APPENDIX A

Southgate Project Distribution List for the Final Environmental Impact Statement

APPENDIX A: DISTRIBUTION LIST FOR THE FINAL ENVIRONMENTAL IMPACT STATEMENT

Table of Contents

Federal Agencies

Executive Office of the President of the United States

Edward Boling, Associate Director for NEPA Oversight, Council on Environmental Quality

Federal Regulatory Commission

Amanda Mardiney, Environmental Biologist

John Peconom, General Natural Resources Management and Biological Sciences

Kimberly D. Bose, Secretary

Nancy Fox-Fernandez, Environmental Biologist and Project Manager

Cardno

Allen Jacks, Senior Project Scientist

Office of Federal Agency Programs

John Eddins, Advisory Council on Historic Preservation

Office of U.S. Representative Mark Walker

Janine Osborne, Director if Constituent Services

Ryan Walker, Legislative Assistant

Office of U.S Representative Thomas Garrett

Tripp Grant, Legislative Assistant

Office of U.S .Senator Mark Warner

Kenneth S. Johnson, Jr., Senior Policy Advisor

Office of U.S. Senator Richard Burr

Ben Khouri, Press Secretary

Betty Jo Shepheard

Office of U.S. Senator Thom Tillis

Torie Ness, Legislative Assistant

Office of U.S. Senator Tim Kaine

Nick Barbash, Legislative Assistant

Senate Energy and Natural Resources Committee

Lisa Murkowski, Chairman

U.S. Army Corps of Engineers

Jason Kelly, Commander, Norfolk District
Jennifer Frye, Western Section Chief, Norfolk District
Steven Vanderploeg, Environmental Scientist, Norfolk District
Todd Miller, Southern Section Chief, Norfolk District
Tom Walker, Regulatory Chief, Norfolk District
Jean Gibby, North Carolina
Robert Clark, Commander, Wilmington District
David Bailey, Project Manager, Wilmington District

U.S. Department of Agriculture

Conservation and Environmental Program Division

Nell Fuller, National Environmental Compliance Manager

Forest Service

Ken Arney, Acting Regional Forester Southern Region 8
Timothy Abing, Energy Program Manager

Joe Carbone, Assistant Director, NEPA, Forest Service-Ecosystem Management Coordination

Natural Resources Conservation Service

Burling Service Center

Brian Loadholt, Supervisory Soil Conservationist

Chatham Service Center

Trenton Howell, District Conservationist

North Carolina

Andree DuVarney, National Environmental Coordinator
Milton Cortes, Assistant State Soil Scientist
Steve Troxler, Secretary of Agriculture – Commissioner
Tim Beard, State Conservationist

Virginia State Office

David Harper, State Soil Scientist
Jack Bricker, State Conservationist

U.S. Department of Commerce

National Oceanic and Atmospheric Administration

NOAA NEPA Coordinator

U.S. Department of Energy

Office of Environmental Management

Mark Whitney, Principal Deputy Assistant Secretary

Office of NEPA Policy and Compliance

Brian Costner, Acting Director, OGC

Office of Oil and Natural Gas

Brian Lavoie'

Division of Natural Gas Regulatory Activities

Amy Sweeney, Director

U.S. Department of Health and Human Services

Edward Bole, Chief Environmental Officer

Center for Disease Control, National Center for Environmental Health

Division of Emergency and Environmental Health Services

Sharunda Buchanan, Director

U.S. Department of Homeland Security

Customs and Border Protection

Christopher Oh, Branch Chief

U.S. Department of Housing and Urban Development

Office of Environment and Energy

Danielle Schopp, Community Planner

U.S. Department of the Interior

Bureau of Indian Affairs

Pamela Snyder-Osmum, EMS/ EMAP Program Manager
Terry McClung, NEPA Coordinator
B.J. Howerton
Bruce Maytubby, Regional Director

Bureau of Safety and Environmental Enforcement

Division of Environmental Assessment
Dr. Jill Lewandowski, Chief
Office of Pipeline Safety
Sentho White, Director, Engineering and Research Division
Environmental Compliance Division
David Fish, Chief

U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration
Karen Lynch, Community Liaison Services Program Manager

Office of Pipeline Safety
Ahuva Battams, Attorney Advisor
William Schoonover, Associate Administrator for Hazardous Materials Safety
Melanie Stevens, Attorney Advisor

Office of Safety, Energy, and the Environment
Camille Mittelholtz, Environmental Policy Team Coordinator

Surface Transportation Board
Victoria Rutson, Chief, Section of Environmental Analysis

U.S. Environmental Protection Agency

Aaron Blair, NEPA Reviewer
Barbara Rudnick, NEPA Program Manager
Matthew Lee, Project Office
Todd Bowers, NC Regulatory and NCDOT

Region 3
Cosmo Servidio, Regional Administrator

Region 4
Maria R. Clark, NEPA Program Manager
Trey Glenn, Regional Administrator

NEPA Program Office
Ntale Kajumba, Acting Chief

Office of Enforcement and Compliance Assurance
Lawrence Starfield, Assistant Administrator

Office of Federal Activities
Susan E. Bromm, Director

U.S. Fish and Wildlife Service

North Carolina
Dale Suiter, Biologist
Pete Benjamin, Field Supervisor
John Ellis, Biologist
Kathy Matthews, Biologist
Sarah McRae, Biologist

Virginia
Bryan Tompkins, Conservation Biologist
Cindy Schulz, Field Supervisor
Emily Argo, Biologist

Jennifer Stanhope, Biologist
Troy Anderson, Supervisory Fish & Wildlife Biologist
Sumalee Hoskin, Biologist

U.S. Geological Survey

Environmental Management Branch

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U.S. House of Representative

Denver Riggleman

Mark Walker, Representative

Thomas Garrett, Representative

U.S. National Park Service

Sarah Craighead, Acting Regional Director

Environmental Planning and Compliance Branch

Patrick Walsh

Northeast Region

Gay Vietzke, Regional Director

Resource Planning and Compliance

Mary Krueger, Energy Specialist

Southeast Region

Bryan Faehner, Energy and Environmental Protection Specialist

Water Resources Division

Jeffrey Duncan, Fishery

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Richard Burr, Senator

Thom Tillis, Senator

Tim Kaine, Senator

Mark Warner, Senator

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S. Lewis Ebert, President and CEO

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Conservation Network

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Department of Agriculture and Consumer Services

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Department of Environment and Natural Resources

Philip Bradley, Senior Geologist

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Danny Smith, Regional Supervisor
Douglas Heyl, Deputy Secretary
Dylan Reinhardt, Energy, Mineral and Land Resources
Eric Hudson, Public Water Supply Supervisor
Guadalupe Carolina Fonseca Jimenez, Deputy Secretary
Jennifer Mundt, Senior Policy Advisor
John Lucey, Legislative Liason
Karen Higgins, Water Resources Supervisor
Linette Weaver, Source Water Assessment and Protection Program Assistant
Michael S. Regan, Secretary
Renee Kramer, Title VI and Environmental Justice Specialist
Sharon Martin, Director of Public Affairs
Sheila Holman, Assistant Secretary for Enviroment
Sue White, Engineer
Zachary Lentz, Regional Engineering Associate

Air Quality

Sushma Masemore, Deputy Assistant Secretary
Michael Abraczinskas, Director

Division of Energy, Mineral and Land Resources

Annette Lucas, PE Stormwater Program Supervisor
Corey Anen, Environmental Engineer
Toby Vinson, Director

Environmental Assistance Outreach

David Lee, Environmental Assistance Coordinator

Land Quality

Tamera Eplin, Regional Engineer

Land Resources

Julie Coco, State Sediment Specialist
Matt Gantt, Regional Environmental Engineer
Shannon Leonard, Regional Engineering Associate

Waste Management

Sarah Rice, North Carolina DEQ Title VI and EJ Coordinator

Water Quality Permitting

Jeffrey Poupart

Water Resources

Jim Gregson, Regional Supervisor
Linda Culpepper, Director
Sean McGuire, GIS Specialist

Sue Homewood, Sr. Environmental Scientist
Daniel Mark Durway, Water Resource Specialist

Department of Justice

Blake Thomas, General Counsel
Lynne Weaver, Special Deputy Attorney General

Department of Natural and Cultural Resources

Courtney Page, Collections Manager
Kimberly Urban, Staff Archaeologist
Renee Shearin, Environmental Review Technician, State Historic Preservation Office
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Department of Transportation

James Trogdon, Transportation Secretary

Division of Parks and Recreation

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Justin Williamson, Environmental Review Coordinator

Economic Development Association

Mark Pope
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Stephen Bryant, Deputy Chief of Staff

Office of Lieutenant Governor

Hal Weatherman, Chief of Staff

Office of State Archaeology

Cassandra Pardo, Project Registrar
David Cranford, Assistant State Archaeologist

State Bureau of Investigations

Mike Harper
Steven Holmes
Angel Gray

State Historic Preservation Office

Beth King, Architectural Survey Specialist
Hannah Beckman, National Register / Survey Specialist
Jennifer Brosz, National Register Coordinator
John Mintz, North Carolina State Archeologist
Katie Harville, Environmental Review Specialist
Lindsay Ferrante, Deputy State Archaeologist - Land
Renee Gledhill-Earley, Environmental Review Coordinator

Rosie Blewitt-Golsch, Staff Archaeologist
Susan Myers, Assistant State Archaeologist and Site Registrar
Kevin Cherry, State Historic Preservation Officer
Ramona Bartos, Deputy State Historic Preservation Officer

State of North Carolina

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Roy Cooper, Governor

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John Isenhour, Technical Assitance Biologist
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Vann Stancil, Special Project Coordinator
David Cox, Habitat Conservation Program Supervisor
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Kelly Thomasson, Secretary of the Commonwealth
Ralph Northam, Governor
Todd Haymore, Secretary of Commerce

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Jewel H. Bronaugh, Commissioner

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Craig Seaver, Division Director
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Jason Bullock, Environmental Manager II
Tyler Meader, Environmental Specialist I
Beth Reed, Administrative and Office Specialist
Theresa Duffey, Natural and Cultural Resource Manager
Rene Hypes, Environmental Manager I
Robbie Rhur, Environmental Planner II

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David Paylor, Director
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Department of Game and Inland Fisheries
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Brian Watson, Aquatic Resources Biologist/Malacologist
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Ernie Aschenbach, Environmental Services Biologist
Michael Pinder, Aquatic Biologist
Ray Fernald, Environmental Services Section Manager
Rick Reynolds, T&E Bat Survey Contact
Robert Duncan
Sergio Harding, Nongame Bird Conservation Biologist

Department of Health, Office of Drinking Water
Aaron Moses, Source Water Program Manager
Mary Mahoney, Source Water Protection Program Assistant

Department of Historical Resources
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Department of Mines, Minerals and Energy
Rick Cooper, Director

Department of Transportation

Stephen C. Brich, Commissioner

Division of Geology and Mineral Resources

Lorrie Coiner, Geologist

Economic Development Partnership

Vince Barnett, Vice President, Business Investment

Office of the Governor

Matthew Strickler

Clark Mercer, Chief of Staff

Marine Resources Commission

Mike Johnson, Habitat Management

Randy Owen, Project Manager

State Historic Preservation Office

Julie Langan, State Historic Preservation Officer

Roger Kirchen, Director

Stephanie Williams, Deputy State Historic Preservation Officer

Native American Tribes

Absentee-Shawna Tribe of Oklahoma

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Edwina Butler-Wolfe, Governor

Erin Thompson, Tribal Historic Preservation Officer

Catawba Indian Nation

Caitlin Haire, Tribal Historic Preservation Office

Caitlin Totherow, Tribal Historic Preservation Officer

Darin Steen, Environmental Services Director

Evie Stewart, Tribal Administrator

Wenonah G. Haire, Tribal Historic Preservation Officer

William Harris, Chief

Cayuga Nation

Clint Halftown, National Representative

Cheroenhaka (Nottoway) Tribe

Ellis Wright, Vice Chief

Walt Brown, Chief

Cherokee Nation of Oklahoma

Bill John Baker, Principal Chief

Elizabeth Toombs, Tribal Historic Preservation Officer

Cheyenne River Sioux Tribe

Steve Vance, Tribal Historic Preservation Officer

Chickahominy Tribe

Ruth Hennamen

Stephen Adkins, Chief

Chickahominy Tribe Eastern Division

Gene Pathfollower Adkins, Chief

Gerald Stewart, Chief

Chickasaw Nation

Bill Anoatubby, Governor
Kirk Perry

Choctaw Nation of Oklahoma

Gary Batton, Chief
Ian Thompson, Tribal Historic Preservation Officer

Coharie Tribe

Freddie Carter, Chair
Gene Jacobs, Chief
Greg Jacobs, Executive Director

Delaware Nation

Darren Hill, Director of Cultural Preservation Program
Deborah Dotson, President
Kim Penrod, Director of Cultural Resources
Nekole Alligood, Director of Cultural Resources

Delaware Tribe Historic Preservation

Susan Bachor, Historic Preservation Representative

Delaware Tribe of Indians

Brice Obermeyer, Historic Preservation Director
Chester Brooks, Chief

Eastern Band of Cherokee Indians

Holly Austin, Tribal Historic Preservation Officer
Richard Sneed, Principal Chief
Russell Townsend, Tribal Historic Preservation Officer

Eastern Shawnee Tribe of Oklahoma

Brett Barnes, Tribal Historic Preservation Officer
Glenna Wallace, Chief

Haliwa-Saponi Tribe

Archie Lynch, Tribal Administrator
Michael Richardson, Chair
Ogletree Richardson, Chief

Jena Band of Choctaw Indians

Alina Shively, Tribal Historic Preservation Officer
Cheryl Smith, Principal Chief

Lumbee Tribe

Dock Locklear, Acting Administrator
Freda Porter, Administrator
Harvey Godwin, Tribal Chair

Mattaponi Tribe

Mark Custalow, Chief

Meherrin Indian Tribe

Jonathan Caudill, Jr., Chair
Wayne Brown, Chief/Tribal Administrator

Mississippi Band of Choctaw Indians

Phyliss Anderson, Chief

Monacan Nation

Kenneth Branham, Tribal Chief
Lou Branham, Assistant Chief

Muscogee (Creek) Nation

Corain Lowe-Zepeda, Tribal Historic Preservation Officer
James Floyd, Principal
Raelynn Butler, Manager, Historic and Cultural Preservation

Nansemond Indian Tribe

Lee Lockamy, Chief
Barry Bass, Chief
Samuel Bass, Chief

Nottoway Indian Tribe of VA

Beth Roach
Leroy Hardy, Councilman
Lynette Allston, Chief
William Wright

Occaneechi Band of the Saponi Nation

Vickie Jeffries, Tribal Administrator
W.A. "Tony" Hayes, Tribal Chair

Oneida Indian Nation

Jesse Bergevin, Historian
Raymond Halbritter, National Representative

Oneida Indian Nation of Wisconsin

Corina Williams, Tribal Historic Preservation Officer
Tehassi Hill, Chair

Onandaga Nation

Sidney Hill, Chief
Tony Gonyea, Faithkeeper

Ottawa Tribe of Oklahoma

Ethel Cook, Chief
Rhonda Hayworth, Tribal Historic Preservation Officer

Patawomeck Tribe

Charles Bullock, Assistant Chief

John R. Lightner, Chief

<u>Pawmunkey Tribe</u>

Robert Gray, Representative

<u>Poarch Band of Creek Indians</u>

Carolyn White, Tribal Historic Preservation Officer
Stephanie Bryan, Chair

<u>Rappahannock Tribe</u>

Anne Richardson, Chief

<u>Rosebud Sioux Tribe of Indians</u>

Ben Rhodd, Tribal Historic Preservation Officer
Russell Eagle Bear, Tribal Historic Preservation Officer

<u>Sapony Tribe</u>

Dante Desiderio, Executive Director
Dorothy Crowe, Tribal Chair
Otis K. Martin

<u>Seneca Nation of Indians</u>

Morris Abrams, Tribal Historic Preservation Officer
Todd Gates, President
Jay Toth, Tribal Archeologist, Tribal Historic Preservation Office

<u>Seneca-Cayuga Nation</u>

William Fisher, Chief
William Tarrant, Tribal Historic Preservation Officer

<u>Shawnee Tribe</u>

Tonya Tipton, Historic Preservation Officer

<u>Shawnee Tribe of Oklahoma</u>

Kim Jumper, Preservation Office
Ron Sparkman, Chief

<u>St. Regis Mohawk Tribe</u>

Arnold Printup, Tribal Historic Preservation Officer
Beverly Cook, Chief

<u>Stockbridge-Munsee Community of Wisconsin</u>

Shannon Holsey, President
Bonney Hartley, Tribal Historic Preservation Officer

<u>Tonawanda Band of Seneca Indians of New York</u>

Kevin Jonathan, NAGPRA Contact
Roger Hill, Chief

<u>Tuscarora Nation</u>

Neil Patterson, Director of the Chiefs Council, Tuscarora Environmental Program
Bryan Printup, Representative
Leo Henry, Chief

United Keetoowah Band of Cherokee Indians in Oklahoma

Joe Bunch, Chief
Lisa Stopp, Tribal Historic Preservation Officer
Karen Prichett, TCNS Coordinator

Upper Mattaponi Tribe

Frank Adams, Chief
Kenneth Adams, Chief

Waccamaw Sioux Tribe

Brenda Moore, Housing Coordinator
Lacy Wayne Freeman, Chief
Matthew Blanks, Tribal Council Chair

State Representatives and Senators

North Carolina House of Representatives

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David Lewis, District 53 Representative
Dennis Riddell, District 64 Representative
John R. Bell, IV, District 10 House Majority Leader
Kirk Osteen, Policy Director for Rep. Stephen Ross
Kyle Hall, District 91 Representative
Phil Shepard
Polly Riddell, Legislative Aide for Representative Dennis Riddell
Stephen Ross, District 63 Representative
Theresa Lopez, Legislative Aide for Rep. Jerry Carter
Tim Moore, Speaker of the House

North Carolina Senate

Bill Rabon, District 8 Senator
Dan Blue, District 14 Senate Minority Leader
Harry Brown, Senate Majority Leader
Jon Hardister, State Representative
Karen Johns, Legislative Aide for Sen. Rick Gunn
Kathryn Currie Carter, Legislative Intern for Sen. Rick Gunn
Kirk DeViere
Michael Garrett, Senator
Rick Gunn, District 24 Senator
Phil Berger, District 26 Senator

Virginia Senate

David Suetterlein
Frank Ruff
Jerry Carter, District 65 House Representative
Steve Newman
Tommy Norment
William Stanley, Jr.

Virginia House of Delegates

Charles Poindexter, 9th District Delegate
Daniel Marshall, III, 14th District Delegate
Kirk Cox, 66th District, Speaker of the House
Leslie Adams, 16th District Delegate
Terry Kilgore, 1st District Delegate

Virginia 9th District

Morgan Griffith, 9th Congressional District Congressman

City Agencies

Alamance County

Brian Baker, Director of Parks and Recreation
Bruce Waller, Assistant County Manager
Bryan Hagood, County Manager
Clyde Albright, Attorney
Craig Honeycutt
Marlena Isley, GIS Director
Robert Key, Director of Inspections
Sherry Hook, Human Resources Director

Alamance County Board of Commissioners

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Bill Lashley, Vice Chair, County Commission
Bob Byrd, Commissioner
Eddie Boswell, Commissioner
Steve Carter, Commissioner
Tim Sutton, Commissioner

Alamance County Emergency Management Office

Debbie Hatfield, Emergency Management Coordinator

Alamance County Emergency Medical Service

Teresa Harvey

Alamance County Fire Marshall's Office

John Payne, Fire Marshall

Alamance County GIS

Katherine Liles, Interim Planning Director

Alamance County Historic Properties Commission

Jessica Dockery, Planner

Alamance County Planning Department

Rodney Cheek, Chair
Tonya Caddle, County Planner

Alamance County Sheriff's Office

Terry Johnson, Sheriff
Cliff parker, Chief Deputy

Chatham Town Council

William Pace, Mayor

City of Burlington

Hardin Atkins, City Manager
Robert Patterson, Jr., Water Resources Director
Todd Lambert, P.E., City Engineer

City of Danville

Joni House, Preservation Coordinator
Kenneth C. Gillie, Jr., Director of Community Development

Telly Tucker, Director of Intergovernmental Affairs

City of Eden

Angela Hampton, Council Member
Bernie Moore, City Council Member
Darryl Carter, City Council Member
Debra Galloway, Planner
Jerry Ellis, City Council Member
Jerry Epps, City Council Member
Jim Burnette, Council Member and Mayor Pro-Team
Kelly Stultz, Planning Director
Michael Dougherty, Director of Economic Development
Neville Hall, Mayor
Paul Dishmon, Director of Municipal Services
Stephen (Brad) Corcoran, City Manager
Sylvia Grogan, Council Member

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City of Graham

Chip Turner, Council Member
Frankie Maness, City Manager
Griffin McClure, Council Member
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Lee Kimrey, Mayor Pro Tem
Melody Wiggins, Council Member
Nathan Page, Planning Director

City of Reidsville

Donald L. Gorham, Council Member
Donna Setliff, Community Development Manager
Harry L. Brown, Council Member
Haywood Cloud Jr, Assistant City Manager
James K. Festerman, Council Member
Jay Donecker, Council Member
Jeff Garstka, Economic Development Director
Preston W. Mitchell, City Manager
Rev. William Hairston, Council Member
Sherri G. Walker, Council Member
Steve Moran, City Engineer
Terresia Scoble, Council Member

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Diane Sawyer, President

Human Relations Commission

Maricarmen Garduno

Reidsville Police Department

Robert Hassell, Chief

Danville-Pittsylvania County Chamber of Commerce

Alexis Ehrhardt, Interim President & CEO

Eden Chamber of Commerce

Heather Castle

Graham Police Department

Tony Velez, Lieutenant

Haw River Police Department

Scott Thomas, Assistant Chief

Haw River Sheriff Department

Toby Harrison, Chief

Haw River Town

Charlie Davis, Attorney

Mebane City

David S. Cheek, Manager

Orange County

Amanda Garner, Business Recruitment Economic Developer
Steve Brantley, Director

Pittsylvania County

Ben L. Farmer, Board of Supervisors Callands-Gretna District
Charles Miller, Supervisor
David M. Smitherman, County Administrator
Elton W. Blackstock, Board of Supervisors Staunton River District
Gregory Sides, Assistant County Administrator for Planning and Development
J. Vaden Hunt, County Attorney
Joe Davis, Supervisor
Karen Hayes, Deputy Director
Matt Rowe, Economic Development Director
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Ronald Scearce, Vice Chair, Board of Supervisors
Tim Barber, Supervisor

Planning Commission

Richard Motley, Planning Commission Chairman

Rockingham County

Carrie Spencer, Planning and Inspections Director
John Morris, Attorney
Lance Metzler, County Manager
Lynn Cochran, Planner
Tina Massey, Executive Assistant – County Manager's Office

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Charlie Hall, Commissioner

Kevin Berger, Chairman
Mark F. Richardson, Commissioner
T. Craig Travis, Commissioner
W. Keith Mabe, Commissioner

County Center
Kerry Taylor- Pinnix, Economic Development

Center for Business and Economic Development
Ken Allen, Assistant Director
Jan Critz Yokeley

Education Foundation
Dawn Charaba, Executive Director

County Government
Rodney Cates, Director of Emergency

Planning Department
Tonya Caddle, County Planner

Sheriff Department
Grey Smith, Captain
Samuel Page, Sheriff

<u>Stoneville Government</u>
Chuck Hundley, Town Council
Jerry Smith, Town Council
Johnny Farmer, Town Council
Kenneth Gamble, Town Manager
Ricky Craddock , Mayor

<u>Town of Green Level</u>
Michael Trollinger, Interim Town Manger
Rodney Gunn, Public Works

<u>Town of Haw River</u>
Buddy E. Boggs, Mayor
Charlie Davis, Attorney
H. Lee Lovette, Mayor Pro Tem
Jeff Fogleman, Council Member
Kelly Allen, Council Member
Melanie Eveker, Assistant Finance Officer/Town Clerk
Patty Wilson, Council Member
Sean Tencer, Town Manager
Steve Lineberry, Council Member

<u>Yanceyville Volunteer Fire Department</u>
John Worley, Chief

Companies and Organizations
1804-1814 Greenstreet Associates

329 Partners, LLC
Robert H. Kluttz, Registered Agent
801 Brooks Rd. Land Trust
Afro-American Historical and Genealogical Society of North Carolina, Inc.
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Reagan Chandler Gural, Vice President
Alamance Community College
Algie Gatewood, President
Cindy Day Collie, Vice President of Administrative and Fiscal Services
Thomas Hartman, Director of Administrative Services
Alamance County Area Chamber of Commerce
Mac Williams, President
Alamance County Historical Museum
William Murray Vincent, Director
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Appalachian Mountain Advocates
Benjamin A. Luckett
Apex Economic Development
Joanna Helms, Economic Development Director
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Ronald Adams and Cynthia Adams
Archy Grove United Christian Church
AWCK Engineering
Josh Johnson, Principal Engineer/Project Manager
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Belview Baptist Church
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Mark Barker
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Border Lake Farm
Howard Kicks, Jr.
Bryant Properties & Holdings, LLC
Shiloh Daum, Attorney
Burlington GIS
Patricia “Trish” Patterson
Burnt Shops, Inc., R. Henderson Scott, Jr. Family Limited Partnership
R. Henderson Scott, Jr., President
Cape Fear Workforce Development Board
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Capital Results
Shawn Day, Director of Public Affairs
Cardinal Pipeline Company, LLC
Cascade Meadows, LLC

Centro La Comunidad
    Lucy Rubiano, Family Support Specialist
Church of God of Prophecy
Circle Bar D Ranch, LLC
Circle Bar D Ranch, LLC, Willow Oaks Plantation, LLC
    Charles Dick Arthur, Registered Agent
Citizens Economic Dev. Inc.
Civitas Institute
    Donald Bryson, President
    Leah Byers, Policy Analyst
Clarence Hale Auto Sales Inc.
    Clarence Hale and Lenora Hale, Jason Todd Hale
Commonwealth Forest Investments, Inc.
Copland Fabrics
    Jason Copland, President and CEO
Cora Holdings, LLC
Cox Properties, LLC
    Carolyn Deloras Cox Browning, Manager
    Jerry C. Browning, Manager
Cultural Heritage Partners
    Ellen Chapman
    Kelli Peterson, Attorney at Law
    Marion Werkheiser
D3 Development, Inc.
    Cora Holdings, LLC, c/o Michael D. Hill, President
D & W Investment Properties, LLC
    Deborah J. Hines
Danville Historical Society
    Mark Joyner, President
Dan River Basin Association
    Jenny Edwards, Rockingham County Project Manager
    Tiffany Haworth, Executive Director
    Robin Light, Office & Finance Manager
Danville & Western Railroad
Danville Utilities
    Jason Grey, Director
Danville-Pittsylvania Regional Industrial Facility Authority
    Clement and Wheatley, Attorney
    Michael Guanzon, Attorney
Deep Creek Baptist Church
Delta Contracting, Inc.
Duke Energy Carolinas, Inc.
Duke Power Company
Duke Power Company
E S T Enterprises, LLC
    Scott Thompson, CEO
Economic Development Partnership of North Carolina
    Chris Chung, CEO
Eden Custom Processing, LLC
Eden Public Library
    Michael Roche, Library Director

Eden Rotary Club
- Vonda Higgs, Program Chair

Eden Water Department
Environmental Solutions and Innovations, Inc.
- Casey Swecker, Vice President
- Stephanie Frazier, Senior Project Manager
- Taina Pankiewicz, President, COO

EQT Energy LLC
- Megan D. Stahl, Permitting Supervisor

EST Enterprises, LLC
- Scott Thompson, CEO

Fieldcrest Road Properties, LLC
First Baptist Church of Draper
FLMR Properties, LLC
Foss Rentals, LLC
G&I Properties
Glen Raven Mills, Inc.
GNE Properties, LLC
- Bradley C. Friesen
- Faye Diachenko

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- Jeannette Beaudry, Chair

Greenbrier Pipeline Co., LLC
- Beverly Lowe

Greenwood Presbyterian Church
- James Pruitt, Elder

H. S. Nolen General Contractors
Haw River 413 Boundary Street
Haw River Assembly
- Elaine Chiosso, Executive Director
- Emily Sutton, Haw River Watch Coordinator

Haw River Baptist Church
Haw River Business Center, LLC
- Pam Stone

Haw River HDC I, LLC, Haw River HDC II, LLC, Haw River HDC III, LLC
Haw River Heritage, LLC
Haw River Historical Society Museum
- Gail Knauff, Director

Haw River Partners, LLC
Haw River Sanitary District
Haworth & Reese, PLLC
- Daniel Lee Bates and Emily Talbott Bates, Attorney

High Country Holdings, LLC
- Hirschler Fleischer
- Joseph Lee Stiles, Esq

Igloo Series II Reo, LLC
Independent Timber, Inc.
- Emmett Martin

Innotex Holding USA, LLC
Interstate Investments of Alamance, LLC

Irvine River Company
    Mark Bishopric, President
JDC Manufacturing, LLC
    Hagan Barrett
John Robert Kernodle Senior Center
Judy Whitfield, Senior Center Director
Johns & Counsel PLLC
    Daniel A Hughes and Margaret M. Hughes, Attorney
K Farms, Inc.
Keystone Foods, LLC
Knowles Road Trust
Lenox Castle Farms
    William Jarrell Young
Lewis Brothers Farms, LLC
M. Kendall Lumber Company, Inc.
    Vanna Connor, Secretary
Martin Marietta Materials, Inc.
    Brian North
    Josh Turner
Maxey Properties, LLC
May Memorial Library
    Lisa Kodin, Reference Department
    Deanna Cunningham, Branch Manager
MBEE Properties, LLC a NC limited liability company
    Bryan M. Wagoner and Michele F. Wagoner
McCandles Performance, LLC
McLeansville Corp.
    Melinda H. Coleman, President
Mebane Historical Society and Museum
    Traci Davenport, Executive Director
Millercoors LLC
Morningside, LLC
Mountain Valley Pipeline, LLC
    Travis Garrett
Moving North Carolina Forward
    Tom Hendrickson, President
NC Manufacturer Extension Partnership
    Phil Mintz, Executive Director- Industry Expansion Solutions
NextEra Energy, Inc.
    Alex Miller, MVP Southgate Permitting Lead
    Christina Akly, Senior Environmental Specialist
    Matt Raffenburg, Director, Environmental Services
Norfolk Southern Railway Co., Property Tax Department
    Property Tax Department
Norfolk Southern, Southern Railroad
    Herbert Wilson, Real Estate Manager
Normandy Mtg Loan Trust 2016-1
North Carolina Chamber of Commerce
    Angela Sutton, Event Sponsorship Manager
    Gary Salamido, Vice President, Governmental Affairs
    Kate Payne, Vice President, Communications

Kara Carter, Communications Manager
Michael Hill, Executive Director of Economic Development
Susan Fleetwood, Executive Director of Economic Development
North Carolina Economic Development Association
Lawrence Bivins, Managing Director
North Carolina Economic Development Association
Liz Dobbins-Smith, Managing Director – Membership Engagement and Programs
North Carolina Future Farmers of America
Alycia Thornton, Director of Development
Jason Davis, Coordinator
North Carolina Natural Heritage Program
Laura Robinson, Botanist
Misty Buchanan, Director
North Carolina Petroleum Council
David McGowan, Executive Director
North Carolina Museum of Natural Sciences
Patricia (Trish) Weaver, Collections Manager, Geology and Paleontology
Lisa Herzog, Operations Manager, Paleontology
North Carolina Railroad Company
PFJ Southeast, LLC
Piedmont Triad Partnership
Jed McMillan, Vice President, Government Affairs
Penny Whiteheart, Executive Vice President
Stan Kelly, President & CEO
Pittman and Steele
Tom Steele, Attorney – Cantelmo Family Irrevocable Trust c/o John R Cantelmo
Pittsylvania County Public Library
Jennifer Arthur, Branch Manager
Pittsylvania Historical Society
Larry Aaron, President
Pittsylvania Historical Society
Mary Plaster, President
Preservation Virginia
Sonja Ingram, Preservation Field Services Manager
Protect Our Water Heritage Rights (POWHR)
Russell Chisholm
Public Service Company of North Carolina
David Knott
Ranch Properties, LLC
Peter F. Osborne, Registered Agent
Reidsville Public Library
Michael Roche, Library Director
Reidsville Rotary Club
John Kolessar, President
Remnants and Textiles, Inc.
Revolution Properties Holdings, LLC
Rosemarie Williams
Rock Solid Hardscapes, LLC
Rockingham Community College
Mark Kinlaw, President
Rockingham County Center

Adam Mark, Economic Development
Rockingham County Center for Economic Development
Leigh Cockram, Director of Economic Development and Tourism
Rockingham Historical Society
Jordan Rossi, Executive Director
Rolesville Economic Development
Mical McFarland, Economic Development Director
Sandy Oaks Farms, LLC
Brian Lavinder, Registered Agent
Sanford Area Growth Alliance
Bob Joyce, Economic Development Director
Jimmy Randolph, Existing Industry Development Manager
Scott Associates
Mike White
Second Partners, LLC
Sierra Club
Caroline Hansley, Organizer, working with the Beyond Dirty Fuels campaign
Smith Family Irrevocable Trust
Jennings Smith
Sonim, LLC
South Rock Farm, LLC
M. Denise Booth
South Rock Farm, LLC
Tina Pinnix-Broome
Southern Environmental Law Center
Geoff Gisler, Staff Attorney
Southern Railway Co.
Southwestern Virginia Gas Company SCC
Hershel Michaels
Spencers, Inc. of Mount Airy NC
Stone Street Development, LLC
Tall Timber Holdings, LLC
Textile Heritage Museum
Jerrie Nall
The Eminent Domain Litigation Group
David C. Dalton and Nancy C. Dalton, Attorney
Thomas Weaver Construction Company, Inc.
Transcontinental Gas Pipeline Company, LLC
Jim Hutchins
Transcontinental Gas Pipeline SCC
TRC Companies, Inc.
Paul Webb, Cultural Resources Program Leader
Tracy Millis, Senior Archaeologist/Senior Project Manager
Truby Drive Realty, LLC
United States Cellular Corporation, A Delaware Corporation
Virginia Chamber of Commerce
Barry DuVal, President & CEO
Virginia Economic Development Partnership
Christy Morton, Vice President, External Affairs
Jason El Koubi, Executive Vice President
Stephen Moret, President & CEO

Vince Barnett, Vice President, Business Investment
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Virginia Oil and Gas Association
Ian Landon
Virginia Outdoor Foundation
Martha Little, Deputy Director of Stewardship
Virginia Petroleum Council
Miles Morin, Executive Director
Virginia Speleological Survey
Mike Futrell, GIS/DB Manager
Virginia-North Carolina Piedmont Genealogical Society
Diane Barbour, Publicity Chair/Immediate Past President
Watts for Congress
Willow Oaks Plantation, LLC
Wolf Island Forestry, LLC
Kenan C. Wright
Z Trans Property, LLC
Igor Nikolovski

