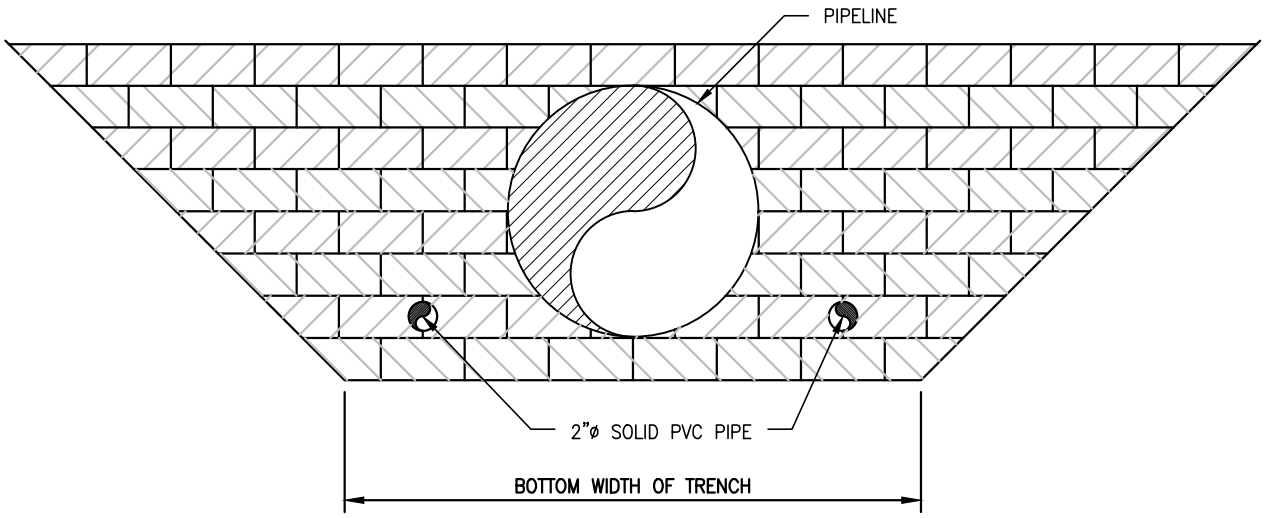
Mountain Valley PIPELINE LLC

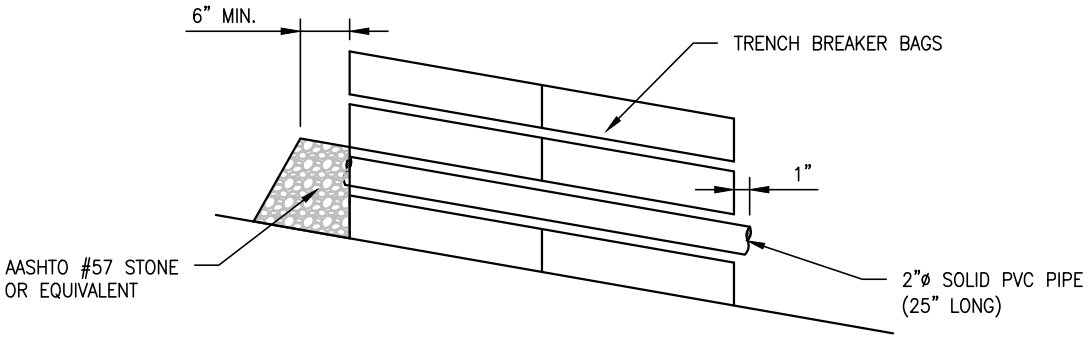
TYPICAL CONSTRUCTION DETAIL

GEOGRID NOTES

DRAWING NO.	REV.
MVP-SG-42C	P1



FRONT VIEW
SCALE: NOT TO SCALE



SECTION VIEW
SCALE: NOT TO SCALE

NOTES:
1. PLACE PVC DRAIN PIPE ON FIRST LAYER OF TRENCH BREAKER BAGS.
2. PLACE PVC DRAIN PIPE EQUADISTANT FROM THE OUTSIDE EDGE OF THE 30" GAS PIPE AND THE BOTTOM LIMITS OF THE TRENCH.
3. EXTEND PVC PIPE THROUGH ENTIRE TRENCH BREAKER AND EXTEND APPROX. 1" PAST END OF BREAKER.
4. AASHTO#57 STONE SHALL BE PLACED TO A MINIMUM 6" THICKNESS UPSLOPE OF THE DRAIN PIPE.

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Mountain Valley PIPELINE LLC

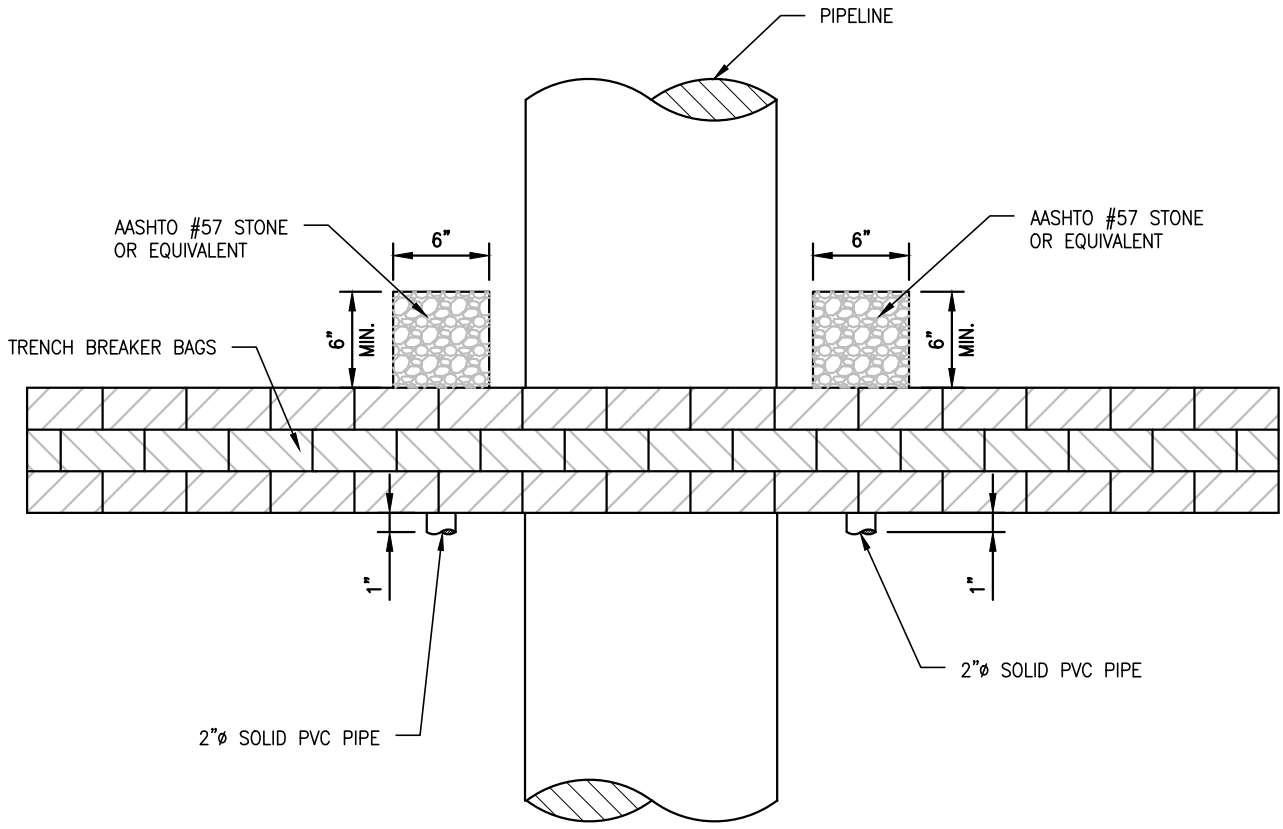
TYPICAL CONSTRUCTION DETAIL

TRENCH BREAKER
PASS-THROUGH DRAIN

DRAWING NO.	REV.
MVP-SG-43A	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:40 PM

File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-43A.dwg



PLAN □ IE□

SCALE: NOT TO SCALE

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JOB NO.			
PROJECT ID:			
H-650-TYP			

Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

TRENCH BREAKER
PASS-THROUGH DRAIN

DRAWING NO.	REV.
MVP-SG-43B	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:40 PM

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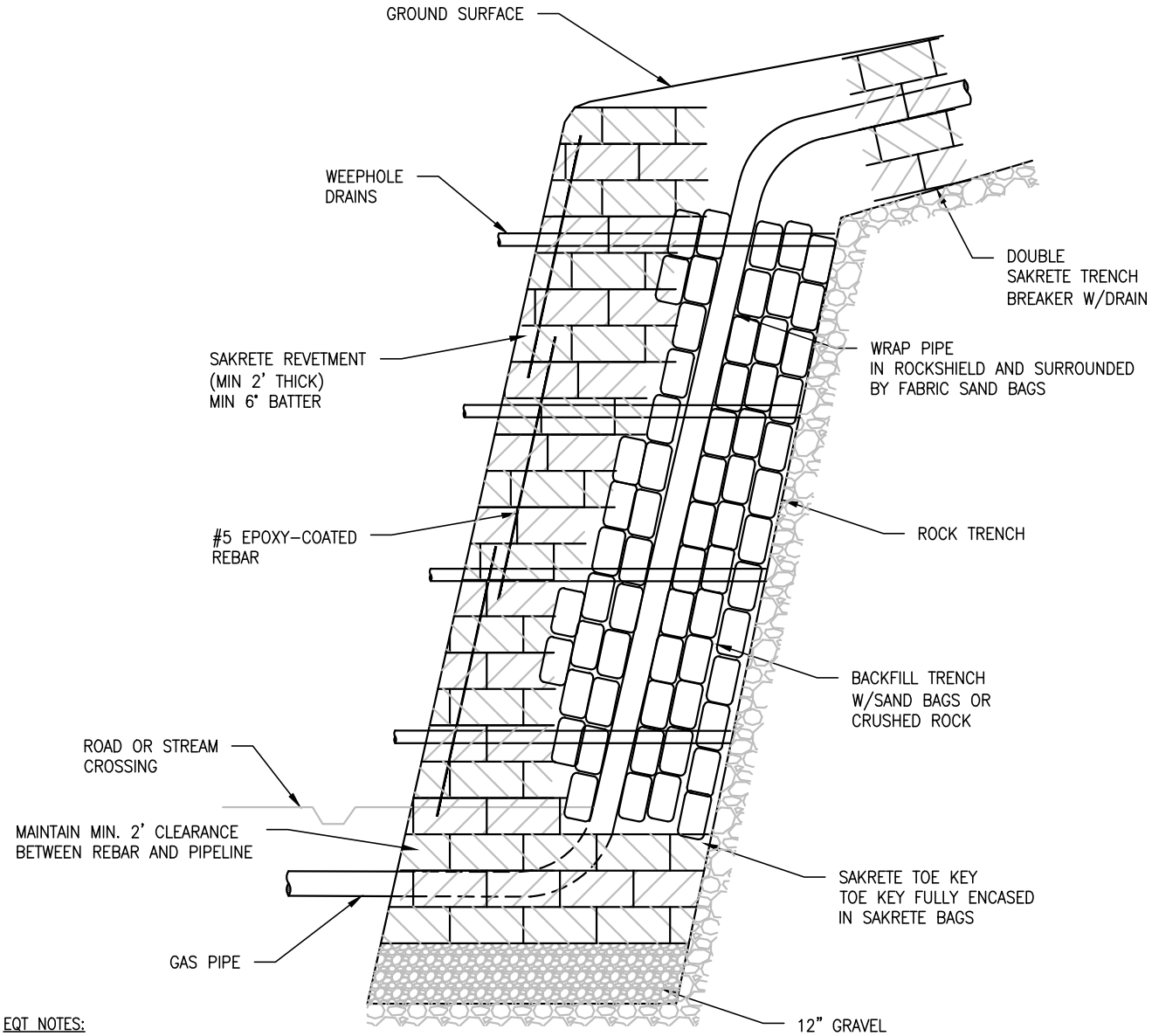

SIDE VIEW
SCALE: NOT TO SCALE

EQT NOTES:

1. SAKRETE BAGS SHOULD EXTEND 4 BAGS DEEP PIPE SHOULD BE COMPLETELY SURROUNDED BY SAND BAGS, OR CRUSHED ROCK (MAX 6").
2. SAKRETE BAGS SHOULD BE STAGGERED IN A MASONRY FASHION. THE FACE OF THE WELL SHALL BE INCLINED 6°-10° FROM VERTICAL.
3. #5 REBAR SHOULD BE DRIVEN THROUGH THE SAKRETE BAGS (SEE DETAIL 1).
4. 2"ø PVC WEEPHOLE DRAINS SHALL BE INSTALLED EVERY 15 FT.

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Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

SLIDE MITIGATION
HIGHWALL REVETMENT
SIDE VIEW

DRAWING NO.	REV.
MVP-SG-44A	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:40 PM

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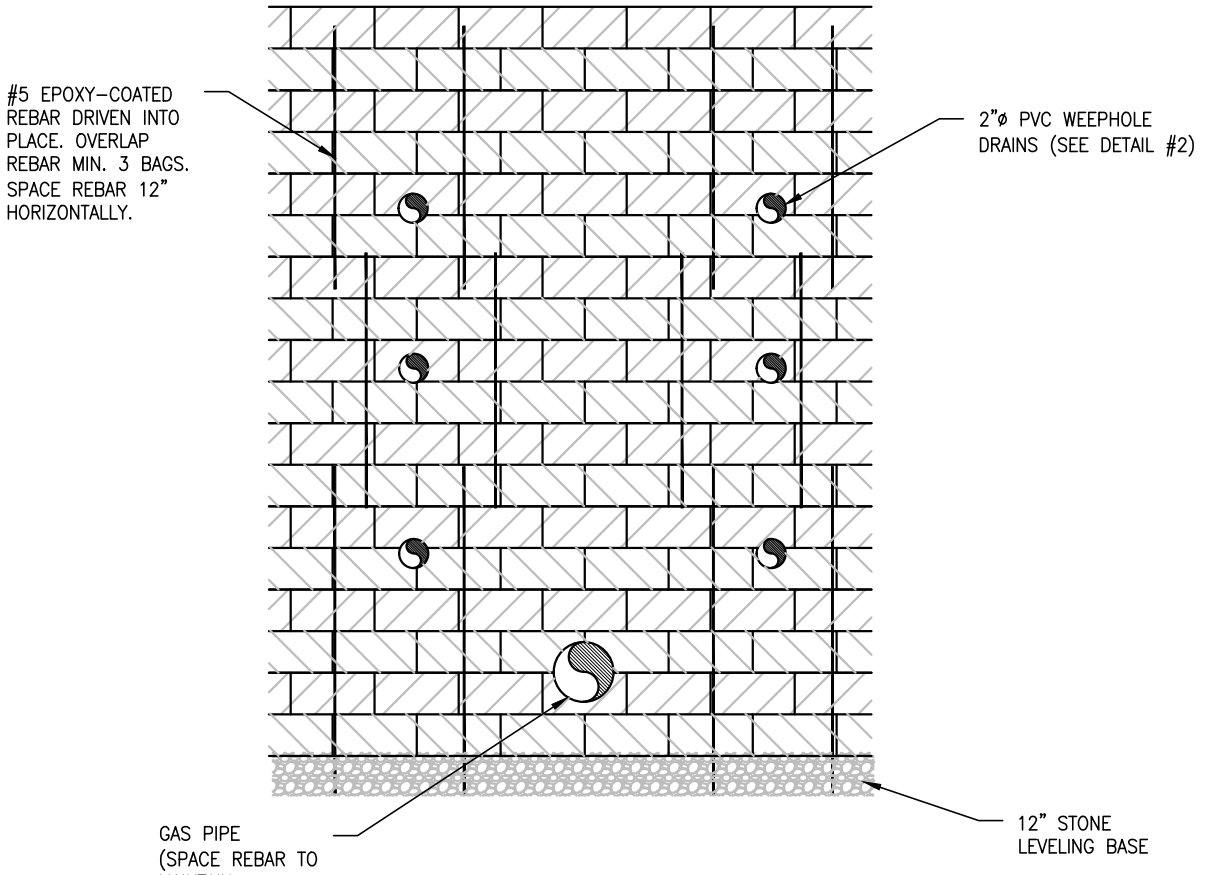

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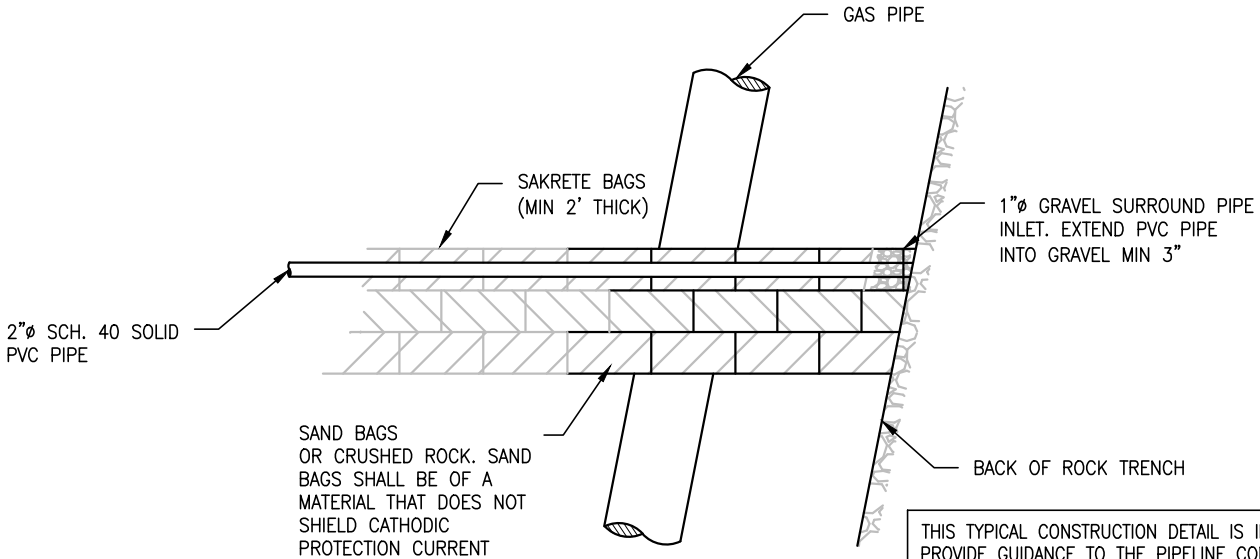

DRAIN DETAIL

SCALE: NOT TO SCALE

THIS TYPICAL CONSTRUCTION DETAIL IS INTENDED TO PROVIDE GUIDANCE TO THE PIPELINE CONTRACTOR. THE ACTUAL CONSTRUCTION TECHNIQUES MAY DIFFER DEPENDING UPON FIELD CONDITIONS AND OR REGULATORY REQUIREMENTS.

DRAWN	TRC	DATE	8/7/2018
CHECKED	XXX	DATE	X/X/2018
APP'D	XXX	DATE	X/X/2018
SCALE	N.T.S.	SHEET	2 OF 2
JOB NO.			
PROJECT ID:			
H-650-TYP			

Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

SLIDE MITIGATION
HIGHWALL REVETMENT
FRONT VIEW AND DRAIN DETAIL

DRAWING NO.	REV.
MVP-SG-44B	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:40 PM

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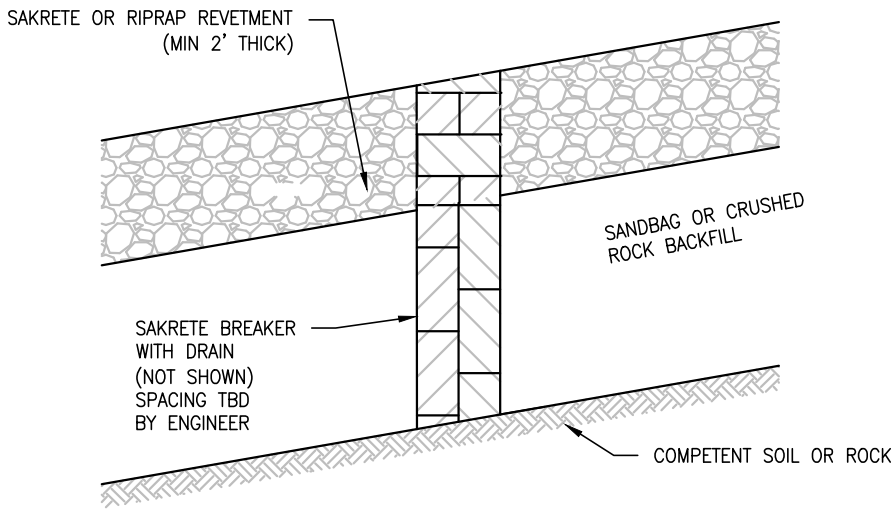

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SCALE: NOT TO SCALE

THIS TYPICAL CONSTRUCTION DETAIL IS INTENDED TO PROVIDE GUIDANCE TO THE PIPELINE CONTRACTOR. THE ACTUAL CONSTRUCTION TECHNIQUES MAY DIFFER DEPENDING UPON FIELD CONDITIONS AND OR REGULATORY REQUIREMENTS.

DRAWN	TRC	DATE	8/7/2018
CHECKED	XXX	DATE	X/X/2018
APP'D	XXX	DATE	X/X/2018
SCALE	N.T.S.	SHEET	1 OF 1
JOB NO.			
PROJECT ID:			
H-650-TYP			

Mountain Valley PIPELINE LLC

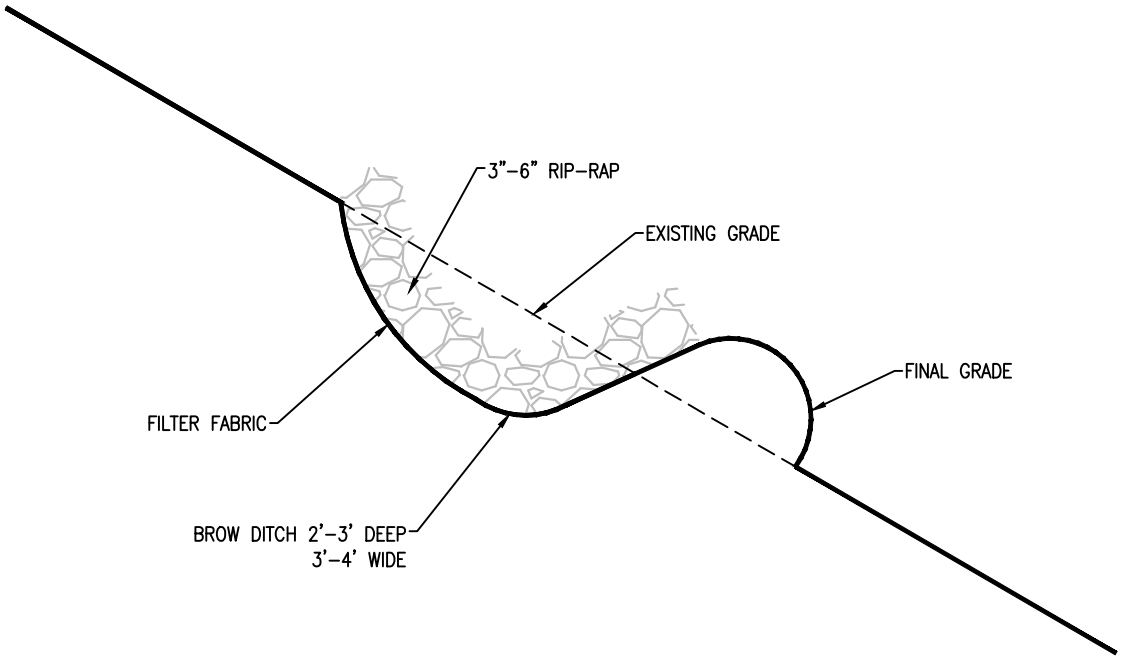
TYPICAL CONSTRUCTION DETAIL

STEEP SLOPE REVETMENT

DRAWING NO.	REV.
MVP-SG-45	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:40 PM

File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-45.dwg



THIS TYPICAL CONSTRUCTION DETAIL IS INTENDED TO PROVIDE GUIDANCE TO THE PIPELINE CONTRACTOR. THE ACTUAL CONSTRUCTION TECHNIQUES MAY DIFFER DEPENDING UPON FIELD CONDITIONS AND OR REGULATORY REQUIREMENTS.

DRAWN	TRC	DATE	8/7/2018
CHECKED	XXX	DATE	X/X/2018
APP'D	XXX	DATE	X/X/2018
SCALE	N.T.S.	SHEET	1 OF 1
JOB NO.			
PROJECT ID: H–650–TYP			

Mountain Valley PIPELINE LLC

TYPICAL CONSTRUCTION DETAIL

BROW DITCH DETAIL

DRAWING NO.	REV.
MVP–SG–46	P1

Plotted by: Sample, Stanley on: August 14, 2018 - 12:40 PM

File Path: O:\Projects\300423 - NextEra MVP Southgate\CA - CADD\Pipeline\Drawings\Typicals\MVP-SG-46.dwg

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 2

March 2019

LIST OF TABLES

REVISED Table 2.2-1 Aquifers Crossed by the MVP Southgate Project Pipeline			
Facility / State / County	**Approximate Mileposts**	**Aquifer System Name**	**Dominant Lithology**
Virginia			
H-605 Pipeline			
Pittsylvania	0.0 – 0.5	Early Mesozoic basin aquifers	Sandstone aquifers
H-650 Pipeline			
Pittsylvania	0.0RR - 4.4	Early Mesozoic basin aquifers	Sandstone aquifers
	4.4 - 4.6	Piedmont and Blue Ridge Crystalline-rock aquifers	Igneous and metamorphic-rock aquifers
	4.6 - 26.1	Early Mesozoic basin aquifers	Sandstone aquifers
North Carolina			
Rockingham	26.1 - 32.6	Early Mesozoic basin aquifers	Sandstone aquifers
	32.6 - 52.7	Piedmont and Blue Ridge Crystalline-rock aquifers	Igneous and metamorphic-rock aquifers
Alamance	52.7 - 73.2 RR	Piedmont and Blue Ridge Crystalline-rock aquifers	Igneous and metamorphic-rock aquifers
Note: Mileposts with an “RR” indicate locations where a re-route was incorporated into the pipeline alignment. Source: USGS, 2000			

#20 and #22 - REVISED Table 2.2-2

Private Wells and Springs within 150 feet of the MVP Southgate Project Construction Workspace a/

State, County, Milepost	Line List Number	Status (active, inactive, plugged, etc.)	Use (irrigation, monitoring, domestic, etc.)	Distance from Project Construction Workspace (Feet) b/
Virginia				
Pittsylvania				
H-605 Pipeline				
No private wells located within 150 feet of workspace areas				
H-650 Pipeline				
4.3	VA-PI-030.000	TBD	TBD	0
6.2	VA-PI-036.000	TBD	TBD	0
6.2	VA-PI-036.000	TBD	TBD	0
6.2	VA-PI-036.000	TBD	TBD	0
6.2	VA-PI-036.000	TBD	TBD	0
6.2	VA-PI-036.000	TBD	TBD	0
6.2	VA-PI-036.000	TBD	TBD	0
6.3	VA-PI-037.000	TBD	TBD	22
6.3	VA-PI-037.000	TBD	TBD	127
6.3	VA-PI-037.000	TBD	TBD	0
6.3	VA-PI-037.000	TBD	TBD	0
6.5	VA-PI-037.000	TBD	TBD	86
6.5	VA-PI-037.000	TBD	TBD	0
6.5	VA-PI-037.000	TBD	TBD	96
21.9	VA-PI-167.000	TBD	TBD	99
North Carolina				
Rockingham				
43.9	NC-RO-133.100.AR	TBD	TBD	31
45.0	NC-RO-139.000	TBD	TBD	69
Alamance				
52.9	NC-AL-000.035	TBD	TBD	25
52.9	NC-AL-000.030	TBD	TBD	65
56.7	NC-AL-028.000	TBD	TBD	0
69.1	NC-AL-150.000	TBD	TBD	4

Note: The Southgate Project is currently working with landowners to identify the status and use of wells within 150 feet. The status and type of well will be determined during easement negotiations with the landowner. TBD = To Be Determined.

a/ Private wells identified by civil survey where access has been granted. No springs have been identified within 150 feet of the Project construction workspace on parcels surveyed through January 22, 2019.

b/ Wells with a distance of 0 feet from Southgate Project Construction Workspace are located within the current construction workspace.

REVISED Table 2.3-2

FEMA 100-year Flood Zones crossed by the MVP Southgate Project

State/County	Flood Zone a/	Entry Mile Post	Exit Mile Post	Length Crossed (feet)
Virginia				
H-605 Pipeline				
Pittsylvania	No Flood Zones Crossed			
H-650 Pipeline				
Pittsylvania	A	0.3	0.4	556
	AE	1.4	2.2	4,357
	AE	4.8	5.1	1,260
	AE	5.1	5.2	771
	AE	6.6	6.6	174
	A	8.5	8.6	266
	A	9.9	9.9	220
	AE	12.7	12.8	210
	AE	13.4	13.5	318
	A	15.7	15.7	172
	AE	17.7	17.8	258
	A	23.2	23.2	57
North Carolina				
Rockingham	AE	27.1	27.8	3,665
	AE	27.8	27.8	32
	AE	27.9	28.0	668
	AE	28.0	28.1	97
	AE	28.3	28.4	204
	AE	29.6	29.6	22
	AE	29.6	30.5	4,741
	AE	30.5	30.6	315
	AE	30.7	30.7	150
	AE	30.7	30.9	941
	AE	32.1	32.2	37
	AE	32.2	32.2	196
	AE	32.2	32.2	10
	AE	32.6	32.7	526
	AE	33.0	33.1	470
	AE	33.1	33.1	32
	AE	38.6	38.8	886
	AE	41.1	41.2	320
	AE	43.2	43.3	551
	AE	46.4	46.5	88
	AE	46.9	47.0	341
	AE	48.6	48.7	353
	AE	50.8	50.8	95
Alamance	AE	53.6	53.7	198
	AE	54.6	54.6	125
	AE	56.4	56.4	26

REVISED Table 2.3-2

FEMA 100-year Flood Zones crossed by the MVP Southgate Project

State/County	Flood Zone a/	Entry Mile Post	Exit Mile Post	Length Crossed (feet)
	AE	56.6	56.6	281
	AE	57.0	57.0	304
	AE	57.9	57.9	8
	AE	58.6	58.7	322
	AE	60.7	60.7	76
	AE	60.7	60.8	47
	AE	63.6	63.6	350
	AE	63.6	63.6	4
	AE	63.8	63.9	100
	AE	64.0	64.0	377
	AE	65.6	65.6	115
	AE	67.6	67.6	153
	AE	69.1	69.1	222
	AE	69.1	69.3	894
	AE	70.2	70.3	320
	AE	70.7	70.8	254
	AE	70.9	70.9	253
	AE	70.9	71.0	115
	AE	71.3	71.3	328
	AE	71.3	71.8	2,536
	AE	72.5	72.7	1,279
	AE	72.9	73.1RR	824

Note: Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

a/ Flood Zone A – Areas subject to inundation by the 1-percent annual chance flood event determined using approximate methodologies.

Flood Zone AE – Areas subject to inundation by the 1-percent annual chance flood event determined by detailed methods.

REVISED Table 2.3-3

Permanent Impacts within the 100-year Flood Zone

Facility	Impact (acre)
T-15 Dan River Interconnect/ MLV 4	0.8
PA-AL181A	0.4
PA-RO-082	0.1
PA-RO-082A	0.1
Total	**1.3**

REVISED Table 2.3-4

Summary of Waterbodies Crossed by the Pipeline of the MVP Southgate Project a/

Facility, State	Flow Type	Number of Waterbodies Crossed
H-605 Pipeline		
Virginia	Ephemeral	0
	Intermittent	1
	Perennial	0
	H-605 Pipeline Virginia Total	**1**
H-650 Pipeline		
Virginia	Ephemeral	4
	Intermittent	20
	Perennial	37
	Pond	1
	H-650 Pipeline Virginia Total	**62**
North Carolina	Ephemeral	20
	Intermittent	52
	Perennial	88
	Pond	1
	H-650 Pipeline North Carolina Total	**161**
	Project Total	**224**

a/ Based on data from field delineation as of January 22, 2019 where access has been obtained to the pipeline corridor, approximated and NHD data elsewhere. Table only includes waterbodies that cross the centerline of the Southgate Project.

REVISED Table 2.3-5

Summary of FERC Classification of Waterbody Crossings by the Pipeline of the MVP Southgate Project a/

State	Minor b/	Intermediate c/	Major d/	Total
Virginia	38	25	0	**63**
North Carolina	124	34	3	**161**
Total	**162**	**59**	**3**	**224**

a/ Based on data from field delineation as of January 22, 2019 where access has been obtained to the pipeline corridor, approximated and NHD data elsewhere. Table only includes waterbodies that cross the centerline of the Southgate Project.

b/ FERC classified Minor Waterbodies – waterbodies less than or equal to 10 feet wide at the water's edge

c/ FERC classified Intermediate Waterbodies – waterbodies greater than 10 feet wide but less than or equal to 100 feet wide at the water's edge

d/ FERC classified Major Waterbodies – waterbodies greater than 100 feet wide at the water's edge

REVISED Table 2.3-7

Proposed Hydrostatic Test Water Use Summary

Anticipate Year of Construction	Construction Spread	Segment Name	Beginning MP	Ending MP	Length of Section (feet)	Required Water (gal)	Proposed Water Source			Proposed Test Water Discharge Location		
							MP	Water Source	Watershed	MP	Watershed	Volume
2020	1	1	0.0RR	30.4	160,512	3,600,000	0.0	Municipal	NA	0.0	Roanoke River Basin	3,600,000
2020	2	2	30.4	73.2RR	227,040	2,300,000	30.4	Municipal	NA	30.4	Cape Fear River Basin	2,300,000
Hydrostatic Test Water Total						**5,900,000**						

Note: Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

REVISED Table 2.3-8

Estimated Water Usage for the MVP Southgate Project HDDs

State, HDD Name	MP (Ending) of the HDD	Maximum Estimated Volume (gallons)		Water Source
		Hydrostatic Test Water	HDD Operations	
North Carolina				
Dan River HDD	30.4	60,000	105,000	Municipal
Stony Creek Reservoir HDD	63.8	16,500	105,000	Municipal

REVISED Table 2.3-9

Construction Workspace Parallels Waterbody (or associated Wetland) within 15 feet

Resource ID	MP	Length of Route within 15 Feet of Resource (feet)	Justification
S-F18-17	9.9	60	Crossing location avoids sensitive resource site. Minimizes impact to wetlands. Constructability to avoid side slope construction.
S-F18-28 / W-F18-29	11.4	37	Collocation and constructability to avoid side slope construction.
S-D18-37	15.7	52 / 44	Collocation and constructability to avoid side slope construction.
W-E18-43	18.0	76	Collocation and constructability to avoid side slope construction.
S-E18-35	23.9	18	Collocation and constructability to avoid side slope construction.
S-A18-36	28.4	53	Collocation and constructability to avoid side slope construction.
S-A18-143	31.9	28	Collocation and constructability to avoid side slope construction.
S-A18-150	32.5	40	Collocation and constructability to avoid side slope construction.
S-A18-151	32.7	90	Constructability to avoid side slope construction.
S-A18-154	33.0	38	Constructability to avoid side slope construction.
S-A18-94 / W-A18-95	37.0	40 / 61	Constructability to avoid side slope construction.
S-B19-158	37.6	78	Collocation and constructability to avoid side slope construction.
S-A18-4	38.5	180	Collocation.
W-B18-55	41.1	60	Collocation and constructability to avoid side slope construction.
AS-B18-71	45.7	352, 39	Collocation and constructability to avoid side slope construction.
W-A18-184	49.8	122	Collocation and constructability to avoid side slope construction.
S-A18-87	53.7	43	Collocation.
S-B18-59 / W-B18-60	55.3	102 / 63	Constructability, to avoid residences
S-A18-125 / W-A18-119	56.5	241 / 60	Collocation.
S-A18-125 / W-A18-127	56.6	105 / 153	Collocation.
S-C18-12	58.7	38	Collocation and constructability to avoid side slope construction.
S-A18-70	62.4	50	Constructability to avoid side slope construction.
S-B18-14	63.2	51	Collocation and constructability to avoid side slope construction.
W-B19-161	65.5	81	Constructability, to avoid residences
S-B18-9	68.8	50	Constructability to avoid side slope construction.
S-B18-135	70.2	110	Constructability to avoid side slope construction.
S-C18-82	70.4	93	Constructability to avoid side slope construction.
W-18-67	71.8	34	Collocation and constructability to avoid side slope construction.

Revised Table 2.3-10

Areas of Potential Blasting at Waterbodies crossed by the Pipeline in Areas of Shallow Bedrock

State/County	Milepost	Waterbody Name	Need for Blasting			Blasting Potential	Projected Depth to Bedrock (Inches)
			Slope	Depth to Bedrock	Rock Type		
VIRGINIA							
Pittsylvania	23.0	Tributary to Trotters Creek		X	X	High	24 to 31
	24.4	Tributary to Dan River	X	X	X	High	16 to 20
	24.8	Tributary to Dan River	X	X	X	High	24 to 31
NORTH CAROLINA							
Rockingham	32.5	Tributary to Town Creek	X	X	X	High	10 to 20
	33.7	Tributary to Town Creek		X	X	High	20 to 40
	34.7	Tributary to Town Creek	X	X	X	High	10 to 20
	39.0	Tributary to Wolf Island Creek		X	X	High	10 to 20
	40.4	Tributary to Lick Fork	X	X	X	High	10 to 20
	40.6	Tributary to Lick Fork	X	X	X	High	10 to 20
	40.7	Tributary to Lick Fork	X	X	X	High	10 to 20
	42.9	Tributary to Jones Creek	X	X	X	High	10 to 20
	44.1	Tributary to Jones Creek		X	X	High	10 to 20
	44.1	Tributary to Jones Creek		X	X	High	10 to 20
	45.8	Tributary to Hogans Creek		X	X	High	10 to 20
	45.9	Tributary to Hogans Creek	X	X	X	High	10 to 20
	46.5	Tributary to Hogans Creek	X	X	X	High	10 to 20
	46.5	Tributary to Hogans Creek	X	X	X	High	10 to 20
	47.4	Tributary to Hogans Creek		X	X	High	10 to 20
	47.6	Tributary to Hogans Creek		X	X	High	10 to 20
NORTH CAROLINA							
Alamance	68.1	Tributary to Boyds Creek	X			Low	>80
	68.9	Tributary to Haw River	X			Low	>80
	71.0	Tributary to Haw River	X			Low	>80
	72.6	Tributary to Haw River	X			Low	>80

Sources:

(1) United States Geological Survey (USGS) Geologic Units by Geographic Area. Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina, 2018.

(2) United States Department of Agricultural, Natural Resources Conservation Service (USDA/NRCS), 2018 Custom Soil Resources Report for Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina.

(3) Possibility of blasting based on Notes 1 and 2 for this Table and Table 6-F MVP Southgate Project Resource Report 6 – Geologic Resources. Blasting based on slope locations where thickness of overlaying soil may be less than trench depth due to erosion and gravitational influences on soil within the stream channel.

(4) Projected depth to bedrock or depth to restrictive features is based on the United States Department of Agriculture Natural Resources Conservation Service (USDA/NRCS), 2018 Custom Soil Resources Report for Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina for soil unit crossed at water body crossing.

Notes:

(1) "Low" – The potential for blasting is possible within this section depending on pipeline alignment into, across, and out of waterbody. The potential of blasting to achieve the crossing depth exists but has a low probability.

(2) "High" – Blasting will be needed within this section to achieve pipeline alignment into, across, and out of waterbody. Blasting will not be needed along the total waterbody crossing length depending on the degree of erosion of the stream banks and stream channel.

REVISED Table 2.3-11

Waterbodies Crossed by the Pipeline in Karst Areas a/

State/County	Milepost	Waterbody Name	Flow Type
Virginia			
Pittsylvania	15.2	S-A18-188 / Tributary to Silver Creek	Perennial
	15.7	S-D18-37 / Tributary to Silver Creek	Perennial
	21.2	S-D18-40 / Tributary to Trayner Branch	Perennial
	21.9	WB-C18-93 / Tributary to Trotters Creek	Pond
	22.2	S-A18-206 / Unnamed Tributary to Trotters Creek	Intermittent

a/ Analysis includes all waterbodies delineated as of January 22, 2019, 2018 crossed by the pipeline.

REVISED Table 2.4-1

Summary of Wetlands Crossed by the MVP Southgate Project

State / County	Wetland Type	Length of Pipeline Crossing (Feet)	Acres Impacted a/	
			Construction	Operation
Virginia				
Pittsylvania	PEM	3,149	6.26	0.74
	PFO	2,779	4.37	1.66
	PSS	472	0.69	0.08
Virginia Total		***6,400***	***11.32***	***2.48***
North Carolina				
Rockingham	PEM	2,162	6.07	0.51
	PFO	1,954	3.65	1.32
	PSS	193	0.42	0.05
Alamance	PEM	220	1.25	0.05
	PFO	1,761	3.03	1.20
	PSS	52	0.11	0.01
North Carolina Total		***6,343***	***14.51***	***3.14***
Project Total		***12,743***	***25.83***	***5.63***

a/ Construction impacts are impacts associated with all areas within the construction workspace limits, temporary and permanent. Operation impacts are impacts associated with vegetation maintenance (10 feet in PEM and PSS wetlands and 30 feet in PFO wetlands). Sums may not equal the total of addends due to rounding. Addends consist of six-decimal digits.

#20 and #31 REVISED Appendix 2-A

Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
Virginia **Pittsylvania** **H-605 Pipeline**									
S-F18-6	0.1	Trib. To Little Cherrystone Creek	Intermittent	6	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
H-650 Pipeline									
S-F18-65	0.4	Little Cherrystone Creek	Perennial	22	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-63	0.6	Trib. To Little Cherrystone Creek	Intermittent	14	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-18	1.1	Trib. To Cherrystone Creek	Perennial	5	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-56	1.4	Trib. To Cherrystone Creek	Intermittent	4	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-18	1.7	Cherrystone Creek	Perennial	29	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-2	3.2	Trib. To Banister River	Intermittent	8	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-6	3.6	Trib. To Banister River	Intermittent	10	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-10	4.0	Trib. To Banister River	Intermittent	6	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-9	4.1	Trib. To Banister River	Intermittent	4	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-4	4.8	Trib. To Banister River	Intermittent	4	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-3	4.9	Banister River	Perennial	48	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-2	5.0	White Oak Creek	Perennial	33	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-2	5.1	White Oak Creek	Perennial	23	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-36	6.6	Trib. To White Oak Creek	Intermittent	5	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-7	7.0	Trib. To White Oak Creek	Intermittent	4	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-6	7.0	Trib. To White Oak Creek	Intermittent	6	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-13	7.6	Trib. To White Oak Creek	Perennial	3	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-13	8.0	Trib. To White Oak Creek	Intermittent	9	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-16	8.5	Trib. To White Oak Creek	Intermittent	8	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-14	8.6	Trib. To White Oak Creek	Perennial	9	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
WB-E18-24	9.0	Trib. To White Oak Creek	Pond	23	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-15	9.9	Trib. To White Oak Creek	Perennial	3	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-17	9.9	White Oak Creek	Perennial	14	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-22	11.0	Trib. To Sandy Creek	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A
S-F18-20	11.0	Trib. To Sandy Creek	Perennial	27	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-20	11.0	Trib. To Sandy Creek	Perennial	4	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-20	11.0	Trib. To Sandy Creek	Perennial	9	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-28	11.4	Trib. To Sandy Creek	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A

#20 and #31 REVISED Appendix 2-A

Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-F18-20	11.4	Trib. To Sandy Creek	Perennial	12	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-C18-85	11.6	Trib. To Sandy Creek	Perennial	4	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-C18-86	11.9	Trib. To Sandy Creek	Perennial	23	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-21	12.8	Sandy Creek	Perennial	15	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-27	13.4	Trib. To Sandy Creek	Perennial	16	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
*AS-D18-22 / S-D18-22	14.3	Trib. To Sandy Creek	Perennial	12	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-47	14.7	Trib. To Sandy Creek	Perennial	3	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-A18-188	15.2	Trib. To Silver Creek	Perennial	5	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-37	15.7	Trib. To Silver Creek	Perennial	24	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-A18-190	15.9	Trib. To Silver Creek	Intermittent	6	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-A18-194	16.0	Trib. To Silver Creek	Perennial	7	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-A18-195	16.2	Trib. To Silver Creek	Perennial	2	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-G18-10	16.2	Trib. To Silver Creek	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A
S-C18-97	16.8	Trib. To Sandy River	Intermittent	6	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-B18-202	17.0	Trib. To Sandy River	Perennial	3	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-51	17.3	Trib. To Sandy River	Perennial	12	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-44	17.7	Sandy River	Perennial	85	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-42	18.0	Trib. To Hardys Creek	Perennial	6	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-D18-38	19.4	Trib. To Sandy River	Ephemeral	4	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-F18-50	19.7	Trib. To Sandy River	Perennial	9	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-52	20.4	Trib. To Trayner Branch	Perennial	4	Intermediate	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-E18-54	20.6	Trib. To Trayner Branch	Perennial	6	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-D18-34	21.0	Trayner Branch	Perennial	7	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-D18-40	21.2	Trib. To Trayner Branch	Perennial	5	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-C18-94	21.7	Trib. To Trotters Creek	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A
WB-C18-93	21.9	Trib. To Trotters Creek	Pond	0	Minor	WWH	AL, R, FC, W	N/A	N/A
S-A18-205	22.0	Trib. To Trotters Creek	Intermittent	19	Intermediate	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-A18-203	22.1	Trib. To Trotters Creek	Intermittent	<1	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-A18-206	22.2	Trib. To Trotters Creek	Intermittent	9	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-F18-43	23.0	Trib. To Trotters Creek	Intermittent	4	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-F18-42	23.2	Trib. To Trotters Creek	Ephemeral	10	Intermediate	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-F18-40	23.2	Trotters Creek	Perennial	22	Intermediate	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-F18-38	23.5	Trib. To Dan River	Intermittent	4	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-F18-35	23.8	Trib. To Dan River	Ephemeral	7	Minor	WWH	AL, R, FC, W	N/A	Open Cut - Dam and pump, Flume
S-E18-34	23.9	Trib. To Dan River	Intermittent	0	Minor	WWH	AL, R, FC, W, PWS	N/A	N/A
S-F18-34	24.4	Trib. To Dan River	Ephemeral	7	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-F18-33	24.8	Trib. To Dan River	Perennial	9	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-C18-89	25.1	Trib. To Dan River	Perennial	19	Intermediate	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-C18-90	25.7	Trib. To Dan River	Perennial	11	Intermediate	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
S-C18-92	25.9	Trib. To Dan River	Intermittent	7	Minor	WWH	AL, R, FC, W, PWS	N/A	Open Cut - Dam and pump, Flume
North Carolina									
Rockingham									
S-B18-99	26.5	Trib. To Cascade Creek	Intermittent	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-42	27.3	Trib. To Cascade Creek	Intermittent	20	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-40	27.5	Cascade Creek	Perennial	108	Major	WWH	Class C	N/A	Conventional Bore
S-A19-273	27.5	Dry Creek	Perennial	29	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-31	28.3	Trib. To Dan River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-A18-32	28.4	Trib. To Dan River	Perennial	6	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-34	28.4	Trib. To Dan River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-A18-36	28.4	Trib. To Dan River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-37	28.6	Trib. To Dan River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-B18-49	28.8	Trib. To Dan River	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-47	29.1	Trib. To Dan River	Ephemeral	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-160	29.3	Trib. To Dan River	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-A18-47	29.6	Trib. To Dan River	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-17	30.1	Dan River	Perennial	247	Major	WWH	Class C	N/A	HDD
S-B18-38	30.3	Trib. To Dan River	Ephemeral	3	Minor	WWH	Class C	N/A	HDD
S-B18-104	30.8 RR	Trib. To Rock Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B19-153	30.9 RR	Trib. To Rock Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut – Dam and pump, Flume
S-B18-105	31.1	Trib. To Rock Creek	Intermittent	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-102	31.1	Trib. To Rock Creek	Perennial	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-95	31.3	Rock Creek	Perennial	28	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-143	31.9	Trib. To Machine Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-140	31.9	Trib. To Machine Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-A18-144	32.0	Trib. To Machine Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-140	32.0	Trib. To Machine Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-148	32.1	Trib. To Machine Creek	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-A18-147	32.2	Machine Creek	Perennial	20	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-150	32.5	Trib. To Town Creek	Ephemeral	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-153	32.6	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-151	32.7 RR	Town Creek	Perennial	55	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-151	33.0	Town Creek	Perennial	48	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-154	33.0	Trib. To Town Creek	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-A18-154	33.0	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-154	33.0	Trib. To Town Creek	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-A18-220	33.3	Trib. To Town Creek	Ephemeral	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-221	33.3	Trib. To Town Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-52	33.4	Trib. To Town Creek	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-51	33.5	Trib. To Town Creek	Intermittent	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-223	33.7	Trib. To Town Creek	Intermittent	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-225	33.7	Trib. To Town Creek	Perennial	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-49	33.9	Trib. To Town Creek	Intermittent	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-48	34.0	Trib. To Town Creek	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-C18-38	34.2 RR	Trib. To Town Creek	Perennial	33	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-39	34.5	Trib. To Town Creek	Ephemeral	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-38	34.6	Trib. To Town Creek	Perennial	17	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-53	34.7	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-38	34.8	Trib. To Town Creek	Perennial	23	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-74	34.8	Trib. To Town Creek	Ephemeral	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-38	35.0	Trib. To Town Creek	Perennial	7	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-57	35.1	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-35	36.0	Trib. To Town Creek	Perennial	10	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-94	37.0	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-97	37.2	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-101	37.3	Trib. To Wolf Island Creek	Perennial	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-B19-157	37.6 RR	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cute – Dam and pump, Flume
*AS-B18-117	37.7	Trib. To Wolf Island Creek	Perennial	12	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-2	38.2	Trib. To Wolf Island Creek	Perennial	21	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-9	38.4	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-4	38.5	Trib. To Wolf Island Creek	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-4	38.5	Trib. To Wolf Island Creek	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-8	38.7	Wolf Island Creek	Perennial	53	Intermediate	WWH	Class C	N/A	Conventional Bore
S-A19-269	38.8 RR	Trib. To Wolf Island Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut – Dam and pump, Flume
S-B18-72	39.0	Trib. To Wolf Island Creek	Ephemeral	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-73	39.1	Trib. To Wolf Island Creek	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-B18-74	39.1	Trib. To Wolf Island Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-74	39.6	Trib. To Wolf Island Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-108	40.2	Trib. To Lick Fork	Perennial	27	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-109	40.2	Trib. To Lick Fork	Ephemeral	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-210	40.4	Trib. To Lick Fork	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-A18-210	40.4	Trib. To Lick Fork	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-51	40.6	Trib. To Lick Fork	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-52	40.7	Trib. To Lick Fork	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-57	41.1	Trib. To Lick Fork	Perennial	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-56	41.2 RR	Lick Fork	Perennial	39	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-171	41.2	Trib. To Lick Fork	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-B18-44	41.6	Trib. To Lick Fork	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-B18-45	41.7	Trib. To Lick Fork	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-B18-44	41.7	Trib. To Lick Fork	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-41	41.8	Trib. To Lick Fork	Perennial	19	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-89	42.3	Trib. To Jones Creek	Ephemeral	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-256	42.9	Trib. To Jones Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-92	43.1	Trib. To Jones Creek	Perennial	12	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-176	43.3	Jones Creek	Perennial	26	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-181	43.3	Trib. To Jones Creek	Perennial	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-80	43.7	Trib. To Jones Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-105	43.7	Trib. To Jones Creek	Perennial	53	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-C18-25	44.1	Trib. To Jones Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-102	44.1	Trib. To Jones Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-226	44.4	Trib. To Jones Creek	Ephemeral	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-228	44.5	Trib. To Jones Creek	Ephemeral	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-213	45.7	Trib. To Hogans Creek	Intermittent	0	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-71	45.7	Trib. To Hogans Creek	Perennial	23	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-68	45.8	Trib. To Hogans Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-231	46.4	Trib. To Hogans Creek	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-A18-234	46.5	Trib. To Hogans Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-235	46.5	Trib. To Hogans Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-76	47.0	Hogans Creek	Perennial	19	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-79	47.4	Trib. To Hogans Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-90	47.6	Trib. To Hogans Creek	Perennial	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B19-167	47.7 RR	Trib. To Hogans Creek	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut – Dam and pump, Flume
S-A18-242	47.7	Trib. To Hogans Creek	Perennial	19	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-60	48.7	Giles Creek	Perennial	4	Minor	WWH	Class C, WS-IV, NSW	N/A	Open Cut - Dam and pump, Flume
S-A18-55	49.3	Trib. To Giles Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-183	49.9	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-185	49.9	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
*AS-A18-182 / S-A18-182	49.9	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-244	50.2	Trib. To Haw River	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A19-289	50.7 RR	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A19-286	50.8	Trib. To Haw River	Perennial	22	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
AS-A19-285	51.2 RR	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-22	51.2	Trib. To Haw River	Ephemeral	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-21	51.4	Trib. To Haw River	Perennial	7	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-15	52.1	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-217	52.1	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-A18-219	52.4	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
Alamance									
S-B18-94	52.7	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-84	53.7	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume

#20 and #31 REVISED Appendix 2-A

Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-A18-87	53.7	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-89	54.0	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-C18-63	54.5	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-62	54.6	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-60	54.9	Trib. To Haw River	Intermittent	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-143	54.9	Trib. To Haw River	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-B18-142	54.9	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-61	54.9	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-68	55.2	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-59	55.3	Trib. To Haw River	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-59	55.3	Trib. To Haw River	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-59	55.3	Trib. To Haw River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-B18-65	56.4	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-120	56.4	Trib. To Haw River	Perennial	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
WB-A18-121	56.5	Trib. To Haw River	Pond	32	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-125	56.5	Trib. To Haw River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-125	56.6	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-126	56.6	Trib. To Haw River	Ephemeral	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-125	56.6	Trib. To Haw River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-132	57.1	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A19-290	57.5 RR	Trib. To Haw River	Ephemeral	0	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-2	57.9	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-13	58.7	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-11	58.7	Trib. To Haw River	Perennial	79	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-12	58.7	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
*AS-NHD-1549	59.6	Trib. To Haw River	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-30	60.7	Trib. To Haw River	Intermittent	13	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-28	60.8	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-78	61.8	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-77	61.8	Trib. To Haw River	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-A18-70	62.4	Trib. To Haw River	Perennial	19	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-72	62.5	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-B18-23	63.0	Trib. To Stony Creek Reservoir	Ephemeral	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-24	63.0	Trib. To Stony Creek Reservoir	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-B18-22	63.0	Trib. To Stony Creek Reservoir	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-B18-22	63.1	Trib. To Stony Creek Reservoir	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-B18-26	63.1	Trib. To Stony Creek Reservoir	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-B18-12	63.1	Trib. To Stony Creek Reservoir	Perennial	6	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-12	63.1	Trib. To Stony Creek Reservoir	Perennial	6	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-29	63.1	Trib. To Stony Creek Reservoir	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-B18-12	63.1	Trib. To Stony Creek Reservoir	Perennial	6	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-14	63.2	Trib. To Stony Creek Reservoir	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-B18-12	63.2	Trib. To Stony Creek Reservoir	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-B18-12	63.2	Trib. To Stony Creek Reservoir	Perennial	21	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-15	63.5	Trib. To Stony Creek Reservoir	Intermittent	0	Minor	WWH	Class C	N/A	N/A
*AS-B18-16 / S-B18-16	63.6	Stony Creek Reservoir	Perennial	305	Major	WWH	Class C, WS-II, HQW, NSW, CA	N/A	HDD
*AS-B18-20	63.8	Trib. To Deep Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-NHD-1547	64.0	Deep Creek	Perennial	9	Minor	WWH	Class C, WS-II, HQW, NSW, CA	N/A	Conventional Bore
*AS-NHD-3040	64.5	Trib. To Deep Creek	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-251	65.6	Trib. To Boyds Creek	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-250	65.6	Trib. To Boyds Creek	Perennial	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-NHD-3025	66.8	Trib. To Boyds Creek	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-A18-177	67.2	Trib. To Boyds Creek	Perennial	15	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-A18-233 / S-A18-233	67.6	Boyds Creek	Perennial	24	Intermediate	WWH	Class C, WS-V, NSW	N/A	Open Cut - Dam and pump, Flume
*AS-NHD-1551	68.1	Trib. To Boyds Creek	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-7	68.4	Trib. To Boyds Creek	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-NHD-1552	68.6	Trib. To Boyds Creek	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-8	68.8	Trib. To Haw River	Intermittent	12	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-11	68.9	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-10	69.1	Trib. To Haw River	Ephemeral	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-15	69.2	Trib. To Haw River	Intermittent	4	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-B18-132	69.5	Trib. To Haw River	Perennial	8	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-B19-147	69.7	Trib. To Haw River	Ephemeral	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B19-148	69.8	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-A18-115	69.9	Trib. To Haw River	Perennial	18	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-135	70.3	Trib. To Haw River	Ephemeral	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-134	70.3	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-133	70.3	Trib. To Haw River	Perennial	11	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-82	70.4	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-C18-81	70.7	Trib. To Haw River	Perennial	24	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-109	70.9	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-108	71.0	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-107	71.0	Trib. To Haw River	Ephemeral	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-64	71.5	Trib. To Haw River	Perennial	26	Intermediate	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-65	71.6	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-68	71.8	Trib. To Haw River	Perennial	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
*AS-NHD-1560	72.1	Trib. To Haw River	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-A18-207	72.2	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-B18-125	72.4	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-127	72.5	Trib. To Haw River	Intermittent	5	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-128	72.5	Trib. To Haw River	Ephemeral	2	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
S-B18-129	72.6	Trib. To Haw River	Ephemeral	3	Minor	WWH	Class C	N/A	Open Cut - Dam and pump, Flume
Aboveground Facilities **North Carolina** **Rockingham**									
*AS-A18-248 / S-A18-248 - CY-05	30.6	Trib. To Dry Creek	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-B18-38 - T-15 Dan River Interconnect	30.3	Trib. To Dan River	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
Access Roads **Virginia** **Pittsylvania**									
S-D18-20 - TA-PI-005	2.2	Trib. To Cherrystone Creek	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A
AS-D18-26 - TA-PI-034	13.7	Trib. To Sandy Creek	Perennial	8	Minor	WWH	AL, R, FC, W	N/A	Bridge or Flume
S-F18-61 - TA-PI-035	14.2	Trib. To Sandy Creek	Perennial	0	Minor	WWH	AL, R, FC, W	N/A	N/A
*AS-NHD-2357 - TA-PI-035	14.3	Trib. To Sandy Creek	Perennial	5	Minor	WWH	AL, R, FC, W	N/A	Bridge or Flume
S-A18-190 - TA-PI-038	15.9	Trib. To Silver Creek	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A
S-F18-47 - TA-PI-043	17.2	Trib. To Sandy River	Intermittent	1	Minor	WWH	AL, R, FC, W	N/A	Bridge or Flume
S-E18-39 - TA-PI-061	22.6	Trib. To Trotters Creek	Intermittent	4	Minor	WWH	AL, R, FC, W	N/A	Bridge or Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/
S-E18-38 - TA-PI-061	22.6	Trib. To Trotters Creek	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A
S-E18-41 – TA-PI-061	22.7	Trib. To Trotters Creek	Ephemeral	0	Minor	WWH	AL, R, FC, W	N/A	N/A
S-E18-32 - TA-PI-063	24.0	Trib. To Dan River	Intermittent	5	Minor	WWH	AL, R, FC, W	N/A	Bridge or Flume
S-C18-88 - TA-PI-067	25.0	Trib. To Dan River	Intermittent	0	Minor	WWH	AL, R, FC, W	N/A	N/A
North Carolina Rockingham									
S-A18-40 - TA-RO-073A	27.4	Cascade Creek	Perennial	48	Intermediate	WWH	Class C	N/A	Bridge or Flume
S-A19-283 - TA-RO-073A	27.4	Trib. To Cascade Creek	Intermittent	2	Minor	WWH	Class C	N/A	Bridge or Flume
WB-A19-281 - TA-RO-073A	27.5	Trib. To Cascade Creek	Pond	0	Intermediate	WWH	Class C	N/A	N/A
S-A18-23 - TA-RO-076	28.3	Trib. To Dan River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-27 - TA-RO-076	28.4	Trib. To Dan River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-A18-19 - TA-RO-080	29.8	Trib. To Dan River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-19 - TA-RO-080	29.7	Trib. To Dan River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-1 - TA-RO-103	38.1	Trib. To Wolf Island Creek	Ephemeral	1	Minor	WWH	Class C	N/A	Bridge or Flume
S-B18-42 - PA-RO-113A	41.8	Trib. To Lick Fork	Intermittent	4	Minor	WWH	Class C	N/A	Bridge or Flume
S-A18-239 - TA-RO-129	46.7	Trib. To Hogans Creek	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-C18-71 - TA-RO-139	50.2	Trib. To Haw River	Ephemeral	0	Minor	WWH	Class C	N/A	N/A
S-C18-15 - TA-RO-144	52.2	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
Alamance									
S-A18-216 - TA-AL-155	54.6	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	N/A	Bridge or Flume
S-A18-215 - TA-AL-155	54.6	Trib. To Haw River	Perennial	6	Minor	WWH	Class C	N/A	Bridge or Flume
*AS-NHD-1554 - PA-AL-164	58.9	Trib. To Haw River	Intermittent	5	Minor	WWH	Class C	N/A	Bridge or Flume
S-A18-70 - TA-AL-169	62.4	Trib. To Haw River	Perennial	0	Minor	WWH	Class C	N/A	N/A
S-A18-72 - TA-AL-169	62.5	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A	N/A
S-B18-138 - TA-AL-172	63.8	Trib. To Stony Creek Reservoir	Perennial	3	Minor	WWH	Class C	N/A	Bridge or Flume
S-B18-137 - TA-AL-172	63.7	Trib. To Stony Creek Reservoir	Intermittent	2	Minor	WWH	Class C	N/A	Bridge or Flume
*AS-NHD-7000 - TA-AL-179A	66.5	Trib. To Boyds Creek	Intermittent	5	Minor	WWH	Class C	N/A	Bridge or Flume

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Waterbodies Crossed by MVP Southgate Project

Facility/ State/ County/ Waterbody ID a/	Approx. MP b/	Waterbody Name	Flow Type c/	Crossing Width (Feet) d/	FERC Class e/	Fishery Classification f/	State Water Quality Classification / Designations g/	Construction Timing Windows h/	Crossing Method i/

a/ Data is based on waterbody field delineations completed through January 22, 2019 where access has been obtained, National Hydrography Database (NHD), and desktop analysis of approximated resources. "S" indicates stream, "WB" indicates pond, "AS" indicates approximate stream or pond. Approximated streams are also indicated with "*"

b/ MP is closest milepost to waterbody. Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

c/ Perennial: flowing throughout the year for all or most years, Intermittent: flowing water during certain times of the year, Ephemeral: flowing water only during short periods of the year. For delineated waterbodies, flow type in North Carolina was determined using the NCDWQ Stream Identification Form Version 4.11 and flow type in Virginia has been field estimated. For approximated waterbodies, flow type was estimated based on aerial imagery unless the approximated stream is directly associated with a delineated waterbody in which the approximated waterbody was assigned the same flow type as the associated delineated waterbody.

d/ Crossing width is the intersection of the waterbody and the centerline of the pipeline or access road. For approximated streams, the crossing width was measure using aerial imagery if wide enough to discern, and defaulted to 5 feet if too narrow to be measured using aerial imagery. If the crossing width is "0", the waterbody is not crossed by the centerline.

e/ FERC Classification from the 2013 FERC Procedures. Minor (≤10 feet); Intermediate (>10 - ≤100 feet); Major (>100 feet).

f/ WWH - Warm Water Habitat.

g/ Virginia Water Quality Designations (VADEQ, 2016b). North Carolina Water Quality Classifications (NCDEQ, 2018d). In Virginia AL = Aquatic Life, R = Recreation, W = Wildlife, FC = Fish Consumption, PWS = PUBLIC Water Source. In North Carolina WS-II = Water Supply II, WA-IV = Water Supply IV, WS-V = Water Supply V, HQW = High Quality Waters, NSW = Nutrient Sensitive Waters

h/ Construction timing windows are dependent on state permit approval conditions. No construction timing windows are anticipated at this time based on correspondence with the applicable Virginia and North Carolina state agencies. Construction timing windows for mussels may be applicable depending on final consultation with the applicable agencies.

i/ HDD: Horizontal Directional Drill. Conventional Crossing will only be used when there is no discernable flow within the waterbody at the time of crossing. Dry Crossing will consist of either Flume, Dam and Pump, or Cofferdam. N/A indicates that the waterbody is not crossed by centerline.

#20 and #35 - REVISED Appendix 2-B Wetlands Crossed by the MVP Southgate Project						
Facility/ State/ County/ Wetland ID a/	**Wetland Type** b/	**Approx. MP**	**Crossing Length (feet)** c/	**Total Construction Impacts (acres)** d/	**Total Operation Vegetation Impacts (acres)** e/	**Construction Crossing Method** f/
Virginia **Pittsylvania** **H-605 Pipeline**						
W-F18-7	PEM	0.1	11	<0.01	<0.01	Open-cut
H-650 Pipeline						
W-F18-11	PFO	0.2	57	0.12	0.04	Open-cut
W-F18-66	PEM	0.4	377	0.48	0.08	Open-cut
W-F18-66	PFO	0.4	0	0.14	0.00	Workspace Only
W-F18-64	PEM	0.6	234	0.36	0.05	Open-cut
W-G18-2	PEM	1.0	13	0.04	<0.01	Open-cut
W-G18-2	PFO	1.0	0	<0.01	<0.01	Workspace Only
W-F18-57	PEM	1.1	0	<0.01	0.00	Workspace Only
W-F18-57	PEM	1.1	0	<0.01	0.00	Workspace Only
W-F18-5	PFO	1.4	156	0.16	0.10	Open-cut
W-F18-5	PEM	1.4	0	0.01	<0.01	Workspace Only
W-F18-5	PFO	1.4	11	0.01	<0.01	Open-cut
W-F18-5	PFO	1.4	255	0.39	0.16	Open-cut
W-F18-5	PEM	1.5	770	1.25	0.18	Open-cut
W-F18-5	PSS	1.5	0	0.14	0.00	Workspace Only
W-F18-5	PEM	1.7	55	0.07	0.01	Open-cut
W-F18-5	PSS	1.8	362	0.45	0.08	Open-cut
W-F18-5	PFO	1.9	290	0.34	0.20	Open-cut
W-F18-5	PEM	2.0	1470	2.90	0.34	Open-cut
W-D18-5	PFO	3.6	44	0.07	0.02	Open-cut
W-D18-5	PFO	3.6	2	<0.01	<0.01	Open-cut
W-D18-11	PFO	4.0	0	<0.01	0.00	Workspace Only
W-D18-11	PFO	4.0	5	<0.01	<0.01	Open-cut
W-D18-7	PFO	4.9	373	0.46	0.25	Open-cut
W-D18-7	PEM	4.9	9	0.20	0.01	Open-cut
W-D18-1	PFO	5.0	14	0.02	<0.01	Open-cut
W-D18-1	PFO	5.0	123	0.18	0.07	Open-cut
W-D18-1	PFO	5.1	87	0.15	0.05	Open-cut
W-D18-1	PFO	5.2	309	0.51	0.21	Open-cut
W-D18-1	PFO	5.2	0	0.06	0.00	Workspace Only
W-D18-1	PFO	5.2	112	0.31	0.08	Open-cut
W-D18-1	PFO	5.2	10	0.01	0.01	Open-cut

#20 and #35 - REVISED Appendix 2-B Wetlands Crossed by the MVP Southgate Project						
Facility/ State/ County/ Wetland ID a/	**Wetland Type b/**	**Approx. MP**	**Crossing Length (feet) c/**	**Total Construction Impacts (acres) d/**	**Total Operation Vegetation Impacts (acres) e/**	**Construction Crossing Method f/**
W-D18-10	PFO	6.5	0	0.01	0.00	Workspace Only
W-D18-10	PEM	6.6	0	0.14	<0.01	Workspace Only
W-D18-10	PFO	6.6	53	0.10	0.04	Open-cut
W-D18-8	PEM	7.0	0	<0.01	0.00	Workspace Only
W-D18-8	PEM	7.0	0	<0.01	0.00	Workspace Only
W-D18-14	PEM	7.6	0	<0.01	0.00	Workspace Only
W-D18-14	PFO	7.6	0	<0.01	0.00	Workspace Only
W-F18-14	PEM	8.0	0	<0.01	0.00	Workspace Only
W-F18-14	PEM	8.0	0	<0.01	0.00	Workspace Only
W-F18-14	PFO	8.0	3	0.01	<0.01	Open-cut
W-F18-14	PEM	8.0	0	0.01	<0.01	Workspace Only
W-F18-14	PFO	8.0	5	<0.01	<0.01	Open-cut
W-E18-17	PEM	8.4	98	0.16	0.02	Open-cut
W-E18-13	PFO	8.5	94	0.15	0.05	Open-cut
W-E18-13	PEM	8.5	0	0.02	0.00	Workspace Only
W-E18-13	PFO	8.6	32	0.05	0.01	Open-cut
W-E18-13	PEM	8.6	0	0.01	0.00	Workspace Only
W-E18-13	PFO	8.6	47	0.07	0.03	Open-cut
W-E18-13	PEM	8.6	0	0.01	0.00	Workspace Only
W-E18-24	PFO	9.0	0	0.01	<0.01	Workspace Only
W-E18-24	PEM	9.1	23	0.09	0.00	Workspace Only
W-F18-16	PFO	9.9	27	0.05	0.01	Open-cut
W-F18-18	PFO	9.9	0	0.01	<0.01	Workspace Only
W-F18-18	PFO	9.9	0	<0.01	0.00	Workspace Only
W-F18-18	PFO	9.9	40	0.06	0.03	Open-cut
W-E18-23	PEM	10.1	0	<0.01	0.00	Workspace Only
W-E18-23	PFO	10.1	4	0.01	<0.01	Open-cut
W-F18-24	PFO	11.0	0	0.03	0.00	Workspace Only
W-F18-21	PFO	11.0	0	<0.01	0.00	Workspace Only
W-F18-21	PFO	11.1	0	<0.01	0.00	Workspace Only
W-F18-29	PFO	11.4	0	<0.01	0.00	Workspace Only
AW-F18-27	PFO	11.4	0	<0.01	<0.00	Workspace Only
W-C18-84	PFO	11.6	29	0.06	0.01	Open-cut
W-C18-84	PFO	11.6	20	0.02	<0.01	Open-cut
W-F18-53	PFO	12.8	8	<0.01	<0.01	Open-cut
W-F18-53	PFO	12.8	0	<0.01	0.00	Workspace Only

#20 and #35 - REVISED Appendix 2-B

Wetlands Crossed by the MVP Southgate Project

Facility/ State/ County/ Wetland ID a/	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method f/
W-F18-53	PFO	12.8	6	<0.01	<0.01	Open-cut
W-F18-53	PFO	12.8	0	<0.01	0.00	Workspace Only
W-E18-28	PFO	13.4	56	0.10	0.03	Open-cut
W-E18-28	PFO	13.5	0	0.01	<0.01	Workspace Only
W-E18-28	PFO	13.5	6	0.02	0.01	Open-cut
W-E18-28	PFO	13.5	24	0.04	0.01	Open-cut
W-D18-23	PFO	14.2	55	0.07	0.04	Open-cut
*AW-D18-23	PFO	14.3	0	0.02	0.00	Workspace Only
W-E18-45	PEM	14.7	0	<0.01	0.00	Workspace Only
W-E18-45	PEM	14.7	0	<0.01	0.00	Workspace Only
W-E18-45	PEM	14.7	3	<0.01	<0.01	Open-cut
W-E18-45	PEM	14.7	0	<0.01	0.00	Workspace Only
W-A18-198	PEM	16.2	39	0.03	0.01	Open-cut
W-A18-198	PFO	16.2	0	<0.01	0.00	Workspace Only
W-A18-200	PSS	16.7	0	0.05	0.00	Workspace Only
W-A18-201	PEM	16.7	0	0.02	0.00	Workspace Only
W-A18-201	PEM	16.8	0	0.02	<0.01	Workspace Only
W-E18-43	PEM	18.0	0	0.01	0.00	Workspace Only
W-E18-43	PFO	18.0	0	<0.01	0.00	Workspace Only
W-E18-43	PFO	18.0	0	<0.01	0.00	Workspace Only
W-D18-42	PEM	19.4	0	0.03	0.00	Workspace Only
W-F18-51	PFO	19.7	0	<0.01	0.00	Workspace Only
W-E18-53	PEM	20.4	0	0.04	0.00	Workspace Only
W-E18-53	PEM	20.4	0	<0.01	0.00	Workspace Only
W-E18-53	PEM	20.4	0	<0.01	0.00	Workspace Only
W-E18-53	PEM	20.4	0	<0.01	0.00	Workspace Only
W-E18-53	PEM	20.4	6	<0.01	<0.01	Open-cut
W-E18-53	PEM	20.4	0	<0.01	0.00	Workspace Only
W-E18-53	PEM	20.4	3	<0.01	<0.01	Open-cut
W-E18-55	PEM	20.6	0	<0.01	0.00	Workspace Only
W-E18-55	PEM	20.6	3	<0.01	<0.01	Open-cut
W-D18-35	PFO	21.0	54	0.08	0.04	Open-cut
W-D18-35	PEM	21.0	0	0.04	0.00	Workspace Only
W-D18-41	PEM	21.2	47	0.09	0.01	Open-cut
W-D18-41	PFO	21.2	7	0.01	<0.01	Open-cut
W-D18-41	PFO	21.2	75	0.09	0.04	Open-cut

#20 and #35 - REVISED Appendix 2-B

Wetlands Crossed by the MVP Southgate Project

Facility/ State/ County/ Wetland ID a/	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method f/
W-D18-41	PEM	21.3	7	0.09	0.02	Open-cut
W-C18-95	PEM	21.7	0	0.03	0.00	Workspace Only
W-A18-204	PFO	22.0	0	<0.01	0.00	Workspace Only
W-A18-204	PFO	22.0	2	0.02	<0.01	Open-cut
W-A18-204	PFO	22.0	40	0.10	0.03	Open-cut
W-A18-204	PEM	22.1	0	0.02	0.00	Workspace Only
W-A18-204	PEM	22.1	0	0.01	0.00	Workspace Only
W-A18-204	PFO	22.1	18	0.02	0.01	Open-cut
W-F18-44	PEM	23.0	0	0.01	0.00	Workspace Only
W-G18-16	PEM	23.5	0	0.01	0.00	Workspace Only
W-F18-36	PFO	23.8	0	<0.01	0.00	Workspace Only
W-F18-36	PEM	23.8	0	0.01	0.00	Workspace Only
W-E18-33	PFO	23.9	0	<0.01	0.00	Workspace Only
W-E18-33	PFO	23.9	0	0.01	0.00	Workspace Only
W-C18-91	PFO	25.9	18	0.04	0.01	Open-cut
W-C18-91	PFO	25.8	0	<0.01	0.00	Workspace Only
W-C18-96	PEM	26.1	0	0.03	<0.01	Workspace Only
W-C18-96	PFO	26.1	97	0.08	0.05	Open-cut
Virginia Subtotal			6,198	11.15	2.47	
North Carolina **Rockingham**						
W-C18-96	PFO	26.1	0	<0.01	<0.01	Workspace Only
W-B18-98	PFO	26.5	15	0.03	0.01	Open-cut
W-A18-22	PEM	26.7	78	0.17	0.02	Open-cut
W-A18-44	PEM	27.1 RR	0	<0.01	0.00	Workspace Only
W-A18-44	PEM	27.2 RR	1,176	3.55	0.27	Open-cut
W-A18-44	PFO	27.3 RR	38	0.05	0.01	Open-cut
W-A19-274	PEM	27.6 RR	42	0.19	0.01	Open-cut
W-A19-274	PEM	27.6 RR	38	0.04	0.01	Open-cut
W-A19-274	PEM	27.6 RR	0	0.17	0.00	Workspace Only
W-A18-39	PEM	28.0 RR	0	0.02	0.00	Workspace Only
W-A18-26	PEM	28.1	41	0.07	0.01	Open-cut
W-A18-30	PEM	28.3	26	0.04	0.01	Open-cut
W-A18-30	PFO	28.3	5	0.01	<0.01	Open-cut
W-A18-33	PEM	28.3	0	0.01	0.00	Workspace Only
W-A18-38	PEM	28.6	28	0.04	0.01	Open-cut
W-A18-38	PFO	28.6	0	0.01	0.00	Workspace Only

#20 and #35 - REVISED Appendix 2-B Wetlands Crossed by the MVP Southgate Project						
Facility/ State/ County/ Wetland ID a/	**Wetland Type b/**	**Approx. MP**	**Crossing Length (feet) c/**	**Total Construction Impacts (acres) d/**	**Total Operation Vegetation Impacts (acres) e/**	**Construction Crossing Method f/**
W-B18-48	PFO	29.1	23	0.05	0.02	Open-cut
W-B18-48	PEM	29.1	0	0.01	<0.01	Workspace Only
W-A18-18	PFO	29.8 RR	935	1.87	0.64	Open-cut
W-A18-18	PEM	29.9	50	0.07	0.01	Open-cut
W-B18-39	PEM	30.2	25	0.00	0.00	HDD
W-B18-39	PEM	30.2	40	0.00	0.00	HDD
W-B18-39	PEM	30.2	30	0.00	0.00	HDD
W-B18-39	PEM	30.2	32	0.00	0.00	HDD
W-B18-36	PEM	30.2	37	0.00	0.00	HDD
W-B18-36	PEM	30.3	17	0.00	0.00	HDD
W-B18-36	PFO	30.3	31	0.00	0.00	HDD
W-B18-36	PEM	30.3	18	0.00	0.00	HDD
W-B18-36	PEM	30.4	0	0.00	0.00	HDD
W-B18-36	PEM	30.4	26	0.00	0.00	HDD
W-B18-36	PEM	30.4	0	0.00	0.00	HDD
W-B18-34	PFO	30.5	180	0.45	0.12	Open-cut
W-A18-54	PEM	30.7	11	0.01	<0.01	Open-cut
W-B18-103	PEM	31.1	0	<0.01	0.00	Workspace Only
W-A18-141	PFO	32.0	183	0.34	0.13	Open-cut
W-A18-141	PEM	32.0	0	0.02	0.0	Workspace Only
W-A18-149	PEM	32.2	52	0.16	0.01	Open-cut
W-A18-149	PSS	32.2	51	0.07	0.01	Open-cut
W-A18-152	PEM	32.6	21	0.06	0.01	Open-cut
W-A18-152	PFO	32.6	29	0.03	0.02	Open-cut
W-A18-155	PEM	33.1	0	0.06	0.00	Workspace Only
W-A18-155	PSS	33.1	0	<0.01	0.00	Workspace Only
W-A18-155	PSS	33.1	69	0.16	0.02	Open-cut
W-A18-222	PFO	33.4	43	0.08	0.03	Open-cut
W-A18-222	PEM	33.4	0	<0.01	0.00	Workspace Only
W-A18-224	PFO	33.7	10	0.02	0.01	Open-cut
W-A18-224	PEM	33.7	0	<0.01	0.00	Workspace Only
W-C18-40	PEM	34.6	0	<0.01	0.00	Workspace Only
W-A18-95	PEM	37.0	8	0.02	<0.01	Open-cut
W-A18-98	PFO	37.2	0	0.01	0.00	Workspace Only
W-S18-1	PFO	37.3	8	0.01	0.01	Open-cut
W-A18-6	PFO	38.5	130	0.15	0.08	Open-cut

#20 and #35 - REVISED Appendix 2-B

Wetlands Crossed by the MVP Southgate Project

Facility/ State/ County/ Wetland ID a/	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method f/
W-A18-6	PFO	38.5	0	<0.01	0.00	Workspace Only
W-A18-6	PFO	38.5	92	0.09	0.06	Open-cut
W-A18-6	PEM	38.5	46	0.09	0.01	Open-cut
W-A18-7	PFO	38.6	0	<0.01	0.00	Workspace Only
W-A18-7	PEM	38.6	76	0.18	0.02	Open-cut
W-A18-7	PSS	38.6	33	0.08	<0.01	Open-cut
W-A18-7	PEM	38.6	0	<0.01	0.00	Workspace Only
W-A18-7	PEM	38.7	16	0.05	<0.01	Open-cut
W-A18-7	PEM	38.7	29	0.07	0.01	Open-cut
W-A18-7	PEM	38.7	17	0.04	<0.01	Open-cut
W-A19-270	PFO	38.8	0	0.02	<0.01	Workspace Only
W-B18-78	PFO	39.7	56	0.06	0.03	Open-cut
W-B18-112	PEM	40.1	0	0.01	0.00	Workspace Only
W-B18-110	PFO	40.2	0	0.02	<0.01	Workspace Only
W-B18-55	PEM	41.1	0	<0.01	0.00	Workspace Only
W-B18-55	PFO	41.1	84	0.13	0.06	Open-cut
W-B18-46	PFO	41.7	6	<0.02	0.01	Open-cut
W-C18-77	PFO	47.0	46	0.08	0.03	Open-cut
W-B18-139	PFO	48.5	24	0.03	0.02	Open-cut
W-A18-62	PSS	48.6	40	0.11	0.01	Open-cut
W-A18-62	PSS	48.6	0	<0.01	0.00	Workspace Only
W-A18-61	PEM	48.7	1	0.01	<0.01	Workspace Only
W-A18-184	PEM	49.9	57	0.12	0.01	Open-cut
W-A18-184	PEM	49.9	0	0.01	<0.01	Workspace Only
W-A18-184	PFO	49.9	0	0.02	0.00	Workspace Only
W-B18-140	PEM	50.2	0	<0.01	0.00	Workspace Only
W-C18-20	PFO	51.4	16	0.05	0.02	Open-cut
W-C18-20	PEM	51.4	55	0.08	0.02	Open-cut
Rockingham County Subtotal			4,240	9.49	1.81	
Alamance						
W-A18-83	PEM	53.3	27	0.06	0.01	Open-cut
W-A18-85	PEM	53.6	9	0.03	<0.01	Open-cut
W-A18-85	PSS	53.7	0	0.04	0.00	Workspace Only
W-A18-85	PEM	53.7	0	<0.01	0.00	Workspace Only
W-C18-67	PFO	54.3	103	0.26	0.07	Open-cut
W-C18-69	PFO	55.3	37	0.07	0.03	Open-cut

#20 and #35 - REVISED Appendix 2-B Wetlands Crossed by the MVP Southgate Project						
Facility/ State/ County/ Wetland ID a/	**Wetland Type** b/	**Approx. MP**	**Crossing Length (feet)** c/	**Total Construction Impacts (acres)** d/	**Total Operation Vegetation Impacts (acres)** e/	**Construction Crossing Method** f/
W-B18-60	PSS	55.3	0	<0.01	0.00	Workspace Only
W-B18-61	PEM	55.5	39	0.06	0.01	Open-cut
W-A18-119	PFO	56.4	95	0.11	0.06	Open-cut
W-A18-119	PEM	56.4	0	0.06	<0.01	Workspace Only
W-A18-119	PFO	56.5	297	0.47	0.21	Open-cut
W-A18-119	PEM	56.5	0	0.06	0.00	Workspace Only
W-A18-127	PEM	56.6	0	0.02	<0.01	Workspace Only
W-A18-127	PFO	56.6	61	0.07	0.04	Open-cut
W-A18-127	PEM	56.6	0	0.02	<0.01	Workspace Only
W-A18-130	PEM	56.8	0	0.01	0.00	Workspace Only
W-A18-130	PFO	56.9	17	0.09	0.03	Open-cut
W-A18-133	PFO	57.1	56	0.10	0.04	Open-cut
W-A18-133	PEM	57.1	0	0.02	0.00	Workspace Only
W-A18-133	PEM	57.1	0	0.01	0.00	Workspace Only
W-A18-135	PFO	57.2	146	0.20	0.10	Open-cut
W-A18-135	PEM	57.2	0	0.02	0.00	Workspace Only
W-A18-254	PFO	57.6	154	0.22	0.10	Open-cut
W-C18-3	PEM	57.8	13	0.04	<0.01	Open-cut
W-C18-3	PFO	57.9	0	<0.01	0.00	Workspace Only
W-C18-3	PEM	57.9	12	0.02	<0.01	Open-cut
W-C18-3	PFO	57.9	8	0.01	0.01	Open-cut
W-C18-5	PSS	58.0	52	0.07	0.01	Open-cut
W-C18-5	PEM	58.0	0	0.03	<0.01	Workspace Only
W-C18-29	PFO	60.8	317	0.55	0.21	Open-cut
W-A18-79	PFO	61.8	0	<0.01	0.00	Workspace Only
W-A18-73	PFO	62.5	0	<0.01	<0.01	Workspace Only
W-A18-74	PFO	62.5	9	0.01	0.01	Open-cut
W-A18-80	PEM	62.7	64	0.09	0.01	Open-cut
W-B18-32	PEM	62.9	0	<0.01	0.00	Workspace Only
W-B18-28	PFO	63.1	313	0.50	0.21	Open-cut
*AW-B18-19	PFO	63.8	50	0.08	0.03	Open-cut
W-B19-168	PEM	65.6	0	0.28	0.00	Workspace Only
W-B19-164	PFO	66.6	9	0.03	0.01	Open-cut
AW-B19-164	PFO	66.6	32	0.07	0.02	Open-cut
W-B18-5	PFO	68.4	16	0.02	0.01	Workspace Only
W-B19-146	PFO	69.7	0	0.11	0.00	Workspace Only

#20 and #35 - REVISED Appendix 2-B

Wetlands Crossed by the MVP Southgate Project

Facility/ State/ County/ Wetland ID a/	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method f/
W-A18-67	PFO	71.8	43	0.04	0.03	Open-cut
W-A18-67	PFO	71.8	0	<0.01	0.00	Workspace Only
W-A18-208	PEM	72.2	0	<0.01	0.00	Workspace Only
W-B19-151	PEM	73.0	0	0.14	0.00	Workspace Only
W-A18-111	PEM	73.0	56	0.25	0.01	Open-cut
W-B19-151	PEM	73.0	0	0.04	0.00	Workspace Only
Alamance County Subtotal			2,035	4.37	1.27	
North Carolina Subtotal			6,275	13.86	3.08	
Pipeline Subtotal			12,473	25.01	5.55	
Aboveground Facilities **Virginia** **Pittsylvania**						
W-F18-11 – Lambert CS & Interconnect / MLV 1g/	PFO	0.0 RR	0	0.02	0.02	Workspace Only
North Carolina **Rockingham**						
W-A18-39 – LN 3600 Interconnect	PEM	28.0	0	<0.01	0.00	Workspace Only
W-B18-36 - T15 Dan River Interconnect	PEM	30.3	0	0.47	0.00	
*AW-B18-36 - T15 Dan River Interconnect	PEM	30.3	0	<0.01	0.00	Workspace Only
W-B18-36 - T15 Dan River Interconnect	PEM	30.3	0	<0.01	0.00	Workspace Only
W-B18-36 - T15 Dan River Interconnect	PEM	30.4	0	0.05	0.00	Workspace Only
W-B18-36 - T15 Dan River Interconnect	PEM	30.4	0	0.01	0.00	Workspace Only
W-B18-36 - T15 Dan River Interconnect	PEM	30.4	0	<0.01	0.00	Workspace Only
Aboveground Facilities Subtotal			0	0.56	0.02	
Cathodic Protection Groundbeds **North Carolina** **Rockingham**						
W-A19-277 – Ground Bed #3, Alternate #1	PEM	41.8	0	0.02	0.02	Workspace Only
Cathodic Protection Groundbeds Total			0	0.02	0.02	
Temporary Access Roads **Virginia** **Pittsylvania**						
*AW-F18-5 - TA-PI-005	PEM	2.2	34	0.02	0.00	Workspace Only
W-F18-1 - TA-PI-011	PSS	5.2	110	0.05	0.00	Workspace Only
W-E18-37 - TA-PI-061	PFO	22.6 RR	0	<0.01	0.00	Workspace Only

#20 and #35 - REVISED Appendix 2-B Wetlands Crossed by the MVP Southgate Project						
Facility/ State/ County/ Wetland ID a/	**Wetland Type b/**	**Approx. MP**	**Crossing Length (feet) c/**	**Total Construction Impacts (acres) d/**	**Total Operation Vegetation Impacts (acres) e/**	**Construction Crossing Method f/**
W-E18-37 - TA-PI-061	PFO	22.6	0	<0.01	0.00	Workspace Only
W-C18-87 - TA-PI-067	PFO	25.0	110	0.08	0.00	Workspace Only
W-C18-87 - TA-PI-067	PFO	25.0	0	<0.01	0.00	Workspace Only
Virginia Access Road Subtotal			254	0.15	0.00	
North Carolina **Rockingham**						
W-B18-97 - TA-PI-068	PEM	26.1	20	0.01	0.00	Workspace Only
W-A18-44 - TA-RO-073	PEM	27.1	0	<0.01	0.00	Workspace Only
W-A18-44 - TA-RO-073	PEM	27.1	18	0.01	0.00	Workspace Only
W-A18-44 - TA-RO-073	PEM	27.1	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.4	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.4	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
AW-A19-282 – TA-RO-073A	PSS	27.5	0	<0.01	0.00	Workspace Only
W-A19-282 – TA-RO-073A	PEM	27.5	17	0.01	0.00	Workspace Only
W-A18-39 – TA-RO-075	PEM	27.9	14	0.01	0.00	Workspace Only
W-A18-39 – TA-RO-075	PEM	28.1	0	<0.01	0.00	Workspace Only
Alamance						
W-A18-75 – TA-AL-169	PEM	62.5	0	0.01	0.00	Workspace Only
W-A18-75 – TA-AL-169	PEM	62.5	0	0.01	0.00	Workspace Only
North Carolina Access Road Subtotal			69	0.06	0.00	
Temporary Access Road Subtotal			323	0.21	0.00	
Permanent Access Road **North Carolina** **Rockingham**						
W-A19-280 – PA-RO-000	PEM	28.7	0	0.01	0.01	Workspace Only
W-A19-280 – PA-RO-000	PEM	28.7	0	0.02	0.02	Workspace Only
W-B18-34 - PA-RO-082	PFO	30.5	0	<0.01	<0.01	Workspace Only
W-B18-43 – PA-RO-113A	PEM	41.8	1	0.02	0.02	Workspace Only

#20 and #35 - REVISED Appendix 2-B

Wetlands Crossed by the MVP Southgate Project

Facility/ State/ County/ Wetland ID a/	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method f/
W-B18-43 - PA-RO-113A	PEM	41.8	0	<0.01	<0.01	Workspace Only
Permanent Access Road Subtotal			1	0.04	0.04	
Project Total			**12,743**	**25.83**	**5.63**	

Note: Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

a/ Data is based on wetland field delineations completed through January 22, 2019 where access has been obtained, National Wetland Inventory (NWI) data, and desktop analysis of approximated resources. Wetland IDs starting with "W" have been field delineated and wetland ID starting with "AW" are approximated based on NWI data and desktop analysis. Approximated wetlands are also indicated by "*". Contractor Yards CY-01, CY-04, CY-05, CY-08, and CY-09 have been field surveyed for wetlands and none were identified within the limits of the yard locations. Contractor Yard CY-03 has not been field surveyed to date and no NWI wetlands were identified within the yard limits based on desktop review.

b/ Wetland Classifications PEM = palustrine emergent wetland, PSS = palustrine scrub shrub wetland, PFO = palustrine forested wetland

c/ Crossing length is measured at the intersection of the wetland and centerline of the pipeline or center of the access road. Crossing length of "0" indicates the wetland is not crossed by the centerline of the pipeline, but is located within the construction workspace. Sums may not equal the total of addends due to rounding. Addends consist of six-decimal digits.

d/ Total construction impacts include all wetland impacts (PEM, PFO, PSS) associated with the construction workspace. Wetland impacts of "<0.01" indicates the impact is less than 0.01 acre, but the impact is included in the project totals. Sums may not equal the total of addends due to rounding. Addends consist of six-decimal digits.

e/ Total operation vegetation impacts include PEM, PSS and PFO impacts for vegetation maintenance. Operational vegetation impacts for PEM and PSS wetlands include a 10-foot-wide vegetation maintenance corridor; operational vegetation maintenance impacts for PFO wetlands include a 30-foot-wide vegetation maintenance corridor (i.e., 10-foot-wide cleared corridor and selective removal of trees within 15 feet of the pipeline). Wetland impacts of "<0.01" indicates the impact is less than 0.01 acre, but the impact is included in the project totals. Minor discrepancies in totals are due to rounding.

f/ Construction crossing method will ultimately be determined based on field conditions observed during construction. "Workspace Only" indicates that the wetland is not crossed by the pipeline but is located within construction workspace.

g/ Wetland impacts at the Lambert Compressor Station are anticipated to be a conversion to PEM/PSS wetland, not permanent fill.