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Alan Hall
Alan Lewis
Alan Lynn Pike and Debra Lovelady Pike
Albert Billie Troxler and Barbara Troxler
Albert Johnson, Sr.
Albert L. Keatts and Ocie Adams Keatts
Alfred O. Smith
Alice Doraine B. Shropshire
Allen R. Gardner, Nancy F. Gardner, and Gladys M. Frazier
Allen Scott Mitchell
Allen Scott Mitchell and Cynthia C. Mitchell
Alvin Herbin and Virginia B. Herbin
Alyssa Hamilton and Penny Jones
Amanda M. Roach
Anderson M. Jones and Elizabeth Jones
Andrea Brown
Andrea D. Boothe
Andrew N. Johnson and Wilma Anne Johnson
Andy Salomon Chavez Sandoval c/o Freddy Chavez
Angela Marie Hinton
Angela Parham
Angelica Covarrubias
Anglia Gail Reavis
Ann Hilton-Huffsmith
Anna H. Wingate
Anne Lane
Anthony Ray Mull
Anthony Settle, Alphony Settle, Carol J. Cummings and Maxine Settle
Anthony W. Jones and Kellie R. Jones
April Marie Stanfield and Ronald Stanfield
Ardell Harrison
Arnie Thomas Roberts and Martha Roberts
Arthur Brunner and Ann Wegmann
Arvin Van Lemons and Joyce M. Lemons
Asure Grisales and Ellen E. Grisales
Avet Anderson
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B. W. Walker and James R. Walker
Baltazar Cruz and Bonnie R. Cruz
Bambi Farris Hutchinson
Barbara B. Perkins
Barbara Booth Hand
Barbara Linville Rebb
Barry Giles Hyler and Katherine Shelton Hyler
Barry Justin Cochran and Deborah Vernon Cochran
Barry S. Frank
Bart Allen West and Rene Lee West
Beatrice B. Hornaday
Beatrice Evelyn Cochran
Belinda Beeson

Belwood L. Hyler
Ben Edwards
Benjamin Joel Andrews and Kimberly Russell Andrews
Bennie L. Anderson
Betty Williams
    General O. Totten Estate c/o Betty Williams
Beulah Kay Danieley and Jesse Steven Gwynn
Beverly S. White and William S. White
Bill Hunt
Bob Costa
Bobby Cox
Bobby Daniel Chambers and Wendy Carol Cain Chambers
Bobby Franklin Wall and Lavalon C. Wall
Bobby G. Brown and Peggy W. Brown
Bobby W. King and Linda C. King
Bonnie Apple Robertson
Bonnie Jean Quanah Colon
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Brenda Clark c/o Michael Harrison
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Bryan M. Wagoner and Michele F. Wagoner
Bula Fay Conner
Byron Lee Moose
Calvin C. Montgomery and Fran T. Moore
Calvin Timothy Collie
Camden Whitehead and Betty W. Whitehead
    Betty W. Whitehead Revocable Trust
Cantelmo Family Irrevocable Trust c/o John R. Cantelmo
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Carlton Dillard Estes and Janice Estes
Carlton Vaden Morton and Betty Brown Morton
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Carol Christopher Oliver
Carol H. Emerson
Carol Jean Metcalf
Carol Jean Presnell
Carol Miles Headen and Dan Headen
Carol Williamson Oakes
Caroline Franklin Holliday
Carolyn Harrison
Carolyn Harrison c/o Michael Harrison
Carrie Brown Massey
Carrie Louise G. Smith c/o Scott (Colt) Puryear, Attorney
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Catherine R. Norville et al
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Chad Everett Soyars and Chandra Lynn Soyars
Chad Matthew Randleman
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Charles Kevin Harris and Angela C. Harris
Charles S. Bumbarner and Elizabeth Bumgarner
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Charlie Worth Lee, Jr. and Brenda Worth
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Cheryl Turner
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    The Scott Family Irrevocable Trust Agreement
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Christine Apple Turner and Thomas Barry Turner, Jr.
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Christopher P. Maltby

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Cruciger
Curtis S. Millner
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Cynthia King Smith Mance
Cynthia Mae Caudill Cobb, Kenneth W. Cobb and Teresa Cobb Massey c/o Teresa Cobb Massey
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D. L. Motley
Dale Frank Tate
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Daniel Lee Madren and Loretta B. Madren
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    Ella West Bason Life Estate
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Elva Teeters c/o Robert Teeters and Elva Teeters
Emigdio Castro and Humberto Castro
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Estate of Mattie N. Harrison c/o Ardell Harrison
Estate of W. H. Matkins c/o Phillip H. Brown
Estate of Walter Sanford Harrison c/o Anna H. Wingate
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    The Herman Colon Johnson Irrevocable Trust of December 2012
Howard Frank Pickrell
Howard J. Shelton and Lana E. Shelton
Howard L. Dunn, Jr. and Patricia L. Dunn
Ilene Byrd and Eve Sharpe
Ilona Flowers
Irye Ray Emerson and Carol H. Emerson c/o J. Ray Carper, Attorney
Irye Ray Emerson, Sr.
Issac C. Hill and Brandy A. Hill
Ivey Dunn Gilliam
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J. Leon Moser and Martha A. Moser
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Jackie R. Thompson and Eldean W. Thompson
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Jackie Ray Atkinson, Jr.
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James Edward Powell
James Elmoe Woods
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James Felix Stanley
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James J. King
James Knapp
James L. Chaney
James L. Howlett Trust
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James Lowell Kernodle and Mary Ann Kernodle
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James Reed Barber and Marion Barber
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James Wayne Kernodle
James William Walker

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Janette L. Riggan and Marsha E. Firth c/o Coy Firth
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Johnnie W. Foster, Sr. et al.
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Johns M. Martin and Johnnie M. Martin
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Jonathan L. Glenn
Jonathan N. Hollie and Christina R. Hollie
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Joseph Williams and Dina Williams
Joyce C. Vaughn Revocable Trust
Joyce F. and James G. Anderson
Joyce Hyler Marshall
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Julie Wynn Snead
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Justin William Smith
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Kalyn Hamilton
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Karen B. Maute
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Katherine Fox
Katherine V. Bayless
Kathleen M. VanDerHyde
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Kathryn M. Nicholson
Kathy Crutchfield Nelson and Jeffrey Davis Nelson
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Keith James Flinchum
Keith L. Miller, Jr. et al
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Laura K. Palmer
Laurence Tipton
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Lelia Jones Tranbarger
Len McCauley
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Leonard W. Strickland and Doris O. Strickland
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Linda Gail Mckinney Kennedy
Linda Rosborough
    Maxine K. Rosborough Estate
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Lloyd G. Tucker and Faye Isley Tucker
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Lori Dyer Webster
Lori Thorn
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Margaret Earlene Odell Estes, Pamela Estes Ragland and Ralph Edward Estes
Margaret H. Paschal
Margaret Katherine Whitehead and Robert Walton McNutt Jr.
Margaret Marie Kendrick Corum Thomas
Margaret W. Smith and Robert L. Smith
Margie P. Manley
Margie Williamson
    Estate of Elnora Miles
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Marion H. Gwynn
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Mark W. Hallman, Jr.
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Marsha F. Fernandez c/o Coy Firth
Marshall H. Kendall
Martha B. Brown
Martha Diane Soyars
Martha Vernon McCollum and Robert Edward McCollum
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Marvin E. Hylton and Margaret E. Hylton
Marvin Lee Strickland
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Mary Barnes Murphy and Clinton Irene Barnes
Mary Ella Scott
Mary Emogene Faucette c/o Mark L. Faucette
Mary Gant
Mary Hardy Betterton c/o Benjamin L. Perdue
Mary Hyler Fitch and James David Fitch
Mary Mitchell Thomas
Mary Nelson Underwood
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Maureen B. Sweeney
Maurice H. Vaughan, Jr. and Lusanna L. Vaughan
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Maxine K. Rosborough Estate, c/o Linda Rosborough
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Melissa Summerlin Pruitt and Brian Michael Pruitt
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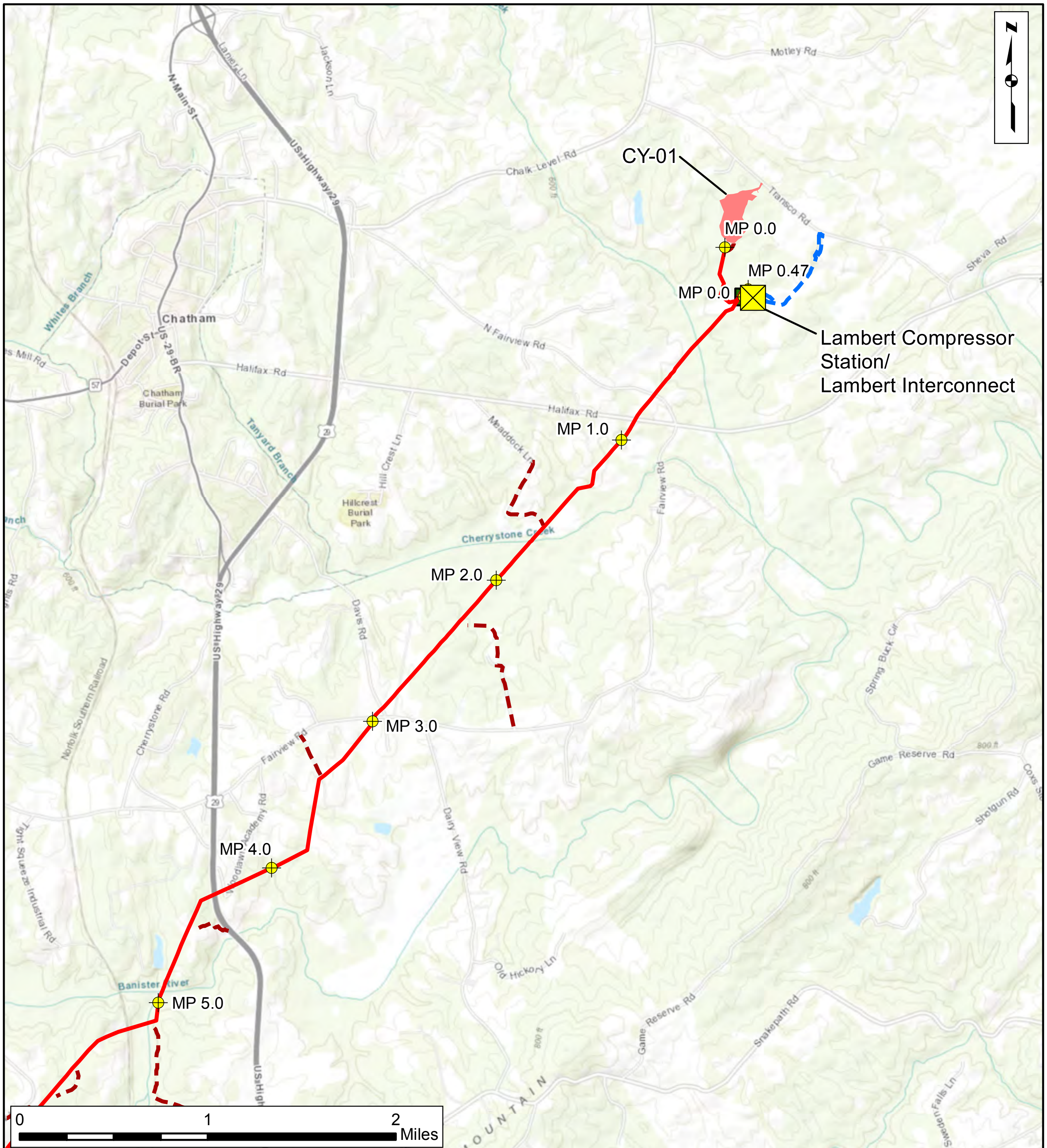
Melvin F. Stone and Deborah S. Stone
Melvin S. King
Michael A. Greene and Jane N. Greene
Michael A. Warren and Karen Warren
Michael Brown
Michael Brown and Laureen Brown
Michael C. Bray and Teresa S. Bray
Michael Edison Rascoe
Michael Glenn Wallace and Paula Rochelle Wallace
Michael Harrison
Michael J. Dishmon and Joyce M. Dishmon
Michael Lee Ward
Michael Lewis Neal and Janine R. Neal
Michael Lynn Barnette and Karen Barnette
Michael O. Paschal and Barbara Knowles Paschal
Michael R. Stowe
Michael Robert Comer and Jonna C. Comer
Michael Stephen Madren
Michael T. Benesch and Darlene B. Benesch
Michael Wheeley and Wanda Wheeley
Michele Aust
Michele P. Moon
Michelle S. Morris
Michelle T. Kennon and Melissa Kennon
Mildred W. Emerson, Clarence A. Emerson, Jr. and Robin K. Emerson
Milton Dickerson and Sherrie Darlene Dickerson
Minnie Lee Cox
Mitch and Stephanie
Mitchell M. McEntire and Virginia McEntire
Morgan Blanchard Thompson
Munsey R. Jones and Judieth W. Jones
Myra P. Cathey and Anthony Cathey
Nadine L. Maness Life Estate Indian Village
Nancy H. Weatherford
Nancy M. Evans and Sherry Ellen Evans Reynolds
Nancy Roscoe Hughes
Nasser Hallaji and Violet Ann Hallaji
Neil R. Fedin and George Thomas Foster
Nellie Mann and William Franklin King
Nicole Spiven
Nicole Tafton Balderas and Jose Juan Balderas Camargo
Norma Blakey
Norman Lehnhardt
Noyd Grayson Eaton and Joseph T. Eaton
Otis L. Foster and Louise J. Foster
Owen McKenzie Living Trust and Marta

McKenzie Living Trust c/o Butch McKenzie
Pamela J. Muller
Pamela Knowles Isley and William Jerry Isley
Patsy Sharon Patterson
Patty Johnson Wilson
The Herman Colon Johnson Irrevocable Trust of December 2012
Paul Bennett East, Jr. and Samuel D. East
Paul Edward Robertson
Paul Franklin Wilson
Paul G. and Zenella R. Radford
Pearl T. Mansfield
Peggy R. Dishmon
Peggy W. May and Donnie L. Warren
Perry Blanchard Slade and Jack Daniel Slade
Pete Witty
Phaivanh Khamdy and Ketmany Khamdy
Phillip D. Hylton and Brenda L. Hylton
Phillip H. Brown
Phillip McCalister and Sheila McCalister
Phillip V. Cantrell and Donice J. Cantrell
Phillip W. Hutson and Susan H. Hutson
Phyllis B. Hunter
Phyllis Mitchell
Porter Lee Raines and Katie Travis Raines
Posey W. McBride
R.E. McCauley Heirs c/o Ralph McCauley
R.M. Jordan
Raeford A. Rogers and Janice A. Rogers
Ralph Loeb and Elizabeth H. Loeb
Ralph Lynn Denny
Ralph Robert Swink and Patricia Dewald Hall
Ramona Faye Millner
Randall and Janna Smith
Randy Alan Bryant
Randy C. Kernodle
Randy E. Bright and Yvonne H. Bright
Raven Lee Broeker and Cathi Jo Broeker
Ray Schaffer
Raymond Carl Thomas
Raymond D. Shisler and Anna M. Shisler
Raymond Devine and Michael L. Devine
Raymond William Batterman, Jr.
Rehwick G. James and Phyllis Rivers James
Reid N. Oakley and James Lynn Oakley
Reid Nash Oakley
Renee Womack
Rex R. Paschal and Bernice Paschal
Richard Belton and Darlene Belton
Richard G. Motley and Reva A. Motley
Richard Garner and Deborah Garner
Richard K. Lowe
Richard L. Rust and Lori R. Rust
Richie Belton and Darlene Belton
Rick King
Rickie S. Manuel
Ricky Dale Jones
Rinda G. Brewbaker
Robert and Marcia Cauthren
Robert Andrew Cagle
Robert B. Stump
Robert Benton Dishmon
Robert C. Teeters and Elva Teeters
Robert C. Warren, Jr. and Lena Kay Warren
Robert Charles Welch Basler and Jami Basler
Robert F. Brown and Karen V. Brown
Robert F. Rhodes
Robert F. Woody, Jr.
Robert H. Gillespie and Estelle Matherly Gillespie
Robert J. Mullis and Connie R. Mullis
Robert L. Carter and Peggy G. Carter
Robert Lee Martin, Jr. and Carolyn Estes Martin
Robert M. Walker and Elizabeth Walker
Robert Matthew Overby and Kathleen M. Overby
Robert Morris Pollok, Jr.
Robert R. Bennett and Mary C. Bennett
Robert S. Fonville
Robert T. Lunsford and Karen M. Lunsford
Robert Travis Mullen
Robert W. Hensley and Mary H. Hensley
Robert William Pollok
Robert Woodson Smith and Carol S. Smith
Robin Denise Morrow
Robin T. Mullins and Rodney E. Turner
Roderick Miller
Roger D. Moser and Tammy C. Moser
Roger H. Sisson and Marie L. Sisson
Ronald David Smith, Jr. and Johanna C. Smith
Ronald Eugene Turner
Ronald K. Ward and Doris H. Ward
Ronald M. Jordan II
Ronald Michael Jordan, II
Ronnie James Snowdy and Kimberly L. Snowdy
Roscoe D. Anderson Estate c/o Eric C. Anderson
Roy L. Tranbarger and Lelia Jones

Tranbarger
Roy R. Loftis and Judy J. Loftis
Roy Vanderhyde and Kathleen M. VanDerHyde
Ruby Hardin c/o Michael Harrison
Ruth Moore
Ruth S. Anderson
Ruthie Mae Johnson
Sadee Allen
Sam Bobby Stallings and Jean G. Stallings
Sam L. Coleman and Linda H .Coleman
Samantha Hatt
Samantha Parsons
Samuel Elliott Benton
Samuel Eugene Benton and Deborah Saul Benton
Samuel J. Adkins and Christie O. Adkins
Sandra Batterman Church
Sandra D. Payne
Sandra Madren Shoe
Sandra Thomas Jones
Sarah Faucette
Scot M. Gilbert and Louise M. Gilbert
Sean Leigh Moore and Lisa Moore
Seth Trevis Edwards and Whitney Poole Edwards
Sharon Patsy Patterson
Shawn Dwight Simpson and Karen Renee Firth
Shawn Gorman
Sherry B. Gunn
Sherry W. Burris and Ken Whitesell
Shiloh Daum
Shirley B. Baggerly c/o Stephen Clarke
Shirley McCain Miller
Stella H. Emerson
Stephen D. Joyce and Autumn S. Joyce
Stephen P. Wilson
Steve E. Smith and Michael David Hardingham
Steven D. Allen
Steven D. Cannon and Tambitha P. Cannon
Steve E. Smith and Michael David Hardingham
Steven L. Cobb and Cynthia Cobb
Steven L. Coleman and Debra C. Coleman
Sue I. Tipton and Laurence W. Tipton c/o Stan G. Abrams
Sue Nash Cox
Susan J. Tucker
Susano B. Jaimes
Sydney L. Miller, Keith L. Miller, Jr. et al.
Sylvia Hutson Cusumano and Linda Hutson Green
Sylvia Suriani
Taftan Nicole Balderas
Takwana Stout Hopkins
Tammy Ann Hale
Tangela D. Williams
Terry Haith
Terry J Powell et al c/o Conrad Powell
Terry J. Blackstock and George L. Blackstock, Jr.
Terry Scott and Pamela Scott
Terry Wayne Sawyer
The Allens
Thelma C. Bell
Thomas D. Newcomb, Jr.
Thomas De Wayne Brim and Monique Moore Brim
Thomas E. Annas
Thomas E. Echols, Ronnie W. Echols, Timothy K. Echols, and Norris E. Echols
Thomas E. Marsh
Thomas E. Tomerlin and Frances B. Tomerlin
Thomas Hiatt and Thomas Richard Hiatt
Thomas Michael Edwards
Thomas Michael Hand and Barry Spencer Frank
Thomas O. Martin and Amy G. Martin
Thomas R. Buccier
Thomas R. Wangard and Janice U. Wangard
Thomas S. Stump and Kathryn F. Stump
Thomas W. Pritchett and Lydia P. Brincefield
Tiffney Renee Jones
Tim Hamilton
Timothy Duke Roney c/o Carol Roney
Timothy L. Shelton and Elaine K. Shelton c/o Michael R. Stowe
Timothy M. Hale and Michelle P. Hale
Timothy Mark Barber and Danny Madison Barber
Timothy W. Moore and Patricia S. Moore
Todd H. Whitt and Joyce F. Whitt
Todd Sherrill
Toni D. Deaton and Tangela D. Williams
Tony D. Estes and Christina Estes
Torrey L. Roach and Amanda R. Roach
Torry and Amy Roach
Tracey A. White
Tracey James
Travis Garrett

Trevor Wayne Hale
Trojan Smith and Suzanne Smith
Valerie Mae Stone
Van W. Walker
Velma Lorene Haynes Hutson
Velma Samuel Adkins Heirs c/o John R. Adkins
Vera Kernodle Bullock
Vernon Allen Morris, Jr. and Karen Rudd Morris
Vernon S. Wilson and Cora Marie Wilson
Vince DiGirolamo
Virgil Alexander Cochran
Virginia Ann Jones Wilmouth
Virginia B. Sharpe, et al
Virginia D. Moore
Virginia Mitchell Smithers and Allen Scott Mitchell
Vivian Parsons Parrish
W. Garland Lynn and Susan Lynn
Wade L. Ray and Amber L. Ray
Wallace D. Dishmon and Patricia W. Dishmon
Walter Donald Gerringer and Tammy Haizlip Gerringer
Walter E. Vanhorn and Patricia S. Halley
Walter H. James and Tracey W. James c/o Cathy R. Stroupe, P.A.
Walter H. James and Tracey W. James and Walter James
Walter L. Romine and Tammi H. Romine
Walter Randall Weddle
Walter Sanford Harrison, Jr. c/o Michael Harrison
Wanda H. Overby and J. Pete Overby
Wayne B. Perry and Doris R. Perry and Wayne B. Perry, Jr.
Wayne Hilliard Gillie
Wayne P. Rose and Donna T. Rose
Wayne S. Apple
Wendy P. Snow and Robert Lee Pruitt
Wesley T. French and Kristi M. French
Wetona Inez Moore
Willard L. Williams
William A. Emerson, II
William A. Lineberry
William Brian Chapmon and Meredith Lee Chapmon
William Clifford Steele, Jr.
William E Slade and Kay D. Slade
William G. Dougherty and Teresa D. Parks
William G. Williams and Margaret Williams
William H. Johnson and Geraldine Johnson
William H. Rogers, Jr. and Judith R. Rogers
William Henry Price, Jr.
William Holt Boone and Wilma Byrd Boone
William I. Crabtree and Carolyn W. Crabtree
Crabtree Family Irrevocable Trust
William Jerry Fonville, Jr.
William Jerry Fonville, Jr. c/o Belinda Beeson
William K. Strader
William K. Tapscott and Roxanne O. Tapscott
William Leonard Merritt
William Lynwood Irving
William M. Hales and Lisa S. Hales
William Melvin Pickrell and Mary Ann Pickrell
William Michael Spain and Ashley Nicole Hardy
William R. Lowry
William Roger Cobb, Jr.
Az William S. Jones et al
William Seth Rascoe
William Simpson and Wanda Simpson
William T. Strickland and Ellen S. Roberts
William Timothy Walker
Wilma Anne Johnson and Andrew Nathaniel Johnson
Xanthan William Lee and Charmin Britt Lee
Yesica Becerra
Yvonne Martin Whitt
Zachary Michael Neefe and Elizabeth Seaks Neefe
The Jimmy H. Coble Revocable Trust dated April 13, 2000

APPENDIX B.1 Project Overview Maps



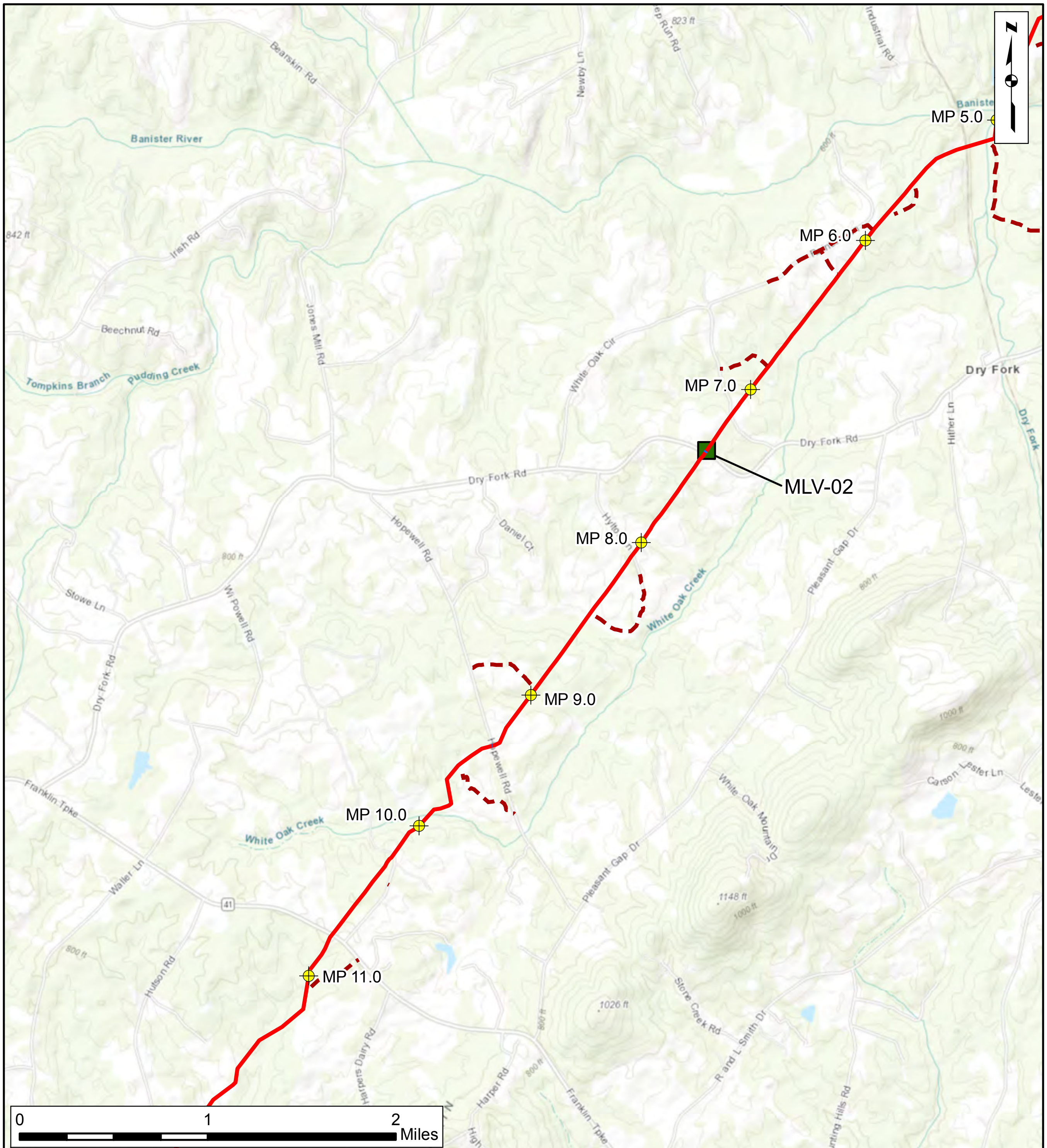
Legend

- Milepost
- Proposed Pipeline Route
- Permanent Access Road
- Temporary Access Road
- Mainline Valve
- Yard
- Meter Station/Interconnect
- Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
Page 1 of 14



Milepost	Mainline Valve
Proposed Pipeline Route	Yard
Permanent Access Road	Meter Station/Interconnect
Temporary Access Road	Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
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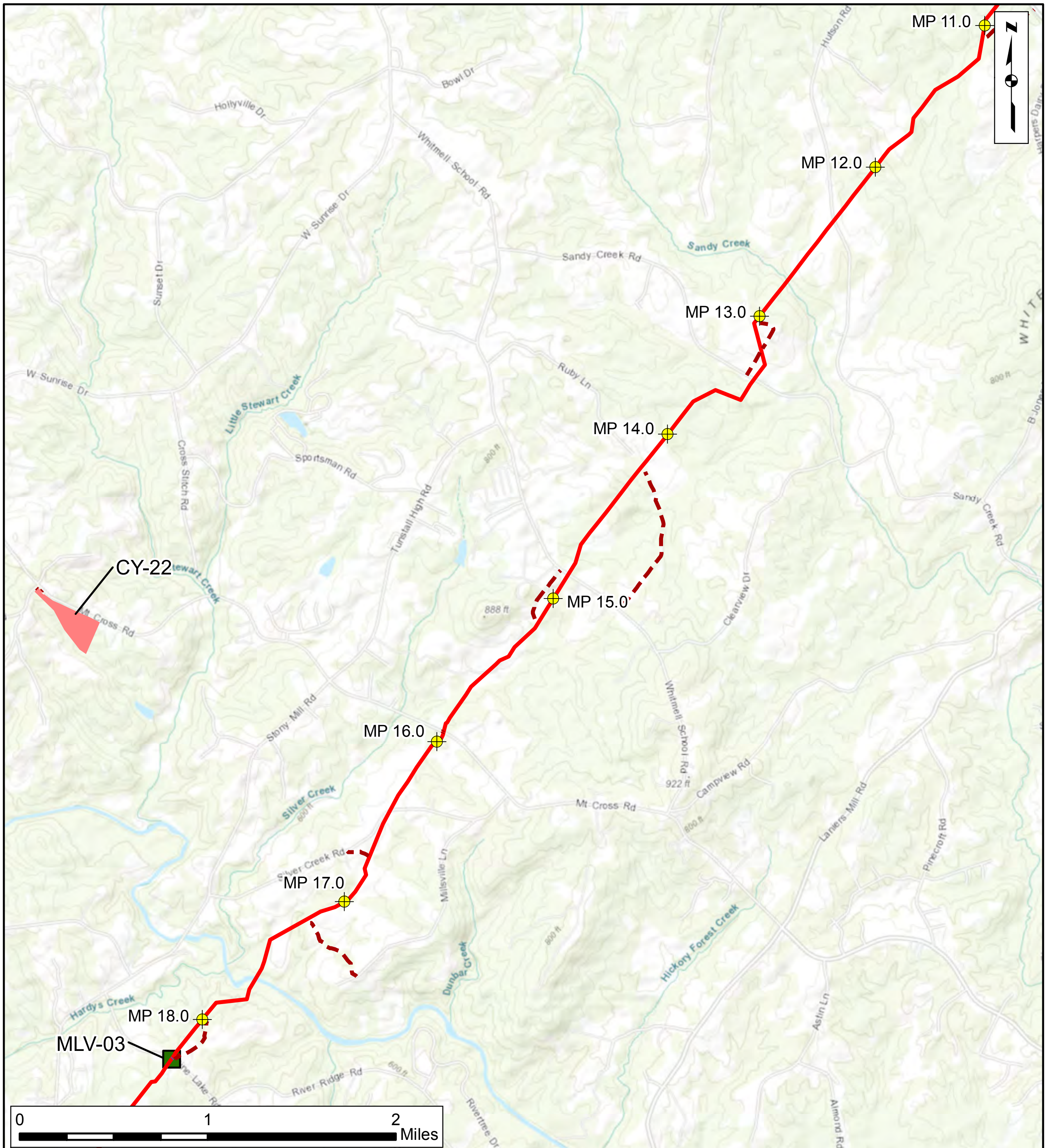

	Milepost		Mainline Valve
	Proposed Pipeline Route		Yard
	Permanent Access Road		Meter Station/Interconnect
	Temporary Access Road		Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
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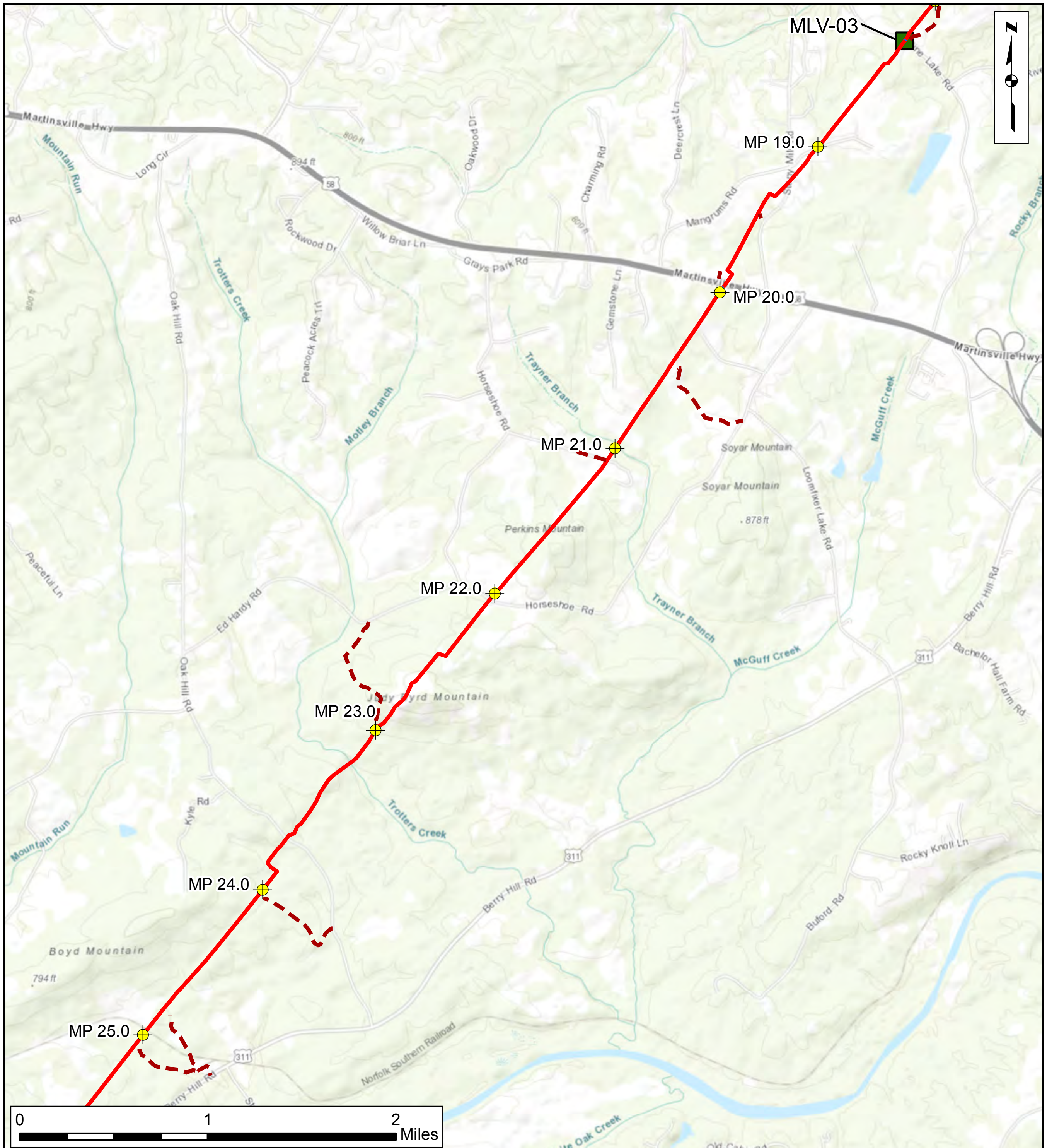

Milepost
Proposed Pipeline Route
Permanent Access Road
Temporary Access Road
Mainline Valve
Yard
Meter Station/Interconnect
Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
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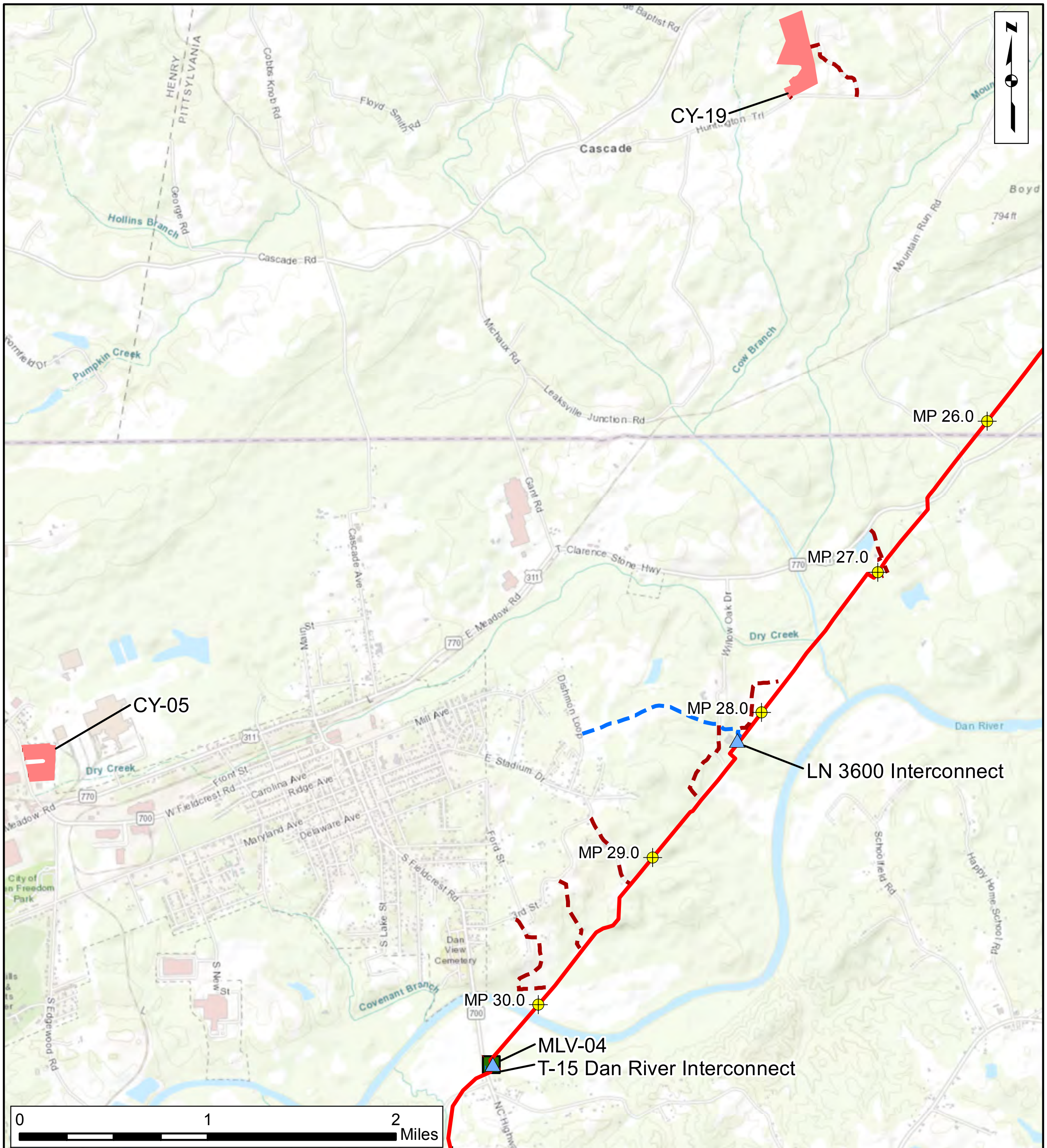

- Milepost
- Proposed Pipeline Route
- Permanent Access Road
- Temporary Access Road
- Mainline Valve
- Yard
- Meter Station/Interconnect
- Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
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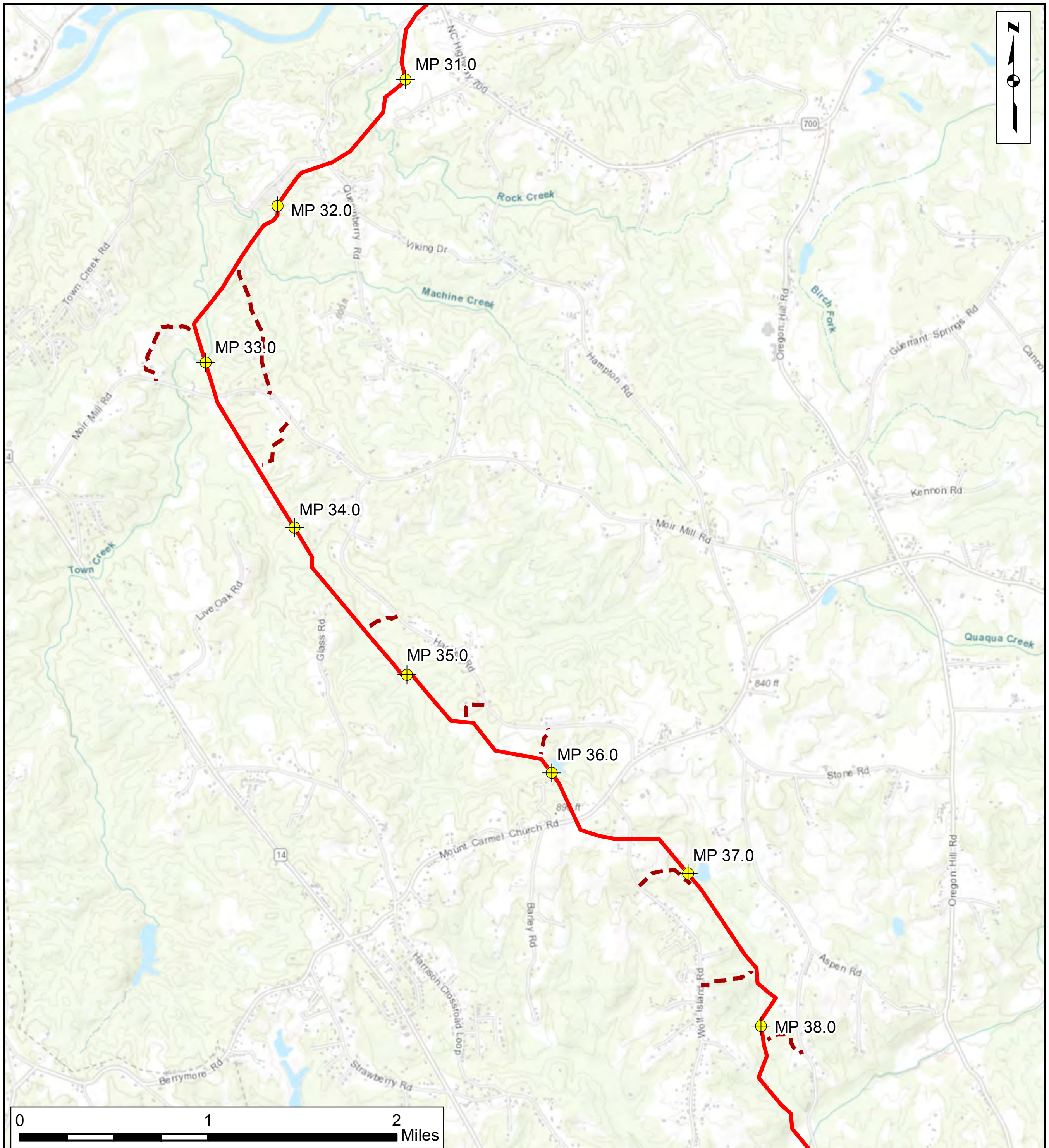
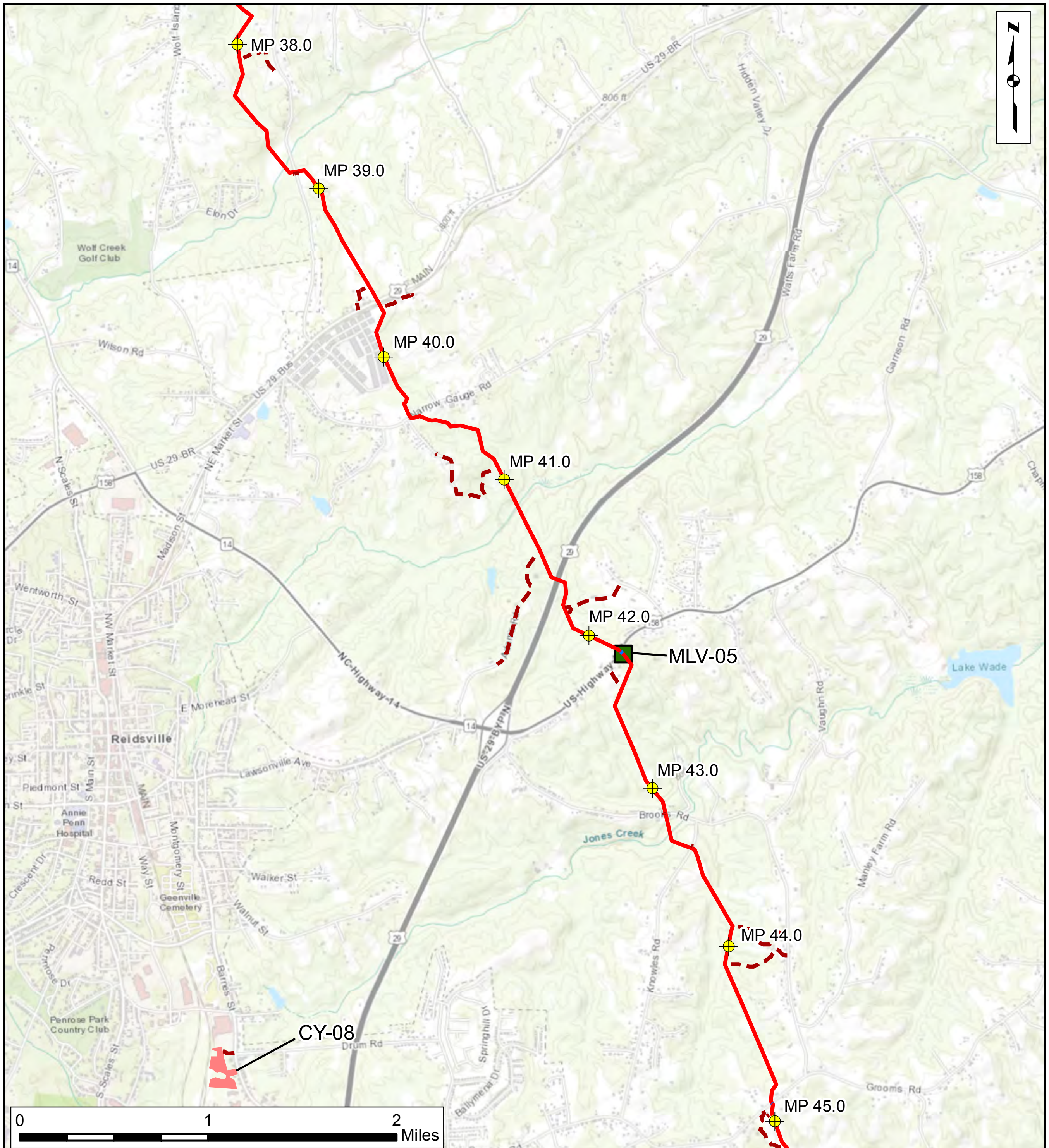


Milepost
Proposed Pipeline Route
Permanent Access Road
Temporary Access Road
Mainline Valve
Yard
Meter Station/Interconnect
Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
Page 6 of 14

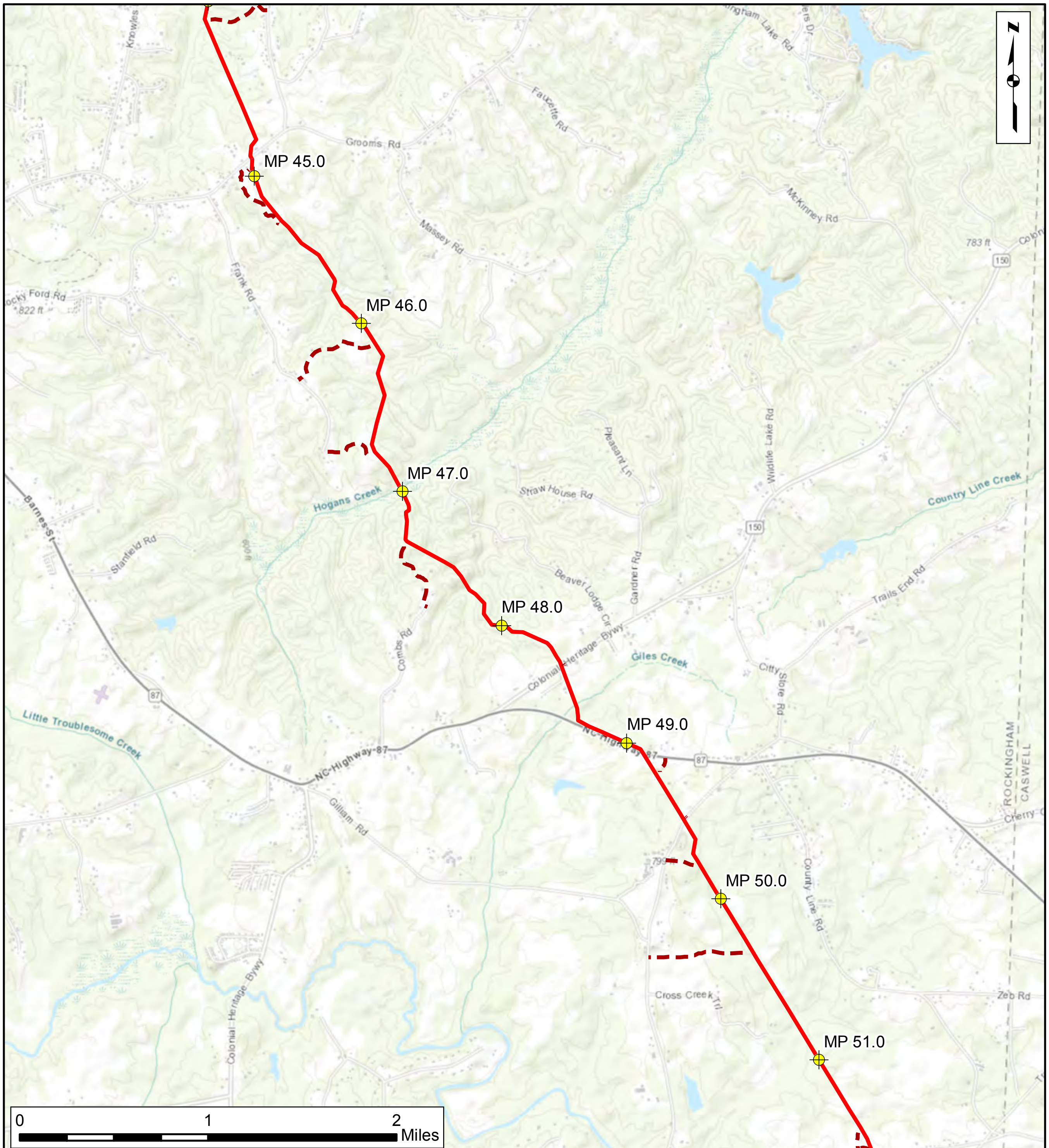


Milepost
Proposed Pipeline Route
Permanent Access Road
Temporary Access Road
Mainline Valve
Yard
Meter Station/Interconnect
Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
Page 7 of 14



Milepost
Proposed Pipeline Route
Permanent Access Road
Temporary Access Road
Mainline Valve
Yard
Meter Station/Interconnect
Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
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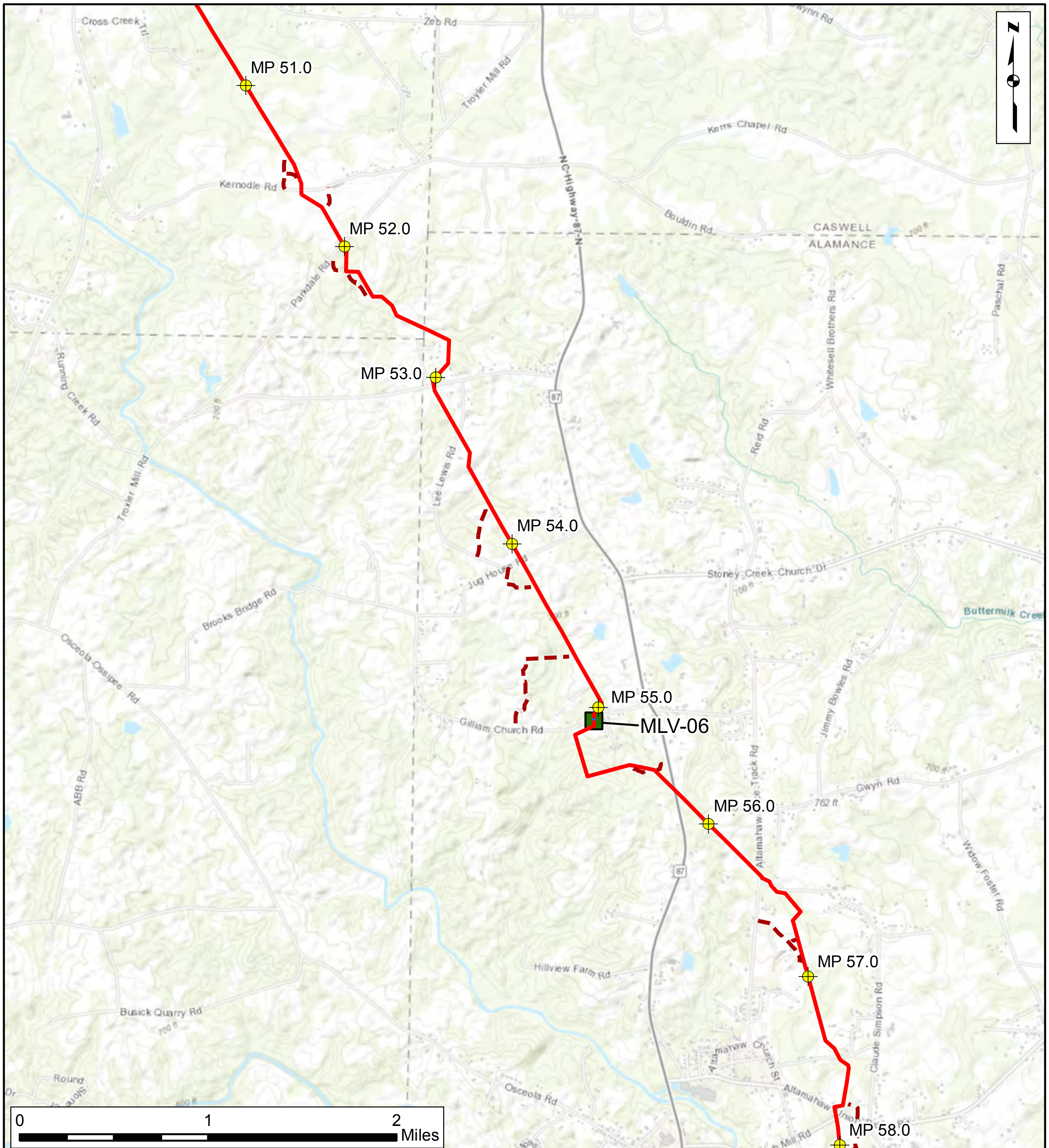

Milepost
Proposed Pipeline Route
Permanent Access Road
Temporary Access Road
Mainline Valve
Yard
Meter Station/Interconnect
Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
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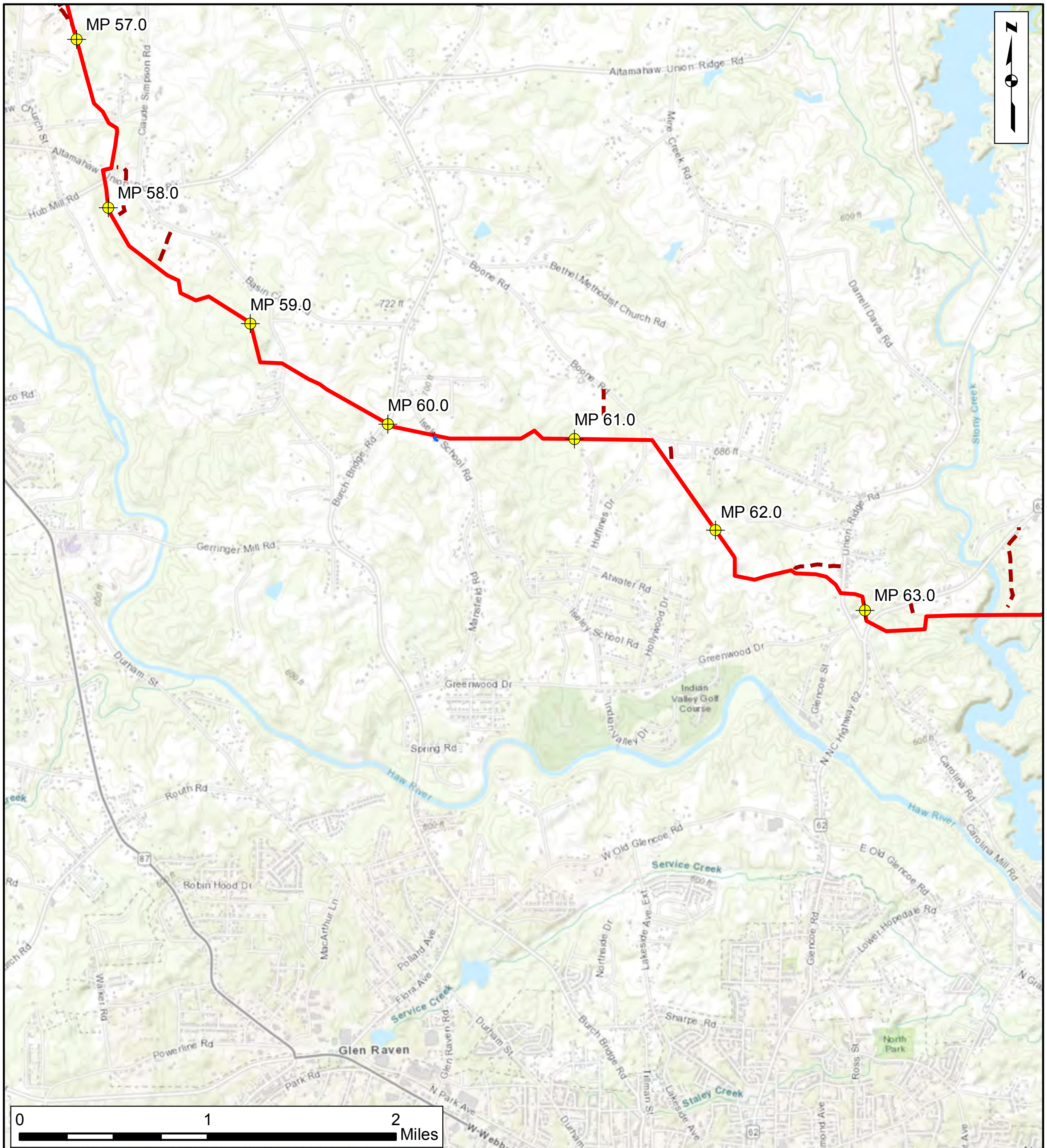
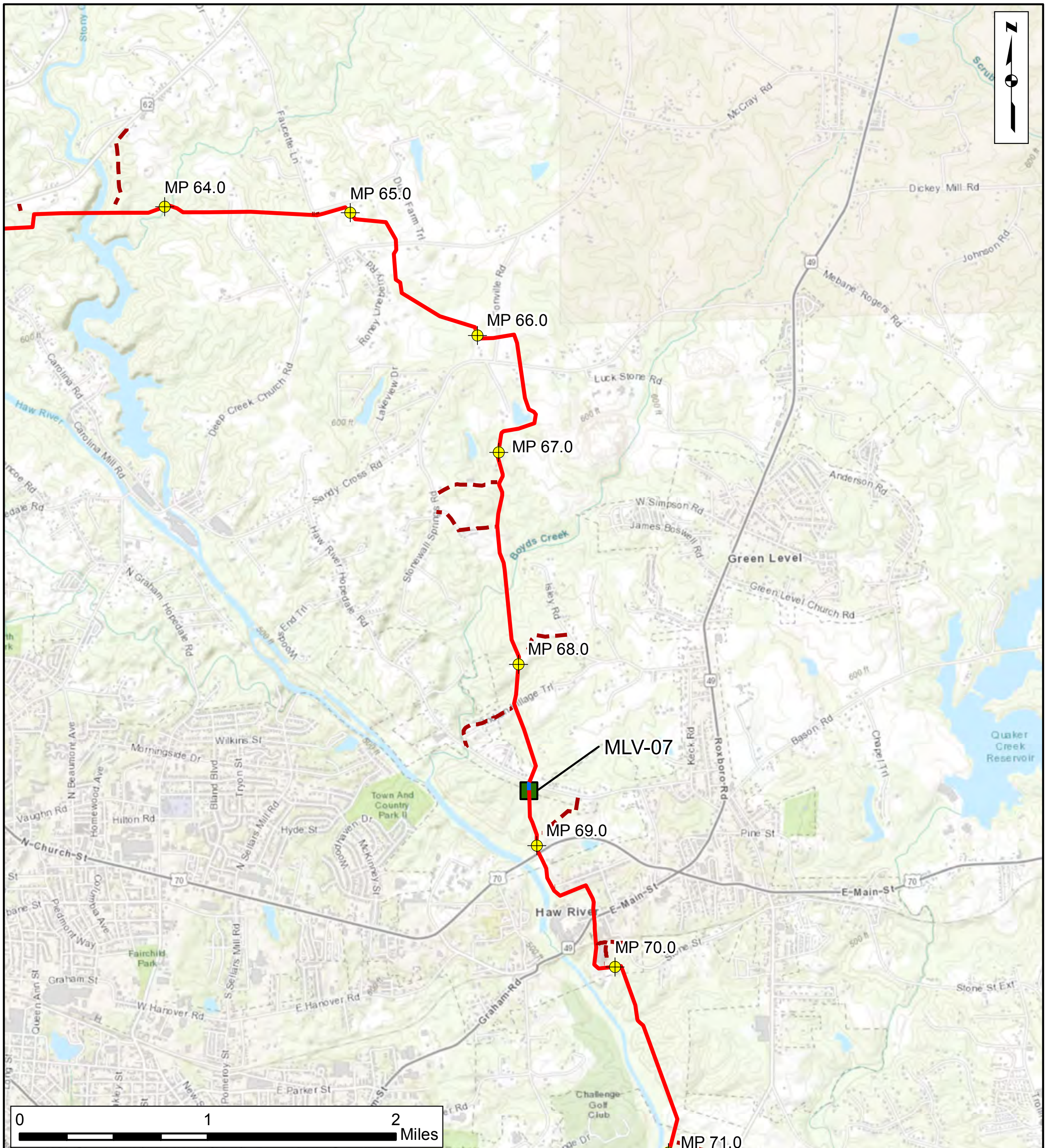


Milepost
Proposed Pipeline Route
Permanent Access Road
Temporary Access Road
Mainline Valve
Yard
Meter Station/Interconnect
Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
Page 10 of 14



Milepost

Proposed Pipeline Route

Permanent Access Road

Temporary Access Road

Mainline Valve

Yard

Meter Station/Interconnect

Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map

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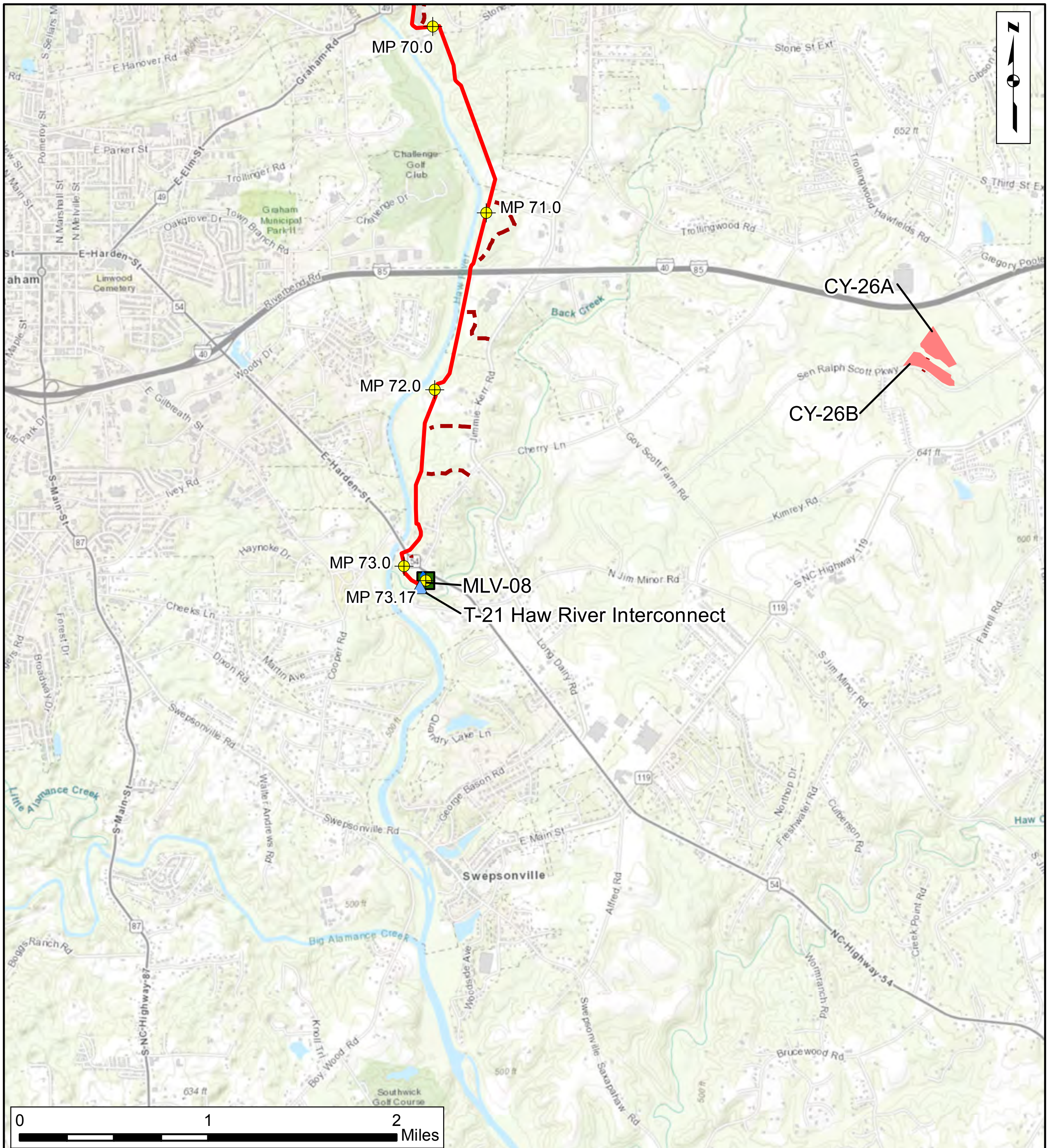
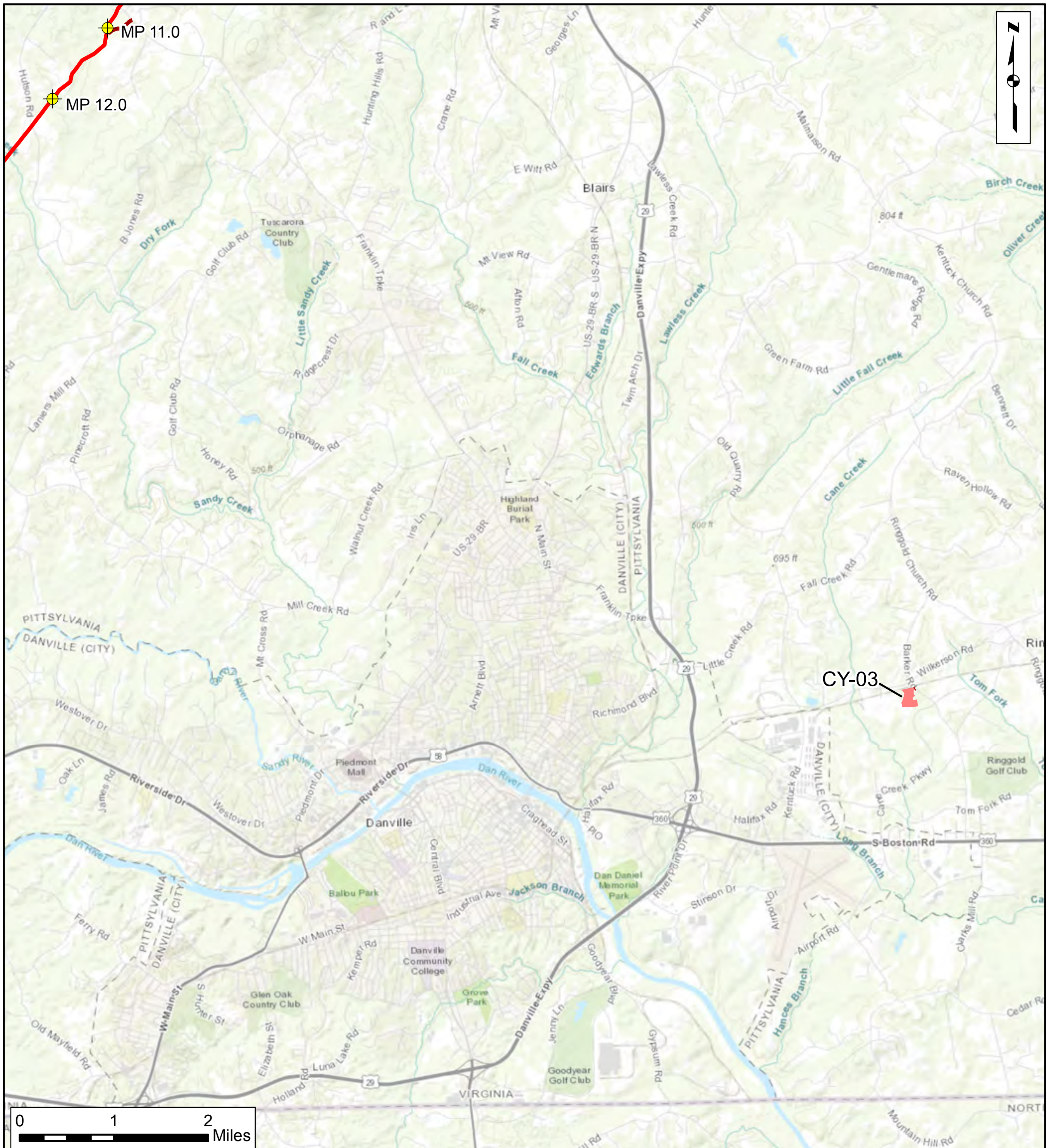