REVISED Appendix 2-F

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Within 50 feet of a Wetland	Within 50 feet of a Waterbody	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)
Virginia, Pittsylvania County							
1052	5.2	X		W-D18-1	0	ATWS situated in this location to support conventional bore and associated equipment.	Y
1113	13.4	X		W-E18-28	19	ATWS situated in this location to support conventional bore and associated equipment.	Y
1169	22.0	X		W-A18-204	32	ATWS situated in this location to support conventional bore and associated equipment.	Y
1001C	0.5		X	AS-APP-6001	12	ATWS situated in this location to provide support of Lambert construction.	Y
North Carolina, Rockingham County							
1222	27.6	X		W-A19-274	0	ATWS in this location to be used for support during stream crossing.	Y
1244	29.9	X		W-A18-18	0	ATWS situated in this location to support HDD and associated equipment.	Y
1249	30.4	X	X	S-B18-38	0	ATWS situated in this location to support HDD and associated equipment	Y
				W-B18-34	35	ATWS situated in this location to support HDD and associated equipment	Y
				AW-B18-36 / W-B18-36	0	ATWS situated in this location to support HDD and associated equipment// hydrostatic testing equipment.	Y

REVISED Appendix 2-F ATWS Within 50 feet of Wetland or Waterbody							
ATWS ID	**Milepost**	**Within 50 feet of a Wetland**	**Within 50 feet of a Waterbody**	**Feature ID**	**Distance from Resource Area (feet) a/**	**Justification**	**Variance Required (Y/N)**
1250	30.5	X		W-B18-34	0	ATWS situated in this location to support conventional bore and associated equipment.	Y
1251	30.4	X		W-B18-36	0	ATWS situated in this location to support HDD and associated equipment.	Y
1368	41.5		X	S-B18-44	15	ATWS situated in this location to support conventional bore and associated equipment.	Y
1369	41.6		X	AS-B18-44	44	ATWS situated in this location to support conventional bore and associated equipment.	Y
1454	49.2		X	S-B19-166	18	MVP will revise this ATWS to be outside of the 50 foot buffer in a future supplemental.	N
1213A	27.0	X		W-A18-44	0	This ATWS is in an agriculture field and will be used for pipeline crossing.	N
1213C	27.1	X		W-A18-44	0	This ATWS is in an agriculture field and will be used for pipeline crossing.	N
1213D	27.3	X		W-A18-44	0	ATWS in this location to be used for support during stream crossing	Y
1224A	28.0	X		W-A18-26	48	This ATWS is in an agriculture field and will be used for pipeline crossing.	N
				W-A18-39	0	This ATWS is in an agriculture field and will be used for pipeline crossing.	N

REVISED Appendix 2-F ATWS Within 50 feet of Wetland or Waterbody							
ATWS ID	**Milepost**	**Within 50 feet of a Wetland**	**Within 50 feet of a Waterbody**	**Feature ID**	**Distance from Resource Area (feet) a/**	**Justification**	**Variance Required (Y/N)**
1244A	29.9	X		W-A18-18	2	ATWS situated in this location to support HDD and associated equipment	Y
1463A	50.7		X	S-A19-289	31	MVP will revise this ATWS to be outside of the 50 foot buffer in a future supplemental.	N
North Carolina, Alamance County							
1511	55.5	X		W-B18-61	23	This ATWS is inside an agriculture field and will be used to support crews at PI.	N
1533	57.5		X	S-A19-290	0	MVP will revise this ATWS to be outside of the 50 foot buffer in a future supplemental.	N
1692	73.1RR	X	X	AS-B19-149	40	This ATWS to be used as a support for crews performing multiple pipeline crossings in this area	Y
				W-A18-111	0	ATWS situated in this location to support conventional bore and associated equipment / hydrostatic test support equipment.	Y
				W-B19-151	0	This ATWS to be used as a support for crews performing multiple pipeline crossings in this area.	Y
1588K	65.5	X		W-B19-168	0	This ATWS is inside an agriculture field and will be used to support crews at PI.	N

REVISED Appendix 2-F

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Within 50 feet of a Wetland	Within 50 feet of a Waterbody	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)
1653A	69.7	X	X	S-B19-147	0	This ATWS to be used as support for crews working in the congested area.	Y
				S-B19-148	0	This ATWS to be used as support for crews working in the congested area	Y
				W-B19-146	0	This ATWS to be used as support for crews working in the congested area	Y
1653B	69.7		X	S-B19-147	34	This ATWS to be used as support for crews working in the congested area	Y
1653C	69.8		X	S-B19-147	38	This ATWS to be used as support for crews working in the congested area	Y
1692A	73.0	X		W-A18-111	0	ATWS situated in this location to support conventional bore and associated equipment.	Y

Note: Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

a/ Distance from resource area of 0 feet indicate the wetland or waterbody is located within the ATWS.

REVISED Appendix 2-G Areas Along the MVP Southgate Project Pipeline not Surveyed for Wetlands and Waterbodies a/					
State, County, Facility, Line List Number	**Milepost Start**	**Milepost End**	**Pipeline length (feet) b/**	**Property Partially Surveyed c/**	**Road / Railroad Crossing**
Virginia					
Pittsylvania					
H-605 Pipeline					
VA-PI-001.000*	0.0	0.0	20		
VA-PI-001.000*	0.0	0.1	321		
VA-PI-002.000*	0.2	0.3	444	X	
H-650 Pipeline					
VA-PI-003.000*	0.7	0.7	19	X	
VA-PI-003.000.RC*	0.7	0.7	51		X
VA-PI-005.000*	0.7	0.7	13	X	
VA-PI-005.000*	0.9	0.9	20	X	
VA-PI-005.000.RC*	0.9	0.9	54		X
VA-PI-006.000*	0.9	0.9	13	X	
VA-PI-014.000*	2.9	2.9	9		
VA-PI-014.000.RC*	2.9	2.9	62		X
VA-PI-016.000*	2.9	2.9	11		
VA-PI-016.000*	3.0	3.0	23		
VA-PI-016.000.RC*	3.0	3.0	53		X
VA-PI-024.000*	3.8RR	3.8RR	25		
VA-PI-027.000*	4.2	4.2	12		
VA-PI-026.000.RC*	4.2	4.2	70		X
VA-PI-029.000	4.2	4.3	10		
VA-PI-030.000*	4.3	4.3	7		
VA-PI-026.000.RC*	4.3	4.3	34		X
VA-PI-031.000*	4.3	4.3	41		
VA-PI-031.000.RC*	4.3	4.4	158		X
VA-PI-034.000.RR*	5.2	5.3	206		X
VA-PI-040.000*	7.2	7.2	9	X	
VA-PI-040.000.RC*	7.2	7.2	68		X
VA-PI-041.000*	7.2	7.2	41		
VA-PI-042.000*	7.4	7.4	17		
VA-PI-042.000.RC*	7.4	7.4	40		X
VA-PI-044.000*	7.4	7.4	24	X	
VA-PI-045.000	8.1	8.1	36	X	
VA-PI-045.000.RC*	8.1	8.1	51		X

REVISED Appendix 2-G

Areas Along the MVP Southgate Project Pipeline not Surveyed for Wetlands and Waterbodies a/

State, County, Facility, Line List Number	Milepost Start	Milepost End	Pipeline length (feet) b/	Property Partially Surveyed c/	Road / Railroad Crossing
VA-PI-046.000*	8.1	8.1	15		
VA-PI-052.000*	9.3	9.3	43		
VA-PI-052.000.RC*	9.3	9.4	20		X
VA-PI-053.000*	9.4	9.4	17	X	
VA-PI-053.000*	9.7	9.9	645	X	
VA-PI-065.000.RC*	10.7	10.8	78		X
VA-PI-075.000*	10.8	10.8	3	X	
VA-PI-075.000*	11.1	11.1	9	X	
VA-PI-075.000*	11.1	11.2	492	X	
VA-PI-075.001*	11.2	11.2	310		
VA-PI-076.000*	11.4	11.4	62	X	
VA-PI-079.000*	12.4	12.4	17		
VA-PI-082.000*	12.4	12.4	4		
VA-PI-079.000.RC*	12.4	12.4	60		X
VA-PI-082.000	12.4	12.4	11		
VA-PI-087.000*	13.4	13.4	7		
VA-PI-087.000.RC*	13.4	13.4	60		X
VA-PI-089.000*	13.4	13.4	13	X	
VA-PI-095.000*	14.7	14.8	39		
VA-PI-096.000*	14.8	14.9	498		
VA-PI-096.000.RC*	14.9	14.9	50		X
VA-PI-099.000	14.9	14.9	12	X	
VA-PI-103.000*	15.9	15.9	5		
VA-PI-103.000.RC*	15.9	15.9	61	X	X
VA-PI-106.000*	15.9	15.9	16	X	
VA-PI-121.000*	18.3	18.3	16	X	
VA-PI-121.000.RC*	18.3	18.3	40		X
VA-PI-124.000*	18.3	18.3	24		
VA-PI-129.000*	19.0	19.0	103		
VA-PI-129.000.RC*	19.0	19.0	62		X
VA-PI-131.000*	19.0	19.0	18		
VA-PI-132.000*	19.2	19.2	11		
VA-PI-143.000.RC*	19.2	19.3	101		X
VA-PI-134.000*	19.3	19.3	21		
VA-PI-151.000*	19.9	19.9	16		

REVISED Appendix 2-G

Areas Along the MVP Southgate Project Pipeline not Surveyed for Wetlands and Waterbodies a/

State, County, Facility, Line List Number	Milepost Start	Milepost End	Pipeline length (feet) b/	Property Partially Surveyed c/	Road / Railroad Crossing
VA-PI-151.000.RC*	19.9	20.0	157		X
VA-PI-152.000*	20.0	20.1	415		
VA-PI-153.000*	20.1	20.2	427		
VA-PI-154.000*	20.2	20.2	273		
VA-PI-154.200*	20.2	20.3	286		
VA-PI-160.000*	20.3	20.3	255	X	
VA-PI-175.000*	23.6	23.7	613	X	
VA-PI-178.000*	24.4	24.6	1,194	X	
VA-PI-179.000.RR*	25.0	25.0	55		X
Pipeline Centerline Total Length Virginia (feet / miles)			**8,598 / 1.6**		
North Carolina					
Rockingham					
NC-RO-030.000.RC	31.6	31.6	62		X
NC-RO-081.000	37.7	37.8	213		
NC-RO-080.000	37.8	37.8	469		
NC-RO-081.000	37.9	38.0	328		
NC-RO-090.000.RC	38.8	38.8	28		X
NC-RO-095.000.RC	39.7	39.7	60		X
NC-RO-098.000	39.7	39.7	24		
NC-RO-097.000.RR	39.7	39.7	134		X
NC-RO-111.000.RC	41.6	41.6	263		X
NC-RO-111.000.RC	41.6	41.6	14		X
NC-RO-112.000.RC	42.2	42.2	72		X
NC-RO-117.000.RC	43.1	43.2	81		X
NC-RO-157.000	48.4	48.4	41	X	
NC-RO-160.000	48.4	48.4	29	X	
NC-RO-168.000	49.5	49.5	10		
NC-RO-168.000.RC	49.5	49.5	71		X
NC-RO-173.000	49.9	50.1	1,028		
NC-RO-177.000	50.3	50.5	626		
NC-RO-178.000	50.5	50.6	677		
NC-RO-181.000	51.2	51.2	61	X	
Alamance					
NC-AL-000.020	52.8	52.9	812		
NC-AL-000.045.RC	53.1	53.1	55		X

REVISED Appendix 2-G

Areas Along the MVP Southgate Project Pipeline not Surveyed for Wetlands and Waterbodies a/

State, County, Facility, Line List Number	Milepost Start	Milepost End	Pipeline length (feet) b/	Property Partially Surveyed c/	Road / Railroad Crossing
NC-AL-004.000	53.9	53.9	93		
NC-AL-005.000.RC	54.1	54.1	60		X
NC-AL-043.000.RC	57.8	57.8	75		X
NC-AL-044.000.RC	57.9	57.9	64		X
NC-AL-050.000	58.2	58.5	1,598		
NC-AL-052.000	58.7	58.9	1,060		
NC-AL-053.000	58.9	59.1	1,105		
NC-AL-054.000	59.1	59.2	250		
NC-AL-054.000.RC	59.2	59.2	67		X
NC-AL-058.000	59.2	59.3	654		
NC-AL-057.000	59.3	59.4	650		
NC-AL-059.000	59.4	59.5	285		
NC-AL-062.000	59.5	59.6	532		
NC-AL-064.000	59.6	59.7	806		
NC-AL-077.000	61.2	61.4	1,106		
NC-AL-077.000.RC	61.4	61.4	61		X
NC-AL-080.000	61.4	61.4	59		
NC-AL-097.000.WBC	63.6	63.6	302		
NC-AL-104.000	63.6	64.0	1,722		
NC-AL-104.000	64.0	64.0	75		
NC-AL-104.000	64.0	64.1	156		
NC-AL-106.000	64.1	64.3	1,473		
MVF-NC-AL-002.000	64.4	64.5	593		
MVF-NC-003.000	64.5	64.5	20		
MVF-NC-AL-002.000	64.5	64.5	94		
MVF-NC-AL-008.000.ABU	64.8	64.8	65		
MVF-NC-AL-007.000	64.8	64.8	26		
MVF-NC-AL-007.000	64.8RR	65.3RR	2,640		
NC-AL-110.000.RC	65.3RR	65.3RR	53		X
FA34-AL-001.000.RC	66.1	66.1	60		X
FA3-AL-005.000	66.2	66.4	870		
NC-AL-122.000.RC	66.4	66.4	63		X
FA3-AL-007.000	66.5	66.5	175		
FA3-AL-009.000*	66.6	66.7	516		
FA3-AL-010.000*	66.7	66.7	115		

REVISED Appendix 2-G

Areas Along the MVP Southgate Project Pipeline not Surveyed for Wetlands and Waterbodies a/

State, County, Facility, Line List Number	Milepost Start	Milepost End	Pipeline length (feet) b/	Property Partially Surveyed c/	Road / Railroad Crossing
NC-AL-128.000*	66.7	67.3	3,063	X	
NC-AL-134.000	67.3	67.5	818		
NC-AL-137.000	67.6	67.7	674		
NC-AL-139.000	67.9	68.0	622		
NC-AL-140.000	68.0	68.1	293		
NC-AL-141.000	68.1	68.1	195		
NC-AL-142.000	68.1	68.2	663		
NC-AL-145.000	68.5	68.6	525		
NC-AL-144.000	68.6	68.7	415		
NC-AL-144.000.RC	68.7	68.7	61		X
NC-AL-163.000	69.5	69.5	3		
NC-AL-166.000	69.5	69.6	501		
NC-AL-169.000	69.6	69.6	384		
NC-AL-166.000.RC	69.6	69.7	58		X
NC-AL-166.000.RR	69.8	69.8	106		X
NC-AL-182.000	69.8	69.8	116		
NC-AL-183.000	69.8	69.9	119		
NC-AL-184.000	69.9	69.9	367		
NC-AL-191.000.RC	71.3	71.4	257		X
NC-AL-194.000	71.9	72.1	989		
NC-AL-195.000	72.1	72.1	271		
NC-AL-196.000	72.1	72.2	451		
NC-AL-206.000	72.8	72.9	106		
NC-AL-207.000.RC	72.9	72.9	102		X
NC-AL-210.000	73.1RR	73.2RR	159		
Pipeline Centerline Total Length North Carolina (feet / miles)			**34,019 / 6.4**		
Pipeline Centerline Total Length (feet / miles)			**42,617 / 8.0**		

Note: Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment. Line list numbers with an "*" are anticipated to be surveyed in April 2019.

a/ Properties not surveyed as of January 22, 2018.

b/ Non-surveyed length of pipeline alignment within line list parcel.

c/ Biological survey field crews had partial access to the property during field visit.

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 2

Appendix 2-I

North Carolina Wetland and Waters Delineation Report – Addendum #1

(Provided Under Separate Cover)

March 2019

MVP Southgate Project

Docket No. CP19-14-000

Attachment 20-1

Virginia Wetland and Waters Delineation Report Addendum 1

(Provided Under Separate Cover)

March 2019

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 3

March 2019

LIST OF TABLES

REVISED Table 3.3-2

Significant or Sensitive Wildlife Habitats within One Mile of the MVP Southgate Project

County / State	Milepost	Name of Area	Land Ownership/ Management	Construction Impact (acres)	Operation Impact (acres)	Habitat Types Affected	Comments
Pittsylvania, VA	0	Transco Road Net Conservation Site	VDCR	0.0	0.0	N/A	Easement direct adjacent to route. Impacts have been avoided.
Pittsylvania, VA	14.2	VA Conservation Easements	VA Outdoors Foundation	0.0	0.0	N/A	The Project proposes to utilize an existing access road on the edge of this easement area. No impacts are anticipated
Rockingham, NC	26.1 to 36.3	Forest Legacy Areas: Northern Tier / Roanoke River / Great Dismal Swamp	NC Forest Service - voluntary management with landowners	206.3	59.9	Various	Forest clearing has been reduced to the extent practicable. Any landowners active in the Forest Legacy Program will be identified by the Project.
Rockingham, NC	30.1	ROA/Dan River Aquatic Habitat	Public Waters	0.0	0.0	Riverine	The Dan River has been ranked as exceptional for containing high quality examples of globally ranked species and habitats. The Dan River is proposed to be crossed utilizing HDD and therefore, no impacts are anticipated.
Rockingham, NC	37.7-38.0	Piedmont Land Conservancy Easement	Piedmont Land Conservancy	0.3	0.1	Scrub-shrub land and forest edge.	The Project crosses through the corner of the easement. Impacts have been minimized to include only edge habitat.
Rockingham, NC	42.2 to 48.4	Forest Legacy Areas: Northern Tier / Roanoke River / Great Dismal Swamp	NC Forest Service - voluntary management with landowners	103.5	36.8	Various	Forest clearing has been reduced to the extent practicable. Any landowners active in the Forest Legacy Program will be identified by the Project.
Alamance, NC	63.8	NC Natural Areas: Stony Creek Forest	Private	0.0	0.0	N/A	The Project has implemented a route change in this area to avoid impacts to the Stony Creek Forest.

Note: Identified through consultation with VDCR-DNH and NCNHP (see Resource Report 1, Appendix 1-K)

Other sources: NCFS, 2010; NCNHP, 2018 and VDCR-DNH, 2017.

REVISED Table 3.4-1

Vegetation Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline

Facility County, State	Agricultural Land a/		Upland Forest / Woodland b/						Open Upland c/		Wetlands d/				Total Vegetation Acreage e/	
			Deciduous		Evergreen		Mixed		Upland Herbaceous / Scrub-shrub		Herbaceous / Scrub Shrub Wetland		Forested Wetland			
	Construction f/	Operation g/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational
H-605 Pipeline Right-of-Way h/	**1.0**	**0.6**	**2.3**	**1.1**	**1.2**	**0.6**	**0.0**	**0.0**	**0.7**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**5.2**	**2.7**
Pittsylvania, VA	1.0	0.6	2.3	1.1	1.2	0.6	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	**5.2**	**2.7**
Additional Temporary Workspace	**<0.1**	**<0.1**	**0.7**	**0.0**	**1.7**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.5**	**0.0**
Pittsylvania, VA	<0.1	<0.1	0.7	0.0	1.7	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**2.5**	**0.0**
H-650 Pipeline Right-of-Way h/	**120.7**	**60.9**	**299.0**	**153.7**	**61.5**	**30.6**	**76.2**	**39.4**	**244.2**	**122.3**	**12.4**	**1.4**	**10.3**	**4.2**	**824.3**	**412.5**
Pittsylvania, VA	51.9	26.0	71.9	36.0	26.7	12.9	39.4	20.4	97.0	48.7	6.9	0.8	4.1	1.6	**297.8**	**146.4**
Rockingham, NC	34.4	18.0	115.3	58.6	26.1	13.3	31.1	16.3	81.7	40.9	4.7	0.5	3.2	1.3	**296.6**	**149.0**
Alamance, NC	34.5	16.9	111.8	59.1	8.7	4.3	5.7	2.7	65.5	32.7	0.8	0.1	2.9	1.2	**229.9**	**117.1**
Additional Temporary Workspace i/	**45.5**	**0.0**	**86.5**	**0.0**	**19.9**	**0.0**	**22.1**	**0.0**	**81.5**	**0.0**	**1.7**	**0.0**	**0.7**	**0.0**	**257.9**	**0.0**
Pittsylvania, VA	15.2	0.0	22.9	0.0	9.0	0.0	10.3	0.0	30.6	0.0	0.0	0.0	0.2	0.0	**88.0**	**0.0**
Rockingham, NC	16.8	0.0	34.1	0.0	8.4	0.0	10.9	0.0	23.6	0.0	1.2	0.0	0.4	0.0	**95.4**	**0.0**
Alamance, NC	13.5	0.0	29.6	0.0	2.5	0.0	0.9	0.0	27.4	0.0	0.5	0.0	0.1	0.0	**74.5**	**0.0**
Cathodic Protection Groundbeds	**0.0**	**0.0**	**0.1**	**0.1**	**0.4**	**0.4**	**0.0**	**0.0**	**3.5**	**3.5**	**<0.1**	**<0.1**	**0.0**	**0.0**	**4.0**	**4.0**

REVISED Table 3.4-1

Vegetation Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline

Facility County, State	Agricultural Land a/		Upland Forest / Woodland b/						Open Upland c/		Wetlands d/				Total Vegetation Acreage e/	
			Deciduous		Evergreen		Mixed		Upland Herbaceous / Scrub-shrub		Herbaceous / Scrub Shrub Wetland		Forested Wetland			
	Construction f/	Operation g/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational
Pittsylvania, VA	0.0	0.0	0.1	0.1	0.4	0.4	0.0	0.0	1.2	1.2	0.0	0.0	0.0	0.0	**1.7**	**1.7**
Rockingham, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	<0.1	<0.1	0.0	0.0	**0.6**	**0.6**
Alamance, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.0	0.0	0.0	**1.7**	**1.7**
Permanent Aboveground Facilities	**12.9**	**6.3**	**6.4**	**4.6**	**<0.1**	**<0.1**	**0.1**	**0.0**	**12.0**	**2.9**	**0.5**	**0.0**	**<0.1**	**<0.1**	**32.0**	**13.9**
Pittsylvania, VA	**12.8**	**6.3**	**6.1**	**4.4**	**0.0**	**0.0**	**0.1**	**0.0**	**1.5**	**1.0**	**0.0**	**0.0**	**<0.1**	**<0.1**	**20.5**	**11.7**
Lambert Compressor Station & Interconnect / MLV 1	12.8	6.3	6.1	4.4	0.0	0.0	0.1	0.0	1.5	1.0	0.0	0.0	<0.1	<0.1	**20.5**	**11.7**
MLV 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**
MLV 3	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
Rockingham, NC	**0.1**	**0.0**	**0.3**	**0.2**	**<0.1**	**0.0**	**0.0**	**0.0**	**9.1**	**1.3**	**0.5**	**0.0**	**0.0**	**0.0**	**10.0**	**1.5**
LN 3600 Interconnect	0.0	0.0	0.3	0.2	<0.1	0.0	0.0	0.0	4.6	0.5	0.0	0.0	0.0	0.0	**4.8**	**0.7**
T-15 Dan River Interconnect / MLV 4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.8	0.5	0.0	0.0	0.0	**5.2**	**0.8**

REVISED Table 3.4-1

Vegetation Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline

Facility County, State	Agricultural Land a/		Upland Forest / Woodland b/						Open Upland c/		Wetlands d/				Total Vegetation Acreage e/	
			Deciduous		Evergreen		Mixed		Upland Herbaceous / Scrub-shrub		Herbaceous / Scrub Shrub Wetland		Forested Wetland			
	Construction f/	Operation g/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational
MLV 5	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
Alamance, NC	**<0.1**	**<0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.4**	**0.6**	**0.0**	**0.0**	**0.0**	**0.0**	**1.4**	**0.6**
T-21 Haw River Interconnect / MLV 8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.6	0.0	0.0	0.0	0.0	**1.4**	**0.6**
MLV 6	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
MLV 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
Contractor Yards	**0.0**	**0.0**	**4.4**	**0.0**	**31.7**	**0.0**	**0.0**	**0.0**	**36.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**72.7**	**0.0**
Pittsylvania, VA	0.0	0.0	4.2	0.0	31.7	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	**51.8**	**0.0**
Rockingham, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	0.0	0.0	0.0	0.0	0.0	**16.2**	**0.0**
Alamance, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**
Guilford, NC	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	**4.6**	**0.0**
Temporary and Permanent Access Roads h/	**14.5**	**0.8**	**9.7**	**0.5**	**2.8**	**<0.1**	**3.5**	**0.1**	**70.9**	**6.5**	**0.2**	**<0.1**	**0.1**	**0.0**	**101.7**	**7.9**
Pittsylvania, VA	6.3	0.8	3.3	0.2	1.5	<0.1	1.9	0.1	28.5	0.9	0.1	0.0	0.1	0.0	**41.6**	**1.9**

REVISED Table 3.4-1

Vegetation Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline

Facility County, State	Agricultural Land a/		Upland Forest / Woodland b/						Open Upland c/		Wetlands d/				Total Vegetation Acreage e/	
			Deciduous		Evergreen		Mixed		Upland Herbaceous / Scrub-shrub		Herbaceous / Scrub Shrub Wetland		Forested Wetland			
	Construction f/	Operation g/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational
Rockingham, NC	4.9	<0.1	2.6	0.1	0.4	0.0	1.6	0.0	32.3	4.6	0.1	<0.1	0.0	0.0	**41.8**	**4.7**
Alamance, NC	3.4	<0.1	3.8	0.2	0.8	0.0	0.1	<0.1	10.0	1.0	<0.1	0.0	0.0	0.0	**18.1**	**1.2**
Guilford, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**0.1**	**0.0**
Vegetation Acres Total	**194.7**	**68.7**	**409.1**	**160.0**	**119.1**	**31.6**	**101.9**	**39.5**	**449.6**	**135.6**	**14.8**	**1.4**	**11.0**	**4.2**	**1,300.3**	**441.1**

Source: Project aerial photography April 2018.

Note: Pig launchers and receivers will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for the pig launchers and receivers are included with those facilities. Mainline valves (MLVs) 1, 4, and 8 will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreage calculations for MLVs 1, 4, and 8 are included with those facilities.

a/ Cultivated land (e.g., tobacco, soybeans, hay, corn).

b/ Upland forest and wooded lands, including those being managed for forest products (i.e., silviculture).

c/ Utility rights-of-way, grasslands, open fields, vacant land, herbaceous and scrub uplands, non-forested lands, golf courses, and municipal land.

d/ Palustrine emergent, palustrine scrub-shrub and palustrine forested wetlands as identified in Resource Report 2. Includes data from field delineation where access is available and NWI where survey access not available.

e/ Sums of addends may not equal totals due to rounding.

f/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points are not included in this acreage. Acreage includes a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire

g/ Includes only the operation footprint of the Project facilities, the 50-foot-wide permanent pipeline right-of-way in uplands, except in wetland areas where the operation width has been reduced to 10 feet in emergent wetlands, scrub shrub wetlands, and within 25 feet of waterbodies; and 30 feet in forested wetlands. The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

REVISED Table 3.4-1

Vegetation Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline

Facility County, State	Agricultural Land a/		Upland Forest / Woodland b/						Open Upland c/		Wetlands d/				Total Vegetation Acreage e/	
			Deciduous		Evergreen		Mixed		Upland Herbaceous / Scrub-shrub		Herbaceous / Scrub Shrub Wetland		Forested Wetland			
	Construction f/	Operation g/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational

h/ Includes the 50-foot-wide permanent right-of-way and temporary workspace areas.

i/ Includes ATWS areas for both the H-605 and H-650 pipelines. ATWS areas to be used for construction of aboveground facilities are included in the acreage calculations for the applicable aboveground facilities.

REVISED Table 3.4-2

Acreage of Forest Interior and Forest Edge Affected by Construction and Operation of the MVP Southgate Project

Facility County, State	Interior Forest a/								Forest Edge							
	Deciduous		Evergreen b/		Mixed		Forested Wetland e/		Deciduous		Evergreen b/		Mixed		Forested Wetland e/	
	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation
H-605 Pipeline Right-of-Way l/	**1.1**	**0.5**	**0.3**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**1.2**	**0.6**	**0.9**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**
Pittsylvania, VA	1.1	0.5	0.3	0.1	0.0	0.0	0.0	0.0	1.2	0.6	0.9	0.4	0.0	0.0	0.0	0.0
Additional Temporary Workspace	**0.4**	**0.0**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.0**	**1.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Pittsylvania, VA	0.4	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.4	0.0	0.0	0.0	0.0	0.0
H-650 Pipeline Right-of-Way l/	**24.9**	**12.9**	**8.3**	**4.2**	**3.4**	**1.6**	**0.6**	**0.2**	**274.1**	**140.9**	**45.4**	**22.7**	**72.8**	**37.8**	**9.7**	**3.9**
Pittsylvania, VA	0.5	0.2	1.4	0.7	0.0	0.0	0.0	0.0	71.4	35.7	24.1	11.7	39.4	20.4	4.1	1.6
Rockingham, NC	9.2	4.7	6.5	3.3	1.4	0.7	0.6	0.2	106.1	54.0	16.8	8.7	29.8	15.7	2.7	1.1
Alamance, NC	15.2	8.0	0.4	0.2	2.1	0.9	<0.1	<0.1	96.6	51.2	4.4	2.3	3.6	1.8	2.9	1.2
Additional Temporary Workspace	**7.0**	**0.0**	**2.3**	**0.0**	**0.7**	**0.0**	**0.0**	**0.0**	**79.5**	**0.0**	**15.3**	**0.0**	**21.4**	**0.0**	**0.7**	**0.0**
Pittsylvania, VA	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.3	0.0	8.5	0.0	10.3	0.0	0.2	0.0
Rockingham, NC	3.3	0.0	2.3	0.0	0.5	0.0	0.0	0.0	30.8	0.0	6.1	0.0	10.4	0.0	0.4	0.0
Alamance, NC	3.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	26.4	0.0	0.7	0.0	0.7	0.0	0.1	0.0

REVISED Table 3.4-2

Acreage of Forest Interior and Forest Edge Affected by Construction and Operation of the MVP Southgate Project

Facility County, State	Interior Forest a/								Forest Edge							
	Deciduous		Evergreen b/		Mixed		Forested Wetland e/		Deciduous		Evergreen b/		Mixed		Forested Wetland e/	
	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation
Cathodic Protection Groundbeds	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.4**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**
Pittsylvania, VA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.4	0.0	0.0	0.0	0.0
Rockingham, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alamance, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Permanent Aboveground Facilities	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**<0.1**	**<0.1**	**6.3**	**4.5**	**0.0**	**0.0**	**0.1**	**0.0**	**<0.1**	**<0.1**
Pittsylvania, VA	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**<0.1**	**<0.1**	**6.0**	**4.3**	**0.0**	**0.0**	**0.1**	**0.0**	**<0.1**	**<0.1**
Lambert Compressor Station & Interconnect / MLV 1	0.1	0.1	0.0	0.0	0.0	0.0	<0.1	<0.1	6.0	4.3	0.0	0.0	0.1	0.0	<0.1	<0.1
MLV 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MLV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rockingham, NC	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
LN 3600 Interconnect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
T-15 Dan River Interconnect / MLV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MLV 5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0

REVISED Table 3.4-2

Acreage of Forest Interior and Forest Edge Affected by Construction and Operation of the MVP Southgate Project

Facility County, State	Interior Forest a/								Forest Edge							
	Deciduous		Evergreen b/		Mixed		Forested Wetland e/		Deciduous		Evergreen b/		Mixed		Forested Wetland e/	
	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation
Alamance, NC	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
T-21 Haw River Interconnect / MLV 8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MLV 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MLV 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contractor Yards	**0.0**	**0.0**	**3.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4.4**	**0.0**	**28.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Pittsylvania, VA	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	28.7	0.0	0.0	0.0	0.0	0.0
Rockingham, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alamance, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guilford, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temporary and Permanent Access Roads h/	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**9.7**	**0.5**	**2.1**	**<0.1**	**3.5**	**0.1**	**0.1**	**0.0**
Pittsylvania, VA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.2	1.5	<0.1	1.9	0.1	0.1	0.0
Rockingham, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.1	0.4	0.0	1.6	0.0	0.0	0.0
Alamance, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.2	0.2	0.0	0.1	<0.1	0.0	0.0
Guilford, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REVISED Table 3.4-2

Acreage of Forest Interior and Forest Edge Affected by Construction and Operation of the MVP Southgate Project

Facility County, State	Interior Forest a/								Forest Edge							
	Deciduous		Evergreen b/		Mixed		Forested Wetland e/		Deciduous		Evergreen b/		Mixed		Forested Wetland e/	
	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation	Construction c/	Operation d/	Construction	Operation	Construction	Operation	Construction	Operation
Project Total	**33.5**	**13.5**	**14.1**	**4.3**	**4.1**	**1.6**	**0.6**	**0.3**	**375.6**	**146.5**	**94.2**	**23.5**	**97.8**	**37.9**	**10.4**	**3.9**

Source: Project aerial photography April 2018.

Note: Pig launchers and receivers will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for the pig launchers and receivers are included with those facilities. Mainline valves (MLVs) 1, 4, and 8 will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreage calculations for MLVs 1, 4, and 8 are included with those facilities.

a/ Interior forest is defined as the area within a forested tract greater than 300 feet from the forest edge.

b/ Silviculture is excluded in this analysis, accounting for the approximate 10.8 and 3.7-acre reduction in construction and operation evergreen totals, respectively, compared to Table 3.4-1.

c/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and railroad rights-of-way are not included in this acreage. Acreage includes a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire.

d/ Includes only the operation footprint of the Project facilities, the 50-foot-wide permanent pipeline right-of-way in uplands, except in wetland areas where the operation width has been reduced to 10 feet in emergent wetlands, scrub shrub wetlands, and within 25 feet of waterbodies; and 30 feet in forested wetlands. The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

e/ Includes the 50-foot-wide permanent right-of-way and temporary workspace areas.

f/ Includes ATWS areas for both the H-605 and H-650 pipelines. ATWS areas to be used for construction of aboveground facilities are included in the acreage calculations for the applicable aboveground facilities.

g/ Sums may not equal the total of addends due to rounding.

REVISED Table 3.4-3

Significant or Sensitive Vegetation Areas Within One Mile of the MVP Southgate Project

Species/Community	County	Consulting Agency	Survey Status	Proposed Avoidance or Minimization
Piedmont Barbara's-button	Pittsylvania, VA	VDCR	Consultation with VDCR ongoing	Populations are assumed to be present. Impacts will be avoided by implementing Plan & Procedures and Invasive Species Plan.
Downy phlox	Pittsylvania, VA	VDCR	Consultation with VDCR ongoing	Populations are assumed to be present. Impacts will be avoided by implementing Plan & Procedures and Invasive Species Plan.
American Bluehearts	Pittsylvania, VA	VDCR	Consultation with VDCR ongoing	Populations are assumed to be present. Impacts will be avoided by implementing Plan & Procedures and Invasive Species Plan.
Cliff Stonecrop	Rockingham, NC	NCNHP	No survey required	No survey requested or planned. Potential impacts will be avoided by implementing Plan & Procedures and Invasive Species Plan.
Dry-Mesic Oak-Hickory Forest (Piedmont Subtype)	Rockingham and Alamance, NC	NCNHP	Not Applicable	The Project has collocated with existing easement and will follow FERC guidance to minimize forested impacts.
Mesic Mixed Hardwood Forest (Piedmont Subtype)	Rockingham and Alamance, NC	NCNHP	Not Applicable	The Project has collocated with existing easement and will follow FERC guidance to minimize forested impacts.
Wide Mouth Creek Conglomerate Exposure	Rockingham, NC	NCNHP	Not Applicable	Outside of Project Area. No impact expected.
Rocky Branch Conglomerate Exposure	Rockingham, NC	NCNHP	Not Applicable	Outside of Project Area. No impact expected.
NC Clean Water Management Trust Fund Easement	Alamance, NC	NCNHP	Not Applicable	Outside of Project Area. No impact expected.
NC Division of Mitigation Services Easement	Alamance, NC	NCNHP	Not Applicable	Outside of Project Area. No impact expected.
Mountains-to-Sea Trail	Alamance, NC	NCNHP	Not Applicable	Outside of Project Area. No impact expected.

Sources:
Consultation with VDCR-DNH and NCNHP (see Resource Report 1, Appendix 1-K); NCNHP, 2018 and VDCR-DNH, 2017.

NEW Table 47-1

Land cover and potential breeding habitat of Project-specific Migratory Bird Species

Land Class / Vegetation Type a/	Land Class / Vegetation Type Definition	MBSC with Preferred Breeding Habitat in Land Class / Vegetation Type b/	# of MBSC by Land Class / Vegetation Type	Project Affected Acres within the Virginia Piedmont Forest Block Complex Important Bird Area (IBA)		Project Affected Acres – Total e/	
				Construction / Temporary (acres) c/	Operation / Permanent (acres) d/	Construction / Temporary (acres) c/	Operation / Permanent (acres) d/
Upland Forest / Woodland - Deciduous	Areas of upland deciduous forest are dominated by trees generally greater than 15 feet tall and contain greater than 20 percent of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change. A variety of upland deciduous forest vegetation communities are crossed by the pipeline alignment. The dominant type is oak-hickory forest, followed by beech-maple forest.	AMWO, BAEA, EWPW, KEWA, PRAW, PROW, RHWO, WOTH	8	17.1	5.9	409.1	160.0
Upland Forest / Woodland - Evergreen	Areas dominated by trees generally greater than 15 feet tall, and contain greater than 20 percent of total vegetation cover. More than 75 percent of the tree species maintain their leaves all year, thus ensuring the canopy is never without green foliage. This subtype includes cultivated crops such as areas devoted to perennial wooded lands being managed for forest products, i.e., pine plantations. The most common evergreen species observed within the Project area included Virginia pine, Loblolly pine (*Pinus taeda*), and pitch pine.	BAEA, BHNU, PRAW	3	8.8	3.5	119.1	31.6
Upland Forest / Woodland - Mixed	Areas dominated by trees generally greater than 15 feet tall and contain greater than 20 percent of total vegetation cover. Neither deciduous nor evergreen species are greater than 75 percent of total tree cover. Mixed deciduous-evergreen forests can contain a mixture of the dominant canopy, sub-canopy, shrub, and herbaceous species described above for deciduous and evergreen forests. The mixed forests within the Project area harbored species listed in the other upland forest categories.	AMWO, BAEA, BHNU, EWPW, KEWA, PRAW, PROW, RHWO, WOTH	9	15.3	6.0	101.9	39.5

NEW Table 47-1

Land cover and potential breeding habitat of Project-specific Migratory Bird Species

Land Class / Vegetation Type a/	Land Class / Vegetation Type Definition	MBSC with Preferred Breeding Habitat in Land Class / Vegetation Type b/	# of MBSC by Land Class / Vegetation Type	Project Affected Acres within the Virginia Piedmont Forest Block Complex Important Bird Area (IBA)		Project Affected Acres – Total e/	
				Construction / Temporary (acres) c/	Operation / Permanent (acres) d/	Construction / Temporary (acres) c/	Operation / Permanent (acres) d/
Open Upland Herbaceous / Scrub-shrub	Utility rights-of-way, grasslands, open fields, vacant land, herbaceous and scrub uplands, non-forested lands, golf courses, and municipal land.	GRSP, NOBO	2	8.9	1.6	449.6	135.6
Wetland – Forested (PFO)	PFO wetlands are characterized by woody vegetation that is 6 meters in height or taller. The woody angiosperms (i.e., trees or shrubs) in this broad leaved deciduous community have relatively wide, flat leaves that are shed annually during the cold or dry season.	PROW, YCNH	2	0.1	0.0	11.0	4.2
Wetland – Emergent and Scrub-shrub (PEM / PSS)	PEM wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. PSS wetlands are characterized by woody vegetation that is generally less than 6 meters (~20 feet) tall. The woody angiosperms (i.e., small trees or shrubs) in this broad leaved deciduous community have relatively wide, flat leaves that are shed annually during the cold or dry season.	LEBI, PROW, WIFL, YCNH	4	<0.1	0.0	14.8	1.4
Agricultural land	Cultivated land (e.g., tobacco, soybeans, hay, corn).	GRSP, NOBO	2	0.0	0.0	194.7	68.7
Open Water	Field delineated waterbodies with a bank width of greater than six feet, and waterbodies visible on aerial photography where field delineation has not been completed.	None	0	0.1	0.0	3.2	0.0
Commercial / Industrial	Manufacturing or industrial plants, paved areas, landfills, mines, quarries, electric power or natural gas utility facilities; developed areas, roads, railroads and railroad yards, and commercial or retail facilities.	None	0	0.1	<0.1	56.5	6.6

NEW Table 47-1

Land cover and potential breeding habitat of Project-specific Migratory Bird Species

Land Class / Vegetation Type a/	Land Class / Vegetation Type Definition	MBSC with Preferred Breeding Habitat in Land Class / Vegetation Type b/	# of MBSC by Land Class / Vegetation Type	Project Affected Acres within the Virginia Piedmont Forest Block Complex Important Bird Area (IBA)		Project Affected Acres – Total e/	
				Construction / Temporary (acres) c/	Operation / Permanent (acres) d/	Construction / Temporary (acres) c/	Operation / Permanent (acres) d/
Residential	Existing developed residential areas and planned residential developments. This may include large developments, low, medium, and high density residential neighborhoods, urban and suburban residential, multi-family residences, ethnic villages, residentially zoned areas that have been developed or short segments of the route at road crossings with homes near the route alignment.	None	0	0.0	0.0	22.8	4.4
Total Acres within the Piedmont Forest Block Complex IBA:				**50.3**	**17.0**	**1,382.7**	**452.1**

a/ Source: Project aerial photography April 2018 and field verification through January 22, 2019.
b/ Four-letter alpha codes for birds in accordance with the 59th American Ornithologists' Union Supplement (2018): AMWO – American woodcock; BAEA – bald eagle; BHNU – brown-headed nuthatch; EWPW – eastern whip-poor-will; GRSP – grasshopper sparrow; KEWA – Kentucky warbler; LEBI – least bittern; NOBO – northern bobwhite; PRAW – prairie warbler; PROW – prothonotary warbler; RHWO – red-headed woodpecker; WOTH – wood thrush; WIFL – willow flycatcher; YCNH – yellow-crowned night-heron.
c/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points are not included in this acreage. Acreage includes a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire.
d/ Includes only the operation footprint of the Project facilities, the 50-foot-wide permanent pipeline right-of-way in uplands, except in wetland areas where the operation width has been reduced to 10 feet in emergent wetlands, scrub shrub wetlands, and within 25 feet of waterbodies; and 30 feet in forested wetlands. The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.
e/ Sums may not equal the total of addends due to rounding. Addends consist of six-decimal digits.

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 4

March 2019

LIST OF TABLES

REVISED Table 4.3-1

Federally-Recognized Native American Groups Contacted for the MVP Southgate Project (current as of March 15, 2019)

Tribe Name	Date(s) Contacted (includes meetings)	Date(s) Response Received (includes meetings)
Absentee Shawnee Tribe	11/2/2018	No response received to date
Catawba Indian Nation	5/31/2018, 6/1/2018, 6/28/2018, 7/11/2018, 8/31/2018/ 9/5/2018/, 9/28/2018, 11/2/2018, 2/6/2019, 2/27/2019, 2/28/2019	5/31/2018, 7/12/2018, 9/28/2018
Absentee Shawnee Tribe	11/2/2018	No response received to date
Cherokee Nation of Oklahoma	8/31/2018, 11/2/2018	11/30/2018
Cheyenne River Sioux Tribe	6/6/2018, 7/11/2018, 8/31/2018	No response received to date
Chickahominy Tribe	5/31/2018, 6/1/2018, 6/12/2018, 6/14/2018, 6/25/2018, 6/29/2018, 7/11/2018, 8/31/2018, 9/6/2018, 11/2/2018, 2/6/2019, 2/10/2019, 2/27/2019, 2/28/2019	5/31/2018, 6/14/2018, 9/6/2018
Chickahominy Tribe Eastern Division	5/31/2018, 6/1/2018, 6/12/2018, 6/14/2018, 8/21/2018, 8/31/2018, 9/6/2018, 2/20/2019, 2/27/2019, 2/28/2019	5/31/2018, 6/14/2018, 9/6/2018
Choctaw Nation of Oklahoma	11/2/2018	No response received to date
Delaware Nation	6/6/2018, 7/11/2018, 8/31/2018, 11/2/2018	No response received to date
Delaware Tribe of Indians	6/6/2018, 7/11/2018, 11/2/2018	6/7/2018
Eastern Band of Cherokee Indians	5/31/2018, 6/1/2018, 6/11/2018, 6/29/2018, 7/11/2018, 8/31/2018, 11/2/2018, 2/6/2019, 2/27/2019, 2/28/2019	5/31/2018, 10/15/2018
Eastern Shawnee Tribe of Oklahoma	6/6/2018, 7/11/2018, 8/31/2018, 11/2/2018	No response received to date
Jena Band of Choctaw Indians	11/2/2018	No response received to date
Monacan Indian Nation*	5/31/2018, 6/1/2018, 6/12/2018, 6/27/2018, 7/11/2018, 8/9/2018, 8/15/2018, 8/31/2018, 10/9/2018, 11/2/2018, 2/6/2019, 2/21/2019, 2/26/2019, 2/28/2019	5/31/2018, 6/12/2018, 8/7/2018, 10/9/2018, 2/21/2019, 2/25/2019, 2/26/2019
Muscogee (Creek) Nation	6/6/2018, 7/11/2018, 8/31/2018, 11/2/2018	6/8/2018
Nansemond Tribe	5/31/2018, 6/1/2018, 6/11/2018, 6/26/2018, 7/11/2018, 8/31/2018, 9/6/2018, 11/2/2018, 2/6/2019, 2/10/2019, 2/18/2019, 2/27/2019, 2/28/2019	5/31/2018, 6/11/2018, 9/6/2018

REVISED Table 4.3-1

Federally-Recognized Native American Groups Contacted for the MVP Southgate Project (current as of March 15, 2019)

Tribe Name	Date(s) Contacted (includes meetings)	Date(s) Response Received (includes meetings)
Oneida Tribe of Wisconsin	11/2/2018	No response received to date
Ottawa Tribe of Oklahoma	11/2/2018	No response received to date
Pamunkey Tribe	5/31/2018, 8/31/2018, 11/2/2018, 2/6/2019, 2/27/2019, 2/28/2019	No response received to date
Poarch Band of Creek Indians	11/2/2018	No response received to date
Rappahannock Tribe	5/31/2018, 6/5/2018, 7/11/2018, 8/31/2018, 9/6/2018, 11/2/2018, 2/6/2019, 2/10/2019, 2/27/2019, 2/28/2019	9/6/2018
Rosebud Sioux Tribe of Indians	6/6/2018, 6/7/2018, 7/11/2018, 8/31/2018	No response received to date
Saint Regis Mohawk Tribe	11/2/2018	No response received to date
Seneca Nation	11/2/2018	No response received to date
Seneca-Cayuga Nation	11/2/2018	No response received to date
Shawnee Tribe	11/2/2018	No response received to date
Stockbridge-Munsee Band of Mohicans	11/2/2018	No response received to date
Tonawanda Band of Seneca Indians	11/2/2018	No response received to date
Tuscarora Nation	6/6/2018, 7/11/2018, 8/31/2018, 11/2/2018, 2/10/2019	No response received to date
United Keetoowah Band of Cherokee Indians	11/2/2018	No response received to date
Upper Mattaponi Tribe	5/30/2018, 6/12/2018, 6/25/2018, 7/11/2018, 8/31/2018, 9/6/2018, 11/2/2018, 2/6/2019, 2/27/2019, 2/28/2019	9/6/2018

REVISED Table 4.3-2 **Non-federally Recognized Native American Groups Contacted for the MVP Southgate Project (current as of March 15, 2019)**		
Tribe Name	**Date(s) Contacted (includes meetings)**	**Date(s) Response Received (includes meetings)**
Cheroenhaka (Nottoway) Tribe	8/3/2018, 8/31/2018, 11/2/2018	No response received to date
Mattaponi Tribe	8/3/2018, 8/31/2018, 11/2/2018	No response received to date
Nottoway of Virginia	8/3/2018, 8/31/2018, 11/2/2018	No response received to date
Patawomeck Tribe	8/3/2018, 8/31/2018, 11/2/2018	No response received to date
North Carolina Commission on Indian Affairs	7/12/2018, 7/25/2018, 7/31/2018, 8/22/2018, 8/31/2018, 9/7/2018, 11/2/2018, 2/28/2019	7/31/2018, 8/27/2018, 9/7/2018
Coharie Tribe	8/3/2018, 8/31/2018, 11/2/2018	No response received to date
Haliwa-Saponi Indian Tribe	8/3/2018, 8/31/2018, 11/2/2019	No response received to date
Lumbee Tribe	8/3/2018, 8/31/2018, 11/2/2018	No response received to date
Meherrin Indian Tribe	8/3/2018, 8/31/2018, 11/2/2018	No response received to date
Occaneechi Band of the Saponi Nation*	8/3/2018, 8/6/2018, 8/14/2018, 8/20/2018, 8/31/2018, 10/2/2018, 10/4/2018, 11/2/2018, 2/6/2019, 2/25/2019, 2/28/2019	8/17/2018, 8/24/2018, 10/5/2018
Sappony Tribe*	8/3/2018, 8/9/2018, 8/15/2018, 8/31/2018, 10/9/2018, 11/2/2018, 2/6/2019, 2/21/2019, 2/26/2019, 2/28/2019	8/7/2018, 10/9/2018, 2/10/2019, 2/21/2019, 2/25/2019, 2/26/2019
Waccamaw Siouan Tribe	8/3/2018, 8/31/2018, 11/2/2018	No response received to date

REVISED Table 4.3-3 **Other Virginia State and Local Agency Cultural Resources Coordination for the MVP Southgate Project (current as of March 15, 2019)**		
Organization	**Date(s) Contacted**	**Date(s) Response Received**
City of Danville (CLG)	7/6/2018	No response received to date
Pittsylvania Historical Society	7/6/2018, 7/24/2018, 8/17/2018	7/21/2018

REVISED Table 4.3-4 **Other North Carolina State and Local Agency Cultural Resources Coordination for the MVP Southgate Project (current as of March 15, 2019)**		
Organization	**Date(s) Contacted**	**Date(s) Response Received**
Town of Eden (CLG)	7/6/2018	No response received to date
Alamance County Historical Properties Commission (CLG)	7/6/2018, 7/31/2018, 8/3/2018	7/30/2018, 7/31/2018, 8/3/2018
Rockingham County Historical Society	9/5/2018, 10/3/2018	10/2/2018, 10/4/2018
Alamance County Historical Museum	7/6/2018	No response received to date
Graham Historical Museum	7/6/2018, 7/23/2018	7/21/2018
Haw River Historical Society Museum	8/7/2018	No response received to date
Mebane Historical Society and Museum	7/6/2018	No response received to date
Textile Heritage Museum	7/6/2018	No response received to date
Virginia-North Carolina Piedmont Genealogical Society	8/19/2018	No response received to date
Afro-American Historical and Genealogical Society of North Carolina, Piedmont Triad Chapter	8/21/2018, 11/19/2018, 2/7/2019, 2/11/2019, 3/5/2019	3/4/2019

REVISED Table 4.3-5

Potential Cultural Resources Reported in Public Comments (updated March 15, 2019)

Resource Number	Resource Name	Distance from CL/Facility	Applicant's NRHP Recommendation	Applicant's Effects Recommendation
071-0036	Little Cherrystone Manor	Property is crossed by CL	NRHP Listed	Assess effects and mitigate as necessary
071-0002	Bachelors Hall Plantation	8100 feet from TA-PI-052	VDHR determined eligible	No effect; resource is outside indirect effects APE
071-0020	Oak Ridge Plantation	8000 feet from TA-PI-054	NRHP listed	No effect; resource is outside indirect effects APE
071-0026; 44PY0040	Oak Hill Plantation	2780 feet from TA-PI-063	NRHP listed but demolished	No effect; resource is outside indirect effects APE
071-0035	Windsor Plantation	2000 feet from CL	NRHP listed	No effect; resource is outside indirect effects APE
071-0006	Berry Hill Plantation	1070 feet from workspace	NRHP listed	No effect; resource is outside indirect effects APE
AM0003	Glencoe Mill Village	1500 feet from CL	NRHP Listed Historic District	No effect; resource is outside indirect effects APE
AM2545	Arches Grove United Church of Christ	2340 feet from CL	Not Eligible	N/A
None	Moore property – 1810 farmhouse 613 Live Oak Road, Reidsville	~1400 feet from CL	Unassessed; property has not been accessed for above ground resources survey. Tax data suggest frame house on the property was built in 1973.	Unknown but likely no effect due to distance and vegetative screening
None	Moore property - family cemetery	Unknown	Unassessed/	No effect; property is not within direct effects APE
None	Moore property – Native American sites	Unknown	Unassessed/	No effect; property is not within direct effects APE
31AM431	Archaeological Site 31AM431	700 feet from PA-AL-174	Unassessed	No effect; property is not within direct effects APE
None	Burlington-Hillsborough Stage Coach Trail 2102 Roney Lineberry Road, Burlington	Unknown	Unassessed	No effect. The limited portion of the property within direct effects APE has been surveyed and no evidence of a roadbed or other cultural resources was identified.
AM2635	William Fonville Family House 1648 S. Fonville Road, Burlington	750 feet from CL	Based on exterior structure is potentially eligible under Criterion C; interior could not be assessed.	No adverse effect.
AM0555	Aldridge building – Anderson House	11,500 feet from TAR-AL-79A	Unassessed (on NC HPO study list)	No effect; resource is outside indirect effects APE
AM0196	Aldridge building – Jacob Holt House	10,000 feet from TAR-AL-79A	Unassessed (on NC HPO study list)	No effect; resource is outside indirect effects APE
None known	Aldridge cemetery #1	Unknown; at least 9,000 feet from TAR-AL-79A	Unassessed	No effect; resource is outside direct effects APE
None known	Aldridge cemetery #2	Unknown; at least 9,000 feet from TAR-AL-79A	Unassessed	No effect; resource is outside direct effects APE
AM0464	Kerr Scott Farm	1500 feet from CL	NRHP Listed	No effect; resource is outside indirect effects APE

REVISED Table 4.5-5

Cultural Resources Survey Status of Pipeline Route (current as of March 15, 2019)*

Facility	County, State	Milepost		Survey Status/Scheduled Completion Date
		Start	End	
H-605 Pipeline	Pittsylvania, VA	0	0.09	Pending survey completion/ April 2019
H-605 Pipeline	Pittsylvania, VA	0.09	0.20	Surveyed
H-605 Pipeline	Pittsylvania, VA	0.20	0.29	Pending survey completion/ April 2019
H-605 Pipeline	Pittsylvania, VA	0.29	0.47	Surveyed
H-650 Pipeline	Pittsylvania, VA	0	0.86	Surveyed
H-650 Pipeline	Pittsylvania, VA	0.86	0.87	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	0.87	1.00	Surveyed
H-650 Pipeline	Pittsylvania, VA	1.00	1.05	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	1.05	3.75RR	Surveyed
H-650 Pipeline	Pittsylvania, VA	3.75RR	3.84RR	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	3.84RR	4.40	Surveyed
H-650 Pipeline	Pittsylvania, VA	4.40	4.41	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	4.41	4.50	Surveyed
H-650 Pipeline	Pittsylvania, VA	4.50	4.70	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	4.70	5.43	Surveyed
H-650 Pipeline	Pittsylvania, VA	5.43	5.49	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	5.49	6.97	Surveyed
H-650 Pipeline	Pittsylvania, VA	6.97	7.54	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	7.54	7.85	Surveyed
H-650 Pipeline	Pittsylvania, VA	7.85	7.90	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	7.90	9.60	Surveyed
H-650 Pipeline	Pittsylvania, VA	9.60	9.63	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	9.63	9.72	Surveyed
H-650 Pipeline	Pittsylvania, VA	9.72	9.84	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	9.84	11.08	Surveyed
H-650 Pipeline	Pittsylvania, VA	11.08	11.27	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	11.27	11.72	Surveyed
H-650 Pipeline	Pittsylvania, VA	11.72	11.77	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	11.77	20.01	Surveyed
H-650 Pipeline	Pittsylvania, VA	20.01	20.33	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	20.33	23.54	Surveyed

REVISED Table 4.5-5

Cultural Resources Survey Status of Pipeline Route (current as of March 15, 2019)*

Facility	County, State	Milepost		Survey Status/Scheduled Completion Date
		Start	End	
H-650 Pipeline	Pittsylvania, VA	23.54	23.68	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	23.68	24.40	Surveyed
H-650 Pipeline	Pittsylvania, VA	24.40	24.91	Pending survey completion/ April 2019
H-650 Pipeline	Pittsylvania, VA	24.91	29.38RR	Surveyed
H-650 Pipeline	Rockingham, NC	29.38RR	29.45RR	Pending survey completion/ April 2019
H-650 Pipeline	Rockingham, NC	29.45RR	33.60	Surveyed
H-650 Pipeline	Rockingham, NC	33.60	33.88	Pending survey completion/ April 2019
H-650 Pipeline	Rockingham, NC	33.88	37.71	Surveyed
H-650 Pipeline	Rockingham, NC	37.71	37.85	Pending survey completion/ April 2019
H-650 Pipeline	Rockingham, NC	37.85	38.79	Surveyed
H-650 Pipeline	Rockingham, NC	38.79	38.81	Pending survey completion/ April 2019
H-650 Pipeline	Rockingham, NC	38.81	42.17	Surveyed
H-650 Pipeline	Rockingham, NC	42.17	42.18	Pending survey completion/ April 2019
H-650 Pipeline	Rockingham, NC	42.18	49.93	Surveyed
H-650 Pipeline	Rockingham, NC	49.93	50.13	Pending survey completion/ April 2019
H-650 Pipeline	Rockingham, NC	50.13	50.33	Surveyed
H-650 Pipeline	Rockingham, NC	50.33	50.61	Pending survey completion/ April 2019
H-650 Pipeline	Rockingham, NC	50.61	52.63	Surveyed
H-650 Pipeline	Alamance, NC	52.63	52.76	Surveyed
H-650 Pipeline	Alamance, NC	52.76	52.92	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	52.92	53.89	Surveyed
H-650 Pipeline	Alamance, NC	53.89	53.90	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	53.90	57.86	Surveyed
H-650 Pipeline	Alamance, NC	57.86	58.53	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	58.53	58.69	Surveyed
H-650 Pipeline	Alamance, NC	58.69	59.72	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	59.72	61.15	Surveyed
H-650 Pipeline	Alamance, NC	61.15	61.39	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	61.39	63.64	Surveyed
H-650 Pipeline	Alamance, NC	63.64	64.33	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	64.33	64.35	Surveyed
H-650 Pipeline	Alamance, NC	64.35	64.49	Pending survey completion/ April 2019

REVISED Table 4.5-5

Cultural Resources Survey Status of Pipeline Route (current as of March 15, 2019)*

Facility	County, State	Milepost		Survey Status/Scheduled Completion Date
		Start	End	
H-650 Pipeline	Alamance, NC	64.49	64.60	Surveyed
H-650 Pipeline	Alamance, NC	64.60	64.78	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	64.78	64.80	Surveyed
H-650 Pipeline	Alamance, NC	64.80	65.31RR	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	65.31RR	65.45RR	Surveyed
H-650 Pipeline	Alamance, NC	65.45RR	65.50RR	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	65.50RR	66.21	Surveyed
H-650 Pipeline	Alamance, NC	66.21	66.38	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	66.38	66.50	Surveyed
H-650 Pipeline	Alamance, NC	66.50	66.53	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	66.53	66.61	Surveyed
H-650 Pipeline	Alamance, NC	66.61	67.47	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	67.47	67.57	Surveyed
H-650 Pipeline	Alamance, NC	67.57	67.58	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	67.58	67.61	Surveyed
H-650 Pipeline	Alamance, NC	67.61	67.74	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	67.74	67.89	Surveyed
H-650 Pipeline	Alamance, NC	67.89	68.23	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	68.23	68.47	Surveyed
H-650 Pipeline	Alamance, NC	68.47	68.65	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	68.65	69.47	Surveyed
H-650 Pipeline	Alamance, NC	69.47	69.64	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	69.64	69.83	Surveyed
H-650 Pipeline	Alamance, NC	69.83	69.92	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	69.92	71.87	Surveyed
H-650 Pipeline	Alamance, NC	71.87	72.20	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	72.20	72.84	Surveyed
H-650 Pipeline	Alamance, NC	72.84	72.86	Pending survey completion/ April 2019
H-650 Pipeline	Alamance, NC	72.86	73.09RR	Surveyed
H-650 Pipeline	Alamance, NC	73.09RR	73.17RR	Pending survey completion/ April 2019

*Note: Mainline valves, ATWSs, and pig launcher/receiver locations are included within the survey corridor for the H-650 pipeline.

REVISED Table 4.5-6

Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)

Facility	Approximate Milepost	County, State	Area (acres) Required for Construction	Survey Status/Scheduled Completion Date
Compressor Station Lambert Compressor Station / Interconnect / MLV 1	0.0	Pittsylvania, VA	20.49	Surveyed
Interconnects LN 3600 Interconnect	28.2	Rockingham, NC	4.84	Surveyed
T-15 Dan River Interconnect / MLV 4	30.4	Rockingham, NC	5.17	Surveyed
T-21 Haw River Interconnect / MLV 8	73.17RR	Alamance, NC	1.38	Pending survey completion/ April 2019
Contractor Yards				
CY-01	N/A	Pittsylvania, VA	39.70	Surveyed
CY-03	N/A	Pittsylvania, VA	26.31	Pending survey completion/ April 2019
CY-04	N/A	Rockingham, NC	4.25	Surveyed
CY-05	N/A	Rockingham, NC	19.79	Surveyed
CY-08	N/A	Guilford, NC	11.47	Surveyed
CY-09	N/A	Rockingham, NC	4.61	Surveyed
Access Roads				
TA-PI-000	0	Pittsylvania, VA	0.192	Pending survey completion/ April 2019
TA-PI-000A	0	Pittsylvania, VA	0.019	Pending survey completion/ April 2019*
PA-PI-001A	0.47	Pittsylvania, VA	1.459	Pending survey completion/ April 2019
PA-PI-001B	0.47	Pittsylvania, VA	0.493	Surveyed
PA-PI-001C	0.47	Pittsylvania, VA	0.335	Pending survey completion/ April 2019
TA-PI-003	1.2	Pittsylvania, VA	1.385	Pending survey completion/ April 2019*
TA-PI-004	1.6	Pittsylvania, VA	1.706	Pending survey completion/ April 2019
TA-PI-005	2.3	Pittsylvania, VA	2.171	Pending survey completion/ April 2019
TA-PI-006	3.4	Pittsylvania, VA	0.747	Pending survey completion/ April 2019
TA-PI-006A	3.4	Pittsylvania, VA	2.007	Pending survey completion/ April 2019
TA-PI-008	4.5	Pittsylvania, VA	0.173	Pending survey completion/ April 2019*
TA-PI-007	4.6	Pittsylvania, VA	0.53	Pending survey completion/ April 2019

REVISED Table 4.5-6

Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)

Facility	Approximate Milepost	County, State	Area (acres) Required for Construction	Survey Status/Scheduled Completion Date
TA-PI-009	4.8	Pittsylvania, VA	2.279	Pending survey completion/ April 2019
TA-PI-011	5.1	Pittsylvania, VA	3.088	Pending survey completion/ April 2019
TA-PI-015	5.6	Pittsylvania, VA	0.618	Surveyed
TA-PI-016	5.9	Pittsylvania, VA	1.986	Pending survey completion/ April 2019
TA-PI-017	6.2	Pittsylvania, VA	0.509	Surveyed
TA-PI-018	6.8	Pittsylvania, VA	0.887	Pending survey completion/ April 2019
PA-PI-018A	7.2	Pittsylvania, VA	0.005	Surveyed
PA-PI-018B	7.4	Pittsylvania, VA	0.032	Surveyed
TA-PI-021	8.2	Pittsylvania, VA	0.247	Pending survey completion/ April 2019
TA-PI-022	8.5	Pittsylvania, VA	1.189	Pending survey completion/ April 2019
TA-PI-023	9	Pittsylvania, VA	1.226	Pending survey completion/ April 2019*
TA-PI-024	9.1	Pittsylvania, VA	0.811	Surveyed
TA-PI-025	9.6	Pittsylvania, VA	1.37	Pending survey completion/ April 2019
TA-PI-026B	10.4	Pittsylvania, VA	0.027	Pending survey completion/ April 2019*
PA-PI-026C	10.7	Pittsylvania, VA	0.008	Surveyed
TA-PI-027	11.1	Pittsylvania, VA	0.923	Pending survey completion/ April 2019*
TA-PI-000B	11.2	Pittsylvania, VA	0.102	Pending survey completion/ April 2019
PA-PI-029	12.4	Pittsylvania, VA	0.13	Pending survey completion/ April 2019*
TA-PI-032	13.2	Pittsylvania, VA	0.604	Surveyed
TA-PI-033	13.2	Pittsylvania, VA	0.431	Pending survey completion/ April 2019*
TA-PI-034	13.6	Pittsylvania, VA	1.528	Pending survey completion/ April 2019
TA-PI-035	14.2	Pittsylvania, VA	2.522	Pending survey completion/ April 2019
TA-PI-036	14.9	Pittsylvania, VA	0.113	Surveyed
TA-PI-037	15.2	Pittsylvania, VA	1.047	Pending survey completion/ April 2019*
TA-PI-038	15.8	Pittsylvania, VA	0.647	Pending survey completion/ April 2019

REVISED Table 4.5-6

Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)

Facility	Approximate Milepost	County, State	Area (acres) Required for Construction	Survey Status/Scheduled Completion Date
TA-PI-039	16	Pittsylvania, VA	0.343	Pending survey completion/ April 2019
TA-PI-041	16.7	Pittsylvania, VA	0.376	Pending survey completion/
TA-PI-042	16.7	Pittsylvania, VA	1.449	April 2019*
TA-PI-043	17.2	Pittsylvania, VA	1.227	Pending survey completion/
TA-PI-046	18	Pittsylvania, VA	0.889	Pending survey completion/ April 2019
PA-PI-046A	18.3	Pittsylvania, VA	0.018	Surveyed
TA-PI-048	18.7	Pittsylvania, VA	0.744	Pending survey completion/ April 2019
TA-PI-049	19.5	Pittsylvania, VA	0.166	Pending survey completion/
TA-PI-050	20	Pittsylvania, VA	0.185	April 2019*
TA-PI-051A	20.2	Pittsylvania, VA	0.054	Pending survey completion/ April 2019
TA-PI-052	20.4	Pittsylvania, VA	1.656	Pending survey completion/ April 2019
PA-PI-053	21.1	Pittsylvania, VA	0.427	Pending survey completion/ April 2019
TA-PI-055	21.6	Pittsylvania, VA	1.713	Pending survey completion/ April 2019
TA-PI-061	23	Pittsylvania, VA	2.362	Pending survey completion/ April 2019
TA-PI-063	24	Pittsylvania, VA	1.587	Pending survey completion/ April 2019
TA-PI-064	24.6	Pittsylvania, VA	1.539	Pending survey completion/
TA-PI-066	24.8	Pittsylvania, VA	1.379	April 2019*
TA-PI-067	25.1	Pittsylvania, VA	1.195	Pending survey completion/ April 2019
TA-PI-068	26	Pittsylvania, VA	0.226	Surveyed
TA-PI-068	26.2	Rockingham, NC	0.481	Surveyed
TA-RO-070	26.2	Rockingham, NC	0.303	Pending survey completion/ April 2019*
TA-RO-071	26.3	Rockingham, NC	2.000	Pending survey completion/ April 2019
TA-RO-072	26.9	Rockingham, NC	0.607	Pending survey completion/ April 2019*
TA-RO-072A	26.9	Rockingham, NC	0.139	Surveyed
TA-RO-073	27.1	Rockingham, NC	0.801	Surveyed
TA-RO-073A	27.4	Rockingham, NC	1.666	Pending survey completion/

REVISED Table 4.5-6

Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)

Facility	Approximate Milepost	County, State	Area (acres) Required for Construction	Survey Status/Scheduled Completion Date
TA-RO-075	28.1	Rockingham, NC	1.274	April 2019*
PA-RO-000	28.2	Rockingham, NC	2.858	Surveyed
TA-RO-076	28.6	Rockingham, NC	1.429	Pending survey completion/ April 2019
TA-RO-078	29.2	Rockingham, NC	1.287	Pending survey completion/
TA-RO-079	29.6	Rockingham, NC	0.167	April 2019*
TA-RO-079A	29.6	Rockingham, NC	1.059	Pending survey completion/ April 2019
TA-RO-080	29.9	Rockingham, NC	2.08	Pending survey completion/ April 2019*
PA-RO-082	30.4	Rockingham, NC	0.118	Surveyed
PA-RO-082A	30.4	Rockingham, NC	0.062	Surveyed
TA-RO-081	30.4	Rockingham, NC	0.018	Surveyed
TA-RO-082A	30.6	Rockingham, NC	0.247	Surveyed
TA-RO-082C	30.7	Rockingham, NC	0.015	Pending survey completion/
TA-RO-082D	30.7	Rockingham, NC	0.011	April 2019*
TA-RO-082E	30.7	Rockingham, NC	0.012	Pending survey completion/
TA-RO-084	31.6	Rockingham, NC	0.062	April 2019*
TA-RO-085	32.4	Rockingham, NC	2.115	Pending survey completion/ April 2019
TA-RO-086	32.5	Rockingham, NC	0.29	Surveyed
TA-RO-087	32.8	Rockingham, NC	1.536	Pending survey completion/ April 2019
TA-RO-088	33.6	Rockingham, NC	1.033	Pending survey completion/ April 2019
TA-RO-089	34.1	Rockingham, NC	1.047	Pending survey completion/
TA-RO-091	34.7	Rockingham, NC	0.583	April 2019*
TA-RO-092	35.4	Rockingham, NC	0.505	Pending survey completion/ April 2019
TA-RO-093	35.7	Rockingham, NC	0.42	Surveyed
TA-RO-094	35.9	Rockingham, NC	0.456	Surveyed
TA-RO-095	36.2	Rockingham, NC	0.36	Pending survey completion/
TA-RO-099	36.7	Rockingham, NC	0.436	April 2019*
TA-RO-100	37.1	Rockingham, NC	1.121	Pending survey completion/

REVISED Table 4.5-6

Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)

Facility	Approximate Milepost	County, State	Area (acres) Required for Construction	Survey Status/Scheduled Completion Date
TA-RO-102	37.6	Rockingham, NC	0.89	Surveyed
TA-RO-103	38.1	Rockingham, NC	0.871	Pending survey completion/ April 2019
TA-RO-104	38.6	Rockingham, NC	0.211	Pending survey completion/ April 2019
TA-RO-106	38.9	Rockingham, NC	0.252	Surveyed
TA-RO-107	39.4	Rockingham, NC	1.128	Pending survey completion/ April 2019*
TA-RO-108	39.6	Rockingham, NC	0.121	Surveyed
PA-RO-109	39.7	Rockingham, NC	0.671	Pending survey completion/ April 2019*
TA-RO-111	40.9	Rockingham, NC	2.581	Pending survey completion/ April 2019
TA-RO-112	41.4	Rockingham, NC	1.97	Pending survey completion/ April 2019
PA-RO-113A	41.8	Rockingham, NC	1.086	Surveyed
TA-RO-113	41.8	Rockingham, NC	0.109	Surveyed
PA-RO-114A	42.2	Rockingham, NC	0.051	Surveyed
TA-RO-115	42.4	Rockingham, NC	0.34	Pending survey completion/ April 2019*
TA-RO-115A	43.2	Rockingham, NC	0.061	Surveyed
TA-RO-000A	43.3	Rockingham, NC	0.209	Pending survey completion/ April 2019*
TA-RO-117	43.4	Rockingham, NC	0.034	Surveyed
TA-RO-118	43.4	Rockingham, NC	0.092	Pending survey completion/ April 2019*
TA-RO-119	43.9	Rockingham, NC	1.11	Surveyed
TA-RO-122	44.1	Rockingham, NC	1.089	Surveyed
TA-RO-124	44.8	Rockingham, NC	0.154	Pending survey completion/ April 2019*
PA-RO-124A	44.9	Rockingham, NC	0.008	Surveyed
TA-RO-125	45	Rockingham, NC	0.137	Surveyed
TA-RO-126	45.3	Rockingham, NC	1.31	Pending survey completion/ April 2019*
TA-RO-127	46.1	Rockingham, NC	1.23	Pending survey completion/ April 2019
TA-RO-129	46.7	Rockingham, NC	0.961	Surveyed
TA-RO-130	47.3	Rockingham, NC	1.272	Pending survey completion/ April 2019

REVISED Table 4.5-6

Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)

Facility	Approximate Milepost	County, State	Area (acres) Required for Construction	Survey Status/Scheduled Completion Date
TA-RO-131	48.2	Rockingham, NC	1.076	Pending survey completion/ April 2019
TA-RO-133	48.6	Rockingham, NC	0.716	Pending survey completion/ April 2019*
TA-RO-134	48.9	Rockingham, NC	0.029	Surveyed
TA-RO-135	49.2	Rockingham, NC	0.268	Pending survey completion/
TA-RO-136	49.5	Rockingham, NC	0.086	April 2019*
TA-RO-138	49.8	Rockingham, NC	0.49	Surveyed
TA-RO-139	50.3	Rockingham, NC	1.635	Pending survey completion/
TA-RO-140	51.4	Rockingham, NC	0.532	April 2019*
TA-RO-141	51.6	Rockingham, NC	0.279	Surveyed
TA-RO-142	51.7	Rockingham, NC	0.386	Pending survey completion/
TA-RO-144	52.2	Rockingham, NC	0.714	April 2019*
TA-RO-145	52.3	Rockingham, NC	0.361	Surveyed
TA-RO-146A	52.6	Guilford, NC	0.137	Surveyed
TA-RO-146A	52.6	Rockingham, NC	0.178	Surveyed
TA-AL-147	53	Alamance, NC	0.076	Surveyed
TA-AL-149	53.3	Alamance, NC	0.02	Surveyed
TA-AL-152	53.5	Alamance, NC	0.287	Pending survey completion/
TA-AL-153	53.8	Alamance, NC	0.819	April 2019*
TA-AL-154	54.2	Alamance, NC	1.345	Pending survey completion/
TA-AL-155	54.7	Alamance, NC	1.945	April 2019*
PA-AL-155A	55.1	Alamance, NC	0.026	Surveyed
TA-AL-156	55.5	Alamance, NC	0.344	Surveyed
TA-AL-157	55.6	Alamance, NC	0.254	Pending survey completion/ April 2019
TA-AL-159	56.3	Alamance, NC	0.138	Pending survey completion/ April 2019*
TA-AL-159B	56.8	Alamance, NC	0.131	Surveyed
TA-AL-159A	56.9	Alamance, NC	1.057	Surveyed
TA-AL-161	57.7	Alamance, NC	0.374	Surveyed

REVISED Table 4.5-6

Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)

Facility	Approximate Milepost	County, State	Area (acres) Required for Construction	Survey Status/Scheduled Completion Date
TA-AL-162	58.1	Alamance, NC	0.595	Pending survey completion/ April 2019
TA-GU-000	58.1	Guilford, NC	0.053	Surveyed
TA-AL-163	58.4	Alamance, NC	0.599	Pending survey completion/ April 2019
PA-AL-164	58.8	Alamance, NC	0.613	Pending survey completion/ April 2019
TA-AL-165	60	Alamance, NC	0.095	Pending survey completion/ April 2019
PA-AL-166	60.3	Alamance, NC	0.093	Surveyed
TA-AL-167	61.2	Alamance, NC	0.433	Pending survey completion/
TA-AL-168	61.6	Alamance, NC	0.341	April 2019*
TA-AL-169	62.4	Alamance, NC	1.125	Pending survey completion/
TA-AL-171	63.4	Alamance, NC	0.331	April 2019*
TA-AL-172	63.7	Alamance, NC	1.375	Surveyed
PA-AL-175A	64.8	Alamance, NC	0.013	Pending survey completion/ April 2019
TA-AL-179A	66.7	Alamance, NC	2.254	Pending survey completion/ April 2019
TA-AL-180	67.3	Alamance, NC	1.326	Pending survey completion/ April 2019
TA-AL-181	68	Alamance, NC	0.887	Pending survey completion/ April 2019
PA-AL-181A	68.2	Alamance, NC	1.199	Pending survey completion/ April 2019
TA-AL-185	68.9	Alamance, NC	0.924	Pending survey completion/ April 2019*
TA-AL-186	69.2	Alamance, NC	0.019	Surveyed
TA-AL-187	69.5	Alamance, NC	0.722	Pending survey completion/ April 2019
TA-AL-188	70.9	Alamance, NC	1.025	Pending survey completion/ April 2019*
TA-AL-189	71.2	Alamance, NC	1.324	Pending survey completion/ April 2019
TA-AL-190	71.5	Alamance, NC	0.877	Pending survey completion/ April 2019*
TA-AL-192	72.2	Alamance, NC	0.741	Pending survey completion/ April 2019
TA-AL-193	72.4	Alamance, NC	0.742	Surveyed
PA-AL-194	73.17RR	Alamance, NC	0.118	Pending survey completion/ April 2019

REVISED Table 4.5-6 Cultural Resources Survey Status of Aboveground Facilities (current as of March 15, 2019)				
Facility	**Approximate Milepost**	**County, State**	**Area (acres) Required for Construction**	**Survey Status/Scheduled Completion Date**
* Note: Survey complete except for turning apron.				

NEW Table 79-1. Updated Appendix 4-D Table 6.1 Summary of Cultural Resources Identified during the Project Survey (distances added March 15, 2019).				
Site	**Site Type**	**Time Period**	**Distance from Construction Corridor (ft)**	**Recommendation**
44PY0261	Artifact Scatter	Early 19th to Mid-20th Century	0	Not Eligible; No Further Consideration
44PY0270	Campsite	Woodland	0	Unassessed (Potential for Deep Deposits); Avoid or Additional Testing
44PY0271	Isolated Find	Unidentified Prehistoric	0	Unassessed (Potential for Deep Deposits); Avoid or Additional Testing
44PY0281	Lithic Scatter	Unidentified Prehistoric	46	Unassessed; Avoid or Additional Testing (Avoided)
44PY0358	Lithic Scatter; Isolated Find	Unidentified Prehistoric; Late 18th to Early 19th Century	132	Unassessed; No Further Investigations (No Substantial Deposits to be Affected)
44PY0375	Lithic Scatter; Homestead	Unidentified Prehistoric; Mid-19th to Late 20th Century	0	Unassessed; Avoid or Additional Testing
44PY0442	Farmstead	Early 19th to Mid-20th Century	0	Not Eligible; No Further Consideration
44PY0445	Farmstead	20th Century	0	Unassessed; Avoid or Additional Testing
44PY0446	Lithic Scatter	Early Woodland	0	Not Eligible; No Further Consideration
44PY0447	Artifact Scatter	Late Archaic, Woodland	74	Unassessed; Avoid or Additional Testing
44PY0448	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
44PY0449	Artifact Scatter; Isolated Find	Woodland; Unidentified Historic	0	Unassessed (Potential for Deep Deposits); Avoid or Additional Testing
44PY0450	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
44PY0451	Lithic Scatter; Structure Ruins and Artifact Scatter	Early Woodland; Early 19th to Late 20th Century	0	Unassessed; Avoid or Additional Testing
44PY0452	Artifact Scatter	Woodland	0	Unassessed; No Further Investigations (No Substantial Deposits to be Affected)
44PY0453	Lithic Scatter; Isolated Find	Unidentified Prehistoric; 20th Century	0	Not Eligible; No Further Consideration

NEW Table 79-1. Updated Appendix 4-D Table 6.1

Summary of Cultural Resources Identified during the Project Survey (distances added March 15, 2019).

Site	Site Type	Time Period	Distance from Construction Corridor (ft)	Recommendation
44PY0454	Structure Ruins	Unidentified Historic	51	Unassessed; Avoid or Additional Testing (Avoided)
44PY0455	Structure Ruins	Unidentified Historic	0	Unassessed; Avoid or Additional Testing
44PY0456	Lithic Scatter; Artifact Scatter	Early Woodland; 19th to 20th Century	0	Not Eligible; No Further Consideration
44PY0457	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
44PY0458	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
44PY0459	Campsite	Early Archaic	0	Not Eligible; No Further Consideration
44PY0460	Campsite	Early Archaic	0	Not Eligible; No Further Consideration
VA-FS-01	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-05	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-09	Isolated Find	Early Woodland	0	Unassessed; No Further Investigations (No Substantial Deposits to be Affected)
VA-FS-11	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-15	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-19	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-21	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-23	Isolated Find	Unidentified Prehistoric	0	Unassessed; No Further Investigations (No Substantial Deposits to be Affected)
VA-FS-24	Isolated Find	Unidentified Prehistoric	0	Unassessed; No Further Investigations (No Substantial Deposits to be Affected)
VA-FS-27	Isolated Find	Late Archaic	0	Not Eligible; No Further Consideration
VA-FS-28	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-30	Isolated Find	Early Woodland	108	Unassessed; Complete Survey

NEW Table 79-1. Updated Appendix 4-D Table 6.1 Summary of Cultural Resources Identified during the Project Survey (distances added March 15, 2019).				
Site	**Site Type**	**Time Period**	**Distance from Construction Corridor (ft)**	**Recommendation**
VA-FS-31	Isolated Find	Woodland	0	Not Eligible; No Further Consideration
VA-FS-35	Isolated Find	Unidentified Prehistoric	97	Not Eligible; No Further Consideration
VA-FS-37	Isolated Find	19th to 20th Century	0	Not Eligible; No Further Consideration
VA-FS-40	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-45	Isolated Find	Unidentified Prehistoric	84	Unassessed; No Further Investigations (No Substantial Deposits to be Affected)
VA-FS-49	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Consideration
VA-FS-51	Isolated Find	Woodland	0	Not Eligible; No Further Consideration
Note: Recommendations on this table have not been updated. Updated recommendations can be found in Table 4.5-7.				

NEW Table 79-2. Updated Appendix 4-E. Table 7.1. Summary of Archaeological Resources Identified during the Project Survey (distances added March 15, 2019).				
Site*	**Site Type**	**Time Period**	**Distance from Construction Corridor (ft)**	**NRHP and Project Recommendations**
31AM414	Lithic Scatter; Isolated Find	Archaic; 18th–19th Century	0	Unassessed; Avoid or Testing
31AM415	Isolated Find	Unidentified Prehistoric	4	Not Eligible; No Further Investigation
31AM416	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM417	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM418	Isolated Find	Middle Archaic	0	Not Eligible; No Further Investigation
31AM419	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM420	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM421	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM422	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM423*	Isolated Find	Unidentified Prehistoric	103	Not Eligible; No Further Investigation
31AM424	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM425	Lithic Scatter	Middle Archaic	33	Not Eligible; No Further Investigation
31AM426	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31AM427	Ruins	Unidentified Historic	0	Not Eligible; No Further Investigation
31AM428	Artifact Scatter; Isolated Find	Woodland; 19th–20th Century	0	Not Eligible; No Further Investigation
31AM432	Lithic Scatter	Woodland	0	Not Eligible; No Further Investigation
31AM433	Isolated Find	Woodland	0	Not Eligible; No Further Investigation
31AM434*	Isolated Find	Archaic	1310	Not Eligible; No Further Investigation
31AM435	Lithic Scatter	Middle–Late Archaic	0	Not Eligible; No Further Investigation
31AM436	Isolated Find	Unidentified Prehistoric; Unidentified Historic	6	Not Eligible; No Further Investigation
31AM437	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Investigation

NEW Table 79-2. Updated Appendix 4-E. Table 7.1. Summary of Archaeological Resources Identified during the Project Survey (distances added March 15, 2019).				
Site*	**Site Type**	**Time Period**	**Distance from Construction Corridor (ft)**	**NRHP and Project Recommendations**
31RK44*	Artifact Scatter	Woodland; Early 19th–20th Century	41	Unassessed; Avoid or Testing
31RK216*	Cemetery	20th Century	23	Not Eligible; Avoidance
31RK217	Artifact Scatter	Late Woodland	0	Unassessed; Avoid or Testing
31RK218	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK219	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK220	Ruins and Artifact Scatter	Late 19th–Late 20th Century	0	Not Eligible; No Further Investigation
31RK221	Ruins and Artifact Scatter	Mid-19th–Mid-20th Century	0	Unassessed; Avoid or Testing
31RK222	Artifact Scatter	Woodland	0	Unassessed; Avoid or Testing
31RK223*	Isolated Find	Woodland	174	Not Eligible; No Further Investigation
31RK224*	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK225	Artifact Scatter	Woodland	0	Not Eligible; No Further Investigation
31RK226*	Lithic Scatter	Unidentified Prehistoric	80	Not Eligible; No Further Investigation
31RK227	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK228	Cemetery	Unidentified Historic	60	Not Eligible; Avoidance
31RK229	Ruins and Artifact Scatter	Late 19th–Late 20th Century	0	Unassessed; Avoid or Testing
31RK230	Ruins and Artifact Scatter	Unidentified Historic	30	Unassessed; Avoid or Testing
31RK231	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK232	Isolated Find	Unidentified Historic	0	Not Eligible; No Further Investigation
31RK233	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK234*	Settle Cemetery	Early 19th–Early 20th Century	220	Unassessed; Avoidance
31RK235	Lithic Scatter; Artifact Scatter	Early Archaic–Woodland; 18th–19th Century	0	Unassessed; Avoid or Testing

NEW Table 79-2. Updated Appendix 4-E. Table 7.1.

Summary of Archaeological Resources Identified during the Project Survey (distances added March 15, 2019).

Site*	Site Type	Time Period	Distance from Construction Corridor (ft)	NRHP and Project Recommendations
31RK236*	Cemetery	20th Century?	271	Unassessed; Avoidance
31RK237*	Cemetery	20th–21st Century	99	Unassessed; Avoidance
31RK238*	Isolated Find	Unidentified Prehistoric	139	Unassessed (Potential for Deep Deposits); Avoid or Testing
31RK239	Lithic Scatter	Unidentified Prehistoric	13	Unassessed; Avoid or Testing
31RK240*	Isolated Find	Unidentified Prehistoric	258	Unassessed (Potential for Deep Deposits); Avoid or Testing
31RK241	Isolated Find	Unidentified Historic	54	Not Eligible; No Further Investigation
31RK242	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK243	Lithic Scatter	Late Archaic	0	Not Eligible; No Further Investigation
31RK244	Ruins and Artifact Scatter	20th Century	50	Not Eligible; No Further Investigation
31RK245	Ruins and Artifact Scatter	20th Century	0	Not Eligible; No Further Investigation
31RK246	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK247	Lithic Scatter; Artifact Scatter	Unidentified Prehistoric; Early 19th–Mid-20th Century	0	Unassessed; Avoid or Testing
31RK248	Isolated Find	Unidentified Prehistoric	1	Not Eligible; No Further Investigation
31RK249	Lithic Scatter	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK253	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK254	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK255	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK256	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation
31RK257	Isolated Find	Unidentified Prehistoric	0	Not Eligible; No Further Investigation

* now avoided by the Project and discussed in Appendix 3

Note: Recommendations on this table have not been updated. Updated recommendations can be found in Table 4.5-8.