Milepost
Proposed Pipeline Route
Permanent Access Road
Temporary Access Road
Mainline Valve
Yard
Meter Station/Interconnect
Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
Page 12 of 14

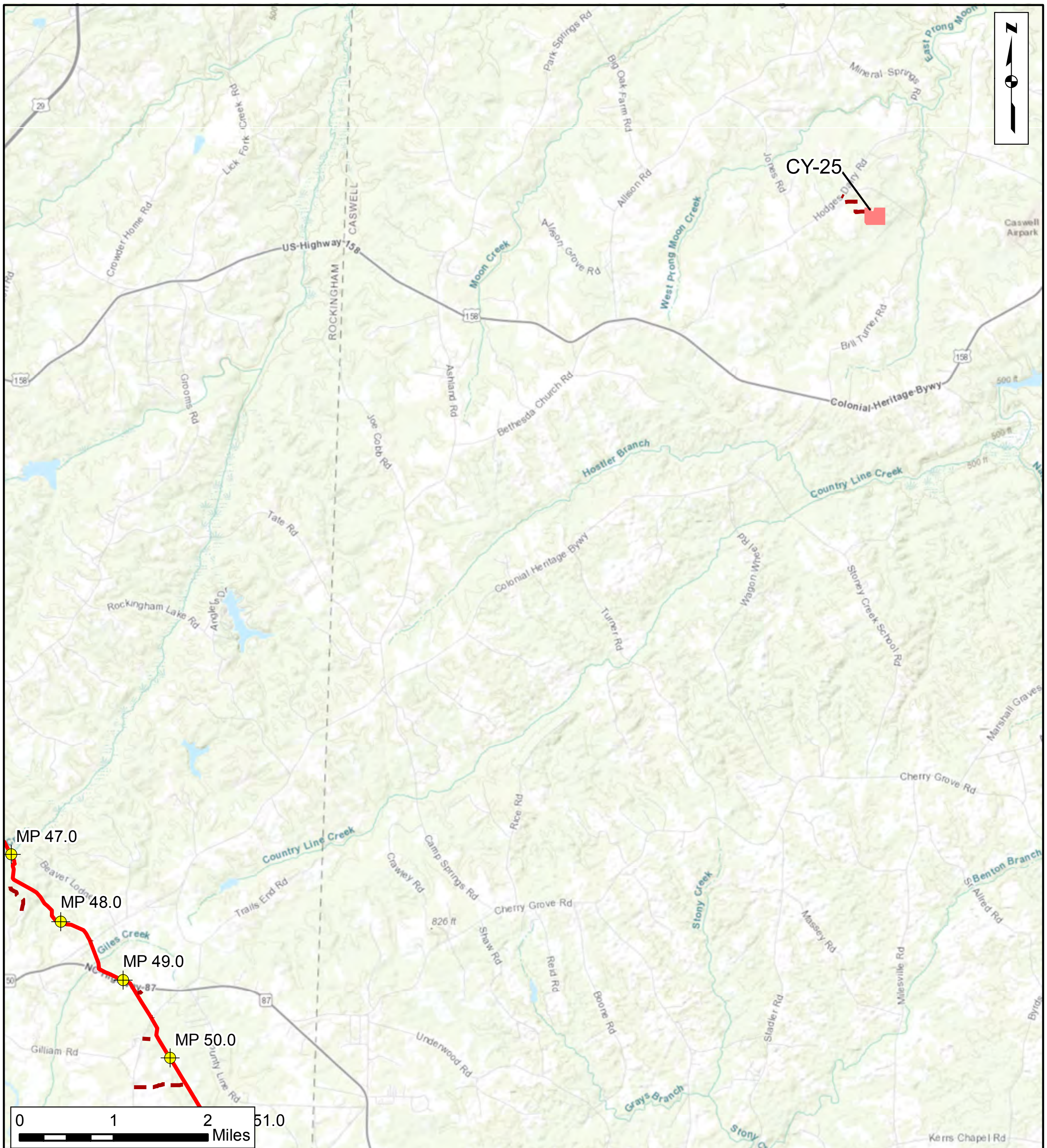


Milepost	Mainline Valve
Proposed Pipeline Route	Yard
Permanent Access Road	Meter Station/Interconnect
Temporary Access Road	Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
Page 13 of 14



- Milepost
- Proposed Pipeline Route
- Permanent Access Road
- Temporary Access Road
- Mainline Valve
- Yard
- Meter Station/Interconnect
- Compressor Station

Appendix B.1

MVP Southgate Project

Project Overview Map
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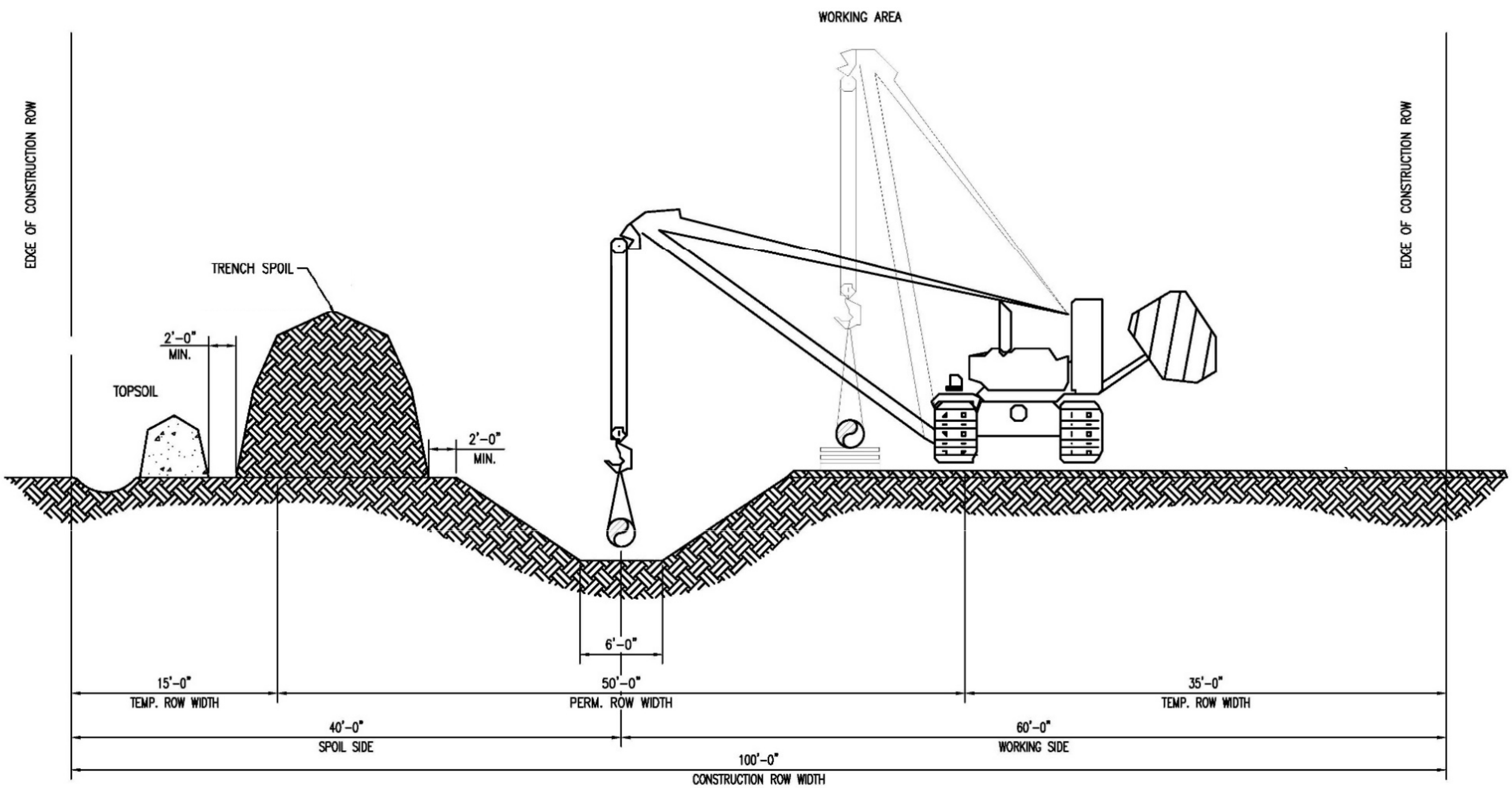
APPENDIX B.2

Typical Right-of-Way Configurations

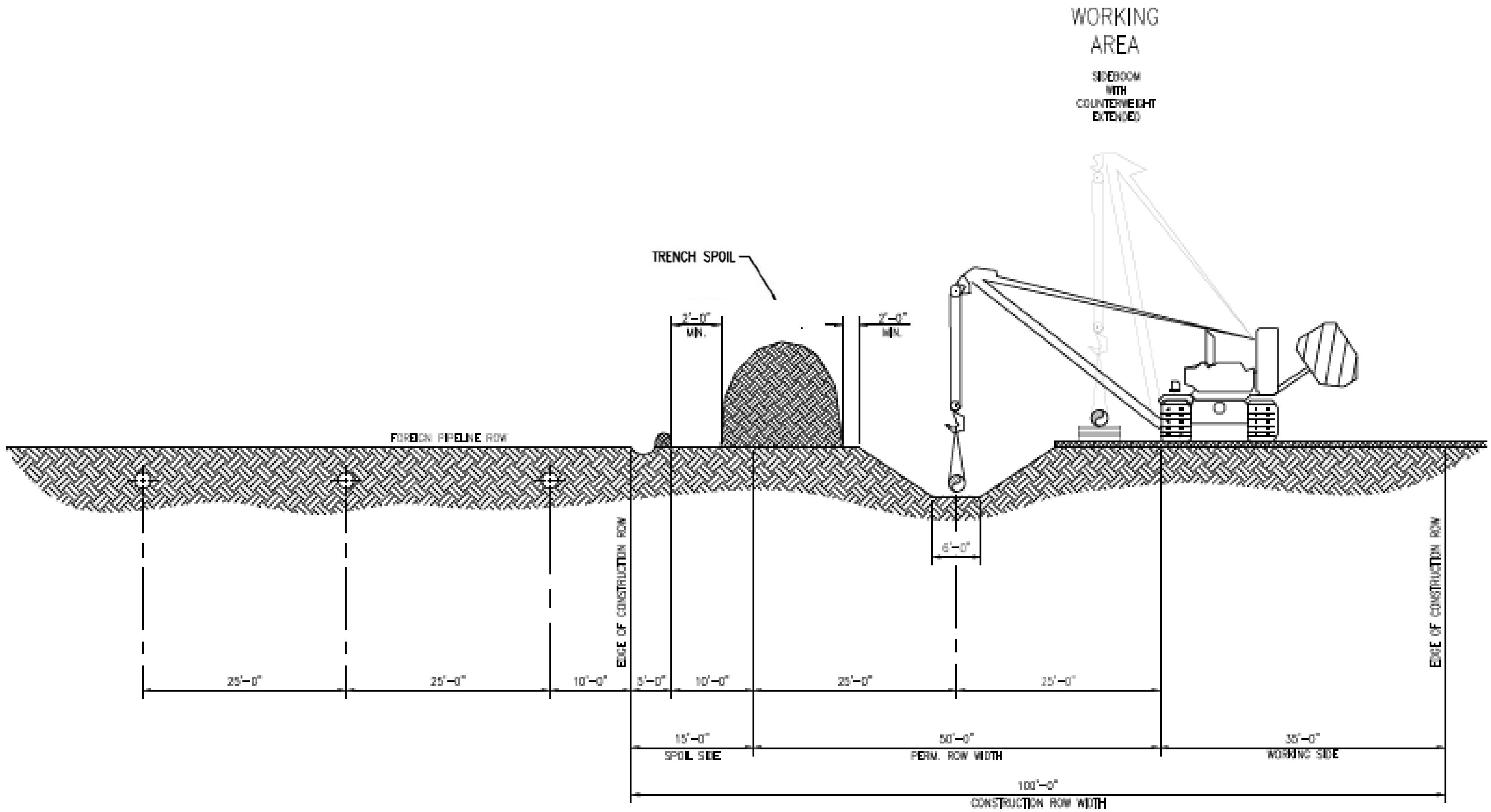


NOTE:
1. DRAWING DEPICTS SOIL SWELL OF 20% AND ROCK SWELL OF 40%.
2. DRAWING ASSUMES TYPE "C" SOIL

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.

Source: Mountain Valley Pipeline LLC FERC Application

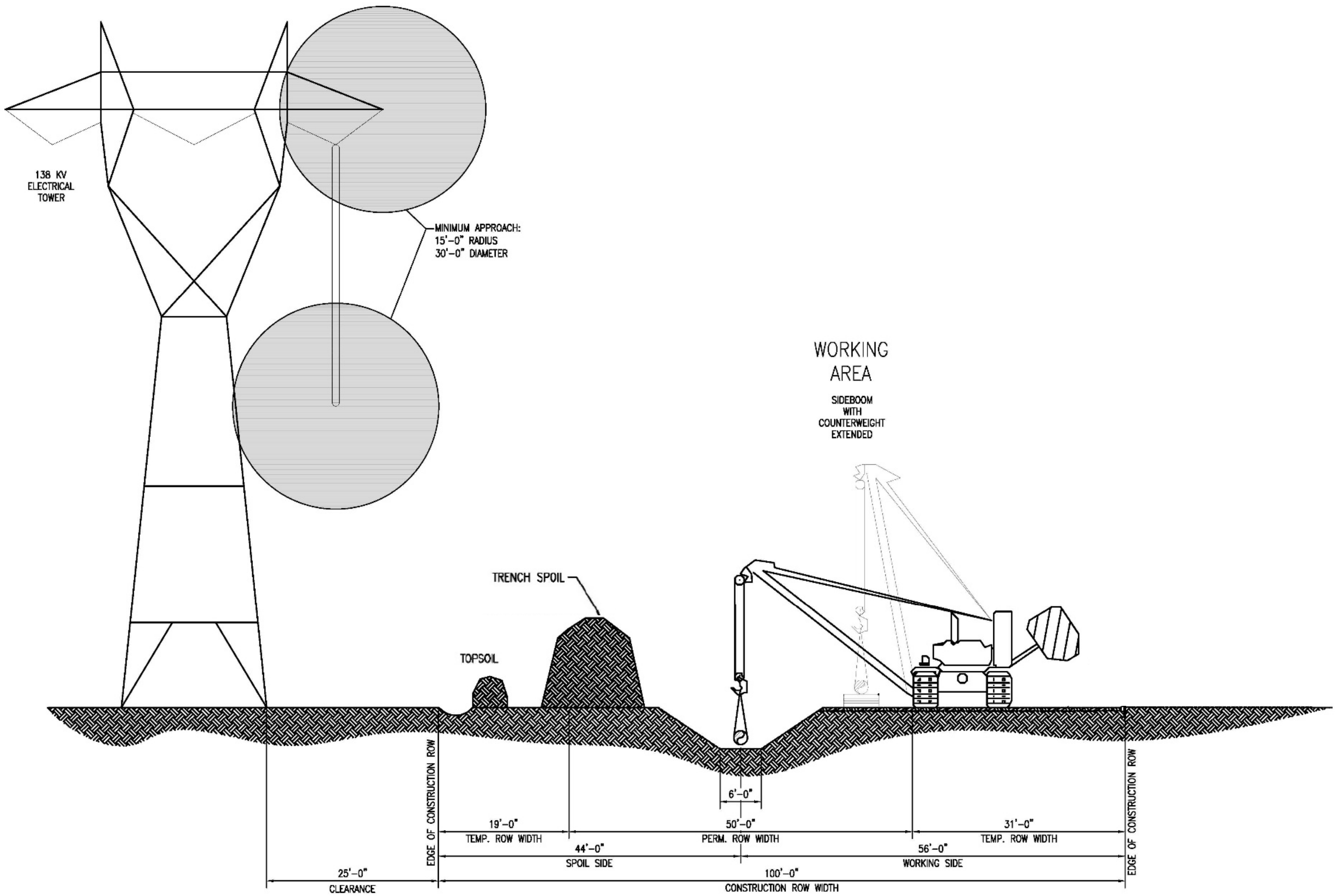
B.2-1
Southgate Project
Mainline Construction
Non-Parallel Construction
With Top Soil Segregation
100' Right of Way



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.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-2
Southgate Project
Mainline Construction
Parallel to Foreign Lines
Construction With Top Soil Segregation
100' Right of Way

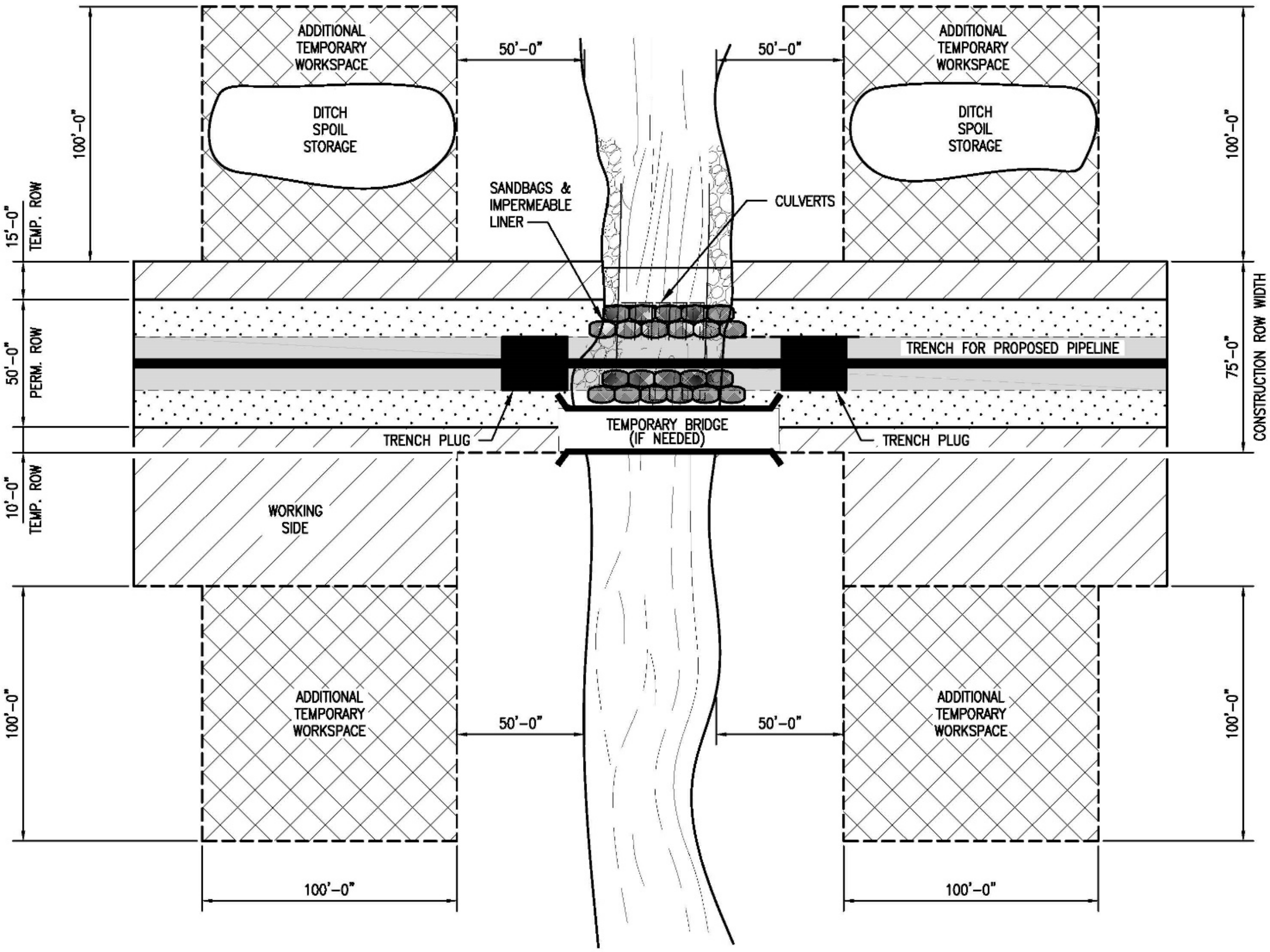


THIS TYPICAL CONSTRUCTION DETAIL IS INTENDED TO PROVIDE GUIDANCE TO THE PIPELINE CONTRACTOR. THE ACTUAL CONSTRUCTION TECHNIQUES MAY DIFFER DEPENDING UPON FIELD CONDITIONS AND OR REGULATORY REQUIREMENTS.

Source: Mountain Valley Pipeline LLC FERC Application

DRAWING ASSUMES TYPE "C" SOIL

B.2-3
Southgate Project
Mainline Construction
Parallel to Power Lines
100' Right-of-Way



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.

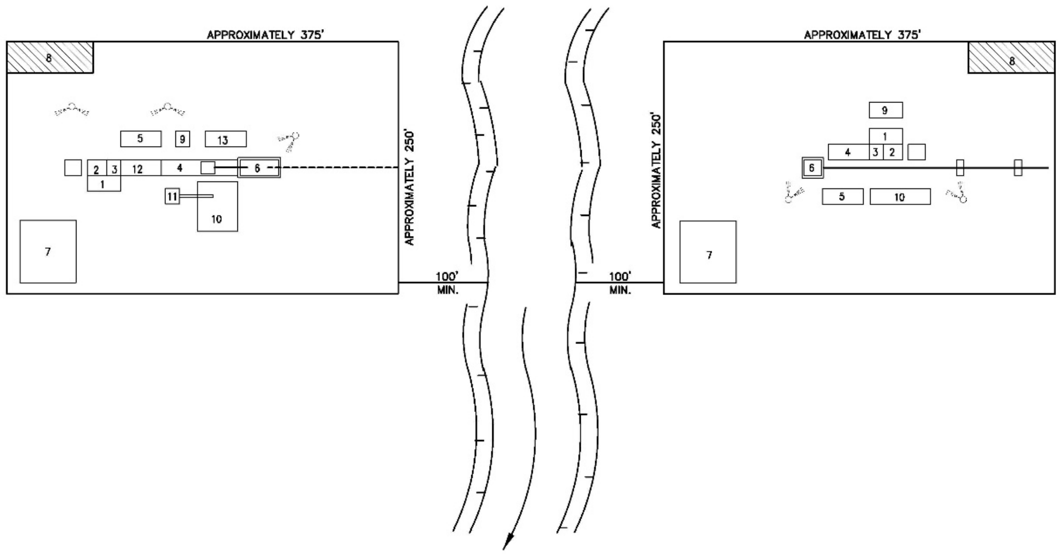
Source: Mountain Valley Pipeline LLC FERC Application

DRAWING ASSUMES TYPE "C" SOIL

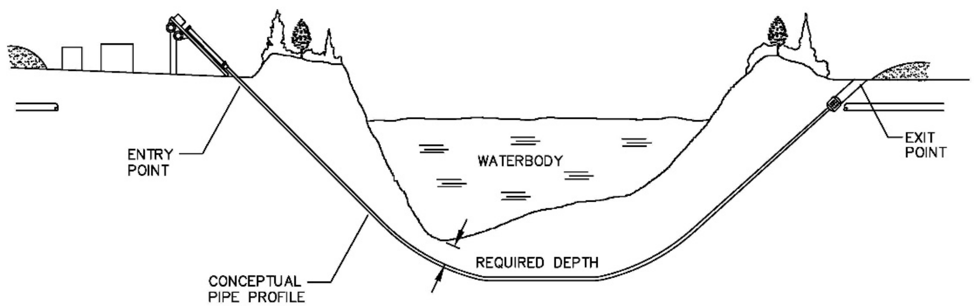
B.2-4
Southgate Project
Mainline Construction
Waterbody Crossing
Open Cut – Flume

EQUIPMENT:
1. SPOIL CONTAINER: 8' X 20'
2. SHAKER: 8' X 12'
3. DESILTER: 8' X 8'
4. MUD RIG: 8' X 25'
5. SUPPLY TRAILER: 8' X 25'
6. EXIT PIT: 8' X 10'
7. STORAGE: 30' X 30'
8. VEHICLE PARKING: 15' X 50'
9. DEWATERING UNIT: 8' X 20'
10. PIPE TRAILER: 8' X 40'

HORIZONTAL DIRECTIONAL DRILL METHOD 7



PLAN



PROFILE

NOTES:
1. SET UP DRILLING EQUIPMENT A MINIMUM OF 100 FEET FROM THE EDGE OF THE WATERCOURSE. DO NOT CLEAR OR GRADE WITHIN THE 100 FOOT ZONE.
2. ENSURE THAT ONLY BENTONITE BASED DRILLING MUD IS USED. DO NOT ALLOW THE USE OF ANY ADDITIVES TO THE DRILLING MUD WITHOUT THE APPROVAL OF COMPANY INSPECTOR.
3. INSTALL SUITABLE DRILLING MUD TANKS OR SUMPS TO PREVENT CONTAMINATION OF WATERCOURSE.
4. INSTALL BERMS DOWNSLOPE FROM THE DRILL ENTRY AND ANTICIPATED EXIT POINTS TO CONTAIN ANY RELEASE OF DRILLING MUD.
5. DISPOSE OF DRILLING MUD IN ACCORDANCE WITH THE APPROPRIATE REGULATORY AUTHORITY REQUIREMENTS.
6. A SEDIMENT BARRIER SHALL BE PLACE ON THE DOWN SLOPE SIDE OF THE RIGHT-OF-WAY, PER THE PROJECT NARRATIVE.

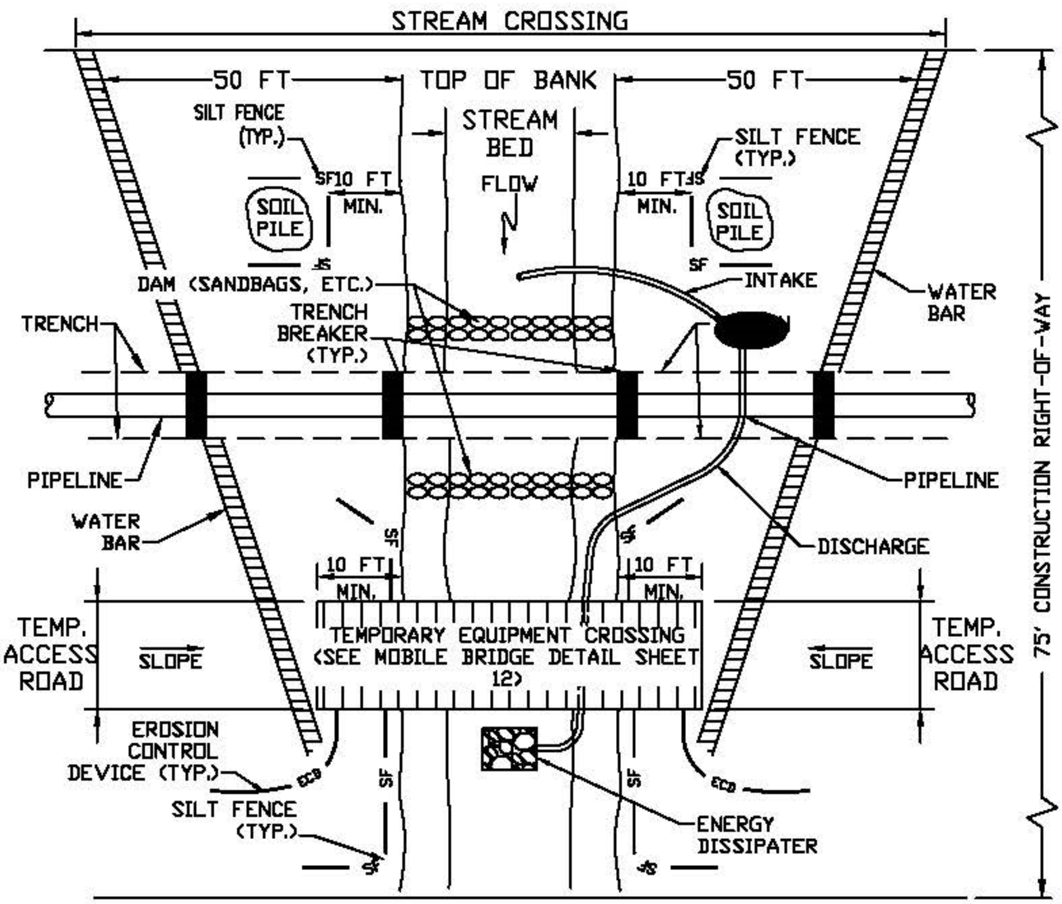
NOTES:
1. EQUIPMENT ORIENTATION MAY VARY DEPENDING ON CONTRACTOR OR SITE CONDITIONS.
2. EQUIPMENT TO BE SUPPORTED ON THE GROUND SURFACE OR TIMBER MATS AS CONDITIONS DICTATE.
3. SILT FENCE, BERMS AND/OR STRAW BALE BARRIER TO BE USED AS REQUIRED TO PREVENT IMPACTS FROM OCCURRING OUTSIDE OF PROJECT LIMITS.
4. HAND CLEARED ACCESS PATH WILL BE USED TO OBTAIN WATER FROM SOURCE WHERE PERMITTED.
5. ENTRANCE & EXIT ANGLES VARY BY LOCATION. REFER TO BORE PROFILE FOR DETAILED INFORMATION.

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.

Source: Mountain Valley Pipeline LLC FERC Application

DRAWING ASSUMES TYPE "C" SOIL

B.2-5
Southgate Project
Mainline Construction
Horizontal Directional Drill
(HDD)



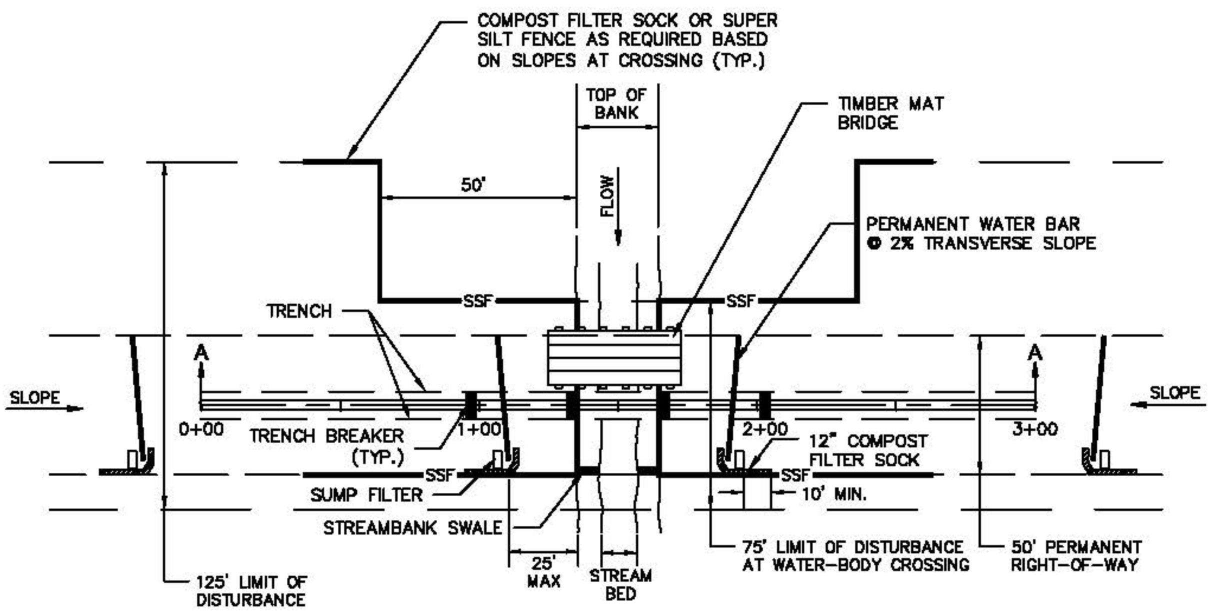
PLAN VIEW

NOTES:

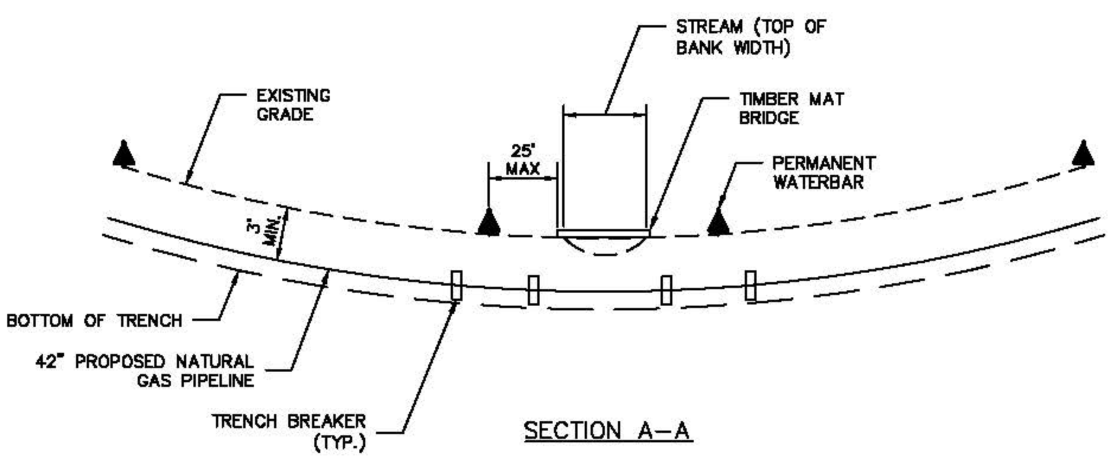
1. INSTALL EROSION CONTROL DEVICES, TRENCH BREAKERS, PUMP, ENERGY DISSIPATER, AND DAMS BEFORE TRENCHING STREAM.
2. PUMP MUST BE OF SUFFICIENT CAPACITY TO CONVEY NORMAL AND/OR EXISTING STREAM FLOW OVER TRENCH. A BACK-UP PUMP OF EQUAL CAPACITY MUST BE AVAILABLE ON-SITE DURING CONSTRUCTION OF THE PIPELINE CROSSING. PUMPS WILL BE PLACED WITHIN SECONDARY CONTAINMENT.
3. PLACE SOIL PILES A MINIMUM OF 10 FEET FROM TOP OF BANK.
4. INSTALL WATER BARS AT APPROACHES TO STREAM CROSSING AND EROSION CONTROL DEVICES, SILT FENCE, OR SUPER SILT FENCE (AS INDICATED ON PLAN SHEETS).
5. MAINTAIN SURFACE OF TEMPORARY EQUIPMENT CROSSING TO PREVENT SOIL DISCHARGES TO STREAM.
6. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.
7. RESTORE AREA TO ORIGINAL CONTOURS.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-6
Southgate Project
Stream Crossing
Dam and Pump



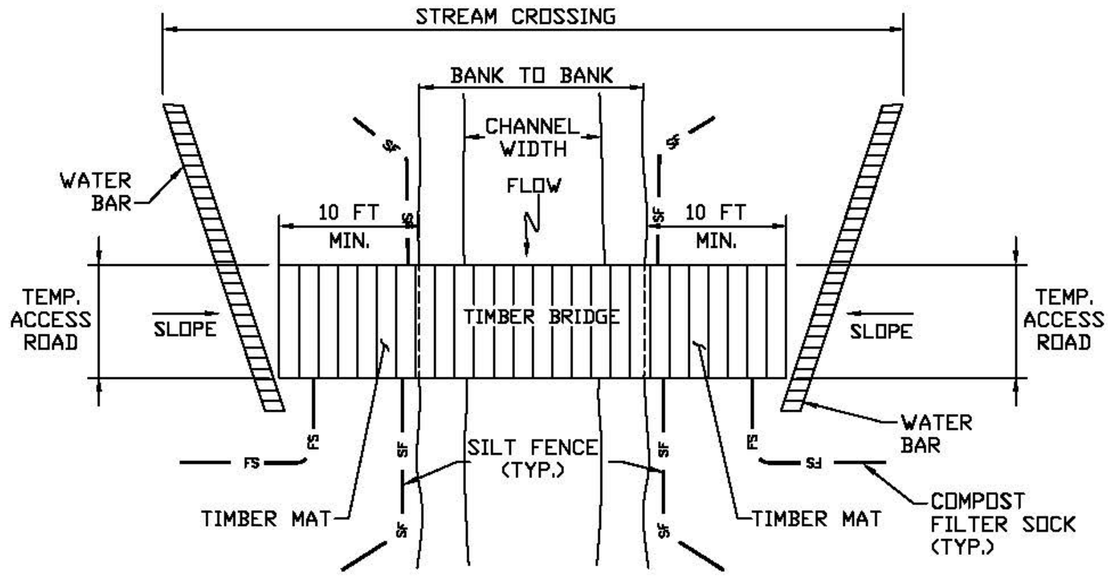
PLAN



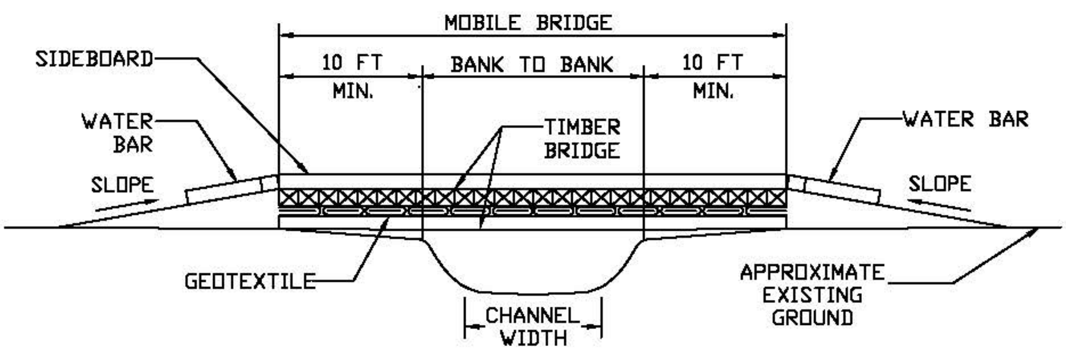
SECTION A–A

Source: Mountain Valley Pipeline LLC FERC Application

B.2-7
Southgate Project
Timber Mat Bridge
Stream Crossing



PLAN VIEW



CROSS SECTION - MOBILE BRIDGE

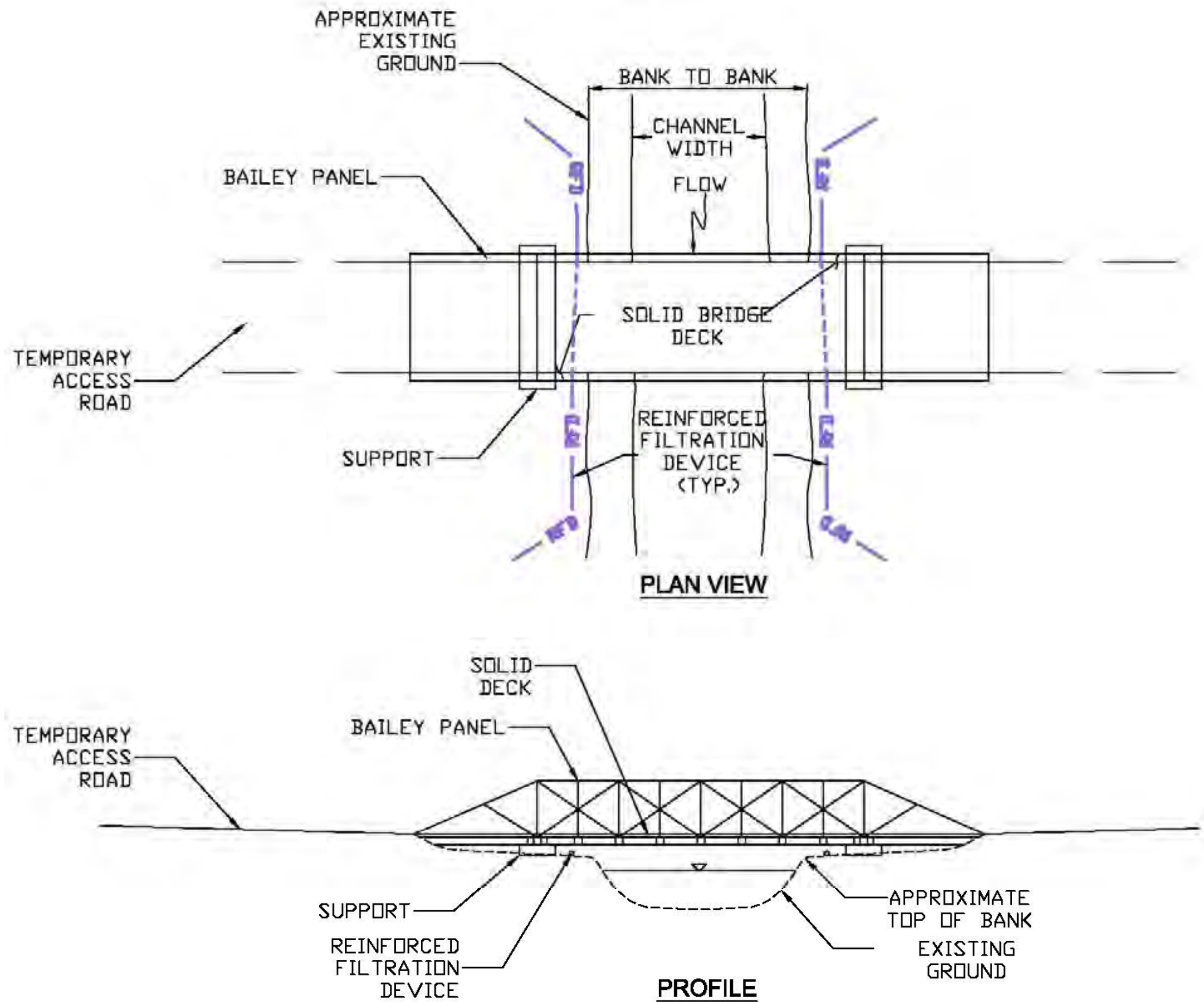
NOTES:

1. INSTALL WATER BARS OR SILT FENCE AT APPROACHES TO STREAM CROSSING AND COMPOST FILTER SOCKS ALONG STREAM BANKS. INSTALL COMPOST FILTER SOCK AT OUTLET OF WATER BARS.
2. MAINTAIN SURFACE OF TEMPORARY EQUIPMENT CROSSING TO PREVENT SOIL DISCHARGES TO STREAM.
3. APPROACHES TO CROSSINGS ARE NOT TO EXCEED A DEPTH OF 6 INCHES ABOVE ORIGINAL GRADE.
4. GEOTEXTILE LINER TO COME UP ON THE SIDES OF THE BRIDGE A MINIMUM OF 18".
5. SIDEBOARDS TO BE ATTACHED TO THE UPPER DECK. GEOTEXTILE TO BE WRAPPED AROUND SIDEBOARDS PRIOR TO FASTENING.

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.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-8
Southgate Project
Mobile Bridge



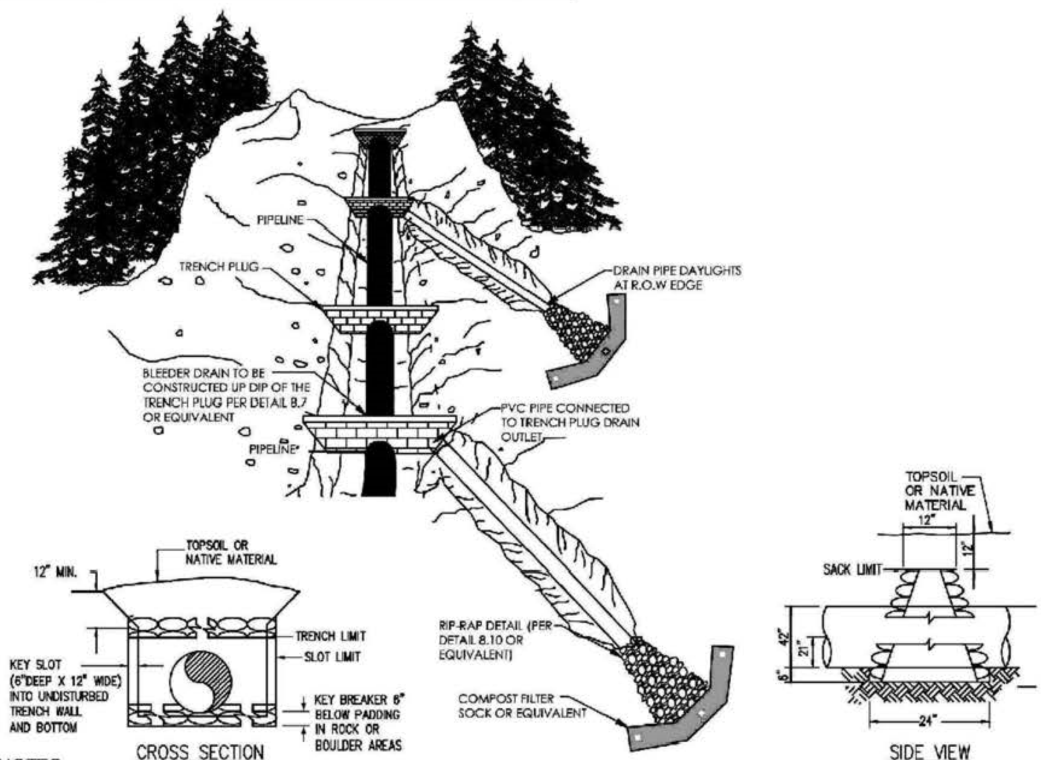
THIS TYPICAL CONSTRUCTION DETAIL IS INTENDED TO PROVIDE GUIDANCE TO THE PIPELINE CONTRACTOR. THE ACTUAL CONSTRUCTION TECHNIQUES MAY DIFFER DEPENDING UPON FIELD CONDITIONS AND OR REGULATORY REQUIREMENTS.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-9
Southgate Project
Modular Temporary
Bailey Bridge

SLOPE %	DISTANCE	PLUG MATERIAL
0% – 5%	SEE NOTE 6	CONCRETE FILLED SACKS
5% – 15%	500 FT	SANDBAGS OR CONCRETE FILLED SACKS
15% – 25%	300 FT	SANDBAGS OR CONCRETE FILLED SACKS
25% – 35%	200 FT	SANDBAGS OR CONCRETE FILLED SACKS
35% – 100%	100 FT	SANDBAGS OR CONCRETE FILLED SACKS
> 100%	50 FT	CONCRETE FILLED BAGS (WETTED)

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.



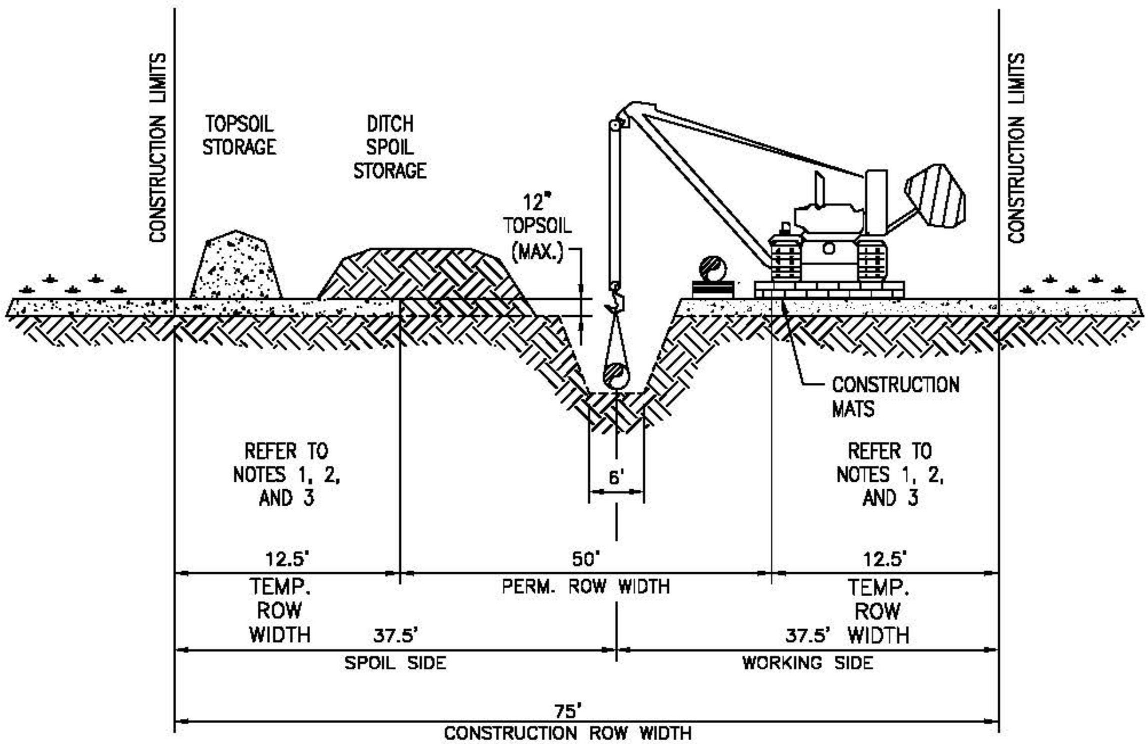
NOTES:

1. TRENCH BREAKERS SHALL BE INSTALLED:
   - ON SLOPES ALONG THE TRENCH LINE WHERE THE NATURAL DRAINAGE PATTERN, PROFILE, AND TYPE OF BACKFILL MATERIAL MAY RESULT IN LOSS OF BACKFILL MATERIAL OR ALTERATION OF THE NATURAL PATTERN;
   - AT THE BASE OF SLOPES ADJACENT TO WATERBODIES AND WETLANDS;
   - WHERE NEEDED TO AVOID DRAINING A WETLAND;
   - ON UPLAND SLOPES, AT THE SAME SPACING AS SLOPE BREAKERS AND UP SLOPE OF SLOPE BREAKERS;
   - IN CULTIVATED LAND AND RESIDENTIAL AREAS WHERE PERMANENT SLOPE BREAKERS ARE NOT TYPICALLY INSTALLED, AT THE SAME SPACING AS IF PERMANENT SLOPE BREAKERS WHERE REQUIRED.
2. MATERIALS APPROPRIATE FOR USE AS PERMANENT TRENCH BREAKERS INCLUDE SANDBAGS OR CONCRETE FILLED SACKS. TOPSOIL SHALL NOT BE USED FOR TRENCH BREAKERS.
3. TRENCH BREAKERS INSTALLED AT WATERBODY AND WETLAND CROSSINGS SHALL BE CONSTRUCTED OF IMPERVIOUS MATERIALS (CONCRETE FILLED SACKS).
4. BREAKER SPACING AND CONFIGURATION MAY BE CHANGED AS DIRECTED BY MVP. DEPTH OF DITCH MAY VARY WITH SITE CONDITIONS.
5. ALL MATERIALS SHALL BE SUPPLIED BY CONTRACTOR.
6. TRENCH BREAKERS ARE REQUIRED AT ALL WATERBODY CROSSINGS REGARDLESS OF TRENCH SLOPE. OTHERWISE NOTE REQUIRED AT SLOPES < 5%.
7. SINGLE TRENCH BREAKERS WILL BE A MINIMUM WIDTH OF 24" AND DOUBLE TRENCH BREAKERS WILL BE A MINIMUM WIDTH OF 36".
8. FOR SUBSURFACE AND TRENCH BREAKER DRAINAGE DETAILS INCLUDING THOSE FOR STEEP SLOPES, SEE LANDSLIDE MITIGATION TYPICAL DETAILS.
9. FOR SLOPES EXCEEDING 50%, CONCRETE FILLED SACKS ARE REQUIRED UNLESS OTHERWISE APPROVED BY MVP.

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.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-10
Southgate Project
Typical Trench Breaker Requirements



NOTES:

1. TOPSOIL SEGREGATION/REMOVAL WILL ONLY BE CONDUCTED WITHIN THE PERMANENT EASEMENT AT ALL WETLAND CROSSINGS IN VIRGINIA.

2. GRUBBING ACTIVITIES SHALL BE LIMITED TO THE PERMANENT EASEMENT AT ALL WETLAND CROSSINGS IN VIRGINIA. OUTSIDE OF THE PERMANENT EASEMENT, WETLAND VEGETATION SHALL ONLY BE REMOVED AT OR ABOVE THE GROUND SURFACE. WOODY VEGETATION WITHIN THE TEMPORARY EASEMENT SHALL BE CUT AT GROUND SURFACE WITH THE STUMPS TO REMAIN IN-PLACE.

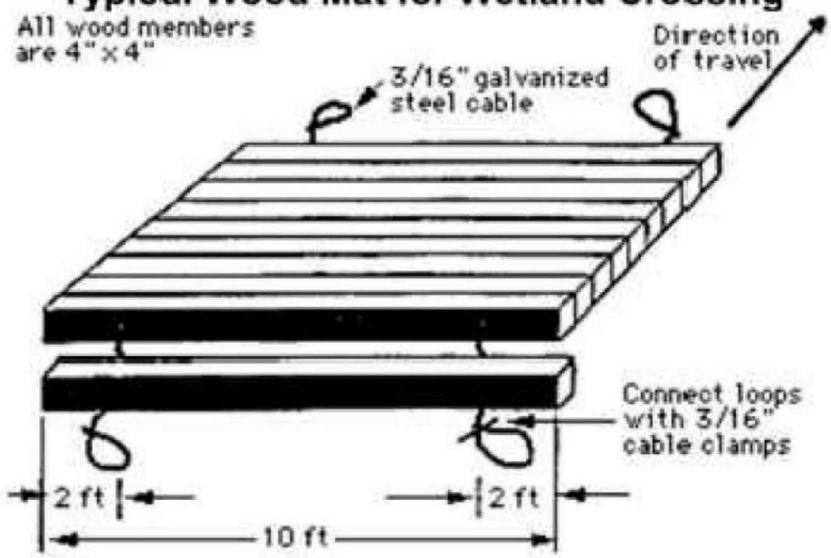
3. WETLAND CROSSINGS IN VIRGINIA SHALL BE CONDUCTED IN ACCORDANCE WITH NWP12 GENERAL AND NORFOLK DISTRICT REGIONAL CONDITIONS.

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.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-11
Southgate Project
Wetland Crossing Typical for
USACE Norfolk (VA) District

Typical Wood Mat for Wetland Crossing



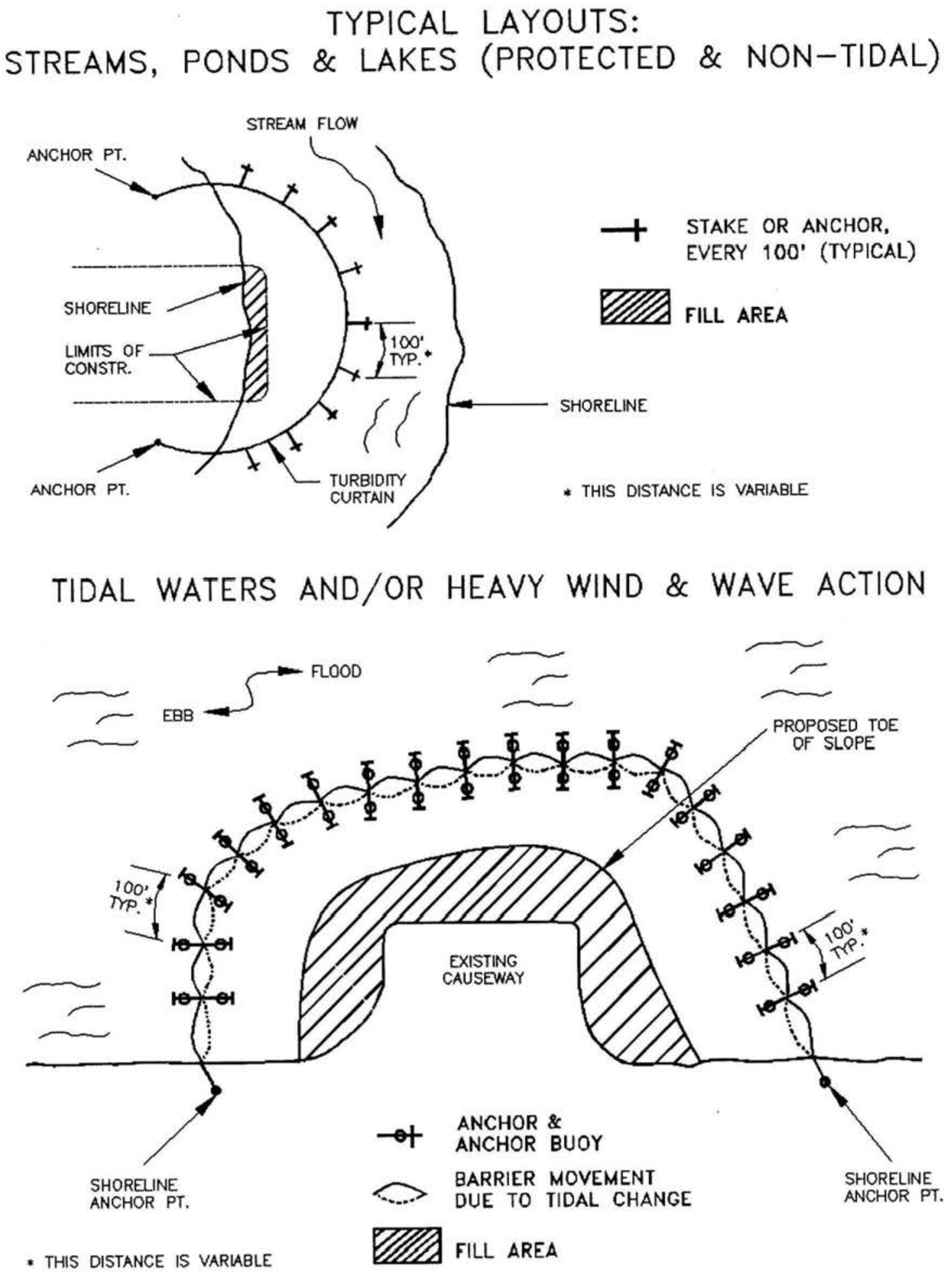
University of Minnesota FS 07009

A geotextile underlayment shall be used under the wood mat.

Source: PaDEP, E&S Pollution Control Manual, March 2012

Source: Mountain Valley Pipeline LLC FERC Application

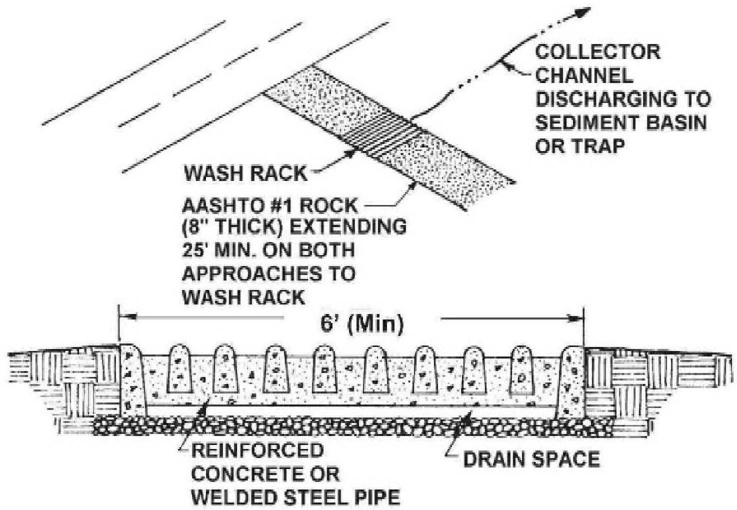
B.2-12
Southgate Project
Timber Mat / Wetland Crossing



Source: Mountain Valley Pipeline LLC FERC Application

B.2-13
Southgate Project
Turbidity Curtain Detail

Rock Construction Entrance with Wash Rack



Modified from Smith Cattleguard Company

IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 70 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK.

Wash rack shall be 20 feet (min.) wide or total width of access.

Wash rack shall be designed and constructed to accommodate anticipated construction vehicular traffic.

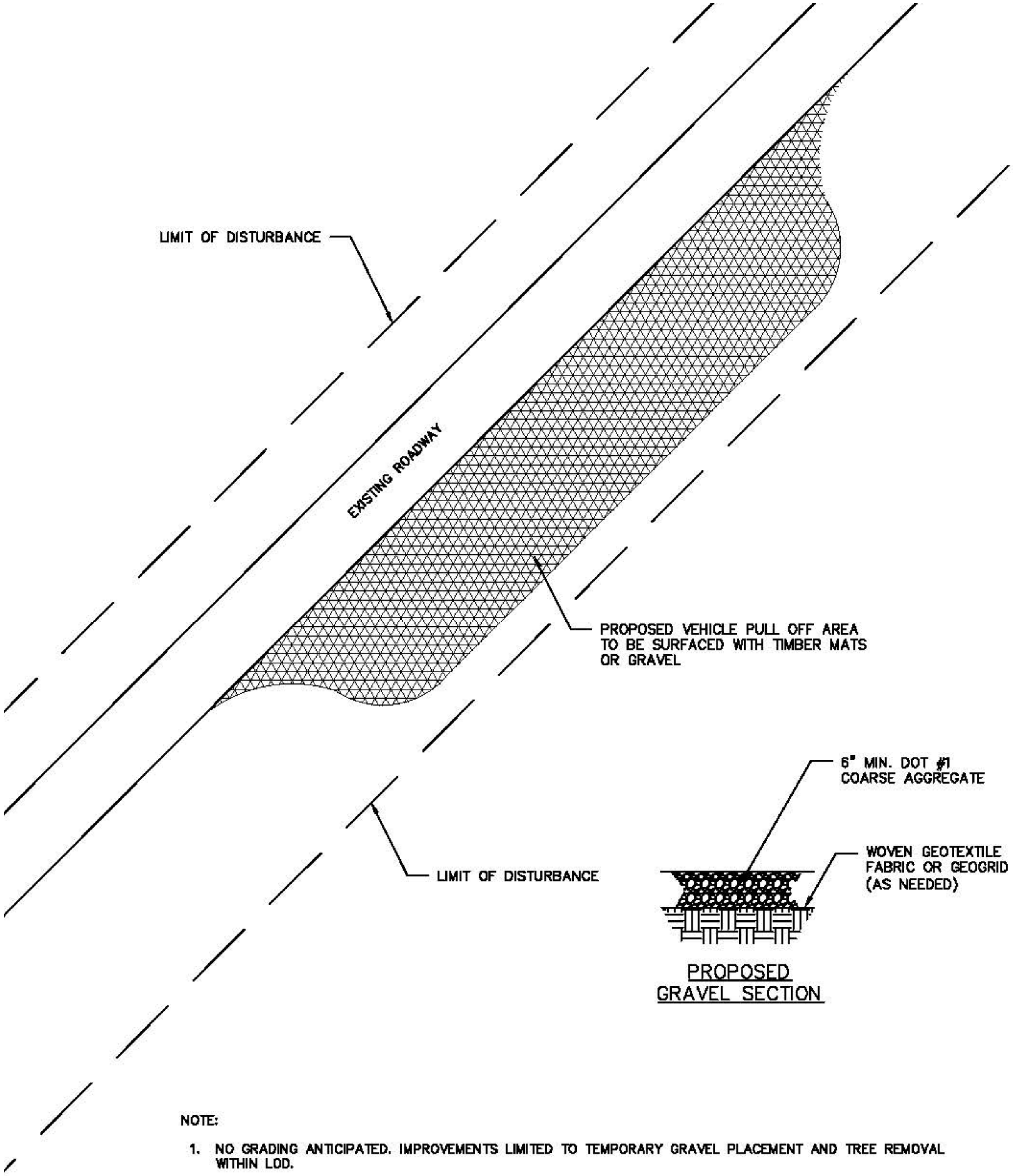
A water supply shall be made available to wash the wheels of all vehicles exiting the site.

MAINTENANCE: Rock construction entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile of rock material shall be maintained on site for this purpose. Drain space under wash rack shall be kept open at all times. Damage to the wash rack shall be repaired prior to further use of the rack. All sediment deposited on roadways shall be removed and returned to the construction site immediately. Washing the roadway or sweeping the deposits into roadway ditches, sewers, culverts, or other drainage courses is not acceptable.

A metal wash rack or livestock grate is an acceptable alternative to the reinforced concrete one shown in the standard detail. Approaches to the wash rack should be lined with aashto #1 at a minimum of 25' on both sides. The wash rack should discharge to a sediment removal facility, such as a vegetated filter strip or into a channel leading to a sediment removal device (e.g. a sediment trap or sediment basin). Rock construction entrances with wash racks should be maintained to the specified dimensions by adding rock when necessary at the end of each workday. A stockpile of rock material should be maintained on site for this purpose. Sediment deposited on paved roadways should be removed and returned to the construction site.
NOTE: Washing the roadway or sweeping the deposits into roadway ditches, sewers, culverts, or other drainage courses is not acceptable. Damaged wash racks should be repaired as necessary to maintain their effectiveness. In lieu of washrack installation, MVP will extend the RCE by 70' increments until mud tracking condition is alleviated.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-14
Southgate Project
Rock Construction Entrance
With Wash Rack

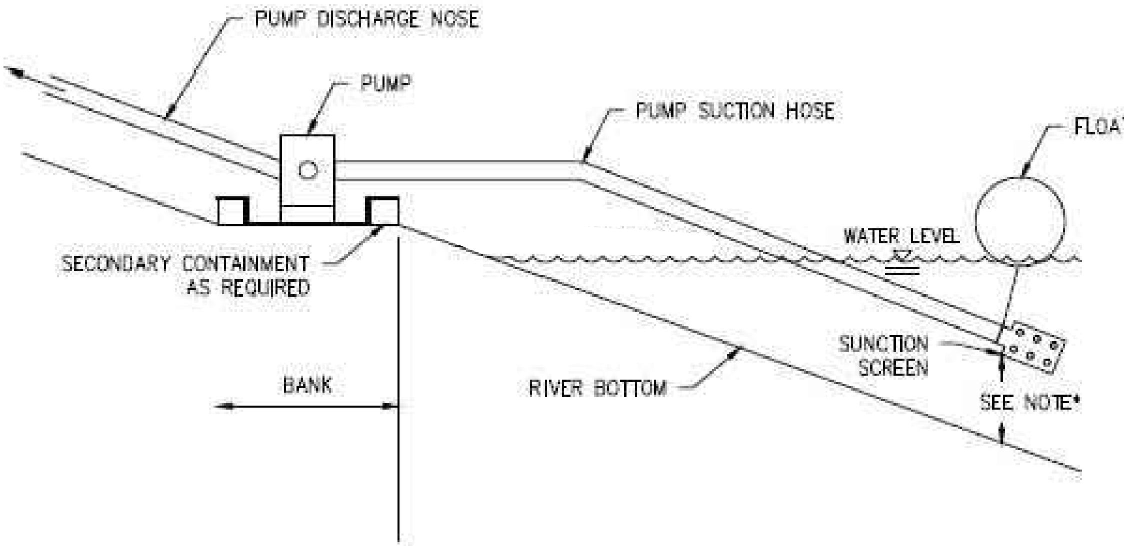


NOTE:

1. NO GRADING ANTICIPATED. IMPROVEMENTS LIMITED TO TEMPORARY GRAVEL PLACEMENT AND TREE REMOVAL WITHIN LOD.
2. WOVEN GEOTEXTILE FABRIC OR GEOGRID MAY BE PLACED UNDER THE GRAVEL PULL OFF AS NEEDED.

Source: Mountain Valley Pipeline LLC FERC Application

B.2-15
Southgate Project
Temporary Vehicle
Pull Off Detail



PROFILE
SCALE: N.T.S.

NOTES:

* CONTRACTOR SHALL MAINTAIN A SUFFICIENT DISTANCE FROM THE BOTTOM OF THE WATERBODY TO THE PUMP INTAKE TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM.
* WITHDRAW NO MORE THAN 10% OF THE INSTANTANEOUS FLOW RATE FROM THE CHANNEL;
* SCREEN INTAKE OPENINGS NO LARGER THAN 1 MILLIMETER AND;
* SCREEN FACE INTAKE VELOCITIES MUST BE NO GREATER THAN 0.25 FEET PER SECOND

FLOATING PUMP INTAKE WITH HOSE

B.2-16
Southgate Project
Water Withdrawal Typical

APPENDIX B.3

Additional Temporary Workspaces –
Within 50 Feet of a Waterbody or Wetland

Appendix B.3

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Feature within 50 feet	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)	FERC Comment
Virginia, Pittsylvania County							
1052	5.2	Wetland	W-D18-1	0	ATWS situated in this location to support conventional bore and associated equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1088B	9.8	Wetland	W-F18-58	47	ATWS situated in this location for storage of material, pumps, mats, pipe for wetland crossing and point of intersect.	N	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1136C	17.7 RR	Wetland/ Waterbody	S-A19-295/ S-E18-44/ W-A19-296	1 49 0	ATWS situated in this location for storage of material, pumps, mats, pipe for wetland and stream crossing.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation
1173D	22.7 RR	Waterbody	S-A19-317	0	ATWS situated in this location for storage of material, pumps, mats, and pipe for stream crossing.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
North Carolina, Rockingham County							
1213	27.0 RR	Wetland	W-A18-44	0	This ATWS is in an agriculture field and would be used for pipeline crossing.	N	The request for ATWS within 50 feet of the wetland appears justified in order to cross Transco facilities. Potential impacts would be minimized by the proposed mitigation.

Appendix B.3

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Feature within 50 feet	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)	FERC Comment
1213A	27.0 RR	Wetland	W-A18-44	6	This ATWS is in an agriculture field and would be used for pipeline crossing.	N	The request for ATWS within 50 feet of the wetland appears justified in order to cross Transco facilities. Potential impacts would be minimized by the proposed mitigation.
1213D	27.3	Wetland	W-A18-44	0	ATWS in this location to be used for support during stream crossing.	Y	The request for ATWS within 50 feet of the wetland appears justified in order to cross Transco facilities. Potential impacts would be minimized by the proposed mitigation.
1222	27.6	Wetland	W-A19-274	0	ATWS in this location to be used for support during stream crossing.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1244	29.9	Wetland	W-A18-18	0	ATWS situated in this location to support HDD and associated equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1244A	29.9	Wetland	W-A18-18	2	ATWS situated in this location to support HDD and associated equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.