NEW Table 79-3. Updated Appendix 4-F Table 3.1. Previously Recorded Architectural Resources within 0.5 Mile of the Project in Pittsylvania County (distances added March 15, 2019).					
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**Previous NRHP Determination**	**Project Status**
071-0004	Belle Grove/Tunstall House	Late 18th/Early 19th Century Federal House and Outbuildings	175	Unassessed	To be surveyed
071-0006	Berry Hill	Early 19th–Early 20th Century Plantation Complex	1170	NRHP Listed; VLR Listed	Outside APE
071-0025	Mountain View	Mid-19th Century House and Outbuildings	0	NRHP Listed; VLR Listed	To be surveyed
071-0028	Oakland	Mid-19th Century Greek Revival House	2100	Unassessed	Outside APE
071-0035	Samuel Pannill Wilson House/Windsor	Mid-19th Century Italianate House and Outbuildings	2100	NRHP Listed; VLR Listed	Outside APE
071-0036	Little Cherrystone Manor/Wooding House	Late 18th–Early 19th Century Provincial Virginia House	0	NRHP Listed; VLR Listed	This report; additional survey needed at 44PY0274
071-0062	Stony Mill	Late 19th Century Mill	1555	Unassessed	Outside APE
071-0064	Luke Payne Cabin	Log House, Demolished	2070	Unassessed	Outside APE
071-0067	Barn at Stony Mill	Vertical Board Barn, Deteriorated	1940	Unassessed	Outside APE
071-0068	Allan Holder Cabin	Historic Cabin	3144	Not Evaluated	Outside APE
071-0136	Sandy Creek Bridge	Bridge	1840	Unassessed	Outside APE
071-0137	White Oak Mountain Wildlife Management Area	Game Reserve/Wildlife Management Area	0	Unassessed	To be surveyed
071-5033	Belle Grove Church	Late 19th Century Church	100	Not Eligible	This report
071-5107	Bridge #6276	1933 Single Span T Beam Bridge	1700	Not Eligible	Outside APE
071-5135	House, Route 1047	Mid-19th Century I-House	2120	Unassessed	Outside APE
071-5136	House, Route 1047	Mid-19th Century House	2800	Unassessed	Outside APE
071-5140	House, Route 718	Late 19th Century House	4350	Unassessed	Outside APE

NEW Table 79-3. Updated Appendix 4-F Table 3.1. Previously Recorded Architectural Resources within 0.5 Mile of the Project in Pittsylvania County (distances added March 15, 2019).					
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**Previous NRHP Determination**	**Project Status**
071-5141	House, Route 718	Early 20th Century Victorian House	4455	Unassessed	Outside APE
071-5142	House, Route 718	Late 19th Century I-House	3300	Unassessed	Outside APE
071-5195	Hunting Cabin, Route 733	Mid-19th Century House and Outbuildings	280	Unassessed	To be surveyed
071-5196	House, Route 733	Late 19th Century Vernacular House and Outbuildings	675	Unassessed	To be surveyed
071-5197	Log Building, Route 733	Early 19th Century Log House and Outbuildings	880	Unassessed	To be surveyed
071-5198	House, Route 733	20th Century Greek Revival House and Outbuildings	880	Unassessed	To be surveyed
071-5199	Ruins, Route 733	Foundations and Outbuildings	1400	Unassessed	To be surveyed
071-5208	House, Franklin Turnpike	Mid-20th Century Minimal Traditional-style House and Outbuildings	80	Not Eligible	This report
071-5209	House, Franklin Turnpike	Mid-20th Century Craftsman-inspired House and Outbuilding	0	Not Eligible	This report
071-5210	House, Tobacco Road	Mid-20th Century Minimal Traditional-style House and Outbuildings	0	Not Eligible	This report
071-5211	Abandoned Farm, Hylton Lane	Late 19th Century Log House and Outbuildings	0	Not Eligible	This report
071-5212	Worely Farmstead	Early 20th Century I-House and Outbuildings	0	Eligible	This report
071-5216	House, Route 868	Early 20th Century I-House	880	Unassessed	To be surveyed
071-5217	Farm, Route 868	Late 19th Century Vernacular House and Outbuildings	60	Unassessed	This report
071-5218	House, Route 868	Early 20th Century Vernacular House and Outbuildings	50	Unassessed	This report
071-5219	Barn, Route 750	Early 20th Century Log Barn	0	Unassessed	To be surveyed
071-5220	Log House, Route 750	Late 19th Century Log House and Outbuildings	135	Unassessed	To be surveyed

NEW Table 79-3. Updated Appendix 4-F Table 3.1. Previously Recorded Architectural Resources within 0.5 Mile of the Project in Pittsylvania County (distances added March 15, 2019).					
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**Previous NRHP Determination**	**Project Status**
071-5221	Farm, Hopewell Road	Early 20th Century Log House and Outbuildings	0	Not Eligible	This report
071-5222	Giles Log House	Early 20th Century Log House and Outbuildings	0	Eligible	This report
071-5223	Jones/Keen Cemetery	Early 19th Century Cemetery	795	Unassessed	To be surveyed
071-5224	Fulton Cemetery	Early 20th Century Cemetery	250	Unassessed	This report
071-5225	Wells Cemetery	Early 20th Century Cemetery	64	Unassessed	This report
071-5226	Cemetery, West of Route 865	Cemetery	60	Not Eligible	This report
071-5227	Wallor Cemetery	Early 19th Century Cemetery	50	Not Eligible	This report
071-5228	Berry Hill Building Set 14	Possible House Ruins	0	Unassessed	To be surveyed
071-5245	Barker Tenant House	Late 19th–Early 20th Century Log House	1500	Not Eligible	To be surveyed
071-5246	Cassady House	20th Century Log House	0	Not Eligible	To be surveyed
071-5258	Concrete Railroad Culvert	Early 20th Century Railroad Culvert	5102	Unassessed	Outside APE
071-5300	Hairston Cemetery Number 1	Mid-18th Century Cemetery	3350	Unassessed	Outside APE
071-5302	Canter Tenant House	Late 19th Century Vernacular House and Outbuildings	3750	Unassessed	Outside APE
071-5303	Hairston Cemetery 2	Mid-19th Century Cemetery	720	Unassessed	Outside APE
071-5304	Adams/Wilson Cemetery	Early 19th Century Cemetery	1050	Unassessed	Outside APE
071-5305	House, Route 875	Late 18th Century Vernacular I-House	800	Unassessed	To be surveyed
071-5313	Berry Hill Building Sets 12 and 13	20th Century House Ruins and Outbuildings	75	Unassessed	To be surveyed
071-5316	House, Berry Hill Road	Mid-19th Century Vernacular House and Outbuildings	2400	Unassessed	Outside APE
071-5317	Tobacco Barns, Berry Hill Road	Late 19th Century Tobacco Barns	2000	Unassessed	Outside APE

NEW Table 79-3. Updated Appendix 4-F Table 3.1. Previously Recorded Architectural Resources within 0.5 Mile of the Project in Pittsylvania County (distances added March 15, 2019).					
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**Previous NRHP Determination**	**Project Status**
071-5318	Tobacco Barn, Berry Hill Road	Late 19th Century Tobacco Barns	1600	Unassessed	Outside APE
071-5319	Farmstead, Oak Hill Road	Late 19th Century Vernacular House and Outbuildings	970	Unassessed	Outside APE
071-5322	Farm Complex, Berry Hill Road	Late 20th Century Intersecting Gable House and Older Outbuildings	3665	Unassessed	Outside APE
071-5329	Lynskey House	Late 19th Century Vernacular House and Outbuildings	2380	Unassessed	Outside APE
071-5330	House, Horseshoe Road	Mid-19th Century Vernacular House and Outbuilding	900	Unassessed	Outside APE
071-5331	House, Oak Hill Road	Mid-19th Century Vernacular House and Outbuildings	2500	Unassessed	Outside APE
071-5332	Keatts House	Late 19th Century Vernacular House and Outbuildings	2340	Unassessed	Outside APE
071-5333	Farmstead, Oak Hill Road	20th Century Vernacular House and Outbuildings	0	Unassessed	To be surveyed
071-5335	Harmony Methodist Church	Early 20th Century Greek Revival Church	1200	Unassessed	Outside APE
071-5336	House, Berry Hill Road	Late 19th Century Vernacular House	2700	Unassessed	Outside APE
071-5413	Jones Farm	Early 20th Century Tobacco Barn	0	Eligible for ER Review Only	Outside APE
071-5499	Shed Ruin, Transco Road	Mid-20th Century Shed Ruins	360	Not Eligible	Within APE; surveyed within past 5 years
071-5524	Transco Transfer Station No. 165	Mid-20th Century Natural Gas Pipeline Compressor Station	0	Unassessed	Within APE; surveyed within past 5 years
071-5525	Cemetery, Transco Road	19th Century Cemetery	70	Not Eligible	This report
071-5526	Gafford House Ruins	19th Century Vernacular House Ruins	0	Not Eligible	This report
071-5529	Berry Hill Building Set 15 Ruins	20th Century Domestic Ruins	1675	Unassessed	Outside APE

NEW Table 79-3. Updated Appendix 4-F Table 3.1. Previously Recorded Architectural Resources within 0.5 Mile of the Project in Pittsylvania County (distances added March 15, 2019).					
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**Previous NRHP Determination**	**Project Status**
071-5530	Berry Hill Building Set 11 Ruins	20th Century Domestic Ruins	0	Primary Resource No Longer Extant	To be surveyed
071-5543	House, Transco Road	Mid-20th Century Vernacular House and Outbuildings	1200	Eligible for ER Review Only	Outside APE
071-5544	Farm, Transco Road	Mid-20th Century Vernacular House and Outbuildings	100	Eligible for ER Review Only	Within APE; surveyed within past 5 years
071-5545	House, Transco Road	Mid-20th Century Linear Ranch House	20	Not Eligible	Within APE; surveyed within past 5 years
071-5546	Farm, Transco Road	Early 20th Century Vernacular House and Outbuildings	445	Not Eligible	Outside APE
071-5547	House, Transco Road	Late 20th Century Ranch House and Outbuildings	875	Not Eligible	Outside APE
071-5548	House, Transco Road	Mid-20th Century Linear Ranch House and Outbuilding	1160	Not Eligible	Outside APE
071-5549	House, Transco Road	Mid-20th Century Linear Ranch House and Outbuildings	1030	Not Eligible	Outside APE
071-5550	House, Transco Road	Mid-20th Century Linear Ranch House and Outbuildings	1285	Not Eligible	Outside APE
071-5551	House, Transco Road	Mid-20th Century Ranch House	1800	Not Eligible	Outside APE

NEW Table 79-4. Updated Appendix 4-F. Table 6.1. Architectural Resources Surveyed by Project in Pittsylvania County (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
071-0036	Little Cherrystone Manor/Wooding House	Late 18th–Early 19th Century Provincial Virginia House; Cemeteries	0	Eligible (NRHP and VLR Listed)
071-5033	Belle Grove Church	Late 19th Century Church; Cemetery	100	Not Eligible
071-5208	House, Franklin Turnpike	Mid-20th Century Minimal Traditional-style House and Outbuildings	80	Not Eligible
071-5209	House, Franklin Turnpike	Mid-20th Century Craftsman-Inspired House and Outbuilding	0	Not Eligible
071-5210	House, Tobacco Road	Mid-20th Century Minimal Traditional-Style House and Outbuildings	0	Not Eligible
071-5211	Abandoned Farm, Hylton Lane	Late 19th Century Log House and Outbuildings	0	Not Eligible
071-5212	Worely Farmstead	Early 20th Century I-House and Outbuildings	0	Not Eligible
071-5217	Farm, Route 868	Late 19th Century Vernacular House and Outbuildings	60	Undetermined
071-5218	House, Route 868	Early 20th Century Vernacular House and Outbuildings	50	Not Eligible
071-5221	Farm, Hopewell Road	Early 20th Century Log House and Outbuildings	0	Not Eligible
071-5222	Giles Log House	Early 20th Century Log House and Outbuildings	0	Potentially Eligible
071-5224	Fulton Cemetery	Early 20th Century Cemetery	250	Not Eligible
071-5225	Wells Cemetery	Early 20th Century Cemetery	64	Not Eligible
071-5226	Cemetery, West of Route 865	Cemetery	60	Not Eligible
071-5227	Wallor Cemetery	Early 19th Century Cemetery	50	Not Eligible
071-5525	Cemetery, Transco Road	19th Century Cemetery	70	Not Eligible
071-5526	Gafford House Ruins	19th Century Vernacular House Ruins	0	Not Eligible
071-5566	Farmstead, Sandy Creek Road	Late 19th Century Log Tobacco Barn	100	Not Eligible
071-5567	Farmstead, Halifax Road	Mid-20th Century Colonial Revival Cape Cod and Outbuildings	0	Not Eligible

NEW Table 79-4. Updated Appendix 4-F. Table 6.1. Architectural Resources Surveyed by Project in Pittsylvania County (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
071-5568	House, Halifax Road	Early 20th Century Colonial Revival Cape Cod	650	Not Eligible
071-5569	Farmstead, Halifax Road	Mid-20th Century Ranch-inspired House	70	Not Eligible
071-5570	Farmstead, Meaddock Lane	Early 20th Century Vernacular House and Outbuildings	0	Not Eligible
071-5571	Farmstead, Batterman Lane	Early 20th Century Prairie School House and Outbuildings	0	Eligible
071-5572	House, Batterman Road	Early 20th Century Cape Cod House	0	Potentially Eligible
071-5573	Church, Dairy View Road	Early 20th Century Gable Front Church	1250	Not Eligible
071-5574	Vanderhyde Dairy Inc.	Early–Mid-20th Century Center Hall Plan House and Outbuildings	700	Not Eligible
071-5575	House, Fairview Road	Mid-20th Century Contemporary-Style House	250	Not Eligible
071-5576	House, Fairview Road	Mid-20th Century Contemporary-Style House and Outbuilding	500	Not Eligible
071-5577	House, Fairview Road	Mid-20th Century Minimal Traditional-Style House	1000	Not Eligible
071-5578	Farmstead, Woodlawn Academy Road	Mid-20th Century Vernacular House, Cemetery, and Outbuilding	500	Potentially Eligible
071-5579	Church, US Highway 29	Early 20th Century Gable-Front Church	750	Not Eligible
071-5580	Farmhouse, Woodlawn Academy Road	Late 19th Century Vernacular House and Outbuilding	145	Potentially Eligible
071-5581	Farmstead, US Highway 29	Early–Mid-20th Century Craftsman House and Outbuildings	0	Not Eligible
071-5582	Farmstead, US Highway 29	Mid-20th Century Vernacular House and Outbuildings	0	Not Eligible
071-5583	Farmstead, Dry Fork Road	Late 19th Century I-House and Outbuildings	0	Not Eligible
071-5584	Farmstead, Hylton Lane	Mid-20th Century Vernacular House and Outbuildings	0	Not Eligible
071-5585	House, Tobacco Road	Mid-20th Century Ranch House	50	Not Eligible
071-5586	House, Tobacco Road	Mid-20th Century Ranch House	50	Not Eligible

NEW Table 79-4. Updated Appendix 4-F. Table 6.1. Architectural Resources Surveyed by Project in Pittsylvania County (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
071-5587	Commercial Building, Franklin Turnpike	Mid-20th Century Commercial Building	215	Not Eligible
071-5588	House, Tobacco Road	Mid-20th Century Minimal Traditional-Style House and Outbuildings	175	Not Eligible
071-5589	House, Tobacco Road	Mid-20th Century Minimal Traditional-Style House and Outbuilding	200	Not Eligible
071-5590	House, Tobacco Road	Mid-20th Century Minimal Traditional-Style House and Outbuilding	265	Not Eligible
071-5591	Farmstead, Franklin Turnpike	1898 Colonial Revival House and Outbuildings	100	Not Eligible
071-5592	Farmstead, Off Hutson Road	Late 19th Century Log Tobacco Barn	0	Not Eligible
071-5593	Hyler Family Cemetery	20th Century Cemetery	50	Not Eligible
071-5594	Farmstead, West Withers Road	Early 20th Century Craftsman/Bungalow-Style House and Outbuildings	0	Not Eligible
071-5595	Farmstead, West Withers Road	Mid-20th Century Vernacular House, Cemetery, and Outbuilding	0	Not Eligible
071-5596	Cemetery, Off Horseshoe Road	Late 19th–Early 20th Century Cemetery	10	Not Eligible
071-5597	House, Tobacco Road	Early 20th Century Minimal Traditional-Style House and Outbuilding	0	Not Eligible
071-5598	Railroad, Off Berry Hill Road	Late 19th Century Railroad	0	Not Eligible
071-5599	House, Tobacco Road	Mid-20th Century Ranch House	0	Not Eligible
071-5600	Farmstead, Off Hopewell Road	Late 19th Century Log Tobacco Barn	200	Not Eligible
071-5601	Tobacco Barn, Hyler Farm Lane	Mid-20th Century Storage Shed	0	Not Eligible
071-5602	Farmhouse, Stony Mill Road	Late 19th Century Greek Revival House	0	Not Eligible
071-5603	58 West Auto Auction	Late 20th Century Commercial Building	0	Not Eligible
071-5604	House, Cedar Spring Road	Late 20th Century House	0	Not Eligible

NEW Table 79-4. Updated Appendix 4-F. Table 6.1. Architectural Resources Surveyed by Project in Pittsylvania County (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
071-5605	Ashworth Cemetery	20th Century Cemetery	370	Not Eligible
071-5606	Farmstead, Millsville Lane	Late 19th Century Folk Victorian House and Outbuildings	0	Not Eligible
071-5607	Farmstead, Millsville Road	Mid-20th Century Vernacular House	0	Not Eligible
071-5608	Farmstead, Silver Creek Road	Mid-20th Century Minimal Traditional-Style House and Outbuildings	100	Not Eligible
071-5609	Farmstead, Whitmell School Road	1900 Colonial Revival-Influenced House and Outbuildings	0	Not Eligible
071-5610	House, Whitmell School Road	Mid-20th Century Ranch House	130	Not Eligible
071-5611	House, Whitmell School Road	Mid-20th Century Minimal Traditional-Style House and Outbuilding	300	Not Eligible
071-5612	Farmstead, Clearview Drive	Late 19th Century Vernacular House and Outbuildings	25	Not Eligible
071-5613	Farmstead, Silver Creek Road	Mid-19th Century Greek Revival House and Outbuilding	1100	Not Eligible
071-5614	House, Silver Creek Road	Early 20th Century Vernacular House and Outbuildings	25	Not Eligible
071-5615	House, Silver Creek Road	Mid-20th Century Ranch House and Outbuilding	150	Not Eligible
071-5617	Farmstead, Silver Creek Road	Mid-20th Century Ranch House	60	Not Eligible
071-5618	Farmstead, Halifax Road	Early–Mid-20th Century Outbuildings	0	Not Eligible
071-5619	Log Ruin, Horseshoe Road	Late 19th Century Log Tobacco Barn	35	Not Eligible
071-5620	Cemetery, Off Hopewell Road	Early 20th Century Cemetery	115	Not Eligible
071-5621	Cemetery, Off Pine Lake Road	Mid-19th Century Cemetery	65	Not Eligible
071-5622	Cemetery, Off Tobacco Road	19th–20th Century Cemetery	85	Not Eligible
071-5623	Cemetery, Off Hutson Road	Mid-19th Century Cemetery	50	Not Eligible

NEW Table 79-5. Updated Appendix 4-G. Table 3.1.

Previously Recorded Historic Properties within One-Half Mile of the Project in Alamance and Rockingham Counties (distances added March 15, 2019).

Number	Name	Description	Distance from Construction Corridor (ft)	Previous NRHP Determination	Project Status
RK0001	Cascade Plantation/Willow Oak Plantation	Early 19th Century Federal House and Outbuildings	1700	NRHP Listed	This report
RK0003	High Rock Farm	19th Century Federal House	1200	NRHP Listed	To be surveyed
RK0620	House, Dodge Street	19th–20th Century Vernacular House	1380	Unassessed	Outside APE
RK0621	House, Fieldcrest Road	Early 20th Century House	2000	Demolished	Demolished
RK0622	House, Harvey Street	19th Century (?) House	1960	Unassessed	Outside APE
RK0624	House, Woodrow Avenue	House	2100	Unassessed	Outside APE
RK0627	Draper Mill Houses	Late 19th–Early 20th Century Bungalows	2200	Unassessed	Outside APE
RK0630	St. Paul's Church	19th–20th Century Plain/Traditional Church	2600	Unassessed	Outside APE
RK0632	Sunshine School	Early 20th Century Plain/Traditional School	2600	Unassessed	Outside APE
RK1017	Hickory Grove/Nelson Farm	1830 House, Style Unknown	1200	Demolished	Demolished
RK1086	Barn	Barn	0	Unassessed	To be surveyed
RK1389	House, US Highway 29	Late 19th Century House	22000	Unassessed	Outside APE
RK1395	House, Barley Road	Late 19th–Early 20th Century Vernacular Farmhouse	1700	Demolished	Demolished
RK1396	House, SR 1945	Ca. 1900 Vernacular Farmhouse	0	Unassessed	This report
RK1397	House, SR 1945	Ca. 1900 Vernacular Farmhouse	25	Unassessed	Demolished
RK1398	Ed and Eloise Moore House	1922 Vernacular House	200	Unassessed	To be surveyed
RK1400	House, SR 1941	Ca. 1900 Vernacular Dogtrot Farmhouse	1200	Unassessed	Outside APE
RK1416	House, US Highway 29	Late 19th–Early 20th Century Colonial Revival House	1800	Unassessed	Outside APE
RK1424	House	House	2565	Unassessed	Outside APE

NEW Table 79-5. Updated Appendix 4-G. Table 3.1.

Previously Recorded Historic Properties within One-Half Mile of the Project in Alamance and Rockingham Counties (distances added March 15, 2019).

Number	Name	Description	Distance from Construction Corridor (ft)	Previous NRHP Determination	Project Status
RK1529	Walker Farm	Late 19th Century Vernacular Farmhouse and Outbuildings	710	Unassessed	Demolished
RK1530	Dixon House	Late 19th Century Log House	590	Unassessed	This report
RK1531	Settle Family Cemetery	Early 19th Century Cemetery	220	Unassessed (Study List)	This report
RK1534	Tucker-Cross Farm	Early–Mid-19th Century Federal/Greek Revival House and Outbuildings	750	Unassessed (Study List)	This report
RK1566	Josiah Settle House	Early 19th Century Federal Style Hall-Parlor House	686	Demolished	Demolished
RK1570	House, SR 1980	Late 19th Century Vernacular Farmhouse	2550	Unassessed	Outside APE
GF1822	House, Troxler Mill Road	I-House and Outbuildings	1970	Unassessed	Outside APE
AM----	Quackenbush House	Late 19th Century House	230	Unassessed (Moved)	Outside APE
AM0003/1515	Glencoe Mill Village Local Historic District	Late 19th Century Vernacular Houses	1500	NRHP Listed District; Local Historic District	Outside APE
AM0010	Charles Thomas Holt House	1896 Queen Anne House and Outbuildings	1200	National Register Listed	Outside APE
AM0015	Charles Albright House	19th–20th Century Vernacular House	2350	Unassessed	Outside APE
AM0020	Henry Albright House	Early–Mid 19th Century Vernacular House	2400	Demolished	Demolished
AM0031	James Anderson House	Mid-19th Century Vernacular House	550	Unassessed	Outside APE
AM0046	Squire Blackmon House	1885 Vernacular House	650	Demolished	Demolished
AM0047	William Blanchard House	1819 Vernacular House and Outbuildings	0	Unassessed	Outside APE
AM0067	Thomas Bullard House	Late 19th Century Vernacular House	1000	Unassessed	Outside APE
AM0122	Chesley Dickey House	Late 19th Century Vernacular House	75	Unassessed	This report
AM0129	Dixon-Thompson House	Mid-19th Century Vernacular House	720	Demolished	Demolished
AM0133	S. L. Faucette Log House	1929 Vernacular House	900	Demolished	Demolished

NEW Table 79-5. Updated Appendix 4-G. Table 3.1.

Previously Recorded Historic Properties within One-Half Mile of the Project in Alamance and Rockingham Counties (distances added March 15, 2019).

Number	Name	Description	Distance from Construction Corridor (ft)	Previous NRHP Determination	Project Status
AM0153	Gem Theater	19th-20th Century Vernacular Commercial Building	20	Demolished	Demolished
AM0157	Gilliam Academy	Early 20th Century Vernacular School	1360	Unassessed	This report
AM0158	Gilliam Church	Late 19th Century Gable Front Church	665	Demolished	Demolished
AM0160	J. H. Gilliam House	Late 19th Century Vernacular House	1280	Unassessed	This report
AM0183	Haw River Christian Church	Late 19th–Early 20th Century Gothic Revival Church	450	Demolished	Demolished
AM0184	North Carolina Railroad Bridge Pier	Mid-19th–Early 20th Century Stone Railroad Pier	1510	Unassessed	Outside APE
AM0185	Southern Railway Overpass	20th Century Railway Bridge	2400	Unassessed	Outside APE
AM0203/ AM1516	T. M. Holt Manufacturing Company/ Holt-Tabardrey Mills	Late 19th Century Standard Commercial Textile Mill Complex	200	Unassessed	This report
AM0204	Holt Chapel Methodist Church	1896 Traditional/Victorian Church	2100	Unassessed (Study List)	Outside APE
AM0205	Holt Mill House	Late 19th Century Traditional/Victorian House	650	Demolished	Demolished
AM0209	John Huffines House	Mid-19th Century Vernacular Log House	470	Unassessed	To be surveyed
AM0219	Christian Iseley House	1812 Vernacular Log House	1000	Unassessed	Outside APE
AM0225	Holt Mill House/Johnston House	Late 19th Century Vernacular House	70	Unassessed	This report
AM0235	J. P. Kerr House	Mid-19th Century Vernacular House	0	Demolished	Demolished
AM0241	Lee Lewis House	Late 19th Century Vernacular House	0	Demolished	Demolished
AM0251	Jacob Long House	1761 Vernacular Log House and Mid-19th Century Additions	1850	Unassessed	Outside APE
AM0266	McClure House	1897 Traditional/Victorian House	50	Unassessed	This report
AM0267	McCracken School	Late 19th Century Vernacular School	1840	Unassessed	Outside APE

NEW Table 79-5. Updated Appendix 4-G. Table 3.1.

Previously Recorded Historic Properties within One-Half Mile of the Project in Alamance and Rockingham Counties (distances added March 15, 2019).

Number	Name	Description	Distance from Construction Corridor (ft)	Previous NRHP Determination	Project Status
AM0299	Morris House	Late 19th Century Vernacular House	2100	Unassessed	Outside APE
AM0323	Over the River Holt Mill Houses	Late 19th Century Traditional/Victorian Houses	1980	Unassessed	Outside APE
AM0335	Pearson House	Late 19th Century Vernacular Houses	1150	Unassessed	Outside APE
AM0337	Lawson Perry House	Early 20th Century Vernacular House	1800	Unassessed	Outside APE
AM0347	Ray House	Late 19th Century Traditional/Victorian House	1470	Demolished	Demolished
AM0350	Robertson House	Late 19th Century Traditional/Victorian House	100	Unassessed	This report
AM0360	Chelsey Roney House	Late 19th Century Neo-Classical Revival/Victorian House	50	Unassessed	To be surveyed
AM0362	John Roney House	Mid-19th Century Vernacular House	100	Unassessed	To be surveyed
AM0387	Haywood-Simpson House	1894 Traditional/Victorian House	650	Unassessed	Outside APE
AM0389	William Simpson House	Late 19th Century Traditional/Victorian House	1600	Unassessed	Outside APE
AM0417	Ben Sutton House	Late 19th Century Vernacular House	2000	Demolished	Demolished
AM0440	Trolinger Grist Mill	Late 19th Century Standard Commercial Vernacular Grist Mill	1300	Demolished	Demolished
AM0447	Captain Sam Vest House	Late 19th Century Traditional/Victorian House	80	Unassessed	This report
AM0454	Alexander Walker House	Mid–Late 19th Century Vernacular I-House and Outbuildings	2400	Unassessed	Outside APE
AM0460	Watlington Log House	Late 19th Century Vernacular Log House	2480	Unassessed	Outside APE
AM0464	Kerr Scott Farm	Mid-19th Century Vernacular Bungalow	1500	NRHP Listed	Outside APE
AM0470	Whittemore-Murray House	Late 19th Century Vernacular House	1110	Unassessed	Outside APE

NEW Table 79-5. Updated Appendix 4-G. Table 3.1.

Previously Recorded Historic Properties within One-Half Mile of the Project in Alamance and Rockingham Counties (distances added March 15, 2019).

Number	Name	Description	Distance from Construction Corridor (ft)	Previous NRHP Determination	Project Status
AM0867	Granite Mill	Mid-19th–Mid-20th Century Textile Mill Complex	0	NRHP Listed	This report
AM1189	Sam Phibbs House	Mid-19th Century Vernacular House	0	Unassessed	To be surveyed
AM1210	Jimmy Ross House	Early 19th Century Log House	1050	Demolished	Demolished
AM1324	NC Railroad Bridge	1851 Railroad Bridge	600	Unassessed	To be surveyed
AM1520	J. M. Jordan House	Late 19th Century Traditional/Victorian House and Outbuildings	0	Unassessed	This report
AM1521	Buckner Mobile Home Park	Mid-20th Century Mobile Home Park	2600	Unassessed	Outside APE
AM1522	G. L. Lewis Farm	Early 20th Traditional/Victorian House	0	Unassessed	This report
AM1523	Shiloh Church and Cemetery	Mid-20th Century Colonial Revival Church and Cemetery	2070	Unassessed	This report
AM1525	Claude Gerringer House	Early 20th Century House	2500	Unassessed	Outside APE
AM1526	J. S. and Mrs. M. J. Gilliam House	Early 20th Century Traditional/Vernacular House and Outbuildings	0	Unassessed	Outside APE
AM1527	Primitive Baptist Library	1950 Brick Library	1340	Unassessed (Study List)	This report
AM1528	J. D. Kernodle House	Early 20th Century Traditional/Victorian House and Outbuilding	0	Demolished	Demolished
AM1529	J. A. Gilliam House	1915 Neo-Classical House and Outbuildings	1770	Unassessed	This report
AM1535	J. D. Simpson House	Early 20th Century Vernacular House and Outbuildings	250	Unassessed	Demolished
AM1536	William Boone House	Mid-19th Century Vernacular House	275	Unassessed	To be surveyed
AM1544	J. T. Smith Grocery	Early 20th Century Standard Commercial Building	2040	Unassessed (Study List)	Outside APE

NEW Table 79-5. Updated Appendix 4-G. Table 3.1.

Previously Recorded Historic Properties within One-Half Mile of the Project in Alamance and Rockingham Counties (distances added March 15, 2019).

Number	Name	Description	Distance from Construction Corridor (ft)	Previous NRHP Determination	Project Status
AM1584	Glencoe School	Early–Mid-20th Century Craftsman/Colonial Revival-influenced School	250	Demolished (Previously NRHP Listed)	Demolished
AM1589	Hal Isley House	Early 20th century house	1830	Unassessed	Outside APE
AM1592	Red Slide Mill Village	Early 20th Century Vernacular Houses	1200	Unassessed	Outside APE
AM1593	Haw River United Methodist Church	Late 19th Century Queen Anne/Gothic Church and Cemetery	1900	Unassessed	Outside APE
AM1595	Haw River Central Business District	Late 19th–Early 20th Century Vernacular Central Business District	0	Unassessed	This report
AM1596	Corner Gas Station	Mid-20th Century Standard/Commercial Gas Station	1300	Unassessed	Outside APE
AM1597	Hideaway Farm	1928 Colonial Revival House and Outbuildings	2000	Demolished	Demolished
AM1600	Kerr Place	Early 20th Century Foursquare House	0	Unassessed	Outside APE
AM1603	Deep Creek Primitive Baptist Church	Late 19th Century African-American Baptist Traditional/Vernacular Church and Cemetery	35	Unassessed (Study List)	To be surveyed
AM1670	Bridge No. 72 (Replaced)	20th Century Low Steel Truss Bridge	1630	Demolished	Demolished
AM1671	Bridge No. 73 (Replaced)	20th Century Bridge	1400	Demolished	Demolished
AM2407/ AM2408	Cora Mill/Tabardrey Mills Warehouse	Late 19th–Mid-20th Century Textile Mill Complex	300	Unassessed	This report

NEW Table 79-6. Updated Appendix 4-G Table 7.1. **Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).**				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
RK0001	Cascade/Willow Oaks Plantation	Early 19th Century Federal House and Outbuildings	1700	NRHP Listed (Potentially Eligible)
RK1396	House, 1674 Moir Mill Road	Early 20th Century House	0	Not Eligible
RK1530	Dixon House	Late 19th Century Log House	590	Not Eligible
RK1531	Settle Family Cemetery	Early 19th to 20th Century Cemetery	220	Potentially Eligible
RK1534	Tucker-Cross Farm	19th to 20th Century Farmstead	750	Not Eligible (Partly Demolished)
RK1655	Farmstead, 12910 NC Highway 770	Mid- to Late 20th Century Farmstead	150	Not Eligible
RK1656	Log House, NC Highway 770	Late 19th Century Log House	350	Potentially Eligible
RK1657	House, 2301 Third Street	Mid-20th Century House	140	Not Eligible
RK1658	Farmstead, 140 Pine Knott Drive	Mid-20th Century House	476	Not Eligible
RK1659	House, 2142 Third Street	Early 20th Century House	549	Not Eligible
RK1660	House, 2025 Third Street	Mid-20th Century House	106	Not Eligible
RK1661	House, 116 Quesinberry Road	20th Century House	200	Not Eligible
RK1662	House, 123 Quesinberry Road	20th Century House	370	Not Eligible
RK1663	Farmstead, 4998 NC Highway 700	Early 20th Century Farmstead	685	Not Eligible
RK1664	Commercial Building, 4924 NC Highway 700	Mid-20th Century Commercial Building	35	Not Eligible
RK1665	House, 296 Quesinberry Road	Early 20th Century House	427	Not Eligible
RK1666	House, 6166 NC Highway 700	Mid-20th Century House	220	Not Eligible
RK1667	House, 668 Quesinberry Road	Mid-20th Century House	732	Not Eligible
RK1668	House, Quesinberry Road and Town Creek Road	Mid-20th Century House	178	Not Eligible
RK1669	House, 149 Town Creek Road	Mid-20th Century House	419	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
RK1670	House, Town Creek Road	Early 20th Century House	635	Potentially Eligible
RK1671	House, 243 Town Creek Road	Early 20th Century House	303	Not Eligible
RK1672	Hunting Cabin, Tall Timber Lane	Mid-20th Century Cabin	0	Not Eligible
RK1673	House, 174 Tall Timber Lane	Mid-20th Century House	100	Not Eligible
RK1674	Farmstead, Moir Mill Road	Early 20th Century Farmstead	110	Not Eligible
RK1675	House, 1979 Moir Mill Road	Early 20th Century House	560	Not Eligible
RK1676	Tobacco Barn, 980 Hamlet Road	Early 20th Century Tobacco Barn	100	Not Eligible
RK1677	House, 942 Hamlet Road	Mid-20th Century House	85	Not Eligible
RK1678	Log House, Hamlet Road	Early 20th Century Log House	90	Not Eligible
RK1679	Tobacco Barn, 1289 Mt. Carmel Church Road	Early 20th Century Tobacco Barn	511	Not Eligible
RK1681	Tobacco Barn (Ruins), Off Hamlet Road	Early 20th Century Tobacco Barn	70	Not Eligible
RK1682	Farmstead, 1830 Wolf Island Road	Early 20th Century Farmstead	130	Not Eligible
RK1683	House, 1918 Wolf Island Road	Mid-20th Century House	545	Not Eligible
RK1684	House, 1828 Wolf Island Road	Early 20th Century House	290	Not Eligible
RK1685	House, 1841 Wolf Island Road	Early 20th Century House	180	Not Eligible
RK1686	Farmstead, 1811 Wolf Island Road	Mid-20th Century House	480	Not Eligible
RK1687	House, 1881 Wolf Island Road	Mid-20th Century House	235	Not Eligible
RK1688	House, 1751 Wolf Island Road	Mid-20th Century House	165	Not Eligible
RK1689	Tobacco Barn, 1000 Crutchfield Road	Early 20th Century Tobacco Barn	200	Not Eligible
RK1690	House, 1390 Wolf Island Road	Mid-20th Century House	275	Not Eligible
RK1691	House, 820 Crutchfield Road	Mid-20th Century House	660	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
RK1693	House, 6052 US 29 Business	Early 20th Century House	110	Not Eligible
RK1694	House, 6014 US 29 Business	Mid-20th Century House	325	Not Eligible
RK1695	House, 6028 US 29 Business	Mid-20th Century House	125	Not Eligible
RK1696	House, 6050 US 29 Business	Mid-20th Century House	30	Not Eligible
RK1697	House, 6064 US 29 Business	Mid-20th Century House	150	Not Eligible
RK1698	House, 6076 US 29 Business	Mid-20th Century House	250	Not Eligible
RK1699	House, 6084 US 29 Business	Mid-20th Century House	175	Not Eligible
RK1700	Farmstead, 6198 US 29 Business	Mid-20th Century Farmstead	920	Not Eligible
RK1701	House, 6193 US 29 Business	Early 20th Century House	65	Not Eligible
RK1702	Commercial Building, 6123 US 29 Business	Early 20th Century Commercial Building	185	Not Eligible
RK1704	American Tobacco Company Building	Early to Mid-20th Century Commercial Buildings	0	Potentially Eligible
RK1705	House, 146 Narrow Gauge Road	Mid-20th Century House	60	Not Eligible
RK1706	House, 156 Narrow Gauge Road	Mid-20th Century House	80	Not Eligible
RK1707	House, 168 Narrow Gauge Road	Early 20th Century House	50	Not Eligible
RK1708	House, 531 Narrow Gauge Road	Early 20th Century House	150	Not Eligible
RK1710	House, 602 Narrow Gauge Road	Mid-20th Century House	360	Not Eligible
RK1711	House, 582 Narrow Gauge Road	Mid-20th Century House	190	Not Eligible
RK1712	Greenwood Presbyterian Church, 618 Narrow Gauge Road	Mid-20th Century Church	315	Not Eligible
RK1713	House, 630 Narrow Gauge Road	Early 20th Century House	495	Not Eligible
RK1714	House, 710 Narrow Gauge Road	Mid-20th Century House	680	Not Eligible
RK1715	House, 125 Love Drive	Mid-20th Century House	260	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
RK1716	House, 113 Love Drive	Mid-20th Century House	80	Not Eligible
RK1717	House, 157 Chicken Farm Road	Mid-20th Century House	5	Not Eligible
RK1718	House, 171 Chicken Farm Road	Mid-20th Century House	7	Not Eligible
RK1719	House, 181 Chicken Farm Road	Mid-20th Century House	2	Not Eligible
RK1720	House, 191 Chicken Farm Road	Mid-20th Century House	12	Not Eligible
RK1721	House, 203 Chicken Farm Road	Mid-20th Century House	18	Not Eligible
RK1722	House, 190 Chicken Farm Road	Mid-20th Century House	20	Not Eligible
RK1723	House, 228 Chicken Farm Road	Mid-20th Century House	70	Not Eligible
RK1724	Farmstead, 458 Adams Road	Late 19th Century Farmstead	820	Not Eligible
RK1725	House, 273 Brady Club Road	Mid-20th Century House	150	Not Eligible
RK1726	House, 297 Brady Club Road	Mid-20th Century House	350	Not Eligible
RK1727	House, 201 Brady Club Road	Mid-20th Century House	570	Not Eligible
RK1728	House, 3253 US Route 158	Mid-20th Century House	415	Not Eligible
RK1729	House, 3241 US Route 158	Mid-20th Century House	950	Not Eligible
RK1730	House, 3231 US Route 158	Mid-20th Century House	660	Not Eligible
RK1731	House, 3211 US Route 158	Mid-20th Century House	800	Not Eligible
RK1732	House, 3193 US Route 158	Mid-20th Century House	1000	Not Eligible
RK1733	House, 3338 US Route 158	Early 20th Century House	280	Not Eligible
RK1734	Commercial Building, 3370 US Route 158	Mid-20th Century Commercial Building	130	Not Eligible
RK1735	House, 717 Brooks Road	Mid-20th Century House	530	Not Eligible
RK1736	House, 727 Brooks Road	Mid-20th Century House	420	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
RK1737	House, 741 Brooks Road	Late 20th Century House	300	Not Eligible
RK1738	Farmstead, 1494 Brooks Road	Early 20th Century Farmstead	30	Not Eligible
RK1739	House, 1478 Brooks Road	Mid-20th Century House	80	Not Eligible
RK1740	House, 1506 Brooks Road	Mid-20th Century House	350	Not Eligible
RK1741	Farmstead, 1658 Brooks Road	Late 19th to 20th Century Farmstead	250	Not Eligible
RK1742	House, 1658 Brooks Road	Mid-20th Century House	515	Not Eligible
RK1743	House, 1630 Brooks Road	Mid-20th Century House	650	Not Eligible
RK1744	Log Tobacco Barn, off Brooks Road	Early 20th Century Log Tobacco Barn	330	Not Eligible
RK1745	House, 1625 Grooms Road	Mid-20th Century House	180	Not Eligible
RK1746	House, 1626 Grooms Road	Early 20th Century House	250	Not Eligible
RK1747	House, 1576 Grooms Road	Mid-20th Century House	350	Not Eligible
RK1748	House, off Grooms Road	Early 20th Century House	65	Not Eligible
RK1749	House, 1513 Grooms Road	Mid-20th Century House	100	Not Eligible
RK1750	House, 1475 Grooms Road	Mid-20th Century House	300	Not Eligible
RK1751	House, 1464 Grooms Road	Mid-20th Century House	160	Not Eligible
RK1752	House, 1449 Grooms Road	Mid-20th Century House	800	Not Eligible
RK1753	House, 705 Frank Road	Mid-20th Century House	10	Not Eligible
RK1754	House, 689 Frank Road	Mid-20th Century House	130	Not Eligible
RK1755	House, 934 Frank Road	Mid-20th Century House	165	Not Eligible
RK1756	House, 574 Combs Road	Mid-20th Century House	350	Not Eligible
RK1757	House, 2400 NC Route 150	Late 19th Century House	700	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
RK1758	House, 1358 NC Route 87	Early 20th Century House	190	Not Eligible
RK1759	House, 1186 NC Route 87	Early 20th Century House	60	Not Eligible
RK1760	Log Tobacco Barn, 1171 NC Highway 87	Early 20th Century Log Tobacco Barn	170	Not Eligible
RK1761	House, 396 High Rock Road	Mid-20th Century House	540	Not Eligible
RK1762	House, 416 High Rock Road	Mid-20th Century House	400	Not Eligible
RK1763	House, 691 High Rock Road	Early 20th Century House	400	Not Eligible
RK1764	Outbuildings, 900 Kernodle Road	Early 20th Century Outbuildings	550	Not Eligible
RK1765	House, 963 Kernodle Road	Mid-20th Century House	1500	Not Eligible
RK1766	House, 973 Kernodle Road	Mid-20th Century House	1300	Not Eligible
RK1767	House, 1075 Kernodle Road	Mid-20th Century House	2260	Not Eligible
RK1768	House, 1379 Mount Carmel Church Road	Early 20th Century House	20	Not Eligible
RK1769	Railroad	Norfolk-Southern Railroad Track	50	Not Eligible
RK1770	First Baptist Church of Draper, 1017 Fieldcrest Road	Mid-20th Century Church	50	Not Eligible
RK1771	House, 1002 Fieldcrest Road	Mid-20th Century House	500	Not Eligible
RK1772	House, 1104 West Front Street	Mid-20th Century House	300	Not Eligible
RK1773	House, 1018 East Meadow Drive	Mid-20th Century House	300	Not Eligible
RK1774	House, 914 East Meadow Drive	Mid-20th Century House	500	Not Eligible
RK1775	House, 906 East Meadow Drive	Late 20th Century House	700	Not Eligible
RK1776	Industrial Building, 335 Summit Road	Mid-20th Century Industrial Building	4400	Not Eligible
RK1777	House, 333 Summit Road	Mid-20th Century House	4350	Not Eligible
RK1778	House, 323 Summit Road	Mid-20th Century House	4300	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. **Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).**				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
RK1779	House, 518 Summit Road	Mid-20th Century House	4600	Not Eligible
RK1780	Commercial Building, 55 East Meadow Road	Mid-20th Century Commercial Building	4000	Not Eligible
AM0122	Chelsey Dickey House	Late 19th Century Vernacular House	75	Not Eligible (Demolished)
AM0157	Gilliam Academy	Early 20th Century Vernacular School	1360	Not Eligible
AM0160	J. H. Gilliam House	Late 19th Century Vernacular House	1280	Potentially Eligible
AM0203/ AM1516	T. M. Holt Manufacturing Company/ Holt-Tabardrey Mills/	Late 19th to Mid-20th Century Textile Mill Complex	200	Potentially Eligible
AM0225	Holt Mill House/Johnston House	Late 19th Century Vernacular House	70	Not Eligible
AM0266	McClure House	1897 Traditional/Victorian House	50	Potentially Eligible
AM0350	Robertson House	Late 19th Century Traditional/Victorian House	100	Potentially Eligible
AM0447	Captain Sam Vest House	Late 19th Century Traditional/Victorian House	80	Potentially Eligible
AM0867	Granite Mill	Mid-19th–Mid-20th Century Textile Mill Complex	0	NRHP Listed
AM1520	J.M. Jordan House	Early 20th Century House with Outbuildings	0	Unassessed
AM1522	G. L. Lewis Farm	Early 20th Century House with Outbuildings	0	Not Eligible
AM1523	Shiloh Church and Cemetery	Mid-20th Century Colonial Revival Church and Cemetery	2070	Not Eligible
AM1527	Primitive Baptist Library	1950 Brick Library	1340	Potentially Eligible
AM1529	J. A. Gilliam House	1915 Neo-Classical House and Outbuildings	1770	Potentially Eligible
AM1595	Haw River Central Business District	Late 19th–Early 20th Century Vernacular Central Business District	250	Not Eligible
AM2407/ AM2408	Cora Mill/Tabardrey Mills Warehouse	Late 19th–Mid-20th Century Textile Mill Complex	200	Potentially Eligible
AM2490	Outbuilding, 4965 Lee Lewis Road	Mid-20th Century Log Outbuilding	750	Not Eligible
AM2491	House, 4926 North NC Highway 87	Mid-20th Century House	2600	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
AM2492	House, 4840 North NC Highway 87	Mid-20th Century House	2400	Not Eligible
AM2493	Farmstead, 4646 North NC Highway 87	20th Century Farmstead	1700	Not Eligible
AM2494	House, 3955 Jug House Road	Mid-20th Century House	1300	Not Eligible
AM2495	Barn, North NC Highway 87 and Jug House Road	Mid-20th Century Barn	800	Not Eligible
AM2496	House, 4075 North NC Highway 87	Mid-20th Century House	1500	Not Eligible
AM2497	House, 4057 North NC Highway 87	Mid-20th Century House	1500	Not Eligible
AM2499	Barn, 3506 Gilliam Church Road	Mid-20th Century Barn	1000	Not Eligible
AM2500	Farmstead, 3095 North NC Highway 87	Mid-20th Century House	1000	Not Eligible
AM2501	House, 3853 North NC Highway 87	Mid-20th Century House	350	Not Eligible
AM2502	House, 3920 North NC Highway 87	Mid-20th Century House	800	Not Eligible
AM2503	House, 3919 North NC Highway 87	Early 20th Century House	1200	Not Eligible
AM2504	Farmstead, 3460 Altamahaw Race Track Road	20th Century Farmstead	450	Not Eligible
AM2505	House, 3421 Altamahaw Race Track Road	Mid-20th Century House	600	Not Eligible
AM2506	Ace Speedway Race Track, 3401 Altamahaw Race Track Road	Mid-20th Century Racetrack	200	Not Eligible
AM2507	Service Station, 3404 Altamahaw Race Track Road	Mid-20th Century Service Station	1000	Not Eligible
AM2508	House, 3540 Bagbey Trail	Mid-20th Century House	400	Not Eligible
AM2509	House, 2843 Holyfield Road	Early 20th Century House	800	Not Eligible
AM2510	House, 3368 Dodd Road	Early 20th Century House	400	Not Eligible
AM2511	House, 3317 Altamahaw Union Ridge Road	Early 20th Century House	400	Not Eligible
AM2512	House, 2508 Basin Creek Road	Early 20th Century House	900	Not Eligible
AM2513	House, 2463 Basin Creek Road	Mid-20th Century House	250	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
AM2514	Farmstead, 2370 Basin Creek Road	Early 20th Century Farmstead	550	Potentially Eligible
AM2515	House, 2768 Union Ridge Road	Mid-20th Century House	850	Not Eligible
AM2516	Farmstead, 3654 Burch Bridge Road	Late 19th to 20th Century Farmstead	570	Not Eligible
AM2517	House, 3718 Burch Bridge Road	Mid-20th Century House	300	Not Eligible
AM2518	House, 3734 Burch Bridge Road	Late 19th Century House	600	Not Eligible
AM2519	House, 3753 Burch Bridge Road	Mid-20th Century House	1000	Not Eligible
AM2520	Farmstead, 1725 Isley School Road	Mid-20th Century Farmstead	950	Not Eligible
AM2521	House, 855 Boone Road	Mid-20th Century House	200	Not Eligible
AM2522	House, 577 Boone Road	Mid-20th Century House	500	Not Eligible
AM2523	Outbuildings, Roberta Drive	Mid-20th Century Outbuildings	550	Not Eligible
AM2524	House, 2854 Union Ridge Road	Early 20th Century House	1000	Not Eligible
AM2525	House, 2830 Union Ridge Road	Mid-20th Century House	750	Not Eligible
AM2526	House, 2842 Union Ridge Road	Early 20th Century House	900	Not Eligible
AM2527	House, 2804 Union Ridge Road	Mid-20th Century House	25	Not Eligible
AM2528	House, 2831 Union Ridge Road	Early 20th Century House	300	Not Eligible
AM2529	House, 2823 Union Ridge Road	Mid-20th Century House	200	Not Eligible
AM2530	House, 2811 Union Ridge Road	Early 20th Century House	100	Not Eligible
AM2531	House, 2779 Union Ridge Road	Mid-20th Century House	100	Not Eligible
AM2532	House and Commercial Building, 2776 Union Ridge Road	Mid-20th Century House and Commercial Building	100	Not Eligible
AM2533	House, 2773 Union Ridge Road	Mid-20th Century House	170	Not Eligible
AM2534	House, 2765 Union Ridge Road	Mid-20th Century House	500	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
AM2535	House, 2761 Union Ridge Road	Mid-20th Century House	400	Not Eligible
AM2536	House, 2755 Union Ridge Road	Mid-20th Century House	35	Not Eligible
AM2537	House, 2747 Union Ridge Road	Mid-20th Century House	250	Not Eligible
AM2538	House, 2739 Union Ridge Road	Mid-20th Century House	150	Not Eligible
AM2539	House, 2730 Union Ridge Road	Early 20th Century House	250	Not Eligible
AM2540	Farmstead, 2540 North NC Highway 62	Mid-20th Century House	720	Not Eligible
AM2541	House, 2327 Mrs. Blanchard Road	Mid-20th Century House	570	Not Eligible
AM2542	House, 2559 Mrs. Blanchard Road	Mid-20th Century House	2000	Not Eligible
AM2543	House, 1566 Deep Creek Church Road	Mid-20th Century House	300	Not Eligible
AM2544	House, 1545 Deep Creek Church Road	Mid-20th Century House	160	Not Eligible
AM2545	Arches Grove United Church of Christ and Cemetery, 1479 Deep Creek Church Road	Mid-20th Century Church and Cemetery	350	Not Eligible
AM2546	House, 2252 Roney Lineberry Road	Mid-20th Century House	100	Not Eligible
AM2547	House, 2262 Roney Lineberry Road	Mid-20th Century House	60	Not Eligible
AM2549	Farmstead, 1844 Sandy Cross Road	Mid-20th Century Farmstead	160	Potentially Eligible
AM2550	House, 1322 Stonewall Springs Road	Mid-20th Century House	650	Not Eligible
AM2551	House, 450 Isley Road	Mid-20th Century House	450	Not Eligible
AM2552	House, 462 Isley Road	Mid-20th Century House	350	Not Eligible
AM2553	House, 534 Isley Road	Mid-20th Century House	230	Not Eligible
AM2554	House, 2238 Haw River Hopedale Road	Mid-20th Century House	300	Not Eligible
AM2555	House, 2349 Haw River Hopedale Road	Mid-20th Century House	200	Not Eligible
AM2556	House, 2371 Haw River Hopedale Road	Mid-20th Century House	300	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
AM2557	House, 373 Boundary Street	Mid-20th Century House	80	Not Eligible
AM2558	House, 381 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2559	House, 401 Boundary Street	Mid-20th Century House	90	Not Eligible
AM2560	House, 403 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2561	House, 407 Boundary Street	Mid-20th Century House	35	Not Eligible
AM2562	House, 411 Boundary Street	Mid-20th Century House	40	Not Eligible
AM2563	House, 413 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2564	House, 417 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2565	House, 419 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2566	House, 423 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2567	House, 425 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2568	House, 142 Pelham Street	Mid-20th Century House	50	Not Eligible
AM2569	House, 424 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2570	House, 416 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2571	House, 414 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2572	House, 410 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2573	House, 408 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2574	House, 406 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2575	House, 404 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2576	House, 382 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2577	House, 380 Boundary Street	Mid-20th Century House	50	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
AM2578	House, 378 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2579	House, 374 Boundary Street	Mid-20th Century House	50	Not Eligible
AM2580	House, 138 Pelham Street	Mid-20th Century House	50	Not Eligible
AM2581	House, 143 Pelham Street	Mid-20th Century House	50	Not Eligible
AM2582	House, 139 Pelham Street	Mid-20th Century House	50	Not Eligible
AM2583	House, 135 Pelham Street	Mid-20th Century House	50	Not Eligible
AM2584	House, 120 Pelham Street	Early 20th Century House	70	Not Eligible
AM2585	First Baptist Church Haw River 508 East Main Street	Mid-20th Century Church	170	Not Eligible
AM2586	Commercial Building, 410 East Main Street	Mid-20th Century Commercial Building	30	Not Eligible
AM2587	House, 404 East Main Street	Mid-20th Century House	0	Not Eligible
AM2588	WWII Home Front Museum and Edward's Automotive Products, 309 East Main Street	Early 20th Century House and Mid-20th Century Commercial Building	150	Not Eligible
AM2589	House, 307 Main Street	Early 20th Century House	100	Not Eligible
AM2590	R. Flynt Building, 304 Main Street	Early 20th Century Commercial Building	15	Not Eligible
AM2591	House, 1107 Cherry Lane	Mid-20th Century House	75	Not Eligible
AM2592	Commercial Building, 302 Main Street	Early 20th Century Commercial Building	75	Not Eligible
AM2593	House, 247 Main Street	Early 20th Century House	85	Not Eligible
AM2594	House, 243 Main Street	Early 20th Century House	100	Not Eligible
AM2595	Wiltex Warehouse, 250 East Main Street	Early 20th Century Commercial Building	150	Not Eligible
AM2596	Haw River Museum, 201 East Main Street	Early 20th Century Commercial Building	230	Not Eligible
AM2597	Commercial Building, 205 East Main Street	Early 20th Century Commercial Building	200	Not Eligible

NEW Table 79-6. Updated Appendix 4-G Table 7.1. **Historic Architectural Resources Surveyed by the Southgate Project in North Carolina (distances added March 15, 2019).**				
Number	**Name**	**Description**	**Distance from Construction Corridor (ft)**	**NRHP Recommendation**
AM2598	Culvert, Main Street	Mid-20th Century Brick Culvert	15	Not Eligible
AM2599	Civic Center, 110 Stone Street	Late 20th Century Civic Building	400	Not Eligible
AM2600	House, 407 Main Street	Early 20th Century House	150	Potentially Eligible
AM2601	House, 411 Main Street	Early 20th Century House	60	Potentially Eligible
AM2602	House, 503 E Main Street	Mid-20th Century House	60	Not Eligible
AM2603	Railroad Fragment, Main Street	19th to 20th Century Railroad	50	Not Eligible
AM2604	Haw River Water Treatment Plant, 225 Stone Quarry Road	Mid-20th century Water Treatment Plant	0	Not Eligible
AM2605	House, Jimmy Kerr Road	Mid-20th Century House	200	Not Eligible
AM2607	House, 1813 Jimmy Kerr Road	Mid-20th Century House	230	Not Eligible
AM2608	House, 1402 Cherry Lane	Mid-20th Century House	300	Not Eligible
AM2609	House, 1620 Route 54	Mid-20th Century House	300	Not Eligible
AM2610	House, 1154 Cherry Lane	Mid-20th Century House	150	Not Eligible
AM2611	Commercial Building, Route 54	Mid-20th Century Commercial Building	200	Not Eligible
AM2612	House, 1146 Cherry Lane	Mid-20th Century House	280	Not Eligible
AM2613	Commercial Building, 1130 Cherry Lane	Mid-20th Century Commercial Building	200	Not Eligible
AM2614	House, 1114 Cherry Lane	Mid-20th Century House	310	Not Eligible
AM2615	House, 1753 NC 54	Mid-20th Century House	500	Not Eligible
AM2616	House, 2760 Union Ridge Road	Mid-20th Century House	230	Not Eligible

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 4 Tables

CUI//PRIV - DO NOT RELEASE

(Provided Under Separate Cover)

March 2019

MVP Southgate Project

Docket No. CP19-14-000

Attachment 72-1

Plan-view Maps for Archaeological and Historic Architectural Sites

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March 2019

MVP Southgate Project

Docket No. CP19-14-000

Attachment 74-1

Draft Report for Supplemental Phase I Deep Testing Investigations and Phase II Archaeological Testing of Sites 44PY0375, 44PY0449, and 44PY0455 for the MVP Southgate Pipeline Project, Pittsylvania County, Virginia

Draft Report for the Phase II Archeological Testing of Sites 31RK221 and 31RK238 and Supplemental Phase I Deep Testing Investigations at Hogan's Creek and Wolf Island Creek for the VP Southgate Project, Rockingham County, NC and Updated Site Forms

Draft Addendum I Phase I Archeological Survey for the MVP Southgate Project, Alamance, Guilford, and Rockingham County, North Carolina

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March 2019

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 5

March 2019

UPDATED RESOURCE REPORT 5 – SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE ANALYSIS

5.2 ANALYSIS AREA

The socioeconomic analysis area (Project area) for the Southgate Project focuses on the counties where the Project facilities will be constructed and operated. The Project is in Pittsylvania County, Virginia, and Rockingham, Alamance, and Guilford counties, North Carolina. Approximately two-thirds of the pipeline (47 miles) will be located in North Carolina (Table 5.2-1). Aboveground facilities include the construction of one new compressor station, four new meter (interconnect) stations, pig launchers and receivers, and mainline valves that will be installed at various locations along the pipeline route.

The Project counties are located in urbanized areas that are defined by the U.S. Census Bureau as areas of 50,000 or more people (U.S. Census Bureau, 2010a). The Project counties include one combined statistical area ("CSA[1]"), two metropolitan statistical areas ("MSA[2]"), and one micropolitan statistical area[3] that provide large labor pools consisting of highly skilled and well-educated workers, access to a wide range of equipment, materials, services, and sufficient temporary housing to accommodate the Project workforce. These populated areas are within the direct impact areas, and therefore, construction and operation impacts from the Project to surrounding communities and municipalities are not anticipated.

REVISED Table 5.2-1
Construction Schedule for the MVP Southgate Project

Facility	County/State	Milepost		Miles
		From	To	
H-605 Pipeline				
Spread 1	Pittsylvania, Virginia	0.0	0.5	0.5
H-650 Pipeline				
Spread 1	Pittsylvania, Virginia	0.0RR	26.1	26.1
	Rockingham, North Carolina	26.1	30.4	4.3
Spread 2	Rockingham, North Carolina	30.4	52.6	22.2
	Alamance, North Carolina	52.6	73.2RR	20.6
			Total	**73.7**
Facility				
Lambert Compressor Station /Lambert Interconnect Delivery / MLV 1	Pittsylvania, Virginia	0.0RR	NA	NA

[1] CSAs consist of two or more adjacent metropolitan and micropolitan statistical areas that have substantial employment interchange. The MSA that combine to create a CSA retain separate identities within the larger CSA (U.S. Census Glossary, 2018).

[2] MSAs are Core Based Statistical Areas ("CBSAs") associated with at least one urbanized area that has a population of at least 50,000. The MSA comprises the central county or counties or equivalent entities containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county or counties as measured through commuting (U.S. Census Glossary, 2018).

[3] Micropolitan statistical areas are CBSAs associated with at least one urban cluster that has a population of at least 10,000 but less than 50,000. The micropolitan statistical area comprises the central county or counties or equivalent entities containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county or counties as measured through commuting (U.S. Census Glossary, 2018).

REVISED Table 5.2-1 Construction Schedule for the MVP Southgate Project				
Facility	**County/State**	**Milepost**		**Miles**
		From	**To**	
LN 3600 Interconnect Delivery	Rockingham, North Carolina	28.2	NA	NA
T-15 Dan River Interconnect Delivery / MLV 4	Rockingham, North Carolina	30.4	NA	NA
T-21 Haw River Interconnect Delivery / MLV 8	Alamance, North Carolina	73.2RR	NA	NA
N/A = Not Applicable				

Pittsylvania County, Virginia

Approximately 26 miles of the pipeline, one compressor station, one interconnect, and two contractor yards (CY-01 and CY-03) will be in Pittsylvania County. Total land area in Pittsylvania County is 978.18 square miles and includes 9.23 square miles of water (U.S. Census, 2010b). The county is home to three towns and several other unincorporated communities with several major highways that cross through it (Pittsylvania County, 2018). Pittsylvania County is also included in the Danville MSA. For the purposes of this analysis, the City of Danville is not included as part of Pittsylvania County because it is an independent city bounded by Pittsylvania County and the North Carolina border and is located approximately 2.5 miles at its closest point to the Southgate Project. With respect to Environmental Justice ("EJ") areas, Pittsylvania County contains 16 census tracts, 9 of which are crossed by the Project and of that amount one census tract is a potential EJ communities (less than 1 percent). See Section 5.3.8 for more details on EJ.

Rockingham County, North Carolina

Approximately 26 miles of the pipeline, two interconnects, and three contractor yards (CY-04, CY-05, and CY-08) will be in Rockingham County. Total land area in Rockingham County is 572.71 square miles and includes 7.15 square miles of water (U.S. Census, 2010b). There is one public-use airport and several major highways that cross through the county. Rockingham County is included in the Greensboro-High Point MSA which is part of the Greensboro-Winston-Salem-High Point CSA. The county is home to two cities, four towns, and 10 townships (Rockingham County, 2018). With respect to EJ communities, Rockingham County contains 21 census tracts, 10 of which are crossed by the Project and of that amount four census tracts are potential EJ communities (less than 1 percent). See Section 5.3.8 for more details on EJ.

Alamance County, North Carolina

Approximately 21.1 miles of the pipeline and one interconnect will be in Alamance County. Total land area in Alamance County is 434.74 square miles and includes 10.79 square miles of water (U.S. Census, 2010b). Alamance County is centrally located in North Carolina, linking the Research Triangle and the Piedmont Triad metropolitan regions. The county is home to three cities, six towns, and many other smaller unincorporated communities and villages (Alamance County, 2018). Alamance County is included in the Burlington MSA which is part of the Greensboro-Winston-Salem-High Point CSA. With respect to EJ communities, Alamance County contains 36 census tracts, nine of which are crossed by the Project and of that amount two census tracts are potential EJ communities (less than 1 percent). See Section 5.3.8 for more details on EJ.

Guilford County, North Carolina

Contractor Yard 09 (CY-09) will be in Guilford County. No other Project facilities are located in Guilford County. Total land area in Guilford County is 657.63 square miles and includes 11.92 square miles of water (U.S. Census, 2010b). Guilford County is centrally located in North Carolina and is the third most populous county in the state. The county is home to four cities, nine towns, and many other smaller unincorporated communities and townships[4]. Guilford County is included in the Greensboro-High Point MSA, which is also included in the Greensboro-Winston-Salem-High Point CSA. With respect to EJ communities, Guilford County contains 119 census tracts, one of which includes CY-09 that is not in an EJ community. See Section 5.3.8 for more details on EJ.

5.3.8 Environmental Justice

Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994) was issued to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities. The order requires each federal agency to identify and address as appropriate the disproportionately high and adverse effects of its programs, policies and activities on minority populations and low-income populations. It also provides minority and low-income communities access to public information and public participation.

5.3.8.1 Federal Environmental Screening

To determine potential impacts on minority and low-income populations, the Southgate Project used the following demographic index criteria to identify environmental justice communities:

a. census block groups that have a minority population of more than 50 percent;
b. census block groups that have a household poverty rate of more than 20 percent; and
c. census block groups that have a household poverty rate or minority population that is 10 percent higher than their respective county.

This criteria used was the Environmental Protection Agency's ("EPA") *Environmental Justice Interagency Working Group Promising Practices for Environmental Justice Methodologies in NEPA Reviews*)[5] as recommended by the North Carolina's Department of Environmental Quality (NCDEQ). Please note, the minority population of more than 50 percent remain the same as the same criteria was used. However, the low-income populations has changed significantly since the recommended criteria uses populations whose household income is below once the federally defined poverty threshold (Table B17017) whereas, prior results were reported using population whose household income was below twice the federally defined poverty threshold (e.g., EJSCREEN).

Block groups and census tracts of potential EJ communities where the Project facilities cross or are in are included in Tables 5.3-9 and 5.3.10 and displayed on Figure 5.3-1. Data in Table 5.3-9 was taken from the U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates. Discussions on the results are provided in the following sections.

[4] Guilford County website: https://www.guilfordcountync.gov/
[5] https://www.epa.gov/environmentaljustice/ej-iwg-promising-practices-ej-methodologies-nepa-reviews

EPA's Environmental Justice Showcase Communities

The Southgate Project also conducted a review of EPA's Environmental Justice Showcase Communities for Regions 3 and 4 and determined that none of the Project facilities are located in these communities (EPA, 2017c).

Tribal Consultation

On July 24, 2014, the EPA issued its Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples. The Policy focuses on EPA's work with federally recognized tribes, state recognized tribes, tribal members, indigenous community-based/grassroots organizations, Native Hawaiians, individual Native Americans, and others living in Indian country. The Policy also discusses EPA's work with other federal agencies, state agencies, and other interested groups (EPA, 2014).

The Southgate Project is actively coordinating with federal tribes that are cooperating agencies in the FERC process (see Resource Report 4 for more details). In addition, the Project has conducted outreach with state tribes and has been actively coordinating with interested tribal representatives.

In addition to federal guidance, the Southgate Project also assessed state level EJ policies, as applicable, which are further discussed in the following sections (see Section 5.3.8.2 below).

REVISED Table 5.3-9
EJ Block Group and Census Tracts for Counties Crossed by the MVP Southgate Project Facilities

State/County Block Group/Census Tract	Total Population	Median Household Income (U.S. Dollars)	Percent												
			White	African American	Native American & Alaskan Native	Asian	Native Hawaiian & Pacific Islander	Other Race	Hispanic or Latino Origin	Children (5 and under)	Elderly (over 65)	Non- English at Home a/	Less Than High School Education	Minority Population b/, c/	Household Poverty d/, e/
Virginia	**8,310,301**	**$66,149**	**68.7**	**19.2**	**0.3**	**6.1**	**0.1**	**2.3**	**8.7**	**6.1**	**13.8**	**15.5**	NA	NA	NA
PIPELINE															
Pittsylvania County	***62,392***	***$43,087***	***74.9***	***21.2***	***0.1***	***0.4***	***0.0***	***1.7***	***2.4***	***4.5***	***19.8***	***3.7***	***14.8***	***25.7***	***40.7***
Block Group 1, Census Tract 105[1]	1,423	NA	79.4	18.1	0.0	0.0	0.0	2.5	2.5	5	19	5	2	20.6	**27.0**
Block Group 3, Census Tract 105	2,011	NA	52.5	44.3	0.0	1.0	0.0	1.0	1.0	2	13	5	4	47.5	7.7
Block Group 2, Census Tract 109	1,450	NA	82.7	11.7	0.0	0.0	0.0	3.5	2.9	3	20	3	5	17.3	9.8
Block Group 1, Census Tract 110.02	3,513	NA	87.3	12.3	0.2	0.0	0.0	0.0	0.0	4	17	4	4	12.7	9.3
Block Group 2, Census Tract 110.02	1,325	NA	86.8	12.4	0.0	0.0	0.8	0.0	0.0	6	16	4	7	13.2	**28.5**
Block Group 3, Census Tract 110.01	1,122	NA	91.4	8.6	0.0	0.0	0.0	0.0	0.0	6	17	2	2	8.6	14.8
Block Group 2, Census Tract 110.01	746	NA	91.8	6.7	0.0	0.0	0.0	0.0	0.0	1	24	2	8	8.2	9.4
Block Group 1, Census Tract 111	1,366	NA	84.8	15.2	0.0	0.0	0.0	0.0	3.0	2	20	6	3	18.2	17.3
Block Group 2, Census Tract 111	1,575	NA	48.9	38.3	0.0	0.0	0.0	12.3	12.8	7	13	6	6	**51.1**	11.5
CONTRACTOR YARDS															
CY-03 Block Group 3, Census Tract 114	508	NA	72.6	26.8	0.0	0.0	0.0	0.0	0.0	13	29	5	11	27.4	15.0
North Carolina	**9,940,828**	**$48,256**	**69.2**	**21.5**	**1.2**	**2.6**	**0.1**	**3.0**	**8.9**	**6.1**	**14.7**	**11.3**	NA	NA	NA
PIPELINE															
Rockingham County	***93,643***	***$40,003***	***75.7***	***18.9***	***0.4***	***0.5***	***0.1***	***2.8***	***5.5***	***5.2***	***18.3***	***5.6***	***14.1***	***27.1***	***18.4***
Block Group 1, Census Tract 402[2]	1,000	NA	92.7	6.3	0.0	0.5	0.0	0.0	1.1	2	23	16	7	8.4	4.3
Block Group 1, Census Tract 401.01	756	NA	90.3	9.7	0.0	0.0	0.0	0.4	0.0	0	15	5	5	10.1	**32.8**
Block Group 1, Census Tract 411	681	NA	78.6	21.4	0.0	0.0	0.0	0.0	0.0	0	21	1	2	21.4	2.8
Block Group 3, Census Tract 401.01	1,295	NA	71.1	15.8	0.0	0.0	0.0	14.1	13.2	9	22	9	7	31.0	14.0
Block Group 2, Census Tract 401.01	1,875	NA	75.9	20.1	1.7	0.0	0.0	1.0	1	2	20	4	6	24.1	17.2
Block Group 2, Census Tract 401.02	1,130	NA	51.2	48.8	0.0	0.0	0.0	2.8	3	13	10	2	2	**51.7**	**26.1**
Block Group 3, Census Tract 401.02	846	NA	73.0	13.7	0.0	0.0	0.0	0.0	0.0	6	22	0	4	27.0	19.0
Block Group 1, Census Tract 413	1,977	NA	80.9	14.7	0.0	0.7	0.0	0.9	1	7	18	2	10	19.1	17.8
Block Group 4, Census Tract 413	1,033	NA	61.0	34.1	0.0	0.0	0.0	0.7	11.9	7	21	17	4	**50.2**	**23.1**
Block Group 2, Census Tract 413	1,214	NA	72.0	25.3	2.7	0.0	0.0	0.0	0.0	1	25	0	3	28.0	14.0
CONTRACTOR YARDS															
CY-04 Block Group 2, Census Tract 402	1,114	NA	45.2	17.0	0.8	0.0	0.0	36.3	39.5	0	15	16	22	***57.4***	***22.3***
CY-08 Block Group 2, Census Tract 414	1,009	NA	49.7	47.8	2.6	0.0	0.0	0.0	21.6	9	19	8	15	***69.3***	***34.0***
PIPELINE															
Alamance County	***156,372***	***$43,209***	***70.7***	***18.6***	***0.4***	***1.5***	***0.1***	***6.0***	***12.1***	***5.9***	***16.0***	***12.6***	***17.3***	***34.5***	***16.8***
Block Group 2, Census Tract 215	1,366	NA	82.4	10.8	0.0	0.0	0.0	6.2	6.2	6	13	6	3	17.6	1.1
Block Group 1, Census Tract 215	1,313	NA	83.5	10.3	0.0	0.0	0.0	6.2	6.2	9	17	8	2	16.5	5.2
Block Group 4, Census Tract 215	1,362	NA	89.0	6.5	0.0	0.0	0.0	4.0	4.0	5	18	2	0	11.0	**20.9**

REVISED Table 5.3-9
EJ Block Group and Census Tracts for Counties Crossed by the MVP Southgate Project Facilities

State/County Block Group/Census Tract	Total Population	Median Household Income (U.S. Dollars)	Percent												
			White	African American	Native American & Alaskan Native	Asian	Native Hawaiian & Pacific Islander	Other Race	Hispanic or Latino Origin	Children (5 and under)	Elderly (over 65)	Non- English at Home a/	Less Than High School Education	Minority Population b/, c/	Household Poverty d/, e/
Block Group 3, Census Tract 215	729	NA	95.5	1.6	0.0	0.0	0.0	2.9	4.5	10	12	2	3	6.2	9.5
Block Group 1, Census Tract 214	1,703	NA	94.5	1.1	0.0	0.4	0.0	0.0	3.9	5	22	5	3	9.5	18.6
Block Group 5, Census Tract 213	891	NA	58.2	34.8	0.2	0.0	0.0	3.9	6.1	5	22	5	6	42.4	18.4
Block Group 2, Census Tract 212.01	1,783	NA	68.3	20.0	0.0	0.0	0.0	8.1	13.6	6	14	10	10	36.2	**22.8**
Block Group 3, Census Tract 212.01	1,151	NA	84.4	8.5	0.0	0.0	0.0	7.0	7.0	1	10	9	7	15.6	10.6
Block Group 1, Census Tract 220.01	1,404	NA	82.1	14.9	0.0	2	0.0	0.0	5	5.0	19	5	6	22.6	8.3
CONTRACTOR YARD															
Guilford County	***511,815***	***$46,896***	***56.4***	***33.6***	***0.4***	***4.6***	***0.1***	***2.7***	***7.6***	***6.0***	***13.7***	***13.0***	***12.3***	***48.0***	***15.6***
CY-09 Block Group 2, Census Tract 153	1,998	NA	71.2	28.3	0.0	0.0	0.0	0.0	0.9	6	6	4	0	29.6	7.5

Sources: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimate and Table B17017 – Poverty Status in the Past 12 Months by Household Type by Age of Householder Universe: Households

Notes:
[1] CY-01 included in Block Group 1, Census Tract 105
[2] CY-05 included in Block Group 1, Census Tract 402
a/ Percent is only for non-English population age 5 years and over.
b/ Data fields are shaded for those census block groups with more than 50 percent of minority population.
c/ Minority population includes total population other than non-Hispanic whites.
d/ Data fields are shaded for those census block groups that have a household poverty rate that is more than 20%.
e/ Data fields are shaded for those census block groups that are 10% higher than their respective county.

N/A = Not applicable.

REVISED Table 5.3-10
EJ Block Group and Census Tracts for Counties Crossed by the MVP Southgate Project by Milepost

State/*County* Block Group/Census Tract	Milepost Enter	Milepost Exit	Total Distance (Miles) b/	Collocation Distance (Miles)
Virginia/*Pittsylvania County*				
Block Group 1, Census Tract 105 a/	0.0	0.47	**0.47***	**0.05***
Block Group 1, Census Tract 105 c/	0.00RR	4.33	**4.36***	**3.29***
Block Group 3, Census Tract 105	4.33	4.94	**0.62***	**.054***
Block Group 2, Census Tract 109	4.94	10.74	5.80	4.99
Block Group 1, Census Tract 110.02	10.74	13.38	2.63	1.67
Block Group 2, Census Tract 110.02	13.38	15.93	**2.55***	**0.90***
Block Group 3, Census Tract 110.01	15.93	18.26	2.33	1.31
Block Group 2, Census Tract 110.01	18.26	19.96	1.71	1.71
Block Group 1, Census Tract 111	19.96	23.70	3.73	3.73
Block Group 2, Census Tract 111	23.70	26.09	**2.39***	**2.39***
North Carolina/*Rockingham County*				
Block Group 1, Census Tract 402 c/	26.09	30.08	4.02	3.29
Block Group 1, Census Tract 401.01	30.08	30.48	**0.40***	**0.40***
Block Group 1, Census Tract 411 c/	30.48	36.28	5.81	3.36
Block Group 3, Census Tract 401.01	36.28	38.82	2.54	0.42
Block Group 2, Census Tract 401.01	38.82	39.68	0.86	.017
Block Group 2, Census Tract 401.02	39.68	40.34	**0.66***	**0.00***
Block Group 3, Census Tract 401.02	40.34	42.19	1.84	1.00
Block Group 1, Census Tract 413	42.19	43.16	0.97	0.40
Block Group 4, Census Tract 413	43.16	44.90	**1.74***	**0.70***
Block Group 1, Census Tract 413	44.90	48.41	3.51	0.19
Block Group 2, Census Tract 413	48.41	52.63	4.22	3.24
North Carolina/*Alamance County*				
Block Group 2, Census Tract 215	52.63	55.07	2.43	1.92
Block Group 1, Census Tract 215	55.07	57.86	2.79	1.89
Block Group 4, Census Tract 215	57.86	60.26	**2.40***	**0.63***
Block Group 3, Census Tract 215	60.26	61.37	1.11	0.00
Block Group 1, Census Tract 214 c/	61.37	66.08	4.77	0.00
Block Group 5, Census Tract 213	66.08	66.39	0.30	0.00
Block Group 2, Census Tract 212.01	66.39	69.65	**3.26***	**0.00***
Block Group 3, Census Tract 212.01	69.65	72.92	3.27	0.00
Block Group 1, Census Tract 220.01 c/	72.92	73.17RR	0.15	0.00
		TOTALS	**73.67 (18.4*)**	**37.55 (8.9*)**

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

a/ Southgate Lateral (H605 Pipeline).

b/ Totals may be off slightly due to rounding of numbers. Total distance crossed incorporates the station equations for the incorporated reroutes.

* /Bold, Potential EJ Community.

Figure 5.3-1. Environmental Justice Areas and Opportunity Zones Map
No Change, Not included.

Opportunity Zones

Opportunity Zones[6] are a new community development program established by Congress in the Tax Cuts and Jobs Act of 2017 to encourage long-term investments in low-income urban and rural communities nationwide. The Opportunity Zones program provides a tax incentive for investors to re-invest their unrealized capital gains into Opportunity Funds that are dedicated to investing into Opportunity Zones designated by the chief executives of every U.S. state and territory (EIG, 2018).

North Carolina Opportunity Zones will offer qualified investors certain tax benefits when they invest unrealized capital gains into these areas. Investments made by qualified entities known as Opportunity Funds into certified Opportunity Zones will receive three key federal tax incentives to encourage investment in low-income communities.

The federal law allows each state to designate up to 25 percent of its total low-income census tracts as Opportunity Zones candidates. North Carolina has just over 1,000 of these tracts, so only 252 census tracts could be selected as Opportunity Zones (NC Commerce, 2018). Opportunity Zones for the Project counties are displayed on Figure 5.3-1. Many of these zones correspond to the block groups and census tracks of potential EJ communities where the Project facilities are located or cross.

Minority and Low-Income

A total of nine block groups out of 28 crossed by the Southgate Project exceeded the national averages of minority populations and/or percent thresholds of low income populations where the Project facilities cross or are in (Table 5.3-9 and Figure 5.3-1). These nine block groups of potential EJ communities represent approximately 18.4 miles of the total Project route (25 percent), (Table 5.3-10 and Figure 5.3-1). While the Southgate Project pipeline route crosses EJ communities, it is collocated with existing infrastructure for approximately 12 percent (8.9 miles) of the alignment within the EJ census tracts. These existing facilities have been in operation for decades within these communities.

With respect to demographic indexes, one block group in Pittsylvania County exceeded the 50 percent threshold of the minority population of the national average by approximately 1 percent and one block group in Rockingham County exceeded the threshold by approximately 2 percent and one block group was equal to the threshold. Low income populations for seven block groups (two in Pittsylvania County, three in Rockingham County and two in Alamance) were reported to be above 20 percent of the national averages by approximately 2-10 percent and of that, five block groups were reported to be above 10 percent of their respective county (three in Rockingham County and two in Alamance). Two block groups in Rockingham County exceeded the percent thresholds of the three demographic indexes a-c above.

With respect to the contractor yards, two block groups in Rockingham County exceeded the percent thresholds of the three demographic indexes a-c above.

Racial/Ethnic Composition

Table 5.3-9 provides the percentages of the general racial/ethnic compositions for the Project counties and block groups crossed by the Project. Racial/ethnic compositions for the Southgate Project area is

[6] An Opportunity Zone is an economically-distressed community where new investments, under certain conditions, may be eligible for preferential tax treatment. Localities qualify as Opportunity Zones if they have been nominated for that designation by the state and that nomination has been certified by the Secretary of the U.S. Treasury via his delegation authority to the Internal Revenue Service (IRS, 2018).

predominantly white with six block groups over 90 percent, 10 block groups at or over 80 percent, two counties and seven block groups over 70 percent, two counties and five block groups approximately 51 to 70 percent and one block group at 49 percent followed by the African American racial/ethnic composition with two block groups averaging approximately 46 percent, two block groups approximately 30 to 40 percent, 14 block groups between 10 and 25 percent and the remaining block groups under 10 percent while the Project counties averaged approximately 20 percent.

Non-English Speaking Groups

Data was taken from the U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates for language spoken at home (S1601), (U.S. Census Bureau, 2012-2016). According to the Census, language spoken at home is defined as the language currently used by respondents at home that is either "English only" or a non-English language used in addition to English or in place of English.

Alamance and Guilford counties were approximately 1.3-1.7 percent higher than North Carolina's estimate for percentages of non-English speaking populations age 5 and over in the Project area, while Pittsylvania and Rockingham counties each were less than their respective state estimates by 12 and 6 percent (Table 5.3-9). Of the seven block groups of potential EJ communities, only two had percentages of non-English speaking populations age 5 and over that averaged 3 percent.

Children and Elderly

According to the U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, three of the Project counties have less people age 5 and under living in the Project area compared to their respective state estimates by more than 1 percent (two were equal), and average 5.7 percent of the state population. However, for the elderly living in the Project area, each of the Project counties exceed their respective state estimates by more than 3 percent, and average approximately 18 percent of the state population, with the exception of Guilford County which was lower than its respective state by 0.7 percent (Table 5.3-9). With respect to the block groups, the highest and lowest percent of people age 5 and under and people age 65 and over living in the Project area are located in Rockingham County. Section 5.4.8 provides a discussion on human health and protective standards including children and the elderly.

Public Outreach

To facilitate public involvement and outreach, the Southgate Project has developed a Public, Stakeholder, and Agency Participation Plan (see Resource Report 1, Appendix 1-L). This plan outlines a commitment to engage actively with stakeholders throughout the life cycle of the Project and provides the steps the Southgate Project has identified to ensure successful ongoing communication with stakeholders, including establishing a Project website (www.mvpsouthgate.com), a toll-free phone line (833-MV-SOUTH), and e-mail mail@mvpsouthgate.com. The Southgate Project will continue to meet with stakeholders to discuss the ongoing efforts associated with the Project.

State Environmental Screening

The states of Virginia and North Carolina have recently established EJ councils and / or policies that appear to be under development, as described further below; however, neither state currently has data or policies available for the counties in the Southgate Project area.

Virginia

Virginia's Executive Order 73 (effective October 31, 2017) established the Advisory Council on Environmental Justice ("ACEJ"). The ACEJ provides independent advice and recommendations to the

Executive Branch on integrating environmental justice considerations throughout Virginia's programs, regulations, policies, and procedures, among other goals. The ACEJ focuses on strategic, scientific, technological, regulatory, community engagement, and economic issues related to environmental justice throughout Virginia and interacts with several groups (Virginia Natural Resources, 2018). The Southgate Project will continue to coordinate with the ACEJ as it develops state polices and guidelines to address EJ.

North Carolina

North Carolina's Department of Environmental Quality ("NCDEQ") recently recommended the FERC use the following criteria to identify minority populations and low-income populations: EPAs *Environmental Justice Interagency Working Group Promising Practices for Environmental Justice Methodologies in NEPA Reviews*).

5.4.8 Environmental Justice

5.4.8.1 Disproportionate High and Adverse Effects on Minority or Low Income Populations

As discussed in Section 5.3.8, assessing the potential for disproportionately high and adverse impacts on minority and/or low income populations typically involves two steps: first, identifying whether minority and/or low-income communities are present, and, then, if these types of communities are present, evaluating whether high and adverse human health or environmental effects will disproportionately affect the identified community or communities. As indicated in the above discussion, review of census data suggests the presence of low income, and, to a much lesser extent, minority communities. As indicated in Table 5.3-9, the 11 block groups total population is 14,013 (1.7 percent) of the total population in EJ compared to that of the Southgate Project counties total population of 824,222. However, construction of the Southgate Project is not expected to result in adverse and disproportionate human health or environmental effects to these communities, as discussed below.

The Southgate Project facilities will be designed in compliance with the national ambient air quality standards, which are protective of human health, including children, the elderly, and sensitive populations. Construction of the Project is not expected to have high and adverse human health or environmental effects on any nearby communities. Adverse construction-related impacts will likely include increases in local traffic and noise, as well as fugitive dust, and could result in temporary delays at some highway crossings. These impacts will be temporary, localized, and are not expected to be significant. The Project will implement a variety of measures that will minimize potential impacts on nearby communities, including environmental justice communities. For instance, the Project will employ proven construction-related practices to control fugitive dust, such as application of water or other commercially approved dust control applications on unpaved areas subject to frequent vehicle traffic. Similarly, noise control measures will be implemented during project construction. See Resource Report 9 for more detail and discussions on noise and air quality impacts.

The presence of existing infrastructure must be considered when evaluating relevant Project impacts, including environmental justice and opportunity zones. When collocated with existing infrastructure or utility corridors, the incremental impacts of an additional pipeline are significantly less compared to routing through a greenfield area. Collocation minimizes potential impacts on the general population and environmental justice communities alike. Mountain Valley developed the Southgate Project pipeline route to collocate to the maximum extent practicable and avoid unnecessary greenfield impacts. Within

environment justice communities, the Project pipeline route is collocated for 8.9 miles, resulting in 8.9 fewer miles of greenfield impacts, including greenfield impacts on environmental justice communities. Many of these environmental justice communities are also located within opportunity zones along the route (See Figure 5.3-1).

Construction could also increase demand for health care and municipal services, as well as potentially increase demand for police and fire protection services. However, these impacts are expected to be temporary and are not expected to measurably affect the quality of services currently received by local communities and residents.

The Southgate Project facilities will also be designed, constructed, operated, and maintained in accordance with or to exceed the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration minimum federal safety standards in 49 CFR 192 (see Resource Report 11 for more details). These regulations, which are intended to protect the public and to prevent natural gas facility accidents and failures, apply to all areas along the pipeline routes regardless of the presence or absence of minority or low income populations.

The Southgate Project will continue to update its stand alone, interactive Project web site to provide the public with the most recent information, including a Project overview, map of the facilities, list of frequently asked questions, list of the Project contacts and announcements of public meetings on the Project. The Project intends to continue its efforts to keep landowners, public officials, and the relevant permitting agencies fully informed of developments on the Project.

Revenues from construction employment, local expenditures by the construction companies for construction materials, and non-local construction workers for temporary housing, food, and entertainment will temporarily benefit the local economy. The increased property tax base during Project operation will be beneficial in the long-term. Local communities will benefit from ad valorem taxes paid annually by the Southgate Project over the life of the Project. Refer to Resource Reports 1.1.2 and 10 for further discussions on the "Purpose and Need" of the Project and additional benefits the Project is expected to provide.

In conclusion, the construction and operation of the Southgate Project would not cause a disproportionate share of adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group, or on block groups that meet the environmental justice criteria.

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Table 6.2-1

Elevations at the MVP Southgate Project Aboveground Facilities

Facility	Milepost a/	State / County	Approximate Minimum Elevation (feet above mean sea level)	Approximate Maximum Elevation (feet above mean sea level)
Lambert Compressor Station / Interconnect / MLV 1	0.0RR	Virginia / Pittsylvania	647	665
LN 3600 Interconnect	28.2	North Carolina / Rockingham	508	514
T-15 Dan River Interconnect / MLV 4	30.4	North Carolina / Rockingham	504	508
T-21 Haw River Interconnect / MLV 8	73.2RR	North Carolina / Alamance	510	514
MLV 2	7.4	Virginia / Pittsylvania	726	728
MLV 3	18.3	Virginia / Pittsylvania	660	662
MLV 5	42.2	North Carolina / Rockingham	732	732
MLV 6	55.1	North Carolina / Alamance	716	718
MLV 7	68.2	North Carolina / Alamance	556	558

a/ Mileposts with an “RR” indicate locations where a re-route was incorporated into the pipeline alignment.

REVISED APPENDIX 6-D - Table 1

Areas of Potential Blasting by Milepost for Right-of-Way Grade and Pipeline Trench Excavation for the MVP Southgate Project

From Milepost	To Milepost	Need for Blasting			Blasting Potential
		Slope	Depth to Bedrock	Rock Type	
0.00	0.95	X			Low
1.20	1.85			X	Low
17.28	33.89	X	X	X	High
34.50	48.23	X	X	X	High
49.29	68.05	X	X	X	High
70.94	72.82	X			Low
Lambert Compressor Station / Interconnect / MLV 1		X	X		Low
LN 3600 Interconnect		X	X		Low
T-15 Dan River Interconnect / MLV 4					None
T-21 Haw River Interconnect / MLV 8					None
MLV 2, 3, 5, 6, 7		Included within Mainline Blasting Potential			

Sources:

(1) United States Geological Survey (USGS) Geologic Units by Geographic Area. Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina, 2018.

(2) United States Department of Agricultural, Natural Resources Conservation Service (USDA/NRCS), 2018 Custom Soil Resources Report for Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina.

(3) Possibility of blasting based on Notes 1 and 2 for this Table and Table 6-F MVP Southgate Project Resource Report 6 – Geologic Resources. Blasting based on slope locations where thickness of overlaying soil may be less than trench depth due to erosion and gravitational influences on the soil.

Notes:

(1) "Low" – The potential for blasting is possible within this section depending on depth of and location of planned pipeline and related facilities. The potential of blasting to achieve grade exists but has low probability.

(2) "High" – Blasting will be needed within these sections to achieve grade. Blasting will not be continuous.

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REVISED Table 7.2-1

Summary of Soil Characteristics and Limitations for the MVP Southgate Project

Facility / County, State	Area of Project Workspace within Designated Soil Classification / Limitation (Acres)							
	Prime Farmland or Farmland of Statewide Importance a/	Compaction Prone b/	Hydric Soils c/	Highly Water Erodible d/	Highly Wind Erodible e/	Shallow Depth to Bedrock f/	Low Revegetation Potential g/	Stony / Rocky h/
H-605 Pipeline								
Pittsylvania, Virginia	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-650 Pipeline								
Pittsylvania, Virginia	351.5	2.6	2.6	8.5	0.0	20.4	19.2	20.4
Rockingham, North Carolina	253.8	2.0	2.6	16.3	0.0	55.8	0.0	0.0
Alamance, North Carolina	263.7	9.2	0.0	0.0	0.0	7.9	0.0	0.0
Cathodic Protection Groundbeds								
Pittsylvania, Virginia	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rockingham, North Carolina	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alamance, North Carolina	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aboveground Facilities								
Pittsylvania, Virginia								
Lambert Compressor Station / Interconnect / MLV 1 (MP 0.0)	20.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MLV 2 and 3 (MPs 7.4 and 18.3)	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contractor Yards	65.3	0.0	0.0	0.0	0.0	0.0	5.1	0.0
Access Roads	47.7	0.0	0.0	0.3	0.0	1.0	0.9	1.0
Rockingham, North Carolina								
LN 3600 Interconnect (MP 28.2)	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
T-15 Dan River Interconnect / MLV 4 (MP 30.4)	5.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
MLV 5 (MP 42.2)	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contractor Yards	0.0	14.3	14.3	9.2	0.0	14.3	0.0	23.6

REVISED Table 7.2-1

Summary of Soil Characteristics and Limitations for the MVP Southgate Project

Facility / County, State	Area of Project Workspace within Designated Soil Classification / Limitation (Acres)							
	Prime Farmland or Farmland of Statewide Importance a/	**Compaction Prone b/**	**Hydric Soils c/**	**Highly Water Erodible d/**	**Highly Wind Erodible e/**	**Shallow Depth to Bedrock f/**	**Low Revegetation Potential g/**	**Stony / Rocky h/**
Access Roads	38.4	0.6	0.2	0.8	0.0	6.0	0.0	0.3
Alamance County, North Carolina								
MLVs 6 and 7 (MPs 55.1 and 68.2)	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
T-21 Haw River Interconnect / MLV 8 (MP 73.1)	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contractor Yards	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Access Roads	18.9	0.4	0.0	0.0	0.0	0.2	0.0	0.0
Guilford County, North Carolina								
Contractor Yard	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Access Roads	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Area within Soil Designation	**1,087.3**	**29.1**	**19.9**	**35.2**	**0.0**	**105.6**	**25.1**	**45.3**
Percent of Project Area i/	**79**	**2**	**1**	**3**	**0**	**8**	**2**	**3**

Note: Pig launchers and receivers will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for the pig launchers and receivers are included with those facilities. Mainline Valves (MLVs) 1, 4, and 8 will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for these MLVs are included with those facilities.

a/ Prime farmland and Farmland of Statewide Importance includes soils mapped and designated as prime farmland and farmland of statewide importance by the NRCS (SSURGO reference column "farmlndcl"). Prime Farmland if drained and / or irrigated and / or reclaimed of excess salts and sodium is not included in this acreage. No areas of Farmland of local importance or unique farmland are affected by the Project.
b/ Soils categorized as compaction prone include soils with clay loam or finer texture and a drainage class of poor, somewhat poor, and very poor.
c/ Hydric soils include soils with a USDA NRCS hydric classification – presence of predominantly hydric (67% to 99%) and hydric (100%).
d/ Highly water erodible soils include soils with a K factor that is greater than 0.4.
e/ Highly wind erodible soils include those in wind erodibility groups 1 or 2.
f/ Shallow bedrock soils included soils that have a depth to bedrock of less than 5 feet (60 inches).
g/ Soils with low revegetation potential include soils with an average low rating based on factors including but not limited to drainage class of excessively drained or very poorly drained, K Factor greater than 0.40, and slope greater than 25 percent (see Table 7.2-2 in Appendix 7-A).
h/ Stony/Rocky soils include those with a cobbley, stony, bouldery, shaly, channery, very gravelly, or extremely gravelly modifier to the textural class of the surface layer and / or that have a surface layer that contains greater than 5 percent by weight rock fragments larger than 3 inches.
i/ Totals do not equal 100 percent as not all soils are classified with limitations and certain soils are classified as having multiple limitations. Percent of Project Area based on a total Project area of 1,382.7 acres.

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
H-605 Pipeline													
Pittsylvania County, Virginia													
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	0.00	0.08	422	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
9B	Creedmoor fine sandy loam, 2 to 7 percent slopes	0.08	0.10	53	Yes	3	0.2	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	0.10	0.17	370	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	0.17	0.47	1,584	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
H-650 Pipeline i/													
Pittsylvania County, Virginia													
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	0.0RR	0.13	792	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	0.13	0.30	950	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
8A	Chenneby-Toccoa complex, 0 to 2 percent slopes, frequently flooded	0.30	0.40	475	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
9C	Creedmoor fine sandy loam, 7 to 15 percent slopes	0.40	0.45	264	Yes	3	0.2	Predominantly Non-Hydric	Low	>60	No	No	Moderately well drained
22B	Mattaponi sandy loam, 2 to 7 percent slopes	0.45	0.53	422	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Moderately well drained
9C	Creedmoor fine sandy loam, 7 to 15 percent slopes	0.53	0.61	422	Yes	3	0.2	Predominantly Non-Hydric	Low	>60	No	No	Moderately well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	0.61	0.63	106	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	0.63	0.77	739	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
9B	Creedmoor fine sandy loam, 2 to 7 percent slopes	0.77	0.89	634	Yes	3	0.2	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	0.89	0.93	211	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
9B	Creedmoor fine sandy loam, 2 to 7 percent slopes	0.93	1.06	686	Yes	3	0.2	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
9C	Creedmoor fine sandy loam, 7 to 15 percent slopes	1.06	1.15	475	Yes	3	0.2	Predominantly Non-Hydric	Low	>60	No	No	Moderately well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	1.15	1.27	634	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	1.27	1.33	317	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
7A	Chenneby loam, 0 to 2 percent slopes, occasionally flooded	1.33	1.86	2,798	Yes	5	0.44	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
41A	Wehadkee silt loam, 0 to 2 percent slopes, frequently flooded	1.86	2.16	1,584	No	6	0.41	Predominantly Hydric	High	>60	No	Yes	Poorly drained
7A	Chenneby loam, 0 to 2 percent slopes, occasionally flooded	2.16	2.19	158	Yes	5	0.44	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	2.19	2.28	475	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	2.28	2.95	3,538	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	2.95	3.16	1,056	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	3.16	3.18	106	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	3.18	3.29	581	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	3.29	3.41	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	3.41	3.64	1,162	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	3.64	3.89RR	1,320	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	3.89RR	4.15	1,426	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	4.15	4.31	845	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	4.31	4.44	686	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	4.44	4.81	1,954	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	4.81	4.83	53	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
8A	Chenneby-Toccoa complex, 0 to 2 percent slopes, frequently flooded	4.83	5.22	2,059	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
1C	Appling sandy loam, 7 to 15 percent slopes	5.22	5.47	1,320	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
1B	Appling sandy loam, 2 to 7 percent slopes	5.47	5.64	898	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
1C	Appling sandy loam, 7 to 15 percent slopes	5.64	5.70	317	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	5.70	6.03	1,742	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	6.03	6.08	264	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
1B	Appling sandy loam, 2 to 7 percent slopes	6.08	6.13	264	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	6.13	6.25	581	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
39	Udorthents, loamy	6.25	6.32	370	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	6.32	6.57	1,373	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	6.57	6.59	106	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	6.59	6.74	792	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	6.74	6.86	634	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	6.86	6.95	475	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	6.95	6.99	211	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	6.99	7.09	528	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	7.09	7.25	845	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	7.25	7.29	158	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	7.29	7.33	211	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	7.33	7.38	264	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	7.38	7.50	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	7.50	7.55	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21E	Madison fine sandy loam, 25 to 45 percent slopes	7.55	7.61	264	No	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	7.61	7.71	581	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	7.71	7.78	370	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	7.78	7.84	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	7.84	7.97	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	7.97	8.02	264	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	8.02	8.12	528	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	8.12	8.20	475	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	8.20	8.33	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	8.33	8.46	739	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	8.46	8.50	211	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	8.50	8.53	158	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
8A	Chenneby-Toccoa complex, 0 to 2 percent slopes, frequently flooded	8.53	8.58	317	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
21E	Madison fine sandy loam, 25 to 45 percent slopes	8.58	8.65	370	No	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	8.65	8.76	581	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	8.76	8.84	422	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	8.84	8.87	158	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	8.87	8.92	264	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4C	Cecil sandy loam, 7 to 15 percent slopes	8.92	9.04	634	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	9.04	9.08	211	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	9.08	9.12	158	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	9.12	9.31	1,003	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	9.31	9.37	317	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	9.37	9.41	211	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	9.41	9.47	264	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	9.47	9.52	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	9.52	9.61	422	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	9.61	9.76	792	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
11B3	Cullen clay loam, 2 to 7 percent slopes, severely eroded	9.76	9.83	370	No	6	0.27	Non-Hydric	High	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	9.83	9.89	317	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
11C3	Cullen clay loam, 7 to 15 percent slopes, severely eroded	9.89	9.91	106	No	6	0.27	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	9.91	10.02	581	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4C	Cecil sandy loam, 7 to 15 percent slopes	10.02	10.05	158	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
21D	Madison fine sandy loam, 15 to 25 percent slopes	10.05	10.12	370	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	10.12	10.27	739	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	10.27	10.32	264	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	10.32	10.72	2,112	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	10.72	10.93	1,109	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	10.93	11.26	1,690	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	11.26	11.43	950	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	11.43	11.54	581	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	11.54	11.66	581	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	11.66	11.80	739	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	11.80	11.86	370	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	11.86	11.96	528	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	11.96	12.03	370	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	12.03	12.12	475	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	12.12	12.34	1,162	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	12.34	12.37	158	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	12.37	12.49	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	12.49	12.75	1,373	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
8A	Chenneby-Toccoa complex, 0 to 2 percent slopes, frequently flooded	12.75	12.80	264	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	12.80	12.86	264	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	12.86	13.05	1,056	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
17B	Hiwassee loam, 2 to 7 percent slopes	13.05	13.21	792	Yes	6	0.21	Non-Hydric	High	>60	No	No	Well drained
18C3	Hiwassee clay loam, 7 to 15 percent slopes, severely eroded	13.21	13.42	1,109	No	6	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
8A	Chenneby-Toccoa complex, 0 to 2 percent slopes, frequently flooded	13.42	13.47	264	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	13.47	13.50	211	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	13.50	13.61	581	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	13.61	13.67	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	13.67	13.80	686	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	13.80	13.91	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	13.91	13.93	106	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	13.93	14.05	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	14.05	14.15	528	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	14.15	14.28	686	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	14.28	14.32	211	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	14.32	14.35	158	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
11C3	Cullen clay loam, 7 to 15 percent slopes, severely eroded	14.35	14.44	475	No	6	0.27	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	14.44	14.57	634	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	14.57	14.62	264	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
11B3	Cullen clay loam, 2 to 7 percent slopes, severely eroded	14.62	14.66	211	No	6	0.27	Non-Hydric	High	>60	No	No	Well drained
4C	Cecil sandy loam, 7 to 15 percent slopes	14.66	14.69	158	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	14.69	14.72	158	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
9C	Creedmoor fine sandy loam, 7 to 15 percent slopes	14.72	14.78	317	Yes	3	0.2	Predominantly Non-Hydric	Low	>60	No	No	Moderately well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	14.78	14.94	845	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	14.94	15.45	2,693	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	15.45	15.48	158	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	15.48	15.87	2,059	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	15.87	15.95	370	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	15.95	16.02	370	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	16.02	16.06	211	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	16.06	16.22	845	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	16.22	16.48	1,373	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	16.48	16.97	2,587	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	16.97	17.24	1,426	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	17.24	17.32	370	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	17.32	17.39	422	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	17.39	17.72	1,690	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
W	Water	17.72	17.74	106	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	17.74	17.77	211	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	17.77	17.85	422	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	17.85	18.01	845	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	18.01	18.40	2,112	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	18.40	18.45	211	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	18.45	18.82	2,006	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	18.82	18.88	317	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	18.88	18.99	581	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	18.99	19.05	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	19.05	19.12	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	19.12	19.22	528	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	19.22	19.30	422	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	19.30	19.35	264	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	19.35	19.59	1,267	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	19.59	19.64	317	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4C	Cecil sandy loam, 7 to 15 percent slopes	19.64	19.68	158	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	19.68	19.77	475	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4C	Cecil sandy loam, 7 to 15 percent slopes	19.77	19.89	634	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	19.89	19.99	475	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	19.99	20.01	158	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	20.01	20.04	158	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	20.04	20.09	264	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	20.09	20.18	528	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	20.18	20.32	739	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	20.32	20.41	422	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	20.41	20.46	264	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	20.46	20.52	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	20.52	20.57	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	20.57	20.66	422	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	20.66	20.71	317	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	20.71	20.75	211	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	20.75	21.00	1,320	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	21.00	21.05	264	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	21.05	21.15	528	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	21.15	21.28	686	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	21.28	21.34	317	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	21.34	21.48	739	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	21.48	21.56	422	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	21.56	21.72	845	No	5	0.27	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29D	Pinkston-Mayodan complex, 15 to 35 percent slopes, very stony	21.72	21.76	211	No	5	0.28	Non-Hydric	Low	18.1	Yes	No	Excessively drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	21.76	22.02	1,373	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	22.02	22.07	264	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	22.07	22.15	422	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	22.15	22.20	264	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
28C	Pinkston cobbly sandy loam, 7 to 15 percent slopes	22.20	22.25	264	No	5	0.3	Non-Hydric	Low	18.1	Yes	No	Excessively drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	22.25	22.28	158	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	22.28	22.32	158	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	22.32	22.33	106	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	22.33	22.46	634	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	22.46	22.53	370	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	22.53	22.65	634	No	5	0.27	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29D	Pinkston-Mayodan complex, 15 to 35 percent slopes, very stony	22.65	22.71	317	No	5	0.28	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	22.71	22.77	317	No	5	0.27	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29E	Pinkston-Mayodan complex, 35 to 50 percent slopes, very stony	22.77	22.90	686	No	5	0.28	Non-Hydric	Low	18.1	Yes	No	Excessively drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	22.90	22.96	317	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
34B	Sheva fine sandy loam, 2 to 7 percent slopes	22.96	23.10	739	No	3	0.35	Non-Hydric	Moderate	29.1	Yes	No	Moderately well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	23.10	23.18	422	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	23.18	23.26	475	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	23.26	23.31	264	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	23.31	23.64	1,742	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	23.64	23.74	581	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	23.74	23.83	475	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	23.83	23.89	317	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	23.89	24.01	634	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	24.01	24.30	1,584	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	24.30	24.39	475	No	5	0.27	Non-Hydric	Low	18.1	Yes	No	Excessively drained
17B	Hiwassee loam, 2 to 7 percent slopes	24.39	24.59	1,003	Yes	6	0.21	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
34B	Sheva fine sandy loam, 2 to 7 percent slopes	24.59	24.82	1,214	No	3	0.35	Non-Hydric	Moderate	29.1	Yes	No	Moderately well drained
18C3	Hiwassee clay loam, 7 to 15 percent slopes, severely eroded	24.82	24.83	53	No	6	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
17B	Hiwassee loam, 2 to 7 percent slopes	24.83	24.91	475	Yes	6	0.21	Non-Hydric	High	>60	No	No	Well drained
18C3	Hiwassee clay loam, 7 to 15 percent slopes, severely eroded	24.91	24.94	158	No	6	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
28C	Pinkston cobbly sandy loam, 7 to 15 percent slopes	24.94	25.00	317	No	5	0.3	Non-Hydric	Low	18.1	Yes	No	Excessively drained
17B	Hiwassee loam, 2 to 7 percent slopes	25.00	25.08	370	Yes	6	0.21	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	25.08	25.26	950	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
17B	Hiwassee loam, 2 to 7 percent slopes	25.26	25.46	1,056	Yes	6	0.21	Non-Hydric	High	>60	No	No	Well drained
28C	Pinkston cobbly sandy loam, 7 to 15 percent slopes	25.46	25.68	1,162	No	5	0.3	Non-Hydric	Low	18.1	Yes	No	Excessively drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	25.68	25.77	475	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	25.77	25.82	317	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	25.82	26.04	1,162	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	26.04	26.08	211	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
Rockingham County, North Carolina													
CmB	Clover sandy loam, 2 to 8 percent slopes	26.08	26.43	1,848	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	26.43	26.61	950	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	26.61	26.65	211	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	26.65	26.76	528	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Clover sandy clay loam, 2 to 8 percent slopes, moderately eroded	26.76	26.84	422	Yes	5	0.3	Non-Hydric	High	>60	No	No	Well drained
CnE2	Clover sandy clay loam, 15 to 25 percent slopes, moderately eroded	26.84	26.96	634	No	5	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	26.96	27.30	1,742	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	27.30	27.66	1,901	No	5	0.31	Predominantly Non-Hydric	High	>60	No	No	Well drained
WhB	Wickham sandy loam, mesic, 1 to 4 percent slopes, rarely flooded	27.66	27.92	1,373	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	27.92	28.14	1,214	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	28.14	28.36	1,162	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	28.36	28.43	317	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	28.43	28.54	581	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	28.54	28.77	1,214	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmE	Clover sandy loam, 15 to 25 percent slopes	28.77	28.87	475	No	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	28.87	28.96	475	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmE	Clover sandy loam, 15 to 25 percent slopes	28.96	29.02	317	No	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
CmD	Clover sandy loam, 8 to 15 percent slopes	29.02	29.08	317	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmE	Clover sandy loam, 15 to 25 percent slopes	29.08	29.18	528	No	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	29.18	29.25	317	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CnE2	Clover sandy clay loam, 15 to 25 percent slopes, moderately eroded	29.25	29.51	1,531	No	5	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	29.51	29.84	1,742	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	29.84	30.05	1,109	No	5	0.31	Predominantly Non-Hydric	High	>60	No	No	Well drained
W	Water	30.05	30.10	211	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	30.10	30.21	581	No	5	0.31	Predominantly Non-Hydric	High	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	30.21	30.33	634	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	30.33	30.61	1,478	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	30.61	30.68	370	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	30.68	30.81	686	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	30.81	30.86	264	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CmD	Clover sandy loam, 8 to 15 percent slopes	30.86	30.89	106	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	30.89	30.97	422	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	30.97	31.03	317	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	31.03	31.11	422	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	31.11	31.14	158	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	31.14	31.18	158	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	31.18	31.23	264	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	31.23	31.33	528	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	31.33	31.53	1,056	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	31.53	31.58	264	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	31.58	31.61	158	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	31.61	31.65	211	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	31.65	31.66	106	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	31.66	31.72	317	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	31.72	31.81	422	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	31.81	32.14	1,742	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	32.14	32.23	475	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	32.23	32.30	370	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	32.30	32.33	158	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	32.33	32.44	581	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	32.44	32.48	158	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	32.48	32.50	106	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	32.50	32.56	317	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	32.56	32.61	264	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	32.61	32.72	528	No	5	0.31	Predominantly Non-Hydric	High	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	32.72	32.75	158	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	32.75	32.83	422	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	32.83	32.92	475	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	32.92	32.98	370	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
HbA	Hatboro silt loam, 0 to 2 percent slopes, frequently flooded, long duration	32.98	33.01	106	No	5	0.21	Predominantly Hydric	High	>60	No	No	Poorly drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	33.01	33.08	370	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HbA	Hatboro silt loam, 0 to 2 percent slopes, frequently flooded, long duration	33.08	33.11	158	No	5	0.21	Predominantly Hydric	High	>60	No	No	Poorly drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	33.11	33.14	158	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	33.14	33.32	950	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	33.32	33.54	1,162	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
JkB	Jackland fine sandy loam, 2 to 8 percent slopes	33.54	33.59	264	Yes	3	0.3	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	33.59	33.74	792	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
DeD	Devotion fine sandy loam, 6 to 15 percent slopes	33.74	33.79	264	No	3	0.27	Non-Hydric	Moderate	25.2	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	33.79	33.83	211	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
DeD	Devotion fine sandy loam, 6 to 15 percent slopes	33.83	33.89	317	No	3	0.27	Non-Hydric	Moderate	25.2	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	33.89	33.94	264	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	33.94	33.96	158	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	33.96	33.99	158	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	33.99	34.15	845	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	34.15	34.21RR	317	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	34.21RR	34.32	686	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	34.32	34.34	106	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	34.34	34.45	581	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	34.45	34.53	370	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	34.53	34.77	1,267	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	34.77	34.84	370	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	34.84	34.94	475	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	34.94	35.00	317	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	35.00	35.03	158	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	35.03	35.10	422	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	35.10	35.23	686	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	35.23	35.31	422	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	35.31	35.38	370	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	35.38	35.46	422	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	35.46	35.58	634	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	35.58	35.73	792	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	35.73	35.77	158	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	35.77	35.80	158	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	35.80	35.91	634	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	35.91	36.08	845	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	36.08	36.21	739	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	36.21	36.25	158	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	36.25	36.68	2,323	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	36.68	36.79	581	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	36.79	36.86	370	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	36.86	37.06	1,056	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	37.06	37.11	264	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	37.11	37.19	422	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	37.19	37.21	106	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	37.21	37.32	581	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	37.32	37.34	106	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	37.34	37.39	264	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	37.39	37.55	845	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
PpE2	Poplar Forest sandy clay loam, 15 to 25 percent slopes, moderately eroded	37.55	37.60	264	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
Ud	Udorthents, loamy	37.60	37.67	422	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained

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Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
PpE2	Poplar Forest sandy clay loam, 15 to 25 percent slopes, moderately eroded	37.67	37.72	264	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	37.72	37.77	264	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	37.77	37.98	1,162	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
CfB	Clifford sandy loam, 2 to 8 percent slopes	37.98	38.03	211	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	38.03	38.14	634	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	38.14	38.22	422	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
PpE2	Poplar Forest sandy clay loam, 15 to 25 percent slopes, moderately eroded	38.22	38.37	792	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	38.37	38.50	634	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	38.50	38.55	264	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
PpB2	Poplar Forest sandy clay loam, 2 to 8 percent slopes, moderately eroded	38.55	38.57	106	Yes	5	0.3	Non-Hydric	High	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	38.57	38.59	106	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	38.59	38.78	1,003	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	38.78	38.84	317	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	38.84	38.86	106	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	38.86	38.94	370	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	38.94	38.99	264	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	38.99	39.02	211	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	39.02	39.07	211	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	39.07	39.14	370	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	39.14	39.17	211	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	39.17	39.25	422	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
DeD	Devotion fine sandy loam, 6 to 15 percent slopes	39.25	39.37	634	No	3	0.27	Non-Hydric	Moderate	25.2	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	39.37	39.46	475	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	39.46	39.65	1,056	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	39.65	39.84	950	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
ChC	Clifford-Urban land complex, 2 to 10 percent slopes	39.84	39.93	475	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
Ur	Urban land	39.93	40.13	1,109	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	40.13	40.32	<1	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CaD	Casville sandy loam, 8 to 15 percent slopes	40.13	40.13	1,003	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	40.32	40.42	528	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	40.42	40.45	158	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
SmC	Siloam sandy loam, 4 to 10 percent slopes	40.45	40.51	370	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	40.51	40.52	<1	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	40.52	40.54	106	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	40.54	40.62	475	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	40.62	40.71	475	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	40.71	40.72	53	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	40.72	40.83	634	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	40.83	41.11	1,478	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
HbA	Hatboro silt loam, 0 to 2 percent slopes, frequently flooded, long duration	41.11	41.18	370	No	5	0.21	Predominantly Hydric	High	>60	No	No	Poorly drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	41.18	41.26	422	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	41.26	41.32	317	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	41.32	41.41	475	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	41.41	41.45	264	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	41.45	41.52	370	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	41.52	41.83	1,584	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	41.83	42.08	1,373	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	42.08	42.11	158	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	42.11	42.16	317	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	42.16	42.21	211	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	42.21	42.31	528	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	42.31	42.45	739	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	42.45	42.50	264	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	42.50	42.63	739	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
PpB2	Poplar Forest sandy clay loam, 2 to 8 percent slopes, moderately eroded	42.63	42.70	370	Yes	5	0.3	Non-Hydric	High	>60	No	No	Well drained
PpD2	Poplar Forest sandy clay loam, 8 to 15 percent slopes, moderately eroded	42.70	42.82	634	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
PpB2	Poplar Forest sandy clay loam, 2 to 8 percent slopes, moderately eroded	42.82	42.85	158	Yes	5	0.3	Non-Hydric	High	>60	No	No	Well drained
PpD2	Poplar Forest sandy clay loam, 8 to 15 percent slopes, moderately eroded	42.85	42.87	106	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
PoE	Poplar Forest sandy loam, 15 to 35 percent slopes	42.87	42.88	53	No	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	42.88	42.93	264	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
PpD2	Poplar Forest sandy clay loam, 8 to 15 percent slopes, moderately eroded	42.93	43.04	528	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
PoE	Poplar Forest sandy loam, 15 to 35 percent slopes	43.04	43.13	528	No	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
PpB2	Poplar Forest sandy clay loam, 2 to 8 percent slopes, moderately eroded	43.13	43.17	211	Yes	5	0.3	Non-Hydric	High	>60	No	No	Well drained
PpD2	Poplar Forest sandy clay loam, 8 to 15 percent slopes, moderately eroded	43.17	43.21	211	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	43.21	43.29	370	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	43.29	43.36	370	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	43.36	43.46	528	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	43.46	43.51	264	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	43.51	43.60	475	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	43.60	43.64	211	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	43.64	43.67	158	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	43.67	43.75	422	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	43.75	43.79	211	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	43.79	43.87	422	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	43.87	43.92	317	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	43.92	43.97	211	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	43.97	44.06	528	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	44.06	44.09	158	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	44.09	44.15	317	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	44.15	44.21	317	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	44.21	44.45	1,267	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	44.45	44.51	317	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	44.51	44.58	422	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	44.58	44.64	317	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	44.64	44.76	634	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	44.76	45.34	3,062	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
DcB	Davie sandy loam, 2 to 8 percent slopes	45.34	45.41	370	Yes	3	0.28	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
JkD	Jackland fine sandy loam, 8 to 15 percent slopes	45.41	45.47	317	No	3	0.3	Non-Hydric	Moderate	>60	No	Yes	Somewhat poorly drained
DcB	Davie sandy loam, 2 to 8 percent slopes	45.47	45.55	422	Yes	3	0.28	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
JkD	Jackland fine sandy loam, 8 to 15 percent slopes	45.55	45.57	106	No	3	0.3	Non-Hydric	Moderate	>60	No	Yes	Somewhat poorly drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	45.57	45.72	792	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	45.72	45.76	211	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	45.76	45.86	528	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
SmC	Siloam sandy loam, 4 to 10 percent slopes	45.86	45.93	370	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	45.93	45.96	158	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
OkB2	Oak Level sandy clay loam, 2 to 8 percent slopes, moderately eroded	45.96	46.24	<1	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	45.96	45.96	1,478	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	46.24	46.30	317	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	46.30	46.33	158	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	46.33	46.36	158	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	46.36	46.52	845	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
OkB2	Oak Level sandy clay loam, 2 to 8 percent slopes, moderately eroded	46.52	46.63	581	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	46.63	46.67	211	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	46.67	46.80	739	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	46.80	46.83	158	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	46.83	46.88	264	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	46.88	46.93	211	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
HbA	Hatboro silt loam, 0 to 2 percent slopes, frequently flooded, long duration	46.93	47.01	422	No	5	0.21	Predominantly Hydric	High	>60	No	No	Poorly drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	47.01	47.08	370	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	47.08	47.33	1,267	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	47.33	47.48	792	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	47.48	47.51	158	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	47.51	47.58	370	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	47.58	47.63	264	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	47.63	47.73	528	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	47.73	47.75	106	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	47.75	47.79	211	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	47.79	47.90	581	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	47.90	47.96	317	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	47.96	48.02	264	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	48.02	48.02	53	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	48.02	48.02	<1	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	48.02	48.04	53	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	48.04	48.55	2,746	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained

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Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
HaB	Halifax sandy loam, 2 to 8 percent slopes	48.55	48.61	264	Yes	3	0.22	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
CeA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	48.61	48.66	264	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HaB	Halifax sandy loam, 2 to 8 percent slopes	48.66	48.68	106	Yes	3	0.22	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
CaB	Casville sandy loam, 2 to 8 percent slopes	48.68	49.24	2,957	Yes	3	0.26	Non-Hydric	High	>60	No	No	Well drained
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	49.24	49.30	317	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	49.30	49.67	2,006	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	49.67	49.83	792	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 8 percent slopes	49.83	49.94	581	Yes	3	0.22	Non-Hydric	Moderate	>60	No	No	Moderately well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	49.94	50.03	475	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 8 percent slopes	50.03	50.15	634	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.15	50.23	422	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 8 percent slopes	50.23	50.44	1,109	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.44	50.51	422	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 8 percent slopes	50.51	50.67	792	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.67	50.75	475	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CeA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	50.75	50.80	211	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.80	50.97	950	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	50.97	51.18	1,109	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
MkB2	Mecklenburg sandy clay loam, 2 to 8 percent slopes, moderately eroded	51.18	51.24	317	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	51.24	51.29	264	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
MkB2	Mecklenburg sandy clay loam, 2 to 8 percent slopes, moderately eroded	51.29	51.33	211	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	51.33	51.43	581	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	51.43	51.98	2,904	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	51.98	52.12	739	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 8 percent slopes	52.12	52.16	211	Yes	3	0.22	Non-Hydric	Moderate	>60	No	No	Moderately well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	52.16	52.17	<1	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	52.17	52.36	1,056	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	52.36	52.43	317	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	52.43	52.46	158	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	52.46	52.51	317	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	52.51	52.56	264	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	52.56	52.59	158	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	52.59	52.59	<1	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	52.59	52.63	211	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
Alamance County, North Carolina													
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	52.63	52.68	264	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	52.68	52.74	317	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	52.74	52.77	158	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	52.77	52.83	317	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	52.83	53.07	1,267	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	53.07	53.09	106	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	53.09	53.18	475	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
EnC	Enon sandy loam, 6 to 10 percent slopes	53.18	53.21	158	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	53.21	53.31	475	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	53.31	53.34	211	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	53.34	53.51	898	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	53.51	53.53	106	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	53.53	53.60	317	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	53.60	53.63	158	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	53.63	53.64	53	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	53.64	53.68	211	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
FgC	Frogsboro sandy loam, 6 to 10 percent slopes	53.68	53.72	158	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	53.72	53.74	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	53.74	53.77	106	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	53.77	53.80	211	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	53.80	53.89	422	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	53.89	53.90	53	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	53.90	53.92	106	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	53.92	53.94	158	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	53.94	53.96	106	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	53.96	53.99	211	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
FgC	Frogsboro sandy loam, 6 to 10 percent slopes	53.99	54.05	317	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	54.05	54.07	106	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	54.07	54.14	370	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	54.14	54.15	<1	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	54.15	54.16	53	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	54.16	54.18	158	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	54.18	54.21	158	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	54.21	54.24	158	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	54.24	54.28	211	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	54.28	54.30	106	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	54.30	54.33	158	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	54.33	54.41	370	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	54.41	54.45	264	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EsD	Enon loam, 10 to 15 percent slopes, very stony	54.45	54.47	106	No	5	0.26	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	54.47	54.51	211	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
EsD	Enon loam, 10 to 15 percent slopes, very stony	54.51	54.53	106	No	5	0.26	Non-Hydric	Moderate	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	54.53	54.59	317	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	54.59	54.62	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
EsD	Enon loam, 10 to 15 percent slopes, very stony	54.62	54.65	106	No	5	0.26	Non-Hydric	Moderate	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	54.65	54.66	106	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	54.66	54.79	686	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	54.79	54.85	317	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	54.85	54.88	158	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	54.88	54.90	106	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
VaC	Vance sandy loam, 6 to 10 percent slopes	54.90	54.93	158	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	54.93	54.97	211	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
CcC	Cecil sandy loam, 6 to 10 percent slopes	54.97	54.99	106	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	54.99	55.20	1,109	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	55.20	55.21	106	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	55.21	55.26	264	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	55.26	55.38	634	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	55.38	55.41	158	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	55.41	55.51	528	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	55.51	55.56	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	55.56	55.60	264	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	55.60	55.80	1,003	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	55.80	55.80	<1	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaE	Pacolet sandy loam, 15 to 45 percent slopes	55.80	55.82	106	No	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
LoE	Louisburg coarse sandy loam, 15 to 45 percent slopes	55.82	55.85	158	No	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	55.85	55.91	317	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	55.91	56.28	2,006	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	56.28	56.32	211	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	56.32	56.41	475	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	56.41	56.44	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
VaC	Vance sandy loam, 6 to 10 percent slopes	56.44	56.54	528	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	56.54	56.65	581	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	56.65	56.67	158	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	56.67	56.81	739	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	56.81	57.04	1,214	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	57.04	57.05	53	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	57.05	57.12	370	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	57.12	57.15	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	57.15	57.19	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	57.19	57.26	370	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	57.26	57.33	422	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	57.33	57.44	581	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	57.44	57.56	634	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	57.56	57.85	1,584	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	57.85	57.88	106	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	57.88	57.91	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	57.91	58.00	475	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.00	58.00	<1	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	58.00	58.03	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
HeC	Helena sandy loam, 6 to 10 percent slopes	58.03	58.04	53	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	58.04	58.08	158	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.08	58.11	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	58.11	58.16	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.16	58.27	634	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	58.27	58.28	53	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.28	58.47	1,056	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	58.47	58.51	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	58.51	58.59	422	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.59	58.64	264	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	58.64	58.69	211	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
EnD	Enon sandy loam, 10 to 15 percent slopes	58.69	58.71	106	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	58.71	58.85	739	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	58.85	59.00	792	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	59.00	59.08	422	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	59.08	59.14	317	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	59.14	59.18	158	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	59.18	59.28	528	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	59.28	59.30	158	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	59.30	59.32	106	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	59.32	59.50	950	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	59.50	59.60	528	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	59.60	59.63	158	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	59.63	59.65	106	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	59.63	59.63	<1	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	59.65	59.68	158	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	59.68	59.81	686	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	59.81	60.05	1,267	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	60.05	60.22	898	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	60.22	60.67	2,429	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	60.67	60.68	<1	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
PaD	Pacolet sandy loam, 10 to 15 percent slopes	60.68	60.72	211	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	60.72	60.80	475	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	60.80	60.83	106	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	60.83	60.91	422	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	60.91	60.95	211	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	60.95	61.01	317	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	61.01	61.08	370	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	61.08	61.10	106	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	61.10	61.15	264	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
IrB	Iredell loam, 2 to 6 percent slopes	61.15	61.31	845	Yes	3	0.31	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	61.31	61.36	317	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	61.36	61.67	1,584	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	61.67	61.76	475	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	61.76	61.83	370	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	61.83	61.90	422	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	61.90	61.93	158	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	61.93	61.95	106	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
IrB	Iredell loam, 2 to 6 percent slopes	61.95	61.99	211	Yes	3	0.31	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	61.99	62.13	792	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	62.13	62.30	898	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	62.30	62.40	528	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	62.40	62.44	211	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	62.44	62.47	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	62.47	62.58	528	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	62.58	62.63	317	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	62.63	62.69	317	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	62.69	62.72	158	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	62.72	62.96	1,267	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	62.96	63.05	475	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	63.05	63.13	422	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	63.13	63.14	53	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
LoE	Louisburg coarse sandy loam, 15 to 45 percent slopes	63.14	63.21	370	No	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	63.21	63.35	686	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	63.35	63.45	581	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	63.45	63.46	53	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	63.46	63.51	264	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	63.51	63.55	211	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	63.55	63.59	211	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
W	Water	63.59	63.64	264	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
EnD	Enon sandy loam, 10 to 15 percent slopes	63.64	63.69	264	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	63.69	63.73	264	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	63.73	63.78	211	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	63.78	63.85	370	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	63.85	63.85	<1	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	63.85	63.85	53	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	63.85	63.90	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	63.90	63.98	422	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	63.98	64.02	264	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	64.02	64.06	158	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	64.06	64.11	264	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	64.11	64.32	1,109	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	64.32	64.40	370	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	64.40	64.42	106	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	64.42	64.52	581	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	64.52	64.58	317	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	64.58	64.67	475	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	64.67	64.70	158	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	64.70	64.92RR	1,162	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	64.92RR	64.93RR	53	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	64.93RR	65.0RR	317	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.0RR	65.06RR	317	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.06RR	65.07RR	106	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
EnD	Enon sandy loam, 10 to 15 percent slopes	65.07RR	65.09RR	106	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	65.09RR	65.13RR	211	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	65.13RR	65.23RR	528	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	65.23RR	65.27RR	211	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	65.27RR	65.37RR	528	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	65.37RR	65.44RR	370	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.44RR	65.48RR	158	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.48RR	65.53RR	264	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.53RR	65.52	264	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.52	65.53	53	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.53	65.58	264	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.58	65.64	317	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	65.64	65.64	<1	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.64	65.68	211	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
IrB	Iredell loam, 2 to 6 percent slopes	65.68	65.82	739	Yes	3	0.31	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.82	65.86	158	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	65.86	66.23	1,954	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	66.23	66.27	264	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	66.27	66.39	634	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	66.39	66.43	211	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	66.43	66.57	686	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	66.57	66.62	264	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	66.62	66.68	264	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	66.68	66.70	106	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	66.70	66.72	106	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
Ud	Udorthents, loamy 0 to 25 percent slopes	66.72	66.73	53	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	66.73	66.80	370	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	66.80	66.87	370	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	66.87	67.03	792	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	67.03	67.04	53	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	67.04	67.10	317	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
EnD	Enon sandy loam, 10 to 15 percent slopes	67.10	67.37	1,426	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
PaE	Pacolet sandy loam, 15 to 45 percent slopes	67.37	67.38	53	No	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	67.38	67.47	475	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	67.47	67.50	158	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	67.50	67.54	211	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	67.54	67.59	264	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	67.59	67.62	106	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	67.62	67.64	106	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	67.64	67.71	370	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	67.71	67.73	106	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	67.73	67.78	264	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	67.78	67.84	317	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	67.84	67.88	158	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	67.88	67.90	158	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
PaE	Pacolet sandy loam, 15 to 45 percent slopes	67.90	67.93	158	No	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	67.93	67.97	211	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	67.97	68.06	475	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.06	68.08	106	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	68.08	68.14	317	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.14	68.19	211	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	68.19	68.24	264	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.24	68.30	317	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	68.30	68.33	158	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.33	68.37	264	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	68.37	68.39	53	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.39	68.43	211	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	68.43	68.48	211	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	68.48	68.60	634	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	68.60	68.63	158	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CuC2	Cullen-Urban land complex, 6 to 10 percent slopes, moderately eroded	68.63	68.64	53	No	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	68.64	68.72	422	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
EnD	Enon sandy loam, 10 to 15 percent slopes	68.72	68.83	581	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	68.83	68.86	158	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.86	68.87	106	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	68.87	68.91	211	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	68.91	68.96	264	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
Ud	Udorthents, loamy 0 to 25 percent slopes	68.96	69.03	370	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	69.03	69.14	581	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	69.14	69.17	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	69.17	69.22	211	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	69.22	69.50	1,531	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	69.50	69.62	581	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
Ur	Urban land	69.62	69.74	634	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
EnD	Enon sandy loam, 10 to 15 percent slopes	69.74	69.85	581	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	69.85	69.86	106	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
W	Water	69.86	69.90	158	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	69.90	69.94	211	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	69.94	69.99	264	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	69.99	70.04	264	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	70.04	70.08	211	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.08	70.11	211	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	70.11	70.17	264	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	70.17	70.17	53	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.17	70.25	370	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	70.25	70.25	<1	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	70.25	70.27	106	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	70.27	70.30	158	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.30	70.32	106	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	70.32	70.37	264	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	70.37	70.38	53	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	70.38	70.42	264	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.42	70.43	53	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
EnB	Enon sandy loam, 2 to 6 percent slopes	70.43	70.50	317	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.50	70.51	106	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	70.51	70.55	211	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.55	70.64	475	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	70.64	70.72	422	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	70.72	70.75	158	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	70.75	70.77	158	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.77	70.79	106	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	70.79	70.84	264	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.84	70.86	106	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	70.86	70.98	686	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	70.98	71.04	317	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	71.04	71.29	1,267	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	71.29	71.36	370	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
Ur	Urban land	71.36	71.46	528	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	71.46	71.73	1,478	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	71.73	71.77	211	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	71.77	71.93	845	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	71.93	72.00	370	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	72.00	72.07	370	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	72.07	72.09	106	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	72.09	72.12	158	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	72.12	72.24	686	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	72.24	72.28	158	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	72.28	72.30	158	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	72.30	72.34	211	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	72.34	72.41	370	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	72.41	72.44	211	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	72.44	72.57	686	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	72.57	72.60	211	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	72.60	72.67	370	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	72.67	72.67	<1	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	72.67	72.69	106	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	72.69	72.82	739	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	72.82	72.93	581	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
Ud	Udorthents, loamy 0 to 25 percent slopes	72.93	72.94	53	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	72.94	72.96	106	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	72.96	73.05	475	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	73.05	73.16RR	581	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	73.16RR	73.17RR	53	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
Aboveground Facilities													
Pittsylvania County, Virginia													
Lambert Compressor Station / Interconnect / Mainline valve 1 (MP 0.0RR)													
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
Mainline valves 2 and 3 MP 7.4 and 18.3													
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	NA	NA	NA	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
Contractor Yards													
1B	Appling sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
9B	Creedmoor fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.2	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
16B	Helena sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
16C	Helena sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
22B	Mattaponi sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Moderately well drained
22C	Mattaponi sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.19	Non-Hydric	Low	>60	No	No	Moderately well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
26D	Fairview fine sandy loam, 15 to 25 percent slopes	NA	NA	NA	Yes	3	0.22	Non-Hydric	Moderate	>60	No	No	Well drained
Access Roads													
1B	Appling sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
1C	Appling sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
3B	Bolling fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.29	Non-Hydric	Moderate	>60	No	No	Moderately well drained

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Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
4B	Clifford sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
4C	Cecil sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	NA	NA	NA	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	NA	NA	NA	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
7A	Chenneby loam, 0 to 2 percent slopes, occasionally flooded	NA	NA	NA	Yes	5	0.44	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
8A	Chenneby-Toccoa complex, 0 to 2 percent slopes, frequently flooded	NA	NA	NA	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
9B	Creedmoor fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.2	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
11B3	Cullen clay loam, 2 to 7 percent slopes, severely eroded	NA	NA	NA	No	6	0.27	Non-Hydric	High	>60	No	No	Well drained
17B	Hiwassee loam, 2 to 7 percent slopes	NA	NA	NA	Yes	6	0.21	Non-Hydric	High	>60	No	No	Well drained
18C3	Hiwassee clay loam, 7 to 15 percent slopes, severely eroded	NA	NA	NA	No	6	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	NA	NA	NA	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
22C	Mattaponi sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.19	Non-Hydric	Low	>60	No	No	Moderately well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	NA	NA	NA	No	5	0.27	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29D	Pinkston-Mayodan complex, 15 to 35 percent slopes, very stony	NA	NA	NA	No	5	0.28	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29E	Pinkston-Mayodan complex, 35 to 50 percent slopes, very stony	NA	NA	NA	No	5	0.28	Non-Hydric	Low	18.1	Yes	No	Excessively drained
34B	Sheva fine sandy loam, 2 to 7 percent slopes	NA	NA	NA	No	3	0.35	Non-Hydric	Moderate	29.1	Yes	No	Moderately well drained
39	Udorthents, loamy	NA	NA	NA	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
Rockingham County, North Carolina													
LN 3600 Interconnect (MP 28.2)													
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	NA	NA	NA	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	NA	NA	NA	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
T-15 Dan River Interconnect / Mainline Valve 4 (MP 30.4)													
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	NA	NA	NA	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	NA	NA	NA	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
Mainline valve 5 (MP 42.2)													
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	NA	NA	NA	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained

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Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
Contractor Yards													
ChC	Clifford-Urban land complex, 2 to 10 percent slopes	NA	NA	NA	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
LeB	Leaksville silt loam, 0 to 4 percent slopes	NA	NA	NA	No	6	0.37	Hydric	High	24.0	Yes	Yes	Poorly drained
SpB	Spray loam, 0 to 5 percent slopes	NA	NA	NA	No	6	0.43	Non-Hydric	High	>60	Yes	No	Well drained
Ud	Udorthents, loamy	NA	NA	NA	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
Access Roads													
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	NA	NA	NA	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CaB	Casville sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.26	Non-Hydric	High	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	NA	NA	NA	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CeA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	NA	NA	NA	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	NA	NA	NA	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmE	Clover sandy loam, 15 to 25 percent slopes	NA	NA	NA	No	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CnE2	Clover sandy clay loam, 15 to 25 percent slopes, moderately eroded	NA	NA	NA	No	5	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	NA	NA	NA	No	5	0.31	Predominantly Non-Hydric	High	>60	No	No	Well drained
DeD	Devotion fine sandy loam, 6 to 15 percent slopes	NA	NA	NA	No	3	0.27	Non-Hydric	Moderate	25.2	No	No	Well drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	NA	NA	NA	No	3	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	NA	NA	NA	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
HaB	Halifax sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.22	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
HwD	Hiwassee loam, 8 to 15 percent slopes	NA	NA	NA	Yes	6	0.18	Non-Hydric	Moderate	>60	No	No	Well drained
IrD	Iredell fine sandy loam, 8 to 15 percent slopes	NA	NA	NA	No	3	0.3	Non-Hydric	Moderate	>60	No	Yes	Somewhat poorly drained
JkB	Jackland fine sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.3	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
LeB	Leaksville silt loam, 0 to 4 percent slopes	NA	NA	NA	No	6	0.37	Hydric	High	24.0	Yes	Yes	Poorly drained
LkB	Leaksville-Urban land complex, 0 to 4 percent slopes	NA	NA	NA	No	Unknown	0.37	Partially Hydric	High	24.0	Unknown	No	Poorly drained
NaB	Nathalie sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.18	Non-Hydric	Moderate	>60	No	No	Well drained
OkB2	Oak Level sandy clay loam, 2 to 8 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	NA	NA	NA	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
PpB2	Poplar Forest sandy clay loam, 2 to 8 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.3	Non-Hydric	High	>60	No	No	Well drained
PpE2	Poplar Forest sandy clay loam, 15 to 25 percent slopes, moderately eroded	NA	NA	NA	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	NA	NA	NA	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	NA	NA	NA	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
SpB	Spray loam, 0 to 5 percent slopes	NA	NA	NA	No	6	0.43	Non-Hydric	High	>60	Yes	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	NA	NA	NA	No	3	0.22	Non-Hydric	High	15.0	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	NA	NA	NA	No	3	0.22	Non-Hydric	Moderate	15.0	No	No	Well drained
Ud	Udorthents, loamy	NA	NA	NA	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
W	Water	NA	NA	NA	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
WhB	Wickham sandy loam, mesic, 1 to 4 percent slopes, rarely flooded	NA	NA	NA	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
YaB	Yadkin loam, 2 to 8 percent slopes	NA	NA	NA	Yes	5	0.18	Non-Hydric	Moderate	>60	No	No	Well drained
Alamance County, North Carolina													
Mainline valves 6 and 7 (MP 55.1 and 68.2)													
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	NA	NA	NA	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
T-21 Haw River Interconnect / Mainline valve 8 (MP 73.2RR)													
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
Access Roads													
CcB	Cecil sandy loam, 2 to 6 percent slopes	NA	NA	NA	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	NA	NA	NA	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	NA	NA	NA	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	NA	NA	NA	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	NA	NA	NA	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	NA	NA	NA	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained

REVISED Table 7.2-2

Soil Types Crossed by the MVP Southgate Project

Map Unit Symbol	Map Unit Name	Milepost Start	Milepost End	Crossing Length (feet)	Prime Farmland or Farmland of Statewide Importance a/	WEG b/	K Factor c/	Hydric Rating d/	Revegetation Potential e/	Depth to Bedrock (inches) f/	Stony/Rocky (g)	Compaction Prone h/	Drainage Class
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EoC2	Enon clay loam, 6 to 10 percent slopes, moderately eroded	NA	NA	NA	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EsC	Enon loam, 6 to 10 percent slopes, very stony	NA	NA	NA	No	5	0.26	Non-Hydric	High	>60	No	No	Well drained
EsD	Enon loam, 10 to 15 percent slopes, very stony	NA	NA	NA	No	5	0.26	Non-Hydric	Moderate	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	NA	NA	NA	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
HeB	Helena sandy loam, 2 to 6 percent slopes	NA	NA	NA	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	NA	NA	NA	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
IrB	Iredell loam, 2 to 6 percent slopes	NA	NA	NA	Yes	3	0.31	Non-Hydric	Moderate	>60	No	No	Moderately well drained
LoD	Louisburg coarse sandy loam, 10 to 15 percent slopes	NA	NA	NA	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	NA	NA	NA	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	NA	NA	NA	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
Ud	Udorthents, loamy 0 to 25 percent slopes	NA	NA	NA	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
Ur	Urban land	NA	NA	NA	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
VaB	Vance sandy loam, 2 to 6 percent slopes	NA	NA	NA	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	NA	NA	NA	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
Guilford County, North Carolina													
Contractor Yards													
HhB	Helena-Sedgefield complex, 0 to 6 percent slopes	NA	NA	NA	Yes	3	0.28	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
Access Roads													
HhB	Helena-Sedgefield complex, 0 to 6 percent slopes	NA	NA	NA	Yes	3	0.28	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained

Notes:

NA = Not Applicable

a/: Prime farmland and Farmland of Statewide Importance includes soils mapped and designated as prime farmland and farmland of statewide importance by the NRCS (SSURGO reference column “farmlndcl”). Prime Farmland if drained and / or irrigated and / or reclaimed of excess salts and sodium is not included in this acreage. No areas of Farmland of local importance or unique farmland are affected by the Project.

b/: WEGs (Wind Erodibility Groups) obtained from the NRCS Soil Data Mart. WEGs range from 1 to 8, with 1 being the highest potential for wind erosion, and 8 the lowest. Highly wind erodible soils include those in wind erodibility groups 1 or 2 (SSURGO reference column "weg").

c/: Water erosion potential was determined by averaging the K factor values of horizons of each soil type. Based on the average K factor, each soil type was grouped into a water erosion class of “Low”, “Moderate”, and “High”. Highly water erodible soils include those with a K factor greater than 0.4.

d/: “Urban Land” and “Udorthents” map units do not have a NRCS designated hydric soil status. These map units were considered to be non-hydric soils. Hydric Type is determined with Hydric Classification - Presence ("hydclprs") where if hydclprs of 0% is categorized as “Non-hydric”. Values between 1% – 33% are categorized as “Predominantly Non-hydric”, 34% - 66% as “Partially Hydric”, 67% - 99% as “Predominantly Hydric”, and 100% is categorized as “Hydric”.

e/: Revegetation Potential is determined by three parameters: drainage class, K factor, and slope, each parameter assigned a value of 1, 2, or 3, then averaged. Drainage classes of excessively drained and very poorly drained are designated low (1), somewhat excessively drained and poorly drained are designated moderate (2), and well drained, moderately well drained, and somewhat poorly drained are designated high (3). Low K factor (3), Moderate (2), and High (1). Slopes of 25% or more are low (1), 8%-25% are moderate (2), and slopes of less than 8% are high (3). The average of these three scores is then taken to determine the overall low, moderate, or high revegetation potential. 1.0-1.7 = Low, 1.8-2.3 = Moderate, 2.4-3.0 = High.

f/: Depth to bedrock is not defined by the NRCS for the “Pavement and Buildings” map unit. In these cases, a depth to bedrock of >60” was assigned, which is consistent with NRCS designations for other natural and fill soils in the Project area. Shallow bedrock soils include those that have lithic or paralithic bedrock within 60 inches or less of the soil surface (SSURGO and STATGO2 reference column “rescind” and “resdept_r”).

g/: Stony/Rocky soils include those with a cobbley, stony, bouldery, shaly, channery, very gravelly, or extremely gravelly modifier to the textural class of the surface layer and / or that have a surface layer that contains greater than 5 percent by weight rock fragments larger than 3 inches.

h/: Compaction prone was determined by texture and drainage class. Compaction prone soils are those with clay loam or finer texture, and somewhat poor, poor, and very poor drainage class (SSURGO reference column “texcl” and “drainagecl”).

i/: Mileposts represent soil types crossed by the pipeline alignment only. A summary of limitations associated with all soil types affected by the Project workspace areas is included in Table 7.2-1.

REVISED Table 7.3-1

Prime Farmland Affected by the MVP Southgate Project

Facility, County, State	Area of Project Workspace within Prime Farmland Areas (Acres) a/							
	Mapped Prime Farmland b/		Prime Farmland currently in agricultural use c/		Mapped Farmland of Statewide Importance d/		Farmland of Statewide Importance currently in agricultural use e/	
	Construction f/	Operation g/	Construction	Operation	Construction	Operation	Construction	Operation
H-605 Pipeline								
Pittsylvania, Virginia	**6.3**	**2.3**	**1.0**	**0.6**	**1.4**	**0.5**	**0.0**	**0.0**
H-650 Pipeline								
Pittsylvania, Virginia	86.7	33.5	14.6	5.2	264.8	100.6	51.4	20.6
Rockingham, North Carolina	152.4	57.7	40.7	15.3	101.3	39.2	1.3	0.3
Alamance, North Carolina	129.6	50.1	33.1	11.7	134.2	50.3	12.3	4.1
Cathodic Protection Groundbeds								
Pittsylvania, Virginia	1.1	1.1	0.0	0.0	0.6	0.6	0.0	0.0
Rockingham, North Carolina	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0
Alamance, North Carolina	1.2	1.2	0.0	0.0	0.5	0.5	0.0	0.0
Aboveground Facilities								
Pittsylvania, Virginia								
Lambert Compressor Station / Interconnect / MLV 1 (MP 0.0)	17.1	8.8	12.3	6.1	3.4	2.9	0.5	0.2
MLVs 2 and 3 (MPs 7.4 and 18.3)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0	0.0
Contractor Yards	55.8	0.0	0.0	0.0	9.5	0.0	0.0	0.0
Access Roads	17.5	2.3	2.1	0.7	30.1	0.6	4.1	0.1
Rockingham, North Carolina								
LN 3600 Interconnect (MP 28.2)	4.6	0.7	<0.1	<0.1	0.2	<0.1	0.0	0.0
T-15 Dan River Interconnect / MLV 4 (MP 30.4)	5.1	0.8	<0.1	0.0	0.0	0.0	0.0	0.0
MLV 5 (MP 42.2)	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0
Contractor Yards	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Access Roads	29.6	3.3	3.7	<0.1	8.8	1.2	0.5	0.0
Alamance County, North Carolina								

REVISED Table 7.3-1

Prime Farmland Affected by the MVP Southgate Project

Facility, County, State	Area of Project Workspace within Prime Farmland Areas (Acres) a/							
	Mapped Prime Farmland b/		Prime Farmland currently in agricultural use c/		Mapped Farmland of Statewide Importance d/		Farmland of Statewide Importance currently in agricultural use e/	
	Construction f/	Operation g/	Construction	Operation	Construction	Operation	Construction	Operation
T-21 Haw River Interconnect (MP 73.1) / MLV 8	0.0	0.0	0.0	0.0	1.4	0.6	0.0	0.0
MLVs 6 and 7 (MPs 55.1 and 68.2)	<0.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.0	0.0
Contractor Yards	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Access Roads	8.6	1.0	1.0	<0.1	10.2	0.9	2.4	0.0
Guilford County, North Carolina								
Contractor Yard	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Access Roads	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Project Total h/	**520.5**	**163.0**	**108.7**	**39.5**	**566.8**	**198.1**	**72.5**	**25.4**

Note: Pig launchers and receivers will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for the pig launchers and receivers are included with those facilities. Mainline Valves ("MLVs") 1, 4, and 8 will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for these MLVs are included with those facilities.

a/ No areas of Farmland of local importance or unique farmland are affected by the Project.
b/ Prime farmland includes soils mapped and designated as prime farmland by the NRCS. Prime Farmland if drained and / or irrigated and / or reclaimed of excess salts and sodium is not included in this acreage (SSURGO reference column "farmlands").
c/ Agricultural land (i.e., cultivated land identified in Resource Report 8) within areas identified as Prime Farmland. Numbers represent actual land in agricultural use.
d/ Farmland of Statewide Importance includes soils mapped and designated as farmland of statewide importance by the NRCS (SSURGO reference column "farmlndcl"). Farmland of statewide importance are mapped by SSURGO and determined by the appropriate State agencies which may include areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods.
e/ Agricultural land (i.e., cultivated land identified in Resource Report 8) within areas identified as Farmland of Statewide Importance. Numbers represent actual land in agricultural use.
f/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and railroad rights-of-way are not included in this acreage. Acreage includes a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire.
g/ Includes only the operation footprint of the Project facilities and the 50-foot-wide permanent pipeline right-of-way.
h/ Sums may not equal addends due to rounding. Addends consist of six-decimal digits.

NEW Table 113-1

Prime Farmland Permanently Affected by the MVP Southgate Project

Facility, County, State	Area of Project Workspace within Prime Farmland Areas (Acres) a/			
	Mapped Prime Farmland b/	Prime Farmland currently in agricultural use c/	Mapped Farmland of Statewide Importance d/	Farmland of Statewide Importance currently in agricultural use e/
Aboveground Facilities				
Pittsylvania, Virginia				
Lambert Compressor Station / Interconnect / MLV 1 (MP 0.0)	8.8	6.1	2.9	0.2
MLVs 2 and 3 (MPs 7.4 and 18.3)	<0.1	<0.1	<0.1	0.0
Permanent Access Roads	2.3	0.7	0.6	0.1
Rockingham, North Carolina				
LN 3600 Interconnect (MP 28.2)	0.7	<0.1	<0.1	0.0
T-15 Dan River Interconnect / MLV 4 (MP 30.4)	0.8	0.0	0.0	0.0
MLV 5 (MP 42.2)	<0.1	0.0	0.0	0.0
Permanent Access Roads	3.3	<0.1	1.2	0.0
Alamance County, North Carolina				
T-21 Haw River Interconnect (MP 73.1) / MLV 8	0.0	0.0	0.6	0.0
MLVs 6 and 7 (MPs 55.1 and 68.2)	<0.1	<0.1	<0.1	0.0
Permanent Access Roads	1.0	<0.1	0.9	0.0
Guilford County, North Carolina				
Access Roads	0.0	0.0	0.1	0.0
Project Total f/	**17.0**	**6.8**	**6.3**	**0.3**

Note: Pig launchers and receivers will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for the pig launchers and receivers are included with those facilities. Mainline Valves ("MLVs") 1, 4, and 8 will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for these MLVs are included with those facilities.

a/ No areas of Farmland of local importance or unique farmland are affected by the Project. Includes only the operation footprint of the Project facilities, permanent access roads, and the 50-foot-wide permanent pipeline right-of-way.

b/ Prime farmland includes soils mapped and designated as prime farmland by the NRCS. Prime Farmland if drained and / or irrigated and / or reclaimed of excess salts and sodium is not included in this acreage (SSURGO reference column "farmlands").

c/ Agricultural land (i.e., cultivated land identified in Resource Report 8) within areas identified as Prime Farmland. Numbers represent actual land in agricultural use.

d/ Farmland of Statewide Importance includes soils mapped and designated as farmland of statewide importance by the NRCS (SSURGO reference column "farmlndcl"). Farmland of statewide importance are mapped by SSURGO and determined by the appropriate State agencies which may include areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods.

e/ Agricultural land (i.e., cultivated land identified in Resource Report 8) within areas identified as Farmland of Statewide Importance. Numbers represent actual land in agricultural use.

f/ Sums may not equal addends due to rounding. Addends consist of six-decimal digits.

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 8

March 2019

LIST OF TABLES

REVISED Table 8.2-1

Land Uses Crossed by the Southgate Project Pipeline

Facility	County, State	Upland Forest / Woodland a/		Upland Open Land b/		Agricultural c/		Commercial / Industrial d/		Wetland e/		Silviculture f/		Residential g/		Open Water h/		Total i/
		Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles
H-605 Pipeline	Pittsylvania, VA	0.3	60	0.1	16	0.1	23	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.5
H-650 Pipeline	Pittsylvania, VA	12.2	47	7.8	30	4.3	16	0.2	1	1.2	4	0.1	0	0.2	1	0.1	1	26.1
	Rockingham, NC	14.6	55	6.8	26	3.2	12	0.5	2	0.8	3	0.2	1	0.1	0	0.2	1	26.5
	Alamance, NC	11.0	54	5.4	26	2.8	14	0.3	1	0.4	2	0.3	1	0.3	1	0.1	1	20.6
TOTAL		38.1	52	20.1	27	10.4	14	1.0	1	2.4	3	0.6	1	0.6	1	0.5	1	73.7

Source: Project aerial photography April 2018

a/ Upland forest not being used for specific commercial purposes.

b/ Utility rights-of-way, open fields, vacant land, herbaceous and scrub uplands, non-forested lands, golf courses, and municipal land.

c/ Cultivated land (e.g., tobacco, soybeans, hay, corn).

d/ Manufacturing or industrial plants, paved areas, landfills, mines, quarries, electric power or natural gas utility facilities; developed areas, roads, railroads and railroad yards, and commercial or retail facilities.

e/ Palustrine forested, Palustrine scrub-shrub, and Palustrine emergent wetlands as identified in Resource Report 2.

f/ Wooded lands being managed for forest products (i.e., pine plantations).

g/ Existing developed residential areas and planned residential developments. This may include large developments, low, medium, and high density residential neighborhoods, urban and suburban residential, multi-family residences, ethnic villages, residentially zoned areas that have been developed or short segments of the route at road crossings with homes near the route alignment.

h/ Field delineated waterbodies with a bank width of greater than six feet, and waterbodies visible on aerial photography where field delineation has not been completed.

i/ Sum of addends may not equal the totals due to rounding. Addends consist of 6-decimal digits.

#114 - REVISED Table 8.2-2

Land Use Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline i/

Facility County, State	Upland Forest / Woodland a/		Upland Open Land b/		Agricultural Land c/		Commercial / Industrial d/		Wetland e/		Silviculture f/		Residential g/		Open Water h/		Total i/	
	Construction i/	Operation k/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational
H-605 Pipeline Right-of-Way l/	**3.4**	**1.7**	**0.7**	**0.4**	**1.0**	**0.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**<0.1**	**0.0**	**5.2**	**2.7**
Pittsylvania, VA	3.4	1.7	0.7	0.4	1.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	0.0	**5.2**	**2.7**
Additional Temporary Workspace m/	**2.4**	**0.0**	**0.1**	**0.0**	**<0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.5**	**0.0**
Pittsylvania, VA	2.4	0.0	0.1	0.0	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**2.5**	**0.0**
H-650 Pipeline Right-of-Way l/	**428.9**	**220.0**	**244.2**	**122.3**	**120.7**	**60.9**	**11.1**	**5.6**	**22.6**	**5.5**	**7.8**	**3.7**	**7.5**	**3.4**	**3.2**	**0.6**	**846.0**	**421.5**
Pittsylvania, VA	136.7	68.7	97.0	48.7	51.9	26.0	2.6	1.3	11.0	2.5	1.2	0.6	2.8	1.2	1.2	0.0	**304.5**	**148.9**
Rockingham, NC	169.8	86.9	81.7	40.9	34.4	18.0	5.2	2.7	7.9	1.8	2.8	1.4	1.2	0.5	1.4	0.0	**304.3**	**152.2**
Alamance, NC	122.3	64.4	65.5	32.7	34.5	16.9	3.2	1.6	3.7	1.3	3.8	1.8	3.5	1.7	0.5	0.0	**237.2**	**120.4**
Additional Temporary Workspace m/	**126.3**	**0.0**	**81.5**	**0.0**	**45.5**	**0.0**	**0.6**	**0.0**	**2.4**	**0.0**	**2.3**	**0.0**	**2.4**	**0.0**	**0.0**	**0.0**	**261.0**	**0.0**
Pittsylvania, VA	41.7	0.0	30.6	0.0	15.2	0.0	<0.1	0.0	0.2	0.0	0.4	0.0	0.4	0.0	0.0	0.0	**88.4**	**0.0**
Rockingham, NC	53.4	0.0	23.6	0.0	16.8	0.0	0.2	0.0	1.6	0.0	0.0	0.0	0.8	0.0	0.0	0.0	**96.4**	**0.0**
Alamance, NC	31.2	0.0	27.4	0.0	13.5	0.0	0.4	0.0	0.6	0.0	1.8	0.0	1.2	0.0	0.0	0.0	**76.2**	**0.0**
Cathodic Protection Groundbeds n/	**0.5**	**0.5**	**3.5**	**3.5**	**0.0**	**0.0**	**0.0**	**0.0**	**<0.1**	**<0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4.0**	**4.0**
Pittsylvania, VA	0.5	0.5	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.7**	**1.7**
Rockingham, NC	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	**0.6**	**0.6**
Alamance, NC	0.0	0.0	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.7**	**1.7**

#114 - REVISED Table 8.2-2

Land Use Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline i/

Facility County, State	Upland Forest / Woodland a/		Upland Open Land b/		Agricultural Land c/		Commercial / Industrial d/		Wetland e/		Silviculture f/		Residential g/		Open Water h/		Total i/	
	Construction i/	Operation k/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational
Permanent Aboveground Facilities	**6.5**	**4.6**	**12.0**	**2.9**	**12.9**	**6.3**	**<0.1**	**<0.1**	**0.6**	**<0.1**	**<0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**32.0**	**13.9**
Pittsylvania, VA	**6.2**	**4.4**	**1.5**	**1.0**	**12.8**	**6.3**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**20.5**	**11.8**
Lambert Compressor Station & Interconnect / MLV 1	6.2	4.4	1.5	1.0	12.8	6.3	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	**20.5**	**11.7**
MLV 2	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
MLV 3	0.0	0.0	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
Rockingham, NC	**0.3**	**0.2**	**9.1**	**1.3**	**0.1**	**0.0**	**<0.1**	**<0.1**	**0.5**	**0.0**	**<0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**10.0**	**1.5**
LN 3600 Interconnect	0.3	0.2	4.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	0.0	0.0	**4.8**	**0.7**
T-15 Dan River Interconnect / MLV 4	0.0	0.0	4.6	0.8	0.1	0.0	<0.1	<0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**5.2**	**0.8**
MLV 5	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
Alamance, NC	**0.0**	**0.0**	**1.4**	**0.6**	**<0.1**	**<0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.4**	**0.6**
T-21 Haw River Interconnect / MLV 8	0.0	0.0	1.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.4**	**0.6**
MLV 6	0.0	0.0	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
MLV 7	0.0	0.0	<0.1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**<0.1**	**<0.1**
Contractor Yards	**36.0**	**0.0**	**36.6**	**0.0**	**0.0**	**0.0**	**32.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**104.9**	**0.0**
Pittsylvania, VA	35.9	0.0	16.0	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**65.3**	**0.0**
Rockingham, NC	0.0	0.0	16.2	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**35.1**	**0.0**

#114 - REVISED Table 8.2-2

Land Use Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline i/

Facility County, State	Upland Forest / Woodland a/		Upland Open Land b/		Agricultural Land c/		Commercial / Industrial d/		Wetland e/		Silviculture f/		Residential g/		Open Water h/		Total i/	
	Construction i/	Operation k/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational
Alamance, NC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**
Guilford, NC	0.2	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**4.6**	**0.0**
Temporary and Permanent Access Roads h/	**15.3**	**0.6**	**70.9**	**6.5**	**14.5**	**0.8**	**12.5**	**1.0**	**0.2**	**0.0**	**0.7**	**0.0**	**12.9**	**1.0**	**0.1**	**0.0**	**127.2**	**9.8**
Pittsylvania, VA	6.7	0.2	28.5	0.9	6.3	0.8	4.7	0.7	0.1	0.0	0.0	0.0	4.7	0.2	0.0	0.0	**51.1**	**2.9**
Rockingham, NC	4.6	0.1	32.3	4.6	4.9	<0.1	3.0	0.2	0.1	<0.1	0.0	0.0	6.4	0.0	0.0	0.0	**51.3**	**4.9**
Alamance, NC	4.0	0.2	10.0	1.0	3.4	<0.1	4.7	0.1	<0.1	0.0	0.7	0.0	1.8	0.7	0.0	0.0	**24.6**	**2.1**
Guilford, NC	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.2**	**0.0**
Project Total	**619.3**	**227.4**	**449.6**	**135.6**	**194.7**	**68.7**	**56.5**	**6.6**	**25.8**	**5.6**	**10.8**	**3.7**	**22.8**	**4.4**	**3.2**	**0.0**	**1,382.7**	**452.1**

Source: Project aerial photography April 2018.

Note: Pig launchers and receivers will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreages calculations for the pig launchers and receivers are included with those facilities. Mainline valves (MLVs) 1, 4, and 8 will be within other aboveground facility sites (i.e., the Lambert Compressor Station, T-15 Dan River Interconnect, and T-21 Haw River Interconnect), therefore, acreage calculations for MLVs 1, 4, and 8 are included with those facilities.

a/ Upland forest not being used for specific commercial purposes.

b/ Utility rights-of-way, open fields, vacant land, herbaceous and scrub uplands, non-forested lands, golf courses, and municipal land.

c/ Cultivated land (e.g., tobacco, soybeans, hay, corn).

d/ Manufacturing or industrial plants, paved areas, landfills, mines, quarries, electric power or natural gas utility facilities; developed areas, roads, railroads and railroad yards, and commercial or retail facilities.

e/ Palustrine forested, Palustrine scrub-shrub, and Palustrine emergent wetlands as identified in Resource Report 2.

f/ Wooded lands being managed for forest products (i.e., pine plantations).

g/ Existing developed residential areas and planned residential developments. This may include large developments, low, medium, and high density residential neighborhoods, urban and suburban residential, multi-family residences, ethnic villages, residentially zoned areas that have been developed or short segments of the route at road crossings with homes near the route alignment.

#114 - REVISED Table 8.2-2

Land Use Acreage Affected by Construction and Operation of the Proposed MVP Southgate Project Pipeline i/

Facility County, State	Upland Forest / Woodland a/		Upland Open Land b/		Agricultural Land c/		Commercial / Industrial d/		Wetland e/		Silviculture f/		Residential g/		Open Water h/		Total i/	
	Construction j/	Operation k/	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operational

h/ Field delineated waterbodies with a bank width of greater than six feet, and waterbodies visible on aerial photography where field delineation has not been completed.

i/ Sums may not equal the total of addends due to rounding. Addends consist of 6-decimal digits.

j/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Southgate Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage. Acreage includes a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire.

k/ Includes only the operation footprint of the Southgate Project facilities, the 50-foot-wide permanent pipeline right-of-way in uplands, except in wetland areas where the operation width has been reduced to 10 feet in emergent wetlands, scrub shrub wetlands, and within 25 feet of waterbodies; and 30 feet in forested wetlands. The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

l/ Includes the 50-foot-wide permanent right-of-way and temporary workspace areas.

m/ includes ATWS areas for the pipeline facilities. ATWS areas to be used for construction of aboveground facilities are included in the acreage calculations for the applicable aboveground facilities.

REVISED Table 8.2-3

Agricultural Drainage Tiles and Irrigation Systems Located on Parcels Affected by the Southgate Project

State, County	Approximate Mileposts	Tract ID	Feature Type
Virginia			
None identified to date			
North Carolina			
Rockingham	48.2	NC-RO-156.000	Irrigation Sprinkler System
Rockingham	50.3 / TA-RO-139	NC-RO-174.100.AR	Irrigation Sprinkler System
Rockingham	50.3 / TA-RO-139	NC-RO-174.200.AR	Irrigation Sprinkler System
Alamance	53.3	NC-AL-000.060	Irrigation Sprinkler System
Alamance	56.1	NC-AL-025.000	Pivot or Irrigation System
Alamance	60.9	NC-AL-076.000	Irrigation Sprinkler System
Alamance	61.7	NC-AL-081.000	Irrigation Sprinkler System
Alamance	62.8	NC-AL-093.000	Agricultural Drain Tile
Alamance	63.2	NC-AL-096.000	Drain Tile
Alamance	63.4 / TA-AL-171	NC-AL-101.000.AR	Irrigation Sprinkler System, Pivot or Irrigation System
Alamance	69.8	NC-AL-180.000	Irrigation Sprinkler System

Source: Landowner surveys conducted to date for the Southgate Project.

REVISED Table 8.2-4

Silviculture Areas Crossed by the Southgate Project

Silviculture Type	Land Tract	Nearest Milepost	Pipeline Crossing Length (feet)	Construction Acres a/	Operation Acres b/
Pine Plantation	VA-PI-006.000	0.9	253	1.0	0.2
Pine Plantation	VA-PI-007.000	1.0	0	<0.1	<0.1
Pine Plantation	VA-PI-008.000	1.0	0	<0.1	0.0
Pine Plantation	VA-PI-101.000	15.4	282	0.7	0.3
Pine Plantation	NC-RO-006.000	27.6	383	1.0	0.4
Pine Plantation	NC-RO-140.000	45.4	796	1.8	0.9
Pine Plantation	NC-AL-000.065	53.5	1,554	4.2	1.8
Pine Plantation	NC-AL-103.000	64.0	0	2.0	0.1
Pine Plantation	NC-AL-143.000	68.4	0	0.1	0.0
		Totals c/	**3,268**	**10.8**	**3.7**

a/ Construction acres includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Southgate Project (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

b/ Includes only the operation footprint of the Southgate Project facilities that is the 50-foot-wide permanent pipeline right-of-way in uplands.

c/ Sums may not equal the total of addends due to rounding. Addends consist of six-decimal digits.

REVISED Table 8.2-6

Railroads Crossed by the Southgate Project

County , State	Milepost	Railroad	Active or Abandoned	Proposed Crossing Method
Pittsylvania, VA	5.3	Norfolk Southern Railroad	Active	Conventional Bore
Pittsylvania, VA	25.0	Norfolk Southern Railroad	Active	Conventional Bore
Rockingham, NC	39.7	Norfolk Southern	Active	Conventional Bore
Alamance, NC	69.8	Norfolk Southern Railway	Active	Conventional Bore

#121 and 122 - REVISED Table 8.4-1

Federal, State, Recreation, and Conservation Lands Crossed by or Located within 0.25 mile of the Southgate Project

County, State	Milepost	Name of Area	Land Ownership / Management	Pipeline Crossing Length (feet)	Land Use a/	Area Affected (Acres)		Distance and Direction from Pipeline or Facility (feet)	Crossing Method / Special Construction Measures
						Construction	Operation		
H-605 Pipeline									
None Identified									
H-650 Pipeline									
Pittsylvania, Virginia	4.3	Designated Banister River Segment / Future Blueway	State Designated	N/A	N/A	N/A	N/A	1,162 feet southeast of MP 4.3	N/A
Pittsylvania, Virginia	4.9	Banister River Future Blueway	Upper Reach Roanoke River Basin Association	48	OW	0.1	0.0	0	Open cut – Dam and pump, Flume
Pittsylvania, Virginia	5.5 – 6.6	Pittsylvania County Parcels	Pittsylvania County	5,835	CI, FW, OL, WL	18.3	6.6	0	Conventional open-cut
Pittsylvania, Virginia	14.1	Easement	Virginia Outdoors Foundation	N/A	N/A	N/A	N/A	914 feet southeast of MP 14.0	N/A
Pittsylvania, Virginia	17.7	Designated Sandy River Segment	State Designated	85	OW	0.1	0.0	0	Open cut – Dam and pump Flume
Pittsylvania, Virginia	22.3 – 24.8	Berry Hill Industrial Park	Pittsylvania Regional Industrial Facility Authority (i.e., Commonwealth of Virginia)	12,991	FW, OL, OW, WL	37.9	14.5	0	Conventional open-cut
Rockingham, North Carolina	30.1	Dan River Trail / Nationwide Rivers Inventory	North Carolina Watercraft Trail	N/A (HDD)	OW	0.0	0.0	0	HDD
Rockingham, North Carolina	37.7 – 38.0	Conservation Easement	Piedmont Land Conservancy	139	FW, OL, OW	0.3	0.1	0	Conventional open-cut
Rockingham, North Carolina	38.8 – 39.0	None	City of Reidsville	1,207	FW, OL	4.2	1.4	0	Conventional open-cut
Alamance, North Carolina	56.9	Ace Speedway	Private	N/A	N/A	N/A	N/A	94 feet west of MP 56.9	N/A
Alamance, North Carolina	58.7	AOI Study Area – Land being considered during the master planning process	North Carolina Division of Parks and Recreation	N/A	N/A	N/A	N/A	1,1340 feet southwest of MP 58.7	N/A

#121 and 122 - REVISED Table 8.4-1

Federal, State, Recreation, and Conservation Lands Crossed by or Located within 0.25 mile of the Southgate Project

County, State	Milepost	Name of Area	Land Ownership / Management	Pipeline Crossing Length (feet)	Land Use a/	Area Affected (Acres)		Distance and Direction from Pipeline or Facility (feet)	Crossing Method / Special Construction Measures
						Construction	Operation		
Alamance, North Carolina	60.7	Mitigation Easement	North Carolina Division of Mitigation Services	N/A	N/A	N/A	N/A	551 feet north of MP 60.7	N/A
Alamance, North Carolina	65.6	Conservation Easement	Private	0	FW, OL	0.3	<0.1	0	Conventional open-cut
Alamance, North Carolina	68.6	Planned Regional Trail	North Carolina Division of Parks and Recreation	Unknown	FW, OL	Unknown	Unknown	0	Conventional open-cut
Alamance, North Carolina	69.9 – 73.1	Planned Haw River Trail / Nationwide Rivers Inventory	Haw River Trail Partnership	N/A	N/A	N/A	N/A	190 feet west of MP 71.6	N/A
Alamance, North Carolina	69.7 – 69.8	Town of Haw River	Town of Haw River	593	CI, FW, OL, RD	2.2	0.6	0	Conventional open-cut and conventional bore
Alamance, North Carolina	69.8	Mountains-To-Sea Trail	North Carolina Division of Parks and Recreation	N/A (conventional bore)	CI	0.0	0.0	0	Conventional Bore
Alamance, North Carolina	70.0	Unknown	Town of Haw River	N/A	N/A	N/A	N/A	234 feet west of MP 70.0	N/A
Alamance, North Carolina	70.0 – 71.3	Challenge Golf Club	Private	N/A	N/A	N/A	N/A	440 feet west of MP 71.3	N/A
Alamance, North Carolina	70.2	Haw River Sanitary District Facility	Town of Haw River	186	FW	0.3	0.2	0	Conventional open-cut
Alamance, North Carolina	71.4 – 71.7	Easement	North Carolina Clean Water Trust Fund	N/A	N/A	N/A	N/A	177 feet west of MP 71.6	N/A
Alamance, North Carolina	71.8	Easement	North Carolina Clean Water Trust Fund	N/A	N/A	N/A	N/A	446 feet west of MP 71.8	N/A
Alamance, North Carolina	72.9	Graham Paddle Access – Haw River Trail	City of Graham	N/A	N/A	N/A	N/A	421 feet northwest of ATWS 1692 near MP 72.9	N/A
Alamance, North Carolina	73.2RR[b/]	Easement	Private	1,195	CI, OL, WL	6.9	1.4	0	Open cut / TBD
Contractor Yards									

#121 and 122 - REVISED Table 8.4-1

Federal, State, Recreation, and Conservation Lands Crossed by or Located within 0.25 mile of the Southgate Project

County, State	Milepost	Name of Area	Land Ownership / Management	Pipeline Crossing Length (feet)	Land Use a/	Area Affected (Acres)		Distance and Direction from Pipeline or Facility (feet)	Crossing Method / Special Construction Measures
						Construction	Operation		
Rockingham, North Carolina	28.6	Municipal parcel	City of Eden	N/A	OL	N/A	N/A	Abutting CY-04	N/A
Rockingham, North Carolina	44.8	Mitigation Easement	North Carolina Division of Mitigation Services	N/A	N/A	N/A	N/A	508 feet west of CY-08	N/A
Access Roads									
Pittsylvania, Virginia	5.6 – 5.8	Pittsylvania County Parcel	Pittsylvania County	N/A	FW, OL	0.6	0.0	TA-PI-015	Stone and Widening
Pittsylvania, Virginia	5.9	Pittsylvania County Parcel	Pittsylvania County	N/A	CI, FW, OL	2.0	0.0	TA-PI-016	Stone and Widening
Pittsylvania, Virginia	6.2	Pittsylvania County Parcel	Pittsylvania County	N/A	CI, OL	0.5	0.0	TA-PI-017	Stone and Widening
Pittsylvania, Virginia	14.2	Easement	Virginia Outdoors Foundation	N/A	N/A	N/A	N/A	TA-PI-035	N/A
Pittsylvania, Virginia	23.0	Berry Hill Industrial Park	Pittsylvania Regional Industrial Facility Authority (i.e., Commonwealth of Virginia)	N/A	FW, OL, OW, WL	2.4	0.0	TA-PI-061	Stone, Widening, and Culverts
Pittsylvania, Virginia	24.0	Berry Hill Industrial Park	Pittsylvania Regional Industrial Facility Authority (i.e., Commonwealth of Virginia)	N/A	CI, FW, OL, OW	1.6	0.0	TA-PI-063	Stone, Widening, and Culverts
Pittsylvania, Virginia	24.6	Berry Hill Industrial Park	Pittsylvania Regional Industrial Facility Authority (i.e., Commonwealth of Virginia)	N/A	FW, OL	1.5	0.0	TA-PI-064	Stone and Widening
Rockingham, North Carolina	38.8 – 38.9	None	City of Reidsville	N/A	FW, OL	0.2	0.0	TA-RO-106	Stone and Widening
Alamance, North Carolina	56.9	Ace Speedway	Private	N/A	CI	0.3	0.0	TA-AL-159A	Stone and Widening

#121 and 122 - REVISED Table 8.4-1

Federal, State, Recreation, and Conservation Lands Crossed by or Located within 0.25 mile of the Southgate Project

County, State	Milepost	Name of Area	Land Ownership / Management	Pipeline Crossing Length (feet)	Land Use a/	Area Affected (Acres)		Distance and Direction from Pipeline or Facility (feet)	Crossing Method / Special Construction Measures
						Construction	Operation		
Alamance, North Carolina	73.2RR	Easement	Private	N/A	OL	<0.1	<0.1	PA-AL-194	TBD
T-21 Haw River Interconnect / MLV 8									
Alamance, North Carolina	73.2RR	Easement	Private	N/A	OL	1.4	0.6	0	TBD

Notes:
ATWS = additional temporary workspace; HDD = horizontal directional drill; MP = milepost; CY = Contractor Yard; N/A = not applicable.
Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.
a/ FW = Upland Forest / Woodland; CI = Commercial / Industrial, OL = Upland Open Land; OW = Open Water; RD = Residential; WL = Wetland.
b/ Boundary of conservation easement to be verified during pipeline easement negotiations with the landowner.

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
H-605 Pipeline			
Upland Forest / Woodland	0.00	0.12	637.6
Wetland	0.12	0.12	11.7
Open Water	0.12	0.12	6.0
Upland Forest / Woodland	0.12	0.27	782.8
Upland Open Land	0.27	0.28	44.7
Agriculture	0.28	0.34	333.9
Upland Open Land	0.34	0.37	128.2
Upland Forest / Woodland	0.37	0.37	30.2
Upland Open Land	0.37	0.38	30.9
Agriculture	0.38	0.41	158.1
Upland Open Land	0.41	0.42	40.9
Upland Forest / Woodland	0.42	0.43	41.6
Upland Open Land	0.43	0.45	153.9
Agriculture	0.45	0.47	85.8
H-650 Pipeline			
Agriculture	0.0RR	0.05RR	267.1
Upland Open Land	0.05RR	0.09RR	201.4
Upland Forest / Woodland	0.09RR	0.16	505.1
Wetland	0.16	0.17	57.5
Upland Forest / Woodland	0.17	0.32	750.2
Wetland	0.32	0.38	344.9
Upland Open Land	0.38	0.39	18.6
Upland Forest / Woodland	0.39	0.39	1.5
Wetland	0.39	0.39	11.4
Upland Forest / Woodland	0.39	0.39	18.3
Open Water	0.39	0.40	21.4
Upland Forest / Woodland	0.40	0.42	113.4
Upland Open Land	0.42	0.44	132.8
Upland Forest / Woodland	0.44	0.52	399.5
Upland Open Land	0.52	0.55	152.7
Upland Forest / Woodland	0.55	0.55	16.4
Open Water	0.55	0.55	14.1
Wetland	0.55	0.56	30.3
Upland Forest / Woodland	0.56	0.56	9.1
Upland Open Land	0.56	0.56	0.3
Wetland	0.56	0.60	194.4

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	0.60	0.71	573.1
Commercial / Industrial	0.71	0.71	25.4
Upland Open Land	0.71	0.87	830.6
Commercial / Industrial	0.87	0.87	26.7
Upland Open Land	0.87	0.92	225.0
Silviculture	0.92	0.96	252.6
Upland Forest / Woodland	0.96	0.98	86.3
Wetland	0.98	0.98	12.9
Upland Forest / Woodland	0.98	0.99	60.0
Upland Open Land	0.99	1.00	16.0
Agriculture	1.00	1.07	367.3
Upland Forest / Woodland	1.07	1.09	117.2
Agriculture	1.09	1.09	6.9
Upland Forest / Woodland	1.09	1.10	49.6
Open Water	1.10	1.10	4.6
Upland Forest / Woodland	1.10	1.11	44.7
Agriculture	1.11	1.13	116.4
Upland Forest / Woodland	1.13	1.15	115.3
Upland Open Land	1.15	1.25	537.4
Upland Forest / Woodland	1.25	1.31	305.8
Upland Open Land	1.31	1.33	117.6
Upland Forest / Woodland	1.33	1.34	17.0
Upland Open Land	1.34	1.37	178.2
Wetland	1.37	1.40	155.7
Upland Forest / Woodland	1.40	1.41	61.5
Wetland	1.41	1.41	10.6
Open Water	1.41	1.41	4.1
Wetland	1.41	1.46	254.8
Upland Forest / Woodland	1.46	1.47	35.9
Wetland	1.47	1.62	770.2
Upland Open Land	1.62	1.69	408.0
Wetland	1.69	1.70	55.3
Upland Open Land	1.70	1.70	8.0
Upland Forest / Woodland	1.7	1.71	46.4
Open Water	1.71	1.72	29.6
Upland Forest / Woodland	1.72	1.73	34.6
Upland Open Land	1.73	1.79	331.1

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Wetland	1.79	2.18	2,072.4
Upland Open Land	2.18	2.21	145.3
Wetland	2.21	2.22	48.7
Upland Forest / Woodland	2.22	2.22	12.5
Upland Open Land	2.22	2.30	407.8
Upland Forest / Woodland	2.30	2.43	685.2
Upland Open Land	2.43	2.45	95.9
Upland Forest / Woodland	2.45	2.51	361.1
Upland Open Land	2.51	2.52	53.2
Upland Forest / Woodland	2.52	2.53	41.7
Upland Open Land	2.53	2.53	14.7
Upland Forest / Woodland	2.53	2.54	48.4
Upland Open Land	2.54	2.55	21.6
Upland Forest / Woodland	2.55	2.57	143.3
Upland Open Land	2.57	2.78	1,093.0
Commercial / Industrial	2.78	2.79	27.2
Agriculture	2.79	2.91	672.7
Commercial / Industrial	2.91	2.92	24.6
Agriculture	2.92	2.98	297.5
Commercial / Industrial	2.98	2.98	28.6
Agriculture	2.98	3.17	999.2
Upland Open Land	3.17	3.23	294.5
Upland Forest / Woodland	3.23	3.23	3.7
Open Water	3.23	3.23	7.8
Upland Forest / Woodland	3.23	3.24	52.4
Upland Open Land	3.24	3.26	110.6
Agriculture	3.26	3.40	748.8
Commercial / Industrial	3.40	3.40	15.2
Agriculture	3.40	3.56	813.2
Upland Forest / Woodland	3.56	3.58	92.5
Wetland	3.58	3.58	43.7
Open Water	3.58	3.59	9.8
Wetland	3.59	3.59	1.4
Upland Forest / Woodland	3.59	3.60	80.0
Agriculture	3.60	3.80RR	1,049.9
Upland Forest / Woodland	3.80RR	3.81RR	56.1
Agriculture	3.81RR	3.82RR	36.7

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	3.82RR	3.84RR	120.3
Upland Open Land	3.84RR	3.87RR	181.4
Upland Forest / Woodland	3.87RR	3.89RR	91.5
Upland Open Land	3.89RR	3.91RR	72.8
Upland Forest / Woodland	3.91RR	3.94RR	162.7
Agriculture	3.94RR	4.02	497.4
Upland Forest / Woodland	4.02	4.02	35.8
Wetland	4.02	4.02	5.1
Open Water	4.02	4.03	5.7
Upland Forest / Woodland	4.03	4.03	18.3
Agriculture	4.03	4.11	444.8
Upland Forest / Woodland	4.11	4.12	50.0
Open Water	4.12	4.12	3.8
Upland Forest / Woodland	4.12	4.13	32.7
Agriculture	4.13	4.24	556.9
Commercial / Industrial	4.24	4.24	21.7
Upland Open Land	4.24	4.27	186.2
Commercial / Industrial	4.27	4.28	16.3
Upland Forest / Woodland	4.28	4.32	232.0
Commercial / Industrial	4.32	4.34	117.4
Upland Open Land	4.34	4.35	35.6
Upland Forest / Woodland	4.35	4.41	330.6
Upland Open Land	4.41	4.50	436.2
Upland Forest / Woodland	4.50	4.50	11.9
Upland Open Land	4.50	4.53	144.6
Upland Forest / Woodland	4.53	4.53	6.2
Upland Open Land	4.53	4.54	87.6
Upland Forest / Woodland	4.54	4.56	95.1
Upland Open Land	4.56	4.62	308.8
Upland Forest / Woodland	4.62	4.78	859.7
Upland Open Land	4.78	4.83	245.9
Upland Forest / Woodland	4.83	4.84	46.6
Open Water	4.84	4.84	4.0
Upland Forest / Woodland	4.84	4.84	9.0
Upland Open Land	4.84	4.85	63.7
Wetland	4.85	4.92	382.1
Upland Open Land	4.92	4.93	50.9

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Open Water	4.93	4.94	48.4
Upland Open Land	4.94	4.99	267.2
Upland Forest / Woodland	4.99	5.01	78.3
Wetland	5.01	5.01	13.5
Open Water	5.01	5.02	32.7
Wetland	5.02	5.04	123.4
Upland Forest / Woodland	5.04	5.05	68.0
Upland Open Land	5.05	5.06	34.2
Upland Forest / Woodland	5.06	5.10	214.3
Upland Open Land	5.10	5.11	30.9
Upland Forest / Woodland	5.11	5.12	43.1
Wetland	5.12	5.13	86.5
Open Water	5.13	5.14	23.0
Upland Forest / Woodland	5.14	5.14	46.1
Wetland	5.14	5.20	308.8
Upland Forest / Woodland	5.20	5.22	71.8
Wetland	5.22	5.24	122.4
Upland Forest / Woodland	5.24	5.25	30.4
Upland Open Land	5.25	5.25	19.9
Commercial / Industrial	5.25	5.26	53.4
Upland Open Land	5.26	5.27	40.0
Upland Forest / Woodland	5.27	5.42	800.0
Upland Open Land	5.42	5.43	54.9
Upland Forest / Woodland	5.43	5.45	128.5
Upland Open Land	5.45	5.49	199.0
Upland Forest / Woodland	5.49	5.55	312.9
Upland Open Land	5.55	5.56	62.6
Upland Forest / Woodland	5.56	5.58	101.5
Upland Open Land	5.58	5.72	708.6
Upland Forest / Woodland	5.72	5.76	216.0
Upland Open Land	5.76	5.76	18.8
Upland Forest / Woodland	5.76	5.79	155.8
Upland Open Land	5.79	5.94	818.2
Upland Forest / Woodland	5.94	5.95	30.2
Upland Open Land	5.95	5.98	163.6
Upland Forest / Woodland	5.98	6.00	90.2
Upland Open Land	6.00	6.11	569.0

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	6.11	6.15	225.4
Upland Open Land	6.15	6.15	14.5
Upland Forest / Woodland	6.15	6.19	223.1
Upland Open Land	6.19	6.21	69.3
Upland Forest / Woodland	6.21	6.22	67.6
Upland Open Land	6.22	6.40	926.9
Upland Forest / Woodland	6.40	6.40	19.3
Upland Open Land	6.40	6.44	232.2
Upland Forest / Woodland	6.44	6.47	165.7
Upland Open Land	6.47	6.55	385.8
Upland Forest / Woodland	6.55	6.56	72.7
Upland Open Land	6.56	6.57	50.6
Upland Forest / Woodland	6.57	6.57	10.3
Wetland	6.57	6.58	53.3
Upland Forest / Woodland	6.58	6.61	135.4
Upland Open Land	6.61	6.62	79.5
Upland Forest / Woodland	6.62	6.64	78.0
Upland Open Land	6.64	6.64	20.8
Open Water	6.64	6.64	5.3
Upland Open Land	6.64	6.69	232.1
Upland Forest / Woodland	6.69	6.70	91.0
Upland Open Land	6.70	6.72	70.5
Upland Forest / Woodland	6.72	6.74	108.2
Upland Open Land	6.74	6.75	42.1
Upland Forest / Woodland	6.75	6.75	36.1
Upland Open Land	6.75	6.76	32.5
Upland Forest / Woodland	6.76	6.84	433.3
Upland Open Land	6.84	6.85	38.8
Upland Forest / Woodland	6.85	6.94	488.9
Upland Open Land	6.94	6.96	85.3
Upland Forest / Woodland	6.96	6.96	25.8
Open Water	6.96	6.96	3.9
Upland Forest / Woodland	6.96	6.98	114.6
Open Water	6.98	6.99	5.3
Upland Forest / Woodland	6.99	6.99	39.0
Upland Open Land	6.99	7.03	208.9
Upland Forest / Woodland	7.03	7.06	121.6

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Agriculture	7.06	7.11	312.6
Upland Open Land	7.11	7.17	271.6
Commercial / Industrial	7.17	7.17	38.9
Upland Open Land	7.17	7.32	752.2
Upland Forest / Woodland	7.32	7.35	177.2
Upland Open Land	7.35	7.36	48.6
Upland Forest / Woodland	7.36	7.37	38.6
Upland Open Land	7.37	7.37	46.0
Commercial / Industrial	7.37	7.42	221.7
Upland Open Land	7.42	7.50	425.7
Upland Forest / Woodland	7.50	7.50	1.6
Upland Open Land	7.50	7.51	48.6
Upland Forest / Woodland	7.51	7.51	21.6
Upland Open Land	7.51	7.58	375.2
Open Water	7.58	7.58	3.2
Upland Open Land	7.58	7.62	186.8
Upland Forest / Woodland	7.62	7.65	165.4
Upland Open Land	7.65	7.97	1,719.1
Wetland	7.97	7.98	3.2
Open Water	7.98	7.98	9.1
Wetland	7.98	7.98	4.9
Upland Forest / Woodland	7.98	7.99	76.5
Upland Open Land	7.99	8.08	448.9
Commercial / Industrial	8.08	8.08	22.4
Upland Open Land	8.08	8.13	272.7
Upland Forest / Woodland	8.13	8.17	178.4
Upland Open Land	8.17	8.38	1,119.5
Upland Forest / Woodland	8.38	8.38	5.2
Upland Open Land	8.38	8.40	125.9
Wetland	8.40	8.42	97.5
Upland Open Land	8.42	8.43	35.9
Upland Forest / Woodland	8.43	8.45	125.6
Upland Open Land	8.45	8.52	357.3
Upland Forest / Woodland	8.52	8.52	11.6
Upland Open Land	8.52	8.53	24.2
Wetland	8.53	8.55	93.4
Open Water	8.55	8.55	8.1

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Wetland	8.55	8.55	32.4
Upland Open Land	8.55	8.56	18.9
Upland Forest / Woodland	8.56	8.56	14.2
Open Water	8.56	8.56	9.3
Upland Open Land	8.56	8.57	33.0
Wetland	8.57	8.58	46.6
Upland Forest / Woodland	8.58	8.59	96.4
Upland Open Land	8.59	8.78	987.1
Upland Forest / Woodland	8.78	8.85	380.2
Upland Open Land	8.85	8.85	3.7
Upland Forest / Woodland	8.85	8.88	132.5
Upland Open Land	8.88	8.90	112.1
Upland Forest / Woodland	8.90	8.93	156.8
Upland Open Land	8.93	8.96	166.0
Upland Forest / Woodland	8.96	9.05	459.4
Open Water	9.05	9.05	23.0
Upland Forest / Woodland	9.05	9.10	228.7
Upland Open Land	9.10	9.10	41.9
Upland Forest / Woodland	9.10	9.11	17.1
Upland Open Land	9.11	9.12	76.9
Agriculture	9.12	9.34	1,154.3
Commercial / Industrial	9.34	9.34	20.1
Upland Open Land	9.34	9.35	15.6
Upland Forest / Woodland	9.35	9.36	52.2
Upland Open Land	9.36	9.42	349.3
Upland Forest / Woodland	9.42	9.52	486.3
Agriculture	9.52	9.59	373.1
Upland Open Land	9.59	9.59	22.2
Upland Forest / Woodland	9.59	9.72	672.2
Upland Open Land	9.72	9.77	282.0
Upland Forest / Woodland	9.77	9.77	19.1
Upland Open Land	9.77	9.81	179.9
Agriculture	9.81	9.84	163.2
Upland Open Land	9.84	9.85	50.9
Upland Forest / Woodland	9.85	9.86	45.1
Upland Open Land	9.86	9.88	102.1
Agriculture	9.88	9.89	55.9

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	9.89	9.89	11.7
Upland Forest / Woodland	9.89	9.90	40.0
Open Water	9.90	9.90	2.6
Upland Forest / Woodland	9.90	9.90	14.0
Wetland	9.90	9.91	26.7
Upland Forest / Woodland	9.91	9.92	89.8
Open Water	9.92	9.93	13.9
Upland Forest / Woodland	9.93	9.94	75.7
Wetland	9.94	9.95	40.2
Upland Forest / Woodland	9.95	10.07	670.7
Upland Open Land	10.07	10.08	14.1
Upland Forest / Woodland	10.08	10.08	18.6
Wetland	10.08	10.08	3.3
Upland Forest / Woodland	10.08	10.13	272.4
Upland Open Land	10.13	10.14	36.0
Upland Forest / Woodland	10.14	10.20	322.7
Upland Open Land	10.20	10.21	26.4
Commercial / Industrial	10.21	10.21	33.3
Upland Open Land	10.21	10.22	58.2
Residential	10.22	10.26	193.7
Upland Open Land	10.26	10.34	401.6
Upland Forest / Woodland	10.34	10.44	530.6
Commercial / Industrial	10.44	10.44	9.3
Upland Forest / Woodland	10.44	10.71	1,456.2
Residential	10.71	10.74	146.2
Commercial / Industrial	10.74	10.75	27.9
Upland Open Land	10.75	10.76	54.7
Upland Forest / Woodland	10.76	10.79	157.3
Upland Open Land	10.79	10.99	1,068.0
Upland Forest / Woodland	10.99	11.03	220.1
Open Water	11.03	11.04	27.0
Upland Forest / Woodland	11.04	11.04	11.5
Open Water	11.04	11.04	4.3
Upland Forest / Woodland	11.04	11.04	18.1
Open Water	11.04	11.04	8.8
Upland Forest / Woodland	11.04	11.06	108.8
Upland Open Land	11.06	11.17	554.2

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	11.17	11.24	353.9
Agriculture	11.24	11.25	77.6
Upland Forest / Woodland	11.25	11.26	71.9
Upland Open Land	11.26	11.27	29.1
Upland Forest / Woodland	11.27	11.39	636.0
Open Water	11.39	11.39	11.6
Upland Forest / Woodland	11.39	11.40	59.5
Upland Open Land	11.40	11.49	435.7
Upland Forest / Woodland	11.49	11.49	16.7
Upland Open Land	11.49	11.54	267.1
Upland Forest / Woodland	11.54	11.62	394.5
Wetland	11.62	11.62	29.0
Open Water	11.62	11.62	4.2
Wetland	11.62	11.63	20.0
Upland Forest / Woodland	11.63	11.91	1,487.0
Open Water	11.91	11.91	22.9
Upland Forest / Woodland	11.91	12.00	449.8
Upland Open Land	12.00	12.00	24.0
Upland Forest / Woodland	12.00	12.05	255.9
Upland Open Land	12.05	12.12	397.2
Upland Forest / Woodland	12.12	12.18	305.6
Agriculture	12.18	12.36	913.4
Commercial / Industrial	12.36	12.36	23.5
Agriculture	12.36	12.51	787.8
Upland Forest / Woodland	12.51	12.52	71.7
Agriculture	12.52	12.72	1,019.4
Upland Forest / Woodland	12.72	12.73	97.1
Upland Open Land	12.73	12.74	12.7
Upland Forest / Woodland	12.74	12.76	143.7
Wetland	12.76	12.77	7.5
Open Water	12.77	12.77	15.3
Wetland	12.77	12.77	5.8
Upland Forest / Woodland	12.77	13.04	1,405.1
Upland Open Land	13.04	13.24	1,091.2
Upland Forest / Woodland	13.24	13.27	134.2
Upland Open Land	13.27	13.37	557.9
Commercial / Industrial	13.37	13.38	20.6

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	13.38	13.38	28.9
Upland Forest / Woodland	13.38	13.42	212.2
Wetland	13.42	13.43	56.3
Upland Forest / Woodland	13.43	13.44	22.9
Open Water	13.44	13.44	16.2
Upland Forest / Woodland	13.44	13.46	82.7
Wetland	13.46	13.46	5.5
Upland Forest / Woodland	13.46	13.46	19.4
Wetland	13.46	13.47	24.2
Upland Forest / Woodland	13.47	13.52	264.9
Upland Open Land	13.52	13.52	8.4
Upland Forest / Woodland	13.52	13.54	111.4
Upland Open Land	13.54	13.55	36.1
Upland Forest / Woodland	13.55	13.55	7.8
Upland Open Land	13.55	13.65	547.6
Upland Forest / Woodland	13.65	13.76	560.0
Upland Open Land	13.76	13.76	23.9
Upland Forest / Woodland	13.76	13.99	1,206.3
Upland Open Land	13.99	14.15	842.9
Upland Forest / Woodland	14.15	14.24	486.2
Wetland	14.24	14.25	55.8
Upland Forest / Woodland	14.25	14.27	72.6
Open Water	14.27	14.27	11.9
Upland Forest / Woodland	14.27	14.52	1,340.1
Upland Open Land	14.52	14.54	112.3
Upland Forest / Woodland	14.54	14.55	23.1
Upland Open Land	14.55	14.55	34.5
Upland Forest / Woodland	14.55	14.62	342.1
Upland Open Land	14.62	14.70	447.2
Upland Forest / Woodland	14.70	14.72	96.8
Open Water	14.72	14.72	2.5
Wetland	14.72	14.72	3.3
Upland Forest / Woodland	14.72	14.75	122.8
Upland Open Land	14.75	14.85	536.7
Commercial / Industrial	14.85	14.85	24.0
Agriculture	14.85	15.21	1,891.3
Upland Open Land	15.21	15.21	17.8

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	15.21	15.22	29.2
Open Water	15.22	15.22	5.1
Upland Forest / Woodland	15.22	15.28	314.4
Agriculture	15.28	15.38	538.1
Upland Forest / Woodland	15.38	15.40	107.1
Silviculture	15.40	15.46	282.4
Upland Forest / Woodland	15.46	15.46	38.2
Upland Open Land	15.46	15.66	1,038.2
Upland Forest / Woodland	15.66	15.69	159.3
Open Water	15.69	15.69	24.0
Upland Forest / Woodland	15.69	15.84	792.8
Upland Open Land	15.84	15.86	73.6
Upland Forest / Woodland	15.86	15.86	27.0
Open Water	15.86	15.86	6.3
Upland Forest / Woodland	15.86	15.93	320.7
Upland Open Land	15.93	15.93	12.1
Commercial / Industrial	15.93	15.93	23.4
Upland Open Land	15.93	15.94	49.3
Upland Forest / Woodland	15.94	16.00	285.8
Open Water	16.00	16.00	4.9
Upland Forest / Woodland	16.00	16.00	21.3
Open Water	16.00	16.00	2.0
Upland Forest / Woodland	16.00	16.03	174.2
Upland Open Land	16.03	16.10	336.2
Upland Forest / Woodland	16.10	16.10	18.7
Upland Open Land	16.10	16.13	151.1
Upland Forest / Woodland	16.13	16.14	32.9
Upland Open Land	16.14	16.15	73.4
Upland Forest / Woodland	16.15	16.16	37.6
Open Water	16.16	16.16	2.5
Wetland	16.16	16.17	39.2
Upland Forest / Woodland	16.17	16.26	502.0
Agriculture	16.26	16.44	933.7
Commercial / Industrial	16.44	16.44	41.4
Agriculture	16.44	16.50	265.3
Upland Forest / Woodland	16.50	16.51	66.8
Agriculture	16.51	16.58	374.2

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	16.58	16.58	25.5
Agriculture	16.58	16.68	502.0
Upland Forest / Woodland	16.68	16.71	152.7
Upland Open Land	16.71	16.71	22.0
Agriculture	16.71	16.78	369.9
Upland Forest / Woodland	16.78	16.79	43.9
Open Water	16.79	16.79	5.7
Upland Forest / Woodland	16.79	16.80	73.2
Agriculture	16.80	16.94	697.2
Upland Forest / Woodland	16.94	16.95	71.3
Open Water	16.95	16.95	2.4
Upland Forest / Woodland	16.95	16.98	168.1
Agriculture	16.98	17.05	378.3
Upland Forest / Woodland	17.05	17.06	20.1
Agriculture	17.06	17.12	307.8
Upland Forest / Woodland	17.12	17.13	54.3
Agriculture	17.13	17.23	531.9
Upland Open Land	17.23	17.25	125.0
Upland Forest / Woodland	17.25	17.29	215.7
Open Water	17.29	17.29	11.6
Upland Forest / Woodland	17.29	17.34	226.2
Upland Open Land	17.34	17.50	850.7
Upland Forest / Woodland	17.50	17.53	168.8
Upland Open Land	17.53	17.56	167.2
Upland Forest / Woodland	17.56	17.73	888.8
Open Water	17.73	17.75	84.9
Upland Forest / Woodland	17.75	18.01	1,415.9
Open Water	18.01	18.02	6.0
Upland Forest / Woodland	18.02	18.11	477.7
Upland Open Land	18.11	18.12	85.1
Upland Forest / Woodland	18.12	18.23	550.7
Upland Open Land	18.23	18.25	148.2
Commercial / Industrial	18.25	18.26	26.2
Agriculture	18.26	18.43	908.9
Upland Forest / Woodland	18.43	18.51	424.5
Agriculture	18.51	18.63	618.0
Upland Forest / Woodland	18.63	18.68	247.6