Appendix B.3

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Feature within 50 feet	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)	FERC Comment
1249	30.4	Wetland/ Waterbody	S-B18-38	0	ATWS situated in this location to support HDD and associated equipment	Y	The request for ATWS within 50 feet of the waterbody appears justified and potential impacts would be minimized by the proposed mitigation.
			W-B18-34	35	ATWS situated in this location to support HDD and associated equipment	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
			AW-B18-36 / W-B18-36	0	ATWS situated in this location to support HDD and associated equipment// hydrostatic testing equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1250	30.5	Wetland	W-B18-34	0	ATWS situated in this location to support conventional bore and associated equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1251	30.4	Wetland	W-B18-36	0	ATWS situated in this location to support HDD and associated equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.

Appendix B.3

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Feature within 50 feet	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)	FERC Comment
1251A	30.3	Wetland	W-B18-34	0	Staging of mats / equipment needed to perform foreign line crossings, then used as needed for parking, materials, pipe, and equipment to support Dan River HDD, and also to support connection point between spreads.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1368	41.5	Waterbody	S-B18-44	15	ATWS situated in this location to support conventional bore and associated equipment.	Y	The request for ATWS within 50 feet of the waterbody appears justified and potential impacts would be minimized by the proposed mitigation.
1396	43.8	Waterbody	S-A18-106	41	Mountain Valley stated that ATWS would be moved further than 50 feet from waterbody Mountain Valley would provide details in their Implementation Plan.	Y	New ATWS details would be reviewed and approved by the director of OEP prior to construction.
<u>North Carolina, Alamance County</u>							
1577D	63.4 RR	Waterbody	S-B18-12	49	Mountain Valley stated that ATWS is to be reduced so that it is not within 50 feet of waterbody. Mountain Valley would provide details in their Implementation Plan.	Y	New ATWS details would be reviewed and approved by the director of OEP prior to construction.

Appendix B.3

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Feature within 50 feet	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)	FERC Comment
1581A	63.4 RR	Waterbody	S-B18-12	46	Mountain Valley stated that ATWS is to be reduced so that it is not within 50 feet of waterbody. Mountain Valley would provide details in their Implementation Plan.	Y	New ATWS details would be reviewed and approved by the director of OEP prior to construction.
1588A	64.4	Waterbody	S-A19-350	35	Mountain Valley stated that ATWS would be moved further than 50 feet from waterbody. Mountain Valley would provide details in their Implementation Plan.	Y	New ATWS details would be reviewed and approved by the director of OEP prior to construction.
1588A	64.4	Waterbody	S-A19-351	0	Mountain Valley stated that ATWS would be moved further than 50 feet from waterbody. Mountain Valley would provide details in their Implementation Plan.	Y	New ATWS details would be reviewed and approved by the director of OEP prior to construction.
1588B	64.5	Waterbody	S-A19-350	27	Mountain Valley stated that ATWS would be moved further than 50 feet from waterbody. Mountain Valley would provide details in their Implementation Plan.	Y	New ATWS details would be reviewed and approved by the director of OEP prior to construction.

Appendix B.3

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Feature within 50 feet	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)	FERC Comment
1653G	69.7 RR	Waterbody	S-C18-70	0	ATWS required in this location to facilitate storage of materials and equipment for stream crossing in a congested area.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1681	71.9	Waterbody	AS-A19-337	44	Mountain Valley stated that ATWS would be moved further than 50 feet from waterbody. Mountain Valley would provide details in their Implementation Plan.	Y	New ATWS details would be reviewed and approved by the director of OEP prior to construction.
1692A	73.0 RR	Wetland	W-A18-111	0	ATWS situated in this location to support conventional bore and associated equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.
1692	73.1 RR	Wetland/ Waterbody	AS-B18-58 / SB18-58	43	This ATWS to be used as a support for crews performing multiple pipeline crossings in this area	Y	The request for ATWS within 50 feet of the waterbody appears justified and potential impacts would be minimized by the proposed mitigation
			S-B19-150	0	ATWS situated in this location to support conventional bore and associated equipment / hydrostatic test support equipment.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.

Appendix B.3

ATWS Within 50 feet of Wetland or Waterbody

ATWS ID	Milepost	Feature within 50 feet	Feature ID	Distance from Resource Area (feet) a/	Justification	Variance Required (Y/N)	FERC Comment
			W-B19-151	0	This ATWS to be used as a support for crews performing multiple pipeline crossings in this area.	Y	The request for ATWS within 50 feet of the wetland appears justified and potential impacts would be minimized by the proposed mitigation.

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

APPENDIX B.4

Access Roads

Appendix B.4

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

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions Width (feet)	Road Dimensions Length (feet)	Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
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	CY-01	Existing	Temporary	Mountain Valley Pipeline, LLC	60	9	G	CI, OL	S, W	0.01	0.00
TAR	TA-PI-065	CY-19	Existing	Temporary	Private	25	60	D	OL	S, W	0.04	000
TAR	TA-PI-065A	CY-19	Existing	Temporary	Private	25	2,230	D	CI, OL	S, W	1.29	0.00
TAR	TA-PI-040	CY-22	Existing	Temporary	Private	25	45	D	CI, OL	S, W	0.04	0.00
TAR	TA-PI-040A	CY-22	Existing	Temporary	Private	25	31	D	CI, OL	S, W	0.03	0.00
TAR	TA-PI-000B	CY-03	Existing	Temporary	Private	38	62	A	CI	None	0.10	0.00
PAR	PA-PI-001A	0.47	Existing	Permanent	Transcontinental Gas Pipeline Company, LLC Private Mountain Valley Pipeline, LLC	20	3,028	A, G, D	AG, CI, FW, OL	S, W	1.46	1.46
PAR	PA-PI-001B	0.47	New	Permanent	Transcontinental Gas Pipeline Company, LLC Private Mountain Valley Pipeline, LLC	20	827	Gr	AG, FW, OL	S, W	0.49	0.49
PAR	PA-PI-001C	0.47	Existing	Permanent	Private	20	713	D	OL	S, W	0.34	0.34
TAR	TA-PI-004	1.6	Existing	Temporary	Private	25	2,874	D	CI, FW, OL, RD	S, W	1.82	0.00
TAR	TA-PI-005	2.3	Existing	Temporary	Private	25	3,755	G, D, Gr	CI, FW, OL, OW, RD	S, C, W	2.20	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-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	303	G	CI, RD	S, W	0.17	0.00
TAR	TA-PI-011	5.1	Existing	Temporary	Private	25	5,360	D	AG, CI, FW, OL, RD, WL	S, W	3.08	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-018B	7.4	New	Permanent	Private	12.5	50	Gr	CI	S, W	0.02	0.02
TAR	TA-PI-022	8.5	Existing	Temporary	Private	25	2,899	D	AG, CI, FW, OL, RD	S, W	1.66	0.00
TAR	TA-PI-023	9	Existing	Temporary	Private	25	2,121	G	AG, CI, FW, OL, RD	S, W	1.23	0.00
PAR	PA-PI-024	9.3	New	Permeant	Private	12.5	16	Gr	FW, OL	S, W	0.01	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	10.4	New	Temporary	Private	25	31	D, Gr	CI, OL	S, W	0.03	0.00
TAR	TA-PI-027	11.1	Existing	Temporary	Independent Timber, Inc.	25	1,590	G, D	FW, OL	S, W	0.92	0.00
TAR	TA-PI-032	13.2	Existing	Temporary	Private	25	1,052	G	OL	S, W	0.60	0.00

Appendix B.4

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

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions Width (feet)	Length (feet)	Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
TAR	TA-PI-033	13.2	Existing	Temporary	Private	25	735	G	FW, OL	S, W	0.43	0.00
TAR	TA-PI-035	14.2RR	Existing	Temporary	Private	25	4,378	D, Gr	AG, FW, OL, OW, RD, WL	S, W	2.52	0.00
TAR	TA-PI-037	15.2	Existing	Temporary	Private	25	1,698	G	AG, CI, OL	S, W	0.98	0.00
TAR	TA-PI-037A	15.9	New	Temporary	Private	15	25	Gr	CI, FW, OL	S, W	0.01	0.00
TAR	TA-PI-037B	15.9	New	Temporary	Private	15	41	Gr	CI, OL	S, W	0.02	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-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	12.5	24	Gr	AG, CI	S, W	0.01	0.01
TAR	TA-PI-049	19.5	Existing	Temporary	Private	25	273	G	OL, RD	S, W	0.17	0.00
TAR	TA-PI-050	20	Existing	Temporary	Private	25	307	A	CI, OL	None	0.19	0.00
PAR	PA-PI-050	20	New	Permanent	Private	35	17	Gr	CI	S, W	0.01	0.01
TAR	TA-PI-051A	20.2	Existing	Temporary	Private	25	101	D	CI, RD	S, W	0.06	0.00
TAR	TA-PI-052	20.4	Existing	Temporary	Private	25	2,871	D	AG, CI, FW, OL, WL	S, W, C	1.66	0.00
TAR	TA-PI-053	21.1	Existing	Permanent	Private	25	916	G	OL, RD	S, W	0.53	0.00
TAR	TA-PI-061	23.0RR	Existing	Temporary	Danville-Pittsylvania Regional Industrial Facility Authority	25	3,508	G, D, Gr	FW, OL, OW, WL	S, W, C	2.02	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-066	24.8	Existing	Temporary	Private	25	2,345	G, D, Gr	CI, FW, OL	S, W	1.45	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
										Virginia Subtotal:	*37.71*	*2.34*
North Carolina												
TAR	TA-RO-072	26.9	Existing	Temporary	Private	25	1,049	G	CI, FW, OL, RD	S, W	0.61	0.00
TAR	TA-RO-072A	26.9	New	Temporary	Private	25	229	Gr	AG, OL, RD	S, W	0.14	0.00
TAR	TA-RO-072B	27.0 RR	Existing	Temporary	Private	25	423	G, GR	AG, CI, FW, OL	S, W	0.25	0.00
TAR	TA-RO-075	28.1 RR	Existing	Temporary	Private	25	2,219	G, D, Gr	AG, OL, WL	S, W	1.28	0.00
PAR	PA-RO-000	28.2 RR	Existing	Permanent	Private	25	4,959	G, Gr	CI, FW, OL	S, W	2.84	2.84
TAR	TA-RO-076	28.6 RR	Existing	Temporary	Private	25	2,506	G, D	FW, OL	S, W	1.45	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	1,846	G, D, Gr	OL, RD	S, W	1.06	0.00

Appendix B.4

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

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions Width (feet)	Road Dimensions Length (feet)	Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
TAR	TA-RO-080	29.9	Existing	Temporary	Private	25	3,587	G, D, Gr	AG, CI, OL, RD	S, W	2.15	0.00
TAR	TA-RO-081	30.4	New	Temporary	Private	34	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	S, W	0.12	0.12
PAR	PA-RO-082A	30.4	Existing	Permanent	Public Service Company of North Carolina, Inc.	25	118	G	CI, OL	S,W	0.06	0.06
TAR	TA-RO-082C	CY-05	Existing	Temporary	Private	80	8	C	CI	None	0.02	0.00
TAR	TA-RO-082D	CY-05	Existing	Temporary	Private	72	6	A	CI	None	0.01	0.00
TAR	TA-RO-082E	CY-05	Existing	Temporary	Private	70	7	A	CI	None	0.01	0.00
TAR	TA-RO-000A	CY-08	Existing	Temporary	Private	25	344	A	CI, OL	None	0.21	0.00
TAR	TA-CA-105	CY-25	Existing	Temporary	Private	25	2,133	D	CI, FW, OL, RD	S, W	1.29	0.00
TAR	TA-AL-195	CY-26A	Existing	Temporary	Private	25	126	D	OL	S, W, C	0.07	0.00
TAR	TA-AL-196	CY-26B	Existing	Temporary	Private	25	47	D	CI, OL	S, W	0.04	0.00
TAR	TA-AL-197	CY-26B	Existing	Temporary	Private	25	82	D	OL	S, W	0.06	0.00
TAR	TA-RO-085	32.4	Existing	Temporary	Private	25	3,667	G, D	CI, FW, OL, RD	S, W	2.05	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	1.05	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-094	35.9	Existing	Temporary	Private	25	778	D	AG, FW, OL	S, W	0.46	0.00
TAR	TA-RO-100	37	Existing	Temporary	Private	25	1,744	D	FW, OL	S, W	1.00	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-106	38.8	Existing	Temporary	City Of Reidsville	25	271	G	FW, OL	S, W	0.16	0.00
TAR	TA-RA-106A	38.8	New	Temporary	Private	25	20	Gr	CI, OL			
TAR	TA-RO-107	39.6	Existing	Temporary	Private	25	673	D	CI, OL, RD	S, W	0.40	0.00
TAR	TA-RO-108	39.6	New	Temporary	Private	25	195	Gr	FW, OL	S, W	0.12	0.00
TAR	TA-RO-109	39.7	Existing	Permanent	Duke Power Company	25	1,148	G, Gr	CI, OL	S, W	0.67	0.67
TAR	TA-RO-110	40.4 RR	New	Temporary	Private	45	22	Gr	CI, FW, OL	S, W	0.02	0.00
TAR	TA-RO-111	40.9	Existing	Temporary	Private	25	3,243	G, D, Gr	AG, CI, FW, OL, RD	S, W	1.90	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
TAR	TA-RO-113A	41.8	New	Temporary	Private	25	1,870	Gr	FW, OL, WL	S, W	1.03	1.09
PAR	PA-RO-114A	42.2	New	Permanent	Private	25	83	Gr	CI, FW, OL	S, W	0.03	0.03

Appendix B.4

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

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions Width (feet)	Road Dimensions Length (feet)	Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
TAR	TA-RO-115	42.4	Existing	Temporary	Private	25	586	G	CI, FW, OL, RD	S, W	0.34	0.00
TAR	TA-RO-115B	43.2	New	Temporary	Private	25	27	Gr	CI, OL	S, W	0.02	0.00
TAR	TA-RO-115C	43.2	New	Temporary	Private	25	10	Gr	OL	S, W	0.01	0.00
TAR	TA-RO-118A	43.4	New	Temporary	Private	25	41	Gr	CI, OL	S, W	0.03	0.00
TAR	TA-RO-118B	43.4	New	Temporary	Private	25	9	Gr	CI, OL	S, W	0.01	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
PAR	PA-RO-124A	44.9	New	Permanent	Private	14	16	Gr	AG	S, W	0.01	0.01
TAR	TA-RO-125	45	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 RR	Existing	Temporary	Private	25	2,745	G, D	AG, FW, OL, RD	S, W	1.59	0.00
TAR	TA-RO-129	46.7	Existing	Temporary	Private	25	1,542	G, D	AG, CI, FW, OL	S, W	0.91	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-131A	48.4	New	Temporary	Private	25	30	Gr	AG, CI	S, W	0.03	0.00
TAR	TA-RO-131B	48.4	Bew	Temporary	Private	25	18	Gr	Ag, CI	S, W	0.02	0.00
TAR	TA-RO-134	48.9	Existing	Temporary	Private	34	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-136A	49.5	New	Temporary	Private	25	19	Gr	CI, OL	S, W	0.02	0.00
TAR	TA-RO-136B	49.5	New	Temporary	Private	25	20	Gr	CI, FW	S, W	0.02	0.00
TAR	TA-RO-138	49.8 RR	Existing	Temporary	Private	25	785	D, Gr	CI, FW, OL	S, W	0.46	0.00
TAR	TA-RO-139	50.3 RR	Existing	Temporary	Private	25	2,779	D	AG, FW, OL	S, W	1.60	0.00
TAR	TA-RO-140	51.4 RR	Existing	Temporary	Private	25	871	D	AG, CI, FW, OL	S, W	0.51	0.00
TAR	TA-RO-141	51.6 RR	Existing	Temporary	Private	25	438	D	AG, OL	S, W	0.26	0.00
TAR	TA-RO-142	51.8	Existing	Temporary	Private	25	668	D	AG, CI, OL	S, W	0.39	0.00
TAR	TA-RO-144	52.1 RR	Existing	Temporary	Private	25	525	D	AG, CI, FW, OL	S, W	0.31	0.00
TAR	TA-RO-144A	52.2 RR	Existing	Temporary	Private	25	461	D	FW, OL	S, W	0.28	0.00
TAR	TA-RO-145	52.3	Existing	Temporary	Private	25	533	D	FW, OL	S, W	0.32	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-149A	53.3	New	Temporary	Private	25	18	Gr	CI, OL	S, W	0.01	0.00
TAR	TA-AL-149B	53.3	New	Temporary	Private	25	15	Gr	OL	S, W	0.02	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	54.2	Existing	Temporary	Private	25	1,227	D	AG, FW, OL	S, W	0.72	0.00

Appendix B.4

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

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions Width (feet)	Length (feet)	Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
TAR	TA-AL-155	54.7	Existing	Temporary	Private	25	3,468	D	AG, CI, FW, OL, OW	S, W	2..02	0.00
PAR	PA-AL-155A	55.1	New	Permanent	Private	25	40	Gr	AG, OL	S, W	0.02	0.03
PAR	PA-AL-155B	55.1	New	Permanent	Private	12.5	16	Gr	AG, OL	S, W	0.01	0.01
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	0.28	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	1.07	0.00
TAR	TA-AL-161	57.7	New	Temporary	Private	25	651	G, Gr	CI, FW, OL, RD	S, W	0.38	0.00
TAR	TA-AL-162	58.1	Existing	Temporary	Private	25	993	Gr, D	AG, FW, OL	S, W	0.58	0.00
TAR	TA-AL-163	58.4	Existing	Temporary	Private	25	1,032	OL, G	CI, OL	S, W	0.60	0.00
TAR	TA-AL-165A	60	New	Temporary	Private	25	17	Gr	OL	S, W	0.02	0.00
TAR	TA-AL-165B	60	New	Temporary	Private	25	16	Gr	OL	S, W	0.02	0.00
TAR	TA-AL-166A	60.2	New	Temporary	Private	12.5	16	Gr	CI, OL	S, W	0.01	0.00
TAR	TA-Al-166B	60.2	New	Temporary	Private	12.5	16	Gr	CI, OL	S, W	0.01	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	61.2	Existing	Temporary	Private	25	757	D	AG, CI, FW, OL	S, W	0.44	0.00
TAR	TA-AL-168	61.6	Existing	Temporary	Private	25	578	G, Gr	AG, CI, FW, OL	S, W	0.36	0.00
TAR	TA-AL-169	62.5	Existing	Temporary	Private	25	1,431	D	OL, RD	S, W	0.83	0.00
TAR	TA-AL-171A	63.3 RR	New	Temporary	Private	25	269	Gr	AG, FW	S, W	0.16	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
TAR	TA-AL-175A	64.8	New	Temporary	Private	12.5	60	Gr	CI, OL	S, W	0.02	0.00
TAR	TA-AL-172A	64.8	New	Temporary	Private	25	20	Gr	CI, FW, OL	S, W	0.02	0.00
TAR	TA-AL-172B	64.8	New	Temporary	Private	25	22	Gr	CI, OL	S, W	0.02	0.00
TAR	TA-AL-179B	67.2 RR	Existing	Temporary	Private	25	1,878	G	CI, OL	S, W	1.09	0.00
TAR	TA-AL-180	67.4 RR	New	Temporary	Private	25	1,906	G, Gr	AG, CI, FW, OL, RD	S, W	1.12	0.00
TAR	TA-AL-181	68.0	Existing	Temporary	Private	25	1,527	G, D	CI, FW, OL, RD	S, W	0.88	0.00
TAR	TA-AL-181A	68.2	Existing	Permanent	Private	25	1,991	G	CI, OL, RD	S, W	1.16	0.00
PAR	PA-AL-182	68.7	New	Permanent	Private	12.5	220	Gr	CI, FW, OL	S, W	0.07	0.07
TAR	TA-AL-185	68.9	Existing	Temporary	Private	25	1,586	Gr	FW, OL, RD	S, W	0.92	0.00
TAR	TA-AL-186	69.2	Existing	Temporary	Private	45	11	G, Gr	FW, RD	S, W	0.02	0.00
TAR	TA-AL-187B	69.8 RR	Existing	Temporary	Private	25	302	G	CI	S, W	0.18	0.00
TAR	TA-AL-187A	69.9 RR	Existing	Temporary	Private	20	1,1087	G	CI, FW, OL	S, W	0.65	0.00
TAR	TA-AL-188	70.9	Existing	Temporary	Private	25	784	C, D	CI, FW, OL	S, W	0.45	0.00

Appendix B.4

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

State/ Facility/ Road ID a/	Road Name	Milepost b/	New or Existing	Proposed for Temporary or Permanent Use	Ownership / Management	Road Dimensions Width (feet)	Length (feet)	Existing Surface c/	Existing Land Use d/	Proposed Improvement e/	Construction Area (acres) f/	Operation Area (acres) g/
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	0.89	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	1,262	Gr	CI, FW, OL	S, W	0.73	0.00
TAR	TA-AL-193A	72.9 RR	Existing	Temporary	Private	25	67	Gr	CI, OL	S, W	0.05	0.00
PAR	PA-AL-194	73.17 RR	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:	*61.78*	*3.36*
										PROJECT TOTAL:	**99.50**	**5.70**

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.

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.

APPENDIX B.5

Waterbodies Crossed by the Southgate Project

Appendix B.5

Waterbodies Crossed by the 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/	Crossing Method h/ i/
Virginia - Pittsylvania								
H-605 Pipeline								
S-F18-6	0.1	Trib. To Little Cherrystone Creek	Intermittent	6	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
H-650 Pipeline								
S-F18-65	0.4	Little Cherrystone Creek	Perennial	22	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry-Ditch - Dam and pump, Flume
S-F18-63	0.6	Trib. To Sandy Creek	Intermittent	14	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-18	1.1	Trib. To Cherrystone Creek	Perennial	5	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-56	1.4	Trib. To Cherrystone Creek	Intermittent	4	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-18	1.7	Cherrystone Creek	Perennial	29	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-2	3.2	Trib. To Banister River	Intermittent	8	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-6	3.6	Trib. To Banister River	Intermittent	9	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-10	4.0	Trib. To Banister River	Intermittent	6	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-9	4.1	Trib. To Banister River	Intermittent	4	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-4	4.8	Trib. To Banister River	Intermittent	4	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-3	4.9	Banister River	Perennial	48	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-2	5.0	White Oak Creek	Perennial	33	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume

Appendix B.5

Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-D18-2	5.1	White Oak Creek	Perennial	23	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-36	6.6	Trib. To White Oak Creek	Intermittent	5	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-7	7.0	Trib. To White Oak Creek	Intermittent	4	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-6	7.0	Trib. To White Oak Creek	Intermittent	5	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-13	7.6	Trib. To White Oak Creek	Perennial	3	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-13	8.0	Trib. To White Oak Creek	Intermittent	9	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-16	8.5	Trib. To White Oak Creek	Intermittent	8	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-14	8.6	Trib. To White Oak Creek	Perennial	9	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
WB-E18-24	9.0	Trib. To White Oak Creek	Pond	23	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-15	9.9	Trib. To White Oak Creek	Perennial	3	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-17	9.9	White Oak Creek	Perennial	14	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-22	11.0	Trib. To Sandy Creek	Intermittent	0	N/A	WWH	AL, R, FC, W	N/A
S-F18-20	11.0	Trib. To Sandy Creek	Perennial	40	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-28	11.4	Trib. To Sandy Creek	Intermittent	0	N/A	WWH	AL, R, FC, W	N/A
S-F18-20	11.4	Trib. To Sandy Creek	Perennial	12	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-85	11.6	Trib. To Sandy Creek	Perennial	4	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume

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Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-C18-86	11.9	Trib. To Sandy Creek	Perennial	23	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-21	12.8	Sandy Creek	Perennial	15	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-27	13.4	Trib. To Sandy Creek	Perennial	11	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-22	14.3 RR	Trib. To Sandy Creek	Perennial	10	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-47	14.7	Trib. To Sandy Creek	Perennial	3	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-188	15.2	Trib. To Silver Creek	Perennial	5	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-37	15.7	Trib. To Silver Creek	Perennial	24	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-190	15.9	Trib. To Silver Creek	Intermittent	6	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-194	16.0	Trib. To Silver Creek	Perennial	7	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-195	16.2	Trib. To Silver Creek	Perennial	3	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-G18-10	16.2	Trib. To Silver Creek	Intermittent	0	N/A	WWH	AL, R, FC, W	N/A
S-C18-97	16.8	Trib. To Sandy River	Intermittent	6	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-202	17.0	Trib. To Sandy River	Perennial	3	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-51	17.3	Trib. To Sandy River	Perennial	12	Intermediate	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-44	17.7 RR	Sandy River	Perennial	113	Major	WWH	AL, R, FC, W	Open Cut – Dry Ditch -, Flume
S-A19-292	17.8 RR	Trib.to Sandy River	Perennial	6	Minor	WWH	AL,R,W	Open Cut – Dry Ditch - Dam and pump, Flume

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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/	Crossing Method h/ i/
S-E18-42	18.0	Trib. To Hardys Creek	Perennial	6	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-38	19.4	Trib. To Sandy River	Ephemeral	4	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-50	19.7	Trib. To Sandy River	Perennial	9	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-52	20.4	Trib. To Trayner Branch	Perennial	13	Intermediate	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-54	20.6	Trib. To Trayner Branch	Perennial	6	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-34	21.0	Trayner Branch	Perennial	7	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-D18-40	21.2	Trib. To Trayner Branch	Perennial	5	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-94	21.7	Trib. To Trotters Creek	Intermittent	0	N/A	WWH	AL, R, FC, W	N/A
WB-C18-93	21.9	Trib. To Trotters Creek	Pond	0	N/A	WWH	AL, R, FC, W	N/A
S-A18-205	22.0	Trib. To Trotters Creek	Intermittent	19	Intermediate	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-203	22.1	Trib. To Trotters Creek	Intermittent	1	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-206	22.2	Trib. To Trotters Creek	Intermittent	9	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-315	22.5 RR	Trib. To Trotters Creek	Intermittent	4	Minor	WWH	Al, R, FC, W	Open Cut - Dam and pump, Flume
S-A19-317	22.7 RR	Trib. To Trotters Creek	Intermittent	4	Minor	WWH	Al,R,FC,W	Open Cut - Dam and pump, Flume
S-F18-42	23.2 RR	Trib. To Trotters Creek	Ephemeral	6	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-40	23.2 RR	Trotters Creek	Perennial	25	Intermediate	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume

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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/	Crossing Method h/ i/
S-F18-38	23.6 RR	Trib. To Dan River	Intermittent	8	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-F18-35	23.9 RR	Trib. To Dan River	Ephemeral	10	Minor	WWH	AL, R, FC, W	Open Cut – Dry Ditch - Dam and pump, Flume
S-E18-34	23.9	Trib. To Dan River	Intermittent	0	N/A	WWH	AL, R, FC, W, PWS	N/A
S-F18-34	24.4	Trib. To Dan River	Ephemeral	7	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
AS-F18-33/S-F18-33	24.8	Trib. To Dan River	Perennial	9	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-89	25.1	Trib. To Dan River	Perennial	19	Intermediate	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-90	25.7	Trib. To Dan River	Perennial	11	Intermediate	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-92	25.9	Trib. To Dan River	Intermittent	7	Minor	WWH	AL, R, FC, W, PWS	Open Cut – Dry Ditch - Dam and pump, Flume
North Carolina - Rockingham								
S-B18-99	26.5	Trib. To Cascade Creek	Intermittent	0	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-42	27.3	Trib. To Cascade Creek	Intermittent	20	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-40	27.5	Cascade Creek	Perennial	108	Major	WWH	Class C	Conventional Bore
S-A19-273	27.5	Dry Creek	Perennial	29	Intermediate	WWH	Class C	Conventional Bore
S-A18-31	28.3 RR	Trib. To Dan River	Intermittent	0	N/A	WWH	Class C	N/A
S-A18-32	28.4 RR	Trib. To Dan River	Perennial	14	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-34	28.4 RR	Trib. To Dan River	Intermittent	0	Minor	WWH	Class C	N/A
S-A18-36	28.4 RR	Trib. To Dan River	Perennial	0	N/A	WWH	Class C	N/A

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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/	Crossing Method h/ i/
S-A18-37	28.6 RR	Trib. To Dan River	Perennial	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-49	28.8	Trib. To Dan River	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-47	29.6	Trib. To Dan River	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-17	30.1	Dan River	Perennial	248	Major	WWH	Class C	HDD
S-B18-38	30.3	Trib. To Dan River	Ephemeral	3	Minor	WWH	Class C	HDD
S-B18-104	30.8	Trib. To Rock Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B19-153	30.9	Trib. To Rock Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-105	31.1	Trib. To Rock Creek	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-102	31.1	Trib. To Rock Creek	Perennial	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-95	31.3	Rock Creek	Perennial	28	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-120	31.7	Trib. To Machine Creek	Ephemeral	0	N/A	WWH	Class C	N/A
S-A18-143	31.9	Trib. To Machine Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-140	31.9	Trib. To Machine Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-144	32.0	Trib. To Machine Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-140	32.0	Trib. To Machine Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-147	32.2	Machine Creek	Perennial	20*	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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Waterbodies Crossed by the Southgate Project

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S-A18-153	32.6	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-151	32.7	Town Creek	Perennial	55	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-151	33.0	Town Creek	Perennial	48	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-154	33.0	Trib. To Town Creek	Intermittent	0	N/A	WWH	Class C	N/A
S-A18-154	33.0	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-154	33.0	Trib. To Town Creek	Intermittent	0	N/A	WWH	Class C	N/A
S-A18-220	33.3	Trib. To Town Creek	Ephemeral	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-221	33.3	Trib. To Town Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-52	33.4	Trib. To Town Creek	Intermittent	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-51	33.5	Trib. To Town Creek	Intermittent	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-223	33.7	Trib. To Town Creek	Intermittent	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-225	33.7	Trib. To Town Creek	Perennial	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-49	33.9	Trib. To Town Creek	Intermittent	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-38	34.2 RR	Trib. To Town Creek	Perennial	33	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-39	34.5	Trib. To Town Creek	Ephemeral	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-38	34.6	Trib. To Town Creek	Perennial	17	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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S-C18-53	34.7	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-38	34.8	Trib. To Town Creek	Perennial	23	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-74	34.8	Trib. To Town Creek	Ephemeral	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-38	35.0	Trib. To Town Creek	Perennial	8	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-57	35.1	Trib. To Town Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-35	36.0	Trib. To Town Creek	Perennial	10	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-94	37.0	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-97	37.2	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-101	37.3	Trib. To Wolf Island Creek	Perennial	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B19-157	37.6	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-B18-117	37.7	Trib. To Wolf Island Creek	Perennial	12	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-2	38.2	Trib. To Wolf Island Creek	Perennial	20	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-9	38.4	Trib. To Wolf Island Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-4	38.5	Trib. To Wolf Island Creek	Perennial	0	N/A	WWH	Class C	N/A
S-A18-4	38.5	Trib. To Wolf Island Creek	Perennial	0	N/A	WWH	Class C	N/A
S-A18-8	38.8	Wolf Island Creek	Perennial	53	Intermediate	WWH	Class C	Conventional Bore

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S-A19-269	38.8	Trib. To Wolf Island Creek	Intermittent	2	Minor	WWH	Class C	Conventional Bore
S-B18-72	39.0	Trib. To Wolf Island Creek	Ephemeral	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-74	39.1	Trib. To Wolf Island Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-74	39.6	Trib. To Wolf Island Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-108	40.2	Trib. To Lick Fork	Perennial	27	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-210	40.5 RR	Trib. To Lick Fork	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-210	40.5 RR	Trib. To Lick Fork	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-51	40.6	Trib. To Lick Fork	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-52	40.7	Trib. To Lick Fork	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-57	41.1	Trib. To Lick Fork	Perennial	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-56	41.2	Lick Fork	Perennial	39	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-171	41.2	Trib. To Lick Fork	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-B18-44	41.6	Trib. To Lick Fork	Intermittent	0	N/A	WWH	Class C	N/A
S-B18-44	41.7	Trib. To Lick Fork	Intermittent	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-41	41.8	Trib. To Lick Fork	Perennial	20	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-89	42.3	Trib. To Jones Creek	Ephemeral	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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S-A18-256	42.9	Trib. To Jones Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-92	43.1	Trib. To Jones Creek	Perennial	12	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-176	43.3	Jones Creek	Perennial	26	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-181	43.3	Trib. To Jones Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-80	43.7	Trib. To Jones Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-105	43.7	Trib. To Jones Creek	Perennial	53	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-25	44.1	Trib. To Jones Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-102	44.1	Trib. To Jones Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-228	44.5	Trib. To Jones Creek	Ephemeral	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-213	45.7	Trib. To Hogans Creek	Intermittent	0	N/A	WWH	Class C	N/A
S-B18-71	45.7	Trib. To Hogans Creek	Perennial	23	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-68	45.8	Trib. To Hogans Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-345	46.1 RR	Trib. To Hogans Creek	Ephemeral	3	Minor	WWh	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-344	46.2 RR	Trib To Hogans Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-231	46.4	Trib. To Hogans Creek	Ephemeral	0	N/A	WWH	Class C	N/A
S-A18-234	46.5	Trib. To Hogans Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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S-A18-235	46.5	Trib. To Hogans Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-76	47.0	Hogans Creek	Perennial	19	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-79	47.4	Trib. To Hogans Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-90	47.6	Trib. To Hogans Creek	Perennial	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B19-167	47.7	Trib. To Hogans Creek	Intermittent	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-242	47.7	Trib. To Hogans Creek	Perennial	19	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-60	48.7	Giles Creek	Perennial	4	Minor	WWH	Class C, WS-IV, NSW	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-55	49.3	Trib. To Giles Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-183	49.9 RR	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-185	49.9 RR	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-A18-182	49.9 RR	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-244	50.2 RR	Trib. To Haw River	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-289	50.7 RR	Trib. To Haw River	Intermittent	0	N/A	WWH	Class C	N/A
S-A19-286	50.8 RR	Trib. To Haw River	Perennial	43*	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-285	51.2 RR	Trib. To Haw River	Intermittent	0	N/A	WWH	Class C	N/A
S-C18-22	51.3 RR	Trib. To Haw River	Ephemeral	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

Appendix B.5

Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-C18-21	51.4 RR	Trib. To Haw River	Perennial	0	N/A	WWH	Class C	N/A
WB-C18-19	51.4 RR	Trib. To Haw River	Pond	0	N/A	WWH	Class C	N/A
S-C18-15	52.2 RR	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-A18-219	52.4 RR	Trib. To Haw River	Perennial	9	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
North Carolina - Alamance								
S-B18-94	52.7	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-84	53.7	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-87	53.7	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-89	54.0	Trib. To Haw River	Intermittent	0	N/A	WWH	Class C	N/A
S-C18-63	54.5	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-62	54.6	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-60	54.9	Trib. To Haw River	Intermittent	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-143	54.9	Trib. To Haw River	Ephemeral	0	N/A	WWH	Class C	N/A
S-B18-142	54.9	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-61	54.9	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-68	55.3 RR	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