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	18.68	18.89	1,114.8
Upland Forest / Woodland	18.89	18.96	361.3
Upland Open Land	18.96	19.00	241.9
Upland Forest / Woodland	19.00	19.01	70.7
Commercial / Industrial	19.01	19.03	66.4
Upland Open Land	19.03	19.05	109.9
Agriculture	19.05	19.20	828.2
Residential	19.20	19.23	155.4
Upland Open Land	19.23	19.24	46.8
Commercial / Industrial	19.24	19.25	37.6
Agriculture	19.25	19.33	444.0
Upland Forest / Woodland	19.33	19.34	3.3
Agriculture	19.34	19.42	434.2
Upland Open Land	19.42	19.43	88.9
Open Water	19.43	19.43	3.8
Upland Open Land	19.43	19.44	21.0
Upland Forest / Woodland	19.44	19.44	18.3
Upland Open Land	19.44	19.45	34.2
Upland Forest / Woodland	19.45	19.50	245.1
Residential	19.50	19.50	20.5
Upland Open Land	19.50	19.51	38.0
Upland Forest / Woodland	19.51	19.54	170.3
Upland Open Land	19.54	19.55	58.9
Upland Forest / Woodland	19.55	19.56	44.2
Upland Open Land	19.56	19.56	25.7
Upland Forest / Woodland	19.56	19.59	154.0
Upland Open Land	19.59	19.60	18.3
Upland Forest / Woodland	19.60	19.60	18.3
Upland Open Land	19.60	19.62	126.5
Upland Forest / Woodland	19.62	19.63	57.2
Upland Open Land	19.63	19.67	207.0
Upland Forest / Woodland	19.67	19.68	41.0
Upland Open Land	19.68	19.68	3.3
Upland Forest / Woodland	19.68	19.71	170.0
Open Water	19.71	19.72	8.9
Upland Open Land	19.72	19.72	50.9
Upland Forest / Woodland	19.72	19.73	26.8

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	19.73	19.79	309.2
Upland Forest / Woodland	19.79	19.79	12.1
Upland Open Land	19.79	19.87	443.6
Upland Forest / Woodland	19.87	19.93	310.2
Upland Open Land	19.93	19.94	35.3
Commercial / Industrial	19.94	19.97	181.4
Upland Open Land	19.97	20.09	613.3
Residential	20.09	20.12	147.0
Upland Open Land	20.12	20.14	109.5
Residential	20.14	20.17	151.0
Upland Open Land	20.17	20.17	19.9
Upland Forest / Woodland	20.17	20.19	87.9
Upland Open Land	20.19	20.23	213.7
Upland Forest / Woodland	20.23	20.28	283.8
Agriculture	20.28	20.37	441.1
Upland Forest / Woodland	20.37	20.38	72.5
Wetland	20.38	20.38	5.3
Open Water	20.38	20.38	9.3
Wetland	20.38	20.38	3.0
Open Water	20.38	20.38	4.3
Upland Forest / Woodland	20.38	20.39	7.7
Upland Open Land	20.39	20.50	610.9
Agriculture	20.50	20.53	145.8
Upland Open Land	20.53	20.58	246.3
Upland Forest / Woodland	20.58	20.60	152.1
Open Water	20.60	20.61	6.2
Wetland	20.61	20.61	2.2
Upland Forest / Woodland	20.61	20.61	24.8
Upland Open Land	20.61	20.66	271.5
Upland Forest / Woodland	20.66	20.70	201.1
Upland Open Land	20.70	20.74	233.2
Upland Forest / Woodland	20.74	20.87	663.2
Agriculture	20.87	20.90	141.2
Upland Open Land	20.90	20.92	118.4
Agriculture	20.92	20.94	110.1
Upland Forest / Woodland	20.94	20.97	168.2
Open Water	20.97	20.97	7.8

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	20.97	20.98	38.6
Wetland	20.98	20.99	53.6
Upland Forest / Woodland	20.99	21.07	441.0
Upland Open Land	21.07	21.16	463.4
Upland Forest / Woodland	21.16	21.18	120.0
Upland Open Land	21.18	21.22	192.1
Wetland	21.22	21.23	54.1
Upland Forest / Woodland	21.23	21.24	29.1
Open Water	21.24	21.24	4.4
Upland Forest / Woodland	21.24	21.24	13.1
Wetland	21.24	21.26	82.6
Upland Forest / Woodland	21.26	21.29	189.6
Upland Open Land	21.29	21.34	262.8
Upland Forest / Woodland	21.34	21.81	2,498.6
Residential	21.81	21.85	209.1
Upland Forest / Woodland	21.85	21.91	305.0
Upland Open Land	21.91	21.92	18.8
Upland Forest / Woodland	21.92	22.00	453.4
Wetland	22.00	22.00	2.4
Open Water	22.00	22.01	18.6
Wetland	22.01	22.01	4.8
Upland Forest / Woodland	22.01	22.02	53.4
Residential	22.02	22.04	107.7
Upland Open Land	22.04	22.04	2.1
Wetland	22.04	22.04	35.2
Upland Open Land	22.04	22.04	0.0
Commercial / Industrial	22.04	22.05	25.9
Upland Open Land	22.05	22.05	31.1
Upland Forest / Woodland	22.05	22.07	58.5
Open Water	22.07	22.07	0.8
Upland Forest / Woodland	22.07	22.07	8.1
Wetland	22.07	22.07	18.8
Upland Forest / Woodland	22.07	22.10	133.3
Upland Open Land	22.10	22.10	12.2
Upland Forest / Woodland	22.10	22.17	396.3
Open Water	22.17	22.18	8.3
Upland Forest / Woodland	22.18	22.27	490.5

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	22.27	22.27	14.7
Upland Forest / Woodland	22.27	22.34	385.3
Upland Open Land	22.34	22.35	6.2
Upland Forest / Woodland	22.35	22.43	468.6
Upland Open Land	22.43	22.44	13.2
Upland Forest / Woodland	22.44	22.61	908.6
Upland Open Land	22.61	22.61	27.9
Upland Forest / Woodland	22.61	22.74	683.2
Upland Open Land	22.74	22.75	23.6
Upland Forest / Woodland	22.75	22.98	1,229.7
Open Water	22.98	22.98	3.8
Upland Forest / Woodland	22.98	23.15	905.6
Open Water	23.15	23.15	10.5
Upland Forest / Woodland	23.15	23.20	223.4
Open Water	23.20	23.20	21.9
Upland Forest / Woodland	23.20	23.52	1,699.7
Open Water	23.52	23.52	4.1
Upland Forest / Woodland	23.52	23.69	892.9
Commercial / Industrial	23.69	23.70	29.2
Upland Open Land	23.70	23.70	30.5
Upland Forest / Woodland	23.70	23.79	446.2
Open Water	23.79	23.79	6.9
Upland Forest / Woodland	23.79	24.04	1,321.4
Upland Open Land	24.04	24.05	28.3
Upland Forest / Woodland	24.05	24.36	1,676.9
Open Water	24.36	24.37	7.6
Upland Forest / Woodland	24.37	24.69	1,695.3
Upland Open Land	24.69	24.72	176.6
Upland Forest / Woodland	24.72	24.78	326.0
Open Water	24.78	24.78	4.9
Upland Forest / Woodland	24.78	24.79	16.9
Open Water	24.79	24.79	3.9
Upland Forest / Woodland	24.79	24.84	296.0
Upland Open Land	24.84	24.84	9.9
Upland Forest / Woodland	24.84	24.96	622.4
Upland Open Land	24.96	24.97	17.5
Commercial / Industrial	24.97	24.97	44.6

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	24.97	25.06	435.4
Upland Open Land	25.06	25.06	24.4
Upland Forest / Woodland	25.06	25.12	325.9
Open Water	25.12	25.13	18.8
Upland Forest / Woodland	25.13	25.38	1,342.4
Upland Open Land	25.38	25.68	1,580.2
Upland Forest / Woodland	25.68	25.70	129.0
Open Water	25.70	25.71	11.0
Upland Forest / Woodland	25.71	25.85	750.3
Wetland	25.85	25.85	3.9
Open Water	25.85	25.85	6.3
Wetland	25.85	25.85	18.4
Upland Forest / Woodland	25.85	25.93	424.6
Upland Open Land	25.93	25.94	48.5
Upland Forest / Woodland	25.94	26.06	640.8
Wetland	26.06	26.08	96.5
Upland Forest / Woodland	26.08	26.18	521.4
Upland Open Land	26.18	26.20	79.1
Upland Forest / Woodland	26.20	26.21	75.3
Upland Open Land	26.21	26.22	23.1
Upland Forest / Woodland	26.22	26.22	35.6
Upland Open Land	26.22	26.23	53.1
Commercial / Industrial	26.23	26.24	34.0
Upland Forest / Woodland	26.24	26.53	1,551.4
Wetland	26.53	26.54	15.0
Upland Forest / Woodland	26.54	26.54	3.5
Upland Open Land	26.54	26.54	15.0
Commercial / Industrial	26.54	26.55	34.8
Upland Open Land	26.55	26.68	696.4
Upland Forest / Woodland	26.68	26.68	27.1
Upland Open Land	26.68	26.69	62.7
Wetland	26.69	26.71	77.3
Upland Forest / Woodland	26.71	26.71	7.3
Upland Open Land	26.71	26.83	607.2
Upland Forest / Woodland	26.83	26.94	611.9
Commercial / Industrial	26.94	26.94	17.9
Upland Open Land	26.94	26.95	23.3

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Agriculture	26.95	27.07	631.6
Wetland	27.07	27.29	1,176.7
Upland Open Land	27.29	27.32	168.9
Upland Forest / Woodland	27.32	27.33	9.7
Wetland	27.33	27.33	37.9
Open Water	27.33	27.34	20.5
Upland Forest / Woodland	27.34	27.37	177.3
Upland Open Land	27.37	27.38	43.3
Agriculture	27.38	27.48	536.0
Upland Open Land	27.48	27.49	54.1
Upland Forest / Woodland	27.49	27.50	36.4
Open Water	27.50	27.52	137.5
Upland Forest / Woodland	27.52	27.52	9.1
Upland Open Land	27.52	27.55	117.6
Wetland	27.55	27.55	42.0
Upland Open Land	27.55	27.58	145.4
Wetland	27.58	27.59	38.1
Upland Open Land	27.59	27.6	46.6
Silviculture	27.60	27.62	132.5
Upland Forest / Woodland	27.62	27.64	111.1
Agriculture	27.64	27.76	615.6
Silviculture	27.76	27.78	112.9
Agriculture	27.78	27.86	436.2
Silviculture	27.86	27.89	137.4
Agriculture	27.89	27.97	437.0
Upland Open Land	27.97	28.02	252.1
Agriculture	28.02	28.04	71.6
Upland Open Land	28.04	28.11	379.7
Wetland	28.11	28.11	40.9
Upland Open Land	28.11	28.22	558.8
Upland Forest / Woodland	28.22	28.23	41.7
Upland Open Land	28.23	28.23	33.3
Upland Forest / Woodland	28.23	28.25	85.2
Upland Open Land	28.25	28.30	253.5
Wetland	28.30	28.30	26.2
Upland Open Land	28.30	28.33	143.7
Upland Forest / Woodland	28.33	28.33	14.0

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Wetland	28.33	28.33	5.1
Upland Forest / Woodland	28.33	28.38	226.3
Open Water	28.38	28.38	6.6
Upland Forest / Woodland	28.38	28.47	466.4
Upland Open Land	28.47	28.53	316.7
Upland Forest / Woodland	28.53	28.65	627.1
Wetland	28.65	28.65	28.8
Upland Forest / Woodland	28.65	28.79	727.5
Upland Open Land	28.79	28.79	23.6
Upland Forest / Woodland	28.79	28.98	970.1
Upland Open Land	28.98	28.98	34.4
Upland Forest / Woodland	28.98	29.09	556.0
Wetland	29.09	29.09	23.4
Upland Forest / Woodland	29.09	29.18	461.1
Upland Open Land	29.18	29.18	13.4
Upland Forest / Woodland	29.18	29.19	18.4
Upland Open Land	29.19	29.19	13.4
Upland Forest / Woodland	29.19	29.23	227.1
Upland Open Land	29.23	29.24	36.3
Upland Forest / Woodland	29.24	29.27	168.1
Upland Open Land	29.27	29.28RR	46.6
Upland Forest / Woodland	29.28RR	29.30RR	127.0
Upland Open Land	29.30RR	29.31RR	17.0
Upland Forest / Woodland	29.31RR	29.59	1,616.1
Agriculture	29.59	29.67	419.3
Upland Forest / Woodland	29.67	29.68	64.2
Wetland	29.68	29.87	984.4
Upland Open Land	29.87	29.87	12.2
Agriculture	29.87	30.04	920.9
Upland Forest / Woodland	30.04	30.05	58.8
Open Water	30.05	30.10	247.3
Upland Forest / Woodland	30.10	30.11	62.8
Agriculture	30.11	30.19	398.3
Wetland	30.19	30.19	24.6
Agriculture	30.19	30.20	21.0
Wetland	30.20	30.21	40.5
Agriculture	30.21	30.21	40.1

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Wetland	30.21	30.22	29.9
Agriculture	30.22	30.22	21.3
Wetland	30.22	30.23	31.6
Agriculture	30.23	30.24	65.2
Wetland	30.24	30.25	36.4
Agriculture	30.25	30.26	44.7
Wetland	30.26	30.27	48.2
Upland Forest / Woodland	30.27	30.31	244.5
Upland Open Land	30.31	30.32	33.3
Upland Forest / Woodland	30.32	30.32	6.9
Wetland	30.32	30.32	17.9
Upland Forest / Woodland	30.32	30.33	19.6
Upland Open Land	30.33	30.36	183.9
Wetland	30.36	30.37	26.7
Upland Open Land	30.37	30.43	360.6
Commercial / Industrial	30.43	30.44	19.6
Upland Open Land	30.44	30.44	2.6
Wetland	30.44	30.47	179.8
Upland Forest / Woodland	30.47	30.47	10.6
Upland Open Land	30.47	30.48	6.0
Commercial / Industrial	30.48	30.48	23.0
Upland Open Land	30.48	30.64	862.2
Commercial / Industrial	30.64	30.66	82.8
Residential	30.66	30.67	50.6
Upland Open Land	30.67	30.70	151.8
Wetland	30.70	30.70	11.2
Upland Open Land	30.70	30.85	777.2
Upland Forest / Woodland	30.85	30.85	18.3
Upland Open Land	30.85	30.91	306.7
Upland Forest / Woodland	30.91	31.29	2,023.5
Open Water	31.29	31.30	28.3
Upland Forest / Woodland	31.30	31.62	1,707.8
Upland Open Land	31.62	31.63	53.6
Commercial / Industrial	31.63	31.64	27.6
Upland Open Land	31.64	31.66	115.6
Upland Forest / Woodland	31.66	31.68	128.5
Upland Open Land	31.68	31.69	54.7

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	31.69	31.73	201.5
Upland Open Land	31.73	31.77	207.7
Upland Forest / Woodland	31.77	31.96	1,006.2
Wetland	31.96	31.96	5.8
Upland Forest / Woodland	31.96	31.99	145.4
Wetland	31.99	32.02	176.8
Upland Forest / Woodland	32.02	32.03	32.2
Upland Open Land	32.03	32.03	31.3
Upland Forest / Woodland	32.03	32.15	618.7
Upland Open Land	32.15	32.16	60.7
Upland Forest / Woodland	32.16	32.18	61.5
Open Water	32.18	32.19	102.6
Upland Forest / Woodland	32.19	32.20	51.1
Upland Open Land	32.20	32.22	68.9
Wetland	32.22	32.24	104.5
Upland Open Land	32.24	32.47	1,219.7
Upland Forest / Woodland	32.47	32.48	37.6
Upland Open Land	32.48	32.50	149.6
Upland Forest / Woodland	32.50	32.52	74.3
Upland Open Land	32.52	32.58	336.1
Upland Forest / Woodland	32.58	32.61	171.4
Upland Open Land	32.61	32.62	15.3
Wetland	32.62	32.62	21.1
Upland Open Land	32.62	32.63	51.9
Upland Forest / Woodland	32.63	32.63	23.4
Wetland	32.63	32.64	29.4
Upland Forest / Woodland	32.64	32.65	70.4
Open Water	32.65	32.66	55.4
Upland Open Land	32.66	32.66	2.0
Upland Forest / Woodland	32.66	32.86	1,046.6
Upland Open Land	32.86	32.87	46.7
Upland Forest / Woodland	32.87	32.88	24.5
Upland Open Land	32.88	32.88	16.2
Upland Forest / Woodland	32.88	32.93	252.1
Upland Open Land	32.93	32.93	13.7
Upland Forest / Woodland	32.93	32.93	16.3
Upland Open Land	32.93	32.94	13.7

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	32.94	32.98	215.5
Open Water	32.98	32.99	47.9
Upland Forest / Woodland	32.99	33.03	221.9
Upland Open Land	33.03	33.10	409.6
Wetland	33.10	33.12	68.5
Upland Forest / Woodland	33.12	33.18	337.9
Upland Open Land	33.18	33.19	28.6
Commercial / Industrial	33.19	33.19	34.3
Upland Forest / Woodland	33.19	33.42	1,193.0
Wetland	33.42	33.43	42.6
Upland Forest / Woodland	33.43	33.56	707.4
Upland Open Land	33.56	33.59	138.9
Upland Forest / Woodland	33.59	33.69	556.6
Wetland	33.69	33.70	10.6
Upland Forest / Woodland	33.70	34.04	1,827.7
Upland Open Land	34.04	34.13	463.1
Upland Forest / Woodland	34.13	34.19RR	306.6
Upland Open Land	34.19RR	34.21RR	98.0
Open Water	34.21RR	34.21RR	32.9
Upland Open Land	34.21RR	34.28	367.5
Upland Forest / Woodland	34.28	34.36	425.1
Upland Open Land	34.36	34.36	38.6
Upland Forest / Woodland	34.36	34.38	99.7
Upland Open Land	34.38	34.40	84.8
Upland Forest / Woodland	34.40	34.65	1,320.3
Open Water	34.65	34.65	16.7
Upland Forest / Woodland	34.65	34.79	724.6
Open Water	34.79	34.79	23.3
Upland Forest / Woodland	34.79	34.99	1,012.7
Upland Open Land	34.99	34.99	34.7
Open Water	34.99	34.99	7.5
Upland Open Land	34.99	35.02	144.4
Upland Forest / Woodland	35.02	35.37	1,832.3
Upland Open Land	35.37	35.37	24.7
Upland Forest / Woodland	35.37	35.38	60.9
Upland Open Land	35.38	35.43	233.4
Upland Forest / Woodland	35.43	35.45	89.5

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Agriculture	35.45	35.46	101.6
Upland Open Land	35.46	35.47	22.1
Upland Forest / Woodland	35.47	35.47	4.7
Upland Open Land	35.47	35.48	66.5
Upland Forest / Woodland	35.48	35.62	742.2
Agriculture	35.62	35.73	542.0
Upland Forest / Woodland	35.73	35.74	71.7
Upland Open Land	35.74	35.75	80.9
Upland Forest / Woodland	35.75	35.87	596.5
Upland Open Land	35.87	35.91	213.4
Upland Forest / Woodland	35.91	35.98	390.0
Open Water	35.98	35.98	9.9
Upland Forest / Woodland	35.98	36.14	805.6
Upland Open Land	36.14	36.14	29.1
Upland Forest / Woodland	36.14	36.24	539.0
Upland Open Land	36.24	36.25	16.1
Agriculture	36.25	36.28	163.9
Commercial / Industrial	36.28	36.28	34.3
Agriculture	36.28	36.51	1,216.1
Upland Open Land	36.51	36.61	482.7
Commercial / Industrial	36.61	36.61	24.9
Upland Forest / Woodland	36.61	36.8	1,016.4
Agriculture	36.80	36.86	318.1
Upland Forest / Woodland	36.86	36.96	512.9
Upland Open Land	36.96	36.99	181.8
Upland Forest / Woodland	36.99	37.01	90.2
Wetland	37.01	37.01	7.6
Upland Forest / Woodland	37.01	37.04	133.2
Upland Open Land	37.04	37.11	402.2
Upland Forest / Woodland	37.11	37.26	769.0
Wetland	37.26	37.26	8.3
Upland Forest / Woodland	37.26	37.43	888.3
Upland Open Land	37.43	37.45	117.3
Upland Forest / Woodland	37.45	37.52	364.7
Upland Open Land	37.52	37.72	1,063.7
Upland Forest / Woodland	37.72	37.74	91.7
Open Water	37.74	37.74	12.1

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	37.74	37.81	335.7
Upland Open Land	37.81	37.82	75.8
Upland Forest / Woodland	37.82	38.05	1,224.5
Upland Open Land	38.05	38.18	691.8
Upland Forest / Woodland	38.18	38.19	18.6
Open Water	38.19	38.19	20.5
Upland Forest / Woodland	38.19	38.23	218.1
Upland Open Land	38.23	38.27	225.8
Upland Forest / Woodland	38.27	38.44	893.7
Wetland	38.44	38.47	129.7
Upland Forest / Woodland	38.47	38.51	224.4
Wetland	38.51	38.54	137.6
Upland Forest / Woodland	38.54	38.61	381.2
Upland Open Land	38.61	38.62	36.7
Wetland	38.62	38.64	109.5
Upland Open Land	38.64	38.65	90.6
Wetland	38.65	38.66	16.3
Upland Open Land	38.66	38.67	91.0
Wetland	38.67	38.68	28.7
Upland Open Land	38.68	38.71	150.4
Wetland	38.71	38.71	16.1
Upland Open Land	38.71	38.74	129.4
Upland Forest / Woodland	38.74	38.74	47.3
Open Water	38.74	38.76	53.1
Upland Forest / Woodland	38.76	38.81	297.0
Upland Open Land	38.81	38.82	21.5
Commercial / Industrial	38.82	38.82	23.0
Upland Open Land	38.82	38.83	50.8
Upland Forest / Woodland	38.83	38.93	513.4
Upland Open Land	38.93	38.94	50.1
Upland Forest / Woodland	38.94	39.33	2,081.4
Agriculture	39.33	39.36	162.4
Upland Forest / Woodland	39.36	39.40	190.0
Upland Open Land	39.40	39.45	278.1
Upland Forest / Woodland	39.45	39.51	336.1
Upland Open Land	39.51	39.55	207.4
Upland Forest / Woodland	39.55	39.58	123.9

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	39.58	39.58	7.0
Upland Forest / Woodland	39.58	39.62	215.9
Upland Open Land	39.62	39.62	0.6
Upland Forest / Woodland	39.62	39.65	144.1
Wetland	39.65	39.66	56.0
Upland Forest / Woodland	39.66	39.67	80.7
Upland Open Land	39.67	39.68	31.5
Commercial / Industrial	39.68	39.68	27.5
Upland Forest / Woodland	39.68	39.70	71.9
Commercial / Industrial	39.70	39.71	59.2
Upland Open Land	39.71	39.74	176.9
Upland Forest / Woodland	39.74	40.11	1,971.9
Upland Open Land	40.11	40.15	166.3
Upland Forest / Woodland	40.15	40.16	73.4
Open Water	40.16	40.17	26.9
Upland Forest / Woodland	40.17	40.32	794.0
Residential	40.32	40.34	123.0
Commercial / Industrial	40.34	40.34	23.2
Upland Open Land	40.34	40.35	50.0
Upland Forest / Woodland	40.35	40.37	77.5
Agriculture	40.37	40.41	239.6
Upland Forest / Woodland	40.41	40.46	239.0
Agriculture	40.46	40.49	184.8
Upland Forest / Woodland	40.49	40.91	2,195.6
Upland Open Land	40.91	40.91	31.9
Upland Forest / Woodland	40.91	41.11	1,050.2
Wetland	41.11	41.12	33.5
Upland Forest / Woodland	41.12	41.12	9.9
Wetland	41.12	41.13	50.1
Upland Forest / Woodland	41.13	41.15	101.5
Open Water	41.15	41.16	39.1
Upland Forest / Woodland	41.16	41.41	1,338.8
Upland Open Land	41.41	41.42	30.7
Upland Forest / Woodland	41.42	41.58	884.5
Upland Open Land	41.58	41.59	51.8
Commercial / Industrial	41.59	41.62	154.5
Upland Open Land	41.62	41.63	12.6

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	41.63	41.66	162.8
Wetland	41.66	41.66	5.8
Upland Forest / Woodland	41.66	41.72	325.2
Upland Open Land	41.72	41.79	392.6
Upland Forest / Woodland	41.79	41.80	43.3
Open Water	41.80	41.81	19.5
Upland Forest / Woodland	41.81	41.91	554.5
Upland Open Land	41.91	42.18	1,433.7
Commercial / Industrial	42.18	42.19	40.3
Upland Open Land	42.19	42.20	24.4
Upland Forest / Woodland	42.20	42.43	1,233.5
Upland Open Land	42.43	42.44	39.0
Upland Forest / Woodland	42.44	42.60	846.6
Upland Open Land	42.60	42.63	166.1
Upland Forest / Woodland	42.63	42.65	119.8
Upland Open Land	42.65	42.66	57.6
Upland Forest / Woodland	42.66	42.72	300.4
Upland Open Land	42.72	42.74	110.2
Upland Forest / Woodland	42.74	42.90	873.8
Upland Open Land	42.90	42.91	33.7
Upland Forest / Woodland	42.91	42.92	57.5
Upland Open Land	42.92	42.92	9.5
Upland Forest / Woodland	42.92	43.07	788.2
Open Water	43.07	43.08	12.0
Upland Forest / Woodland	43.08	43.15	376.3
Upland Open Land	43.15	43.15	36.4
Commercial / Industrial	43.15	43.16	24.1
Upland Open Land	43.16	43.16	23.7
Upland Forest / Woodland	43.16	43.26	523.1
Open Water	43.26	43.27	25.9
Upland Forest / Woodland	43.27	43.31	248.4
Upland Open Land	43.31	43.32	20.3
Upland Forest / Woodland	43.32	43.40	410.1
Upland Open Land	43.40	43.42	114.4
Commercial / Industrial	43.42	43.42	24.9
Upland Open Land	43.42	43.48	295.2
Upland Forest / Woodland	43.48	43.49	46.9

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	43.49	43.55	338.3
Upland Forest / Woodland	43.55	43.55	3.7
Upland Open Land	43.55	43.57	113.4
Upland Forest / Woodland	43.57	43.57	5.3
Upland Open Land	43.57	43.60	155.8
Upland Forest / Woodland	43.60	43.61	54.4
Upland Open Land	43.61	43.62	9.7
Upland Forest / Woodland	43.62	43.71	476.9
Open Water	43.71	43.71	44.6
Upland Forest / Woodland	43.71	43.72	36.7
Open Water	43.72	43.72	8.9
Upland Forest / Woodland	43.72	43.95	1,187.1
Upland Open Land	43.95	43.95	19.6
Upland Forest / Woodland	43.95	43.96	31.4
Upland Open Land	43.96	43.96	7.6
Upland Forest / Woodland	43.96	44.02	305.5
Upland Open Land	44.02	44.02	19.3
Upland Forest / Woodland	44.02	44.03	55.8
Upland Open Land	44.03	44.04	34.7
Upland Forest / Woodland	44.04	44.10	347.5
Upland Open Land	44.10	44.11	37.1
Upland Forest / Woodland	44.11	44.14	154.8
Upland Open Land	44.14	44.17	182.6
Upland Forest / Woodland	44.17	44.18	44.2
Upland Open Land	44.18	44.22	201.4
Upland Forest / Woodland	44.22	44.27	278.2
Residential	44.27	44.31	206.7
Upland Forest / Woodland	44.31	44.35	192.1
Upland Open Land	44.35	44.36	70.7
Upland Forest / Woodland	44.36	44.46	528.4
Agriculture	44.46	44.48	103.5
Upland Forest / Woodland	44.48	44.58	493.1
Upland Open Land	44.58	44.68	528.6
Upland Forest / Woodland	44.68	44.77	507.9
Upland Open Land	44.77	44.78	47.5
Agriculture	44.78	44.90	615.8
Commercial / Industrial	44.90	44.90	21.7

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Agriculture	44.90	45.31	2,144.9
Upland Forest / Woodland	45.31	45.38	404.6
Upland Open Land	45.38	45.39	22.3
Silviculture	45.39	45.44	288.0
Upland Open Land	45.44	45.45	29.2
Silviculture	45.45	45.54	507.9
Upland Open Land	45.54	45.56	92.9
Upland Forest / Woodland	45.56	45.70	744.7
Open Water	45.70	45.71	22.9
Upland Forest / Woodland	45.71	45.71	27.5
Upland Open Land	45.71	45.79	408.1
Upland Forest / Woodland	45.79	45.80	38.3
Upland Open Land	45.80	45.81	78.4
Upland Forest / Woodland	45.81	45.89	428.2
Upland Open Land	45.89	45.99	515.1
Upland Forest / Woodland	45.99	46.00	49.0
Agriculture	46.00	46.06	334.3
Upland Open Land	46.06	46.07	17.9
Agriculture	46.07	46.10	190.3
Upland Open Land	46.10	46.11	27.2
Agriculture	46.11	46.23	652.2
Upland Open Land	46.23	46.25	80.4
Agriculture	46.25	46.26	65.3
Upland Forest / Woodland	46.26	46.27	78.1
Agriculture	46.27	46.28	39.8
Upland Forest / Woodland	46.28	46.28	4.1
Agriculture	46.28	46.31	127.1
Upland Forest / Woodland	46.31	46.47	882.7
Upland Open Land	46.47	46.54	375.0
Agriculture	46.54	46.59	239.0
Upland Open Land	46.59	46.69	504.9
Agriculture	46.69	46.69	32.5
Upland Open Land	46.69	46.71	76.8
Upland Forest / Woodland	46.71	46.74	166.1
Agriculture	46.74	46.80	322.6
Upland Forest / Woodland	46.80	46.98	939.7
Open Water	46.98	46.98	18.8

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	46.98	47.00	125.6
Wetland	47.00	47.01	46.6
Upland Forest / Woodland	47.01	47.02	32.6
Upland Open Land	47.02	47.15	672.8
Upland Forest / Woodland	47.15	47.15	40.6
Upland Open Land	47.15	47.23	420.5
Upland Forest / Woodland	47.23	47.73	2,635.1
Open Water	47.73	47.74	19.1
Upland Forest / Woodland	47.74	48.12	2,048.3
Agriculture	48.12	48.30	914.2
Upland Forest / Woodland	48.30	48.35	257.3
Agriculture	48.35	48.41	343.2
Commercial / Industrial	48.41	48.42	28.0
Agriculture	48.42	48.46	219.0
Upland Forest / Woodland	48.46	48.47	72.1
Wetland	48.47	48.48	24.4
Upland Forest / Woodland	48.48	48.52	205.6
Upland Open Land	48.52	48.52	32.3
Agriculture	48.52	48.55	168.4
Upland Open Land	48.55	48.56	10.5
Upland Forest / Woodland	48.56	48.61	288.9
Wetland	48.61	48.62	39.5
Upland Forest / Woodland	48.62	48.66	204.8
Wetland	48.66	48.66	0.9
Upland Forest / Woodland	48.66	48.70	231.0
Upland Open Land	48.70	48.72	85.9
Commercial / Industrial	48.72	49.01	1,548.0
Upland Open Land	49.01	49.06	272.9
Upland Forest / Woodland	49.06	49.10	202.7
Upland Open Land	49.10	49.10	20.2
Commercial / Industrial	49.10	49.11	39.2
Upland Open Land	49.11	49.24	686.0
Upland Forest / Woodland	49.24	49.39	771.0
Upland Open Land	49.39	49.52	703.1
Commercial / Industrial	49.52	49.53	33.6
Upland Forest / Woodland	49.53	49.65	648.9
Upland Open Land	49.65	49.88	1,209.5

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Wetland	49.88	49.89	57.0
Upland Open Land	49.89	50.44	2,896.5
Upland Forest / Woodland	50.44	50.46	116.5
Upland Open Land	50.46	50.47	65.1
Upland Forest / Woodland	50.47	50.51	210.8
Upland Open Land	50.51	50.63	633.0
Upland Forest / Woodland	50.63	50.71	415.0
Upland Open Land	50.71	50.75	227.3
Open Water	50.75	50.76	21.4
Upland Open Land	50.76	51.10	1,820.5
Agriculture	51.10	51.18	387.5
Upland Open Land	51.18	51.25	391.7
Agriculture	51.25	51.35	512.2
Upland Open Land	51.35	51.38	178.6
Wetland	51.38	51.39	70.2
Upland Open Land	51.39	51.53	693.4
Agriculture	51.53	51.65	654.0
Commercial / Industrial	51.65	51.65	29.0
Agriculture	51.65	51.83	920.0
Upland Open Land	51.83	51.85	114.0
Agriculture	51.85	51.96	584.4
Upland Open Land	51.96	51.98	88.8
Commercial / Industrial	51.98	51.98	17.6
Upland Open Land	51.98	52.05	338.3
Upland Forest / Woodland	52.05	52.14	501.8
Upland Open Land	52.14	52.15	45.9
Upland Forest / Woodland	52.15	52.17	94.7
Upland Open Land	52.17	52.19	116.2
Upland Forest / Woodland	52.19	52.24	261.2
Upland Open Land	52.24	52.26	103.1
Upland Forest / Woodland	52.26	52.27	66.4
Upland Open Land	52.27	52.30	153.9
Upland Forest / Woodland	52.30	52.30	20.4
Upland Open Land	52.30	52.32	98.7
Upland Forest / Woodland	52.32	52.35	163.6
Upland Open Land	52.35	52.38	158.6
Open Water	52.38	52.38	4.8

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	52.38	52.41	149.1
Upland Forest / Woodland	52.41	52.53	638.2
Upland Open Land	52.53	52.54	27.9
Upland Forest / Woodland	52.54	52.60	340.8
Upland Open Land	52.60	52.62	70.4
Commercial / Industrial	52.62	52.62	11.9
Upland Open Land	52.62	52.62	29.9
Upland Forest / Woodland	52.62	52.73	554.2
Agriculture	52.73	52.73	28.2
Upland Forest / Woodland	52.73	53.05	1,646.3
Upland Open Land	53.05	53.05	8.5
Commercial / Industrial	53.05	53.05	29.5
Upland Forest / Woodland	53.05	53.12	359.9
Agriculture	53.12	53.17	257.7
Upland Forest / Woodland	53.17	53.25	397.1
Agriculture	53.25	53.28	177.5
Upland Forest / Woodland	53.28	53.32	216.4
Upland Open Land	53.32	53.33	48.7
Commercial / Industrial	53.33	53.34	34.4
Upland Open Land	53.34	53.34	21.6
Silviculture	53.34	53.35	43.7
Wetland	53.35	53.35	26.1
Silviculture	53.35	53.47	635.3
Residential	53.47	53.48	14.2
Silviculture	53.48	53.62	762.7
Residential	53.62	53.62	11.8
Silviculture	53.62	53.64	112.7
Upland Open Land	53.64	53.65	4.4
Wetland	53.65	53.65	9.0
Upland Open Land	53.65	53.66	53.3
Upland Forest / Woodland	53.66	53.76	549.0
Upland Open Land	53.76	53.77	25.6
Upland Forest / Woodland	53.77	53.81	206.6
Agriculture	53.81	53.83	152.9
Upland Open Land	53.83	53.88	262.0
Upland Forest / Woodland	53.88	53.90	80.5
Upland Open Land	53.90	53.96	340.6

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	53.96	53.99	161.4
Upland Open Land	53.99	54.00	43.7
Agriculture	54.00	54.09	486.6
Commercial / Industrial	54.09	54.11	59.7
Agriculture	54.11	54.21	528.2
Upland Forest / Woodland	54.21	54.23	137.5
Agriculture	54.23	54.30	350.7
Upland Forest / Woodland	54.30	54.31	66.8
Wetland	54.31	54.33	102.9
Upland Forest / Woodland	54.33	54.35	116.8
Agriculture	54.35	54.43	392.0
Upland Forest / Woodland	54.43	54.60	925.6
Upland Open Land	54.60	54.61	20.2
Upland Forest / Woodland	54.61	54.64	153.8
Agriculture	54.64	54.80	848.9
Upland Open Land	54.80	54.88	427.8
Upland Forest / Woodland	54.88	54.89	91.5
Upland Open Land	54.89	54.92	125.5
Upland Forest / Woodland	54.92	55.01	500.9
Agriculture	55.01	55.06	241.9
Upland Open Land	55.06	55.06	25.4
Commercial / Industrial	55.06	55.07	25.7
Upland Open Land	55.07	55.07	15.5
Agriculture	55.07	55.20	662.7
Upland Open Land	55.20	55.21	61.5
Upland Forest / Woodland	55.21	55.25	222.5
Wetland	55.25	55.26	37.0
Upland Forest / Woodland	55.26	55.42	840.0
Agriculture	55.42	55.50	453.2
Upland Forest / Woodland	55.50	55.53	171.1
Wetland	55.53	55.54	39.1
Upland Open Land	55.54	55.59	271.3
Upland Forest / Woodland	55.59	55.66	355.6
Agriculture	55.66	55.66	13.7
Upland Forest / Woodland	55.66	55.67	54.3
Agriculture	55.67	55.68	21.0
Upland Forest / Woodland	55.68	55.73	286.7

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	55.73	55.74	53.3
Commercial / Industrial	55.74	55.75	48.2
Agriculture	55.75	55.78	148.8
Upland Forest / Woodland	55.78	55.91	696.3
Agriculture	55.91	56.28	1,953.7
Upland Open Land	56.28	56.30	96.2
Upland Forest / Woodland	56.30	56.37	375.6
Upland Open Land	56.37	56.38	28.0
Commercial / Industrial	56.38	56.38	31.4
Upland Open Land	56.38	56.39	24.4
Upland Forest / Woodland	56.39	56.42	159.3
Wetland	56.42	56.43	95.3
Upland Forest / Woodland	56.43	56.46	119.2
Commercial / Industrial	56.46	56.46	20.7
Upland Forest / Woodland	56.46	56.49	164.1
Open Water	56.49	56.50	31.4
Upland Forest / Woodland	56.50	56.51	51.3
Wetland	56.51	56.53	104.4
Upland Forest / Woodland	56.53	56.54	75.0
Wetland	56.54	56.58	192.8
Upland Forest / Woodland	56.58	56.64	301.6
Wetland	56.64	56.65	61.3
Upland Forest / Woodland	56.65	56.67	130.6
Upland Open Land	56.67	56.68	22.8
Agriculture	56.68	56.78	546.6
Upland Open Land	56.78	56.81	166.5
Upland Forest / Woodland	56.81	56.85	199.5
Wetland	56.85	56.85	17.0
Upland Forest / Woodland	56.85	56.93	418.1
Agriculture	56.93	56.97	185.0
Upland Forest / Woodland	56.97	57.03	338.2
Upland Open Land	57.03	57.03	10.7
Upland Forest / Woodland	57.03	57.06	131.4
Wetland	57.06	57.07	56.0
Upland Forest / Woodland	57.07	57.16	486.8
Wetland	57.16	57.19	145.8
Upland Forest / Woodland	57.19	57.26	385.1

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	57.26	57.27	22.8
Residential	57.27	57.28	58.0
Upland Open Land	57.28	57.28	38.2
Residential	57.28	57.29	41.7
Upland Open Land	57.29	57.34	231.7
Upland Forest / Woodland	57.34	57.34	47.7
Upland Open Land	57.34	57.46	631.1
Commercial / Industrial	57.46	57.47	50.2
Upland Open Land	57.47	57.52	236.0
Upland Forest / Woodland	57.52	57.54	134.9
Wetland	57.54	57.56	84.8
Upland Forest / Woodland	57.56	57.56	2.5
Wetland	57.56	57.57	66.8
Upland Forest / Woodland	57.57	57.58	26.1
Agriculture	57.58	57.62	244.4
Upland Forest / Woodland	57.62	57.76	707.4
Upland Open Land	57.76	57.78	135.6
Residential	57.78	57.81	163.3
Commercial / Industrial	57.81	57.82	43.6
Upland Open Land	57.82	57.85	133.6
Wetland	57.85	57.85	13.1
Upland Open Land	57.85	57.85	2.0
Commercial / Industrial	57.85	57.86	33.7
Upland Open Land	57.86	57.86	34.5
Wetland	57.86	57.87	20.2
Upland Forest / Woodland	57.87	57.89	93.4
Upland Open Land	57.89	58.01	675.9
Wetland	58.01	58.02	52.2
Upland Open Land	58.02	58.34	1,677.0
Upland Forest / Woodland	58.34	58.40	320.1
Upland Open Land	58.40	58.44	180.3
Upland Forest / Woodland	58.44	58.46	145.2
Agriculture	58.46	58.56	523.3
Upland Forest / Woodland	58.56	58.66	499.1
Open Water	58.66	58.66	30.4
Upland Forest / Woodland	58.66	58.67	45.0
Open Water	58.67	58.68	48.5

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	58.68	58.77	478.9
Upland Open Land	58.77	58.82	245.0
Upland Forest / Woodland	58.82	59.12	1,605.2
Residential	59.12	59.13	42.8
Upland Forest / Woodland	59.13	59.14	40.3
Residential	59.14	59.16	105.3
Commercial / Industrial	59.16	59.16	29.5
Upland Open Land	59.16	59.17	23.7
Residential	59.17	59.29	646.9
Upland Forest / Woodland	59.29	59.32	177.4
Upland Open Land	59.32	59.34	113.4
Upland Forest / Woodland	59.34	59.42	383.3
Commercial / Industrial	59.42	59.42	13.1
Upland Forest / Woodland	59.42	59.47	256.8
Upland Open Land	59.47	59.48	40.6
Upland Forest / Woodland	59.48	59.49	71.8
Upland Open Land	59.49	59.51	86.0
Upland Forest / Woodland	59.51	59.53	122.3
Upland Open Land	59.53	59.55	99.2
Upland Forest / Woodland	59.55	59.57	108.2
Upland Open Land	59.57	59.63	335.8
Upland Forest / Woodland	59.63	59.65	112.8
Upland Open Land	59.65	59.67	86.1
Upland Forest / Woodland	59.67	59.72	282.7
Upland Open Land	59.72	59.73	39.0
Upland Forest / Woodland	59.73	59.76	135.9
Upland Open Land	59.76	59.80	227.8
Upland Forest / Woodland	59.80	59.84	200.4
Upland Open Land	59.84	59.86	141.1
Upland Forest / Woodland	59.86	59.89	130.2
Upland Open Land	59.89	59.99	525.9
Commercial / Industrial	59.99	59.99	19.7
Upland Open Land	59.99	60.25	1,376.7
Commercial / Industrial	60.25	60.26	45.7
Upland Open Land	60.26	60.46	1,041.5
Upland Forest / Woodland	60.46	60.73	1,443.7
Open Water	60.73	60.73	12.9

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Wetland	60.73	60.76	154.8
Upland Forest / Woodland	60.76	60.78	61.8
Wetland	60.78	60.81	162.6
Upland Forest / Woodland	60.81	60.82	87.9
Upland Open Land	60.82	60.93	572.1
Agriculture	60.93	61.15	1,167.3
Upland Open Land	61.15	61.15	8.5
Upland Forest / Woodland	61.15	61.36	1,110.1
Upland Open Land	61.36	61.37	26.3
Commercial / Industrial	61.37	61.37	21.1
Upland Open Land	61.37	61.38	40.0
Upland Forest / Woodland	61.38	61.4	105.5
Upland Open Land	61.40	61.43	169.8
Agriculture	61.43	61.59	827.4
Upland Open Land	61.59	61.61	95.4
Agriculture	61.61	61.64	173.3
Upland Open Land	61.64	61.69	234.8
Upland Forest / Woodland	61.69	61.83	770.6
Upland Open Land	61.83	61.91	423.0
Agriculture	61.91	62.21	1,583.0
Upland Open Land	62.21	62.39	933.7
Upland Forest / Woodland	62.39	62.45	324.5
Open Water	62.45	62.45	19.7
Upland Forest / Woodland	62.45	62.52	364.9
Wetland	62.52	62.52	8.4
Upland Forest / Woodland	62.52	62.54	86.4
Upland Open Land	62.54	62.66	638.8
Wetland	62.66	62.67	63.7
Upland Open Land	62.67	62.82	748.0
Commercial / Industrial	62.82	62.82	23.8
Upland Open Land	62.82	62.89	371.1
Upland Forest / Woodland	62.89	63.03	742.2
Wetland	63.03	63.08	238.0
Upland Forest / Woodland	63.08	63.08	18.9
Wetland	63.08	63.09	75.5
Upland Forest / Woodland	63.09	63.09	2.8
Upland Open Land	63.09	63.10	27.2

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Commercial / Industrial	63.10	63.10	28.6
Upland Open Land	63.10	63.11	18.7
Upland Forest / Woodland	63.11	63.21	520.5
Open Water	63.21	63.21	21.0
Upland Forest / Woodland	63.21	63.53	1,663.9
Upland Open Land	63.53	63.53	28.9
Upland Forest / Woodland	63.53	63.59	304.4
Open Water	63.59	63.65	304.7
Upland Forest / Woodland	63.65	63.84	1,035.3
Wetland	63.84	63.85	49.9
Upland Forest / Woodland	63.85	64.03	923.0
Open Water	64.03	64.03	8.4
Upland Forest / Woodland	64.03	64.09	315.2
Upland Open Land	64.09	64.34	1,332.4
Commercial / Industrial	64.34	64.34	11.5
Upland Open Land	64.34	64.41	368.7
Upland Forest / Woodland	64.41	64.63	1,131.9
Residential	64.63	64.64	73.5
Upland Forest / Woodland	64.64	64.78	755.9
Upland Open Land	64.78	64.79	14.5
Commercial / Industrial	64.79	64.79	22.8
Upland Open Land	64.79	64.83RR	208.7
Upland Forest / Woodland	64.83RR	64.86RR	136.3
Upland Open Land	64.86RR	65.06RR	1,080.4
Upland Forest / Woodland	65.06RR	65.10RR	182.3
Upland Open Land	65.10RR	65.14RR	210.2
Upland Forest / Woodland	65.14RR	65.16RR	139.9
Upland Open Land	65.16RR	65.30RR	748.5
Commercial / Industrial	65.30RR	65.31RR	21.2
Upland Open Land	65.31RR	65.32RR	43.4
Agriculture	65.32RR	65.36RR	209.7
Upland Open Land	65.36RR	65.36RR	42.5
Agriculture	65.36RR	65.53RR	854.5
Upland Forest / Woodland	65.53RR	65.57	522.8
Upland Open Land	65.57	65.57	37.6
Upland Forest / Woodland	65.57	65.76	982.1
Upland Open Land	65.76	65.78	98.9

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Agriculture	65.78	65.82	246.6
Upland Open Land	65.82	65.83	19.3
Upland Forest / Woodland	65.83	65.89	350.6
Upland Open Land	65.89	65.98	431.9
Upland Forest / Woodland	65.98	65.98	23.3
Upland Open Land	65.98	66.00	116.8
Agriculture	66.00	66.08	407.1
Commercial / Industrial	66.08	66.08	23.3
Upland Open Land	66.08	66.09	34.9
Agriculture	66.09	66.21	621.7
Upland Forest / Woodland	66.21	66.32	588.9
Upland Open Land	66.32	66.38	330.4
Commercial / Industrial	66.38	66.39	22.0
Upland Open Land	66.39	66.47	444.1
Upland Forest / Woodland	66.47	66.51	219.8
Agriculture	66.51	66.59	383.3
Upland Open Land	66.59	66.60	79.9
Upland Forest / Woodland	66.60	66.61	61.6
Wetland	66.61	66.62	40.5
Upland Forest / Woodland	66.62	66.62	4.7
Upland Open Land	66.62	66.68	332.4
Upland Forest / Woodland	66.68	66.79	577.2
Upland Open Land	66.79	66.84	229.0
Upland Forest / Woodland	66.84	66.85	51.3
Upland Open Land	66.85	66.89	239.6
Upland Forest / Woodland	66.89	66.90	38.5
Upland Open Land	66.90	66.91	37.9
Upland Forest / Woodland	66.91	67.02	611.5
Upland Open Land	67.02	67.04	85.7
Upland Forest / Woodland	67.04	67.25	1,110.1
Open Water	67.25	67.25	14.2
Upland Forest / Woodland	67.25	67.60	1,838.9
Open Water	67.60	67.60	24.8
Upland Forest / Woodland	67.60	67.63	158.6
Upland Open Land	67.63	67.73	516.8
Upland Forest / Woodland	67.73	67.95	1,149.4
Upland Open Land	67.95	68.07	618.7

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	68.07	68.22	817.1
Residential	68.22	68.22	16.7
Upland Open Land	68.22	68.25	114.0
Upland Forest / Woodland	68.25	68.36	602.7
Wetland	68.36	68.36	15.7
Upland Forest / Woodland	68.36	68.41	247.4
Open Water	68.41	68.41	2.8
Upland Forest / Woodland	68.41	68.49	395.9
Upland Open Land	68.49	68.50	100.1
Upland Forest / Woodland	68.50	68.58	400.1
Upland Open Land	68.58	68.58	0.6
Upland Forest / Woodland	68.58	68.58	24.1
Upland Open Land	68.58	68.59	26.2
Upland Forest / Woodland	68.59	68.60	76.2
Upland Open Land	68.60	68.62	79.6
Upland Forest / Woodland	68.62	68.62	9.4
Upland Open Land	68.62	68.63	21.1
Upland Forest / Woodland	68.63	68.65	124.0
Upland Open Land	68.65	68.65	10.9
Commercial / Industrial	68.65	68.66	28.4
Upland Open Land	68.66	68.66	34.4
Upland Forest / Woodland	68.66	68.79	688.5
Open Water	68.79	68.80	12.6
Upland Forest / Woodland	68.80	68.82	125.5
Upland Open Land	68.82	68.84	107.3
Upland Forest / Woodland	68.84	68.95	572.3
Upland Open Land	68.95	69.02	402.5
Upland Forest / Woodland	69.02	69.03	22.8
Upland Open Land	69.03	69.03	23.9
Upland Forest / Woodland	69.03	69.03	11.4
Commercial / Industrial	69.03	69.05	100.4
Upland Forest / Woodland	69.05	69.09	203.2
Upland Open Land	69.09	69.24	762.4
Upland Forest / Woodland	69.24	69.42	978.8
Residential	69.42	69.43	23.7
Upland Open Land	69.43	69.43	1.5
Upland Forest / Woodland	69.43	69.46	200.3

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	69.46	69.47	13.9
Upland Forest / Woodland	69.47	69.48	61.7
Open Water	69.48	69.48	8.0
Upland Forest / Woodland	69.48	69.60	645.7
Residential	69.60	69.60	9.9
Upland Forest / Woodland	69.60	69.64	207.8
Commercial / Industrial	69.64	69.65	30.0
Residential	69.65	69.66	52.4
Commercial / Industrial	69.66	69.69	140.7
Residential	69.69	69.69	3.4
Upland Forest / Woodland	69.69	69.69	33.6
Commercial / Industrial	69.69	69.72	132.3
Upland Forest / Woodland	69.72	69.77	273.4
Upland Open Land	69.77	69.78	45.7
Commercial / Industrial	69.78	69.79	32.0
Upland Open Land	69.79	69.79	27.3
Commercial / Industrial	69.79	69.80	64.3
Upland Open Land	69.80	69.80	9.8
Upland Forest / Woodland	69.80	69.82	62.4
Upland Open Land	69.82	69.82	40.0
Commercial / Industrial	69.82	69.83	12.1
Upland Open Land	69.83	69.83	18.0
Upland Forest / Woodland	69.83	69.84	37.6
Upland Open Land	69.84	69.84	44.0
Upland Forest / Woodland	69.84	69.89	220.6
Open Water	69.89	69.89	18.3
Upland Forest / Woodland	69.89	70.26	1,950.4
Open Water	70.26	70.26	11.5
Upland Forest / Woodland	70.26	70.28	102.6
Upland Open Land	70.28	70.29	22.5
Upland Forest / Woodland	70.29	70.58	1,545.7
Upland Open Land	70.58	70.59	58.5
Upland Forest / Woodland	70.59	70.72	700.8
Open Water	70.72	70.73	24.2
Upland Forest / Woodland	70.73	70.76	170.3
Upland Open Land	70.76	70.76	9.7
Upland Forest / Woodland	70.76	70.81	237.3

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Open Land	70.81	70.83	136.4
Upland Forest / Woodland	70.83	70.92	467.7
Upland Open Land	70.92	70.93	38.3
Upland Forest / Woodland	70.93	71.03	559.2
Upland Open Land	71.03	71.04	59.7
Upland Forest / Woodland	71.04	71.07	117.7
Upland Open Land	71.07	71.07	32.0
Upland Forest / Woodland	71.07	71.09	108.5
Upland Open Land	71.09	71.1	24.0
Upland Forest / Woodland	71.10	71.31	1,124.3
Upland Open Land	71.31	71.31	17.0
Commercial / Industrial	71.31	71.35	171.8
Upland Open Land	71.35	71.35	24.5
Upland Forest / Woodland	71.35	71.35	14.0
Upland Open Land	71.35	71.48	641.0
Upland Forest / Woodland	71.48	71.49	56.1
Open Water	71.49	71.49	25.9
Upland Forest / Woodland	71.49	71.5	47.2
Upland Open Land	71.50	71.54	228.3
Upland Forest / Woodland	71.54	71.56	100.0
Upland Open Land	71.56	71.57	60.9
Upland Forest / Woodland	71.57	71.58	53.8
Upland Open Land	71.58	71.62	173.7
Upland Forest / Woodland	71.62	71.63	96.8
Upland Open Land	71.63	71.74	531.8
Upland Forest / Woodland	71.74	71.74	49.6
Wetland	71.74	71.75	43.9
Upland Forest / Woodland	71.75	71.93	930.8
Upland Open Land	71.93	72.01	404.3
Upland Forest / Woodland	72.01	72.03	120.5
Upland Open Land	72.03	72.05	85.3
Upland Forest / Woodland	72.05	72.07	116.3
Upland Open Land	72.07	72.07	12.4
Upland Forest / Woodland	72.07	72.08	45.9
Upland Open Land	72.08	72.11	150.5
Upland Forest / Woodland	72.11	72.22	605.6
Upland Open Land	72.22	72.24	76.5

REVISED Table 8-A

Land Use Crossed by Milepost for the Southgate Project Pipeline

Land Use	Entry Milepost	Exit Milepost	Length (feet)
Upland Forest / Woodland	72.24	72.40	845.5
Upland Open Land	72.40	72.40	22.5
Upland Forest / Woodland	72.40	72.41	56.1
Upland Open Land	72.41	72.44	161.8
Upland Forest / Woodland	72.44	72.62	950.1
Upland Open Land	72.62	72.63	40.5
Upland Forest / Woodland	72.63	72.76	668.1
Residential	72.76	72.78	140.8
Upland Forest / Woodland	72.78	72.91	662.6
Upland Open Land	72.91	72.92	70.0
Commercial / Industrial	72.92	72.94	84.8
Upland Open Land	72.94	72.95	71.4
Wetland	72.95	72.96	56.5
Upland Open Land	72.96	73.17RR	1,102.3

Note: Mileposts with an “RR” indicate locations where a re-route was incorporated into the pipeline alignment.

REVISED Table 8-B

Roadways Crossed by the Southgate Project

Facility, State, County	Milepost	Road Name	Surface Type	Jurisdiction	Public or Private	Crossing Method
H-605 Pipeline						
Virginia						
Pittsylvania	N/A	N/A	N/A	N/A	N/A	N/A
H-650 Pipeline						
Virginia						
Pittsylvania	0.7	County Road 703 / Fairview N	Asphalt	County	Public	Bore
Pittsylvania	0.9	State Route 57 / Halifax Road	Asphalt	State	Public	Bore
Pittsylvania	2.9	County Road 694 / Davis Road	Asphalt	County	Public	Bore
Pittsylvania	3.0	County Road 703 / Fairview Road	Asphalt	County	Public	Bore
Pittsylvania	4.3	County Road 1437 / Woodlawn Academy Road	Asphalt	County	Public	Bore
Pittsylvania	4.3	County Road 1437 / Woodlawn Academy Road	Asphalt	County	Public	Bore
Pittsylvania	4.4	U.S. Highway 29	Asphalt	U.S.	Public	Bore
Pittsylvania	7.2	County Road 836 / White Oak Circle	Asphalt	County	Public	Bore
Pittsylvania	7.4	County Road 718 / Dry Fork Road	Asphalt	County	Public	Bore
Pittsylvania	8.1	County Road 1099 / Hylton Lane	Asphalt	County	Public	Bore
Pittsylvania	9.4	County Road 834 / Hopewell Road	Asphalt	County	Public	Bore
Pittsylvania	10.2	County Road 1071 / Tobacco Road	Gravel	County	Public	Open Cut
Pittsylvania	10.8	State Route 41 / Franklin Turnpike	Asphalt	State	Public	Bore
Pittsylvania	12.4	County Road 865 / Hutson Road	Asphalt	County	Public	Bore
Pittsylvania	13.4	County Road 866 / Sandy Creek Road	Asphalt	County	Public	Bore
Pittsylvania	14.9	County Road 750 / Whitmell School Road	Asphalt	County	Public	Bore
Pittsylvania	15.9	County Road 844 / Mount Cross Road	Asphalt	County	Public	Bore
Pittsylvania	16.5	County Road 868 / Silver Creek Road	Asphalt	County	Public	Bore
Pittsylvania	18.3	County Road 878 / Pine Lake Road	Asphalt	County	Public	Bore
Pittsylvania	19.0	County Road 876 / Cedar Spring Road	Asphalt	County	Public	Bore
Pittsylvania	19.3	County Road 869 / Stony Mill Road	Asphalt	County	Public	Bore
Pittsylvania	20.0	U.S. Highway 58 / Martinsville Highway	Asphalt	U.S.	Public	Bore

REVISED Table 8-B

Roadways Crossed by the Southgate Project

Facility, State, County	Milepost	Road Name	Surface Type	Jurisdiction	Public or Private	Crossing Method
Pittsylvania	22.1	County Road 875 / Horseshoe Road	Asphalt	County	Public	Bore
Pittsylvania	23.7	County Road 862 / Oak Hill Road	Asphalt	County	Public	Bore
North Carolina						
Rockingham	26.2	State Road 1745 / Buffalo Road	Asphalt	State	Public	Bore
Rockingham	26.6	State Road 770 / State Hwy 770	Asphalt	State	Public	Bore
Rockingham	30.5	State Hwy 700 / S Fieldcrest Road	Asphalt	State	Public	Bore
Rockingham	30.7	State Road 1951 / Quesinberry Road	Asphalt	State	Public	Bore
Rockingham	31.6	State Road 1951 / Quesinberry Road	Asphalt	State	Public	Bore
Rockingham	33.2	State Road 1945 / Moir Mill Road	Asphalt	State	Public	Bore
Rockingham	36.3	State Road 1980 / Mount Carmel Church Road	Asphalt	State	Public	Bore
Rockingham	36.6	State Road 1982 / Wolf Island Road	Asphalt	State	Public	Bore
Rockingham	38.8	State Road 1941 / Crutchfield Road	Asphalt	State	Public	Bore
Rockingham	39.7	U.S. Highway 29	Asphalt	U.S.	Public	Bore
Rockingham	40.4	State Road 2552 / Narrow Gauge Road	Asphalt	State	Public	Bore
Rockingham	41.6	U.S. Highway 29	Asphalt	U.S.	Public	Bore
Rockingham	42.2	U.S. Highway 158	Asphalt	U.S.	Public	Bore
Rockingham	43.2	State Road 2579 / Brooks Road	Asphalt	State	Public	Bore
Rockingham	43.4	State Road 2588 / Knowles Road	Asphalt	State	Public	Bore
Rockingham	44.9	State Road 2571 / Grooms Road	Asphalt	State	Public	Bore
Rockingham	48.4	State Road 150 / State Highway 150	Asphalt	State	Public	Bore
Rockingham	49.1	State Road 87 / State Highway 87	Asphalt	State	Public	Bore
Rockingham	49.5	State Road 2614 / High Rock Road	Asphalt	State	Public	Bore
Rockingham	51.7	State Road 2619 / Kernodle Road	Asphalt	State	Public	Bore
Rockingham	52.0	State Road 2658 / Parkdale Road	Asphalt	State	Public	Bore
Rockingham	52.6	Tri County Drive	Gravel	Private	Private	Open Cut
Alamance	53.1	State Road 2903 / Troxler Mill Road	Asphalt	State	Public	Bore
Alamance	53.3	State Road 1577 / Lee Lewis Road	Asphalt	State	Public	Bore

REVISED Table 8-B Roadways Crossed by the Southgate Project						
Facility, State, County	**Milepost**	**Road Name**	**Surface Type**	**Jurisdiction**	**Public or Private**	**Crossing Method**
Alamance	54.1	State Road 1576 / Jug House Road	Asphalt	State	Public	Bore
Alamance	55.1	State Road 1576 / Gilliam Church Road	Asphalt	State	Public	Bore
Alamance	55.8	State Highway 87	Asphalt	State	Public	Bore
Alamance	56.4	State Road 1571 / Altamahaw Race Track Road	Asphalt	State	Public	Bore
Alamance	56.4	State Road 1649 / Lonzie Foster Trail	Gravel	State	Public	Open Cut
Alamance	57.3	State Route 1591 / Hollyfield Road"	Gravel	State	Public	Open Cut
Alamance	57.5	State Road 1565 / Dodd Road	Asphalt	State	Public	Bore
Alamance	57.8	State Road 1002 / Altamahaw Union Ridge Rd	Asphalt	State	Public	Bore
Alamance	57.9	State Road 1561 / Hub Mill Road	Asphalt	State	Public	Bore
Alamance	59.2	State Road 1595 / Danieley Water Wheel Road	Asphalt	State	Public	Bore
Alamance	60.0	State Road 1593 / Burch Bridge Road	Asphalt	State	Public	Bore
Alamance	60.3	State Road 1598 / Isley School Road	Asphalt	State	Public	Bore
Alamance	61.4	State Road 1601 / Huffines Drive	Asphalt	State	Public	Bore
Alamance	62.8	State Road 1001 / Union Ridge Road	Asphalt	State	Public	Bore
Alamance	63.1	State Highway 62	Asphalt	State	Public	Bore
Alamance	64.8	State Route 1750 / Faucette Lane	Asphalt	State	Public	Bore
Alamance	65.3RR	State Road 1729 / Deep Creek Church Road	Asphalt	State	Public	Bore
Alamance	66.1	State Road 1735 / N. Fonville Rd	Asphalt	State	Public	Bore
Alamance	66.4	State Road 1752 / Sandy Cross Road	Asphalt	State	Public	Bore
Alamance	68.2	Indian Village Trail	Gravel	County	Public	Open Cut
Alamance	68.7	State Road 1737 / Haw River Hopedale Road	Asphalt	State	Public	Bore
Alamance	69.0	U.S. Highway 70 / Haw River Bypass	Asphalt	U.S.	Public	Bore
Alamance	69.7	State Highway 49 / W. Main Street	Asphalt	State	Public	Bore
Alamance	69.8	State Road 1935 / Stone St	Asphalt	State	Public	Bore

REVISED Table 8-B

Roadways Crossed by the Southgate Project

Facility, State, County	Milepost	Road Name	Surface Type	Jurisdiction	Public or Private	Crossing Method
Alamance	71.3	Interstate 40 / Interstate 85	Asphalt	U.S.	Public	Bore
Alamance	72.9	State Highway 54 / E Harden Street	Asphalt	State	Public	Bore

Notes:
N/A = Not Applicable
Mileposts with an "RR" indicate locations where a re-route was incorporated into the pipeline alignment.

#118 - REVISED Table 8-D

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from pipeline centerline (North, East, South, West)	Distance from Edge of closest workspace limit (feet)	Distance From Centerline of easement (feet)	Residential Construction Plan Number a/	Mountain Valley Proposed Action a/
Virginia								
Pittsylvania	1.2	Barn	No	West	0	554	N/A	Protect
Pittsylvania	1.2	Barn	No	West	0	610	N/A	Protect
Pittsylvania	1.2	Shed	No	West	0	675	N/A	Protect
Pittsylvania	1.2	Barn	No	West	0	1,764	N/A	Protect
Pittsylvania	1.3	Barn	No	West	6	470	N/A	Protect
Pittsylvania	2.3	Shed	No	East	14	1,662	N/A	Protect
Pittsylvania	4.5	1- Story House	Yes	East	4	735	RSS-H650-024	Use existing driveway (TA-PI-007) to pass by residences. Post both enter and exit caution/slow signage to alert contractors. Proposed Barricade Fence 100 linear feet from corner of house.
Pittsylvania	4.5	Garage	No	East	0	663	RSS-H650-024	Protect
Pittsylvania	4.5	Garage	No	East	0	748	RSS-H650-024	Protect
Pittsylvania	4.5	Tobacco Shed	No	East	10	880	N/A	Protect
Pittsylvania	4.5	Barn	No	East	0	930	RSS-H650-024	Protect
Pittsylvania	4.5	Well Pump House	No	East	17	921	N/A	Protect
Pittsylvania	4.8	Barn	No	West	4	683	N/A	Protect
Pittsylvania	6.5	Office	Yes	West	30	1,283	N/A	Protect
Pittsylvania	8.5	House	Yes	East	46	859	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	9.0	Barn	No	West	14	1,445	N/A	Protect
Pittsylvania	9.0	Barn	No	West	14	1,482	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Pittsylvania	9.0	Tobacco Shed	No	West	5	1,642	N/A	Protect
Pittsylvania	10.3	2-Story House	Yes	East	34	59	RSS-H650-016	Protect – Proposed barricade fence.
Pittsylvania	10.3	Garage	No	East	29	54	RSS-H650-016	Protect
Pittsylvania	10.3	Shed	No	East	0	10	RSS-H650-016	Remove
Pittsylvania	10.6	Shed	No	East	49	110	N/A	Protect
Pittsylvania	10.7	House - 2 story	Yes	East	28	88	N/A	Protect
Pittsylvania	10.8	Mailbox stone column	No	West	0	14	N/A	Remove
Pittsylvania	10.8	Stone entry wall	No	West	0	0	N/A	Remove
Pittsylvania	10.8	Stone entry wall	No	East	0	14	N/A	Remove
Pittsylvania	13.1	Shed	No	East	13	205	N/A	Protect
Pittsylvania	13.4	House - 1 story	Yes	West	50	90	N/A	Protect
Pittsylvania	13.7	Old Cabin	No	West	0	40	N/A	Remove
Pittsylvania	13.7	House	Yes	East	27	1,516	N/A	Stay within access road TA-PI-034 limits.
Pittsylvania	15.9	Portable building	No	East	0	633	N/A	Protect
Pittsylvania	15.9	Garage	No	East	20	605	N/A	Protect
Pittsylvania	15.9	Barn	No	East	2	688	N/A	Protect
Pittsylvania	15.9	Garage	No	East	0	55	N/A	Protect
Pittsylvania	16.0	Shed	No	East	0	164	N/A	Protect
Pittsylvania	16.3	Mobile home - single wide	Yes	East	26	86	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Pittsylvania	16.7	House	Yes	West	22	282	N/A	Use existing driveway (TA-PI-041) to pass by residences. Post both enter and exit caution/slow signage to alert contractors.
Pittsylvania	17.2	Barn	No	East	0	1,718	N/A	Protect
Pittsylvania	17.2	House	Yes	East	31	1,857	N/A	Stay within access road TA-PI-043 limits.
Pittsylvania	17.5	Shed	No	West	29	413	N/A	Protect
Pittsylvania	18.4	Tobacco Shed	No	West	5	29	N/A	Protect
Pittsylvania	18.4	Tobacco Shed	No	West	10	34	N/A	Protect
Pittsylvania	18.7	Garage	No	East	21	460	N/A	Protect
Pittsylvania	19.1	Garage	No	East	46	108	N/A	Protect
Pittsylvania	19.6	Shed	No	West	34	93	N/A	Protect
Pittsylvania	19.9	Business - auto sales	No	West	33	288	N/A	Protect
Pittsylvania	20.2	Garage	No	East	21	35	N/A	Protect
Pittsylvania	20.2	Mobile home	Yes	East	21	81	RSS-H650-004	Install safety fence at limit of workspace extending 100 feet from house.
Pittsylvania	20.3	Car awning	No	East	0	44	N/A	Protect

#118 - REVISED Table 8-D

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from pipeline centerline (North, East, South, West)	Distance from Edge of closest workspace limit (feet)	Distance From Centerline of easement (feet)	Residential Construction Plan Number a/	Mountain Valley Proposed Action a/
Pittsylvania	20.3	Mobile home	Yes	East	14	61	RSS-H650-005	The workspace has been adjusted in this location. Proposed barricade fence. Protect
Pittsylvania	22.0	2-Story House	Yes	East	45	133	N/A	Protect
Pittsylvania	22.2	House - 1 story, fallen down	No	East	0	79	N/A	Protect if possible or Remove
North Carolina								
Rockingham	26.7	Shed	No	East	4	998	N/A	Protect
Rockingham	26.7	Barn	No	East	10	888	N/A	Protect
Rockingham	28.1	Shed	No	West	33	3,678	N/A	Protect
Rockingham	29.2	Shed	No	East	29	1,217	N/A	Protect
Rockingham	29.2	Shed	No	East	26	1,185	N/A	Protect
Rockingham	30.0	Shed / Car port	No	West	12	1,397	N/A	Protect
Rockingham	30.0	House	Yes	West	18	1,422	N/A	Stay within access road TA-RO-080 limits.
Rockingham	30.5	House - 1 story, abandoned	No	North	3	43	N/A	Protect
Rockingham	30.5	House - 1 story, abandoned	Yes	South	29	122	N/A	Protect
Rockingham	30.7	House – 1 Story	Yes	East	40	100	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Rockingham	31.7	House - 1 story	Yes	North	46	86	N/A	Protect
Rockingham	32.5	Shed	No	East	4	1,467	N/A	Protect
Rockingham	32.5	1-Story House	Yes	East	20	1,430	RSS-H650-025	Stay within limits of access road TA-RO-085. Proposed barricade fence 100 linear feet from corner of house.
Rockingham	35.4	Shed - abandoned	No	North	0	232	N/A	Protect if possible or remove
Rockingham	36.4	Abandoned cabin	No	North	50	112	N/A	Protect
Rockingham	36.5	Abandoned cabin	No	North	30	90	N/A	Protect
Rockingham	36.5	Abandoned cabin	No	North	30	93	N/A	Protect
Rockingham	36.7	Barn	No	South	25	64	N/A	Protect
Rockingham	37.1	House - 1 story, abandoned	No	East	0	48	N/A	Protect if possible or remove.
Rockingham	40.3	Shed	No	East	9	35	N/A	Protect
Rockingham	40.3	House - 1 story	Yes	East	11	48	RSS-H650-007	The workspace has been adjusted in this location. Proposed barricade fence. Protect
Rockingham	41.8	Barn	No	North	31	718	N/A	Protect
Rockingham	42.4	Shed	No	West	9	47	N/A	Protect
Rockingham	43.1	House, abandoned	No	West	38	114	N/A	Protect
Rockingham	43.1	1-Story House	Yes	East	50	110	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Rockingham	43.9	Shed, abandoned	No	South	2	886	N/A	Protect
Rockingham	44.1	Shed	No	East	0	1,615	RSS-H650-026	Protect
Rockingham	44.1	1- Story House	Yes	East	3	1,612	RSS-H650-026	Stay within limits of access road TA-RO-122. Proposed barricade fence.
Rockingham	45.0	House - 2 story, abandoned	No	West	27	110	N/A	Protect
Rockingham	46.1	Mobile home	Yes	North	32	925	N/A	Protect
Rockingham	46.1	1-Story House	Yes	South	16	1,675	RSS-H650-027	Stay within limits of access road TA-RO-127. Proposed barricade fence.
Rockingham	46.1	Mobile home	Yes	South	38	1,675	N/A	Stay within limits of access road TA-RO-127.
Rockingham	49.1	House - 2 story, log cabin, abandoned	No	Crosses	0	0	RSS-H650-001	To be removed
Rockingham	49.3	Dilapidated shack	No	West	0	3	RSS-H650-002	To be removed
Rockingham	49.3	Chicken coop	No	Crosses	0	0	RSS-H650-002	To be removed
Rockingham	49.3	Shed	No	East	0	31	RSS-H650-002	To be removed
Rockingham	49.3	House - 2 story, abandoned	No	East	11	59	RSS-H650-002	The workspace has been adjusted in this location Protect
Rockingham	49.3	Smoke House	No	East	0	10	RSS-H650-002	To be removed
Rockingham	46.3	Shed	No	East	0	62	N/A	Relocate if possible, or remove.
Rockingham	49.8	Car awning	No	South	46	635	N/A	Protect
Rockingham	52.6	Tractor awning	No	North	21	153	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Alamance	52.9	1-Story House	Yes	East	38	130	N/A	Protect
Alamance	53.0	Barn, abandoned	No	East	48	183	N/A	Protect
Alamance	53.0	Barn, abandoned	No	East	20	155	N/A	Protect
Alamance	53.0	Shed	No	East	0	33	N/A	Relocate if possible, or remove.
Alamance	53.0	Falling down wood building	No	East	0	57	N/A	Remove
Alamance	53.5	Shed	No	South	13	193	N/A	Protect
Alamance	53.5	House - 1 story	Yes	South	30	178	N/A	Stay within limits of access road TA-AL-152.
Alamance	53.5	House - 1 story	Yes	South	29	256	N/A	Stay within limits of access road TA-AL-152.
Alamance	56.8	Shed	No	West	10	219	N/A	Protect
Alamance	57.3	Shed	No	East	17	73	N/A	Protect
Alamance	57.3	Garage	No	East	16	106	N/A	Protect
Alamance	57.8	Barn, abandoned	No	East	6	120	N/A	Protect
Alamance	57.8	Mobile home	Yes	North	11	83	RSS-H650-008	The workspace has been adjusted in this location. Proposed barricade fence. Protect
Alamance	58.6	Old Cabin	No	South	0	84	N/A	Protect if possible, likely to be removed
Alamance	58.6	Old Cabin	No	South	0	14	N/A	Protect if possible, likely to be removed
Alamance	59.1	1-Story House	Yes	South	43	115	N/A	Protect
Alamance	59.3	1-Story House	Yes	South	48	88	N/A	Protect
Alamance	62.7	Shed	No	North	0	329	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Alamance	67.3	1-Story House	Yes	West	12	1,239	RSS-H650-028	Stay within limits of access road TA-AL-180. Proposed barricade fence 100 linear feet from corner of house.
Alamance	67.3	1-Story House	Yes	West	18	1,109	RSS-H650-028	Stay within limits of access road TA-AL-180. Proposed barricade fence 100 linear feet from corner of house.
Alamance	67.3	1-Story House	Yes	West	8	1,200	RSS-H650-028	Stay within limits of access road TA-AL-180. Proposed barricade fence 100 linear feet from corner of house.
Alamance	67.3	Barn	Yes	West	15	1,028	RSS-H650-028	Protect
Alamance	67.3	Barn	Yes	West	2	926	RSS-H650-028	Protect
Alamance	68.6	Barn	No	North	0	76	N/A	Protect
Alamance	68.9	House	Yes	East	49	1,471	N/A	Stay within limits of access road TA-AL-185.
Alamance	69.1	2-Story House	Yes	East	23	88	RSS-H650-009	Install safety fence at limit of workspace extending 100 feet from house.
Alamance	69.3	Shed	No	North	7	66	N/A	Protect
Alamance	69.4	Chicken / rabbit coop	No	North	0	0	N/A	Remove or Relocate
Alamance	69.4	Shed	No	North	0	4	N/A	Remove or Relocate
Alamance	69.5	Shed in concrete	No	North	28	87	N/A	Protect
Alamance	69.5	Shed	No	East	48	117	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Alamance	69.5	Shed	No	North	43	103	N/A	Protect
Alamance	69.6	1-Story House	Yes	West	6	31	RSS-H650-017	Install safety fence at limit of workspace extending 100 feet from road right-of-way and extending 100 feet from the house to the north.
Alamance	69.6	Portable Building	No	East	38	100	N/A	Protect
Alamance	69.6	Business - textiles	No	East	17	36	N/A	Protect
Alamance	69.7	2-Story House	Yes	East	8	33	RSS-H650-018	Install safety fence at limit of workspace from road right-of-way and extending 100 from the house to the south.
Alamance	69.7	Garage	No	East	31	91	N/A	Protect
Alamance	69.7	Fire station	No	West	4	44	N/A	Protect
Alamance	69.7	Business	No	West	0	38	N/A	Protect
Alamance	69.7	Pavilion	No	West	0	0	N/A	Remove
Alamance	69.8	Garage	No	West	6	100	N/A	Protect
Alamance	69.8	Shed	No	West	0	27	N/A	Remove or Relocate
Alamance	69.8	Shed	No	East	0	0	N/A	Remove or Relocate
Alamance	69.8	Shed	No	East	0	0	N/A	Remove or Relocate
Alamance	69.8	Barn	No	West	10	100	N/A	Protect

#118 - REVISED Table 8-D Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from pipeline centerline (North, East, South, West)**	**Distance from Edge of closest workspace limit (feet)**	**Distance From Centerline of easement (feet)**	**Residential Construction Plan Number a/**	**Mountain Valley Proposed Action a/**
Alamance	69.8	1-Story House	Yes	West	0	56	RSS-H650-006	Exclude house from ATWS by installing safety fence around the house, leaving the front (street side) of the house open for occupant access. Protect
Alamance	70.0	Pump House	No	East	44	154	N/A	Protect
Alamance	70.7	Shed, fallen down	No	West	35	76	N/A	Protect
Alamance	71.4	Green House	No	East	48	107	N/A	Protect
Alamance	71.4	Green House	No	East	38	100	N/A	Protect
Alamance	72.2	Shed	No	East	42	174	N/A	Protect
Alamance	72.7	Garage	No	East	32	97	N/A	Protect
Alamance	72.7	House	Yes	East	50	123	N/A	Protect
Alamance	72.8	1-Story House	Yes	West	26	66	RSS-H650-015	Install safety fence at limit of workspace extending 100 feet from house.
Alamance	72.8	Garage	No	West	16	56	RSS-H650-015	N/A
Alamance	72.8	Garage	No	East	0	33	RSS-H650-015	Protect if possible, if not it will need to be removed
Alamance	72.8	Camper	No	East	22	157	RSS-H650-015	Protect
Alamance	72.9	Garage	No	East	39	99	N/A	Protect
Rockingham	CY-05	House - 1 story	Yes	West	0	15,620	RSS-H650-003	Install safety fence around the house at a 1-foot off-set from the property line.
Rockingham	CY-05	Fuel bays	No	West	0	15,418	N/A	N/A

#118 - REVISED Table 8-D

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from pipeline centerline (North, East, South, West)	Distance from Edge of closest workspace limit (feet)	Distance From Centerline of easement (feet)	Residential Construction Plan Number a/	Mountain Valley Proposed Action a/
Rockingham	CY-05	Truck stop	No	West	0	15,368	N/A	N/A
Rockingham	CY-05	Garage bays	No	West	0	15,325	N/A	N/A
Rockingham	CY-05	Warehouse	No	West	0	14,825	N/A	N/A
Rockingham	CY-05	Garage	No	West	0	14,725	N/A	N/A
Rockingham	CY-08	Garage	No	West	50	14,189	N/A	N/A
Guilford	CY-09	Commercial	No	West	20	54,620	N/A	N/A
Pittsylvania	CY-03	Warehouse	No	East	0	58,418	N/A	N/A
Pittsylvania	CY-01	House - 1 story	No	North	0	1,511	N/A	N/A
Pittsylvania	CY-01	Garage	No	North	0	1,586	N/A	N/A

a/ See Appendix 8-C. N/A = Not Applicable.

MVP SOUTHGATE PROJECT

PROPOSED H-650 PIPELINE
ENGINEERING SERVICES DESIGN; JOB NUMBERS 300423
RESIDENTIAL DRAWINGS

DRAWING NO,	DRAWING TITLE	REV.
RES-COV	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE RESIDENTIAL DRAWINGS	P2
RSS-H650-001	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ROCKINGHAM COUNTY NORTH CAROLINA	P1
RSS-H650-002	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ROCKINGHAM COUNTY NORTH CAROLINA	P2
RSS-H650-003	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ROCKINGHAM COUNTY NORTH CAROLINA	P2
RSS-H650-004	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE PITTSYLVANIA COUNTY VIRGINIA	P2
RSS-H650-005	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE PITTSYLVANIA COUNTY VIRGINIA	P2
RSS-H650-006	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ALAMANCE COUNTY NORTH CAROLINA	P1
RSS-H650-007	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ROCKINGHAM COUNTY NORTH CAROLINA	P2
RSS-H650-008	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ALAMANCE COUNTY NORTH CAROLINA	P2
RSS-H650-009	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ALAMANCE COUNTY NORTH CAROLINA	P1
RSS-H650-015	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ALAMANCE COUNTY NORTH CAROLINA	P2
RSS-H650-016	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE PITTSYLVANIA COUNTY VIRGINIA	P
RSS-H650-017	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ALAMANCE COUNTY NORTH CAROLINA	P1
RSS-H650-018	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ALAMANCE COUNTY NORTH CAROLINA	P1
RSS-H650-024	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE PITTSYLVANIA COUNTY VIRGINIA	P
RSS-H650-025	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ROCKINGHAM COUNTY NORTH CAROLINA	P
RSS-H650-026	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ROCKINGHAM COUNTY NORTH CAROLINA	P
RSS-H650-027	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ROCKINGHAM COUNTY NORTH CAROLINA	P
RSS-H650-028	MOUNTAIN VALLEY PIPELINE PROJECT PROPOSED H650 PIPELINE ALAMANCE COUNTY NORTH CAROLINA	P

DRAWN	TRC	DATE	10/30/2018
CHECKED	SJO	DATE	10/30/2018
APP'D		DATE	
SCALE	N.T.S.	SHEET	1 OF 1
JOB NO.			
PROJECT ID:			

RESIDENTIAL DETAIL COVER

MOUNTAIN VALLEY PIPELINE
SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
RESIDENTIAL DRAWINGS

DRAWING NO.	REV.
RES-COVER	P2

ISSUED FOR FERC SUPPLEMENTAL FILING
03/26/19

TRC
Results you can rely on

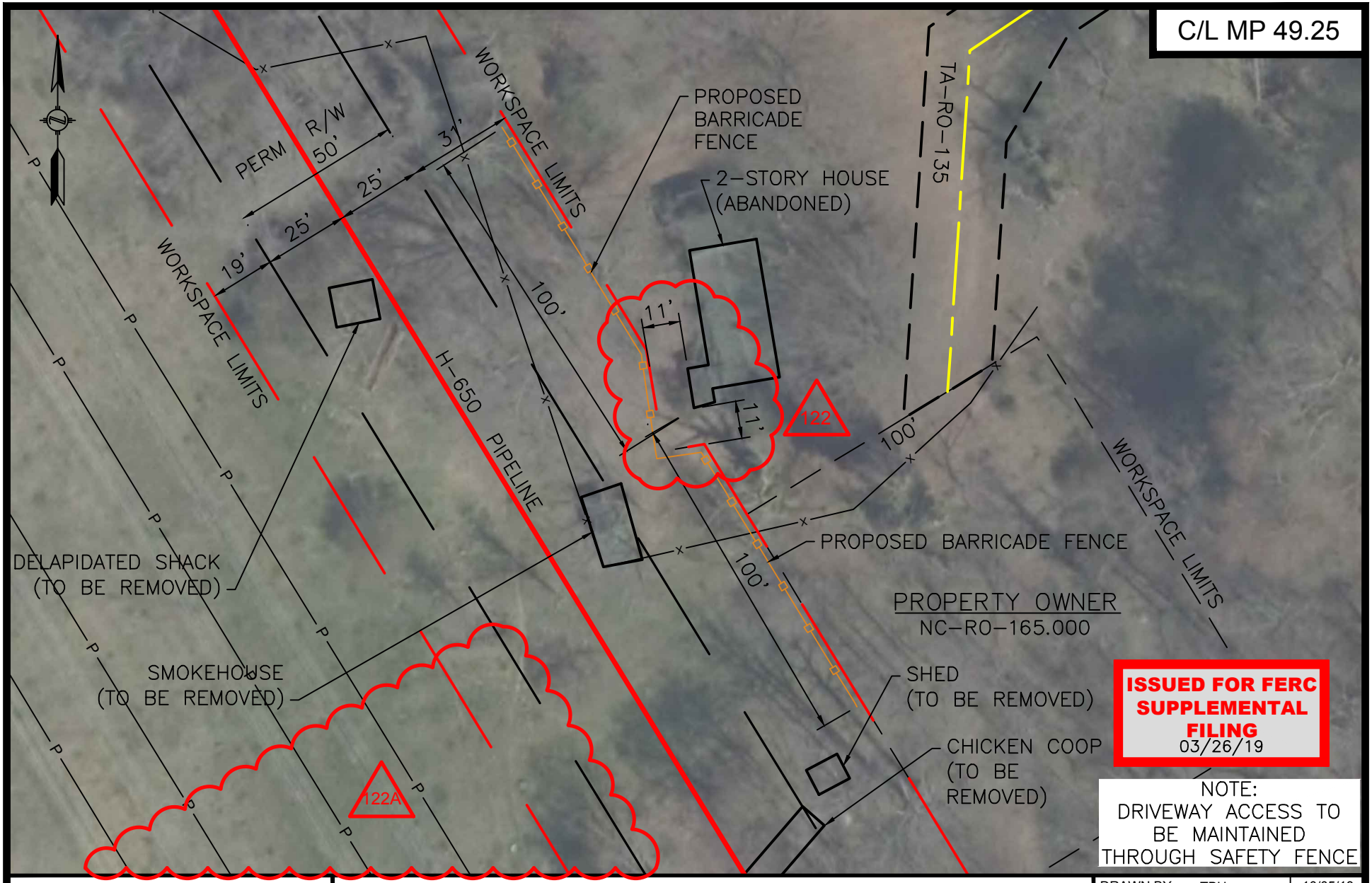
Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ROCKINGHAM COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/05/18
DRAFTING CK:	SJO	10/19/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
DRAWING NO.:	**RSS-H650-001**	
SCALE: 1" = 40'		REV. P1
DATE OF PLOT: 3/26/2019 12:17 PM		



TRC
Results you can rely on

Mountain Valley PIPELINE LLC

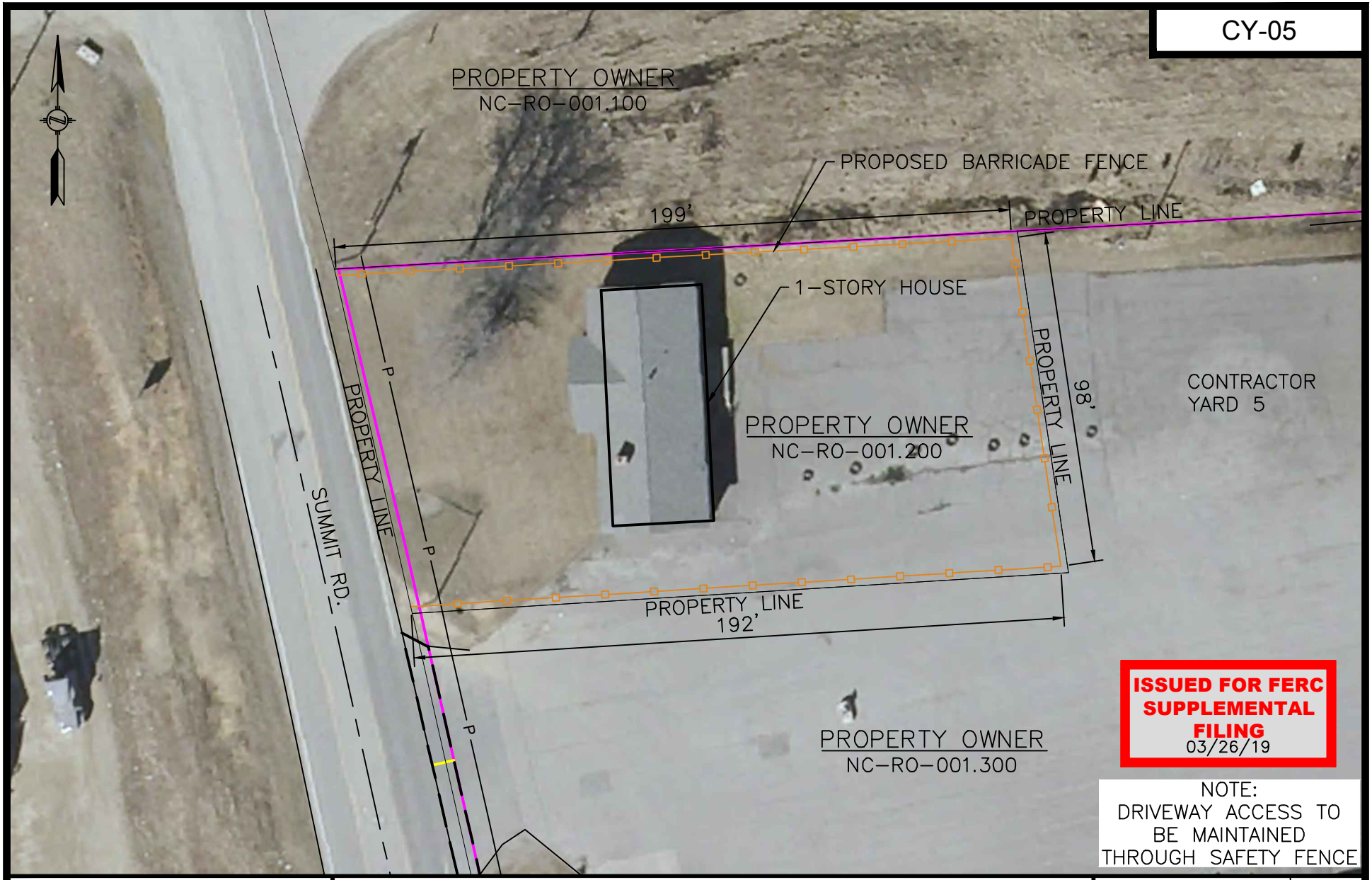
CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ROCKINGHAM COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: TBH	10/05/18
DRAFTING CK: SJO	10/19/18
ENVIRONMENTAL CK:	
ENGINEERING CK: .	.
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-002**	
SCALE: 1" = 40'	REV. P2
DATE OF PLOT: 3/21/2019 8:43 AM	

CY-05



ISSUED FOR FERC SUPPLEMENTAL FILING
03/26/19

NOTE:
DRIVEWAY ACCESS TO BE MAINTAINED THROUGH SAFETY FENCE

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ROCKINGHAM COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/08/18
DRAFTING CK:	SJO	10/19/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
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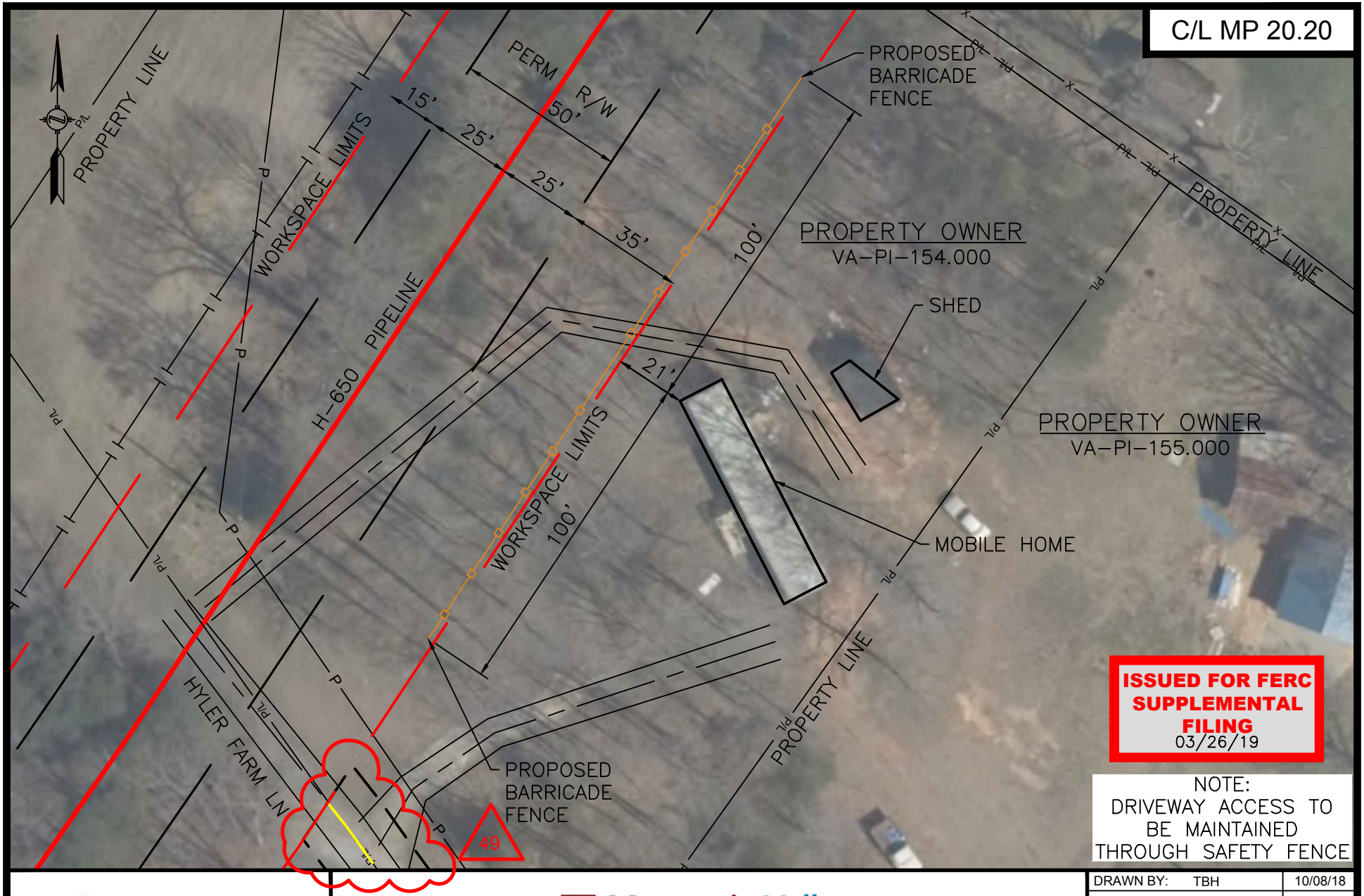

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
PITTSYLVANIA COUNTY,VIRGINIA