Appendix B.5

Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-B18-59	55.6 RR	Trib. To Haw River	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-65	56.4 RR	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-120	56.4 RR	Trib. To Haw River	Perennial	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
WB-A18-121	56.5	Trib. To Haw River	Pond	31	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-123	56.6 RR	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-129	56.6 RR	Trib. To Haw River	Ephemeral	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
WB-A18-128	56.7 RR	Trib. To Haw River	Pond	68	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-132	57.1	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-2	57.9	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-11	58.7 RR	Trib. To Haw River	Perennial	31	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-12	58.7 RR	Trib. To Haw River	Intermittent	0	Minor	WWH	Class C	N/A
AS-NHD-1549	59.6	Trib. To Haw River	Intermittent	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-30	60.7	Trib. To Haw River	Intermittent	16	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-28	60.8 RR	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-A19-340	61.3	Trib. To Haw River	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-339	61.4	Trib. To Haw River	Ephemeral	0	N/A	WWH	Class C	N/A
S-A18-78	61.8	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-70	62.5	Trib. To Haw River	Perennial	13	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-24	63.0 RR	Trib. To Stony Creek	Intermittent	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-14	63.2 RR	Trib. To Stony Creek	Ephemeral	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-113	63.3 RR	Trib. To Stony Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-12	63.4 RR	Trib. To Stony Creek	Perennial	18	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-15	63.5	Trib. To Stony Creek	Intermittent	0	Minor	WWH	Class C	N/A
S-B18-16	63.6	Stony Creek Reservoir	Perennial	296	Major	WWH	Class C, WS-II, HQW, NSW, CA	HDD
S-B18-20	63.8	Trib. To Deep Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-331	64.1 RR	Deep Creek	Perennial	34	Intermediate	WWH	Class C, WS-II, HQW, NSW, CA	Conventional Bore
S-A19-351	64.4	Trib. To Deep Creek	Ephemeral	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-350	64.5	Trib. To Deep Creek	Perennial	13	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-319	65.0 RR	Trib. To Boyds Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-321	65.1 RR	Trib. To Boyds Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-A19-324	65.2 RR	Trib. To Boyds Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-251	65.6	Trib. To Boyds Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-250	65.6	Trib. To Boyds Creek	Perennial	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-A19-353	66.5 RR	Trib. To Boyds Creek	Intermittent	2	Minor	WWH	N/A	Open Cut – Dry Ditch - Dam and pump, Flume
AS-NHD-3025	66.8 RR	Trib. To Boyds Creek	Intermittent	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-A18-177	67.3 RR	Trib. To Boyds Creek	Perennial	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-A18-180	67.3 RR	Trib. To Boyds Creek	Intermittent	0	Minor	WWH	Class C	N/A
S-B18-80	67.3 RR	Trib. To Boyds Creek	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-233	67.6	Boyds Creek	Perennial	24	Intermediate	WWH	Class C, WS-V, NSW	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-335	67.9	Trib. To Boyds Creek	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-336	68.1	Trib. To Boyds Creek	Intermittent	8	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B-18-7	68.4	Trib. To Boyd Creek	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-NHD-1552	68.6	Trib. To Boyds Creek	Intermittent	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-8	68.8	Trib. To Haw River	Intermittent	12	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-11	68.9	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-A18-15	69.2	Trib. To Haw River	Intermittent	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-B18-132	69.5	Trib. To Haw River	Perennial	8	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-70	69.7 RR	Trib. To Haw River	Intermittent	0	Minor	WWH	N/A	N/A
S-A18-115	70.0 RR	Trib. To Haw River	Perennial	6	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-135	70.3	Trib. To Haw River	Ephemeral	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-133	70.3	Trib. To Haw River	Perennial	11	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-82	70.4	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-C18-81	70.7	Trib. To Haw River	Perennial	24	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-109	70.9	Trib. To Haw River	Perennial	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-108	71.0	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-107	71.0	Trib. To Haw River	Ephemeral	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-64	71.5	Trib. To Haw River	Perennial	26	Intermediate	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-65	71.6	Trib. To Haw River	Intermittent	1	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-68	71.8	Trib. To Haw River	Perennial	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
AS-A19-337 / S-A19-337	71.9	Trib. To Haw River	Ephemeral	4	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A19-338	72.0	Trib. To Haw River	Ephemeral	2	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume

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Waterbodies Crossed by the 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/	Crossing Method h/ i/
AS-NHD-1560	72.1	Trib. To Haw River	Intermittent	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-A18-207	72.2	Trib. To Haw River	Intermittent	0	N/A	WWH	Class C	N/A
S-B18-125	72.4	Trib. To Haw River	Intermittent	3	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B18-127	72.5	Trib. To Haw River	Intermittent	5	Minor	WWH	Class C	Open Cut – Dry Ditch - Dam and pump, Flume
S-B19-150	73.0 RR	Trib. To Back Creek	Perennial	0	N/A	WWH	Class C	N/A
Aboveground Facilities								
North Carolina - Rockingham								
S-B18-38 - T-15 Dan River Interconnect	30.3	Trib. To Dan River	Ephemeral	0	N/A	WWH	Class C	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
S-F18-61 - TA-PI-035	14.3 RR	Trib. To Sandy Creek	Perennial	7	Minor	WWH	AL, R, FC, W	Bridge or Flume
S-F18-47 - TA-PI-043	17.2	Trib. To Sandy River	Intermittent	0	N/A	WWH	AL, R, FC, W	N/A
S-E18-41 - TA-PI-061	22.7 RR	Trib. To Trotters Creek	Ephemeral	0	N/A	WWH	AL, R, FC, W	N/A
S-E18-39 - TA-PI-061	22.6 RR	Trib. To Trotters Creek	Perennial	4	Minor	WWH	AL, R, FC, W	Bridge or Flume
S-E18-38 – TA-PI-061	22.6 RR	Trib. To Trotters Creek	Intermittnet	0	N/A	WWH	AL, R, FC, W	N/A
S-E18-32 - TA-PI-063	24.0	Trib. To Dan River	Intermittent	4	Minor	WWH	AL, R, FC, W	Bridge or Flume

Appendix B.5

Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-C18-88 - TA-PI-067	25.0	Trib. To Dan River	Intermittent	0	N/A	WWH	AL, R, FC, W	N/A
North Carolina - Rockingham								
S-A18-23 - TA-RO-076	28.3 RR	Trib. To Dan River	Perennial	0	N/A	WWH	Class C	N/A
S-A18-27 - TA-RO-076	28.4 RR	Trib. To Dan River	Intermittent	1	Minor	WWH	Class C	Bridge or Flume
S-A18-19 - TA-RO-080	29.7	Trib. To Dan River	Perennial	0	N/A	WWH	Class C	N/A
S-A18-19 - TA-RO-080	29.8	Trib. To Dan River	Perennial	0	N/A	WWH	Class C	N/A
S-A18-1 - TA-RO-103	38.1	Trib. To Wolf Island Creek	Ephemeral	0	N/A	WWH	Class C	N/A
S-B18-42 - TA-RO-113A	41.8	Trib. To Lick Fork	Intermittent	0	N/A	WWH	Class C	N/A
S-A18-239 - TA-RO-129	46.7	Trib. To Hogans Creek	Intermittent	0	N/A	WWH	Class C	N/A
S-A18-238 – TA-RO-129	46.7	Trib. To Hogans Creek	Intermittent	0	N/A	WWH	Class C	N/A
S-C18-71 - TA-RO-139	50.2 RR	Trib. To Haw River	Ephemeral	0	N/A	WWH	Class C	N/A
S-C18-15 - TA-RO-144A	52.2 RR	Trib. To Haw River	Intermittent	0	N/A	WWH	Class C	N/A
North Carolina - Alamance								
S-A18-215 - TA-AL-155	54.6	Trib. To Haw River	Perennial	11	Intermediate	WWH	Class C	Bridge or Flume
S-A18-216 - TA-AL-155	54.6	Trib. To Haw River	Intermittent	2	Minor	WWH	Class C	Bridge or Flume
S-B18-138 - TA-AL-172	63.7	Trib. To Stony Creek	Perennial	3	Minor	WWH	Class C	Bridge or Flume

Appendix B.5

Waterbodies Crossed by the 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/	Crossing Method h/ i/
S-B18-137 - TA-AL-172	63.7	Trib. To Stony Creek	Intermittent	2	Minor	WWH	Class C	Bridge or Flume
S-A19-308-TA-Al195	71.2	Trib. To Back Creek	Perennial	0	N/A	WWH	Class C	N/A

a/ Data is based on waterbody field delineations completed through May 9, 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 (unless followed by "*" which indicates the stream width for a parallel pipeline crossing),. 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, but is within the Project workspace. .

e/ FERC Classification from the 2013 FERC Procedures. Minor (<10 feet); Intermediate (>10 - <100 feet); Major (>100 feet). N/A indicates the stream is not crossed by the Project pipeline..

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/ June 1 through November 30 is the FERC mandated warmwater habitat construction window; in-water work, except that required to install or remove equipment bridges, must be completed between these dates unless expressly permitted or further restricted in writing on a site-specific basis by the appropriate federal or state agency. Construction timing windows for mussels may be applicable depending on final consultation with the applicable agencies.

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

APPENDIX B.6

Wetlands Crossed by the Southgate Project

Appendix B.6

Wetlands Crossed by the MVP Southgate Project

Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-F18-7	Virginia	Pittsylvania	H-605 Pipeline	PEM	0.1	11	<0.01	<0.01	Open-cut
W-F18-11	Virginia	Pittsylvania	H-650 Pipeline	PFO	0.2	57	0.12	0.04	Open-cut
W-F18-66	Virginia	Pittsylvania	H-650 Pipeline	PEM	0.4	356	0.48	0.08	Open-cut
W-F18-66	Virginia	Pittsylvania	H-650 Pipeline	PFO	0.4	0	0.14	0.00	Workspace
W-F18-64	Virginia	Pittsylvania	H-650 Pipeline	PEM	0.6	225	0.36	0.05	Open-cut
W-G18-2	Virginia	Pittsylvania	H-650 Pipeline	PEM	1.0	13	0.04	<0.01	Open-cut
W-G18-2	Virginia	Pittsylvania	H-650 Pipeline	PFO	1.0	0	<0.01	<0.01	Workspace
W-F18-57	Virginia	Pittsylvania	H-650 Pipeline	PEM	1.1	0	<0.01	0.00	Workspace
W-F18-57	Virginia	Pittsylvania	H-650 Pipeline	PEM	1.1	0	<0.01	0.00	Workspace
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PFO	1.4	156	0.16	0.10	Open-cut
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PEM	1.4	0	0.01	<0.01	Workspace
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PFO	1.4	11	0.01	<0.01	Open-cut
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PFO	1.4	255	0.39	0.16	Open-cut
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PEM	1.6	770	1.25	0.18	Open-cut
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PSS	1.5	0	0.14	0.00	Workspace
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PEM	1.7	55	0.07	0.01	Open-cut
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PSS	1.8	362	0.45	0.08	Open-cut
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PEM	2.1	1,470	2.90	0.34	Open-cut
W-F18-5	Virginia	Pittsylvania	H-650 Pipeline	PFO	1.9	290	0.34	0.20	Open-cut
W-D18-5	Virginia	Pittsylvania	H-650 Pipeline	PFO	3.6	44	0.07	0.02	Open-cut
W-D18-5	Virginia	Pittsylvania	H-650 Pipeline	PFO	3.6	2	<0.01	<0.01	Open-cut
W-D18-11	Virginia	Pittsylvania	H-650 Pipeline	PFO	4.0	0	<0.01	0.00	Open-cut
W-D18-11	Virginia	Pittsylvania	H-650 Pipeline	PFO	4.0	5	<0.01	<0.01	Open-cut
W-D18-7	Virginia	Pittsylvania	H-650 Pipeline	PFO	4.9	373	0.46	0.25	Open-cut

Appendix B.6

Wetlands Crossed by the MVP Southgate Project

Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-D18-7	Virginia	Pittsylvania	H-650 Pipeline	PEM	4.9	9	0.20	0.01	Open-cut
W-D18-1	Virginia	Pittsylvania	H-650 Pipeline	PFO	5.0	14	0.02	<0.01	Open-cut
W-D18-1	Virginia	Pittsylvania	H-650 Pipeline	PFO	5.0	123	0.18	0.07	Open-cut
W-D18-1	Virginia	Pittsylvania	H-650 Pipeline	PFO	5.1	87	0.15	0.05	Open-cut
W-D18-1	Virginia	Pittsylvania	H-650 Pipeline	PFO	5.2	309	0.51	0.21	Open-cut
W-D18-1	Virginia	Pittsylvania	H-650 Pipeline	PFO	5.2	0	0.06	0.00	Workspace
W-D18-1	Virginia	Pittsylvania	H-650 Pipeline	PFO	5.2	113	0.31	0.08	Open-cut
W-D18-1	Virginia	Pittsylvania	H-650 Pipeline	PFO	5.2	10	0.00	0.00	Conventional Bore
W-D18-10	Virginia	Pittsylvania	H-650 Pipeline	PFO	6.5	0	0.01	0.00	Workspace
W-D18-10	Virginia	Pittsylvania	H-650 Pipeline	PEM	6.6	0	0.14	<0.01	Workspace
W-D18-10	Virginia	Pittsylvania	H-650 Pipeline	PFO	6.6	53	0.10	0.04	Open-cut
W-D18-8	Virginia	Pittsylvania	H-650 Pipeline	PEM	7.0	0	<0.01	0.00	Workspace
W-D18-8	Virginia	Pittsylvania	H-650 Pipeline	PEM	7.0	0	<0.01	0.00	Workspace
W-D18-14	Virginia	Pittsylvania	H-650 Pipeline	PEM	7.6	0	<0.01	0.00	Workspace
W-D18-14	Virginia	Pittsylvania	H-650 Pipeline	PFO	7.6	0	<0.01	0.00	Workspace
W-F18-14	Virginia	Pittsylvania	H-650 Pipeline	PEM	8.0	0	<0.01	0.00	Workspace
W-F18-14	Virginia	Pittsylvania	H-650 Pipeline	PEM	8.0	0	<0.01	0.00	Workspace
W-F18-14	Virginia	Pittsylvania	H-650 Pipeline	PFO	8.0	3	0.01	<0.01	Open-cut
W-F18-14	Virginia	Pittsylvania	H-650 Pipeline	PEM	8.0	0	0.01	<0.01	Workspace
W-F18-14	Virginia	Pittsylvania	H-650 Pipeline	PFO	8.0	5	<0.01	<0.01	Open-cut
W-E18-17	Virginia	Pittsylvania	H-650 Pipeline	PEM	8.4	98	0.16	0.02	Open-cut
W-E18-13	Virginia	Pittsylvania	H-650 Pipeline	PFO	8.5	94	0.15	0.05	Open-cut
W-E18-13	Virginia	Pittsylvania	H-650 Pipeline	PEM	8.5	0	0.02	0.00	Workspace
W-E18-13	Virginia	Pittsylvania	H-650 Pipeline	PFO	8.6	32	0.05	0.01	Open-cut

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Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-E18-13	Virginia	Pittsylvania	H-650 Pipeline	PEM	8.6	0	0.01	0.00	Workspace
W-E18-13	Virginia	Pittsylvania	H-650 Pipeline	PFO	8.6	47	0.07	0.03	Open-cut
W-E18-13	Virginia	Pittsylvania	H-650 Pipeline	PEM	8.6	0	0.01	0.00	Workspace
W-E18-24	Virginia	Pittsylvania	H-650 Pipeline	PFO	9.0	0	0.01	<0.01	Workspace
W-E18-24	Virginia	Pittsylvania	H-650 Pipeline	PEM	9.1	0	0.09	0.00	Workspace
W-F18-58	Virginia	Pittsylvania	H-650 Pipeline	PFO	9.7	393	0.46	0.24	Open-cut
W-F18-16	Virginia	Pittsylvania	H-650 Pipeline	PFO	9.9	27	0.05	0.01	Open-cut
W-F18-18	Virginia	Pittsylvania	H-650 Pipeline	PFO	9.9	0	0.01	<0.01	Workspace
W-F18-18	Virginia	Pittsylvania	H-650 Pipeline	PFO	9.9	0	<0.01	0.00	Workspace
W-F18-18	Virginia	Pittsylvania	H-650 Pipeline	PFO	9.9	40	0.06	0.03	Open-cut
W-E18-23	Virginia	Pittsylvania	H-650 Pipeline	PEM	10.1	0	<0.01	0.00	Workspace
W-E18-23	Virginia	Pittsylvania	H-650 Pipeline	PFO	10.1	4	0.01	<0.01	Open-cut
W-F18-24	Virginia	Pittsylvania	H-650 Pipeline	PFO	11.0	0	0.03	0.00	Workspace
W-F18-21	Virginia	Pittsylvania	H-650 Pipeline	PFO	11.0	0	<0.01	0.00	Workspace
W-F18-21	Virginia	Pittsylvania	H-650 Pipeline	PFO	11.1	0	<0.01	0.00	Workspace
W-F18-29	Virginia	Pittsylvania	H-650 Pipeline	PFO	11.4	0	0.01	0.00	Workspace
W-F18-27	Virginia	Pittsylvania	H-650 Pipeline	PFO	11.4	0	<0.01	<0.01	Workspace
W-C18-84	Virginia	Pittsylvania	H-650 Pipeline	PFO	11.6	29	0.06	0.01	Open-cut
W-C18-84	Virginia	Pittsylvania	H-650 Pipeline	PFO	11.6	20	0.02	<0.01	Open-cut
W-F18-53	Virginia	Pittsylvania	H-650 Pipeline	PFO	12.8	8	<0.01	<0.01	Open-cut
W-F18-53	Virginia	Pittsylvania	H-650 Pipeline	PFO	12.8	0	<0.01	0.00	Workspace
W-F18-53	Virginia	Pittsylvania	H-650 Pipeline	PFO	12.8	6	<0.01	<0.01	Open-cut
W-F18-53	Virginia	Pittsylvania	H-650 Pipeline	PFO	12.8	0	<0.01	0.00	Workspace
W-E18-28	Virginia	Pittsylvania	H-650 Pipeline	PFO	13.4	64	0.11	0.03	Open-cut

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Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-E18-28	Virginia	Pittsylvania	H-650 Pipeline	PFO	13.4	0	<0.01	0.00	Workspace
W-E18-28	Virginia	Pittsylvania	H-650 Pipeline	PFO	13.5 RR	26	0.06	0.02	Open-cut
W-E18-28	Virginia	Pittsylvania	H-650 Pipeline	PFO	13.5 RR	23	0.04	0.02	Open-cut
W-D18-23	Virginia	Pittsylvania	H-650 Pipeline	PFO	14.3 RR	61	0.11	0.04	Open-cut
W-E18-45	Virginia	Pittsylvania	H-650 Pipeline	PEM	14.7	0	<0.01	0.00	Workspace
W-E18-45	Virginia	Pittsylvania	H-650 Pipeline	PEM	14.7	0	<0.01	0.00	Workspace
W-E18-45	Virginia	Pittsylvania	H-650 Pipeline	PEM	14.7	3	<0.01	<0.01	Open-cut
W-E18-45	Virginia	Pittsylvania	H-650 Pipeline	PEM	14.7	0	<0.01	0.00	Workspace
W-A18-198	Virginia	Pittsylvania	H-650 Pipeline	PEM	16.2	39	0.03	0.01	Open-cut
W-A18-198	Virginia	Pittsylvania	H-650 Pipeline	PFO	16.2	0	<0.01	0.00	Workspace
W-A18-200	Virginia	Pittsylvania	H-650 Pipeline	PSS	16.7	0	0.05	0.00	Workspace
W-A18-201	Virginia	Pittsylvania	H-650 Pipeline	PEM	16.7	0	0.02	0.00	Workspace
W-A18-201	Virginia	Pittsylvania	H-650 Pipeline	PEM	16.8	0	0.02	<0.01	Workspace
W-A19-296	Virginia	Pittsylvania	H-650 Pipeline	PFO	17.7 RR	34	0.16	0.02	Open-cut
W-E18-43	Virginia	Pittsylvania	H-650 Pipeline	PEM	18.0	0	0.01	0.00	Workspace
W-E18-43	Virginia	Pittsylvania	H-650 Pipeline	PFO	18.0	0	<0.01	0.00	Workspace
W-E18-43	Virginia	Pittsylvania	H-650 Pipeline	PFO	18.0	0	<0.01	0.00	Workspace
W-D18-42	Virginia	Pittsylvania	H-650 Pipeline	PEM	19.4	0	0.03	0.00	Workspace
W-F18-51	Virginia	Pittsylvania	H-650 Pipeline	PFO	19.7	0	<0.01	0.00	Workspace
W-E18-53	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.4	0	0.04	0.00	Workspace
W-E18-53	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.4	0	<0.01	0.00	Workspace
W-E18-53	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.4	0	<0.01	0.00	Workspace
W-E18-53	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.4	0	<0.01	0.00	Workspace
W-E18-53	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.4	6	<0.01	<0.01	Open-cut

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Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-E18-53	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.4	0	<0.01	0.00	Workspace
W-E18-53	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.4	3	<0.01	<0.01	Open-cut
W-E18-55	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.6	0	<0.01	0.00	Workspace
W-E18-55	Virginia	Pittsylvania	H-650 Pipeline	PEM	20.6	3	<0.01	<0.01	Open-cut
W-D18-35	Virginia	Pittsylvania	H-650 Pipeline	PFO	21.0	54	0.08	0.04	Open-cut
W-D18-35	Virginia	Pittsylvania	H-650 Pipeline	PEM	21.0	0	0.04	0.00	Workspace
W-D18-41	Virginia	Pittsylvania	H-650 Pipeline	PEM	21.2	47	0.09	0.01	Open-cut
W-D18-41	Virginia	Pittsylvania	H-650 Pipeline	PFO	21.2	7	0.01	<0.01	Open-cut
W-D18-41	Virginia	Pittsylvania	H-650 Pipeline	PFO	21.2	75	0.09	0.04	Open-cut
W-D18-41	Virginia	Pittsylvania	H-650 Pipeline	PEM	21.3	8	0.09	0.02	Open-cut
W-C18-95	Virginia	Pittsylvania	H-650 Pipeline	PEM	21.7	0	0.03	0.00	Workspace
W-A18-204	Virginia	Pittsylvania	H-650 Pipeline	PFO	22.0	0	<0.01	0.00	Workspace
W-A18-204	Virginia	Pittsylvania	H-650 Pipeline	PFO	22.0	2	0.02	<0.01	Open-cut
W-A18-204	Virginia	Pittsylvania	H-650 Pipeline	PFO	22.0	40	0.10	0.03	Open-cut
W-A18-204	Virginia	Pittsylvania	H-650 Pipeline	PEM	22.1	0	0.02	0.00	Workspace
W-A18-204	Virginia	Pittsylvania	H-650 Pipeline	PEM	22.1	0	0.01	0.00	Workspace
W-A18-204	Virginia	Pittsylvania	H-650 Pipeline	PFO	22.1	18	0.02	0.01	Open-cut
W-A19-316	Virginia	Pittsylvania	H-650 Pipeline	PFO	22.5 RR	0	<0.01	0.00	Workspace
W-A19-318	Virginia	Pittsylvania	H-650 Pipeline	PFO	23.1 RR	20	0.03	0.01	Open-cut
W-A19-314	Virginia	Pittsylvania	H-650 Pipeline	PFO	23.8 RR	0	<0.01	0.00	Workspace
W-E18-33	Virginia	Pittsylvania	H-650 Pipeline	PFO	23.9	0	<0.01	0.00	Workspace
W-E18-33	Virginia	Pittsylvania	H-650 Pipeline	PFO	23.9	0	0.01	0.00	Workspace
W-A19-297	Virginia	Pittsylvania	H-650 Pipeline	PEM	24.6	0	0.01	0.00	Workspace
W-C18-91	Virginia	Pittsylvania	H-650 Pipeline	PFO	25.9	18	0.04	0.01	Open-cut

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Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-C18-91	Virginia	Pittsylvania	H-650 Pipeline	PFO	25.8	3	<0.01	0.00	Open-cut
W-C18-96	Virginia	Pittsylvania	H-650 Pipeline	PEM	26.1	0	0.03	<0.01	Workspace
W-C18-96	Virginia	Pittsylvania	H-650 Pipeline	PFO	26.1	97	0.08	0.05	Open-cut
W-C18-96	North Carolina	Rockingham	H-650 Pipeline	PFO	26.1	0	<0.01	<0.01	Workspace
W-B18-98	North Carolina	Rockingham	H-650 Pipeline	PFO	26.5	15	0.03	0.01	Open-cut
W-A18-22	North Carolina	Rockingham	H-650 Pipeline	PEM	26.7 RR	72	0.15	0.02	Open-cut
W-A18-44	North Carolina	Rockingham	H-650 Pipeline	PEM	27.0 RR	0	<0.01	0.00	Workspace
W-A18-44	North Carolina	Rockingham	H-650 Pipeline	PEM	27.1	1,197	3.07	0.27	Open-cut
W-A18-44	North Carolina	Rockingham	H-650 Pipeline	PFO	27.3	38	0.05	0.01	Open-cut
W-A19-274	North Carolina	Rockingham	H-650 Pipeline	PEM	27.6	42	0.19	0.01	Open-cut
W-A19-274	North Carolina	Rockingham	H-650 Pipeline	PEM	27.6	38	0.04	0.01	Open-cut
W-A19-274	North Carolina	Rockingham	H-650 Pipeline	PEM	27.6	0	0.17	0.00	Workspace
W-A18-39	North Carolina	Rockingham	H-650 Pipeline	PEM	28.0 RR	0	0.02	0.00	Workspace
W-A18-26	North Carolina	Rockingham	H-650 Pipeline	PEM	28.1 RR	24	0.06	0.01	Open-cut
W-A18-30	North Carolina	Rockingham	H-650 Pipeline	PEM	28.3 RR	26	0.03	0.01	Open-cut
W-A18-30	North Carolina	Rockingham	H-650 Pipeline	PFO	28.3 RR	18	0.01	0.01	Open-cut
W-A18-38	North Carolina	Rockingham	H-650 Pipeline	PEM	28.6 RR	0	0.02	<0.01	Workspace
W-A18-38	North Carolina	Rockingham	H-650 Pipeline	PFO	28.6 RR	41	0.04	0.03	Open-cut
W-B18-48	North Carolina	Rockingham	H-650 Pipeline	PFO	29.1	23	0.05	0.02	Open-cut
W-B18-48	North Carolina	Rockingham	H-650 Pipeline	PEM	29.1	0	0.01	<0.01	Workspace
W-A18-18	North Carolina	Rockingham	H-650 Pipeline	PFO	29.8	935	2.33	0.64	Open-cut
W-A18-18	North Carolina	Rockingham	H-650 Pipeline	PEM	29.9	50	0.07	0.01	Open-cut
W-B18-39	North Carolina	Rockingham	H-650 Pipeline	PEM	30.2	25	<0.01	0.00	HDD
W-B18-39	North Carolina	Rockingham	H-650 Pipeline	PEM	30.2	40	<0.01	0.00	HDD

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Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-B18-39	North Carolina	Rockingham	H-650 Pipeline	PEM	30.2	30	<0.01	0.00	HDD
W-B18-39	North Carolina	Rockingham	H-650 Pipeline	PEM	30.2	32	<0.01	0.00	HDD
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PEM	30.2	36	<0.01	0.00	HDD
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PEM	30.3	16	<0.01	0.00	HDD
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PFO	30.3	32	<0.01	0.00	HDD
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PEM	30.3	18	<0.01	0.00	HDD
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PEM	30.4	0	0.00	0.00	HDD
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PEM	30.4	27	0.03	0.01	Open-cut
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PEM	30.4	0	<0.01	0.00	Workspace
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PFO	30.3	0	0.01	0.00	Workspace
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PFO	30.4	0	<0.01	0.00	Workspace
W-B18-36	North Carolina	Rockingham	H-650 Pipeline	PFO	30.4	0	0.01	0.00	Workspace
W-B18-34	North Carolina	Rockingham	H-650 Pipeline	PFO	30.4	0	0.01	0.00	Workspace
W-B18-34	North Carolina	Rockingham	H-650 Pipeline	PFO	30.5	180	0.45	0.12	Open-cut
W-A18-54	North Carolina	Rockingham	H-650 Pipeline	PEM	30.7	11	0.01	<0.01	Open-cut
W-B18-103	North Carolina	Rockingham	H-650 Pipeline	PEM	31.1	0	<0.01	0.00	Workspace
W-A18-141	North Carolina	Rockingham	H-650 Pipeline	PFO	32.0	183	0.34	0.13	Open-cut
W-A18-141	North Carolina	Rockingham	H-650 Pipeline	PEM	32.0	0	0.02	0.00	Workspace
W-A18-149	North Carolina	Rockingham	H-650 Pipeline	PSS	32.2	51	0.07	0.01	Open-cut
W-A18-149	North Carolina	Rockingham	H-650 Pipeline	PEM	32.2	52	0.16	0.01	Open-cut
W-A18-152	North Carolina	Rockingham	H-650 Pipeline	PEM	32.6	21	0.06	0.01	Open-cut
W-A18-152	North Carolina	Rockingham	H-650 Pipeline	PFO	32.6	29	0.03	0.02	Open-cut
W-A18-155	North Carolina	Rockingham	H-650 Pipeline	PEM	33.1	0	0.06	0.00	Workspace
W-A18-155	North Carolina	Rockingham	H-650 Pipeline	PSS	33.1	0	<0.01	0.00	Workspace

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Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-A18-155	North Carolina	Rockingham	H-650 Pipeline	PSS	33.1	68	0.16	0.02	Open-cut
W-A18-222	North Carolina	Rockingham	H-650 Pipeline	PFO	33.4	43	0.08	0.03	Open-cut
W-A18-222	North Carolina	Rockingham	H-650 Pipeline	PEM	33.4	0	<0.01	0.00	Workspace
W-A18-224	North Carolina	Rockingham	H-650 Pipeline	PFO	33.7	10	0.02	0.01	Open-cut
W-A18-224	North Carolina	Rockingham	H-650 Pipeline	PEM	33.7	0	<0.01	0.00	Workspace
W-C18-40	North Carolina	Rockingham	H-650 Pipeline	PEM	34.6	0	<0.01	0.00	Workspace
W-A18-95	North Carolina	Rockingham	H-650 Pipeline	PEM	37.0	8	0.02	<0.01	Open-cut
W-A18-98	North Carolina	Rockingham	H-650 Pipeline	PFO	37.2	0	0.01	0.00	Workspace
W-S18-1	North Carolina	Rockingham	H-650 Pipeline	PFO	37.3	8	0.01	0.01	Open-cut
W-A18-6	North Carolina	Rockingham	H-650 Pipeline	PFO	38.5	130	0.15	0.08	Open-cut
W-A18-6	North Carolina	Rockingham	H-650 Pipeline	PFO	38.5	0	<0.01	0.00	Workspace
W-A18-6	North Carolina	Rockingham	H-650 Pipeline	PFO	38.5	92	0.09	0.06	Open-cut
W-A18-6	North Carolina	Rockingham	H-650 Pipeline	PEM	38.5	46	0.09	0.01	Open-cut
W-A18-7	North Carolina	Rockingham	H-650 Pipeline	PFO	38.6	0	<0.01	0.00	Workspace
W-A18-7	North Carolina	Rockingham	H-650 Pipeline	PEM	38.6	76	0.18	0.02	Open-cut
W-A18-7	North Carolina	Rockingham	H-650 Pipeline	PSS	38.6	34	0.08	0.01	Open-cut
W-A18-7	North Carolina	Rockingham	H-650 Pipeline	PEM	38.6	0	<0.01	0.00	Workspace
W-A18-7	North Carolina	Rockingham	H-650 Pipeline	PEM	38.7	17	0.05	<0.01	Open-cut
W-A18-7	North Carolina	Rockingham	H-650 Pipeline	PEM	38.7	28	0.07	0.01	Open-cut
W-A18-7	North Carolina	Rockingham	H-650 Pipeline	PEM	38.7	16	0.04	<0.01	Open-cut
W-A19-270	North Carolina	Rockingham	H-650 Pipeline	PFO	38.8	0	0.02	<0.01	Workspace
W-B18-78	North Carolina	Rockingham	H-650 Pipeline	PFO	39.7	56	0.06	0.03	Open-cut
W-B18-112	North Carolina	Rockingham	H-650 Pipeline	PEM	40.1	0	0.01	0.00	Workspace
W-B18-110	North Carolina	Rockingham	H-650 Pipeline	PFO	40.2	0	0.02	0.01	Workspace

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Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-B18-55	North Carolina	Rockingham	H-650 Pipeline	PEM	41.1	0	<0.01	0.00	Workspace
W-B18-55	North Carolina	Rockingham	H-650 Pipeline	PFO	41.1	84	0.13	0.06	Open-cut
W-B18-46	North Carolina	Rockingham	H-650 Pipeline	PFO	41.7	6	0.02	0.01	Open-cut
W-A19-346	North Carolina	Rockingham	H-650 Pipeline	PEM	46.1 RR	0	<0.01	0.00	Workspace
W-A19-343	North Carolina	Rockingham	H-650 Pipeline	PFO	46.2 RR	0	0.02	<0.01	Workspace
W-C18-77	North Carolina	Rockingham	H-650 Pipeline	PFO	46.0	46	0.08	0.03	Open-cut
W-B18-139	North Carolina	Rockingham	H-650 Pipeline	PFO	48.5	24	0.03	0.02	Open-cut
W-A18-62	North Carolina	Rockingham	H-650 Pipeline	PSS	48.6	40	0.11	0.01	Open-cut
W-A18-62	North Carolina	Rockingham	H-650 Pipeline	PSS	48.6	0	<0.01	0.00	Workspace
W-A18-61	North Carolina	Rockingham	H-650 Pipeline	PEM	48.7	1	0.01	<0.01	Open-cut
W-A18-184	North Carolina	Rockingham	H-650 Pipeline	PEM	49.9 RR	0	0.01	0.00	Workspace
W-A18-184	North Carolina	Rockingham	H-650 Pipeline	PEM	49.9 RR	0	0.01	0.00	Workspace
W-A18-184	North Carolina	Rockingham	H-650 Pipeline	PFO	49.9 RR	39	0.06	0.03	Open-cut
W-A19-284	North Carolina	Rockingham	H-650 Pipeline	PSS	51.2 RR	0	0.01	0.00	Workspace
W-C18-20	North Carolina	Rockingham	H-650 Pipeline	PFO	51.4 RR	19	0.02	0.01	Open-cut
W-C18-20	North Carolina	Rockingham	H-650 Pipeline	PFO	51.4 RR	135	0.21	0.09	Open-cut
W-C18-20	North Carolina	Rockingham	H-650 Pipeline	PEM	51.4 RR	0	<0.01	0.00	Workspace
W-A18-83	North Carolina	Alamance	H-650 Pipeline	PEM	53.3	26	0.06	0.01	Open-cut
W-A18-85	North Carolina	Alamance	H-650 Pipeline	PEM	53.6	9	0.03	<0.01	Open-cut
W-A18-85	North Carolina	Alamance	H-650 Pipeline	PSS	53.7	0	0.04	0.00	Workspace
W-A18-85	North Carolina	Alamance	H-650 Pipeline	PEM	53.7	0	<0.01	0.00	Workspace
W-C18-67	North Carolina	Alamance	H-650 Pipeline	PFO	54.3	103	0.26	0.07	Open-cut
W-B18-60	North Carolina	Alamance	H-650 Pipeline	PSS	55.6 RR	0	0.02	0.00	Workspace
W-B18-60	North Carolina	Alamance	H-650 Pipeline	PSS	55.6 RR	0	0.01	0.00	Workspace