SHEET 1 OF 1

DRAWN BY:	TBH	10/08/18
DRAFTING CK:	SJO	10/19/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
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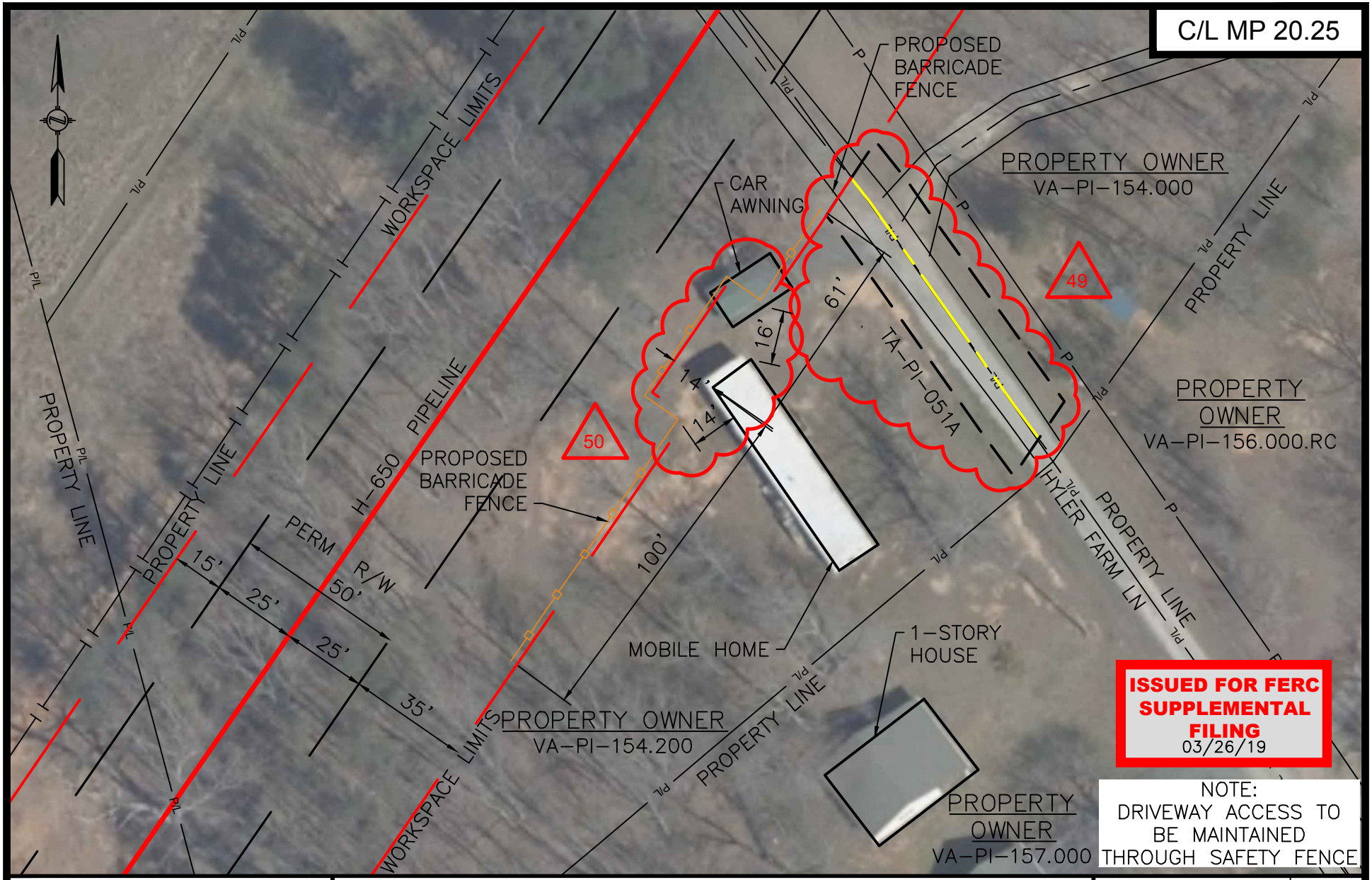

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
PITTSYLVANIA COUNTY, VIRGINIA

SHEET 1 OF 1

DRAWN BY:	TBH	10/09/18
DRAFTING CK:	SJO	10/19/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
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TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/17/18
DRAFTING CK:	SJO	10/19/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
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DATE OF PLOT: 3/26/2019 10:25 AM		

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ROCKINGHAM COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/09/18
DRAFTING CK:	SJO	10/19/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
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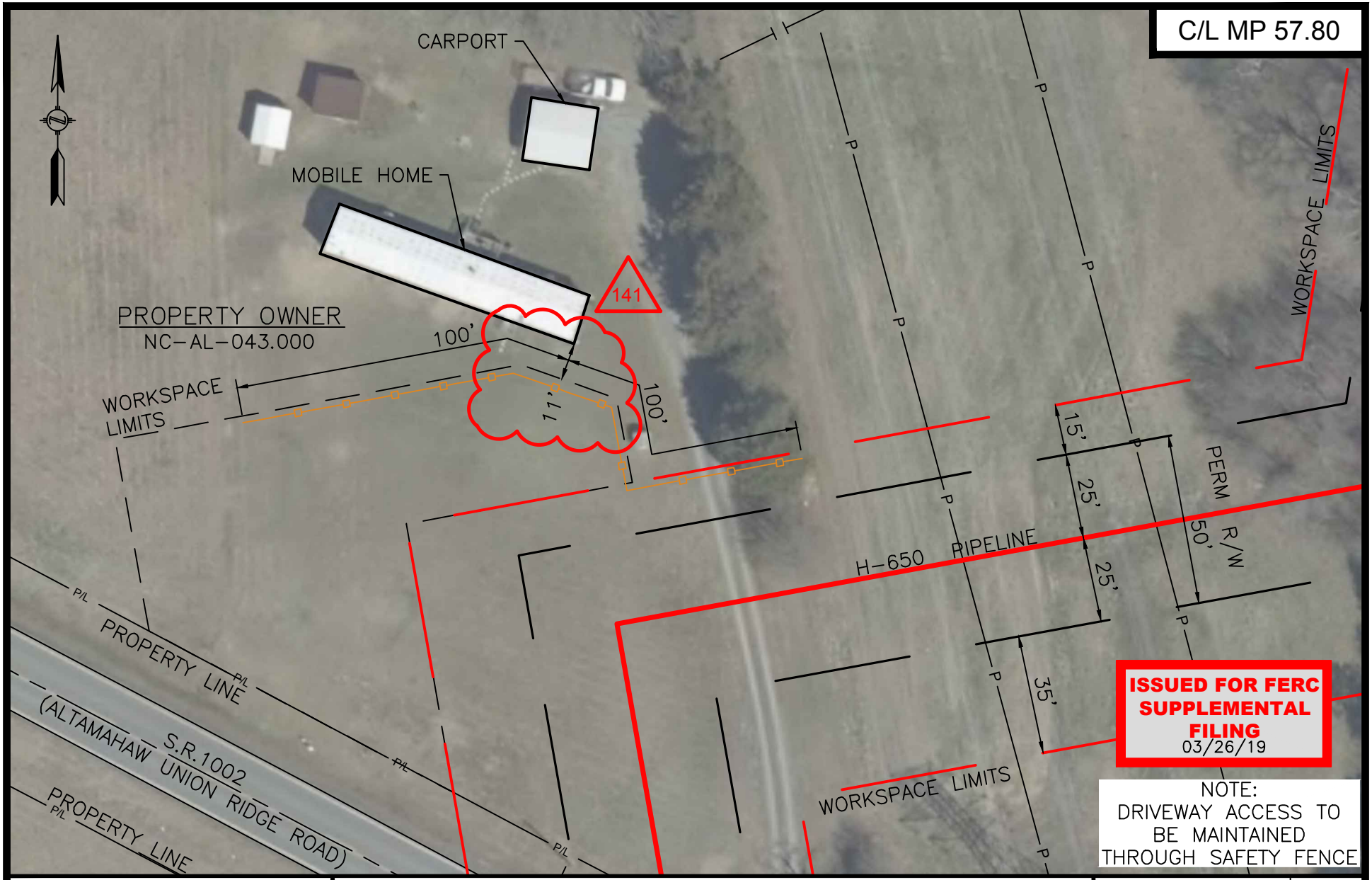

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: TBH	10/10/18
DRAFTING CK: SJO	10/19/18
ENVIRONMENTAL CK:	
ENGINEERING CK: .	.
DETAIL SHEET:	
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DATE OF PLOT: 3/21/2019 8:47 AM	

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: TBH	10/10/18
DRAFTING CK: SJO	10/19/18
ENVIRONMENTAL CK:	
ENGINEERING CK: .	.
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-009**	
SCALE: 1" = 40'	REV. P1
DATE OF PLOT: 3/26/2019 10:25 AM	

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/17/18
DRAFTING CK:	SJO	10/22/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
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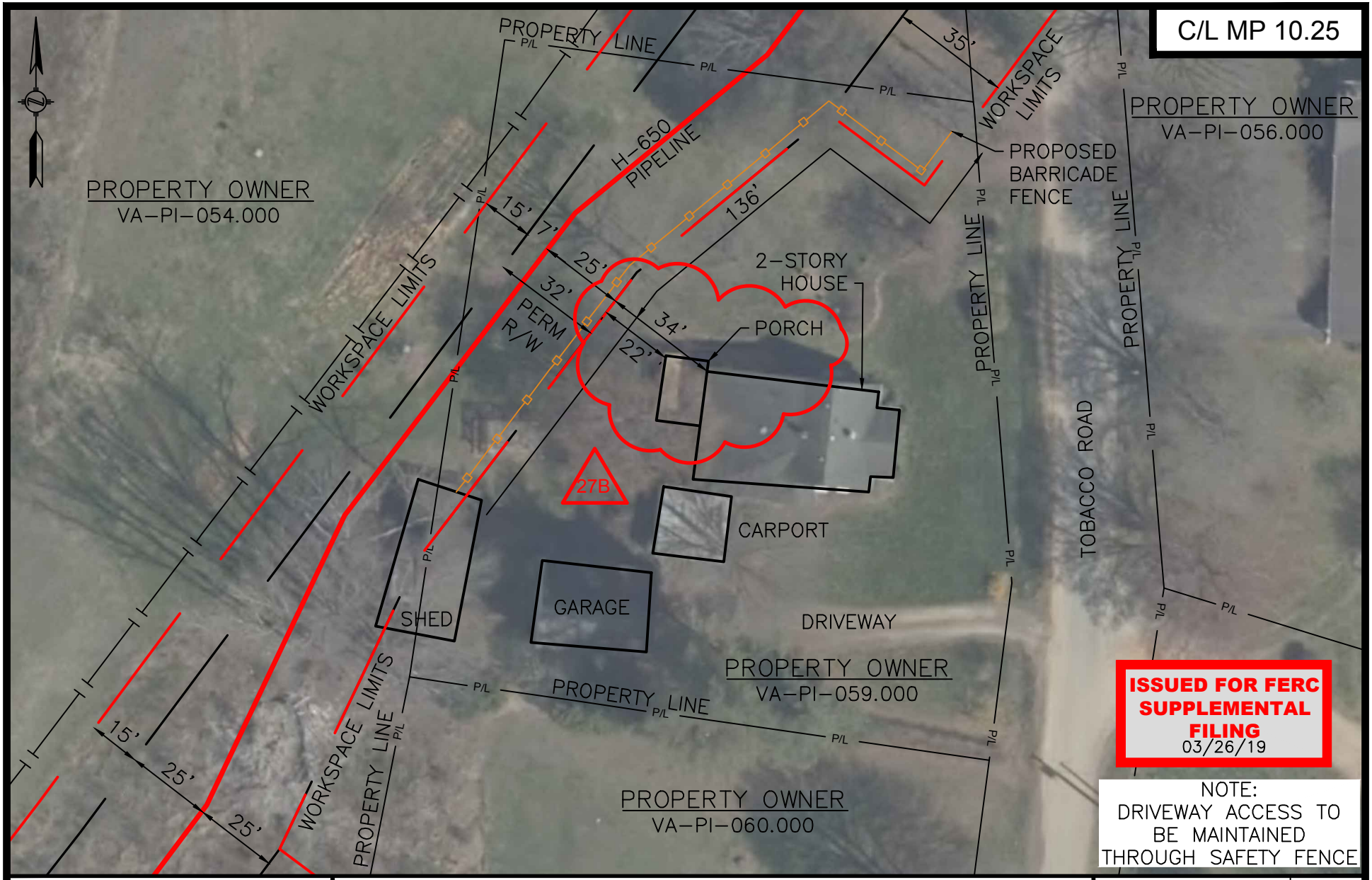

TRC
Results you can rely on

FIRM REGISTRATION NO.:
VA 0407006097

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
PITTSYLVANIA COUNTY, VIRGINIA

SHEET 1 OF 1

DRAWN BY:	TBH	10/17/18
DRAFTING CK:	SJO	10/22/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
DRAWING NO.:	**RSS-H650-016**	
SCALE: 1" = 40'		REV. P
DATE OF PLOT: 3/26/2019 10:51 AM		

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/17/18
DRAFTING CK:	SJO	10/22/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
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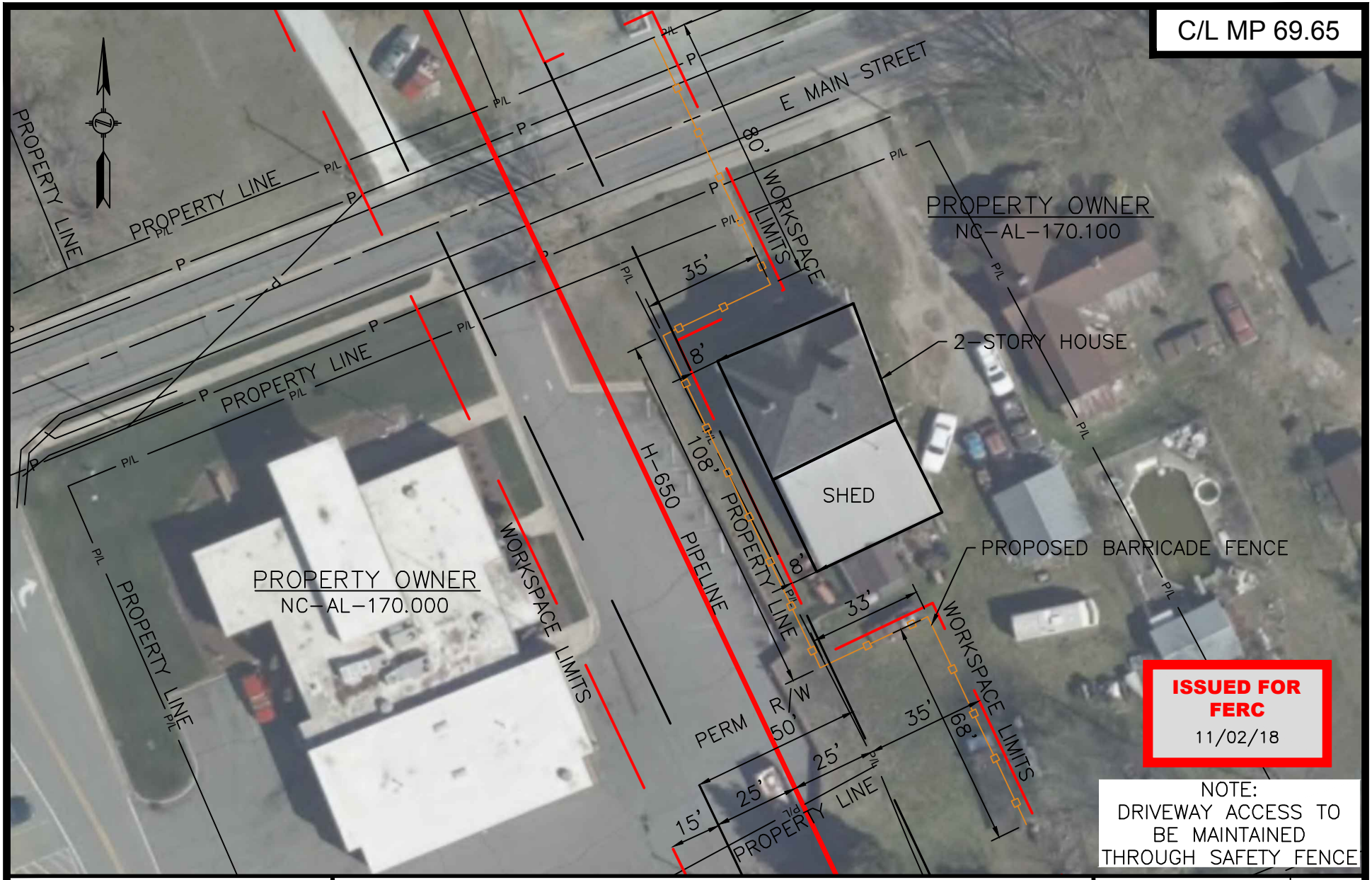

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/17/18
DRAFTING CK:	SJO	10/22/18
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
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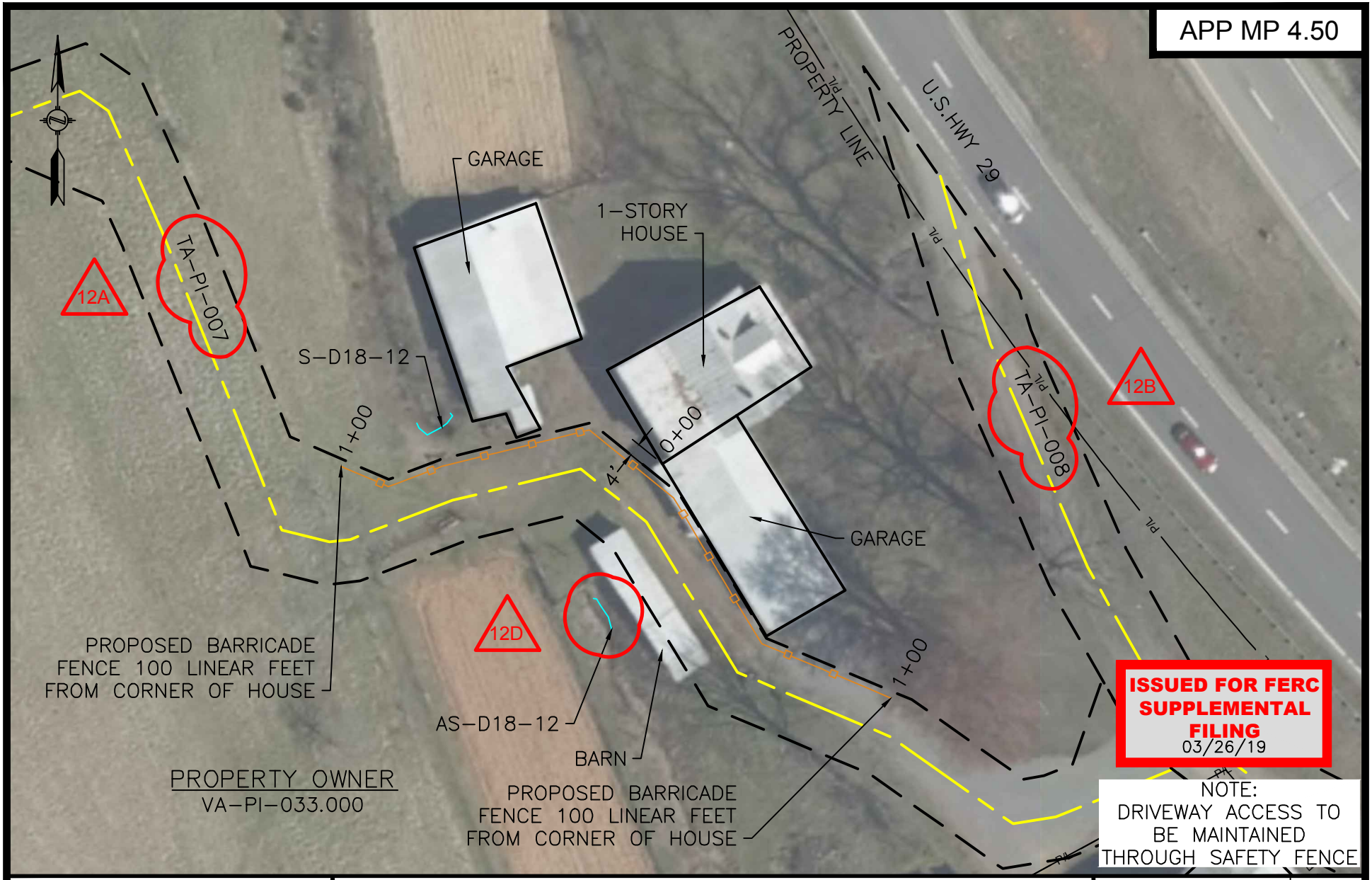
APP MP 4.50



TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
PITTSYLVANIA COUNTY,VIRGINIA

SHEET 1 OF 1

DRAWN BY:	SJS	03/19/19
DRAFTING CK:	DEM	03/20/19
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
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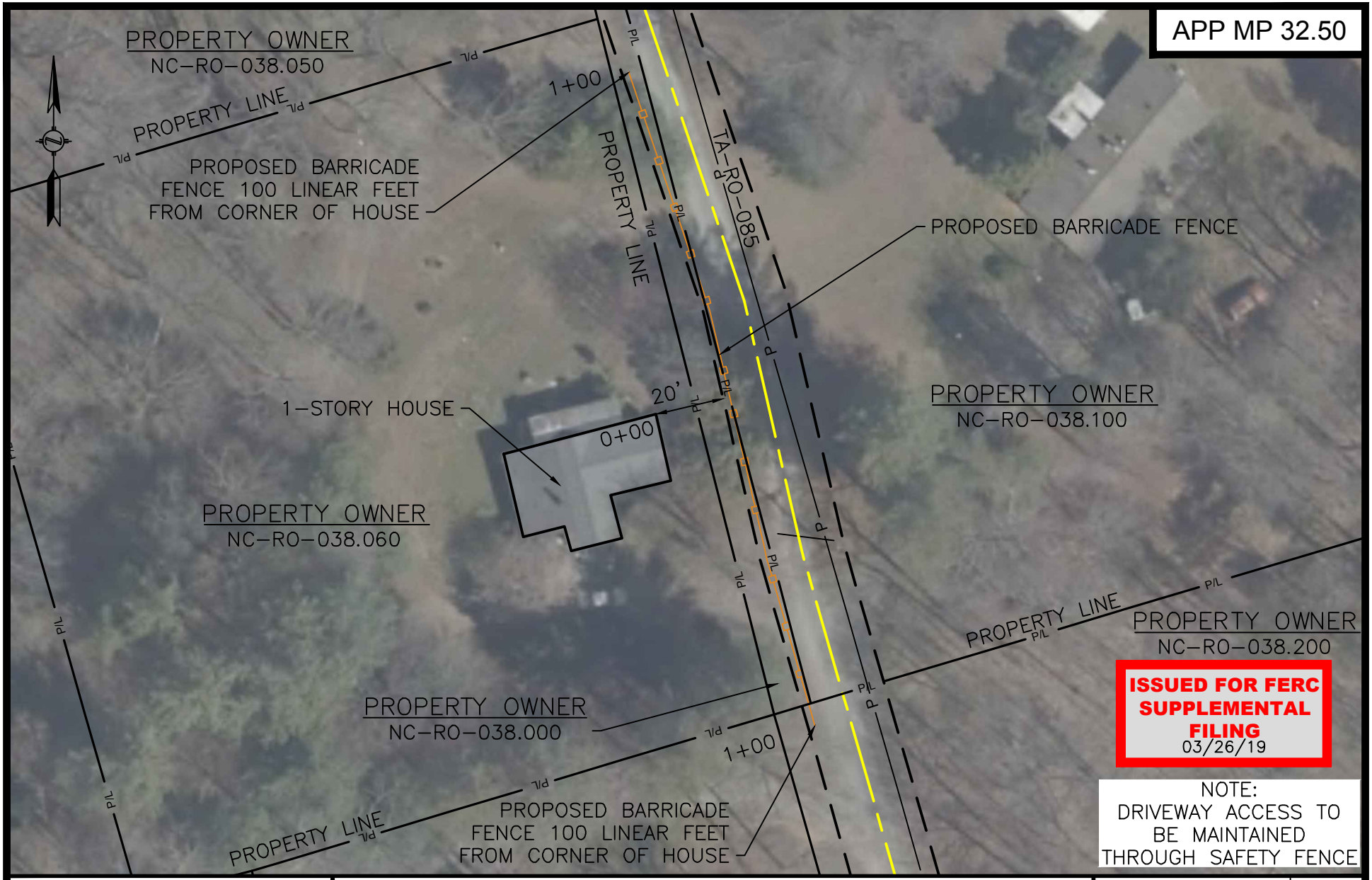

TRC
Results you can rely on

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CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ROCKINGHAM COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	SJS	03/19/19
DRAFTING CK:	DEM	03/20/19
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
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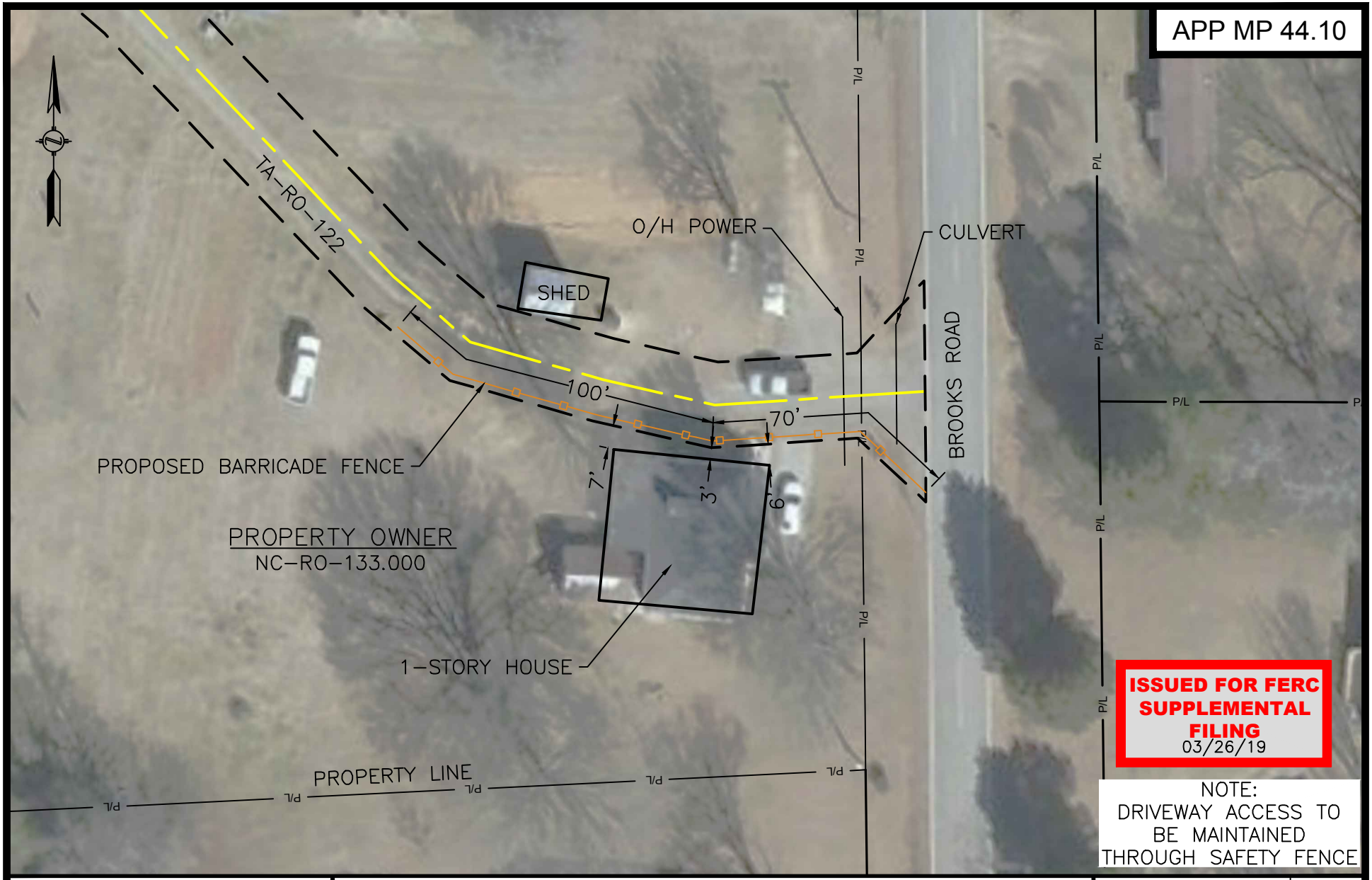
DATE OF PLOT: 3/26/2019 10:52 AM		

APP MP 44.10



ISSUED FOR FERC SUPPLEMENTAL FILING
03/26/19

NOTE:
DRIVEWAY ACCESS TO BE MAINTAINED THROUGH SAFETY FENCE

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ROCKINGHAM COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: SJS	03/19/19
DRAFTING CK: DEM	03/20/19
ENVIRONMENTAL CK:	
ENGINEERING CK: .	.
DETAIL SHEET:	
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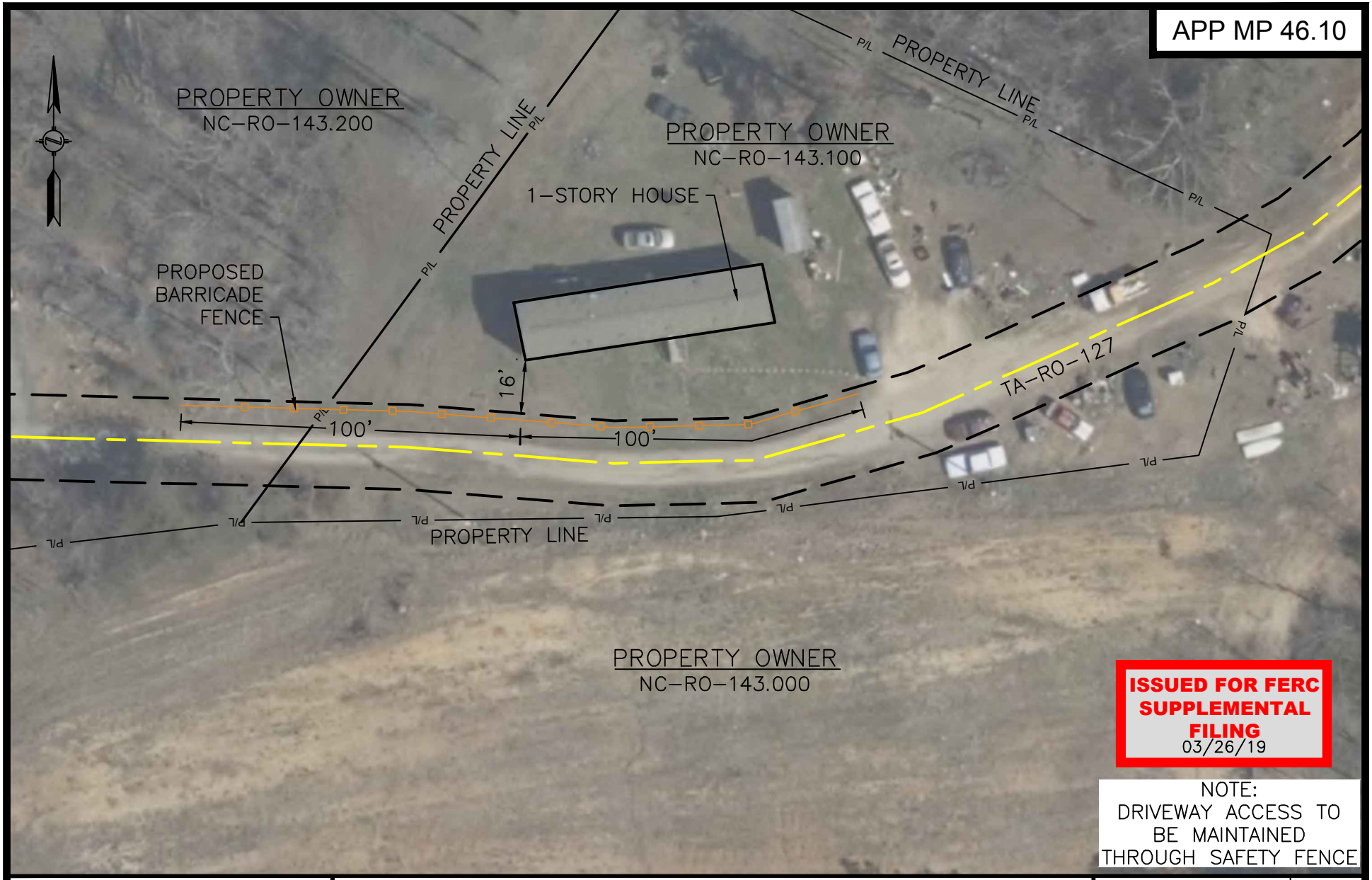
DATE OF PLOT: 3/26/2019 10:53 AM	

APP MP 46.10



ISSUED FOR FERC SUPPLEMENTAL FILING
03/26/19

NOTE:
DRIVEWAY ACCESS TO BE MAINTAINED THROUGH SAFETY FENCE

TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ROCKINGHAM COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: SJS	03/19/19
DRAFTING CK: DEM	03/20/19
ENVIRONMENTAL CK:	
ENGINEERING CK: .	.
DETAIL SHEET:	
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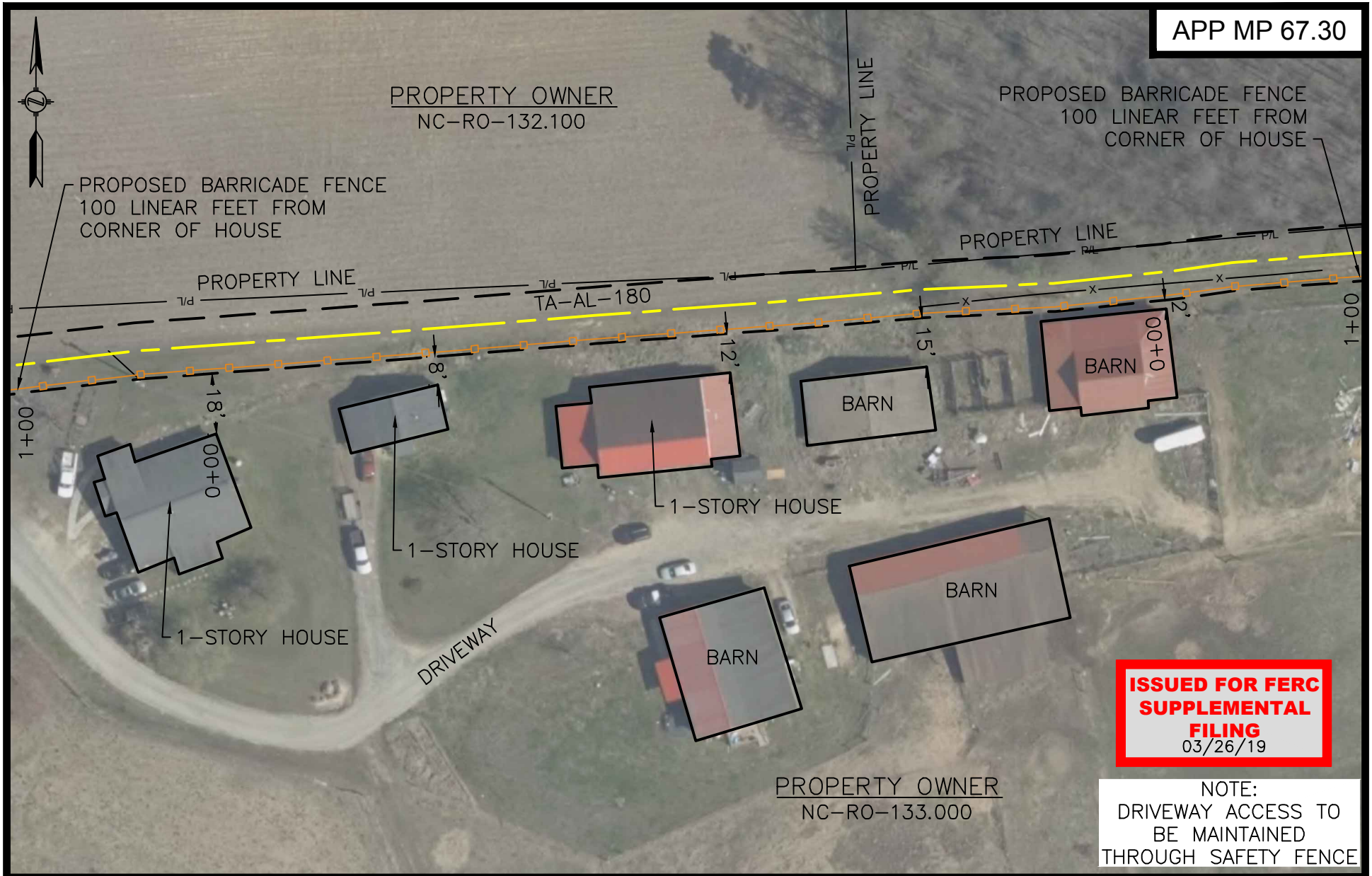
DATE OF PLOT: 3/26/2019 10:54 AM	

APP MP 67.30



TRC
Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	TBH	10/17/18
DRAFTING CK:	DEM	03/20/19
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
DRAWING NO.:	**RSS-H650-028**	
SCALE: 1" = 40'		REV. P
DATE OF PLOT: 3/26/2019 10:55 AM		

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 9

March 2019

LIST OF TABLES

Table 9-A1

MVP Southgate Project
Construction Period Emissions Summary

		2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
County	**Activity**	**CO_2**	**CO**	**NOx**	**PM_{10}**	**PM_{25}**	**SO_2**	**VOC**	**HAPS**	**CO_2**	**CO**	**NOx**	**PM_{10}**	**PM_{25}**	**SO_2**	**VOC**	**HAPS**
Pittsylvania, VA	Non-Road and On-Road Construction Vehicles and Worker Commutes	39,222.0	59.5	93.7	6.2	5.7	0.2	12.4	1.1	3,885.8	5.2	7.3	0.6	0.5	0.0	1.2	0.1
	Fugitive Dust[1]	0.0	0.0	0.0	437.4	47.5	0.0	0.0	0.0	0.0	0.0	0.0	240.0	25.6	0.0	0.0	0.0
	Open Burning	3,341.4	147.1	4.2	17.9	17.9	0.0	25.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	**42,563.3**	**206.6**	**97.9**	**461.5**	**71.1**	**0.2**	**37.6**	**1.1**	**3,885.8**	**5.2**	**7.3**	**240.6**	**26.1**	**0.0**	**1.2**	**0.1**
Rockingham, NC	Non-Road and On-Road Construction Vehicles and Worker Commutes	33,527.6	43.4	78.8	5.0	4.6	0.2	10.1	0.9	1,594.3	1.5	2.1	0.1	0.1	0.0	0.4	0.0
	Fugitive Dust[1]	0.0	0.0	0.0	392.3	42.4	0.0000	0.0	0.0	0.0	0.0	0.0	215.6	23.0	0.0	0.0	0.0
	Open Burning	3,263.9	143.7	4.1	17.4	17.4	0.0	24.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	**36,791.5**	**187.1**	**82.9**	**414.8**	**64.5**	**0.2**	**34.8**	**0.9**	**1,594.3**	**1.5**	**2.1**	**215.7**	**23.1**	**0.0**	**0.4**	**0.0**
Alamance, NC	Non-Road and On-Road Construction Vehicles and Worker Commutes	31,438.9	39.0	73.1	4.5	4.2	0.2	9.4	0.9	1,616.8	1.5	2.2	0.1	0.1	0.0	0.4	0.0
	Fugitive Dust[1]	0.0	0.0	0.0	275.8	29.9	0.0	0.0	0.0	0.0	0.0	0.0	152.5	16.3	0.0	0.0	0.0
	Open Burning	2,257.3	99.4	2.8	12.1	12.1	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	**33,696.2**	**138.4**	**75.9**	**292.3**	**46.2**	**0.2**	**26.4**	**0.9**	**1,616.8**	**1.5**	**2.2**	**152.7**	**16.4**	**0.0**	**0.4**	**0.0**
PROJECT TOTAL		**113,051.0**	**532.1**	**256.7**	**1,168.6**	**181.8**	**0.6**	**98.8**	**2.9**	**7,097.0**	**8.2**	**11.7**	**608.9**	**65.6**	**0.04**	**2.0**	**0.2**

Notes:
1. Includes fugitive dust emissions from construction vehicle and commuter vehicles travel on paved and unpaved roads.

Table 9-A2

MVP Southgate Project
Construction Period Work Activity Emissions Summary

Summary of Non-Road Emissions

Activity	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS
H-605 and H-650 Pipeline - Pittsylvania County, VA	27,862	23.98	65.53	3.74	3.74	0.1460	8.25	0.64	1,472	0.74	1.98	0.11	0.11	0.0074	0.38	0.03
H-650 Pipeline - Rockingham County, NC	27,862	23.98	65.53	3.74	3.74	0.1460	8.25	0.64	1,472	0.74	1.98	0.11	0.11	0.0074	0.38	0.03
H-650 Pipeline - Alamance County, NC	27,862	23.98	65.53	3.74	3.74	0.1460	8.25	0.64	1,472	0.74	1.98	0.11	0.11	0.0074	0.38	0.03
Lambert Compressor Station/ Interconnect	7,664	15.26	22.16	1.64	1.64	0.0413	3.13	0.18	1,929	2.14	4.46	0.34	0.34	0.0101	0.69	0.04
LN 3600 Interconnect	1,470	2.54	4.35	0.30	0.30	0.0079	0.57	0.03	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
T-15 Dan River Interconnect	1,470	2.54	4.35	0.30	0.30	0.0079	0.57	0.03	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
T-21 Haw River Interconnect	1,470	2.54	4.35	0.30	0.30	0.0079	0.57	0.03	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
TOTAL	**95,660**	**94.81**	**231.81**	**13.77**	**13.77**	**0.5030**	**29.60**	**2.20**	**6,346**	**4.35**	**10.38**	**0.65**	**0.65**	**0.0322**	**1.83**	**0.14**

Summary of On-Road Construction Vehicle Emissions including Material Deliveries/Removals and Worker Commutes

Activity	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS
H-605 and H-650 Pipeline - Pittsylvania County, VA	972	8.52	0.77	0.17	0.04	0.0066	0.26	0.11	113	0.60	0.19	0.03	0.01	0.0009	0.03	0.01
H-650 Pipeline - Rockingham County, NC	900	8.30	0.61	0.15	0.03	0.0060	0.24	0.10	78	0.57	0.09	0.02	0.00	0.0006	0.02	0.01
H-650 Pipeline - Alamance County, NC	950	8.42	0.73	0.17	0.04	0.0064	0.25	0.11	101	0.59	0.15	0.02	0.01	0.0008	0.03	0.01
Lambert Compressor Station/ Interconnect	470	3.77	0.46	0.09	0.02	0.0033	0.13	0.05	95	0.65	0.12	0.02	0.01	0.0007	0.03	0.01
LN 3600 Interconnect	50	0.42	0.04	0.01	0.00	0.0003	0.01	0.01	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
T-15 Dan River Interconnect	50	0.42	0.04	0.01	0.00	0.0003	0.01	0.01	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
T-21 Haw River Interconnect	50	0.42	0.04	0.01	0.00	0.0003	0.01	0.01	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
TOTAL	**3,442**	**30.27**	**2.69**	**0.61**	**0.13**	**0.0233**	**0.91**	**0.39**	**386**	**2.40**	**0.56**	**0.08**	**0.03**	**0.0029**	**0.11**	**0.03**

Summary of Off-Road Vehicle Travel

Activity	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS
H-605 and H-650 Pipeline - Pittsylvania County, VA	488	2.17	0.92	0.12	0.05	0.0038	0.14	0.04	44	0.20	0.08	0.01	0.00	0.0003	0.01	0.00
H-650 Pipeline - Rockingham County, NC	488	2.17	0.92	0.12	0.05	0.0038	0.14	0.04	44	0.20	0.08	0.01	0.00	0.0003	0.01	0.00
H-650 Pipeline - Alamance County, NC	488	2.17	0.92	0.12	0.05	0.0038	0.14	0.04	44	0.20	0.08	0.01	0.00	0.0003	0.01	0.00
Lambert Compressor Station/ Interconnect	1,766	5.78	3.87	0.46	0.20	0.0144	0.50	0.11	233	0.84	0.49	0.06	0.03	0.0019	0.07	0.02
LN 3600 Interconnect	618	1.51	1.49	0.17	0.08	0.0052	0.18	0.04	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
T-15 Dan River Interconnect	618	1.51	1.49	0.17	0.08	0.0052	0.18	0.04	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
T-21 Haw River Interconnect	618	1.51	1.49	0.17	0.08	0.0052	0.18	0.04	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
TOTAL	**5,086**	**16.80**	**11.09**	**1.32**	**0.59**	**0.0413**	**1.44**	**0.33**	**364**	**1.43**	**0.74**	**0.09**	**0.04**	**0.0029**	**0.10**	**0.03**

Summary of Open Burning Emissions

Activity	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS	CO_2	CO	NOx	PM_{10}	PM_{25}	SO_2	VOC	HAPS
H-605 and H-650 Pipeline - Pittsylvania County, VA	3,252	143.19	4.09	17.39	17.39	0.0	24.5	NA	0	0	0	0	0	0	0	NA
H-650 Pipeline - Rockingham County, NC	3,260	143.52	4.10	17.43	17.43	0.0	24.6	NA	0	0	0	0	0	0	0	NA
H-650 Pipeline - Alamance County, NC	2,257	99.38	2.84	12.07	12.07	0.0	17.0	NA	0	0	0	0	0	0	0	NA
Lambert Compressor Station/ Interconnect	89	3.92	0.11	0.48	0.48	0.0	0.7	NA	0	0	0	0	0	0	0	NA
LN 3600 Interconnect	2	0.09	0.002	0.01	0.01	0.0	0.01	NA	0	0	0	0	0	0	0	NA
T-15 Dan River Interconnect	2	0.09	0.002	0.01	0.01	0.0	0.01	NA	0	0	0	0	0	0	0	NA
T-21 Haw River Interconnect	0	0.00	0.00	0.00	0.00	0.0	0.0	NA	0	0	0	0	0	0	0	NA
TOTAL	**8,863**	**390.18**	**11.15**	**47.38**	**47.38**	**0.0**	**66.89**	**0.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**

Summary of Fugitive Dust Emissions (Includes Paved and Unpaved Road vehicle travel)

Activity	2020 Emission Totals (Tons)		2021 Emission Totals (Tons)	
	PM_{10}	PM_{25}	PM_{10}	PM_{25}
H-605 and H-650 Pipeline - Pittsylvania County, VA	401.15	43.15	229.29	24.41
H-650 Pipeline - Rockingham County, NC	377.58	40.63	215.57	22.95
H-650 Pipeline - Alamance County, NC	269.51	29.15	152.52	16.25
Lambert Compressor Station/ Interconnect	36.28	4.38	10.71	1.22
LN 3600 Interconnect	7.33	0.90	0.00	0.00
T-15 Dan River Interconnect	7.43	0.91	0.00	0.00
T-21 Haw River Interconnect	6.24	0.78	0.00	0.00
TOTAL	1,106	119.89	608.09	64.83

Table 9-A3(a)
MVP Southgate Project
Fugitive Dust Emissions During Construction

Facility	County	Disturbed Acreage	Construction Duration (months)	Exposed Soils (acre-months)	Total PM Emissions (tons)				Earth Moving - Total PM Emissions (tons)				Wind Erosion - Total PM Emissions (tons)			
					2020		2021		2020		2021		2020		2021	
					PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Pipeline	Pittsylvania, VA	518.7	19	9,856	391.65	41.63	228.47	24.28	342.37	34.24	199.72	19.97	49.28	7.39	28.75	4.31
	Rockingham, NC	487.7	19	9,265	368.18	39.13	214.77	22.83	321.85	32.19	187.75	18.77	46.33	6.95	27.02	4.05
	Alamance, NC	344.4	19	6,544	260.05	27.64	151.70	16.12	227.33	22.73	132.61	13.26	32.72	4.91	19.09	2.86
Lambert Compressor Station/ Interconnect	Pittsylvania, VA	20.5	18	369	15.47	1.64	7.74	0.82	13.53	1.35	6.76	0.68	1.95	0.29	0.97	0.15
LN 3600 Interconnect	Rockingham, NC	4.8	5	24	1.52	0.16	0.00	0.00	1.33	0.13	0.00	0.00	0.19	0.03	0.00	0.00
T-15 Dan River Interconnect	Rockingham, NC	5.2	5	26	1.63	0.17	0.00	0.00	1.42	0.14	0.00	0.00	0.20	0.03	0.00	0.00
T-21 Haw River Interconnect	Alamance, NC	1.4	5	7	0.44	0.05	0.00	0.00	0.38	0.04	0.00	0.00	0.05	0.01	0.00	0.00
			Total	**26,092**	**1038.95**	**110.43**	**602.67**	**64.06**	**908.22**	**90.82**	**526.84**	**52.68**	**130.73**	**19.61**	**75.83**	**11.37**

Fugitive Dust Emission Factors (Construction)

PM_{10}[2]	5.50E-02	ton/acre-month
$PM_{2.5}$[1,2]	5.50E-03	ton/acre-month

[1] WRAP Fugitive Dust Handbook, Countess Environmental, September 2006, Section 3.4.1.
[2] WRAP Fugitive Dust Handbook, Table 3-2, level 1, average conditions

Fugitive Dust Emission Factors (Wind Erosion)

PM_{10}[3]	7.92E-03	ton/acre-month
$PM_{2.5}$[3,4]	1.19E-03	ton/acre-month

[3] Wind erosion of exposed areas (seeded land, stripped or graded overburden) = 0.38 ton TSP/acre/yr (WRAP Fugitive Dust Handbook, Table 11-6)

[4] PM_{10}/TSP = 0.5, $PM_{2.5}$/PM_{10} = 0.15, (WRAP Fugitive Dust Handbook, Section 7-2)

[5] Water and other approved dust suppressants would be used at construction sites (50% minumum control applied per WRAP Fugitive Dust Handbook).

Table 9-A3(b)
MVP Southgate Project
Paved Road Fugitive Dust Emissions During Construction

Site-Specific Information

Parameter	Units	Value
Average Weight of Vehicle (W)[2]	tons	3.0
Precip > 0.01 in (p)[1]	days/yr	116

Emission Factor Equation Parameters

Parameter	Units	PM-10	PM-2.5
Surface Material Silt Loading (sL)[3]	g/m2	0.6	
Particle Size Multiplier (k)[4]	lb/VMT	0.0022	0.00054

Calculated Emission Factors

	Units	PM-10	PM-2.5
E (Short-Term Emission Factor)	lb/VMT	0.0042	0.0010
Eext (Annual Emission Factor)	lb/VMT	0.0029	0.0007

Facility	County	Paved Road Vehicle Miles Traveled (VMT)		Total PM Emissions (tons)			
				2020		2021	
		2020	2021	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Pipeline	Pittsylvania, VA	2,496,171	200,446	3.61	0.89	0.29	0.07
	Rockingham, NC	2,433,241	184,836	3.52	0.86	0.27	0.07
	Alamance, NC	2,471,391	194,986	3.57	0.88	0.28	0.07
Lambert Compressor Station	Pittsylvania, VA	1,940,729	385,136	2.81	0.69	0.56	0.14
Lambert Interconnect	Rockingham, NC	573,500	0	0.83	0.20	0.00	0.00
LN 3600 and T-15 Dan River Interconnects	Rockingham, NC	1,147,000	0	1.66	0.41	0.00	0.00
T-21 Haw River Interconnect	Alamance, NC	573,500	0	0.83	0.20	0.00	0.00
			Total	**16.82**	**4.13**	**1.40**	**0.34**

Calculation Sources:
(1) EPA's AP 42 Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources Chapter 13.0 – Introduction to Miscellaneous Sources, Section 13.2 – Introduction to Fugitive Dust Sources Final Section of 13.2.1 Paved Roads (January 2011)

Emission Factor Equations:
Equation 1 from Calculation Source (1) - Hourly Emission Factor (lb/VMT): E = k*[sL^0.91]*(W^1.02)
Equation 2 from Calculation Source (1) - Annual Emission Factor (lb/VMT): Eext = E*[1-P/(4*N)]

Where:
E = particulate emission factor (having units matching the units of k);
k = particle size multiplier for particle size range and units of interest;
sL = road surface silt loading (grams per square meter) (g/m2); and
W = average weight (tons) of the vehicles traveling the road.

Notes:
[1] Chatham, VA 30-year average of days > 0.1 inch precipitation (1981-2010)
[2] Based on estimate of the average vehicle weight for onroad vehicles, including worker commutes and material removal/delivery vehicles
[3] Based on Table 13.2.1-2 of Calculation Source (1); worst-case baseline
[4] Based on Table 13.2.1-1 of Calculation Source (1) for paved roads

Table 9-A3(c)
MVP Southgate Project
Unpaved Road Fugitive Dust Emissions During Construction

Site-Specific Information

Parameter	Units	Values
Average Weight of Vehicle (W)[1]	tons	3
Precip > 0.01 in (p)[2]	days/yr	116

Emission Factor Equation Parameters

Parameter	Units	PM-10	PM-2.5
Surface Material Silt Content (s)[3]	%	8.5	
Particle Size Multiplier (k)[4]	lb/VMT	1.5	0.15
Emperical Constant (a)[4]	---	0.9	0.7
Emperical Constant (b)[4]	---	0.45	0.45
Water Spray Control Efficiency	%	50	

Calculated Emission Factors

	Units	PM-10	PM-2.5
E	lb/VMT	0.550	0.059
Eext	lb/VMT	0.375	0.040

Facility	County	Unpaved Road Vehicle Miles Traveled (VMT)		Total PM Emissions (tons)			
				2020		2021	
		2020	2021	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Pipeline	Pittsylvania, VA	37,648	3,432	5.88	0.63	0.54	0.06
	Rockingham, NC	37,648	3,432	5.88	0.63	0.54	0.06
	Alamance, NC	37,648	3,432	5.88	0.63	0.54	0.06
Lambert Compressor Station	Pittsylvania, VA	78,000	15,470	12.19	1.31	2.42	0.26
Lambert Interconnect	Rockingham, NC	31,850	0	4.98	0.53	0.00	0.00
LN 3600 and T-15 Dan River Interconnects	Rockingham, NC	63,700	0	9.96	1.07	0.00	0.00
T-21 Haw River Interconnect	Alamance, NC	31,850	0	4.98	0.53	0.00	0.00
			Total	**49.76**	**5.33**	**4.03**	**0.43**

Calculation Sources:

(1) EPA's AP 42 Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources Chapter 13.0 – Introduction to Miscellaneous Sources, Section 13.2 – Introduction to Fugitive Dust Sources Final Section of 13.2.2 Unpaved Roads (November 2006)

Emission Factor Equations:

Equation 1a from Calculation Source (1) - Hourly Emission Factor (lb/VMT): E = k*[(s/12)^a]*(W/3)^b

Equation 2 from Calculation Source (1) - Annual Emission Factor (lb/VMT): Eext = E*[(365-P)/365]

Notes:

[1] Based on estimate of the average vehicle weight for construction site vehicles

[2] Chatham, VA 30-year average of days > 0.1 inch precipitation (1981-2010)

[3] Based on Table 13.2.2.1 of Calculation Source (1)

[4] Based on Table 13.2.2.2 of Calculation Source (1) for Unpaved Industrial Roads

Table 9-A4
H-605 and H-650 Pipeline Construction Equipment Air Emissions - Pittsylvania County

MVP Southgate Project
H-605 and H-650 Pipeline, Pittsylvania, VA

On-site Road and Nonroad Construction Equipment	Equipment Engine HP	Fuel		Schedule		SCC	Number of Operating Hours		NONROAD2008a Emission Factor (g/hp-hr)								Engine Load Factor	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
		Diesel	Gasoline	days/week	hours/day		2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
Nonroad construction equipment																																
Light plants	15	X		2	4	2270002027	2,149	277	588.92	2.36	4.48	0.35	0.35	0.0040	0.45	0.01	0.43	9.00	0.04	0.07	0.005	0.005	0.0001	0.007	0.000	1.16	0.00	0.01	0.001	0.001	0.0000	0.001	0.000
Bore rigs	250	X		6	10	2270002033	2,080	0	530.27	0.68	2.86	0.15	0.15	0.0031	0.24	0.01	0.43	130.70	0.17	0.70	0.036	0.036	0.0008	0.060	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
HDD Reaming/Pullback Rig	875	X		6	10	2270002033	2,080	0	530.03	1.09	4.71	0.18	0.18	0.0031	0.32	0.01	0.43	457.24	0.94	4.06	0.157	0.157	0.0027	0.272	0.011	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
HDD Assist Reaming/Pilot Hole Rig	440	X		6	10	2270002033	2,080	0	530.35	0.88	3.08	0.14	0.14	0.0031	0.22	0.01	0.43	230.06	0.38	1.33	0.060	0.060	0.0014	0.094	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 345C)	325	X		6	10	2270002036	71,240	3,640	536.38	0.38	1.00	0.05	0.05	0.0028	0.14	0.01	0.59	8076.65	5.70	15.00	0.819	0.819	0.0417	2.101	0.185	412.68	0.29	0.77	0.042	0.042	0.0021	0.107	0.009
Excavators (JD 350G LC)	271	X		6	10	2270002036	8,060	0	536.40	0.17	0.53	0.02	0.02	0.0026	0.13	0.01	0.59	761.97	0.24	0.75	0.030	0.030	0.0037	0.191	0.017	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 320DL)	148	X		6	10	2270002036	71,240	3,900	536.39	0.23	0.56	0.04	0.04	0.0027	0.14	0.01	0.59	3678.05	1.56	3.83	0.244	0.244	0.0182	0.935	0.084	201.35	0.09	0.21	0.013	0.013	0.0010	0.051	0.005
Off-highway trucks -1-2.5 ton trucks (CAT 725)	309	X		6	8	2270002051	6,656	1,456	536.40	0.20	0.52	0.02	0.02	0.0026	0.13	0.01	0.59	717.48	0.26	0.70	0.028	0.028	0.0035	0.179	0.016	156.95	0.06	0.15	0.006	0.006	0.0008	0.039	0.004
Water Truck	175	X		6	10	2270002051	4,160	1,560	536.41	0.12	0.32	0.01	0.01	0.0026	0.13	0.01	0.59	253.97	0.06	0.15	0.005	0.005	0.0012	0.063	0.006	95.24	0.02	0.06	0.002	0.002	0.0005	0.023	0.002
Utility Truck	100	X		6	10	2270002051	10,140	2,080	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	353.74	0.10	0.22	0.008	0.008	0.0017	0.087	0.008	72.56	0.02	0.04	0.002	0.002	0.0004	0.018	0.002
Tractors, loaders, and backhoes (CAT 450F)	144	X		6	6	2270002066	1,560	0	625.13	1.65	2.76	0.34	0.34	0.0036	0.44	0.01	0.21	32.51	0.09	0.14	0.018	0.018	0.0002	0.023	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Dozers (CAT D6K)	125	X		6	10	2270002069	49,920	4,160	536.38	0.28	0.72	0.05	0.05	0.0027	0.14	0.01	0.59	2176.73	1.15	2.92	0.207	0.207	0.0109	0.571	0.050	181.39	0.10	0.24	0.017	0.017	0.0009	0.048	0.004
Dozers (CAT D7E)	235	X		6	10	2270002069	49,400	3,900	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	4049.71	1.54	5.08	0.220	0.220	0.0201	1.039	0.093	319.71	0.12	0.40	0.017	0.017	0.0016	0.082	0.007
Off- highway tractors (John Deere 6115D)	115	X		6	6	2270002051	1,404	468	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	56.33	0.02	0.03	0.001	0.001	0.0003	0.014	0.001	18.78	0.01	0.01	0.000	0.000	0.0001	0.005	0.000
Rock Drill Machine (JOHN HENRY drill on CAT320DL)	248	X		6	10	2270002081	3,120	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	269.88	0.23	0.67	0.043	0.043	0.0014	0.081	0.006	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Feller Buncher (CAT 553C)	173	X		6	10	2270002081	260	0	536.28	0.61	1.44	0.14	0.14	0.0029	0.17	0.01	0.59	15.69	0.02	0.04	0.004	0.004	0.0001	0.005	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Logging Skidder (CAT 525C)	182	X		6	10	2270002081	780	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	49.51	0.04	0.12	0.008	0.008	0.0003	0.015	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chipper (Bandit 1850)	250	X		6	10	2270002081	780	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	68.01	0.06	0.17	0.011	0.011	0.0004	0.020	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Sideboom (CAT 583T Pipelayer)	347	X		6	10	2270002081	37,700	0	536.26	0.95	2.24	0.14	0.14	0.0031	0.18	0.01	0.59	4562.39	8.12	19.09	1.169	1.169	0.0261	1.524	0.105	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Bending Machine	175	X		6	10	2270002081	3,900	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	238.05	0.20	0.59	0.038	0.038	0.0013	0.071	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Stump Grinder (Vermeer SC252)	27	X		6	10	2270002081	1,560	0	595.69	0.38	3.16	0.04	0.04	0.0030	0.15	0.01	0.59	16.32	0.01	0.09	0.001	0.001	0.0001	0.004	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chain Saw	10	X		6	10	2270002081	7,540	0	594.37	4.49	4.32	0.35	0.35	0.0040	0.56	0.01	0.59	29.15	0.22	0.21	0.017	0.017	0.0002	0.027	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Industrial Equipment																																
Bobcat with sweeper attachment	70	X		6	2	2270003040	572	364	589.79	1.16	3.25	0.14	0.14	0.0033	0.18	0.01	0.43	11.19	0.02	0.06	0.003	0.003	0.0001	0.003	0.000	7.12	0.01	0.04	0.002	0.002	0.0000	0.002	0.000
Bobcat with brush hog attachement	70	X		6	2	2270003040	312	0	589.79	1.16	3.25	0.14	0.14	0.0033	0.18	0.01	0.43	6.11	0.01	0.03	0.001	0.001	0.0000	0.002	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Commercial Equipment																																
Pumps	15	X		6	6	2270006010	13,416	1,092	588.81	2.43	4.59	0.36	0.36	0.0040	0.49	0.01	0.43	56.16	0.23	0.44	0.034	0.034	0.0004	0.046	0.001	4.57	0.02	0.04	0.003	0.003	0.0000	0.004	0.000
Air compressors	275	X		6	10	2270006015	18,200	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	1257.68	2.09	7.29	0.463	0.463	0.0075	0.659	0.029	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Welders	55	X		6	9	2270006025	19,422	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	268.43	0.45	1.56	0.099	0.099	0.0016	0.141	0.006	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Pressure washers	5	X		6	4	2270006030	2,392	728	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	3.01	0.00	0.02	0.001	0.001	0.0000	0.002	0.000	0.91	0.00	0.01	0.000	0.000	0.0000	0.000	0.000
Hydro power units	200	X		6	10	2270006035	520	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	26.13	0.04	0.15	0.010	0.010	0.0002	0.014	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road construction vehicles							Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)																					
Light duty gasoline vehicles (< 6,000 lb GVW)	150		X	6	2		46,800	1,560	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		22.55	0.21	0.02	0.004	0.001	0.0002	0.006	0.003	0.75	0.01	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty gasoline vehicles (>6,000 lb GVW)	300		X	6	2		393,120	39,000	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		189.43	1.75	0.13	0.032	0.006	0.0013	0.050	0.022	18.79	0.17	0.01	0.003	0.001	0.0001	0.005	0.002
Light duty diesel vehicles (< 6,000 lb GVW)	150	X		6	2		82,680	10,920	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		182.97	0.14	0.52	0.055	0.028	0.0016	0.053	0.008	24.17	0.02	0.07	0.007	0.004	0.0002	0.007	0.001
Heavy duty diesel vehicles (>6,000 lb GVW) Gang Bus	300	X		6	2		42,120	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		93.21	0.07	0.26	0.028	0.014	0.0008	0.027	0.004	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Deliveries / Removals	Empty Vehicle Weight (tons)	Full Vehicle Weight (tons)	Round Trip Distance (miles)	Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
				2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
On-road delivery vehicles																													
Heavy duty diesel vehicles (>6,000 lb GVW) Pipe / Materials Truck	11	21.5	70	74,620	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	35.96	0.33	0.02	0.006	0.001	0.0002	0.009	0.004	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road material removal vehicles																													
Heavy duty diesel vehicles (>6,000 lb GVW)	11	21.5	70	23,660	23,660	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08	52.36	0.04	0.15	0.016	0.008	0.0005	0.015	0.002	52.36	0.04	0.15	0.016	0.008	0.0005	0.015	0.002

Construction Areas	Potential Open Burning Area (acres)		AP-42 Section 13 Southern Region Emission Factors (tons/acre) 2014 Climate Registry Default Emission Factors for CO_2								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Potential Open Burning of Forested Area	227	0	14.31	0.63	0.02	0.08	0.08	0.00	0.11	NA	3,252.36	143.19	4.09	17.39	17.39	0.00	24.55	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA

Construction Workers	Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Worker Commutes	1,833,171	125,306	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	883.34	8.15	0.59	0.151	0.028	0.0059	0.233	0.102	60.38	0.56	0.04	0.010	0.002	0.0004	0.016	0.007

Table 9-A5
H-650 Pipeline Construction Equipment Air Emissions - Rockingham County

MVP Southgate Project
H-650 Pipeline, Rockingham, NC

On-site Road and Nonroad Construction Equipment	Equipment Engine HP	Fuel		Schedule		SCC	Number of Operating Hours		NONROAD2008a Emission Factor (g/hp-hr)								Engine Load Factor	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
		Diesel	Gasoline	days/week	hours/day		2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
Nonroad construction equipment																																
Light plants	15	X		2	4	2270002027	2,149	277	588.92	2.36	4.48	0.35	0.35	0.0040	0.45	0.01	0.43	9.00	0.04	0.07	0.005	0.005	0.0001	0.007	0.000	1.16	0.00	0.01	0.001	0.001	0.0000	0.001	0.000
Bore rigs	250	X		6	10	2270002033	2,080	0	530.27	0.68	2.86	0.15	0.15	0.0031	0.24	0.01	0.43	130.70	0.17	0.70	0.036	0.036	0.0008	0.060	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
HDD Reaming/Pullback Rig	875	X		6	10	2270002033	2,080	0	530.03	1.09	4.71	0.18	0.18	0.0031	0.32	0.01	0.43	457.24	0.94	4.06	0.157	0.157	0.0027	0.272	0.011	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
HDD Assist Reaming/Pilot Hole Rig	440	X		6	10	2270002033	2,080	0	530.35	0.88	3.08	0.14	0.14	0.0031	0.22	0.01	0.43	230.06	0.38	1.33	0.060	0.060	0.0014	0.094	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 345C)	325	X		6	10	2270002036	71,240	3,640	536.38	0.38	1.00	0.05	0.05	0.0028	0.14	0.01	0.59	8076.65	5.70	15.00	0.819	0.819	0.0417	2.101	0.185	412.68	0.29	0.77	0.042	0.042	0.0021	0.107	0.009
Excavators (JD 350G LC)	271	X		6	10	2270002036	8,060	0	536.40	0.17	0.53	0.02	0.02	0.0026	0.13	0.01	0.59	761.97	0.24	0.75	0.030	0.030	0.0037	0.191	0.017	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 320DL)	148	X		6	10	2270002036	71,240	3,900	536.39	0.23	0.56	0.04	0.04	0.0027	0.14	0.01	0.59	3678.05	1.56	3.83	0.244	0.244	0.0182	0.935	0.084	201.35	0.09	0.21	0.013	0.013	0.0010	0.051	0.005
Off-highway trucks -1-2.5 ton trucks (CAT 725)	309	X		6	8	2270002051	6,656	1,456	536.40	0.20	0.52	0.02	0.02	0.0026	0.13	0.01	0.59	717.48	0.26	0.70	0.028	0.028	0.0035	0.179	0.016	156.95	0.06	0.15	0.006	0.006	0.0008	0.039	0.004
Water Truck	175	X		6	10	2270002051	4,160	1,560	536.41	0.12	0.32	0.01	0.01	0.0026	0.13	0.01	0.59	253.97	0.06	0.15	0.005	0.005	0.0012	0.063	0.006	95.24	0.02	0.06	0.002	0.002	0.0005	0.023	0.002
Utility Truck	100	X		6	10	2270002051	10,140	2,080	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	353.74	0.10	0.22	0.008	0.008	0.0017	0.087	0.008	72.56	0.02	0.04	0.002	0.002	0.0004	0.018	0.002
Tractors, loaders, and backhoes (CAT 450F)	144	X		6	6	2270002066	1,560	0	625.13	1.65	2.76	0.34	0.34	0.0036	0.44	0.01	0.21	32.51	0.09	0.14	0.018	0.018	0.0002	0.023	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Dozers (CAT D6K)	125	X		6	10	2270002069	49,920	4,160	536.38	0.28	0.72	0.05	0.05	0.0027	0.14	0.01	0.59	2176.73	1.15	2.92	0.207	0.207	0.0109	0.571	0.050	181.39	0.10	0.24	0.017	0.017	0.0009	0.048	0.004
Dozers (CAT D7E)	235	X		6	10	2270002069	49,400	3,900	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	4049.71	1.54	5.08	0.220	0.220	0.0201	1.039	0.093	319.71	0.12	0.40	0.017	0.017	0.0016	0.082	0.007
Off- highway tractors (John Deere 6115D)	115	X		6	6	2270002051	1,404	468	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	56.33	0.02	0.03	0.001	0.001	0.0003	0.014	0.001	18.78	0.01	0.01	0.000	0.000	0.0001	0.005	0.000
Rock Drill Machine (JOHN HENRY drill on CAT320DL)	248	X		6	10	2270002081	3,120	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	269.88	0.23	0.67	0.043	0.043	0.0014	0.081	0.006	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Feller Buncher (CAT 553C)	173	X		6	10	2270002081	260	0	536.28	0.61	1.44	0.14	0.14	0.0029	0.17	0.01	0.59	15.69	0.02	0.04	0.004	0.004	0.0001	0.005	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Logging Skidder (CAT 525C)	182	X		6	10	2270002081	780	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	49.51	0.04	0.12	0.008	0.008	0.0003	0.015	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chipper (Bandit 1850)	250	X		6	10	2270002081	780	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	68.01	0.06	0.17	0.011	0.011	0.0004	0.020	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Sideboom (CAT 583T Pipelayer)	347	X		6	10	2270002081	37,700	0	536.26	0.95	2.24	0.14	0.14	0.0031	0.18	0.01	0.59	4562.39	8.12	19.09	1.169	1.169	0.0261	1.524	0.105	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Bending Machine	175	X		6	10	2270002081	3,900	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	238.05	0.20	0.59	0.038	0.038	0.0013	0.071	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Stump Grinder (Vermeer SC252)	27	X		6	10	2270002081	1,560	0	595.69	0.38	3.16	0.04	0.04	0.0030	0.15	0.01	0.59	16.32	0.01	0.09	0.001	0.001	0.0001	0.004	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chain Saw	10	X		6	10	2270002081	7,540	0	594.37	4.49	4.32	0.35	0.35	0.0040	0.56	0.01	0.59	29.15	0.22	0.21	0.017	0.017	0.0002	0.027	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Industrial Equipment																																
Bobcat with sweeper attachment	70	X		6	2	2270003040	572	364	589.79	1.16	3.25	0.14	0.14	0.0033	0.18	0.01	0.43	11.19	0.02	0.06	0.003	0.003	0.0001	0.003	0.000	7.12	0.01	0.04	0.002	0.002	0.0000	0.002	0.000
Bobcat with brush hog attachement	70	X		6	2	2270003040	312	0	589.79	1.16	3.25	0.14	0.14	0.0033	0.18	0.01	0.43	6.11	0.01	0.03	0.001	0.001	0.0000	0.002	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Commercial Equipment																																
Pumps	15	X		6	6	2270006010	13,416	1,092	588.81	2.43	4.59	0.36	0.36	0.0040	0.49	0.01	0.43	56.16	0.23	0.44	0.034	0.034	0.0004	0.046	0.001	4.57	0.02	0.04	0.003	0.003	0.0000	0.004	0.000
Air compressors	275	X		6	10	2270006015	18,200	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	1257.68	2.09	7.29	0.463	0.463	0.0075	0.659	0.029	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Welders	55	X		6	9	2270006025	19,422	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	268.43	0.45	1.56	0.099	0.099	0.0016	0.141	0.006	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Pressure washers	5	X		6	4	2270006030	2,392	728	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	3.01	0.00	0.02	0.001	0.001	0.0000	0.002	0.000	0.91	0.00	0.01	0.000	0.000	0.0000	0.000	0.000
Hydro power units	200	X		6	10	2270006035	520	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	26.13	0.04	0.15	0.010	0.010	0.0002	0.014	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road construction vehicles							Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)																					
Light duty gasoline vehicles (< 6,000 lb GVW)	150		X	6	2		46,800	1,560	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		22.55	0.21	0.02	0.004	0.001	0.0002	0.006	0.003	0.75	0.01	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty gasoline vehicles (>6,000 lb GVW)	300		X	6	2		393,120	39,000	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		189.43	1.75	0.13	0.032	0.006	0.0013	0.050	0.022	18.79	0.17	0.01	0.003	0.001	0.0001	0.005	0.002
Light duty diesel vehicles (< 6,000 lb GVW)	150	X		6	2		82,680	10,920	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		182.97	0.14	0.52	0.055	0.028	0.0016	0.053	0.008	24.17	0.02	0.07	0.007	0.004	0.0002	0.007	0.001
Heavy duty diesel vehicles (>6,000 lb GVW) Gang Bus	300	X		6	2		42,120	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		93.21	0.07	0.26	0.028	0.014	0.0008	0.027	0.004	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Deliveries / Removals	Empty Vehicle Weight (tons)	Full Vehicle Weight (tons)	Round Trip Distance (miles)		Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
					2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
On-road delivery vehicles																															
Heavy duty diesel vehicles (>6,000 lb GVW) Pipe / Materials Truck	11	21.5	70		35,350	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		17.03	0.16	0.01	0.003	0.001	0.0001	0.004	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road material removal vehicles																															
Heavy duty diesel vehicles (>6,000 lb GVW)	11	21.5	70		0	8,050	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000	17.81	0.01	0.05	0.005	0.003	0.0002	0.005	0.001

Construction Areas	Potential Open Burning Area (acres)		AP-42 Section 13 Southern Region Emission Factors (tons/acre) 2014 Climate Registry Default Emission Factors for CO_2									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Potential Open Burning of Forested Area	228	0	14.31	0.63	0.02	0.08	0.08	0.00	0.11	NA		3,259.94	143.52	4.10	17.43	17.43	0.00	24.60	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA

Construction Workers	Number of Vehicle Miles		MOVES Emission Factors (g/VMT)									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Worker Commutes	1,833,171	125,306	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		883.34	8.15	0.59	0.151	0.028	0.0059	0.233	0.102	60.38	0.56	0.04	0.010	0.002	0.0004	0.016	0.007

Table 9-A6
H-650 Pipeline Construction Equipment Air Emissions - Alamance County

MVP Southgate Project
H-650 Pipeline, Alamance, NC

On-site Road and Nonroad Construction Equipment	Equipment Engine HP	Fuel		Schedule		SCC	Number of Operating Hours		NONROAD2008a Emission Factor (g/hp-hr)								Engine Load Factor	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
		Diesel	Gasoline	days/week	hours/day		2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
Nonroad construction equipment																																
Light plants	15	X		2	4	2270002027	2,149	277	588.92	2.36	4.48	0.35	0.35	0.0040	0.45	0.01	0.43	9.00	0.04	0.07	0.005	0.005	0.0001	0.007	0.000	1.16	0.00	0.01	0.001	0.001	0.0000	0.001	0.000
Bore rigs	250	X		6	10	2270002033	2,080	0	530.27	0.68	2.86	0.15	0.15	0.0031	0.24	0.01	0.43	130.70	0.17	0.70	0.036	0.036	0.0008	0.060	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
HDD Reaming/Pullback Rig	875	X		6	10	2270002033	2,080	0	530.03	1.09	4.71	0.18	0.18	0.0031	0.32	0.01	0.43	457.24	0.94	4.06	0.157	0.157	0.0027	0.272	0.011	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
HDD Assist Reaming/Pilot Hole Rig	440	X		6	10	2270002033	2,080	0	530.35	0.88	3.08	0.14	0.14	0.0031	0.22	0.01	0.43	230.06	0.38	1.33	0.060	0.060	0.0014	0.094	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 345C)	325	X		6	10	2270002036	71,240	3,640	536.38	0.38	1.00	0.05	0.05	0.0028	0.14	0.01	0.59	8076.65	5.70	15.00	0.819	0.819	0.0417	2.101	0.185	412.68	0.29	0.77	0.042	0.042	0.0021	0.107	0.009
Excavators (JD 350G LC)	271	X		6	10	2270002036	8,060	0	536.40	0.17	0.53	0.02	0.02	0.0026	0.13	0.01	0.59	761.97	0.24	0.75	0.030	0.030	0.0037	0.191	0.017	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 320DL)	148	X		6	10	2270002036	71,240	3,900	536.39	0.23	0.56	0.04	0.04	0.0027	0.14	0.01	0.59	3678.05	1.56	3.83	0.244	0.244	0.0182	0.935	0.084	201.35	0.09	0.21	0.013	0.013	0.0010	0.051	0.005
Off-highway trucks -1-2.5 ton trucks (CAT 725)	309	X		6	8	2270002051	6,656	1,456	536.40	0.20	0.52	0.02	0.02	0.0026	0.13	0.01	0.59	717.48	0.26	0.70	0.028	0.028	0.0035	0.179	0.016	156.95	0.06	0.15	0.006	0.006	0.0008	0.039	0.004
Water Truck	175	X		6	10	2270002051	4,160	1,560	536.41	0.12	0.32	0.01	0.01	0.0026	0.13	0.01	0.59	253.97	0.06	0.15	0.005	0.005	0.0012	0.063	0.006	95.24	0.02	0.06	0.002	0.002	0.0005	0.023	0.002
Utility Truck	100	X		6	10	2270002051	10,140	2,080	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	353.74	0.10	0.22	0.008	0.008	0.0017	0.087	0.008	72.56	0.02	0.04	0.002	0.002	0.0004	0.018	0.002
Tractors, loaders, and backhoes (CAT 450F)	144	X		6	6	2270002066	1,560	0	625.13	1.65	2.76	0.34	0.34	0.0036	0.44	0.01	0.21	32.51	0.09	0.14	0.018	0.018	0.0002	0.023	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Dozers (CAT D6K)	125	X		6	10	2270002069	49,920	4,160	536.38	0.28	0.72	0.05	0.05	0.0027	0.14	0.01	0.59	2176.73	1.15	2.92	0.207	0.207	0.0109	0.571	0.050	181.39	0.10	0.24	0.017	0.017	0.0009	0.048	0.004
Dozers (CAT D7E)	235	X		6	10	2270002069	49,400	3,900	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	4049.71	1.54	5.08	0.220	0.220	0.0201	1.039	0.093	319.71	0.12	0.40	0.017	0.017	0.0016	0.082	0.007
Off- highway tractors (John Deere 6115D)	115	X		6	6	2270002051	1,404	468	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	56.33	0.02	0.03	0.001	0.001	0.0003	0.014	0.001	18.78	0.01	0.01	0.000	0.000	0.0001	0.005	0.000
Rock Drill Machine (JOHN HENRY drill on CAT320DL)	248	X		6	10	2270002081	3,120	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	269.88	0.23	0.67	0.043	0.043	0.0014	0.081	0.006	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Feller Buncher (CAT 553C)	173	X		6	10	2270002081	260	0	536.28	0.61	1.44	0.14	0.14	0.0029	0.17	0.01	0.59	15.69	0.02	0.04	0.004	0.004	0.0001	0.005	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Logging Skidder (CAT 525C)	182	X		6	10	2270002081	780	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	49.51	0.04	0.12	0.008	0.008	0.0003	0.015	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chipper (Bandit 1850)	250	X		6	10	2270002081	780	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	68.01	0.06	0.17	0.011	0.011	0.0004	0.020	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Sideboom (CAT 583T Pipelayer)	347	X		6	10	2270002081	37,700	0	536.26	0.95	2.24	0.14	0.14	0.0031	0.18	0.01	0.59	4562.39	8.12	19.09	1.169	1.169	0.0261	1.524	0.105	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Bending Machine	175	X		6	10	2270002081	3,900	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	238.05	0.20	0.59	0.038	0.038	0.0013	0.071	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Stump Grinder (Vermeer SC252)	27	X		6	10	2270002081	1,560	0	595.69	0.38	3.16	0.04	0.04	0.0030	0.15	0.01	0.59	16.32	0.01	0.09	0.001	0.001	0.0001	0.004	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chain Saw	10	X		6	10	2270002081	7,540	0	594.37	4.49	4.32	0.35	0.35	0.0040	0.56	0.01	0.59	29.15	0.22	0.21	0.017	0.017	0.0002	0.027	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Industrial Equipment																																
Bobcat with sweeper attachment	70	X		6	2	2270003040	572	364	589.79	1.16	3.25	0.14	0.14	0.0033	0.18	0.01	0.43	11.19	0.02	0.06	0.003	0.003	0.0001	0.003	0.000	7.12	0.01	0.04	0.002	0.002	0.0000	0.002	0.000
Bobcat with brush hog attachement	70	X		6	2	2270003040	312	0	589.79	1.16	3.25	0.14	0.14	0.0033	0.18	0.01	0.43	6.11	0.01	0.03	0.001	0.001	0.0000	0.002	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Commercial Equipment																																
Pumps	15	X		6	6	2270006010	13,416	1,092	588.81	2.43	4.59	0.36	0.36	0.0040	0.49	0.01	0.43	56.16	0.23	0.44	0.034	0.034	0.0004	0.046	0.001	4.57	0.02	0.04	0.003	0.003	0.0000	0.004	0.000
Air compressors	275	X		6	10	2270006015	18,200	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	1257.68	2.09	7.29	0.463	0.463	0.0075	0.659	0.029	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Welders	55	X		6	9	2270006025	19,422	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	268.43	0.45	1.56	0.099	0.099	0.0016	0.141	0.006	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Pressure washers	5	X		6	4	2270006030	2,392	728	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	3.01	0.00	0.02	0.001	0.001	0.0000	0.002	0.000	0.91	0.00	0.01	0.000	0.000	0.0000	0.000	0.000
Hydro power units	200	X		6	10	2270006035	520	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	26.13	0.04	0.15	0.010	0.010	0.0002	0.014	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road construction vehicles							Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)																					
Light duty gasoline vehicles (< 6,000 lb GVW)	150		X	6	2		46,800	1,560	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		22.55	0.21	0.02	0.004	0.001	0.0002	0.006	0.003	0.75	0.01	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty gasoline vehicles (>6,000 lb GVW)	300		X	6	2		393,120	39,000	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		189.43	1.75	0.13	0.032	0.006	0.0013	0.050	0.022	18.79	0.17	0.01	0.003	0.001	0.0001	0.005	0.002
Light duty diesel vehicles (< 6,000 lb GVW)	150	X		6	2		82,680	10,920	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		182.97	0.14	0.52	0.055	0.028	0.0016	0.053	0.008	24.17	0.02	0.07	0.007	0.004	0.0002	0.007	0.001
Heavy duty diesel vehicles (>6,000 lb GVW) Gang Bus	300	X		6	2		42,120	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		93.21	0.07	0.26	0.028	0.014	0.0008	0.027	0.004	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Deliveries / Removals	Empty Vehicle Weight (tons)	Full Vehicle Weight (tons)	Round Trip Distance (miles)	Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
				2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
On-road delivery vehicles																													
Heavy duty diesel vehicles (>6,000 lb GVW) Pipe / Materials Truck	11	21.5	70	55,300	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	26.65	0.25	0.02	0.005	0.001	0.0002	0.007	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road material removal vehicles																													
Heavy duty diesel vehicles (>6,000 lb GVW)	11	21.5	70	18,200	18,200	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08	40.28	0.03	0.11	0.012	0.006	0.0004	0.012	0.002	40.28	0.03	0.11	0.012	0.006	0.0004	0.012	0.002

Construction Areas	Potential Open Burning Area (acres)		AP-42 Section 13 Southern Region Emission Factors (tons/acre) 2014 Climate Registry Default Emission Factors for CO_2								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Potential Open Burning of Forested Area	158	0	14.31	0.63	0.02	0.08	0.08	0.00	0.11	NA	2,257.34	99.38	2.84	12.07	12.07	0.00	17.04	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA

Construction Workers	Number of Vehicle Miles		MOVES Emission Factors (g/VMT)								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Worker Commutes	1,833,171	125,306	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	883.34	8.15	0.59	0.151	0.028	0.0059	0.233	0.102	60.38	0.56	0.04	0.010	0.002	0.0004	0.016	0.007

Table 9-A7
Lambert Compressor Station Construction Equipment Air Emissions - Pittsylvania County

MVP Southgate Project
Lambert Compressor Station, Pittsylvania County, VA

On-site Road and Nonroad Construction Equipment	Equipment Engine HP	Fuel		Schedule		SCC	Number of Operating Hours		NONROAD2008a Emission Factor (g/hp-hr)								Engine Load Factor	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
		Diesel	Gasoline	days/week	hours/day		2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
Nonroad construction equipment																																
Pavers (CAT AP655D Track Asphalt Paver)	174	X		6	10	2270002003	1,040	260	536.36	0.38	0.91	0.08	0.08	0.0028	0.15	0.01	0.59	63.12	0.04	0.11	0.009	0.009	0.0003	0.017	0.001	15.78	0.01	0.03	0.002	0.002	0.0001	0.004	0.000
Small handheld, walk-behind, or single person sized tampers or rammers (BoMag 8500 compactor)	19	X		6	10	2270002006	9,360	3,120	588.51	4.46	4.45	0.38	0.38	0.0040	0.58	0.01	0.43	49.61	0.38	0.38	0.032	0.032	0.0003	0.049	0.001	16.54	0.13	0.13	0.011	0.011	0.0001	0.016	0.000
Light plants	15	X		6	10	2270002027	14,560	3,120	588.92	2.36	4.48	0.35	0.35	0.0040	0.45	0.01	0.43	60.96	0.24	0.46	0.036	0.036	0.0004	0.047	0.001	13.06	0.05	0.10	0.008	0.008	0.0001	0.010	0.000
Excavators (CAT 345C)	325	X		6	10	2270002036	7,280	2,860	536.38	0.38	1.00	0.05	0.05	0.0028	0.14	0.01	0.59	825.35	0.58	1.53	0.084	0.084	0.0043	0.215	0.019	324.24	0.23	0.60	0.033	0.033	0.0017	0.084	0.007
Excavators (JD 350G LC)	271	X		6	10	2270002036	3,900	1,560	536.40	0.17	0.53	0.02	0.02	0.0026	0.13	0.01	0.59	368.70	0.12	0.36	0.014	0.014	0.0018	0.093	0.008	147.48	0.05	0.15	0.006	0.006	0.0007	0.037	0.003
Excavators (CAT 320DL)	148	X		6	10	2270002036	2,860	1,560	536.39	0.23	0.56	0.04	0.04	0.0027	0.14	0.01	0.59	147.66	0.06	0.15	0.010	0.010	0.0007	0.038	0.003	80.54	0.03	0.08	0.005	0.005	0.0004	0.020	0.002
Concrete or stone industrial saws	10	X		6	10	2270002039	4,680	520	594.37	4.50	4.32	0.36	0.36	0.0040	0.56	0.01	0.59	18.09	0.14	0.13	0.011	0.011	0.0001	0.017	0.000	2.01	0.02	0.01	0.001	0.001	0.0000	0.002	0.000
Off-highway trucks -1-2.5 ton trucks (CAT 725)	309	X		6	10	2270002051	7,800	3,640	536.40	0.20	0.52	0.02	0.02	0.0026	0.13	0.01	0.59	840.80	0.31	0.82	0.033	0.033	0.0041	0.210	0.019	392.37	0.14	0.38	0.015	0.015	0.0019	0.098	0.009
Water Truck	175	X		6	10	2270002051	3,640	1,560	536.41	0.12	0.32	0.01	0.01	0.0026	0.13	0.01	0.59	222.22	0.05	0.13	0.004	0.004	0.0011	0.055	0.005	95.24	0.02	0.06	0.002	0.002	0.0005	0.023	0.002
Utility Truck	100	X		6	6	2270002051	3,432	1,248	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	119.73	0.03	0.07	0.003	0.003	0.0006	0.030	0.003	43.54	0.01	0.03	0.001	0.001	0.0002	0.011	0.001
Rough terrain forklifts (CASE 588H)	78	X		6	10	2270002057	6,760	1,560	595.59	1.46	1.48	0.18	0.18	0.0032	0.18	0.01	0.59	204.24	0.50	0.51	0.063	0.063	0.0011	0.061	0.004	47.13	0.12	0.12	0.015	0.015	0.0003	0.014	0.001
Rubber tire front loaders (CAT 972K)	288	X		6	6	2270002060	1,716	936	536.36	0.30	0.95	0.05	0.05	0.0027	0.15	0.01	0.59	172.39	0.10	0.30	0.016	0.016	0.0009	0.047	0.004	94.03	0.05	0.17	0.009	0.009	0.0005	0.026	0.002
Tractors, loaders, and backhoes (CAT 450F)	144	X		6	8	2270002066	2,288	1,248	625.13	1.65	2.76	0.34	0.34	0.0036	0.44	0.01	0.21	47.68	0.13	0.21	0.026	0.026	0.0003	0.034	0.001	26.01	0.07	0.11	0.014	0.014	0.0002	0.018	0.001
Dozers (CAT D6K)	125	X		6	10	2270002069	5,720	3,120	536.38	0.28	0.72	0.05	0.05	0.0027	0.14	0.01	0.59	249.42	0.13	0.33	0.024	0.024	0.0013	0.065	0.006	136.05	0.07	0.18	0.013	0.013	0.0007	0.036	0.003
Dozers (CAT D7E)	235	X		6	6	2270002069	312	0	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	25.58	0.01	0.03	0.001	0.001	0.0001	0.007	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Loaders (Tracked - CAT 953D)	148	X		6	6	2270002072	5,928	1,872	624.59	2.33	3.58	0.44	0.44	0.0037	0.61	0.01	0.21	126.85	0.47	0.73	0.089	0.089	0.0008	0.124	0.002	40.06	0.15	0.23	0.028	0.028	0.0002	0.039	0.001
Off- highway tractors (John Deere 6115D)	115	X		6	10	2270002051	1,560	1,560	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	62.58	0.02	0.04	0.001	0.001	0.0003	0.015	0.001	62.58	0.02	0.04	0.001	0.001	0.0003	0.015	0.001
Rock Drill Machine (JOHN HENRY drill on CAT320DL)	248	X		6	10	2270002081	1,560	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	134.94	0.11	0.34	0.022	0.022	0.0007	0.040	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Logging Skidder (CAT 525C)	182	X		6	10	2270002081	1,560	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	99.03	0.08	0.25	0.016	0.016	0.0005	0.030	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chipper (Bandit 1850)	250	X		6	10	2270002081	1,560	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	136.03	0.11	0.34	0.022	0.022	0.0007	0.041	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Stump Grinder (Vermeer SC252)	27	X		6	10	2270002081	1,560	0	595.69	0.38	3.16	0.04	0.04	0.0030	0.15	0.01	0.59	16.32	0.01	0.09	0.001	0.001	0.0001	0.004	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chain Saw	10		X	6	10	2265002081	3,120	0	1046.69	278.54	1.97	0.11	0.11	0.0191	4.90	0.23	0.48	17.28	4.60	0.03	0.002	0.002	0.0003	0.081	0.004	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Industrial Equipment																																
Aerial Lifts	49	X		6	10	2270003010	24,960	2,600	692.66	4.22	4.79	0.63	0.63	0.0042	1.05	0.01	0.21	196.10	1.19	1.36	0.179	0.179	0.0012	0.296	0.003	20.43	0.12	0.14	0.019	0.019	0.0001	0.031	0.000
Self-propelled sweeping and scrubbing vehicles	70	X		6	5	2270003030	1,560	650	589.89	0.74	3.08	0.08	0.08	0.0031	0.15	0.01	0.43	30.53	0.04	0.16	0.004	0.004	0.0002	0.008	0.001	12.72	0.02	0.07	0.002	0.002	0.0001	0.003	0.000
Hydraulic Crane	268	X		6	10	2270002045	5,200	260	530.57	0.22	1.02	0.04	0.04	0.0027	0.15	0.01	0.43	350.47	0.14	0.67	0.027	0.027	0.0018	0.097	0.008	17.52	0.01	0.03	0.001	0.001	0.0001	0.005	0.000
Marooka	250	X		6	6	2270002069	2,496	312	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	217.68	0.08	0.27	0.012	0.012	0.0011	0.056	0.005	27.21	0.01	0.03	0.001	0.001	0.0001	0.007	0.001
Nonroad Commercial Equipment																																
Generator set (specify kW)	94	X		6	10	2270006005	17,160	7,800	589.21	1.80	3.24	0.31	0.31	0.0035	0.36	0.01	0.43	450.48	1.38	2.48	0.238	0.238	0.0027	0.278	0.009	204.77	0.63	1.13	0.108	0.108	0.0012	0.126	0.004
Pumps	15	X		6	5	2270006010	9,620	780	588.81	2.43	4.59	0.36	0.36	0.0040	0.49	0.01	0.43	40.27	0.17	0.31	0.025	0.025	0.0003	0.033	0.001	3.27	0.01	0.03	0.002	0.002	0.0000	0.003	0.000
Air compressors	275	X		6	10	2270006015	7,280	520	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	503.07	0.84	2.92	0.185	0.185	0.0030	0.264	0.012	35.93	0.06	0.21	0.013	0.013	0.0002	0.019	0.001
Welders	55	X		6	10	2270006025	17,160	3,120	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	237.16	0.39	1.37	0.087	0.087	0.0014	0.124	0.006	43.12	0.07	0.25	0.016	0.016	0.0003	0.023	0.001
Pressure washers	5	X		6	5	2270006030	2,340	1,040	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	2.94	0.00	0.02	0.001	0.001	0.0000	0.002	0.000	1.31	0.00	0.01	0.000	0.000	0.0000	0.001	0.000
Hydro power units	200	X		6	10	2270006035	3,120	520	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	156.80	0.26	0.91	0.058	0.058	0.0009	0.082	0.004	26.13	0.04	0.15	0.010	0.010	0.0002	0.014	0.001
On-road construction vehicles							**Number of Vehicle Miles Traveled**		**MOVES Emission Factors (g/VMT)**																							
Light duty gasoline vehicles (< 6,000 lb GVW)	150		X	6	2		101,400	35,100	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		48.86	0.45	0.03	0.008	0.002	0.0003	0.013	0.006	16.91	0.16	0.01	0.003	0.001	0.0001	0.004	0.002
Heavy duty gasoline vehicles (>6,000 lb GVW)	300		X	6	5		731,250	126,750	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		352.36	3.25	0.24	0.060	0.011	0.0023	0.093	0.041	61.08	0.56	0.04	0.010	0.002	0.0004	0.016	0.007
Light duty diesel vehicles (< 6,000 lb GVW)	150	X		6	5		271,050	46,800	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		599.83	0.46	1.70	0.179	0.091	0.0053	0.175	0.025	103.57	0.08	0.29	0.031	0.016	0.0009	0.030	0.004
Heavy duty diesel vehicles (>6,000 lb GVW)	300	X		6	5		66,300	23,400	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		146.72	0.11	0.41	0.044	0.022	0.0013	0.043	0.006	51.78	0.04	0.15	0.015	0.008	0.0005	0.015	0.002

Deliveries / Removals	Empty Vehicle Weight (tons)	Full Vehicle Weight (tons)	Round Trip Distance (miles)	Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
				2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
On-road delivery vehicles																														
Heavy duty diesel vehicles (>6,000 lb GVW)	11	50	200	127,000	48,000	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		61.20	0.56	0.04	0.010	0.002	0.0004	0.016	0.007	23.13	0.21	0.02	0.004	0.001	0.0002	0.006	0.003
On-road material removal vehicles																														
Heavy duty diesel vehicles (>6,000 lb GVW)	11	21	200	28,000	12,000	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		61.96	0.05	0.18	0.018	0.009	0.0005	0.018	0.003	26.56	0.02	0.08	0.008	0.004	0.0002	0.008	0.001

Construction Areas	Potential Open Burning Area (acres)		AP-42 Section 13 Southern Region Emission Factors (tons/acre) 2014 Climate Registry Default Emission Factors for CO_2									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Potential Open Burning of Forested Area	6	0	14.31	0.63	0.02	0.08	0.08	0.00	0.11	NA		89.01	3.92	0.11	0.48	0.48	0.00	0.67	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA

Construction Workers	Number of Vehicle Miles		MOVES Emission Factors (g/VMT)									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Worker Commutes	615,729	93,086	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		296.70	2.74	0.20	0.051	0.009	0.0020	0.078	0.034	44.85	0.41	0.03	0.008	0.001	0.0003	0.012	0.005

Table 9-A8
Lambert Interconnect Construction Equipment Air Emissions - Pittsylvania County

MVP Southgate Project
Lambert Interconnect, Pittsylvania County, VA

On-site Road and Nonroad Construction Equipment	Equipment Engine HP	Fuel		Schedule		SCC	Number of Operating Hours		NONROAD2008a Emission Factor (g/hp-hr)								Engine Load Factor	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
		Diesel	Gasoline	days/week	hours/day		2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
Nonroad construction equipment																																
Small handheld, walk-behind, or single person sized tampers or rammers (BoMag 8500 compactor)	19	X		6	10	2270002006	2,080	0	588.51	4.46	4.45	0.38	0.38	0.0040	0.58	0.01	0.43	11.02	0.08	0.08	0.007	0.007	0.0001	0.011	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Light plants	15	X		6	10	2270002027	3,640	0	588.92	2.36	4.48	0.35	0.35	0.0040	0.45	0.01	0.43	15.24	0.06	0.12	0.009	0.009	0.0001	0.012	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 345C)	325	X		6	10	2270002036	2,080	0	536.38	0.38	1.00	0.05	0.05	0.0028	0.14	0.01	0.59	235.81	0.17	0.44	0.024	0.024	0.0012	0.061	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (JD 350G LC)	271	X		6	10	2270002036	1,040	0	536.40	0.17	0.53	0.02	0.02	0.0026	0.13	0.01	0.59	98.32	0.03	0.10	0.004	0.004	0.0005	0.025	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 320DL)	148	X		6	10	2270002036	260	0	536.39	0.23	0.56	0.04	0.04	0.0027	0.14	0.01	0.59	13.42	0.01	0.01	0.001	0.001	0.0001	0.003	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Concrete or stone industrial saws	10	X		6	10	2270002039	780	0	594.37	4.50	4.32	0.36	0.36	0.0040	0.56	0.01	0.59	3.02	0.02	0.02	0.002	0.002	0.0000	0.003	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Off-highway trucks -1-2.5 ton trucks (CAT 725)	309	X		6	10	2270002051	1,040	0	536.40	0.20	0.52	0.02	0.02	0.0026	0.13	0.01	0.59	112.11	0.04	0.11	0.004	0.004	0.0005	0.028	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Water Truck	175	X		6	10	2270002051	1,300	0	536.41	0.12	0.32	0.01	0.01	0.0026	0.13	0.01	0.59	79.36	0.02	0.05	0.002	0.002	0.0004	0.020	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Utility Truck	100	X		6	6	2270002051	1,560	0	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	54.42	0.02	0.03	0.001	0.001	0.0003	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rough terrain forklifts (CASE 588H)	78	X		6	10	2270002057	1,300	0	595.59	1.46	1.48	0.18	0.18	0.0032	0.18	0.01	0.59	39.28	0.10	0.10	0.012	0.012	0.0002	0.012	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rubber tire front loaders (CAT 972K)	288	X		6	6	2270002060	468	0	536.36	0.30	0.95	0.05	0.05	0.0027	0.15	0.01	0.59	47.02	0.03	0.08	0.004	0.004	0.0002	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Tractors, loaders, and backhoes (CAT 450F)	144	X		6	8	2270002066	1,040	0	625.13	1.65	2.76	0.34	0.34	0.0036	0.44	0.01	0.21	21.67	0.06	0.10	0.012	0.012	0.0001	0.015	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Dozers (CAT D6K)	125	X		6	10	2270002069	1,300	0	536.38	0.28	0.72	0.05	0.05	0.0027	0.14	0.01	0.59	56.69	0.03	0.08	0.005	0.005	0.0003	0.015	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Loaders (Tracked - CAT 953D)	148	X		6	6	2270002072	780	0	624.59	2.33	3.58	0.44	0.44	0.0037	0.61	0.01	0.21	16.69	0.06	0.10	0.012	0.012	0.0001	0.016	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Off- highway tractors (John Deere 6115D)	115	X		6	10	2270002051	520	0	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	20.86	0.01	0.01	0.000	0.000	0.0001	0.005	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rock Drill Machine (JOHN HENRY drill on CAT320DL)	248	X		6	10	2270002081	520	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	44.98	0.04	0.11	0.007	0.007	0.0002	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Logging Skidder (CAT 525C)	182	X		6	10	2270002081	260	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	16.50	0.01	0.04	0.003	0.003	0.0001	0.005	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chipper (Bandit 1850)	250	X		6	10	2270002081	260	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	22.67	0.02	0.06	0.004	0.004	0.0001	0.007	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Stump Grinder (Vermeer SC252)	27	X		6	10	2270002081	260	0	595.69	0.38	3.16	0.04	0.04	0.0030	0.15	0.01	0.59	2.72	0.00	0.01	0.000	0.000	0.0000	0.001	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chain Saw	10		X	6	10	2265002081	520	0	1046.69	278.54	1.97	0.11	0.11	0.0191	4.90	0.23	0.48	2.88	0.77	0.01	0.000	0.000	0.0001	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Industrial Equipment																																
Aerial Lifts	49	X		6	10	2270003010	1,300	0	692.66	4.22	4.79	0.63	0.63	0.0042	1.05	0.01	0.21	10.21	0.06	0.07	0.009	0.009	0.0001	0.015	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Self-propelled sweeping and scrubbing vehicles	70	X		6	5	2270003030	650	0	589.89	0.74	3.08	0.08	0.08	0.0031	0.15	0.01	0.43	12.72	0.02	0.07	0.002	0.002	0.0001	0.003	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Hydraulic Crane	268	X		6	10	2270002045	780	0	530.57	0.22	1.02	0.04	0.04	0.0027	0.15	0.01	0.43	52.57	0.02	0.10	0.004	0.004	0.0003	0.015	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Marooka	250	X		6	6	2270002069	780	0	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	68.02	0.03	0.09	0.004	0.004	0.0003	0.017	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Commercial Equipment																																
Pumps	15	X		6	5	2270006010	2,080	0	588.81	2.43	4.59	0.36	0.36	0.0040	0.49	0.01	0.43	8.71	0.04	0.07	0.005	0.005	0.0001	0.007	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Air compressors	275	X		6	10	2270006015	3,120	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	215.60	0.36	1.25	0.079	0.079	0.0013	0.113	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Welders	55	X		6	10	2270006025	2,340	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	32.34	0.05	0.19	0.012	0.012	0.0002	0.017	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Pressure washers	5	X		6	5	2270006030	520	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	0.65	0.00	0.00	0.000	0.000	0.0000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Hydro power units	200	X		6	10	2270006035	1,040	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	52.27	0.09	0.30	0.019	0.019	0.0003	0.027	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road construction vehicles							Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)																							
Light duty gasoline vehicles (< 6,000 lb GVW)	150		X	6	10		156,000	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		75.17	0.69	0.05	0.013	0.002	0.0005	0.020	0.009	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty gasoline vehicles (>6,000 lb GVW)	300		X	6	5		97,500	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		46.98	0.43	0.03	0.008	0.001	0.0003	0.012	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Light duty diesel vehicles (< 6,000 lb GVW)	150	X		6	10		175,500	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		388.38	0.30	1.10	0.116	0.059	0.0034	0.114	0.016	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty diesel vehicles (>6,000 lb GVW)	300	X		6	5		48,750	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		107.88	0.08	0.30	0.032	0.016	0.0009	0.032	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Deliveries / Removals	Empty Vehicle Weight (tons)	Full Vehicle Weight (tons)	Round Trip Distance (miles)	Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
				2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
On-road delivery vehicles																														
Heavy duty gasoline vehicles (>6,000 lb GVW)			50	1,250	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		0.60	0.01	0.00	0.000	0.000	0.0000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty diesel vehicles (>6,000 lb GVW)			50	2,250	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		1.08	0.01	0.00	0.000	0.000	0.0000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road material removal vehicles																														
Heavy duty diesel vehicles (>6,000 lb GVW)			50	2,250	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		4.98	0.00	0.01	0.001	0.001	0.0000	0.001	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Construction Areas	Potential Open Burning Area (acres)		AP-42 Section 13 Southern Region Emission Factors (tons/acre) 2014 Climate Registry Default Emission Factors for CO_2								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Potential Open Burning of Forested Area	0	0	14.31	0.63	0.02	0.08	0.08	0.00	0.11	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA

Construction Workers	Number of Vehicle Miles		MOVES Emission Factors (g/VMT)								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Worker Commutes	90,000	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	43.37	0.40	0.03	0.007	0.001	0.0003	0.011	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Table 9-A9
LN 3600 and T-15 Dan River Interconnect Construction Equipment Air Emissions - Rockingham County

MVP Southgate Project
LN 3600 and T-15 Dan River Interconnects, Rockingham County, NC

On-site Road and Nonroad Construction Equipment	Equipment Engine HP	Fuel		Schedule		SCC	Number of Operating Hours		NONROAD2008a Emission Factor (g/hp-hr)								Engine Load Factor	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
		Diesel	Gasoline	days/week	hours/day		2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
Nonroad construction equipment																																
Small handheld, walk-behind, or single person sized tampers or rammers (BoMag 8500 compactor)	19	X		6	10	2270002006	4,160	0	588.51	4.46	4.45	0.38	0.38	0.0040	0.58	0.01	0.43	22.05	0.17	0.17	0.014	0.014	0.0001	0.022	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Light plants	15	X		6	10	2270002027	7,280	0	588.92	2.36	4.48	0.35	0.35	0.0040	0.45	0.01	0.43	30.48	0.12	0.23	0.018	0.018	0.0002	0.023	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 345C)	325	X		6	10	2270002036	4,160	0	536.38	0.38	1.00	0.05	0.05	0.0028	0.14	0.01	0.59	471.63	0.33	0.88	0.048	0.048	0.0024	0.123	0.011	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (JD 350G LC)	271	X		6	10	2270002036	2,080	0	536.40	0.17	0.53	0.02	0.02	0.0026	0.13	0.01	0.59	196.64	0.06	0.19	0.008	0.008	0.0010	0.049	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 320DL)	148	X		6	10	2270002036	520	0	536.39	0.23	0.56	0.04	0.04	0.0027	0.14	0.01	0.59	26.85	0.01	0.03	0.002	0.002	0.0001	0.007	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Concrete or stone industrial saws	10	X		6	10	2270002039	1,560	0	594.37	4.50	4.32	0.36	0.36	0.0040	0.56	0.01	0.59	6.03	0.05	0.04	0.004	0.004	0.0000	0.006	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Off-highway trucks -1-2.5 ton trucks (CAT 725)	309	X		6	10	2270002051	2,080	0	536.40	0.20	0.52	0.02	0.02	0.0026	0.13	0.01	0.59	224.21	0.08	0.22	0.009	0.009	0.0011	0.056	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Water Truck	175	X		6	10	2270002051	2,600	0	536.41	0.12	0.32	0.01	0.01	0.0026	0.13	0.01	0.59	158.73	0.04	0.10	0.003	0.003	0.0008	0.039	0.004	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Utility Truck	100	X		6	6	2270002051	3,120	0	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	108.84	0.03	0.07	0.002	0.002	0.0005	0.027	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rough terrain forklifts (CASE 588H)	78	X		6	10	2270002057	2,600	0	595.59	1.46	1.48	0.18	0.18	0.0032	0.18	0.01	0.59	78.55	0.19	0.19	0.024	0.024	0.0004	0.023	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rubber tire front loaders (CAT 972K)	288	X		6	6	2270002060	936	0	536.36	0.30	0.95	0.05	0.05	0.0027	0.15	0.01	0.59	94.03	0.05	0.17	0.009	0.009	0.0005	0.026	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Tractors, loaders, and backhoes (CAT 450F)	144	X		6	8	2270002066	2,080	0	625.13	1.65	2.76	0.34	0.34	0.0036	0.44	0.01	0.21	43.34	0.11	0.19	0.024	0.024	0.0003	0.031	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Dozers (CAT D6K)	125	X		6	10	2270002069	2,600	0	536.38	0.28	0.72	0.05	0.05	0.0027	0.14	0.01	0.59	113.37	0.06	0.15	0.011	0.011	0.0006	0.030	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Loaders (Tracked - CAT 953D)	148	X		6	6	2270002072	1,560	0	624.59	2.33	3.58	0.44	0.44	0.0037	0.61	0.01	0.21	33.38	0.12	0.19	0.024	0.024	0.0002	0.033	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Off- highway tractors (John Deere 6115D)	115	X		6	10	2270002051	1,040	0	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	41.72	0.01	0.03	0.001	0.001	0.0002	0.010	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rock Drill Machine (JOHN HENRY drill on CAT320DL)	248	X		6	10	2270002081	1,040	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	89.96	0.08	0.22	0.014	0.014	0.0005	0.027	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Logging Skidder (CAT 525C)	182	X		6	10	2270002081	520	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	33.01	0.03	0.08	0.005	0.005	0.0002	0.010	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chipper (Bandit 1850)	250	X		6	10	2270002081	520	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	45.34	0.04	0.11	0.007	0.007	0.0002	0.014	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Stump Grinder (Vermeer SC252)	27	X		6	10	2270002081	520	0	595.69	0.38	3.16	0.04	0.04	0.0030	0.15	0.01	0.59	5.44	0.00	0.03	0.000	0.000	0.0000	0.001	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chain Saw	10		X	6	10	2265002081	1,040	0	1046.69	278.54	1.97	0.11	0.11	0.0191	4.90	0.23	0.48	5.76	1.53	0.01	0.001	0.001	0.0001	0.027	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Industrial Equipment																																
Aerial Lifts	49	X		6	10	2270003010	2,600	0	692.66	4.22	4.79	0.63	0.63	0.0042	1.05	0.01	0.21	20.43	0.12	0.14	0.019	0.019	0.0001	0.031	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Self-propelled sweeping and scrubbing vehicles	70	X		6	5	2270003030	1,300	0	589.89	0.74	3.08	0.08	0.08	0.0031	0.15	0.01	0.43	25.44	0.03	0.13	0.003	0.003	0.0001	0.006	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Hydraulic Crane	268	X		6	10	2270002045	1,560	0	530.57	0.22	1.02	0.04	0.04	0.0027	0.15	0.01	0.43	105.14	0.04	0.20	0.008	0.008	0.0005	0.029	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Marooka	250	X		6	6	2270002069	1,560	0	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	136.05	0.05	0.17	0.007	0.007	0.0007	0.035	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Commercial Equipment																																
Pumps	15	X		6	5	2270006010	4,160	0	588.81	2.43	4.59	0.36	0.36	0.0040	0.49	0.01	0.43	17.42	0.07	0.14	0.011	0.011	0.0001	0.014	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Air compressors	275	X		6	10	2270006015	6,240	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	431.21	0.72	2.50	0.159	0.159	0.0026	0.226	0.010	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Welders	55	X		6	10	2270006025	4,680	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	64.68	0.11	0.37	0.024	0.024	0.0004	0.034	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Pressure washers	5	X		6	5	2270006030	1,040	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	1.31	0.00	0.01	0.000	0.000	0.0000	0.001	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Hydro power units	200	X		6	10	2270006035	2,080	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	104.53	0.17	0.61	0.038	0.038	0.0006	0.055	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road construction vehicles							Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)																							
Light duty gasoline vehicles (< 6,000 lb GVW)	150		X	6	10		312,000	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		150.34	1.39	0.10	0.026	0.005	0.0010	0.040	0.017	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty gasoline vehicles (>6,000 lb GVW)	300		X	6	5		195,000	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		93.96	0.87	0.06	0.016	0.003	0.0006	0.025	0.011	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Light duty diesel vehicles (< 6,000 lb GVW)	150	X		6	10		351,000	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		776.75	0.60	2.20	0.232	0.117	0.0068	0.227	0.033	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty diesel vehicles (>6,000 lb GVW)	300	X		6	5		97,500	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		215.77	0.17	0.61	0.064	0.033	0.0019	0.063	0.009	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Deliveries / Removals	Empty Vehicle Weight (tons)	Full Vehicle Weight (tons)	Round Trip Distance (miles)		Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
					2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
On-road delivery vehicles																															
Heavy duty gasoline vehicles (>6,000 lb GVW)			50		2,500	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		1.20	0.01	0.00	0.000	0.000	0.0000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty diesel vehicles (>6,000 lb GVW)			50		4,500	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		2.17	0.02	0.00	0.000	0.000	0.0000	0.001	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road material removal vehicles																															
Heavy duty diesel vehicles (>6,000 lb GVW)			50		4,500	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		9.96	0.01	0.03	0.003	0.002	0.0001	0.003	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Construction Areas	Potential Open Burning Area (acres)		AP-42 Section 13 Southern Region Emission Factors (tons/acre) 2014 Climate Registry Default Emission Factors for CO_2									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Potential Open Burning of Forested Area	0.3	0	14.31	0.63	0.02	0.08	0.08	0.00	0.11	NA		3.92	0.17	0.00	0.02	0.02	0.00	0.03	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA

Construction Workers	Number of Vehicle Miles		MOVES Emission Factors (g/VMT)									2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Worker Commutes	180,000	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		86.74	0.80	0.06	0.015	0.003	0.0006	0.023	0.010	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Table 9-A10
T-21 Haw River Interconnect Construction Equipment Air Emissions - Alamance County

MVP Southgate Project
T-21 Haw River Interconnect, Alamance County, NC

On-site Road and Nonroad Construction Equipment	Equipment Engine HP	Fuel		Schedule		SCC	Number of Operating Hours		NONROAD2008a Emission Factor (g/hp-hr)								Engine Load Factor	2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
		Diesel	Gasoline	days/week	hours/day		2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP		CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAPs
Nonroad construction equipment																																
Small handheld, walk-behind, or single person sized tampers or rammers (BoMag 8500 compactor)	19	X		6	10	2270002006	2,080	0	588.51	4.46	4.45	0.38	0.38	0.0040	0.58	0.01	0.43	11.02	0.08	0.08	0.007	0.007	0.0001	0.011	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Light plants	15	X		6	10	2270002027	3,640	0	588.92	2.36	4.48	0.35	0.35	0.0040	0.45	0.01	0.43	15.24	0.06	0.12	0.009	0.009	0.0001	0.012	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 345C)	325	X		6	10	2270002036	2,080	0	536.38	0.38	1.00	0.05	0.05	0.0028	0.14	0.01	0.59	235.81	0.17	0.44	0.024	0.024	0.0012	0.061	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (JD 350G LC)	271	X		6	10	2270002036	1,040	0	536.40	0.17	0.53	0.02	0.02	0.0026	0.13	0.01	0.59	98.32	0.03	0.10	0.004	0.004	0.0005	0.025	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Excavators (CAT 320DL)	148	X		6	10	2270002036	260	0	536.39	0.23	0.56	0.04	0.04	0.0027	0.14	0.01	0.59	13.42	0.01	0.01	0.001	0.001	0.0001	0.003	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Concrete or stone industrial saws	10	X		6	10	2270002039	780	0	594.37	4.50	4.32	0.36	0.36	0.0040	0.56	0.01	0.59	3.02	0.02	0.02	0.002	0.002	0.0000	0.003	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Off-highway trucks -1-2.5 ton trucks (CAT 725)	309	X		6	10	2270002051	1,040	0	536.40	0.20	0.52	0.02	0.02	0.0026	0.13	0.01	0.59	112.11	0.04	0.11	0.004	0.004	0.0005	0.028	0.003	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Water Truck	175	X		6	10	2270002051	1,300	0	536.41	0.12	0.32	0.01	0.01	0.0026	0.13	0.01	0.59	79.36	0.02	0.05	0.002	0.002	0.0004	0.020	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Utility Truck	100	X		6	6	2270002051	1,560	0	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	54.42	0.02	0.03	0.001	0.001	0.0003	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rough terrain forklifts (CASE 588H)	78	X		6	10	2270002057	1,300	0	595.59	1.46	1.48	0.18	0.18	0.0032	0.18	0.01	0.59	39.28	0.10	0.10	0.012	0.012	0.0002	0.012	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rubber tire front loaders (CAT 972K)	288	X		6	6	2270002060	468	0	536.36	0.30	0.95	0.05	0.05	0.0027	0.15	0.01	0.59	47.02	0.03	0.08	0.004	0.004	0.0002	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Tractors, loaders, and backhoes (CAT 450F)	144	X		6	8	2270002066	1,040	0	625.13	1.65	2.76	0.34	0.34	0.0036	0.44	0.01	0.21	21.67	0.06	0.10	0.012	0.012	0.0001	0.015	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Dozers (CAT D6K)	125	X		6	10	2270002069	1,300	0	536.38	0.28	0.72	0.05	0.05	0.0027	0.14	0.01	0.59	56.69	0.03	0.08	0.005	0.005	0.0003	0.015	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Loaders (Tracked - CAT 953D)	148	X		6	6	2270002072	780	0	624.59	2.33	3.58	0.44	0.44	0.0037	0.61	0.01	0.21	16.69	0.06	0.10	0.012	0.012	0.0001	0.016	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Off- highway tractors (John Deere 6115D)	115	X		6	10	2270002051	520	0	536.41	0.15	0.33	0.01	0.01	0.0026	0.13	0.01	0.59	20.86	0.01	0.01	0.000	0.000	0.0001	0.005	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Rock Drill Machine (JOHN HENRY drill on CAT320DL)	248	X		6	10	2270002081	520	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	44.98	0.04	0.11	0.007	0.007	0.0002	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Logging Skidder (CAT 525C)	182	X		6	10	2270002081	260	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	16.50	0.01	0.04	0.003	0.003	0.0001	0.005	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chipper (Bandit 1850)	250	X		6	10	2270002081	260	0	536.32	0.45	1.33	0.09	0.09	0.0029	0.16	0.01	0.59	22.67	0.02	0.06	0.004	0.004	0.0001	0.007	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Stump Grinder (Vermeer SC252)	27	X		6	10	2270002081	260	0	595.69	0.38	3.16	0.04	0.04	0.0030	0.15	0.01	0.59	2.72	0.00	0.01	0.000	0.000	0.0000	0.001	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Chain Saw	10		X	6	10	2265002081	520	0	1046.69	278.54	1.97	0.11	0.11	0.0191	4.90	0.23	0.48	2.88	0.77	0.01	0.000	0.000	0.0001	0.013	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Industrial Equipment																																
Aerial Lifts	49	X		6	10	2270003010	1,300	0	692.66	4.22	4.79	0.63	0.63	0.0042	1.05	0.01	0.21	10.21	0.06	0.07	0.009	0.009	0.0001	0.015	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Self-propelled sweeping and scrubbing vehicles	70	X		6	5	2270003030	650	0	589.89	0.74	3.08	0.08	0.08	0.0031	0.15	0.01	0.43	12.72	0.02	0.07	0.002	0.002	0.0001	0.003	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Hydraulic Crane	268	X		6	10	2270002045	780	0	530.57	0.22	1.02	0.04	0.04	0.0027	0.15	0.01	0.43	52.57	0.02	0.10	0.004	0.004	0.0003	0.015	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Marooka	250	X		6	6	2270002069	780	0	536.39	0.20	0.67	0.03	0.03	0.0027	0.14	0.01	0.59	68.02	0.03	0.09	0.004	0.004	0.0003	0.017	0.002	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Nonroad Commercial Equipment																																
Pumps	15	X		6	5	2270006010	2,080	0	588.81	2.43	4.59	0.36	0.36	0.0040	0.49	0.01	0.43	8.71	0.04	0.07	0.005	0.005	0.0001	0.007	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Air compressors	275	X		6	10	2270006015	3,120	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	215.60	0.36	1.25	0.079	0.079	0.0013	0.113	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Welders	55	X		6	10	2270006025	2,340	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	32.34	0.05	0.19	0.012	0.012	0.0002	0.017	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Pressure washers	5	X		6	5	2270006030	520	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	0.65	0.00	0.00	0.000	0.000	0.0000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Hydro power units	200	X		6	10	2270006035	1,040	0	530.15	0.88	3.07	0.20	0.20	0.0031	0.28	0.01	0.43	52.27	0.09	0.30	0.019	0.019	0.0003	0.027	0.001	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road construction vehicles							Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)																							
Light duty gasoline vehicles (< 6,000 lb GVW)	150		X	6	10		156,000	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		75.17	0.69	0.05	0.013	0.002	0.0005	0.020	0.009	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty gasoline vehicles (>6,000 lb GVW)	300		X	6	5		97,500	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05		46.98	0.43	0.03	0.008	0.001	0.0003	0.012	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Light duty diesel vehicles (< 6,000 lb GVW)	150	X		6	10		175,500	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		388.38	0.30	1.10	0.116	0.059	0.0034	0.114	0.016	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty diesel vehicles (>6,000 lb GVW)	300	X		6	5		48,750	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08		107.88	0.08	0.30	0.032	0.016	0.0009	0.032	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Deliveries / Removals	Empty Vehicle Weight (tons)	Full Vehicle Weight (tons)	Round Trip Distance (miles)	Number of Vehicle Miles Traveled		MOVES Emission Factors (g/VMT)								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
				2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
On-road delivery vehicles																													
Heavy duty gasoline vehicles (>6,000 lb GVW)			50	1,250	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	0.60	0.01	0.00	0.000	0.000	0.0000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
Heavy duty diesel vehicles (>6,000 lb GVW)			50	2,250	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	1.08	0.01	0.00	0.000	0.000	0.0000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000
On-road material removal vehicles																													
Heavy duty diesel vehicles (>6,000 lb GVW)			50	2,250	0	2007.61	1.54	5.67	0.60	0.30	0.0176	0.59	0.08	4.98	0.00	0.01	0.001	0.001	0.0000	0.001	0.000	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

Construction Areas	Potential Open Burning Area (acres)		AP-42 Section 13 Southern Region Emission Factors (tons/acre) 2014 Climate Registry Default Emission Factors for CO_2								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Potential Open Burning of Forested Area	0	0	14.31	0.63	0.02	0.08	0.08	0.00	0.11	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA

Construction Workers	Number of Vehicle Miles		MOVES Emission Factors (g/VMT)								2020 Emission Totals (Tons)								2021 Emission Totals (Tons)							
	2020	2021	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP	CO2	CO	NOx	PM10	PM25	SO2	VOC	HAP
Worker Commutes	90,000	0	437.15	4.03	0.29	0.07	0.01	0.0029	0.12	0.05	43.37	0.40	0.03	0.007	0.001	0.0003	0.011	0.005	0.00	0.00	0.00	0.000	0.000	0.0000	0.000	0.000

MVP Southgate Project

Docket No. CP19-14-000

Attachment 127-1

Additional VADEQ Correspondence Since December 14, 2018

March 2019

MVP Southgate Project

Docket No. CP19-14-000

Attachment 127-1

March 2019

From: Walthall, Anita [mailto:anita.walthall@deq.virginia.gov]
Sent: Wednesday, February 06, 2019 3:33 PM
To: Akly, Christina
Subject: Re: Lambert Compressor station

CAUTION - EXTERNAL EMAIL

Hello Christina,

We have not talked with Central Office yet. There were changes to be made to my data analysis and that required a peer review. The air permit manager has the information to review. After that's satisfied, we'll be ready to coordiante with Central. Hopefully he will get to me this week. I will be in touch with you once we have a definitive decision.

Regards,
Anita

_____
Anita L. Walthall
Air Permit Writer
Department of Environmental Quality
Blue Ridge Regional Office
3019 Peters Creek Rd
Roanoke, VA 24019
(540)562-6769

www.deq.virginia.gov

Effective APRIL 1, 2019 DEQ - Blue Ridge Regional Office is RELOCATING to:

901 Russell Drive, Salem, VA 24153

- Please update your records -

On Wed, Feb 6, 2019 at 3:01 PM Akly, Christina <Christina.Akly@fpl.com> wrote:

> Hi Anita,

I just wanted to follow up on the permit application status for the Lambert compressor station.
Did you get a chance to talk to the central district office?
When you get a chance, please give me a call so we can discuss.

Thank you!

Christina Akly, Ph.D., P.E.
Senior Environmental Specialist
NextEra Energy, Inc. / Environmental Services
700 Universe Blvd, Juno Beach, FL 33408
Office: 561.691.7065 / Mobile: 352.562.9524

Conference Bridge: 305-552-3001
Participant Code: 343 068 28
Host Access Code: 739 581 28

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Please consider the environment before printing this email

Contact Report for Michael Kiss

Contact ID 652	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	02/12/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Mr. Kiss left MVP a voicemail regarding air quality modeling analysis for the Lambert Station.
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Patrick Corbett

Contact ID 694	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	02/25/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	VADEQ Air Permitting Meeting to discuss the draft air permit application for the Lambert Compressor Station. Attendees: MVP (Christina Akly, Alex Miller), Anita Walthall, Stanley Faggert, Paul Jenkins, Tamera Thompson, Patrick Corbett, and Michael Dowd.
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Michael Dowd

Contact ID 695	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	02/25/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	VADEQ Air Permitting Meeting to discuss the draft air permit application for the Lambert Compressor Station. Attendees: MVP (Christina Akly, Alex Miller), Anita Walthall, Stanley Faggert, Paul Jenkins, Tamera Thompson, Patrick Corbett, and Michael Dowd.
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Stan Faggert

Contact ID 691	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	02/25/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	VADEQ Air Permitting Meeting to discuss the draft air permit application for the Lambert Compressor Station. Attendees: MVP (Christina Akly, Alex Miller), Anita Walthall, Stanley Faggert, Paul Jenkins, Tamera Thompson, Patrick Corbett, and Michael Dowd.
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Paul Jenkins

Contact ID 692	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	02/25/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	VADEQ Air Permitting Meeting to discuss the draft air permit application for the Lambert Compressor Station. Attendees: MVP (Christina Akly, Alex Miller), Anita Walthall, Stanley Faggert, Paul Jenkins, Tamera Thompson, Patrick Corbett, and Michael Dowd.
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tamera Thompson

Contact ID 693	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	02/25/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	VADEQ Air Permitting Meeting to discuss the draft air permit application for the Lambert Compressor Station. Attendees: MVP (Christina Akly, Alex Miller), Anita Walthall, Stanley Faggert, Paul Jenkins, Tamera Thompson, Patrick Corbett, and Michael Dowd.
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Anita Walthall

Contact ID 690	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	02/25/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	VADEQ Air Permitting Meeting to discuss the draft air permit application for the Lambert Compressor Station. Attendees: MVP (Christina Akly, Alex Miller), Anita Walthall, Stanley Faggert, Paul Jenkins, Tamera Thompson, Patrick Corbett, and Michael Dowd.
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 10

March 2019

LIST OF TABLES

REVISED Table 10.5-1 Comparison of the Preferred Route and Route Alternative 1			
Feature	**Preferred Route**	**Route Alternative 1**	**Difference**
General			
Total length (miles) a/	29.9	30.1	+0.2
Length adjacent to existing ROW (miles)	14.7	4.6	-10.1
Land affected during construction (acres) a/	362.1	365	+2.9
Land affected during operation (acres) a/	181.1	182.4	+1.3
Land Use			
Populated areas within ½ mile (number)	0	0	0
National Forest System lands crossed (miles)	0	0	0
National Forest Wilderness crossed (miles)	0	0	0
State lands crossed (forests, parks, wildlife management areas) (miles)	0	0	0
Scenic Trail crossings (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Designated Natural and Scenic Rivers, Nationwide Rivers Inventory, significant fisheries, ponds/lakes (number)	1	0	-1
NRHP designated or eligible historic districts crossed (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	1	0	-1
Landowner parcels crossed (number)	158	158	0
Residences within 50 feet of construction work space (number)	6	11	+5
Environmental Justice Areas (miles)	21.6	10.1	-11.5
Resources			
Agricultural Land crossed (miles) c/	8.3	9.2	+0.9
Open Land crossed (miles)	14.8	13.2	-1.6
Residential Land (miles)	0.1	0.4	+0.3
Commercial/Industrial Land (miles)	0.5	0.3	-0.2
Forest Areas (miles)	14.5	16.3	+1.8
Forested Land affected during construction (acres)	173.8	199	+25.2
Forested Land affected during operation (acres)	87.2	99.5	+12.3
Total Wetlands (NWI) crossed (feet)	1240	726	-514
PEM NWI wetlands affected by construction (acres) b/	0.2	0	-0.2
PEM NWI wetlands affected by operation (acres) a/	0.1	0	-0.1
PSS NWI wetlands affected by construction (acres) b/	0.7	0.6	-0.1
PSS NWI wetlands affected by operation (acres) a/	0.5	0.4	-0.1
PFO NWI wetlands crossed (feet)	755	391	-364
PFO NWI wetlands affected by construction (acres) b/	1.3	0.8	-0.5
PFO NWI wetlands affected by operation (acres) a/	0.9	0.5	-0.4
Perennial waterbody crossings (number)	16	14	-2
Crossings of major waterbodies (>100 feet) (number)	0	0	0
Presence of critical habitat or federally endangered or threatened species (Yes/No). Number of species.	No/0	No/0	0

REVISED Table 10.5-1

Comparison of the Preferred Route and Route Alternative 1

Feature	Preferred Route	Route Alternative 1	Difference
Shallow bedrock crossed (miles)	4.0	3.8	-0.2
Karst area crossed (miles)	0	0	0

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW. Includes a 5.4-mile long lateral from Alternative 1 to an interconnect with PSNC Energy, east of Eden, North Carolina.

b/ Assuming 75-foot-wide construction ROW.

c/ Includes pasture/hay and cultivated crops.

Populated Areas = census designated places, consolidated cites, and incorporated places.

ROW = right-of-way. NWI = National Wetland Inventory. NRHP = National Register of Historic Places.

PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

Information Sources:

GIS – Analysis based on Geodatabase layers and shapefiles.

NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page

VA Parcel Boundaries and Standard Fields - https://www.arcgis.com/home/item.html?id=f1dccaf1f42e40cbba791feae2e23690

NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html

NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/

USGS – U.S. Geological Survey - http://www.usgs.gov/

NHD – National Hydrography Dataset - http://nhd.usgs.gov/

USDA - https://data.fs.usda.gov/geodata/edw/datasets.php

NRHP - National Register of Historic Places - https://www.nps.gov/nr/research/data_downloads.htm

ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-2 Comparison of the Preferred Route and Route Alternative 2			
Feature	**Preferred Route**	**Route Alternative 2**	**Difference**
General			
Total length (miles) a/	42.4	43.4	+1.0
Length adjacent to existing ROW (miles)	20.0	14.6	-5.4
Land affected during construction (acres) a/	514.3	525.8	+11.5
Land affected during operation (acres) a/	257.2	262.8	+5.6
Land Use			
Populated areas within ½ mile (number)	0	0	0
National Forest System lands crossed (miles)	0	0	0
National Forest Wilderness crossed (miles)	0	0	0
State lands crossed (forests, parks, wildlife management areas) (miles)	0	0	0
Scenic Trail crossings (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Designated Natural and Scenic Rivers, Nationwide Rivers Inventory, significant fisheries, ponds/lakes (number)	2	0	-2
NRHP designated or eligible historic districts crossed (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	1	0	-1
Landowner parcels crossed (number)	245	200	-45
Residences within 50 feet of construction work space (number)	8	13	+5
Environmental Justice Areas (miles)	21.6	3.7	-17.9
Resources			
Agricultural Land crossed (miles) c/	14.3	13.4	-0.9
Open Land crossed (miles)	21.7	21.5	-0.2
Residential Land (miles)	0.3	0.3	0
Commercial/Industrial Land (miles)	0.6	0.3	-0.3
Forest Areas (miles)	19.6	21.1	+1.5
Forested Land affected during construction (acres)	238.8	249.3	+10.5
Forested Land affected during operation (acres)	120	124.9	+4.9
Total Wetlands (NWI) crossed (feet)	1,972	3,047	+1,075
PEM NWI wetlands affected by construction (acres) b/	0.8	0	-0.8
PEM NWI wetlands affected by operation (acres) a/	0.6	0	-0.6
PSS NWI wetlands affected by construction (acres) b/	0.7	0.5	-0.2
PSS NWI wetlands affected by operation (acres) a/	0.5	0.4	-0.1
PFO NWI wetlands crossed (feet)	790	2,763	+1,973
PFO NWI wetlands affected by construction (acres) b/	1.4	4.9	+3.5
PFO NWI wetlands affected by operation (acres) a/	0.9	3.3	+2.4
Perennial waterbody crossings (number)	18	19	+1
Crossings of major waterbodies (>100 feet) (number)	1	0	-1
Presence of critical habitat or federally endangered or threatened species (Yes/No). Number of species.	No / 0	No / 0	0
Shallow bedrock crossed (miles)	4.0	4.3	+0.3
Karst area crossed (miles)	0	0	0

REVISED Table 10.5-2

Comparison of the Preferred Route and Route Alternative 2

Feature	Preferred Route	Route Alternative 2	Difference

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW. Includes an 8.8-mile long lateral from Alternative 2 to an interconnect with PSNC Energy, east of Eden, North Carolina.

b/ Assuming 75-foot-wide construction ROW.

c/ Includes pasture/hay and cultivated crops.

Populated Areas = census designated places, consolidated cites, and incorporated places.

ROW = right-of-way. NWI = National Wetland Inventory. NRHP = National Register of Historic Places.

PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

Information Sources:

GIS – Analysis based on Geodatabase layers and shapefiles.

NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page

VA Parcel Boundaries and Standard Fields - https://www.arcgis.com/home/item.html?id=f1dccaf1f42e40cbba791feae2e23690

NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html

NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/

USGS – U.S. Geological Survey - http://www.usgs.gov/

NHD – National Hydrography Dataset - http://nhd.usgs.gov/

USDA - https://data.fs.usda.gov/geodata/edw/datasets.php

NRHP - National Register of Historic Places - https://www.nps.gov/nr/research/data_downloads.htm

ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-3 Comparison of the Preferred Route and Route Alternative 3			
Feature	**Preferred Route**	**Route Alternative 3**	**Difference**
General			
Total length (miles) a/	60.0	63.4	+3.4
Length adjacent to existing ROW (miles)	26.9	25.4	-1.5
Land affected during construction (acres) a/	727.7	769.1	+41.4
Land affected during operation (acres) a/	363.9	384.5	+20.6
Land Use			
Populated areas within ½ mile (number)	0	1	+1
National Forest System lands crossed (miles)	0	0	0
National Forest Wilderness crossed (miles)	0	0	0
State lands crossed (forests, parks, wildlife management areas) (miles)	0	0	0
Scenic Trail crossings (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Designated Natural and Scenic Rivers, Nationwide Rivers Inventory, significant fisheries, ponds/lakes (number)	2	0	-2
NRHP designated or eligible historic districts crossed (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	2	0	-2
Landowner parcels crossed (number)	337	377	+40
Residences within 50 feet of construction work space (number)	17	24	+7
Environmental Justice Areas (miles)	21.6	19.1	-2.5
Resources			
Agricultural Land crossed (miles) c/	0.5	0.4	-0.1
Open Land crossed (miles)	31.9	27.3	-4.6
Residential Land (miles)	0.5	1.0	+0.5
Commercial/Industrial Land (miles)	0.8	0.6	-0.2
Forest Areas (miles)	26.9	34.7	+7.8
Forested Land affected during construction (acres)	319.2	407.9	+88.7
Forested Land affected during operation (acres)	160.2	204.6	+44.4
Total Wetlands (NWI) crossed (feet)	2,196	3,159	+963
PEM NWI wetlands affected by construction (acres) b/	1.1	0.6	-0.5
PEM NWI wetlands affected by operation (acres) a/	0.8	0.4	-0.4
PSS NWI wetlands affected by construction (acres) b/	0.7	2.1	+1.4
Total PSS NWI wetlands affected by operation (acres) a/	0.5	1.2	+0.7
PFO NWI wetlands crossed (feet)	790	1,614	+824
PFO NWI wetlands affected by construction (acres) b/	1.4	2.8	+1.4
PFO NWI wetlands affected by operation (acres) a/	0.9	1.9	+1.0
Perennial waterbody crossings (number)	28	31	+3
Crossings of major waterbodies (>100 feet) (number)	1	0	-1
Presence of critical habitat or federally endangered or threatened species (Yes/No). Number of species.	No / 0	No / 0	0
Shallow bedrock crossed (miles)	4.8	10.4	+5.6

REVISED Table 10.5-3

Comparison of the Preferred Route and Route Alternative 3

Feature	Preferred Route	Route Alternative 3	Difference
Karst area crossed (miles)	2.0	0.6	-1.4

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW. Includes a 16.6-mile long lateral from Alternative 3 to an interconnect with PSNC Energy, east of Eden, North Carolina.

b/ Assuming 75-foot-wide construction ROW.

c/ Includes pasture/hay and cultivated crops.

Populated Areas = census designated places, consolidated cites, and incorporated places.

ROW = right-of-way. NWI = National Wetland Inventory. NRHP = National Register of Historic Places

PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

Information Sources:

GIS – Analysis based on Geodatabase layers and shapefiles.

NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page

VA Parcel Boundaries and Standard Fields - https://www.arcgis.com/home/item.html?id=f1dccaf1f42e40cbba791feae2e23690

NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html

NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/

USGS – U.S. Geological Survey - http://www.usgs.gov/

NHD – National Hydrography Dataset - http://nhd.usgs.gov/

USDA - https://data.fs.usda.gov/geodata/edw/datasets.php

NRHP - National Register of Historic Places - https://www.nps.gov/nr/research/data_downloads.htm

ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-4

Comparison of the Preferred Route and FERC Alternative 1

Feature	Preferred Route	FERC Alternative 1	Difference
Total length (miles)	9.1	8.7	-0.4
Construction right-of-way (acres) a/	110.8	105.7	-5.1
Permanent right-of-way (acres) a/	55.4	52.8	-2.6
Total number of parcels crossed	96	53	-43
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	4 / 3	1 / 1	-3 / -2
Residential Land (miles)	0.1	0.1	0
Commercial/Industrial Land (miles)	0.2	0.1	-0.1
Unlisted/Potential Eligible Historic Properties (number)	1	0	-1
National Trails, Recreation Trails, and Other Recreational Areas (number)	1	1	0
Number of waterbodies crossed	18	23	+5
Number of NWI wetlands crossed	1	9	+8
Total NWI wetland crossing length (feet)	25	3,990	+3,965
NWI wetlands within construction ROW (acres) b/	0.2	6.8	+6.6
Agricultural Land within construction ROW (acres) c/	28.6	19.5	-9.1
Forest Areas (miles)	4.8	4.3	-0.5
Forested Land affected during construction (acres)	58.8	52.6	-6.2
Forested Land affected during operation (acres)	29.3	26.4	-2.9
Length parallel or adjacent to existing ROW (miles)	0.25	5.95	+5.7

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-5

Comparison of the Preferred Route and FERC Alternative 2

Feature	Preferred Route	FERC Alternative 2	Difference
Total length (miles)	3.8	4.0	+0.2
Construction right-of-way (acres) a/	46.5	48.9	+2.4
Permanent right-of-way (acres) a/	23.2	24.4	+1.2
Total number of parcels crossed	47	30	-17
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	4 / 3	0 / 0	-4 / -3
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0.1	0.1	0
Unlisted/Potential Eligible Historic Properties (number)	1	0	-1
National Trails, Recreation Trails, and Other Recreational Areas (number)	1	1	0
Number of waterbodies crossed	8	12	+4
Number of NWI wetlands crossed	0	9	+9
Total NWI wetland crossing length (feet)	0	4,163	+4,163
NWI wetlands within construction ROW (acres) b/	0.1	6.9	+6.8
Agricultural Land within construction ROW (acres) c/	6.4	6.9	+0.5
Forest Areas (miles)s	1.9	1.7	-0.2
Forested Land affected during construction (acres)	23.8	20.2	-3.6
Forested Land affected during operation (acres)	11.8	10.2	-1.6
Length parallel or adjacent to existing ROW (miles)	0.2	3.6	+3.4

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-6

Comparison of the Preferred Route and FERC Alternative 3

Feature	Preferred Route	FERC Alternative 3	Difference
Total length (miles)	2.0	1.5	-0.5
Construction right-of-way (acres) a/	24.7	18.9	-5.8
Permanent right-of-way (acres) a/	12.3	9.4	-2.9
Total number of parcels crossed	16	16	0
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0 / 0	0 / 0	0 / 0
Residential Land (miles)	0	0.1	+0.1
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	3	3	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	12.4	9.5	-2.9
Forest Areas (miles)	0.8	0.8	0
Forested Land affected during construction (acres)	5.2	4.9	-0.3
Forested Land affected during operation (acres)	10.5	9.9	-0.6
Length parallel or adjacent to existing ROW (miles)	0	0	0

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-7

Comparison of the Preferred Route and FERC Alternative 4

Feature	Preferred Route	FERC Alternative 4	Difference
Total length (miles)	5.0	9.4	+4.4
Construction right-of-way (acres) a/	61.3	114	+52.7
Permanent right-of-way (acres) a/	30.6	57.0	+26.4
Total number of parcels crossed	60	56	-4
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	3 / 1	0 / 0	-3 / -1
Residential Land (miles)	0	0.1	+0.1
Commercial/Industrial Land (miles)	0.1	0.3	+0.2
Unlisted/Potential Eligible Historic Properties (number)	1	0	-1
National Trails, Recreation Trails, and Other Recreational Areas (number)	1	1	0
Number of waterbodies crossed	12	14	+2
Number of NWI wetlands crossed	1	5	+4
Total NWI wetland crossing length (feet)	25	321	+296
NWI wetlands within construction ROW (acres) b/	0.2	0.7	+0.5
Agricultural Land within construction ROW (acres) c/	11.5	36.2	+24.7
Forest Areas (miles)	2.9	4.3	+1.4
Forested Land affected during construction (acres)	35.4	53.5	+18.1
Forested Land affected during operation (acres)	17.8	26.6	+8.8
Length parallel or adjacent to existing ROW (miles)	0.2	2.0	+1.8

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-8

Comparison of the Preferred Route and FERC Alternative 5

Feature	Preferred Route	FERC Alternative 5	Difference
Total length (miles)	1.3	2.2	+0.9
Construction right-of-way (acres) a/	16.2	26.3	+10.1
Permanent right-of-way (acres) a/	8.1	13.1	+5.0
Total number of parcels crossed	16	19	+3
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	1 / 2	0 / 0	-1/ -2
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	3	3	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	2.9	11.5	+8.6
Forest Areas (miles)	0.8	0.8	0
Forested Land affected during construction (acres)	9.6	9.3	-0.3
Forested Land affected during operation (acres)	4.7	4.6	-0.1
Length parallel or adjacent to existing ROW (miles)	0.1	0	-0.1

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-9

Comparison of the Preferred Route and FERC Alternative 6

Feature	Preferred Route	FERC Alternative 6	Difference
Total length (miles)	3.7	4.4	+0.7
Construction right-of-way (acres) a/	45.6	53.3	+7.7
Permanent right-of-way (acres) a/	22.7	26.6	+3.9
Total number of parcels crossed	26	28	+2
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0 / 0	1 / 0	+1 / 0
Residential Land (miles)	0.2	0	+0.2
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	5	10	+5
Number of NWI wetlands crossed	1	2	+1
Total NWI wetland crossing length (feet)	35	131	+96
NWI wetlands within construction ROW (acres) b/	0.1	0.3	+0.2
Agricultural Land within construction ROW (acres) c/	21.7	17.8	-3.9
Forest Areas (miles)	1.8	2.1	+0.3
Forested Land affected during construction (acres)	21.3	24.9	+3.6
Forested Land affected during operation (acres)	10.7	12.7	+2
Length parallel or adjacent to existing ROW (miles)	0.9	2.5	+1.6

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.5-10 Comparison of the Original Route and Mystic Valley Reroute (Preferred Route)			
Feature	**Original Route**	**Mystic Valley Reroute (Preferred Route)**	**Difference**
General			
Total length (miles) a/	3	3.5	+0.5
Length adjacent to existing ROW (miles)	0	0	0
Land affected during construction (acres) a/	36.4	42.5	+6.1
Land affected during operation (acres) a/	18.1	21.2	+3.1
Land Use			
Populated areas within ½ mile (number)	0	0	0
National Forest System lands crossed (miles)	0	0	0
National Forest Wilderness crossed (miles)	0	0	0
State lands crossed (forests, parks, wildlife management areas) (miles)	0	0	0
Scenic Trail crossings (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Designated Natural and Scenic Rivers, Nationwide Rivers Inventory, significant fisheries, ponds/lakes (number)	0	0	0
NRHP designated or eligible historic districts crossed (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	1	+1
Landowner parcels crossed (number)	29	35	+6
Residences within 50 feet of construction work space (number)	0	0	0
Environmental Justice Areas (miles)	1.1	1.1	0
Resources			
Agricultural Land crossed (miles) c/	19.1	19.2	-0.1
Open Land crossed (miles)	1.9	1.7	+0.2
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Forest Areas (miles)	1.5	1	-0.5
Forested Land affected during construction (acres)	19	12.2	-6.8
Forested Land affected during operation (acres)	9.4	6	-3.4
Total Wetlands (NWI) crossed (feet)	0	0	0
PEM NWI wetlands affected by construction (acres) b/	0	0	0
PEM NWI wetlands affected by operation (acres) a/	0	0	0
PSS NWI wetlands affected by construction (acres) b/	0	0	0
PSS NWI wetlands affected by operation (acres) a/	0	0	0
PFO NWI wetlands crossed (feet)	0	0	0

REVISED Table 10.5-10

Comparison of the Original Route and Mystic Valley Reroute (Preferred Route)

Feature	Original Route	Mystic Valley Reroute (Preferred Route)	Difference
PFO NWI wetlands affected by construction (acres) b/	0	0	0
PFO NWI wetlands affected by operation (acres) a/	0	0	0
Perennial waterbody crossings (number)	0	0	0
Crossings of major waterbodies (>100 feet) (number)	0	0	0
Presence of critical habitat or federally endangered or threatened species (Yes/No). Number of species.	No / 0	No / 0	0
Shallow bedrock crossed (miles)	0	0	0
Karst area crossed (miles)	0	0	0

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
Populated Areas = census designated places, consolidated cites, and incorporated places.
ROW = right-of-way. NWI = National Wetland Inventory. NRHP = National Register of Historic Places.
PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
VA Parcel Boundaries and Standard Fields - https://www.arcgis.com/home/item.html?id=f1dccaf1f42e40cbba791feae2e23690
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
USDA - https://data.fs.usda.gov/geodata/edw/datasets.php
NRHP - National Register of Historic Places - https://www.nps.gov/nr/research/data_downloads.htm
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.6-1

Comparison of the Preferred Route and Robert Pollok-Hill View Farms Variation

Feature	Preferred Route	Robert Pollok-Hill View Farms Variation	Difference
Total length (miles)	1.0	1.0	0
Construction right-of-way (acres) a/	12.3	12.3	0
Permanent right-of-way (acres) a/	6.1	6.1	0
Total number of parcels crossed	5	6	-1
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0/0	0/0	0/0
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	0	0	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	8.9	9.1	+0.2
Forest Areas (miles)	0.2	0.1	-0.1
Forested Land affected during construction (acres)	2.3	1.6	-0.7
Forested Land affected during operation (acres)	1.1	0.8	-0.3
Length parallel or adjacent to existing ROW (miles)	0	1	+1

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.6-2

Comparison of the Preferred Route and MP 40.0 to MP 41.4 Variation

Feature	Preferred Route	MP 40.0 to MP 41.4 Variation	Difference
Total length (miles)	1.4	1.6	+0.2
Construction right-of-way (acres) a/	17.4	19.8	+2.4
Permanent right-of-way (acres) a/	8.7	9.9	+1.2
Total number of parcels crossed	9	8	-1
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	1/2	0/0	-1/-2
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	3	3	0
Number of NWI wetlands crossed	1	1	0
Total NWI wetland crossing length (feet)	243	303	+60
NWI wetlands within construction ROW (acres) b/	0.4	0.5	+0.1
Agricultural Land within construction ROW (acres) c/	1.2	2.2	+1
Forest Areas (miles)	1.1	1	-0.1
Forested Land affected during construction (acres)	12.7	11.5	-1.2
Forested Land affected during operation (acres)	6.4	5.7	-0.7
Length parallel or adjacent to existing ROW (miles)	0.5	0.2	-0.3

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.6-3

Comparison of the Original Route and MP 69.5 to MP 69.7 Variation (Preferred Route)

Feature	Original Route	MP 69.5 to MP 69.69 Variation (Preferred Route)	Difference
Total length (miles)	0.5	0.4	+0.1
Construction right-of-way (acres) a/	6.5	5.4	+1.1
Permanent right-of-way (acres) a/	3.2	2.6	+0.6
Total number of parcels crossed	11	9	-2
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	3/1	2/2	-1/+1
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0.1	0.1	0
Unlisted/Potential Eligible Historic Properties (number)	1	1	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	1	1	0
Number of waterbodies crossed	1	1	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	0	0	0
Forest Areas (miles)	0.1	0.1	0
Forested Land affected during construction (acres)	2	1.8	-0.2
Forested Land affected during operation (acres)	1	0.8	-0.2
Length parallel or adjacent to existing ROW (miles)	0	0	0

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/

REVISED Table 10.6-4 Route Variations Incorporated into the MVP Southgate Project Pipeline					
Tract ID	**Reroute No.**	**Approx. Begin MP**	**Approx. End MP**	**Length (miles)**	**Variation Description / Justification**
VA-PI-001.000 VA-PI-002.000	MVP-RA-228-1624	0	0	0.00	H-605 Lambert Compressor Station Suction Line
VA-PI-002.000	MVP-RA-228-1627	0	0	0.00	Lambert Compressor Station Discharge Line
VA-PI-008.000 VA-PI-009.000	MVP-RA-143-1526	1	1.25	0.25	Adjusted centerline (“CL”) to be next to existing right-of-way (“ROW”)
VA-PI-012.000	MVP-RR-257-1422	2.25	2.25	0.00	Adjusted the access road TA-PI-005 to end at a additional temporary workspace (“ATWS”) that is outside of a wetland
VA-PI-014.000	MVP-RA-143-1527	2.35	2.7	0.35	Adjusted CL to be next to existing ROW
VA-PI-022.000 VA-PI-023.000	MVP-RR-257-1425	3.4	3.4	0.00	Extended access road TA-PI-006 to a public road
VA-PI-022.000 VA-PI-023.000	MVP-RR-228-1312	3.55	3.55	0.00	Contoured this work box to fit stream/wetland angles
VA-PI-029.000 VA-PI-030.000 VA-PI-031.000 VA-PI-032.000	MVP-RA-143-1528	4.25	4.4	0.15	Removed Point of Intersections (“PI's”)
VA-PI-032.000	MVP-RA-143-1529	4.6	4.9	0.30	Adjusted CL to be next to existing ROW
VA-PI-034.000	MVP-RA-143-1530	5	5.1	0.10	Minimized creek crossing and adjust PI away from creek crossing
VA-PI-034.000 VA-PI-034.000.RR VA-PI-035.000	MVP-RA-183-0855	5	5.3	0.30	Adjusted CL to avoid being in stream for approximately 600 feet.
VA-PI-034.000	MVP-RA-221-1831	5	5	0.00	Trimmed ATWS to 30' x 100' to avoid sensitive resource area
VA-PI-034.000	MVP-RA-221-1835	5	5	0.00	Removed. Reduce / avoid impact on sensitive resource area
VA-PI-034.000 VA-PI-034.100.AR	MVP-RA-253-1423	5.1	5.1	0.00	Modified access road layout
VA-PI-035.000	MVP-RA-218-1715	5.3	5.3	0.00	Access road removed
VA-PI-035.000 VA-PI-036.000	MVP-RA-253-1606	5.5	5.5	0.00	Removed TA-PI-044
VA-PI-035.100.AR VA-PI-036.000 VA-PI-037.000	MVP-VRR-270-1240	5.9	5.9	0.00	Extend access road to a public road
VA-PI-037.000	MVP-RA-153-1208	6.3	6.5	0.20	Adjusted CL to be next to existing ROW
VA-PI-041.000	MVP-RA-153-1215	7.2	7.3	0.10	Adjusted CL to be next to existing ROW
VA-PI-041.000 VA-PI-042.000 VA-PI-044.000	MVP-RA-228-1315	7.2	7.5	0.30	Straighten out and follow existing pipelines
VA-PI-043.000	MVP-RA-218-1732	7.6	7.6	0.00	Removed TA-PI-020
VA-PI-053.000	MVP-RR-183-0902	9.6	9.6	0.00	Adjusted access road to avoid cemetery

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-053.000	MVP-RA-254-1528	9.6	9.6	0.00	Modified access road layout
VA-PI-053.000	MVP-RR-183-0859	9.65	10	0.35	Adjusted centerline to avoid large cemetery
VA-PI-075.000 VA-PI-075.001.ASC VA-PI-076.000	MVP-RR-221-1024	11	11.5	0.50	Alternate route to avoid sensitive resource area
VA-PI-077.000	MVP-RR-255-1641	11.65	11.9	0.25	Adjusted centerline to avoid cemetery
VA-PI-079.000	MVP-RA-218-2017	12.2	12.2	0.00	Removed access road
VA-PI-082.000	MVP-RA-219-1725	12.4	12.4	0.00	Reduced ATWS to property lines to avoid cemetery
VA-PI-082.000	MVP-RA-219-1839	12.6	12.6	0.00	Removed access road
VA-PI-082.000	MVP-RA-219-1846	12.65	12.65	0.00	Removed access road
VA-PI-084.000	MVP-RA-153-1249	12.8	13.1	0.30	Adjusted CL to be next to existing ROW
VA-PI-092.200.AR	MVP-RR-219-0800	14.15	14.15	0.00	The landowner requested that the access road not to go past their house and barn but from the gates at the road along the property line
VA-PI-092.200.AR	MVP-RA-254-1542	14.15	14.15	0.00	Removed section of access road
VA-PI-094.000	MVP-RA-153-1254	14.2	14.4	0.20	Adjusted CL to be next to existing ROW
VA-PI-094.000 VA-PI-095.000 VA-PI-096.000	MVP-RA-153-1257	14.7	14.85	0.15	Adjusted CL to reduce the number of PIs.
VA-PI-096.000, VA-PI-099.000	MVP-RA-218-2043	14.8	15.2	0.40	Adjusted to route to the west based on the property evidence gathered and run the line north to a point of intersection with original route. Avoid VA-PI-097.000.ABU.
VA-PI-100.000 VA-PI-099.000 VA-PI-101.000	MVP-RA-153-1303	15.2	15.45	0.25	Adjusted CL to reduce the number of PIs in this location.
VA-PI-099.000	MVP-RR-218-2047	15.2	15.2	0.00	Landowner does not want the access road going by his house.
VA-PI-099.000 VA-PI-099.100.AR	MVP-RA-253-1127	15.4	15.4	0.00	Remove section of TA-PI-037
VA-PI-102.000.ABU VA-PI-103.000	MVP-RA-179-1227	15.7	15.85	0.15	Adjusted CL to be next to existing pipeline ROW. According to the LDAR info the slope is ~14.9% (8.2 deg)
VA-PI-103.000 VA-PI-104.000.ABU VA-PI-106.000	MVP-RA-199-1127	15.9	16.05	0.15	Avoided sensitive resource area.
VA-PI-106.000	MVP-RA-253-1124	16.1	16.1	0.00	Removed TA-PI-040

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-115.000 VA-PI-118.000	MVP-RA-219-1808	16.8	17.2	0.40	At 16.9, propose to cross the creek at a more perpendicular angle.
VA-PI-118.000	MVP-RA-253-1035	17.4	17.4	0.00	Removed TA-PI-044
VA-PI-120.000 VA-PI-121.000 VA-PI-122.000.ABU VA-PI-123.000 VA-PI-124.000	MVP-RA-163-1213	18	18.4	0.40	Adjusted CL to be next to the existing pipeline ROW. There is an old farm house and barn next to the existing pipeline ROW, potential karst area.
VA-PI-121.000	MVP-RA-197-1303	18	18	0.00	Adjusted CL of access road TA-PI-046 to avoid sensitive resource area
VA-PI-121.000 VA-PI-122.000.ABU VA-PI-123.000 VA-PI-124.000	MVP-RA-239-1745	18.2	18.35	0.15	Adjusted CL to avoid A frame electric poles
VA-PI-124.000	MVP-RA-239-1750	18.3	18.3	0.00	Mainline Valve 3
VA-PI-150.000	MVP-RA-228-1319	19.8	19.9	0.10	Crossed the existing lines square
VA-PI-150.000 VA-PI-151.000 VA-PI-152.000 VA-PI-155.000 VA-PI-156.000	MVP-RA-153-1458	19.9	20.3	0.40	This will reduce the number of Pi's needed and this route will miss the structure.
VA-PI-150.000 VA-PI-151.000 VA-PI-152.000 VA-PI-153.000.ABU VA-PI-154.000.ABU VA-PI-160.000	MVP-RR-218-2110	19.9	20.4	0.50	Preferred by the landowner. He had no issues with us co-locating but stressed that he did not want us to go through the center of his pasture. There is ~75' between the Williams line and the garage on tract VA-PI-153.000.ABU
VA-PI-160.000	MVP-RR-257-1433	20.45	20.45	0.00	Adjusted access road TA-PI-052 to avoid sensitive resource area
VA-PI-160.000 VA-PI-161.000 VA-PI-162.000 VA-PI-163.000	MVP-RA-155-1441	20.5	21.2	0.70	Adjusted CL to be next to existing ROW
VA-PI-164.100.AR VA-PI-164.000.ABU	MVP-RA-218-1737	21.2	21.2	0.00	Removed TA-PI-054
VA-PI-163.000 VA-PI-165.000	MVP-RA-155-1446	21.35	21.65	0.30	Adjusted CL to be next to existing ROW

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-171.000 VA-PI-172.000 VA-PI-173.000	MVP-RA-155-1449	22.15	22.75	0.60	Adjusted CL to be next to existing ROW
VA-PI-173.000	MVP-RA-249-1429	22.35	22.35	0.00	Removed ATWS 1172
VA-PI-173.000	MVP-RA-249-1444	22.35	22.35	0.00	Removed TA-PI-056
VA-PI-173.000	MVP-RA-249-1437	22.45	22.45	0.00	ATWS 1174 Removed
VA-PI-173.000	MVP-RA-249-1447	22.45	22.45	0.00	TA-PI-057 Removed
VA-PI-166.100.AR VA-PI-166.200.AR VA-PI-173.000 VA-PI-173.100.AR	MVP-RA-249-1450	22.6	22.6	0.00	TA-PI-058 Removed
VA-PI-173.000	MVP-RA-249-1454	22.7	22.7	0.00	TA-PI-060 Removed
VA-PI-174.000 VA-PI-175.000	MVP-RA-177-1447	23.1	23.7	0.60	Adjusted CL to be next to existing ROW
VA-PI-178.000	MVP-RA-177-1449	24.4	24.7	0.30	Adjusted CL to be next to existing ROW
NC-RO-002.000	MVP-RA-157-1313	26.25	26.45	0.20	Adjusted CL to be next to existing ROW
NC-RO-005.000 NC-RO-006.000	MVP-RR-269-1541	27	28.3	1.30	Adjusted CL to avoid sensitive resource area and for LN3600
NC-RO-005.000 NC-RO-006.000	MVP-RR-270-1244	27.4	27.4	0.00	Added access road
NC-RO-006.000 NC-RO-006.001.CS2	MVP-RR-257-1435	28.1	28.1	0.00	Extended access road PA-RO-000 to public road
NC-RO-006.000	MVP-RA-153-1309	28.3	28.3	0.00	Moved the ATWS to stay out of large wetland
NC-RO-007.000	MVP-RA-159-1655	29.3	29.65	0.35	There is side hill construction in this area, adjust CL to be on top of the hill
NC-RO-011.000 NC-RO-012.000.WBC NC-RO-013.000 NC-RO-014.000 NC-RO-015.000 NC-RO-016.000 NC-RO-018.000.ABU NC-RO-019.000	MVP-RR-269-1549	29.9	30.55	0.65	Adjusted CL for HDD profile and T15 location

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-011.000	MVP-RR-270-1247	29.9	29.9	0.00	Added ATWS for equipment and mats
NC-RO-011.000	MVP-RR-270-1248	29.9	29.9	0.00	Added ATWS for HDD area
NC-RO-011.000	MVP-RR-270-1250	29.9	29.9	0.00	Added ATWS for truck turning
NC-RO-011.000	MVP-RR-270-1251	29.9	29.9	0.00	Adjusted where the access road route
NC-RO-014.000	MVP-RR-228-1322	30.3	30.3	0.00	ATWS for Hydro test
NC-RO-022.000 NC-RO-025.000	MVP-RR-257-1438	30.75	31.15	0.40	Adjusted route to avoid red tract and 2 large stream crossings
NC-RO-025.000 NC-RO-027.000 NC-RO-029.000	MVP-RA-159-1700	31.2	31.4	0.20	Adjusted CL to reduce the amount of stream impact and to avoid side hill construction
NC-RO-025.900.AR NC-RO-025.850.ABU NC-RO-025.800.ABU NC-RO-025.700.AR NC-RO-025.650.ABU NC-RO-025.600.AR NC-RO-025.500.AR NC-RO-025.400.AR NC-RO-025.300.AR NC-RO-025.200.AR NC-RO-025.100.AR NC-RO-026.000.ABU NC-RO-025.000	MVP-RA-219-1902	31.2	31.2	0.00	Removed access road TA-RO-083
NC-RO-029.000 NC-RO-030.000	MVP-RA-179-1146	31.4	31.6	0.20	Adjusted CL to stay away from sensitive resource area and bring the PI closer to the top of the hill
NC-RO-033.000 NC-RO-034.000	MVP-RA-159-1706	31.6	31.9	0.30	Adjusted CL to avoid side hill and multiple ravines
NC-RO-035.000 NC-RO-037.000	MVP-RA-159-1717	32	32.15	0.15	Adjusted CL to avoid side hill construction
NC-RO-038.000	MVP-RR-257-1441	32.35	32.55	0.20	Adjusted route to co-locate with existing pipeline
NC-RO-047.000 NC-RO-048.000 NC-RO-049.000 NC-RO-050.000 NC-RO-051.000 NC-RO-052.000 NC-RO-053.000 NC-RO-054.000 NC-RO-055.000 NC-RO-056.000 NC-RO-057.000	MVP-RA-162-1521	34.2	35.35	1.15	Adjusted CL to avoid side hill construction, baptism area around MP 34.6 and sensitive resource area around MP 34.9

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Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-054.000 NC-RO-056.000 NC-RO-057.000	MVP-RR-193-1030	34.95	35.35	0.40	Adjusted CL to avoid multiple stream crossings and side hill construction
NC-RO-058.000 NC-RO-060.000 NC-RO-061.000	MVP-RA-162-1535	35.9	36.35	0.45	Adjusted CL to avoid side hill construction and to stay off "NO" tract
NC-RO-060.000 NC-RO-061.000	MVP-RA-228-1520	36	36	0.00	Removed ATWS 1304 because it is in a ravine.
NC-RO-060.000	MVP-RA-242-1543	36	36	0.00	Trimmed the work space out of the corner to stay off red tract
NC-RO-077.000 NC-RO-081.000 NC-RO-080.000	MVP-RR-242-1509	37.6	37.85	0.25	Adjusted route to avoid red tract
NC-RO-084.000 NC-RO-085.000 NC-RO-086.000 NC-RO-087.000 NC-RO-088.000 NC-RO-089.000 NC-RO-090.000	MVP-RA-143-1533	38	38.8	0.80	Avoided Side Hill Construction
NC-RO-085.000	MVP-RA-230-1251	38.1	38.1	0.00	Changed ATWS 1328 to 240' x 90' to fit inside survey corridor
NC-RO-091.000	MVP-RA-230-1254	38.85	38.85	0.00	Change ATWS 1337 to 90' x 110' to fit inside survey corridor
NC-RO-091.000 NC-RO-092.000 NC-RO-094.000	MVP-RA-162-1541	39	39.35	0.35	Adjusted CL to avoid side hill construction
NC-RO-092.000 NC-RO-094.000 NC-RO-095.000	MVP-RR-193-1501	39.2	39.6	0.40	Adjusted CL to bring the CL up the hill a little bit more and to get the WS out of the wetland/pond area
NC-RO-100.000 NC-RO-101.000	MVP-RA-163-1116	40	40.2	0.20	Adjusted CL to stay away from washout ditch
NC-RO-101.000	MVP-RA-230-1302	40.15	40.15	0.00	Change ATWS 1350 to 90' x 110' to fit inside survey corridor
NC-RO-101.000	MVP-RA-230-1305	40.2	40.2	0.00	Changed ATWS 1352 to 90' x 110' to fit inside survey corridor
NC-RO-106.000	MVP-RA-230-1308	40.5	40.5	0.00	Changed ATWS 1355 to 90' Wide to fit inside survey corridor
NC-RO-108.000	MVP-RA-230-1311	40.6	40.6	0.00	Changed ATWS 1357 to 90' Wide to fit inside survey corridor
NC-RO-109.000	MVP-RA-153-1317	40.7	40.9	0.20	Adjusted CL to avoid side hill construction
NC-RO-111.000	MVP-VRR-270-1253	41.4	41.4	0.00	Extended access road to public road

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-111.000 NC-RO-111.000.RC NC-RO-112.000	MVP-RA-193-1511	41.45	41.8	0.35	Adjusted CL to straighten out the route and reduce the number of PIs needed
NC-RO-111.000 NC-RO-112.000	MVP-RR-249-1522	41.55	41.75	0.20	Adjusted CL to be able to bore Hwy 29
NC-RO-112.000	MVP-RA-153-1320	41.6	41.8	0.20	Straighten out this road crossing to follow the power lines.
NC-RO-111.000 NC-RO-112.000	MVP-RR-249-1517	41.65	41.65	0.00	ATWS for bore
NC-RO-112.000	MVP-RA-157-1325	41.9	42.2	0.30	Adjusted CL to stay away from small cemetery.
NC-RO-112.200 NC-RO-112.300 NC-RO-112.400 NC-RO-117.000	MVP-RR-162-1547	42.3	43	0.70	Adjusted CL to avoid AT&T tower
NC-RO-117.000 NC-RO-118.000.ABU NC-RO-122.000	MVP-RR-177-1515	42.5	43.4	0.90	Adjusted CL to stay away from large cemetery
NC-RO-122.000	MVP-RA-230-1313	43.4	43.4	0.00	Changed ATWS 1391 to 90' x 110' to fit inside survey corridor
NC-RO-122.100	MVP-RA-230-1315	43.45	43.45	0.00	Changed ATWS 1392 to 75' x 260' to fit inside survey corridor
NC-RO-133.200	MVP-RA-230-1317	43.8	43.8	0.00	Changed ATWS 1396 to 90' x 110' to fit inside survey corridor
NC-RO-133.000	MVP-RA-230-1320	44.1	44.1	0.00	Changed ATWS 1403 to 90' x 110' to fit inside survey corridor
NC-RO-138.000	MVP-RA-230-1322	44.8	44.8	0.00	Changed ATWS 1408 to 60' x 220' to fit inside survey corridor
NC-RO-140.000 NC-RO-142.000	MVP-RA-153-1324	45.45	45.75	0.30	CL adjustment to route around pasture.
NC-RO-148.505.AR NC-RO-148.510.AR	MVP-RR-254-1405	46.75	46.75	0.00	Adjusted TA-RO-129 CL to MDS CL points of existing road and change the start of the access road off Frank Rd to follow existing gravel path
NC-RO-149.000	MVP-RA-230-1324	47.05	47.05	0.00	Changed ATWS 1429 to 90' x 230' to fit inside survey corridor
NC-RO-153.000	MVP-RA-153-1329	47.3	47.5	0.20	Straighten out to reduce the number of PIs
NC-RO-154.000	MVP-RR-257-1443	47.3	47.3	0.00	Extended access road TA-RO-130 to public road
NC-RO-154.000	MVP-RA-153-1333	47.6	47.7	0.10	Straighten out to reduce the number of PIs

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-154.000	MVP-RA-230-1327	47.6	47.6	0.00	Changed ATWS 1437 to 90' Wide to fit inside survey corridor
NC-RO-156.000	MVP-RA-153-1338	48	48.1	0.10	Straighten out to reduce the number of PIs
NC-RO-156.000	MVP-RA-193-1529	48	48.1	0.10	Adjusted CL to keep CL on top of hill
NC-RO-162.000	MVP-RA-230-1329	48.7	48.7	0.00	Changed ATWS 1449 to 90' Wide to fit inside survey corridor
NC-RO-165.000	MVP-RA-253-1620	49.2	49.2	0.00	Adjusted TA-RO-135 CL to MDS CL points of existing road and round turns
NC-RO-171.000 NC-RO-171.100.AR	MVP-RA-242-1439	49.8	49.8	0.00	Removed access road TA-RO-138, runs through land owner's car port and past house. The access road is approx. 855 feet and the nearest road crossing is approx. 1330 feet.
NC-RO-170.000 NC-RO-171.100.AR	MVP-RR-257-1446	49.8	49.8	0.00	Adjusted access road TA-RO-138 to avoid going under car port
NC-RO-181.000	MVP-RA-253-1624	51.4	51.4	0.00	Adjusted TA-RO-140 CL to MDS CL points of existing road and round turns
NC-RO-181.000	MVP-RA-253-1626	51.6	51.6	0.00	Adjusted TA-RO-141 CL to MDS CL points of existing road and round turns
NC-RO-183.000	MVP-RA-253-1628	51.7	51.7	0.00	Adjusted TA-RO-142 CL to MDS CL points of existing road and round turns
NC-RO-186.000	MVP-RA-230-1331	52.55	52.55	0.00	Changed ATWS 1477 to 90' x 110' to fit inside survey corridor
NC-RO-186.000	MVP-RA-230-1333	52.6	52.6	0.00	Changed ATWS 1478 to 90' x 110' to fit inside survey corridor
NC-AL-000.005	MVP-RA-230-1335	52.6	52.6	0.00	Change ATWS 1479 to 90' x 110' to fit inside survey corridor
NC-RO-186.000	MVP-RR-257-1448	52.6	52.6	0.00	Changed access road TA-TO-146 to go from public road to TWS
NC-AL-000.065	MVP-RA-250-1321	53.5	53.5	0.00	Trimmed this section of TA-AL-152
NC-AL-008.000 NC-AL-009.000	MVP-RR-165-1051	54.85	55.1	0.25	Adjusted CL to avoid pond / swamp area
NC-AL-015.000 NC-AL-016.000 NC-AL-017.000.ABU NC-AL-018.000	MVP-RA-206-1431	55.3	55.3	0.00	Removed - There is enough ATWS at the PI (ATWS 1509) that this ATWS is not needed.
NC-AL-010.000 NC-AL-018.000	MVP-RA-230-1340	55.3	55.3	0.00	Changed ATWS 1509 to 75' x 230' to fit inside survey corridor

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-AL-018.000 NC-AL-019.000 NC-AL-021.000 NC-AL-022.000 NC-AL-023.000 NC-AL-024.000 NC-AL-025.000 NC-AL-025.100.AR NC-AL-027.000	MVP-RA-153-1347	55.5	56.35	0.85	Adjusted CL to reduce the number of PIs and to reduce the amount of tree clearing needed
NC-AL-018.000	MVP-RR-270-1255	55.6	55.6	0.00	Adjusted access road to be on existing path
NC-AL-028.000	MVP-RA-153-1356	56.4	56.4	0.00	Moved ATWS to the road crossing because the ATWS at MP 56.7 is on top of a pond
NC-AL-028.000 NC-AL-033.000	MVP-RR-257-1513	56.8	56.8	0.00	Added access road
NC-AL-035.000.ABU NC-AL-036.000	MVP-RA-242-1409	56.9	56.9	0.00	Removed access road TA-AL-160 runs on top of land owner's septic and in between their crop fields. The access road is approx. 2000 feet and the nearest road crossing is approx. 2740 feet.
NC-AL-033.000	MVP-RR-257-1515	56.9	56.9	0.00	Added access road
NC-AL-042.000 NC-AL-043.000	MVP-RA-186-1423	57.35	57.75	0.40	LiDAR suggests that the PI is in the pond. This adjustment is to avoid the pond
NC-AL-043.000	MVP-RR-257-1517	57.75	57.75	0.00	Extended access road TA-AL-161 to public road
NC-AL-051.000	MVP-RA-231-0828	58.6	58.6	0.00	Changed ATWS 1543 to 90' x 110' to fit inside survey corridor
NC-AL-054.000 NC-AL-058.000	MVP-RA-228-1324	59.1	59.2	0.10	Extended PIs out of the road ROW
NC-AL-075.000	MVP-RA-231-0832	60.7	60.7	0.00	Change ATWS 1559 to 90' x 110' to fit inside survey corridor
NC-AL-076.100.AR NC-AL-076.200.AR NC-AL-076.400.AR NC-AL-076.500.AR NC-AL-076.000 NC-AL-074.450.AR NC-AL-076.000 NC-AL-074.100.AR NC-AL-074.000	MVP-RA-172-0945	60.8	60.8	0.00	The landowner walked with the civil crew to show them where he wants the access road to be.
NC-AL-076.100.AR NC-AL-076.000 NC-AL-074.450.AR NC-AL-074.000	MVP-RA-153-1402	60.9	60.9	0.00	This property owner has an existing access road to the backfield that has been logged and cleared.
NC-AL-103.000 NC-AL-104.000 NC-AL-106.000	MVP-RR-240-1812	61	67.5	6.50	Mystic Valley Farm re-route

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-AL-128.000 NC-AL-134.000 NC-AL-135.000 MVF-NC-AL-001.000 MVF-NC-AL-002.000 MVF-NC-AL-003.000 MVF-NC-AL-004.000 MVF-NC-AL-005.000 MVF-NC-AL-006.000 MVF-NC-AL-007.000 MVF-NC-AL-010.000 NC-AL-110.000.RC MVF-NC-AL-011.000 MVF-NC-AL-012.000.ABU MVF-NC-AL-013.000 MVF-NC-AL-016.000 MVF-NC-AL-017.000 NC-AL-120.000 NC-AL-119.000 FA34-AL-001.000 FA3-AL-002.000 FA3-AL-003.000 FA3-AL-005.000 FA3-AL-006.000 FA3-AL-007.000 FA3-AL-008.000 FA3-AL-009.000 FA3-AL-010.000					
NC-AL-085.000 NC-AL-086.000	MVP-RR-165-0832	62.25	62.5	0.25	The land owner mentioned that in the field of tract NC-AL-085.000 they would like to put a sub-division in the future
NC-AL-086.000	MVP-RA-231-0841	62.65	62.65	0.00	Changed ATWS 1573 to 90' x 110' to fit inside survey corridor
NC-AL-089.000 NC-AL-088.000.ABU	MVP-RA-231-0844	62.8	62.8	0.00	Changed ATWS 1575 to 90' x 330 to fit inside survey corridor
NC-AL-093.000	MVP-RA-231-0846	63	63	0.00	Changed ATWS 1577 to 90' x 110' to fit inside survey corridor
NC-AL-096.000 NC-AL-097.000 NC-AL-098.000	MVP-RA-143-1534	63.1	63.5	0.40	Extended PI out of creek
NC-AL-101.000.ABU NC-AL-102.000.ABU	MVP-RA-231-0848	63.45	63.45	0.00	Changed ATWS 1582 to 90' x 230' to fit inside survey corridor
NC-AL-102.000.ABU	MVP-RA-231-0852	63.5	63.5	0.00	Changed ATWS 1583 to 90' x 330' to fit inside survey corridor
NC-AL-103.000	MVP-RR-206-1421	63.7	63.7	0.00	This is an alternate access to TA-AL-172 and TA-AL-173 access roads.
NC-AL-103.000 NC-AL-103.100.AR	MVP-RA-250-1017	63.7	63.7	0.00	Trimmed TA-AL-172 to remove the section behind the house
NC-AL-103.000	MVP-RA-250-1019	64	64	0.00	Removed TA-AL-173

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-AL-119.000 NC-AL-120.000	MVP-RA-247-1539	65.6	65.6	0.00	Mystic Valley Farm Access road 1
NC-AL-120.000	MVP-RA-231-0855	65.8	65.8	0.00	Changed ATWS 1605 to 90' x 110' to fit inside survey corridor
NC-AL-121.000.ABU NC-AL-122.000	MVP-RA-231-0858	65.9	65.9	0.00	Change ATWS 1607 to 90' Wide to fit inside survey corridor
NC-AL-128.000	MVP-RA-247-1557	66.75	66.75	0.00	Mystic Valley Farm Access road 4
NC-AL-132.100.AR NC-AL-133.000 NC-AL-128.000 NC-AL-133.000	MVP-RA-247-1551	67.25	67.25	0.00	Mystic Valley Farm Access road 2
NC-AL-138.000 NC-AL-139.000 NC-AL-140.000 NC-AL-141.000 NC-AL-142.000	MVP-RR-186-1407	67.9	68.2	0.30	The LiDAR information suggests that the end of the pond is in the perm. ROW. This adjustment is to stay away from the pond
NC-AL-143.000	MVP-RA-231-0901	68.3	68.3	0.00	Changed ATWS 1629 to 90' Wide to fit inside survey corridor
NC-AL-143.000	MVP-RR-270-1257	68.3	68.3	0.00	Added perm. access road because Indian Village Trail is a private road
NC-AL-143.000	MVP-RA-231-0903	68.35	68.35	0.00	Changed ATWS 1631 to 90' x 110' to fit inside survey corridor
NC-AL-143.000	MVP-RA-231-0907	68.4	68.4	0.00	Changed ATWS 1632 to 90' x 110' to fit inside survey corridor
NC-AL-143.000	MVP-RA-231-0928	68.45	68.45	0.00	Changed ATWS 1634 to 90' x 110' to fit inside survey corridor
NC-AL-148.000	MVP-RA-231-0930	68.7	68.7	0.00	Changed ATWS 1639 to 90' x 165' to fit inside survey corridor
NC-AL-148.000	MVP-RA-231-0933	68.8	68.8	0.00	Changed ATWS 1641 to 90' x 110' to fit inside survey corridor
NC-AL-148.000	MVP-RA-231-0937	68.85	68.85	0.00	Changed ATWS 1643 to 90' x 140' to fit inside survey corridor
NC-AL-148.000 NC-AL-149.000	MVP-RA-231-0939	68.95	68.95	0.00	Changed ATWS 1646 to 85' x 220' to fit inside survey corridor
NC-AL-149.000 NC-AL-150.000 NC-AL-151.000	MVP-RA-228-1327	69	69.1	0.10	Straighten out and move PI out of road ROW
NC-AL-169.000.ABU NC-AL-170.000.ABU NC-AL-176.000.ABU NC-AL-179.000.ABU NC-AL-180.000.ABU	MVP-RR-221-0832	69.5	69.9	0.40	Less impact for this route. Shorter distance, less fittings, less pipe, lessen foreign utility impact, less overhead utility relocation.

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-AL-181.000.ABU NC-AL-183.000 NC-AL-184.000					
NC-AL-182.000 NC-AL-182.100.ABU NC-AL-184.000	MVP-RA-156-1740	69.8	69.95	0.15	Adjusted CL to avoid abandoned building and to stay away from steep hill side
NC-AL-184.000	MVP-RA-231-0941	69.9	69.9	0.00	Changed ATWS 1659 to 90' x 110' to fit inside survey corridor
NC-AL-186.000 NC-AL-188.000	MVP-RA-219-1820	70.35	70.7	0.35	Proposed a couple minor shifts of centerline to account for side-hill terrain
NC-AL-191.000	MVP-RA-231-0943	70.9	70.9	0.00	Changed ATWS 1670 to 90' wide to fit inside survey corridor
NC-AL-191.000	MVP-RA-231-0945	71	71	0.00	Changed ATWS 1672 to 90' Wide to fit inside survey corridor
NC-AL-191.000	MVP-RA-231-0947	71.05	71.05	0.00	Changed ATWS 1675 to 90' x 110' to fit inside survey corridor
NC-AL-191.000	MVP-RA-231-0948	71.3	71.3	0.00	Changed ATWS 1676 to 80' x 280' to fit inside survey corridor
NC-AL-192.000	MVP-RR-270-1300	71.55	71.55	0.00	Extended access road to a public road
NC-AL-192.000 NC-AL-193.000	MVP-RA-231-0950	71.8	71.8	0.00	Changed ATWS 1680 to 90' x 230' to fit inside survey corridor
NC-AL-193.000 NC-AL-194.000	MVP-RA-231-0952	71.9	71.9	0.00	Changed ATWS 1681 to 90' x 260' to fit inside survey corridor
NC-AL-199.000 NC-AL-200.000 NC-AL-201.000	MVP-RA-198-1549	72.4	72.7	0.30	According to the LiDAR info, there is side hill construction in this area (~32.5%, ~18 deg.) Adjust the CL to avoid the side hill construction
NC-AL-210.000	MVP-RR-270-1302	73.1	73.1	0.00	Add edperm. access road for T21
NC-AL-210.000	MVP-RR-270-1303	73.1	73.1	0.00	Changed location of T21 Site
VA-PI-001.100 VA-PI-001.300	MVP-VRR-296-1307	0	0	0	Add new access road to be on private drive but keep the old one. Both will be permanent access roads
VA-PI-001.300.AR VA-PI-001.100.AR	MVP-VRA-339-1526	0	0	0	Add flare to PA-PI-001A
VA-PI-002.000	MVP-VRR-043-1447	0	0	0	Change layout of Lambert CS
VA-PI-002.000	MVP-RA-292-1124	0.1	0.1	0	Edit ATWS 1001F to stay a minimum of 50 feet from the wetland/waterbody
VA-PI-006.000 VA-PI-008.000	MVP-VRA-053-1723	1	1	0	Add TWS wetland W-G18-2 enters limit of Disturbance (“LOD”) at approx 73 feet
VA-PI-009.000	MVP-VRA-353-1542	1.2	1.2	0	Add space for turning to TA-PI-003

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-008.300 VA-PI-009.000	MVP-VRA-353-1540	1.2	1.2	0	Add space for turning to TA-PI-003
VA-PI-008.100.AR	MVP-VRA-339-1530	1.2	1.2	0	Add flare to TA-PI-003
VA-PI-009.000	MVP-VRA-028-1433	1.2	1.2	0	Edit ATWS 1018 because of adjusting access road to be on existing path
VA-PI-009.000	MVP-VRA-292-1128	1.3	1.3	0	Extend ATWS 1020 by 75 feet because of the removal of ATWS 1021 in large wetland
VA-PI-008.000 VA-PI-008.100.AR VA-PI-009.000 VA-PI-008.200.AR VA-PI-008.300.AR	MVP-RA-253-1407	1.5	1.5	0	Adjusted TA-PI-003 CL to MDS CL points of existing road and round turns
VA-PI-010.000	MVP-VRA-351-0913	1.6	1.6	0	Add turning to TA-PI-004
VA-PI-010.000	MVP-VRA-340-0926	1.6	1.6	0	Add to TA-PI-004 for turning
VA-PI-010.000	MVP-VRR-310-1607	1.6	1.6	0	Extend TA-PI-004 to a public road
VA-PI-010.000	MVP-VRA-351-0911	1.6	1.6	0	Add turning to TA-PI-004
VA-PI-010.000	MVP-VRA-031-1108	1.6	1.6	0	Edit ATWS 1022 because of adjusting access road to be on existing path
VA-PI-010.000	MVP-VRA-292-1132	1.6	1.6	0	Delete ATWS 1021 because it is in a large wetland
VA-PI-012.000	MVP-VRA-292-1135	2.1	2.1	0	Delete ATWS 1025 because is it in a large wetland
VA-PI-012.000 VA-PI-014.000	MVP-VRR-351-0915	2.3	2.3	0	Extend TA-PI-005 to public road Fairview Rd
VA-PI-012.000	MVP-VRA-340-0929	2.3	2.3	0	Add to TA-PI-005 for turning
VA-PI-012.000	MVP-VRA-292-1137	2.3	2.3	0	Extend ATWS 1025A to tree line because of the removal of ATWS 1025 in large wetland
VA-PI-014.000	MVP-VRA-028-1435	2.8	2.8	0	Trim ATWS to stay off of driveway
VA-PI-023.000	MVP-VRA-339-1532	3.4	3.4	0	Add flare to TA-PI-006
VA-PI-022.000	MVP-RA-292-1139	3.6	3.6	0	Edit ATWS 1036 to stay a minimum of 50 ft from the wetland/waterbody
VA-PI-024.000 VA-PI-025.000	MVP-VRA-353-1445	3.7	3.95	0.25	The landowner requested that the centerline is exactly to the property corner and then run the length of the property line until it is off the property
VA-PI-033.000	MVP-VRA-339-1537	4.55	4.55	0	Add to TA-PI-007 for turning

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-033.100.AR	MVP-VRA-339-1535	4.55	4.55	0	Add to TA-PI-007 for turning
VA-PI-032.000	MVP-VRA-028-1437	4.7	4.7	0	Edit ATWS 1048 because of adjusting access road to be on existing path
VA-PI-032.000	MVP-VRA-339-1554	4.8	4.8	0	Add Flare to TA-PI-009
VA-PI-032.000 VA-PI-032.100.AR	MVP-RA-253-1420	5.05	5.05	0	Adjusted TA-PI-009 CL to MDS CL points of existing road and round turns
VA-PI-034.100.AR VA-PI-034.200.AR	MVP-VRA-277-0858	5.1	5.1	0	Extend access road TA-PI-011 to Hwy 29
	MVP-VRA-339-1557	5.1	5.1	0	Add flare to TA-PI-011
VA-PI-036.000	MVP-VRA-028-1439	5.9	5.9	0	Edit ATWS 1056 because of adjusting access road to be on existing path
VA-PI-036.000	MVP-RA-253-1609	6	6	0	Adjusted TA-PI-015 CL to MDS CL points of existing road and round turns
VA-PI-036.000	MVP-VRA-043-1335	6	6	0	Add TWS because the environmental feature was removed by the state
VA-PI-037.000	MVP-VRA-339-1559	6.2	6.2	0	Add flare to TA-PI-017
VA-PI-036.000	MVP-VRA-043-1343	6.2	6.2	0	Add TWS because the environmental feature was removed by the state
VA-PI-037.000	MVP-VRA-028-1440	6.2	6.2	0	Edit ATWS 1061 because of adjusting access road to be on existing path
VA-PI-039.000	MVP-VRA-339-1603	6.85	6.85	0	Add flare to TA-PI-018
VA-PI-038.000 VA-PI-038.100.AR VA-PI-039.000	MVP-RA-253-1614	7.05	7.05	0	Adjusted TA-PI-018 CL to MDS CL points of existing road and round turns
VA-PI-047.000	MVP-VRA-339-1613	8.2	8.2	0	Add flare to TA-PI-021
VA-PI-047.000	MVP-RA-253-1616	8.4	8.4	0	Adjusted TA-PI-021 CL to MDS CL points of existing road and round turns
VA-PI-047.000 VA-PI-048.000	MVP-VRR-253-1618	8.65	8.65	0	Adjusted TA-PI-022 CL to MDS CL points of existing road and round turns
VA-PI-050.000	MVP-VRA-028-1441	8.9	8.9	0	Edit ATWS 1082 because of adjusting access road to be on existing path
VA-PI-051.000	MVP-VRA-339-1614	8.95	8.95	0	Add flare to TA-PI-023
VA-PI-051.000	MVP-VRA-282-1127	9	9	0	Add ATWS
VA-PI-052.000	MVP-VRA-339-1617	9.1	9.1	0	Add flare to TA-PI-024
VA-PI-052.000	MVP-VRA-028-1442	9.3	9.3	0	Edit ATWS 1085 because of adjusting access road to be on existing path

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-053.000	MVP-VRA-353-1543	9.6	9.6	0	Add space for turning to TA-PI-025
VA-PI-053.000	MVP-VRA-353-1545	9.6	9.6	0	Add space for turning to TA-PI-025
VA-PI-053.000	MVP-VRA-353-1547	9.6	9.6	0	Add space for turning to TA-PI-025
VA-PI-053.000	MVP-VRA-339-1618	9.6	9.6	0	Add flare to TA-PI-025
VA-PI-060.000	MVP-VRA-332-1532	10.3	10.3	0	Trim TWS to stay off of VA-PI-060.000
VA-PI-061.000 VA-PI-056.000.RC	MVP-VRA-339-1622	10.35	10.35	0	Add flare to TA-PI-026B
VA-PI-075.000	MVP-VRA-339-1626	11.1	11.1	0	Add flare to TA-PI-027
VA-PI-082.000	MVP-VRA-339-1630	12.4	12.4	0	Add flare to PA-PI-029
VA-PI-081.000	MVP-VRA-332-1652	12.4	12.4	0	Trim ATWS to stay off of VA-PI-081.000
VA-PI-084.000 VA-PI-085.000	MVP-RA-254-1532	13.15	13.15	0	Adjusted TA-PI-032 CL to MDS CL points of existing road and round turns
	MVP-VRA-339-1631	13.2	13.2	0	Add flare to TA-PI-033
VA-PI-084.000 VA-PI-087.000	MVP-VRA-028-1444	13.35	13.35	0	Edit ATWS 1112 because of adjusting access road to be on existing path
	MVP-VRA-339-1633	13.65	13.65	0	Add flare to TA-PI-034
VA-PI-090.000 VA-PI-091.000	MVP-VRR-052-1359	13.7	13.7	0	Move AR over to avoid wetlands and limit tree clearing
	MVP-VRA-339-1634	14.15	14.15	0	Add flare to TA-PI-035
VA-PI-099.000 VA-PI-099.100	MVP-VRA-028-1445	14.9	14.9	0	Edit ATWS 1120 because of adjusting access road to be on existing path
VA-PI-096.000.RC	MVP-VRA-339-1636	15.2	15.2	0	Add flare to TA-PI-037
VA-PI-102.100	MVP-VRA-353-1554	15.8	15.8	0	Add space for turning to TA-PI-038
VA-PI-102.000	MVP-VRA-353-1553	15.8	15.8	0	Add space for turning to TA-PI-038
VA-PI-102.000	MVP-VRA-353-1551	15.8	15.8	0	Add space for turning to TA-PI-038
VA-PI-102.000	MVP-VRA-339-1638	15.8	15.8	0	Add flare to TA-PI-038
VA-PI-104.000	MVP-VRA-332-1535	15.9	15.9	0	Trim TWS to stay off of garage

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-104.100 VA-PI-103.000.RC	MVP-VRA-339-1639	16	16	0	Add flare to TA-PI-039
VA-PI-104.100 VA-PI-106.000	MVP-VRA-028-1446	16	16	0	Edit ATWS 1126 because of adjusting access road to be on existing path
VA-PI-116.000.ABU	MVP-VRA-339-1640	16.7	16.7	0	Add flare to TA-PI-041
VA-PI-115.000	MVP-VRA-339-1643	16.7	16.7	0	Add flare to TA-PI-042
VA-PI-115.200	MVP-VRA-052-1404	17.1	17.1	0	Move TA-PI-043 over to avoid W-F18-46
	MVP-VRA-339-1644	17.2	17.2	0	Add flare to TA-PI-043
VA-PI-119.000 VA-PI-119.100	MVP-VRA-339-1714	17.5	17.5	0	Remove access road TA-PI-045
VA-PI-119.000	MVP-VRA-339-1646	17.5	17.5	0	Add flare to TA-PI-045
VA-PI-121.000 VA-PI-121.000.RC	MVP-VRA-339-1647	18	18	0	Add flare to TA-PI-046
VA-PI-129.000.RC VA-PI-125.000	MVP-VRA-344-1526	18.65	18.65	0	Extend TA-PI-048 to a public road
VA-PI-125.000 VA-PI-128.000	MVP-VRA-344-1612	18.65	18.65	0	Add to TA-PI-048 for turning
VA-PI-128.001 VA-PI-130.000	MVP-VRA-022-1101	19	19	0	Trim ATWS 1146 off of VA-PI-128.001
VA-PI-143.000.RC	MVP-VRA-339-1654	19.5	19.5	0	Add flare to TA-PI-049
VA-PI-150.100 VA-PI-151.000.RC	MVP-VRA-339-1656	19.8	19.8	0	Add flare to TA-PI-050
VA-PI-149.000 VA-PI-150.000	MVP-RA-292-1145	19.8	19.8	0	Edit ATWS 1149 to stay a minimum of 50 ft from the wetland/waterbody
VA-PI-154.000.ABU	MVP-VRR-275-1245	20.2	20.2	0	Add access road because Hyler Farm Ln becomes a private road approx. 60 feet from the edge of TWS
VA-PI-154.200	MVP-VRA-285-1631	20.25	20.25	0	Trim out TWS to have a 11' buffer around mobile home
VA-PI-160.000	MVP-VRA-339-1658	20.45	20.45	0	Add flare to TA-PI-052
VA-PI-160.000	MVP-VRR-052-1406	20.6	20.6	0	Move TA-PI-052 over closer to pond to use culvert and follow existing path then follow current AR route to avoid cemetery
VA-PI-160.000	MVP-VRA-052-1408	20.6	20.6	0	Shift TA-PI-052 over to avoid W-F18-54
VA-PI-162.000 VA-PI-163.000	MVP-VRA-313-1017	21.1	21.1	0	Rotate ground bed to parallel property line and to keep it on one land owner

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
VA-PI-165.000	MVP-VRA-028-1456	21.6	21.6	0	Edit ATWS 1168 because of adjusting access road to be on existing path
VA-PI-165.000	MVP-VRA-339-1701	21.65	21.65	0	Add flare to TA-PI-055
VA-PI-169.000	MVP-VRA-298-1122	21.9	21.9	0	Trim out TWS to stay out of pond
VA-PI-172.000	MVP-VRA-339-1705	23	23	0	Add flare to TA-PI-061
VA-PI-178.000	MVP-VRA-053-1732	23.9	23.9	0	Add TWS stream S-E18-34 only enters LOD at approx 60 feet
VA-PI-178.100	MVP-VRA-052-1410	24	24	0	Shift TA-PI-063 or avoid wetland W-E18-31
VA-PI-178.100	MVP-VRA-339-1707	24.05	24.05	0	Add flare to TA-PI-063
VA-PI-178.000	MVP-VRA-339-1708	24.6	24.6	0	Add flare to TA-PI-064
VA-PI-180.000	MVP-VRA-339-1719	24.8	24.8	0	Add to TA-PI-066 for turning
VA-PI-180.000	MVP-VRA-339-1710	24.8	24.8	0	Add flare to TA-PI-066
VA-PI-180.000	MVP-VRA-339-1720	25.05	25.05	0	Add to TA-PI-067 for turning
NC-RO-001.000	MVP-VRA-339-1725	26	26	0	Add to TA-PI-068 for turning
NC-RO-001.000	MVP-VRA-339-1721	26	26	0	Add to TA-PI-068 for turning
NC-RO-001.000	MVP-VRA-340-1038	26.2	26.2	0	Add flare to TA-RO-070
NC-RO-001.001 NC-RO-004.000	MVP-VRA-031-0947	26.3	26.3	0	Trim TA-RO-071 to stay off of NC-RO-001.001
NC-RO-004.000 NC-RO-002.000.RC	MVP-VRA-340-1041	26.7	26.7	0	Add flare to TA-RO-071
NC-RO-004.000.RC NC-RO-005.000	MVP-VRA-340-1047	26.95	26.95	0	Add to TA-RO-072A for turning
NC-RO-004.000.RC NC-RO-005.000	MVP-VRA-340-1045	26.95	26.95	0	Add to TA-RO-072A for turning
NC-RO-002.000.RC NC-RO-004.000 NC-RO-005.000	MVP-VRA-340-1043	26.95	26.95	0	Add flare to TA-RO-072
NC-RO-005.000	MVP-VRA-340-1052	27.15	27.15	0	Add to TA-RO-073 for turning
NC-RO-004.000.RC NC-RO-005.000	MVP-VRA-340-1050	27.15	27.15	0	Add to TA-RO-073 for turning
NC-RO-005.000	MVP-VRA-028-1458	27.15	27.15	0	Edit ATWS 1213B because of adjusting access road to be on existing path

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-005.000	MVP-RA-292-1151	27.2	27.2	0	Edit ATWS 1213D to stay a minimum of 50 ft from the wetland/waterbody
NC-RO-005.000	MVP-VRA-025-0826	27.3	27.3	0	Add TWS and ATWS up to the edge of field
NC-RO-006.000	MVP-VRA-353-1558	27.4	27.4	0	Add space for turning to TA-RO-073A
NC-RO-006.000	MVP-VRA-340-1054	27.4	27.4	0	Add flare to TA-RO-073A
NC-RO-006.000	MVP-VRA-340-1056	27.8	27.8	0	Add to TA-RO-075 for turning
NC-RO-006.000	MVP-VRA-345-1652	28.1	28.1	0	Combine ATWS 1224A and 1224C
NC-RO-006.001.AR	MVP-VRA-340-1100	28.2	28.2	0	Add flare to PA-RO-000
NC-RO-006.000	MVP-VRA-037-1332	28.2	28.2	0	Add perm. ROW to TENNESSEE NATURAL GAS
NC-RO-006.000	MVP-VRA-028-1459	28.3	28.3	0	Edit ATWS 1230 because of adjusting access road to be on existing path
NC-RO-006.000	MVP-VRA-340-1103	28.6	28.6	0	Add to TA-RO-076 for turning
NC-RO-006.000	MVP-VRA-340-1101	28.6	28.6	0	Add to TA-RO-076 for turning
NC-RO-006.000	MVP-VRA-028-1500	28.6	28.6	0	Edit ATWS 1232 because of adjusting access road to be on existing path
NC-RO-007.000	MVP-VRA-292-1153	29	29	0	Edit ATWS 1237 to stay a minimum of 50 ft from the wetland/waterbody
NC-RO-007.000	MVP-VRA-028-1501	29.15	29.15	0	Edit ATWS 1239 because of adjusting access road to be on existing path
NC-RO-007.000 NC-RO-007.100.AR	MVP-VRA-340-1105	29.2	29.2	0	Add flare to TA-RO-078
NC-RO-007.000	MVP-VRR-004-0828	29.3	29.5	0.2	Adjust CL to top of hill to avoid side hill construction
NC-RO-007.000 NC-RO-007.300	MVP-VRA-340-1106	29.6	29.6	0	Add flare to TA-RO-079
NC-RO-007.000	MVP-RA-292-1154	29.6	29.6	0	Edit ATWS 1243 to stay a minimum of 50 ft from the wetland/waterbody
NC-RO-011.000	MVP-VRA-340-1108	29.9	29.9	0	Add flare to TA-RO-080
NC-RO-011.000	MVP-VRA-353-1600	29.9	29.9	0	Add space for turning to TA-RO-080
NC-RO-011.000 NC-RO-012.000.WBC	MVP-VRA-063-1208	29.9	29.9	0	Add TWS 5 feet wide centered on the CL of easement on top of permanent ROW from HDD exit down to water body 5' corridor centered on the pipe between the edges of the workspace between the entry and exit points.

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-011.000	MVP-VRA-028-1502	29.9	29.9	0	Edit ATWS 1247 because of adjusting access road to be on existing path
	MVP-VRA-340-1109	30.4	30.4	0	Add flare to TA-RO-081
NC-RO-013.000 NC-RO-014.000 NC-RO-015.000 NC-RO-016.000	MVP-VRA-063-1210	30.4	30.4	0	Add TWS 5 feet wide centered on the CL of easement on top of permanent ROW from HDD entry down to water body 5' corridor centered on the pipe between the edges of the workspace between the entry and exit points.
NC-RO-015.000 NC-RO-015.000.RC	MVP-VRA-340-1118	30.45	30.45	0	Add flare to PA-RO-082
NC-RO-022.000	MVP-VRA-289-1356	30.85	30.85	0	Trim TWS to stay out of environmental buffer. Wait for survey data
NC-RO-022.000 NC-RO-025.000	MVP-VRA-025-0831	30.9	30.9	0	Trim TWS to make a 75' neck down because of the environmental buffer
NC-RO-025.000	MVP-VRA-014-1555	31.1	31.1	0	Trim TWS and ATWS to stay outside of environmental buffer
NC-RO-025.000	MVP-VRA-014-1553	31.1	31.1	0	Trim TWS and ATWS to stay outside of environmental buffer
NC-RO-025.000	MVP-VRA-292-1156	31.1	31.1	0	Edit TWS and ATWS 1253B to stay a minimum of 50 ft from the wetland/waterbody
NC-RO-025.000	MVP-VRA-014-1548	31.15	31.15	0	Extend ATWS
NC-RO-030.000.RC NC-RO-033.000	MVP-VRA-340-1121	31.65	31.65	0	Add flare to TA-RO-084
NC-RO-033.000	MVP-VRA-053-1734	31.7	31.7	0	Add TWS stream S-B18-120 doesn't enter LOD
NC-RO-033.000	MVP-VRA-015-1411	31.7	31.7	0	Trim ATWS to stay outside of environmental buffer
NC-RO-025.000	MVP-VRA-025-0835	31.9	31.9	0	Trim TWS and ATWS to stay outside of environmental buffer
NC-RO-034.000	MVP-VRA-025-0839	31.9	31.9	0	Trim TWS to stay outside of environmental buffer
NC-RO-037.000	MVP-VRA-025-0841	32.1	32.1	0	Trim TWS to stay outside of environmental buffer
NC-RO-038.200	MVP-VRA-340-1122	32.4	32.4	0	Add flare to TA-RO-085
NC-RO-038.000	MVP-VRA-340-1135	32.5	32.5	0	Add to TA-RO-086 for turning
NC-RO-038.000	MVP-VRA-340-1124	32.5	32.5	0	Add to TA-RO-086 for turning
NC-RO-040.100	MVP-VRA-340-1137	32.8	32.8	0	Add flare to TA-RO-087
NC-RO-040.000	MVP-VRA-028-1503	32.8	32.8	0	Edit ATWS 1271 because of adjusting access road to be on existing path

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-040.000	MVP-RA-292-1159	32.9	32.9	0	Edit ATWS 1274 to stay a minimum of 50 ft from the wetland/waterbody
NC-RO-040.000	MVP-RA-292-1157	32.9	32.9	0	Edit ATWS 1273 to stay a minimum of 50 ft from the wetland/waterbody
NC-RO-044.000	MVP-VRA-353-1115	33.6	33.6	0	Add flare to TA-RO-088
NC-RO-044.000	MVP-VRA-353-1116	33.6	33.6	0	Adjust TA-RO-088 to stay off of NC-RO-044.100
	MVP-VRA-340-1139	33.6	33.6	0	Add flare to TA-RO-088
NC-RO-047.500 NC-RO-047.600	MVP-VRA-340-1141	34.1	34.1	0	Add flare to TA-RO-089
NC-RO-047.000	MVP-VRA-028-1245	34.2	34.2	0	Trim TWS to stay 25' away from Duke's tower
NC-RO-047.000	MVP-VRA-353-1428	34.2	34.3	0.1	Adjust Stream and Duke Power crossing
NC-RO-053.000	MVP-VRA-340-1144	34.7	34.7	0	Add flare to TA-RO-091
NC-RO-057.000	MVP-VRA-028-1247	35.2	35.2	0	Trim TWS to stay 25' away from Duke's tower
NC-RO-057.000	MVP-VRA-028-1248	35.3	35.3	0	Trim TWS to stay 25' away from Duke's tower
NC-RO-057.200.AR	MVP-VRA-340-1147	35.4	35.4	0	Add flare to TA-RO-092
NC-RO-057.000	MVP-VRA-028-1249	35.4	35.4	0	Trim ATWS to stay 25' away from power pole
	MVP-VRA-340-1230	35.9	35.9	0	Add flare to TA-RO-094
NC-RO-061.000 NC-RO-061.000.RC	MVP-VRA-340-1232	36.15	36.15	0	Add flare to TA-RO-095
NC-RO-067.000 NC-RO-068.000	MVP-VRA-340-1234	36.7	36.7	0	Add flare to TA-RO-099
NC-RO-069.000	MVP-VRA-340-1236	37.1	37.1	0	Add flare to TA-RO-100
NC-RO-073.000	MVP-VRA-014-1608	37.25	37.25	0	Trim TWS to be outside of environmental buffer
	MVP-VRA-340-1237	37.6	37.6	0	Add flare to TA-RO-102
NC-RO-081.000	MVP-VRA-025-0842	37.7	37.7	0	Trim TWS to stay outside of environmental buffer
NC-RO-086.000	MVP-VRA-353-1604	38.1	38.1	0	Add space for turning to TA-RO-103
NC-RO-086.000	MVP-VRA-353-1602	38.1	38.1	0	Add space for turning to TA-RO-103

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-086.000	MVP-VRA-340-1239	38.1	38.1	0	Add flare to TA-RO-103
NC-RO-089.000	MVP-VRA-028-1256	38.6	38.6	0	Adjust TA-RO-104 to be 25' away from Duke's tower
NC-RO-089.000	MVP-VRA-340-1240	38.6	38.6	0	Add flare to TA-RO-104
NC-RO-089.000	MVP-VRA-014-1557	38.7	38.7	0	Trim TWS to stay outside of environmental buffer
NC-RO-090.000	MVP-VRA-014-1559	38.8	38.8	0	Add ATWS
NC-RO-090.000	MVP-VRA-014-1601	38.8	38.8	0	Trim ATWS to be outside of environmental buffer
NC-RO-090.000	MVP-VRA-014-1603	38.8	38.8	0	Trim TWS and ATWS to be outside of environmental buffer
NC-RO-090.000.RC NC-RO-091.000	MVP-VRA-340-1244	38.9	38.9	0	Add flare to TA-RO-106
NC-RO-091.000	MVP-VRA-028-1504	38.9	38.9	0	Edit ATWS 1338 because of adjusting access road to be on existing path
NC-RO-091.000	MVP-VRA-028-1505	38.95	38.95	0	Edit ATWS 1339 because of adjusting access road to be on existing path
NC-RO-094.000 NC-RO-095.000.RC NC-RO-094.200	MVP-VRA-340-1245	39.4	39.4	0	Add flare to TA-RO-107
NC-RO-095.000	MVP-VRA-028-1258	39.4	39.4	0	Trim TWS to be 25' away from electric pole
NC-RO-094.000	MVP-VRA-340-1253	39.6	39.6	0	Add space for turning to TA-RO-108
NC-RO-094.000	MVP-VRA-340-1247	39.6	39.6	0	Add flare to TA-RO-107
NC-RO-100.200.AR	MVP-VRA-340-1250	39.7	39.7	0	Add flare to PA-RO-109
NC-RO-101.000	MVP-VRA-028-1301	40.1	40.1	0	Trim TWS to stay 25' away from electric pole
NC-RO-103.000 NC-RO-103.000.RC	MVP-VRA-285-1633	40.3	40.3	0	Trim back TWS to have a 11' buffer around the house - 1 story
	MVP-VRA-340-1255	40.9	40.9	0	Add flare to TA-RO-111
NC-RO-112.000	MVP-VRA-340-1258	41.8	41.8	0	Add space for turning to TA-RO-113
NC-RO-112.100	MVP-VRA-340-1256	41.8	41.8	0	Add flare to PA-RO-113A
NC-RO-112.000.RC	MVP-VRA-340-1259	42.4	42.4	0	Add flare to TA-RO-115
NC-RO-117.000	MVP-VRA-305-1714	42.9	42.9	0	Trim TWS to make neck down 75'

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-117.000	MVP-VRA-028-1303	42.95	42.95	0	Trim TWS to stay 25' away from Duke's tower
NC-RO-117.000	MVP-RA-292-1200	43.1	43.1	0	Edit TWS and ATWS 1383 to stay a minimum of 50 ft from the wetland/waterbody
NC-RO-121.000	MVP-VRA-340-1300	43.2	43.2	0	Add flare to TA-RO-115A
NC-RO-122.000	MVP-VRA-289-1359	43.3	43.3	0	Trim TWS to stay out of environmental buffer
NC-RO-124.000.RC	MVP-VRA-340-1302	43.4	43.4	0	Add flare to TA-RO-117
NC-RO-124.000.RC NC-RO-122.100	MVP-VRA-340-1304	43.45	43.45	0	Add flare to TA-RO-118
NC-RO-133.100	MVP-VRA-340-1306	43.9	43.9	0	Add flare to TA-RO-119
NC-RO-133.200	MVP-VRA-353-1610	43.9	43.9	0	Add space for turning to TA-RO-119
NC-RO-133.000	MVP-VRA-353-1608	43.9	43.9	0	Add space for turning to TA-RO-119
NC-RO-133.000	MVP-VRA-353-1611	44.1	44.1	0	Add space for turning to TA-RO-122
NC-RO-133.000	MVP-VRA-340-1308	44.1	44.1	0	Add flare to TA-RO-122
NC-RO-138.000.RC	MVP-VRA-340-1310	44.8	44.8	0	Add flare to TA-RO-124
NC-RO-139.000	MVP-VRA-340-1314	44.95	44.95	0	Add space for turning to TA-RO-125
NC-RO-139.000	MVP-VRA-340-1315	44.95	44.95	0	Add space for turning to TA-RO-125
NC-RO-138.000.RC NC-RO-139.000	MVP-VRA-340-1317	45.3	45.3	0	Add flare to TA-RO-126
NC-RO-140.000 NC-RO-142.000	MVP-VRA-025-0852	45.7	45.7	0	Trim TWS to stay outside of environmental buffer
NC-RO-142.000	MVP-VRA-025-0844	45.7	45.7	0	Trim TWS to stay outside of environmental buffer
NC-RO-143.000	MVP-VRA-053-1735	46.4	46.4	0	Add TWS because stream S-A18-231 only enters LOD at approx 41 feet
NC-RO-148.505	MVP-VRA-340-1436	46.7	46.7	0	Add space for turning to TA-RO-129
NC-RO-148.510.AR	MVP-VRA-340-1434	46.7	46.7	0	Add space for turning to TA-RO-129
NC-RO-148.510	MVP-VRA-340-1320	46.7	46.7	0	Add space for turning to TA-RO-129
	MVP-VRA-340-1437	47.3	47.3	0	Add flare to TA-RO-130

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-RO-155.000	MVP-VRA-025-0856	47.7	47.7	0	Trim TWS to stay outside of environmental buffer
NC-RO-154.000	MVP-VRA-025-0854	47.7	47.7	0	Trim ATWS to stay outside of environmental buffer
NC-RO-154.000	MVP-RA-292-1202	47.7	47.7	0	Edit ATWS 1438 to stay a minimum of 50 ft from the wetland/waterbody
	MVP-VRA-340-1443	48.2	48.2	0	Add flare to TA-RO-131
NC-RO-160.000	MVP-VRA-353-1612	48.55	48.55	0	Add space for turning to TA-RO-133
NC-RO-157.000.RC NC-RO-159.000	MVP-VRA-340-1444	48.55	48.55	0	Add flare to TA-RO-133
NC-RO-162.000.RC	MVP-VRA-340-1446	48.9	48.9	0	Add flare to TA-RO-134
NC-RO-165.000	MVP-VRA-353-1613	49.2	49.2	0	Add space for turning to TA-RO-135
NC-RO-162.000.RC NC-RO-166.000	MVP-VRA-340-1448	49.2	49.2	0	Add flare to TA-RO-135
NC-RO-165.000	MVP-VRA-028-1304	49.2	49.2	0	Delete ATWS 1453 because it is under Duke's ROW
NC-RO-165.000	MVP-VRA-285-1635	49.25	49.25	0	Trim out TWS to have a 11' buffer around house - 1 story, abandoned
NC-RO-165.000 NC-RO-166.000 NC-RO-167.000	MVP-VRA-028-1306	49.3	49.3	0	Delete ATWS 1455 because it is under Duke's ROW
NC-RO-168.000.RC	MVP-VRA-340-1450	49.5	49.5	0	Add flare to TA-RO-136
NC-RO-173.000	MVP-VRA-028-1309	50.1	50.1	0	Trim TWS to stay 25' away from Duke's tower
	MVP-VRA-340-1453	50.3	50.3	0	Add flare to TA-RO-139
NC-RO-179.000	MVP-VRA-292-1203	50.75	50.75	0	Add TWS
NC-RO-182.000.RC	MVP-VRA-340-1455	51.4	51.4	0	Add flare to TA-RO-140
NC-RO-181.000	MVP-VRA-340-1458	51.6	51.6	0	Add to TA-RO-141 for turning
NC-RO-181.000	MVP-VRA-340-1456	51.6	51.6	0	Add to TA-RO-141 for turning
NC-RO-182.000.RC	MVP-VRA-340-1459	51.7	51.7	0	Add flare to TA-RO-142
NC-RO-183.000 NC-RO-183.100.AR NC-RO-183.200.AR NC-RO-183.300.AR	MVP-RR-253-1629	52	52	0	Adjusted TA-RO-143 CL to MDS CL points of existing road and round turns

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-GU-001.000	MVP-VRA-340-1501	52.2	52.2	0	Add flare to TA-RO-144
NC-RO-183.000.RC NC-RO-185.000	MVP-VRA-340-1502	52.2	52.2	0	Add flare to TA-RO-144
NC-GU-001.000	MVP-VRA-340-1504	52.3	52.3	0	Add space for turning to TA-RO-144
NC-AL-000.045.RC NC-AL-000.045	MVP-VRA-340-1509	53	53	0	Add flare to TA-AL-147
NC-AL-000.060.RC	MVP-VRA-340-1511	53.3	53.3	0	Add flare to TA-AL-149
NC-AL-002.000.AR	MVP-VRA-340-1526	53.5	53.5	0	Add flare to TA-AL-152
NC-AL-000.065	MVP-VRA-053-1736	53.65	53.65	0	Add TWS wetland W-A18-85 only enters LOD at approx 35 -40 feet
NC-AL-003.000	MVP-VRA-340-1528	53.8	53.8	0	Add flare to TA-AL-153
NC-AL-005.000	MVP-VRA-053-1737	54	54	0	Add TWS steam S-A18-89 only enters LOD at approx 50 feet
NC-AL-006.100	MVP-VRA-340-1530	54.2	54.2	0	Add to TA-AL-154 for turning
	MVP-VRA-340-1531	54.2	54.2	0	Add flare to TA-AL-154
NC-AL-006.000	MVP-VRA-053-0922	54.35	54.35	0	Add TWS back in because the wetland crosses the LOD approximately 70 feet so a neck down of 75' is not needed
NC-AL-006.100	MVP-VRA-340-1532	54.7	54.7	0	Add to TA-AL-155 for turning
NC-AL-009.000	MVP-RA-292-1206	55	55	0	Edit ATWS 1504 to stay a minimum of 50 ft from the wetland/waterbody
NC-AL-018.000	MVP-VRA-340-1534	55.6	55.6	0	Add flare to TA-AL-157
NC-AL-018.000 NC-AL-019.000	MVP-VRA-028-1310	55.6	55.6	0	Trim ATWS that to stay out of Duke's ROW
NC-AL-022.000	MVP-VRA-028-1313	55.8	55.8	0	Trim TWS to stay 25' away from electric poles
NC-AL-027.000	MVP-VRA-340-1535	56.3	56.3	0	Add flare to TA-AL-159
NC-AL-033.000	MVP-VRA-340-1537	56.8	56.8	0	Add to TA-AL-159B for turning
NC-AL-033.000	MVP-VRA-340-1538	56.8	56.8	0	Add to TA-AL-159B for turning
NC-AL-033.000	MVP-VRA-340-1542	56.9	56.9	0	Add flare to TA-AL-159A
NC-AL-043.000	MVP-VRA-305-1719	57.55	57.55	0	Trim TWS to make neck down 75'

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-AL-008.100	MVP-VRA-353-1615	57.7	57.7	0	Add space for turning to TA-AL-155
NC-AL-043.000	MVP-VRA-285-1636	57.8	57.8	0	Trim back ATWS to have a 11' buffer around mobile home
NC-AL-044.000 NC-AL-044.000.RC NC-AL-046.000	MVP-VRA-305-1721	57.85	57.85	0	Trim TWS to make neck down 75'
NC-AL-043.000.RC	MVP-VRA-340-1546	58.05	58.05	0	Add flare to TA-AL-162
NC-AL-064.000	MVP-VRA-305-1723	59.65	59.65	0	Trim TWS to make neck down 75'
NC-AL-066.000	MVP-VRA-340-1613	59.9	59.9	0	Add flare to TA-AL-165
NC-AL-068.000.RC	MVP-VRA-340-1615	60.2	60.2	0	Add flare to PA-AL-166
NC-AL-069.000	MVP-VRA-354-1623	60.3	60.3	0	Remove contractor yard CY-10 and TA-AL-165A
NC-AL-076.100	MVP-VRA-340-1616	61.1	61.1	0	Add flare to TA-AL-167
NC-AL-081.000.RC	MVP-VRA-340-1617	61.55	61.55	0	Add flare to TA-AL-168
NC-AL-086.000	MVP-VRA-340-1619	62.4	62.4	0	Add flare to TA-AL-169
NC-AL-086.000	MVP-VRA-028-1507	62.5	62.5	0	Edit ATWS 1572 because of adjusting access road to be on existing path
NC-AL-086.000	MVP-VRA-053-1740	62.65	62.65	0	Add TWS wetland W-A18-80 enters LOD at approx 70 feet
NC-AL-093.000 NC-AL-102.000	MVP-VRA-063-1215	63.45	63.45	0	Add TWS 5 feet wide centered on the CL of easement on top of permanent ROW from HDD exit down to water body 5' corridor centered on the pipe between the edges of the workspace between the entry and exit points.
NC-AL-103.000	MVP-VRA-340-1653	63.7	63.7	0	Move access road over to stay off of NC-AL-103.100
NC-AL-101.000	MVP-VRA-340-1620	63.7	63.7	0	Add flare to TA-AL-171
	MVP-VRA-340-1621	63.7	63.7	0	Add flare to TA-AL-172
NC-AL-104.000	MVP-VRA-063-1220	63.75	63.75	0	Add TWS 5 feet wide centered on the CL of easement on top of permanent ROW from HDD entry down to water body 5' corridor centered on the pipe between the edges of the workspace between the entry and exit points.
NC-AL-103.000 NC-AL-104.000	MVP-VRA-305-1724	64	64	0	Trim TWS to make neck down 75'
	MVP-VRA-340-1623	64.8	64.8	0	Add flare to PA-AL-175A

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
MVF-NC-AL-007.000 MVF-NC-AL-010.000	MVP-VRR-032-1136	64.8	65.2	0.4	Adjust the CL to avoid cemetery and change the road crossing PI to be a little bit further away from the road ROW
MVF-NC-AL-007.000	MVP-VRR-032-1140	65.1	65.1	0	Add ATWS 50' x 200' for PI
MVF-NC-AL-007.000	MVP-VRA-025-0905	65.2	65.2	0	Add ATWS
MVF-NC-AL-011.000	MVP-VRA-025-0906	65.3	65.3	0	Add to ATWS 1588J and edit the north line to be off of the road ROW
MVF-NC-AL-011.000 MVF-NC-AL-012.000	MVP-VRA-025-0907	65.3	65.3	0	Trim ATWS to be outside of environmental buffer and to stay off of MVF-NC-AL-012.000
MVF-NC-AL-011.000 MVF-NC-AL-012.000	MVP-VRR-032-1147	65.3	65.45	0.15	Adjust the route to be on the west edge of MVF-NC-AL-011.000 staying 10 ft away from property line and staying out of the environmental buffer. No LOD should be on MVF-NC-AL-012.000
MVF-NC-AL-013.000 NC-AL-120.000	MVP-VRA-305-1726	65.6	65.6	0	Trim TWS to make neck down 75'
FA3-AL-006.000	MVP-VRA-028-1532	66.4	66.4	0	Trim ATWS 1588T to stay out of environmental buffer
NC-AL-132.100	MVP-VRA-340-1629	67.25	67.25	0	Add flare to TA-AL-180
NC-AL-132.100 NC-AL-133.000	MVP-VRA-340-1631	67.3	67.3	0	Add space for turning to TA-AL-180
MVF-NC-AL-013.000 MVF-NC-AL-011.000	MVP-RA-292-1207	67.5	67.5	0	Edit ATWS 1588K to stay a minimum of 50 ft from the wetland/waterbody
NC-AL-137.000	MVP-RA-292-1208	67.6	67.6	0	Edit ATWS 1620 to stay a minimum of 50 ft from the wetland/waterbody
NC-AL-143.000	MVP-VRA-011-0842	68.35	68.35	0	Trim TWS to reduce the environmental impact
NC-AL-148.000	MVP-VRA-340-1635	68.95	68.95	0	Add flare to TA-AL-185
NC-AL-149.000	MVP-VRA-353-1619	69.95	69.95	0	Add space for turning to TA-AL-185
NC-AL-191.000	MVP-VRA-340-1638	70.9	70.9	0	Add space for turning to TA-AL-188
NC-AL-191.000	MVP-VRA-340-1640	70.9	70.9	0	Add to TA-AL-188, Change to ATWS
	MVP-VRA-340-1641	70.9	70.9	0	Add flare to TA-AL-188
NC-AL-191.100	MVP-VRA-028-1508	71	71	0	Edit ATWS 1674 because of adjusting access road to be on existing path
NC-AL-197.000	MVP-VRA-340-1644	72.2	72.2	0	Add flare to TA-AL-192
NC-AL-210.000 NC-AL-211.000	MVP-VRA-340-1646	73	73	0	Add space for turning to PA-AL-194

REVISED Table 10.6-4

Route Variations Incorporated into the MVP Southgate Project Pipeline

Tract ID	Reroute No.	Approx. Begin MP	Approx. End MP	Length (miles)	Variation Description / Justification
NC-AL-211.000	MVP-VRA-340-1648	73	73	0	Add flare to PA-AL-194
NC-AL-210.000	MVP-VRA-011-0850	73	73	0	Trim ATWS to stay outside of the environmental buffer
NC-AL-210.000	MVP-VRR-023-1100	73.11	73.11	0	This is a place holder for the move of the T-21 site
NC-AL-210.000	MVP-VRR-023-1057	73.11	73.13	0.02	This is a place holder for the extension of the pipeline because of the T-21 move
VA-PI-142.200	MVP-VRA-339-1717	CY-03	CY-03	0	Adjust access road TA-PI-000B flare
NC-RO-001.400	MVP-VRA-052-1357	CY-05	CY-05	0	Trim CY-05 to avoid W-A18-249
NC-RO-001.100.CY05 NC-RO-001.500.CY	MVP-VRA-354-1611	CY-05	CY-05	0	Remove this part of CY-05 to stay off of NC-RO-001.100.CY05
NC-RO-014.200.CY06	MVP-VRA3-354-1613	CY-06	CY-06	0	Remove this part of CY-06 to stay off of NC-RO-014.200.CY06
NC-RO-014.100	MVP-VRA-052-1646	CY-06	CY-06	0	Trim out CY-06 to avoid wetland W-A18-245 and tree clearing
NC-RO-002.200.CY07	MVP-VRA-354-1615	CY-07	CY-07	0	Remove contractor yard CY-07 and TA-RO-082B
	MVP-VRA-340-1034	CY-08	CY-08	0	Add flare to TA-RO-000A
NC-RO-136.100	MVP-VRA-011-0830	CY-08	CY-08	0	Trim contractor yard CY-08 to stay outside of environmental buffer
NC-RO-136.100	MVP-VRA-011-0833	CY-08	CY-08	0	Trim contractor yard CY-08 to stay outside of environmental buffer
NC-GU-001.300.CY09	MVP-VRA-354-1622	CY-09	CY-09	0	Remove this part of CY-09
NC-GU-001.200	MVP-VRA-011-0835	CY-09	CY-09	0	Trim contractor yard CY-09 to be outside of environmental buffer and out of trees

REVISED Table 10.7-1

Comparison of the Proposed Lambert Compressor Station Site and Alternative 1

Feature	Proposed Lambert Compressor Station	Alternative 1
Land availability (Yes/No)	Yes	Unknown
Total Land to be acquired (estimated acres)	127.5	Unknown
Construction workspace (acres)	20.5	14.5
Operation workspace (acres)	11.7	3.8
Length of pipeline required to reach the site (miles)	0.4	<0.1
Length of access road required to reach the site (miles)	0.6	0.4
Existing Land use (type)	Forested/Agriculture	Forested
Residential Land, and Commercial/Industrial Land (Yes/No)	No/No	No/No
National Trails, Recreation Trails, and Other Recreational Areas (Yes/No)	0	0
Forest Areas (miles)	N/A	N/A
Forested Land affected during construction (acres)	1.8	14.5
Forested Land affected during operation (acres)	4.5	N/A
Construction/operation impact on prime farmland soils (acres)	12.8 / 3.7	14.5 / Unknown
Construction/operation impact on NWI wetlands (acres)	0 / 0	0 / 0
Presence of critical habitat or federally endangered or threatened species (Yes/No)	No	No
Presence of NRHP-eligible sites (Yes/No)	No	No
Unlisted/Potential Eligible Historic Properties (Yes/No)	No	No
Number of NSAs within 1 mile of the site	45	55
Zoning	Unknown	Unknown

NWI = National Wetland Inventory; NRHP = National Register of Historic Places; NSAs = Noise Sensitive Areas;
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/

ESRI - GIS Mapping - http://www.esri.com/

Comparison of the Preferred Route and Whitehead Variation (MP 3.65 to MP 5.1)

As requested by FERC, the Project evaluated a route variation that would avoid the Whitehead property between milepost ("MP") 3.65 and MP 5.1 (see Figure 136-1). At MP 3.65, this variation extends south-southeast for approximately 0.3 mile and crosses agricultural/open land. It then turns south-southwest for approximately 1.5 miles and crosses a combination of agricultural/open land and mixed forested before it rejoins the preferred route at MP 5.1.

As shown in Table 136-1, the primary advantages of the Whitehead Variation are:

- crosses one fewer National or recreational trails and other recreational area; and
- crosses one fewer waterbody.

The primary disadvantages of the Whitehead Variation are:

- greater length and associated land disturbance; and
- affects more wetlands, agricultural, and forest land.

Potential constructability concerns of the Whitehead Variation are:

- none identified based on initial review.

Because the primary disadvantages outweigh the primary advantages, the Project eliminated this variation from further consideration as its preferred pipeline route.

NEW Table 136-1

Comparison of the Preferred Route and Whitehead Variation (MP 3.65 to MP 5.1)

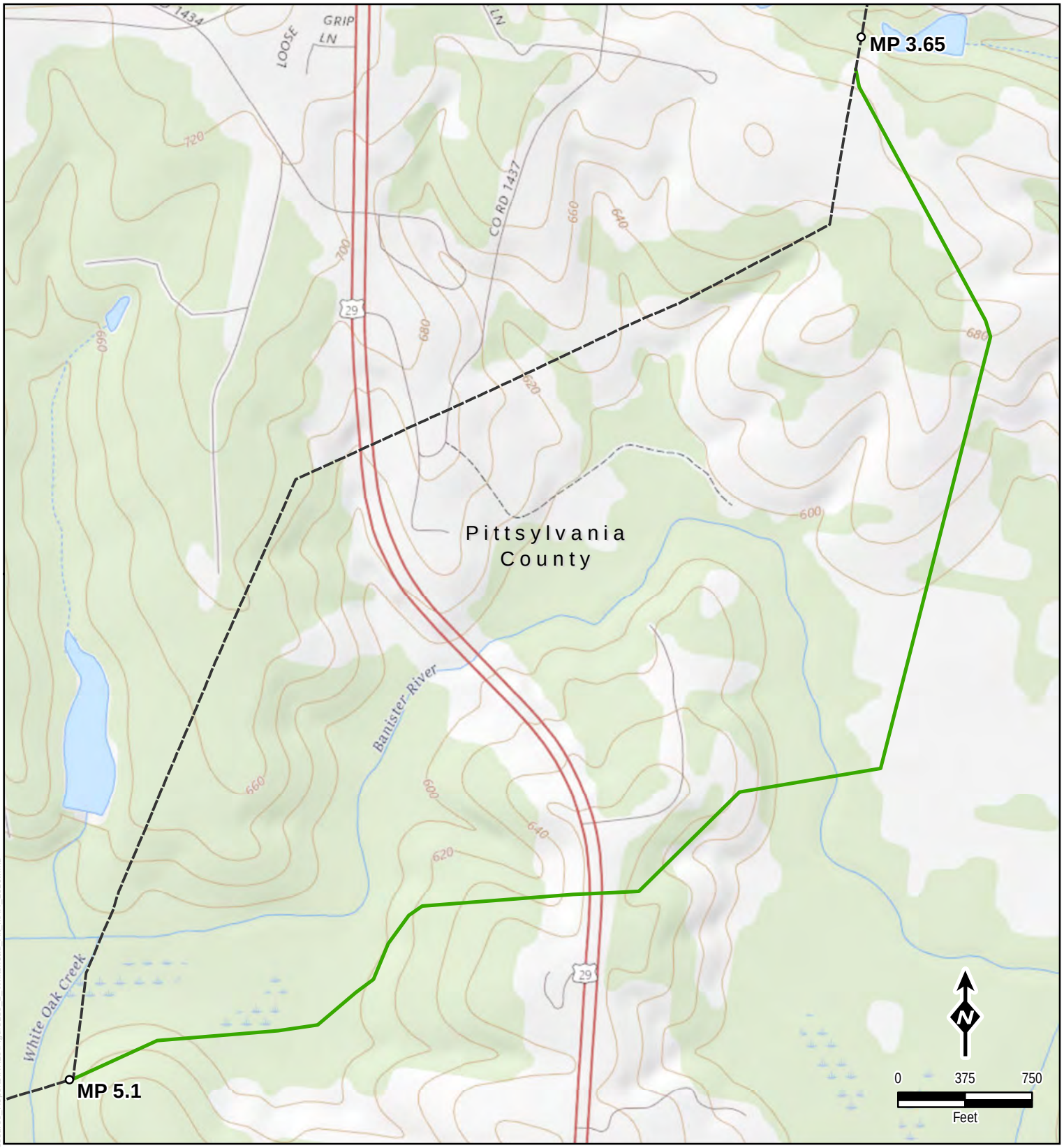
Feature	Preferred Route	Whitehead Variation	Difference
Total length (miles)	1.5	1.8	+0.3
Construction right-of-way (acres) a/	18.1	21.5	+3.4
Permanent right-of-way (acres) a/	9	10.7	+1.7
Total number of parcels crossed	11	12	+1
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0/0	0/0	0/0
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	1	0	-1
Number of waterbodies crossed	2	1	-1
Number of NWI wetlands crossed	1	1	0
Total NWI wetland crossing length (feet)	200	315	+115
NWI wetlands within construction ROW (acres) b/	0.3	0.5	+0.2
Agricultural Land within construction ROW (acres) c/	2.6	5.9	+3.3
Forest Areas (miles)	0.4	0.5	+0.1
Forested Land affected during construction (acres)	5.1	6.21	+1.1
Forested Land affected during operation (acres)	2.4	3.1	+0.7
Length parallel or adjacent to existing ROW (miles)	0.6	0	-0.6

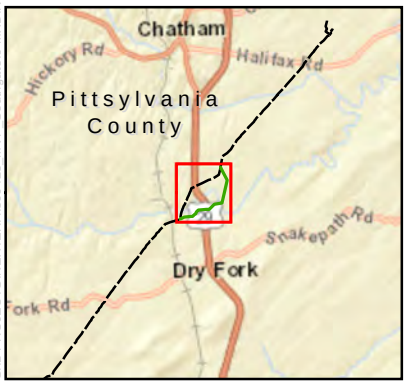
NEW Table 136-1

Comparison of the Preferred Route and Whitehead Variation (MP 3.65 to MP 5.1)

Feature	Preferred Route	Whitehead Variation	Difference

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/





Legend

- Mileposts
- Preferred Pipeline Route
- Whitehead Variation (MP 3.65 to MP 5.1)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

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Figure 136-1
Sheet 1 of 1

Whitehead Variation (MP 3.65 to MP 5.1)
(USGS Topographic)

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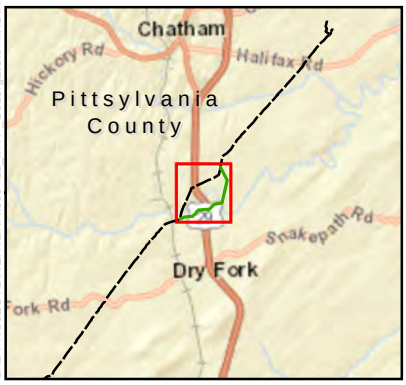
March 2019



Legend

- Mileposts
- Preferred Pipeline Route
- Whitehead Variation (MP 3.65 to MP 5.1)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

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Figure 136-1A

Sheet 1 of 1

Whitehead Variation (MP 3.65 to MP 5.1)
(ESRI World Imagery)

TRC
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Comparison of the Preferred Route and Shambley Variation (MP 59.3 to MP 59.9)

As requested by FERC, the Project evaluated a route variation that would avoid the Shambley property between MP 59.3 and MP 59.9 (see Figure 137-1). At MP 59.3, this variation extends southeast and northeast for approximately 0.1 mile and crosses forest land. It then turns south-southeast and south for approximately 0.6 mile and crosses a combination of forest and agricultural/open land before it rejoins the preferred route at MP 59.9.

As shown in Table 137-1, the are no primary advantages of the Shambley Variation over the preferred route.

The primary disadvantages of the Shambley Variation are:

- greater length and associated land disturbance; and
- affects more forest land.

Potential constructability concerns of the Shambley Variation are:

- none identified based on initial review.

Because the primary disadvantages outweigh the primary advantages, the Project eliminated this variation from further consideration as its preferred pipeline route.

NEW Table 137-1

Comparison of the Preferred Route and Shambley Variation (MP 59.3 to MP 59.9)

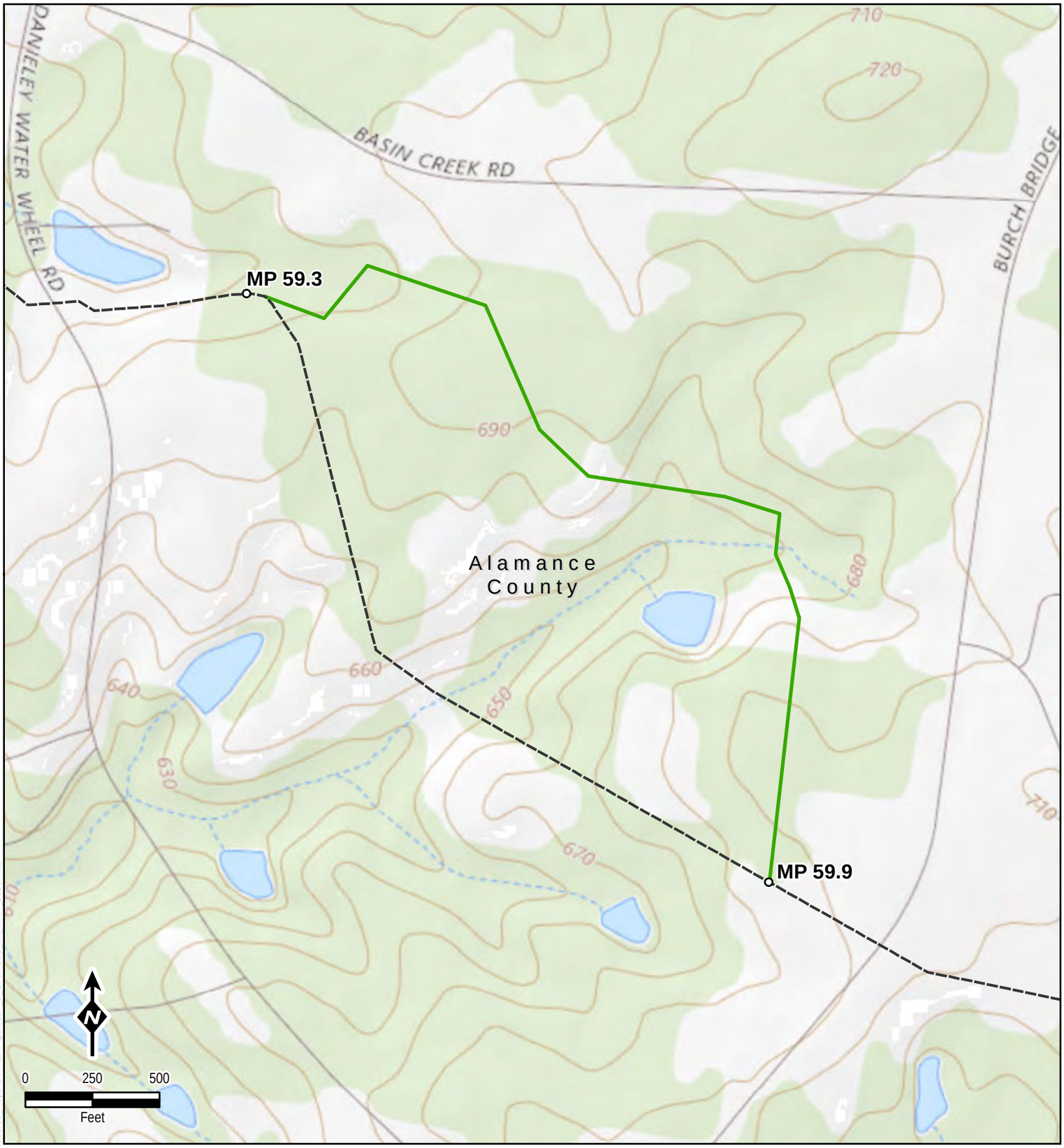
Feature	Preferred Route	Shambley Variation	Difference
Total length (miles)	0.6	0.7	+0.1
Construction right-of-way (acres) a/	7.3	9	+1.7
Permanent right-of-way (acres) a/	3.6	4.4	+0.8
Total number of parcels crossed	7	8	+1
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0/0	0/0	0/0
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	1	1	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	4.4	4.4	0
Forest Areas (miles)	0.2	0.3	+0.1
Forested Land affected during construction (acres)	2.9	4.4	+1.5
Forested Land affected during operation (acres)	1.5	2.1	+0.6
Length parallel or adjacent to existing ROW (miles)	0.3	0	-0.3

NEW Table 137-1

Comparison of the Preferred Route and Shambley Variation (MP 59.3 to MP 59.9)

Feature	Preferred Route	Shambley Variation	Difference

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/



Legend

- Mileposts
- Preferred Pipeline Route
- Shambley Variation (MP 59.3 to MP 59.9)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 500 feet
When Printed 8.5x11

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Figure 137-1
Sheet 1 of 1

Shambley Variation (MP 59.3 to MP 59.9)
(USGS Topographic)

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Legend

- Mileposts
- Preferred Pipeline Route
- Shambley Variation (MP 59.3 to MP 59.9)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 500 feet
When Printed 8.5x11

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Figure 137-1A

Sheet 1 of 1

Shambley Variation (MP 59.3 to MP 59.9)
(ESRI World Imagery)

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March 2019

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Comparison of the Preferred Route and Bombardier Variation (MP 59.0 to MP 59.4)

As requested by FERC, the Project evaluated a route variation that would avoid the Bombardier property between MP 59.0 and MP 59.4 (see Figure 138a-1). At MP 59.0, this variation extends southeast for approximately 0.2 mile and crosses forested land. It then turns east for approximately 0.3 mile and crosses a combination of agricultural/open land and Danieley Water Wheel Road before it rejoins the preferred route at MP 59.4.

As shown in Table 138a-1, the primary advantages of the Bombardier Variation are:

- cross one fewer parcel; and
- affect less forest land.

The primary disadvantages of the Bombardier Variation are:

- greater length and associated land disturbance; and
- affects more agricultural land.

Potential constructability concerns of the Bombardier Variation are:

- none identified based on initial review.

Because the primary disadvantages outweigh the primary advantages, the Project eliminated this variation from further consideration as its preferred pipeline route.

NEW Table 138a-1

Comparison of the Preferred Route and Bombardier Variation (MP 59.0 to MP 59.4)

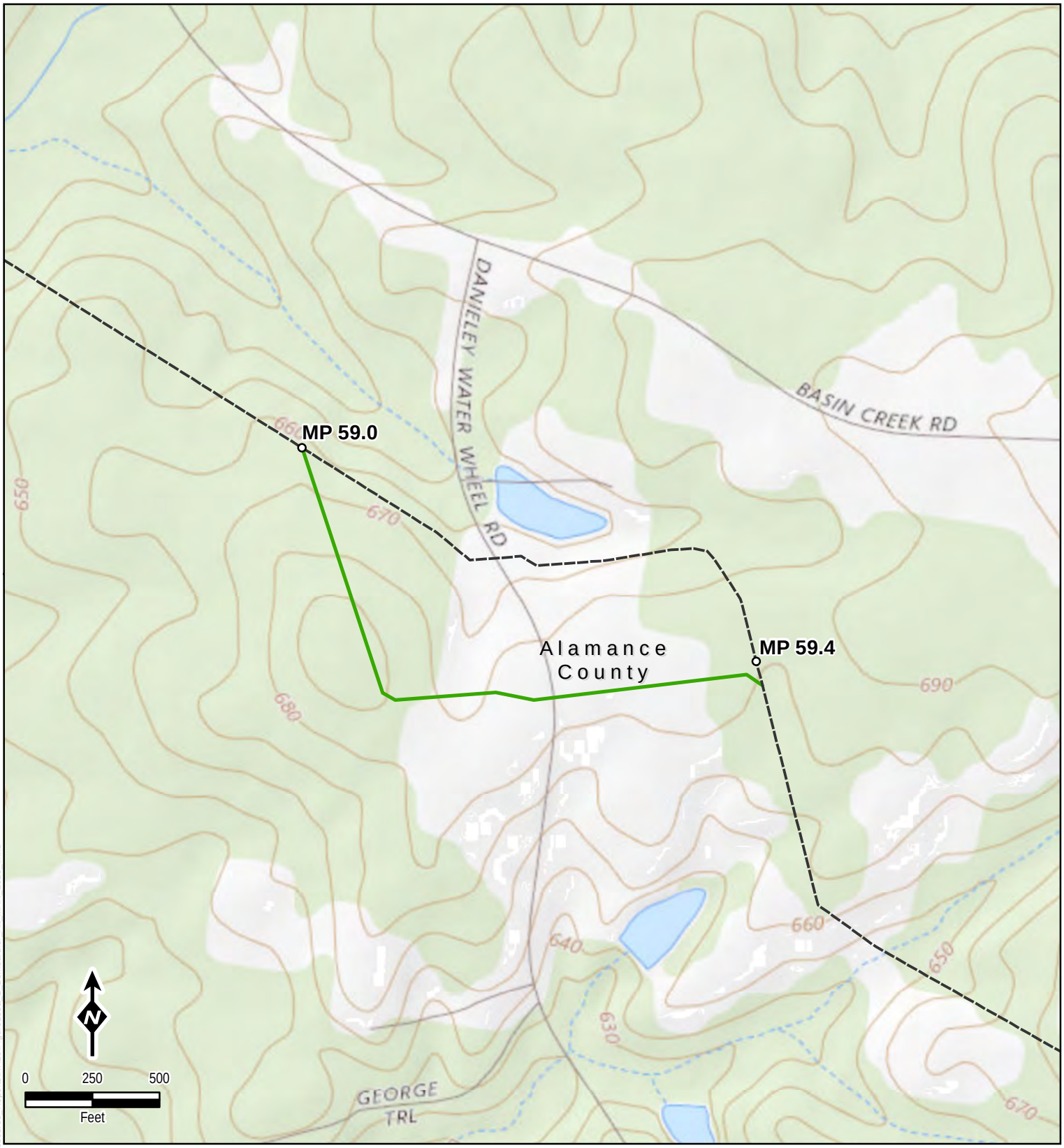
Feature	Preferred Route	Bombardier Variation	Difference
Total length (miles)	0.4	0.5	+0.1
Construction right-of-way (acres) a/	5.2	5.7	+0.5
Permanent right-of-way (acres) a/	2.6	2.8	+0.2
Total number of parcels crossed	6	5	-1
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0/0	0/0	0/0
Residential Land (miles)	0.2	0.2	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	0	0	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	1.9	2.1	+0.2
Forest Areas (miles)	0.2	0.2	0
Forested Land affected during construction (acres)	2.9	2.7	-0.2
Forested Land affected during operation (acres)	1.4	1.3	-0.1
Length parallel or adjacent to existing ROW (miles)	0	0	0

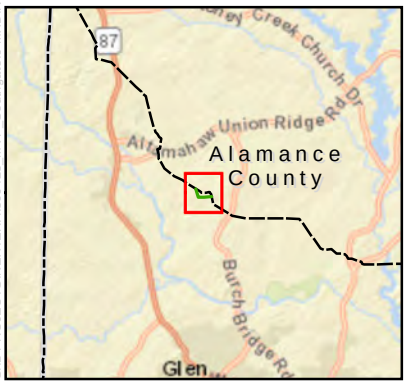
NEW Table 138a-1

Comparison of the Preferred Route and Bombardier Variation (MP 59.0 to MP 59.4)

Feature	Preferred Route	Bombardier Variation	Difference

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/





Legend

- Mileposts
- Preferred Pipeline Route
- Bombardier Variation (MP 59.0 to MP 59.4)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 500 feet
When Printed 8.5x11

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Figure 138a-1

Sheet 1 of 1

Bombardier Variation (MP 59.0 to MP 59.4)
(USGS Topographic)

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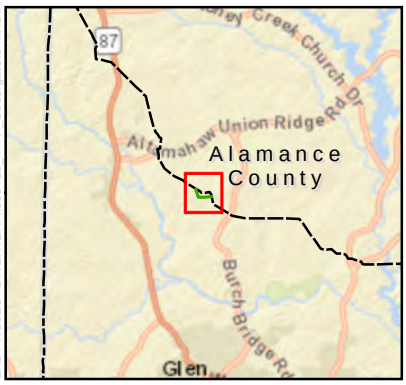
March 2019



Legend

- Mileposts
- Preferred Pipeline Route
- Bombardier Variation (MP 59.0 to MP 59.4)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 500 feet
When Printed 8.5x11

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Figure 138a-1A

Sheet 1 of 1

Bombardier Variation (MP 59.0 to MP 59.4)
(ESRI World Imagery)

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West Chester, PA 19382

March 2019

Comparison of the Preferred Route and Moore Variation (MP 33.1 to MP 33.9)

As requested by FERC, the Project evaluated a route variation that would avoid the Moore property between MP 33.1 and MP 33.9 (see Figure 138b-1). At MP 33.1, this variation extends south-southeast for approximately 0.6 mile and crosses forest land interspersed with agricultural/open land and Moir Mill Road. It then turns south-southwest for approximately 0.3 mile and crosses mostly forest land before it rejoins the preferred route at MP 33.9.

As shown in Table 138b-1, the are no primary advantages of the Moore Variation are over the preferred route.

The primary disadvantages of the Moore Variation are:

- greater length and associated land disturbance; and
- affects more forest and agricultural land.

Potential constructability concerns of the Moore Variation are:

- would require side hill construction.

Because the primary disadvantages outweigh the primary advantages, the Project eliminated this variation from further consideration as its preferred pipeline route.

NEW Table 138b-1

Comparison of the Preferred Route and Moore Variation (MP 33.1 to MP 33.9)

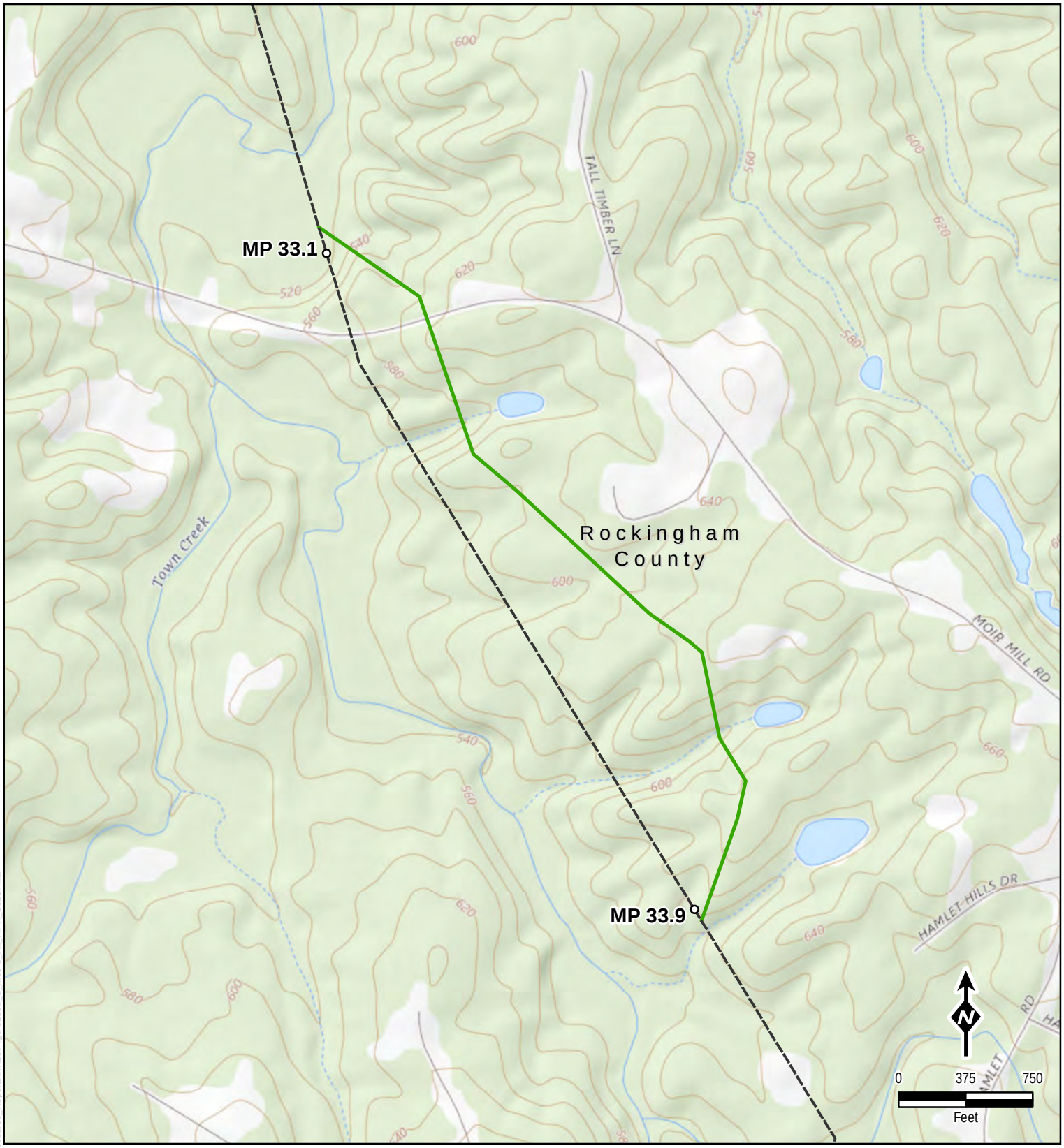
Feature	Preferred Route	Moore Variation	Difference
Total length (miles)	0.8	0.9	+0.1
Construction right-of-way (acres) a/	10.4	11.4	+1
Permanent right-of-way (acres) a/	5.2	5.7	+0.5
Total number of parcels crossed	4	7	+3
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0/0	0/0	0/0
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	2	2	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	0	1.2	+1.2
Forest Areas (miles)	0.3	0.6	+0.3
Forested Land affected during construction (acres)	3.1	7.5	+4.4
Forested Land affected during operation (acres)	1.6	3.8	+2.2
Length parallel or adjacent to existing ROW (miles)	0.7	0	-0.7

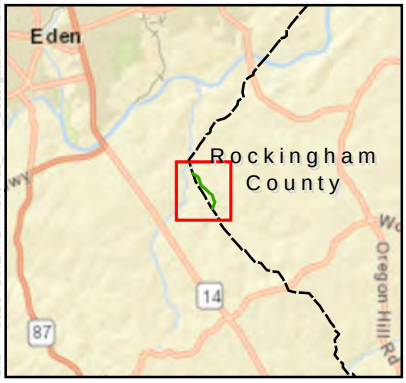
NEW Table 138b-1

Comparison of the Preferred Route and Moore Variation (MP 33.1 to MP 33.9)

Feature	Preferred Route	Moore Variation	Difference

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/





Legend

- Mileposts
- Preferred Pipeline Route
- Moore Variation (MP 33.1 to MP 33.9)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

Mountain Valley PIPELINE, LLC

Figure 138b-1
Sheet 1 of 1

Moore Variation (MP 33.1 to MP 33.9)
(USGS Topographic)

TRC
600 Willowbrook Ln
West Chester, PA 19382
March 2019

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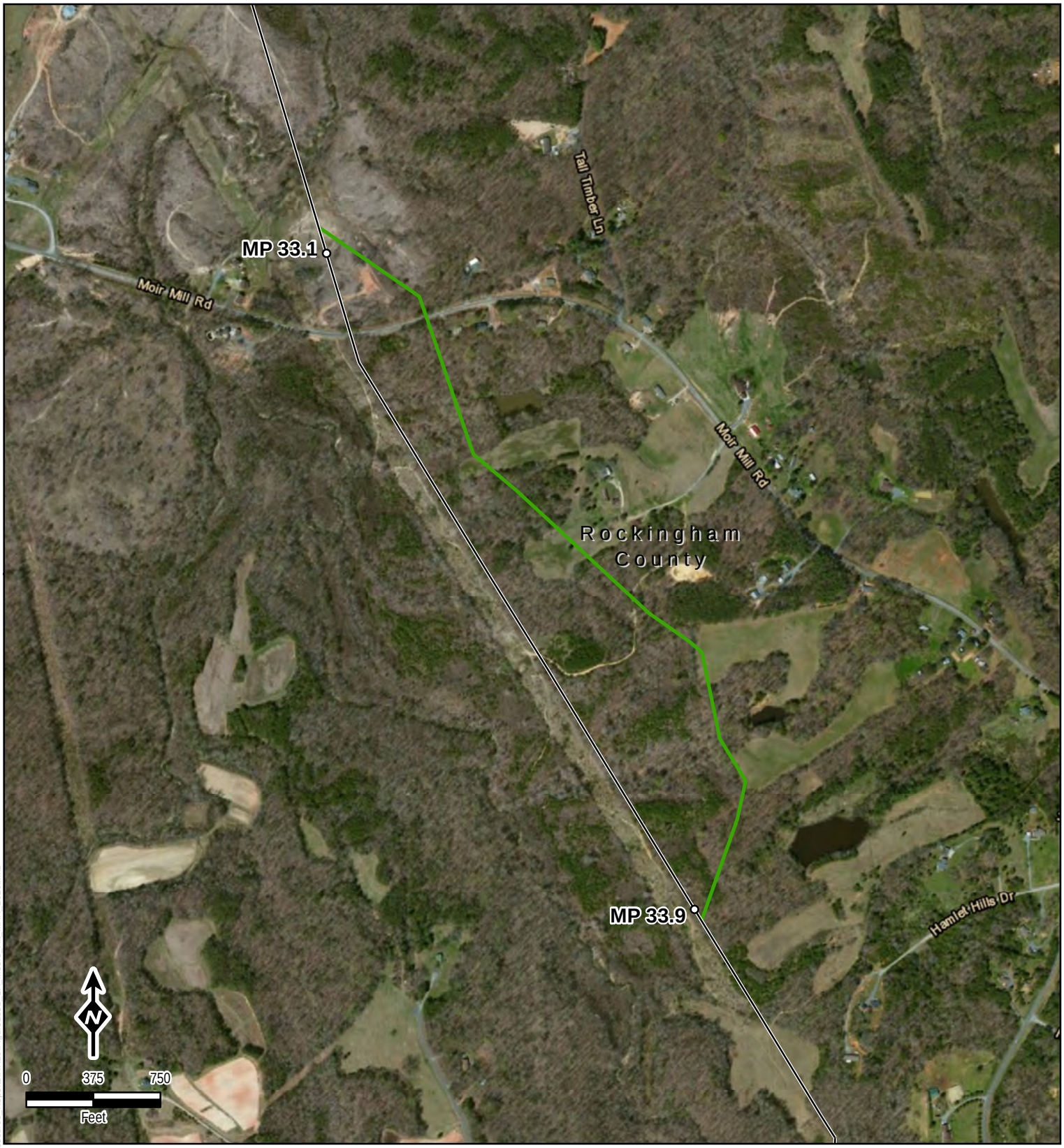

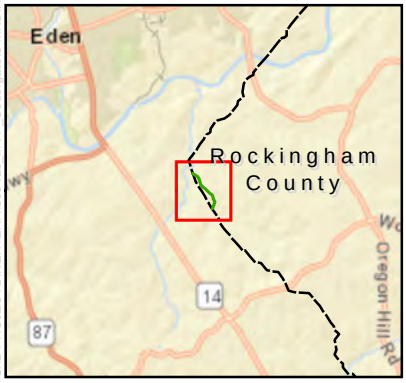

Legend

- Mileposts
- Preferred Pipeline Route
- Moore Variation (MP 33.1 to MP 33.9)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

Mountain Valley PIPELINE, LLC

Figure 138b-1A

Sheet 1 of 1

Moore Variation (MP 33.1 to MP 33.9)
(ESRI World Imagery)

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Comparison of the Preferred Route and Ore and Cowan Variation (MP 40.0 to MP 41.4)

As requested by FERC, the Project evaluated a route variation that would avoid the Ore and Cowan property. This property lies along the preferred route between MP 40.0 and MP 41.4 and was analyzed in Resource Report 10, Section 10.6.2 as part of the MP 40.0 to MP 41.4 Variation. As discussed in Resource Report 10, Section 10.6.2, the primary disadvantages MP 40.0 to MP 41.4 Variation outweighed the primary advantages; therefore, the Project eliminated this variation from further consideration as its preferred pipeline route.

Comparison of the Preferred Route and Nicholson Variation (MP 3.65 to MP 4.0)

As requested by FERC, the Project evaluated a route variation that would avoid the Nicholson property between MP 3.65 and MP 4.0 (see Figure 138f-1). At MP 3.65, this variation extends south-southeast for approximately 0.3 mile and crosses agricultural/open land. It then turns south-southwest and northwest for approximately 0.4 miles and crosses a agricultural/open land and small area of forest land before it rejoins the preferred route at MP 4.0.

As shown in Table 138f-1, the primary advantage of the Nicholson Variation is:

- affect less forest land.

The primary disadvantages of the Nicholson Variation are:

- greater length and associated land disturbance; and
- affects more agricultural land.

Potential constructability concerns of the Nicholson Variation are:

- none identified based on initial review.

Because the primary disadvantages outweigh the primary advantages, the Project eliminated this variation from further consideration as its preferred pipeline route.

NEW Table 138f-1

Comparison of the Preferred Route and Nicholson Variation (MP 3.65 to MP 4.0)

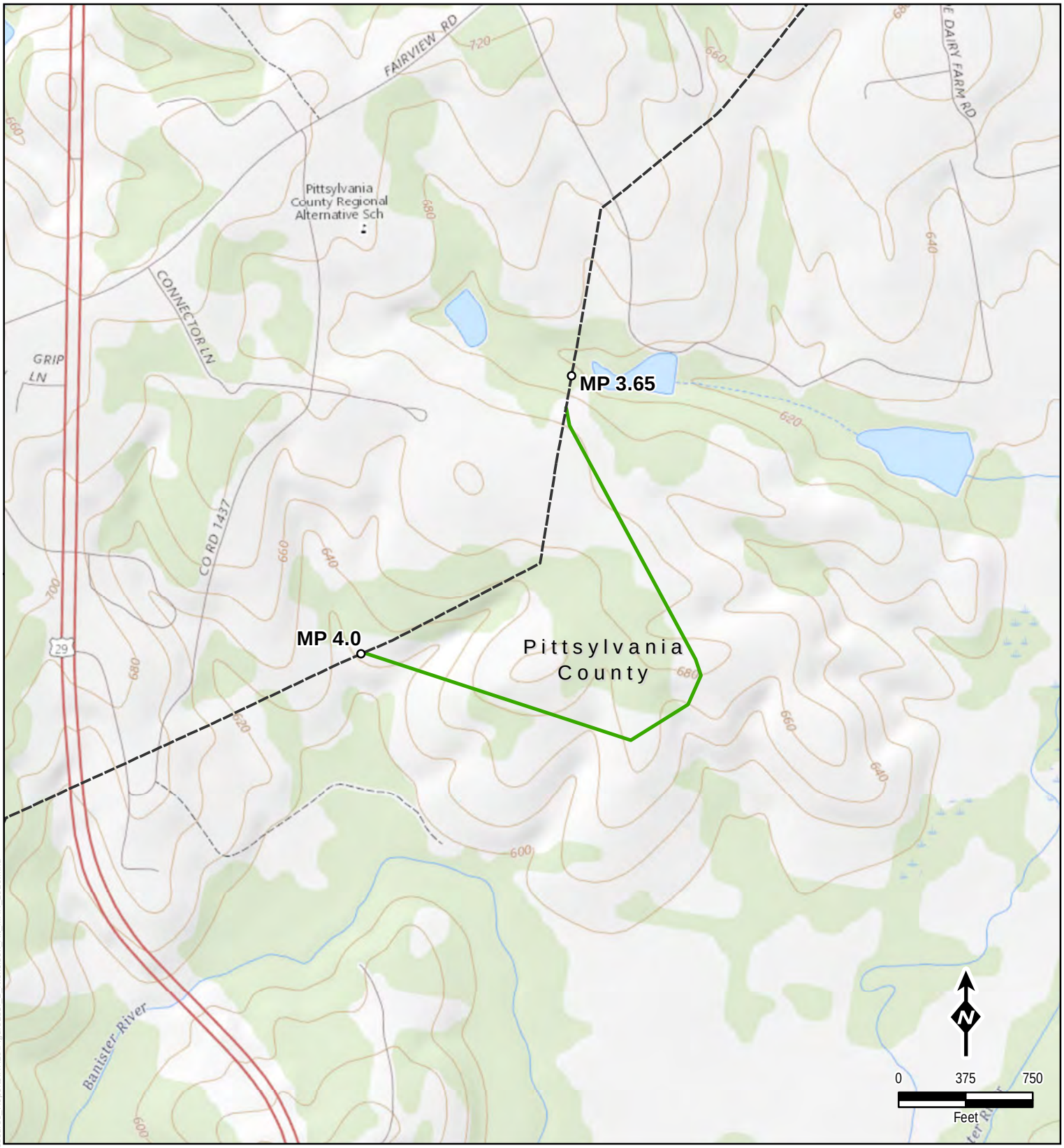
Feature	Preferred Route	Nicholson Variation	Difference
Total length (miles)	0.4	0.7	+0.3
Construction right-of-way (acres) a/	4.7	8.9	+4.2
Permanent right-of-way (acres) a/	2.3	4.4	+2.1
Total number of parcels crossed	4	5	+1
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0/0	0/0	0/0
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	0	0	0
Number of NWI wetlands crossed	0	0	0
Total NWI wetland crossing length (feet)	0	0	0
NWI wetlands within construction ROW (acres) b/	0	0	0
Agricultural Land within construction ROW (acres) c/	2.3	4.4	+2.1
Forest Areas (miles)	0	0	0
Forested Land affected during construction (acres)	0.4	0	-0.4
Forested Land affected during operation (acres)	0.2	0	-0.2
Length parallel or adjacent to existing ROW (miles)	0	0	0

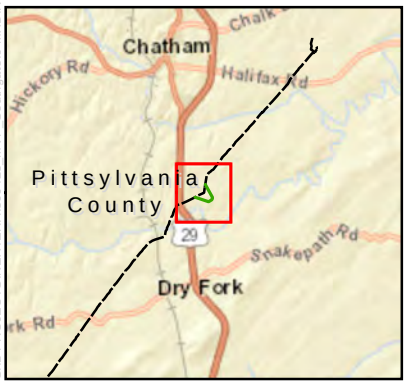
NEW Table 138f-1

Comparison of the Preferred Route and Nicholson Variation (MP 3.65 to MP 4.0)

Feature	Preferred Route	Nicholson Variation	Difference

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/





Legend

- Mileposts
- Preferred Pipeline Route
- Nicholson Variation (MP 3.65 to MP 4.0)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

Mountain Valley PIPELINE, LLC

Figure 138f-1
Sheet 1 of 1

Nicholson Variation (MP 3.65 to MP 4.0)
(USGS Topographic)

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600 Willowbrook Ln
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March 2019

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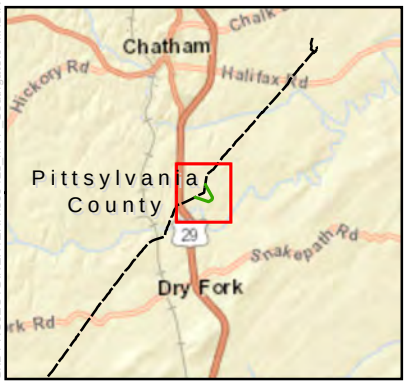

Legend

- Mileposts
- Preferred Pipeline Route
- Nicholson Variation (MP 3.65 to MP 4.0)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

Mountain Valley Pipeline, LLC

Figure 138f-1A

Sheet 1 of 1

Nicholson Variation (MP 3.65 to MP 4.0)
(ESRI World Imagery)

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March 2019

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Comparison of the Preferred Route and Madrin Variation (MP 58.1 to MP 58.9)

As requested by FERC, the Project evaluated a route variation that would avoid the Madrin property between MP 58.1 and MP 58.9 (see Figure 138g-1). At MP 58.1, this variation extends southwest and southeast for approximately 0.3 mile and crosses a combination of forest and agricultural/open land. It then turns east and southeast for approximately 0.4 miles and crosses agricultural/open and forest land and parallels an existing electric transmission easement. It then turns east-southeast and northeast for approximately 0.5 mile where it collocates with an existing electric transmission easement for approximately 0.2 mile and crosses mostly forest land before it rejoins the preferred route at MP 58.9.

As shown in Table 138g-1, there are no primary advantages of the Madrin Variation over the preferred route.

The primary disadvantages of the Madrin Variation are:

- greater length and associated land disturbance; and
- affects more wetland and agricultural land.
- crosses and affects more forest land.

Potential constructability concerns of the Madrin Variation are:

- none identified based on initial review.

Because the primary disadvantages outweigh the primary advantages, the Project eliminated this variation from further consideration as its preferred pipeline route.

NEW Table 138g-1

Comparison of the Preferred Route and Madrin Variation (MP 58.1 to MP 58.9)

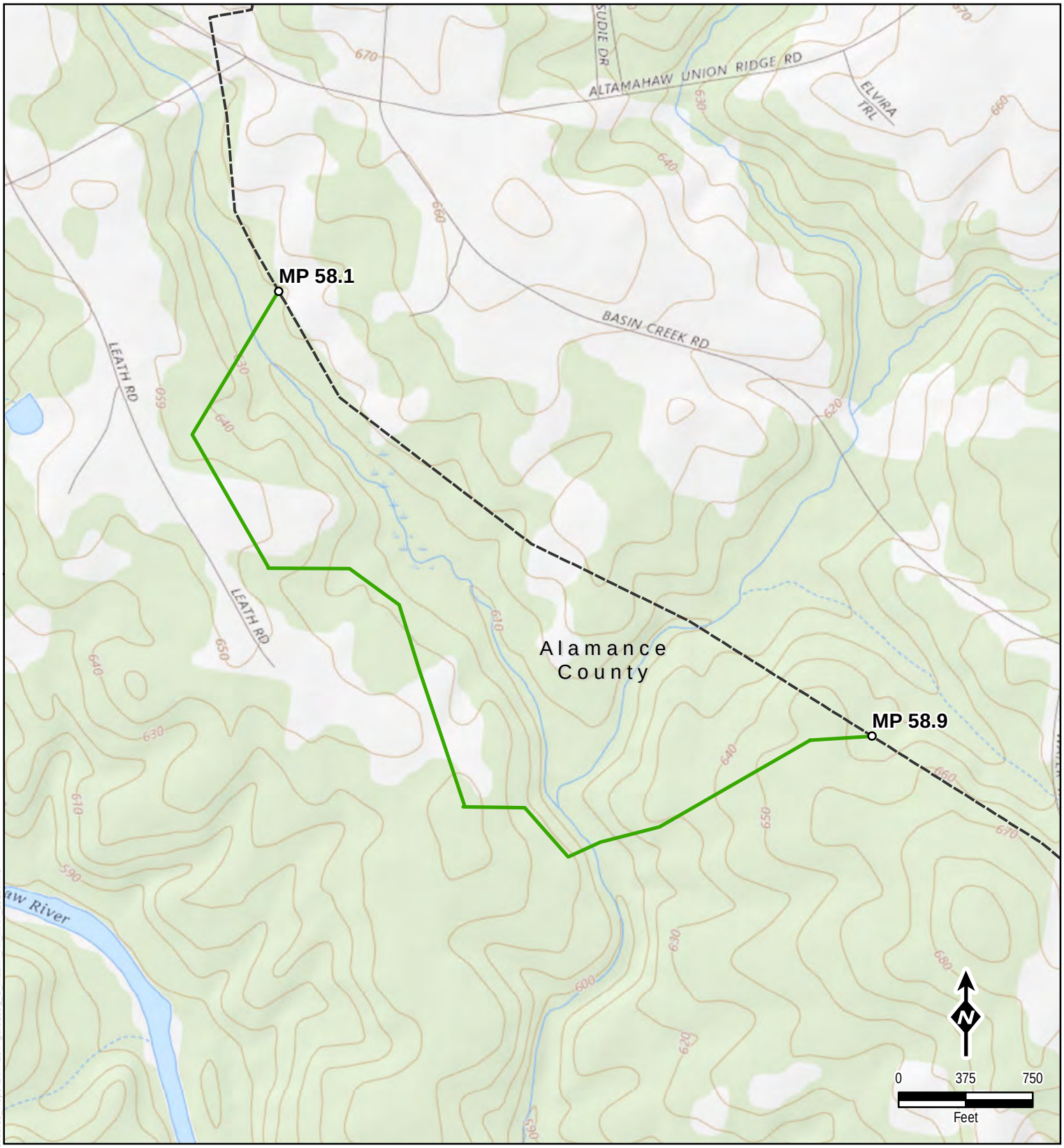
Feature	Preferred Route	Madrin Variation	Difference
Total length (miles)	0.8	1.2	+0.4
Construction right-of-way (acres) a/	9.9	14.7	+4.8
Permanent right-of-way (acres) a/	4.9	7.3	+2.4
Total number of parcels crossed	6	7	+1
Number of residences within 25 and 50 feet of the edge of the construction ROW (and associated additional temporary workspace)	0/0	0/0	0/0
Residential Land (miles)	0	0	0
Commercial/Industrial Land (miles)	0	0	0
Unlisted/Potential Eligible Historic Properties (number)	0	0	0
National Trails, Recreation Trails, and Other Recreational Areas (number)	0	0	0
Number of waterbodies crossed	1	1	0
Number of NWI wetlands crossed	1	2	+1
Total NWI wetland crossing length (feet)	34	46	+12
NWI wetlands within construction ROW (acres) b/	0.1	0.1	0
Agricultural Land within construction ROW (acres) c/	4.2	4.3	+0.1
Forest Areas (miles)	0.4	0.7	+0.3
Forested Land affected during construction (acres)	5.1	9	+3.9
Forested Land affected during operation (acres)	2.5	4.5	+2

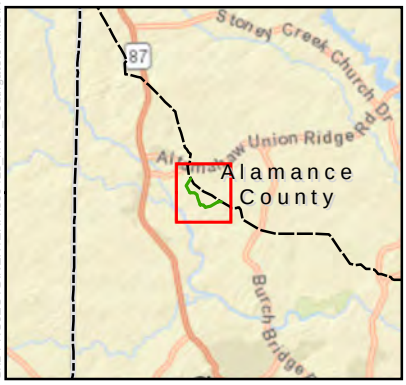
NEW Table 138g-1

Comparison of the Preferred Route and Madrin Variation (MP 58.1 to MP 58.9)

Feature	Preferred Route	Madrin Variation	Difference
Length parallel or adjacent to existing ROW (miles)	0.1	0.2	+0.1

a/ Assuming 100-foot-wide construction ROW and 50-foot-wide permanent ROW.
b/ Assuming 75-foot-wide construction ROW.
c/ Includes pasture/hay and cultivated crops.
ROW = right-of-way. NWI = National Wetland Inventory
Information Sources:
GIS – Analysis based on Geodatabase layers and shapefiles.
NC Parcel Boundaries and Standard Fields - http://data.nconemap.gov/geoportal/catalog/search/resource/details.page
NLCD – 2006 National Land Cover Data - http://www.epa.gov/mrlc/nlcd-2006.html
NWI – National Wetlands Inventory - http://www.fws.gov/wetlands/
USGS – U.S. Geological Survey - http://www.usgs.gov/
NHD – National Hydrography Dataset - http://nhd.usgs.gov/
ESRI - GIS Mapping - http://www.esri.com/





Legend

- Mileposts
- Preferred Pipeline Route
- Madrin Variation (MP 58.1 to MP 58.9)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

Mountain Valley PIPELINE, LLC

Figure 138g-1
Sheet 1 of 1

Madrin Variation (MP 58.1 to MP 58.9)
(USGS Topographic)

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March 2019

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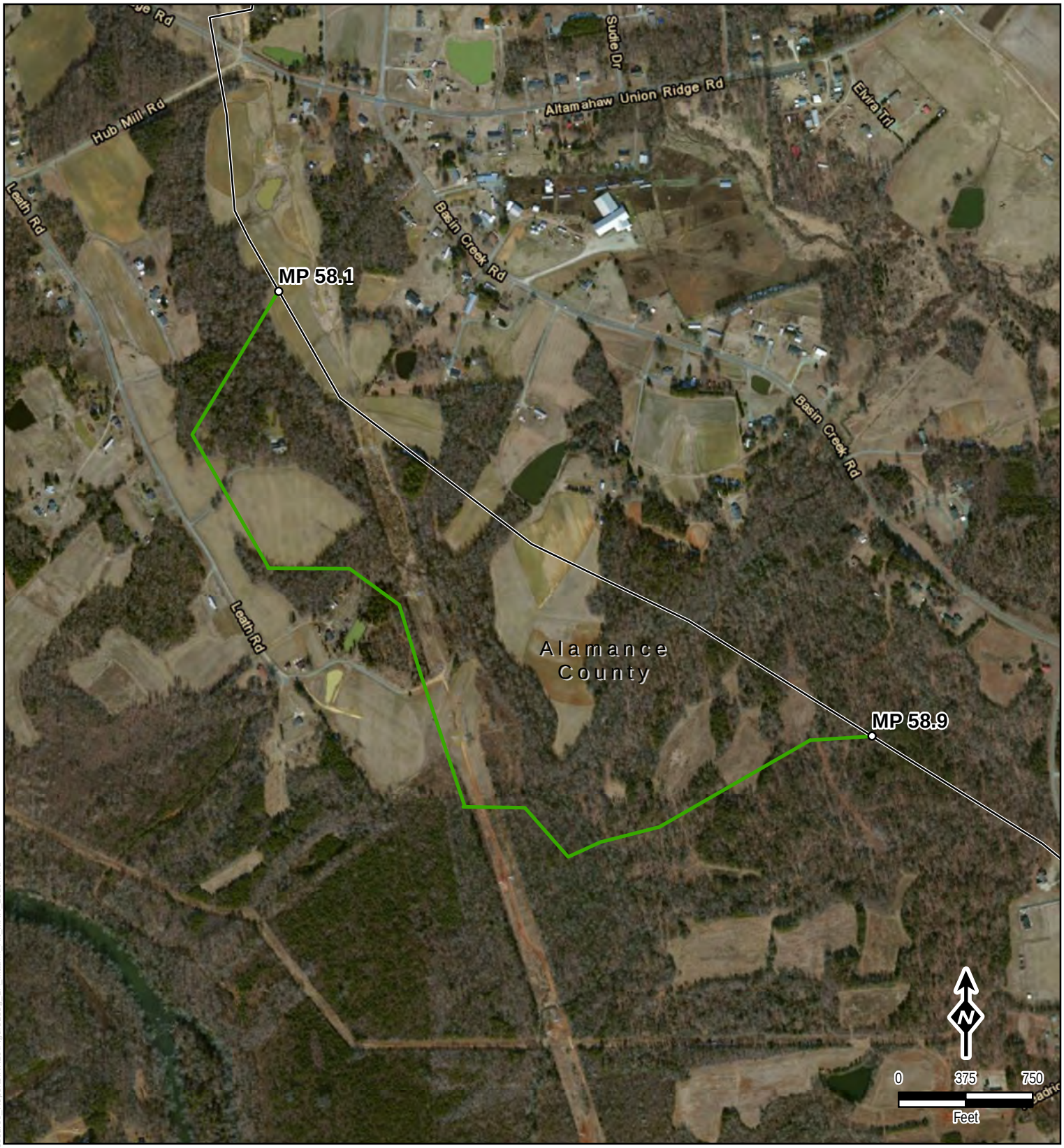

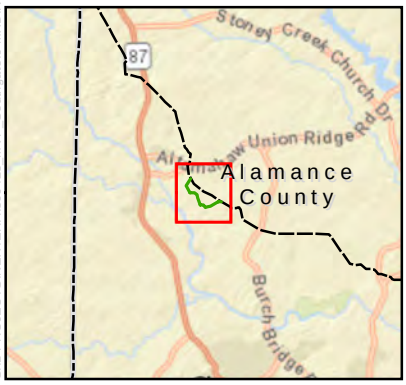

Legend

- Mileposts
- Preferred Pipeline Route
- Madrin Variation (MP 58.1 to MP 58.9)
- County Boundary

Data Sources: ESRI, USGS, EQT

1 inch = 750 feet
When Printed 8.5x11

Mountain Valley PIPELINE LLC

Figure 138g-1A

Sheet 1 of 1

Madrin Variation (MP 58.1 to MP 58.9)
(ESRI World Imagery)

TRC
Results you can rely on
600 Willowbrook Ln
West Chester, PA 19382

March 2019

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MVP Southgate Project

Docket No. CP19-14-000

Attachment Resource Report 11

March 2019

LIST OF TABLES

REVISED Table 11.2-1

MVP Southgate Project Pipeline Class Locations

Pipeline / County	Class Location	Beginning Approx. Milepost	Ending Approx. Milepost
H-605 Pipeline			
Pittsylvania	1	0.00	0.40
H-650 Pipeline			
Pittsylvania	1	0.00RR	0.50
Pittsylvania	2	0.50	0.70
Pittsylvania	1	0.70	0.80
Pittsylvania	2	0.80	1.00
Pittsylvania	1	1.00	1.10
Pittsylvania	2	1.10	1.30
Pittsylvania	1	1.30	2.90
Pittsylvania	2	2.90	3.40
Pittsylvania	1	3.40	3.50
Pittsylvania	2	3.50	4.20
Pittsylvania	3	4.20	4.30
Pittsylvania	2	4.30	4.40
Pittsylvania	1	4.40	6.40
Pittsylvania	2	6.40	6.60
Pittsylvania	1	6.60	7.00
Pittsylvania	2	7.00	7.60
Pittsylvania	1	7.60	7.90
Pittsylvania	2	7.90	8.2
Pittsylvania	1	8.20	10.10
Pittsylvania	2	10.10	10.80
Pittsylvania	1	10.80	13.10
Pittsylvania	2	13.10	13.50
Pittsylvania	1	13.50	15.30
Pittsylvania	2	15.30	15.40
Pittsylvania	1	15.40	15.80
Pittsylvania	2	15.80	16.10
Pittsylvania	1	16.12	16.14
Pittsylvania	2	16.14	16.90
Pittsylvania	1	16.90	16.91
Pittsylvania	2	16.91	17.10
Pittsylvania	1	17.10	18.20
Pittsylvania	2	18.20	18.40
Pittsylvania	1	18.40	18.70
Pittsylvania	2	18.70	18.89
Pittsylvania	1	18.89	18.93
Pittsylvania	2	18.93	19.40
Pittsylvania	3	19.40	19.50

REVISED Table 11.2-1

MVP Southgate Project Pipeline Class Locations

Pipeline / County	Class Location	Beginning Approx. Milepost	Ending Approx. Milepost
Pittsylvania	2	19.50	19.90
Pittsylvania	3	19.90	19.97
Pittsylvania	2	19.97	20.41
Pittsylvania	1	20.41	26.10
Rockingham	1	26.10	30.40
Rockingham	2	30.40	31.10
Rockingham	1	31.10	31.40
Rockingham	2	31.40	32.10
Rockingham	1	32.10	35.90
Rockingham	2	35.90	36.10
Rockingham	1	36.10	36.20
Rockingham	2	36.20	36.80
Rockingham	1	36.80	37.19
Rockingham	2	37.19	37.22
Rockingham	1	37.22	37.34
Rockingham	2	37.34	37.53
Rockingham	1	37.53	39.49
Rockingham	2	39.49	39.83
Rockingham	3	39.83	39.86
Rockingham	2	39.86	39.94
Rockingham	1	39.94	40.20
Rockingham	2	40.20	40.75
Rockingham	1	40.75	42.10
Rockingham	2	42.10	42.5
Rockingham	1	42.50	43.00
Rockingham	2	43.00	43.30
Rockingham	1	43.30	44.20
Rockingham	2	44.20	45.10
Rockingham	1	45.10	48.30
Rockingham	2	48.30	48.70
Rockingham	1	48.70	49.00
Rockingham	2	49.00	49.40
Rockingham	1	49.40	52.50
Rockingham	2	52.50	53.60
Alamance	1	53.60	54.90
Alamance	2	54.90	55.60
Alamance	1	55.60	55.70
Alamance	2	55.70	55.80
Alamance	1	55.80	56.40
Alamance	2	56.40	56.60
Alamance	1	56.60	56.70

REVISED Table 11.2-1

MVP Southgate Project Pipeline Class Locations

Pipeline / County	Class Location	Beginning Approx. Milepost	Ending Approx. Milepost
Alamance	2	56.70	56.80
Alamance	3	56.80	56.90
Alamance	2	56.90	57.59
Alamance	1	57.59	57.62
Alamance	2	57.62	58.11
Alamance	1	58.11	58.14
Alamance	2	58.14	58.46
Alamance	1	58.46	58.49
Alamance	2	58.49	58.60
Alamance	1	58.60	59.00
Alamance	2	59.00	59.60
Alamance	1	59.60	59.90
Alamance	2	59.90	60.10
Alamance	1	60.10	60.30
Alamance	2	60.30	60.40
Alamance	1	60.40	62.60
Alamance	2	62.60	62.98
Alamance	1	62.98	63.02
Alamance	2	63.02	63.20
Alamance	1	63.20	63.30
Alamance	2	63.30	63.60
Alamance	1	63.60	64.30
Alamance	2	64.30	64.46
Alamance	1	64.46	64.53
Alamance	2	64.53	64.90
Alamance	1	64.90	65.70
Alamance	1	65.70	66.00
Alamance	2	66.00	66.50
Alamance	1	66.50	67.40
Alamance	2	67.40	67.60
Alamance	1	67.60	67.90
Alamance	2	67.90	68.00
Alamance	1	68.00	68.10
Alamance	2	68.10	68.32
Alamance	1	68.32	68.34
Alamance	3	68.34	68.70
Alamance	1	68.70	69.00
Alamance	3	69.00	70.00
Alamance	1	70.00	71.90
Alamance	2	71.90	72.00
Alamance	1	72.00	72.60

REVISED Table 11.2-1 **MVP Southgate Project Pipeline Class Locations**			
Pipeline / County	**Class Location**	**Beginning Approx. Milepost**	**Ending Approx. Milepost**
Alamance	2	72.60	72.80
Alamance	3	72.80	72.90
Alamance	2	72.90	73.20RR

REVISED Table 11.2-2 **Location of High Consequence Areas**			
Pipeline / County	**Beginning Milepost**	**Ending Milepost**	**Length (mile)**
Virginia			
H-605 Pipeline			
Pittsylvania	NA	NA	NA
H-650 Pipeline			
Pittsylvania	2.89	3.34	0.45
Pittsylvania	4.04	4.51	0.47
Pittsylvania	19.19	20.17	0.98
North Carolina			
Rockingham	39.70	39.97	0.27
Rockingham	40.34	40.60	0.26
Alamance	56.69	57.06	0.37
Alamance	69.21	69.42	0.21
Alamance	69.47	69.94	0.47
Alamance	72.70	73.05	0.35
NA = Not Applicable.			

MVP Southgate Project

Docket No. CP19-14-000

Attachment 140-1

Revised Alignment Sheets

(Provided Under Separate Cover)

March 2019