Appendix B.6

Wetlands Crossed by the MVP Southgate Project

Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-B18-61	North Carolina	Alamance	H-650 Pipeline	PEM	55.5	39	0.06	0.01	Open-cut
W-A18-119	North Carolina	Alamance	H-650 Pipeline	PFO	56.4 RR	90	0.12	0.06	Open-cut
W-A18-119	North Carolina	Alamance	H-650 Pipeline	PEM	56.4 RR	0	0.02	0.00	Workspace
W-A18-119	North Carolina	Alamance	H-650 Pipeline	PFO	56.5	63	0.09	0.05	Open-cut
W-A18-119	North Carolina	Alamance	H-650 Pipeline	PEM	56.5	0	0.02	0.00	Workspace
W-A18-119	North Carolina	Alamance	H-650 Pipeline	PFO	56.6 RR	0	0.01	0.00	Workspace
W-A18-119	North Carolina	Alamance	H-650 Pipeline	PFO	56.6 RR	77	0.16	0.06	Open-cut
W-A18-127	North Carolina	Alamance	H-650 Pipeline	PFO	56.6 RR	128	0.14	0.07	Open-cut
W-A18-127	North Carolina	Alamance	H-650 Pipeline	PFO	56.7 RR	0	0.02	0.00	Workspace
W-A18-130	North Carolina	Alamance	H-650 Pipeline	PEM	56.8	0	0.01	0.00	Workspace
W-A18-130	North Carolina	Alamance	H-650 Pipeline	PFO	56.9	17	0.09	0.03	Open-cut
W-A18-133	North Carolina	Alamance	H-650 Pipeline	PFO	57.1	56	0.10	0.04	Open-cut
W-A18-133	North Carolina	Alamance	H-650 Pipeline	PEM	57.1	0	0.02	0.00	Workspace
W-A18-133	North Carolina	Alamance	H-650 Pipeline	PEM	57.1	0	0.01	0.00	Workspace
W-A18-135	North Carolina	Alamance	H-650 Pipeline	PFO	57.2	146	0.20	0.10	Open-cut
W-A18-135	North Carolina	Alamance	H-650 Pipeline	PEM	57.2	0	0.02	0.00	Workspace
W-A18-254	North Carolina	Alamance	H-650 Pipeline	PFO	57.6	154	0.22	0.10	Open-cut
W-C18-3	North Carolina	Alamance	H-650 Pipeline	PEM	57.8	13	0.04	<0.01	Open-cut
W-C18-3	North Carolina	Alamance	H-650 Pipeline	PFO	57.9	0	0.00	0.00	Workspace
W-C18-3	North Carolina	Alamance	H-650 Pipeline	PEM	57.9	13	0.02	<0.01	Open-cut
W-C18-3	North Carolina	Alamance	H-650 Pipeline	PFO	57.9	8	0.01	0.01	Open-cut
W-C18-5	North Carolina	Alamance	H-650 Pipeline	PSS	58.0	52	0.07	0.01	Open-cut
W-C18-5	North Carolina	Alamance	H-650 Pipeline	PEM	58.0	0	0.03	<0.01	Workspace
W-C18-29	North Carolina	Alamance	H-650 Pipeline	PFO	60.7	116	0.20	0.07	Open-cut

Appendix B.6

Wetlands Crossed by the MVP Southgate Project

Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-C18-29	North Carolina	Alamance	H-650 Pipeline	PFO	60.8 RR	33	0.07	0.02	Open-cut
W-A18-79	North Carolina	Alamance	H-650 Pipeline	PFO	61.8	0	<0.01	0.00	Workspace
W-A18-74	North Carolina	Alamance	H-650 Pipeline	PFO	62.5	8	0.01	0.01	Open-cut
W-A18-80	North Carolina	Alamance	H-650 Pipeline	PEM	62.7	64	0.09	0.01	Open-cut
W-B18-32	North Carolina	Alamance	H-650 Pipeline	PEM	62.9	0	<0.01	0.00	Workspace
W-A19-348	North Carolina	Alamance	H-650 Pipeline	PFO	63.0 RR	24	0.02	0.02	Open-cut
W-B18-19	North Carolina	Alamance	H-650 Pipeline	PFO	63.8	63	0.11	0.04	Open-cut
W-A19-332	North Carolina	Alamance	H-650 Pipeline	PFO	64.1 RR	49	0.08	0.02	Conventional Bore
W-A19-320	North Carolina	Alamance	H-650 Pipeline	PEM	65.0 RR	69	0.10	0.02	Open-cut
W-A19-326	North Carolina	Alamance	H-650 Pipeline	PFO	65.2 RR	6	0.02	0.01	Open-cut
W-B19-168	North Carolina	Alamance	H-650 Pipeline	PEM	65.6	0	0.05	0.00	Workspace
W-A19-352	North Carolina	Alamance	H-650 Pipeline	PFO	66.5 RR	0	<0.01	0.00	Workspace
*AW-A19-352	North Carolina	Alamance	H-650 Pipeline	PFO	66.5 RR	0	0.04	0.00	Workspace
W-B19-164	North Carolina	Alamance	H-650 Pipeline	PFO	66.6 RR	34	0.04	0.02	Open-cut
W-B18-5	North Carolina	Alamance	H-650 Pipeline	PFO	68.4	16	0.02	0.01	Open-cut
W-A18-67	North Carolina	Alamance	H-650 Pipeline	PFO	71.8	0	<0.01	0.00	Workspace
W-A18-67	North Carolina	Alamance	H-650 Pipeline	PFO	71.8	43	0.04	0.03	Open-cut
W-A18-208	North Carolina	Alamance	H-650 Pipeline	PEM	72.2	0	<0.01	0.00	Workspace
W-B19-151	North Carolina	Alamance	H-650 Pipeline	PEM	72.9 RR	258	0.56	0.06	Open-cut
W-A18-111	North Carolina	Alamance	H-650 Pipeline	PEM	73.0 RR	0	0.04	0.00	Workspace
W-B19-151	North Carolina	Alamance	H-650 Pipeline	PEM	73.0 RR	45	0.04	0.01	Open-cut
W-B18-36	North Carolina	Rockingham	T15 Dan River Interconnect	PEM	30.3	0	0.47	0.00	Workspace
*AW-B18-36	North Carolina	Rockingham	T15 Dan River Interconnect	PEM	30.3	0	<0.01	0.00	Workspace

Appendix B.6

Wetlands Crossed by the MVP Southgate Project

Wetland ID a/	State	County	Facility	Wetland Type b/	Approx. MP	Crossing Length (feet) c/	Total Construction Impacts (acres) d/	Total Operation Impacts (acres) e/	Construction Crossing f/
W-B18-36	North Carolina	Rockingham	T15 Dan River Interconnect	PEM	30.3	0	<0.01	0.00	Workspace
W-B18-36	North Carolina	Rockingham	T15 Dan River Interconnect	PEM	30.4	0	0.05	0.00	Workspace
W-B18-36	North Carolina	Rockingham	T15 Dan River Interconnect	PEM	30.4	0	0.01	0.00	Workspace
W-B18-36	North Carolina	Rockingham	T15 Dan River Interconnect	PEM	30.4	0	<0.01	0.00	Workspace
W-F18-1	Virginia	Pittsylvania	Temporary Access Roads	PSS	5.2	110	0.05	0.00	Workspace
W-F18-62	Virginia	Pittsylvania	Temporary Access Roads	PEM	14.3 RR	1	<0.01	0.00	Workspace
W-F18-62	Virginia	Pittsylvania	Temporary Access Roads	PEM	14.3 RR	16	0.01	0.00	Workspace
W-F18-54	Virginia	Pittsylvania	Temporary Access Roads	PEM	20.5	0	<0.01	0.00	Workspace
W-E18-37	Virginia	Pittsylvania	Temporary Access Roads	PFO	22.6 RR	0	<0.01	0.00	Workspace
W-E18-37	Virginia	Pittsylvania	Temporary Access Roads	PFO	22.6 RR	0	<0.01	0.00	Workspace
W-C18-87	Virginia	Pittsylvania	Temporary Access Roads	PFO	25.0	106	0.08	0.00	Workspace
W-C18-87	Virginia	Pittsylvania	Temporary Access Roads	PFO	25.0	0	<0.01	0.00	Workspace
W-A18-39	North Carolina	Rockingham	Temporary Access Roads	PEM	28.1 RR	0	<0.01	0.00	Workspace
W-B18-34	North Carolina	Rockingham	Temporary Access Roads	PFO	30.4	82	0.04	0.00	Workspace
W-B18-36	North Carolina	Rockingham	Temporary Access Roads	PFO	30.4	0	<0.01	0.00	Workspace
W-A18-39	North Carolina	Rockingham	Temporary Access Roads	PEM	27.9 RR	14	0.01	0.00	Workspace
W-B18-43	North Carolina	Rockingham	Temporary Access Roads	PEM	41.8	0	<0.01	0.00	Workspace
W-B18-43	North Carolina	Rockingham	Temporary Access Roads	PEM	41.8	0	0.01	0.00	Workspace

Appendix B.6 Wetlands Crossed by the MVP Southgate Project									
Wetland ID a/	**State**	**County**	**Facility**	**Wetland Type b/**	**Approx. MP**	**Crossing Length (feet) c/**	**Total Construction Impacts (acres) d/**	**Total Operation Impacts (acres) e/**	**Construction Crossing f/**

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 August 24, 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 "*". Environmental survey is complete for the Contractor Yards (i.e., CY-01, CY- 03, CY-05, CY-08, CY-19, CY-22, CY-25A, CY-25B, CY-26A, CY-26B). Limits of disturbance for contractor yards have been adjusted to avoid impacting wetlands.

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" indicates that the wetland is not crossed by the pipeline but is located within construction workspace.

APPENDIX B.7

Residential Construction Plans

MVP SOUTHGATE PROJECT

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

GENERAL NOTES:

SAFETY FENCE, IN CONJUNCTION WITH ANY PROPOSED EROSION AND SEDIMENTATION CONTROL DEVICES, WILL BE INSTALLED AT THE EDGE OF THE LIMIT OF DISTURBANCE (LOD) FOR A DISTANCE OF 100 FEET ON EITHER SIDE OF THE RESIDENCE OR COMMERCIAL ESTABLISHMENT. FENCING WILL BE MAINTAINED THROUGHOUT ACTIVE CONSTRUCTION IN THE AREA. WHERE NECESSARY, HARD BARRIERS SUCH AS JERSEY BARRIERS WILL BE INSTALLED TO PROVIDE A SOLID, PROTECTIVE BARRIER.

STRUCTURES WITHIN LOD WILL BE REMOVED, RELOCATED, OR PROTECTED PER LAND OWNER AGREEMENT.

PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA AND/OR FIELD LOCATED PROPERTY EVIDENCE. THEY SHOULD NOT BE RELIED ON AS AN ACCURATE DEPICTION OF THE ACTUAL PROPERTY LINE LOCATIONS. THEY MAY NOT REPRESENT THE RESULTS OF A BOUNDARY SURVEY.

AREAS OF PERMANENT EASEMENT WILL BE PERMANENTLY MAINTAINED PER USDOT PHMSA REQUIREMENTS. TEMPORARY WORKSPACES WOULD BE ALLOWED TO REVERT BACK TO PRE-EXISTING USES. OTHER MINOR ITEMS WILL BE ADDRESSED THROUGH LANDOWNER STIPULATIONS SPECIFIC TO THE PROPERTY.

CONSTRUCTION CREWS WILL UTILIZE DUST CONTROLS MEASURES AS NEEDED, INCLUDING WETTING AND BRUSHING OF ROADS.

WORK HOURS WILL BE LIMITED TO 7 AM TO 7 PM OR SUNSET (WHICHEVER IS LATER) UNLESS OTHER ARRANGEMENTS HAVE BEEN AGREED UPON WITH LANDOWNER.

B.7-1

CONSTRUCTION METHODS:

THE STOVE PIPE METHOD IS A LESS EFFICIENT ALTERNATIVE TO THE MAINLINE METHOD OF CONSTRUCTION. IT IS TYPICALLY USED WHEN THE PIPELINE IS TO BE INSTALLED IN VERY CLOSE PROXIMITY TO AN EXISTING STRUCTURE OR WHEN AN OPEN DITCH WOULD ADVERSELY IMPACT A COMMERCIAL/RESIDENTIAL ESTABLISHMENT. THE TECHNIQUE INVOLVES INSTALLING PIPE ONE JOINT AT A TIME WHEREBY THE WELDING, X-RAY AND COATING ACTIVITIES ARE ALL PERFORMED IN THE OPEN TRENCH. AT THE END OF EACH DAY THE NEWLY INSTALLED PIPE IS BACKFILLED OR THE OPEN TRENCH IS COVERED WITH STEEL PLATES OR TIMBER MATS.

THE DRAG SECTION CONSTRUCTION METHOD, WHILE LESS EFFICIENT THAN MAINLINE METHODS, IS NORMALLY PREFERRED OVER THE STOVE PIPE ALTERNATIVE. THIS TECHNIQUE INVOLVES THE TRENCHING, INSTALLATION AND BACKFILL OF A PREFABRICATED LENGTH OF PIPE CONTAINING SEVERAL SEGMENTS ALL IN ONE DAY. AT THE END OF EACH DAY THE NEWLY INSTALLED PIPE IS BACKFILLED AND/OR COVERED WITH STEEL PLATES OR TIMBER MATS.

MAINLINE CONSTRUCTION IS THE MOST EFFICIENT CONSTRUCTION METHOD. THIS METHOD IS SIMILAR TO STOVE PIPE AND DRAG SECTION INSTALLATION, BUT ON A LARGER SCALE. ALL STEPS OF THE CONSTRUCTION PROCESS (CLEARING, GRADING, TRENCHING, STRINGING & BENDING, WELDING & COATING, LOWERING & BACKFILL) OCCUR OVER LARGE STRETCHES OF RIGHT-OF-WAY TO MAXIMIZE EFFICIENCY OF THE CONSTRUCTION SPREADS. MAINLINE CONSTRUCTION IS TYPICALLY UTILIZED WHERE LARGE STRETCHES OF PIPELINE ROW ARE UNINTERRUPTED. THIS METHOD MAY BE USED NEAR STRUCTURES WHERE OFFSET FROM WORKSPACES IS LARGE ENOUGH TO FACILITATE SAFE AND PRACTICAL IMPLEMENTATION

DRAWN TRC	DATE 05/01/2019
CHECKED SSL	DATE 05/01/2019
APP'D	DATE
SCALE N.T.S.	SHEET 1 OF 2
JOB NO.	
PROJECT ID:	

RESIDENTIAL NOTES

MOUNTAIN VALLEY PIPELINE
SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
RESIDENTIAL DRAWING NOTES

DRAWING NO.	REV.
RES-NOTES	P1

MVP SOUTHGATE PROJECT

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

CLEANUP AND REVEGETATION PLANS

SUBSOIL AND TOPSOIL (UP TO 12 INCHES) IN RESIDENTIAL AREAS WILL BE SEGREGATED AND RETURNED TO PRE-CONSTRUCTION GRADE AS SHOWN ON DRAWINGS.

IF SOILS ARE REQUIRED TO BE IMPORTED (E.G. IF TOP SOILING IS NOT PRACTICAL), THEY WILL BE CERTIFIED AS FREE OF NOXIOUS WEEDS AND SOIL PESTS, UNLESS OTHERWISE APPROVED BY THE LANDOWNER. IF TREES ARE NEEDED TO BE REMOVED FROM THE LANDSCAPE FOR CONSTRUCTION, THEY WILL BE REPLACED WITH THE SAME SPECIES OR SIMILAR BASED ON LANDOWNER REQUESTS.

RESTORE ALL TURF, ORNAMENTAL SHRUBS, AND SPECIALIZED LANDSCAPING IN ACCORDANCE WITH THE LANDOWNER'S REQUEST, OR COMPENSATE THE LANDOWNER. RESTORATION WORK MUST BE PERFORMED BY PERSONNEL FAMILIAR WITH LOCAL HORTICULTURAL AND TURF ESTABLISHMENT PRACTICES.

ALL DISTURBED RESIDENTIAL UPLAND AREAS WILL BE MULCHED BEFORE SEEDING IF FINAL GRADING AND INSTALLATION OF PERMANENT EROSION CONTROL MEASURES WILL NOT BE INSTALLED WITHIN 10 DAYS OF COMPLETION.

ALL LAWN AREAS AND IMPACTED LANDSCAPING WILL BE RESTORED FOLLOWING CLEAN-UP OPERATIONS AS SOON AS REASONABLY POSSIBLE, OR AS SPECIFIED IN THE LANDOWNER AGREEMENT. IF SEASONAL OR OTHER WEATHER CONDITIONS PREVENT COMPLIANCE WITH THESE TIME FRAMES, TEMPORARY EROSION CONTROLS (SEDIMENT BARRIERS AND MULCH) WILL BE MAINTAINED UNTIL CONDITIONS ALLOW COMPLETION OF RESTORATION.

IF CRUSHED STONE ACCESS PADS ARE USED IN RESIDENTIAL AREAS THEY WILL BE INSTALLED ON TOP OF SYNTHETIC FABRIC TO FACILITATE EASY REMOVAL.

EXCESS ROCK FROM THE TOP 12 INCHES OF SOIL IN RESIDENTIAL AREAS WILL BE REMOVED UNLESS OTHER ARRANGEMENTS WITH LANDOWNER HAVE BEEN AGREED UPON.

TOPSOIL AND SUBSOIL COMPACTION WILL MEET PRECONSTRUCTION CONDITIONS AND WHERE NECESSARY, SOIL COMPACTION MITIGATION MAY BE REQUIRED TO MITIGATE FOR SEVERELY COMPACTED RESIDENTIAL AREAS.

OTHER RESTORATION DETAILS, INCLUDING REVEGETATION REQUIREMENTS RELATED TO LAWNS, MAY BE SPECIFIC TO LANDOWNER STIPULATIONS.

CONDUCT FOLLOW-UP INSPECTIONS OF ALL DISTURBED AREAS, AS NECESSARY, TO DETERMINE THE SUCCESS OF REVEGETATION AND ADDRESS LANDOWNER CONCERNS. AT A MINIMUM, CONDUCT INSPECTIONS AFTER THE FIRST AND SECOND GROWING SEASONS.

LANDOWNER COMPLAINT RESOLUTION PROCESS

IN THE EVENT OF AN ISSUE, LANDOWNERS ARE DIRECTED TO CONTACT THEIR LOCAL MVP SOUTHGATE LAND REPRESENTATIVE. LANDOWNERS CAN ALSO REACH PROJECT PERSONNEL BY CALLING 1-833-MV-SOUTH OR EMAILING MAIL@MVPSOUTHGATE.COM

AFTER WORKING WITH THE SOUTHGATE PROJECT REPRESENTATIVE AND APPROPRIATE RIGHT-OF-WAY AGENT, IF THE LANDOWNER IS STILL NOT COMPLETELY SATISFIED WITH THE RESOLUTION, THE INDIVIDUAL SHOULD CONTACT THE COMMISSION'S LANDOWNER HELPLINE AT (877) 337-2237, OR BY EMAIL, LANDOWNERHELP@FERC.GOV.

DRAWN TRC	DATE 05/08/2019	RESIDENTIAL NOTES
CHECKED	DATE	MOUNTAIN VALLEY PIPELINE SOUTHGATE PROJECT PROPOSED H–650 PIPELINE RESIDENTIAL DRAWING NOTES
APP'D	DATE	
SCALE N.T.S.	SHEET 2 OF 2	DRAWING NO. RES–NOTES CONT.
JOB NO.		REV. P1
PROJECT ID:		

B.7-3

MVP SOUTHGATE PROJECT

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

Residential Plan Drawing	Anticipated Construction Method	Approximate Construction Duration	Additional Measures	Restoration Plans
RSS H650 001	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS H650 002	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS H650 003	NA Yard	400 Days	Install hard barriers	See General Restoration Notes
RSS H650 004	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS H650 005	Mainline	15 Days	None identified at this time.	See General Restoration Notes
~~RSS-H650-006~~	~~Mainline~~	~~15 Days~~	~~None identified at this time~~	~~See General Restoration Notes~~
RSS H650 008	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS H650 009	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS H650 015	Mainline / Drag	15 Days	None identified at this time.	See General Restoration Notes
RSS H650 016	Mainline	15 Days	None identified at this time.	See General Restoration Notes
~~RSS-H650-006~~	~~Mainline~~	~~15 Days~~	~~None identified at this time~~	~~See General Restoration Notes~~
~~RSS-H650-006~~	~~Mainline~~	~~15 Days~~	~~None identified at this time~~	~~See General Restoration Notes~~
RSS H650 024	NA Access Road	200 Days	Install hard barriers	See General Restoration Notes
RSS H650 025	NA Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS H650 026	NA Access Road	200 Days	Install hard barriers	See General Restoration Notes
RSS H650 027	NA Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS H650 028	NA Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS H650 029	NA Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS H650 030	NA Access Road	200 Days	Install hard barriers	See General Restoration Notes

RSS-H650-031	Mainline	25 Days	None identified at this time.	See General Restoration Notes
RSS-H650-032	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS-H650-033	NA - Yard	400 Days	Install hard barriers	See General Restoration Notes
RSS-H650-034	Mainline	35 Days	None identified at this time.	See General Restoration Notes
RSS-H650-035	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS-H650-036	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS-H650-037	NA - Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS-H650-038	NA - Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS-H650-039	Mainline / Road Bore	25 Days	None identified at this time.	See General Restoration Notes
RSS-H650-040	NA - Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS-H650-041	Mainline	15 Days	None identified at this time.	See General Restoration Notes
~~RSS-H650-006~~	~~Mainline~~	~~15 Days~~	~~None identified at this time~~	~~See General Restoration Notes~~
RSS-H650-043	NA - Yard	400 Days	None identified at this time.	See General Restoration Notes
RSS-H650-044	NA - Yard	400 Days	None identified at this time.	See General Restoration Notes
RSS-H650-045	NA - Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS-H650-046	NA - Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS-H650-047	Mainline	15 Days	None identified at this time.	See General Restoration Notes
RSS-H650-048	NA - Access Road	200 Days	None identified at this time.	See General Restoration Notes
RSS-H650-050	Mainline / Road Bore	25 Days	None identified at this time.	See General Restoration Notes
RSS-H650-051	Mainline	15 Days	None identified at this time.	See General Restoration Notes

NOTE:

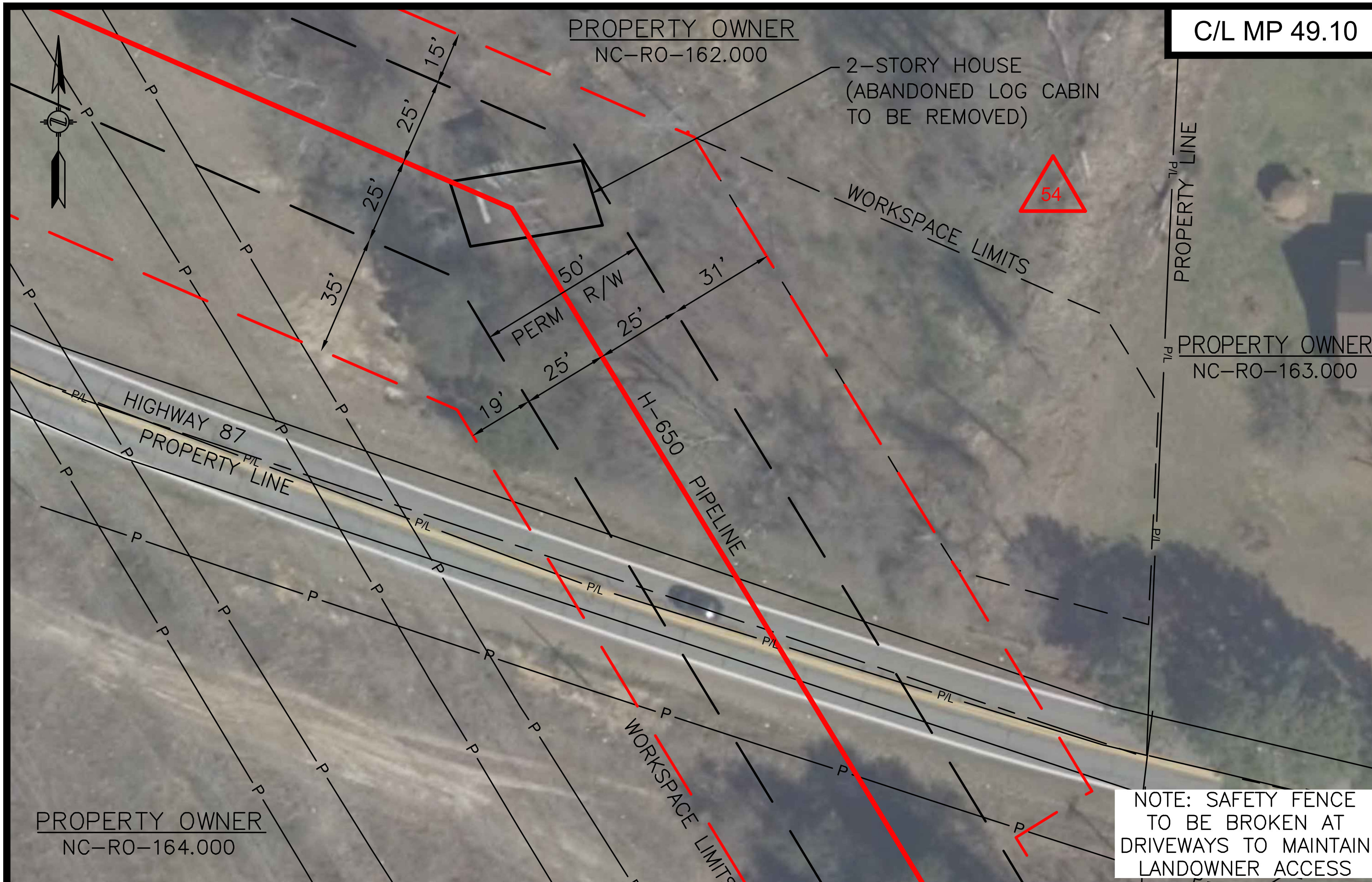
CONSTRUCTION METHOD AND DURATION MAY CHANGE DUE TO LANDOWNER REQUESTS, FIELDS CONDITIONS, AND OTHER CONSIDERATIONS.

DRAWN TRC	DATE 05/08/2019		
CHECKED SSL	DATE 05/09/2019		
APP'D	DATE		
SCALE N.T.S.	SHEET 1 OF 2		
JOB NO.			
PROJECT ID:			

RESIDENTIAL NOTES

MOUNTAIN VALLEY PIPELINE
SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
RESIDENTIAL DRAWING NOTES

DRAWING NO.	REV.
RES-NOTES SITE SPECIFIC	P3



B.7-4

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

Mountain Valley PIPELINE LLC

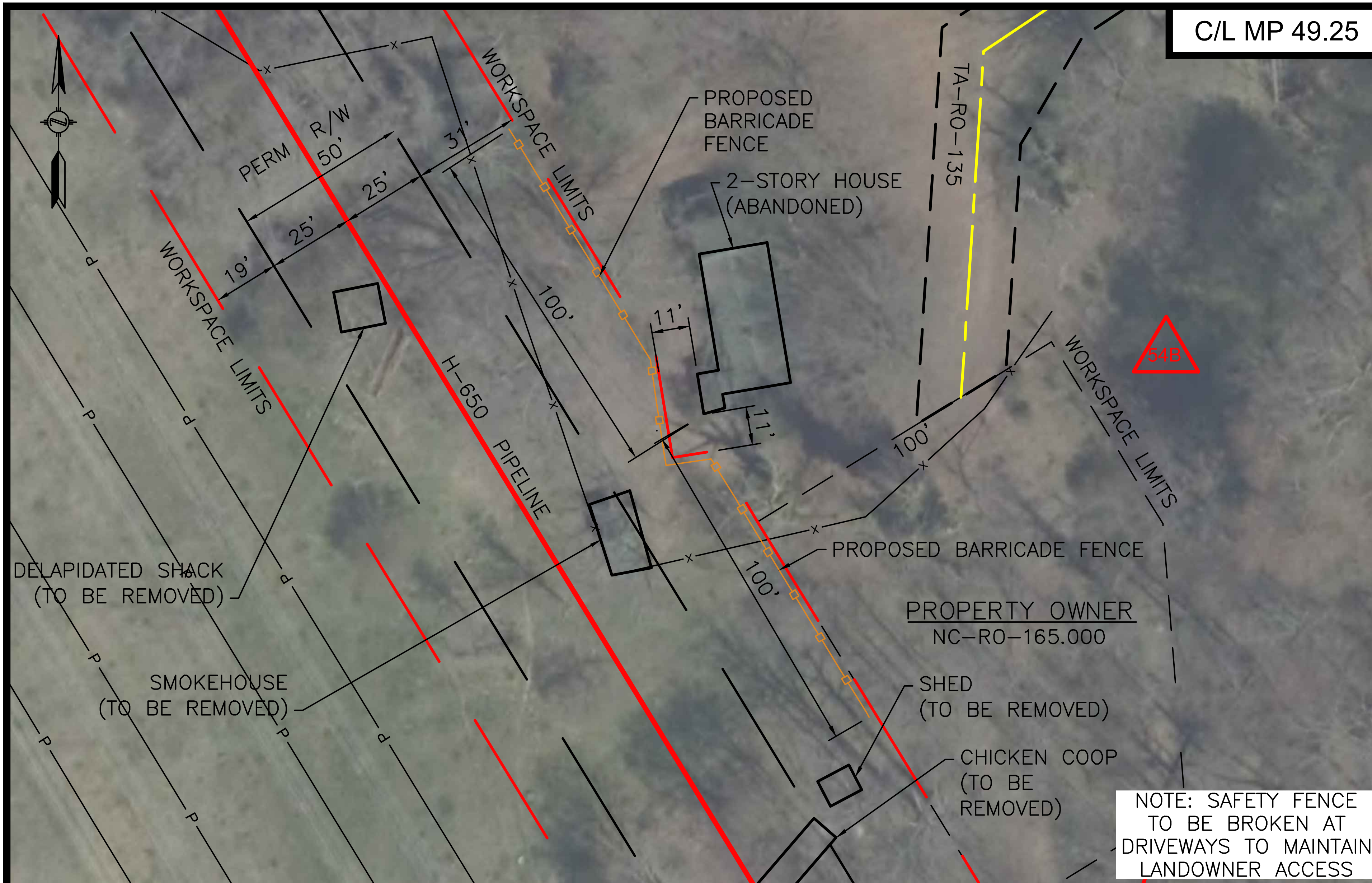
CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

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. P3
DATE OF PLOT: 9/23/2019 12:37 PM	

B.7-5



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

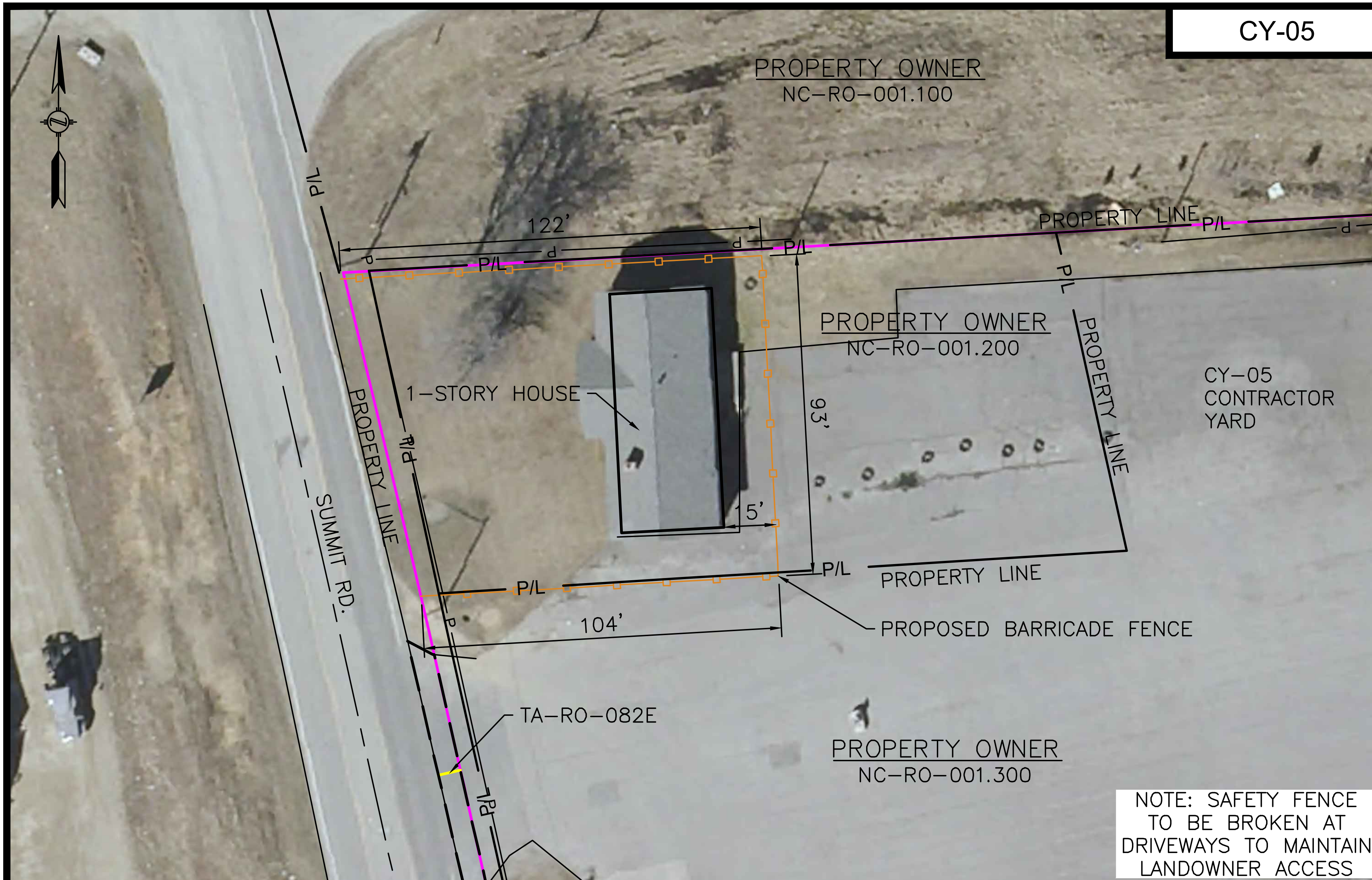
Mountain Valley PIPELINE LLC

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. P4
DATE OF PLOT:	9/23/2019 12:39 PM	



B.7-6

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

Mountain Valley PIPELINE LLC

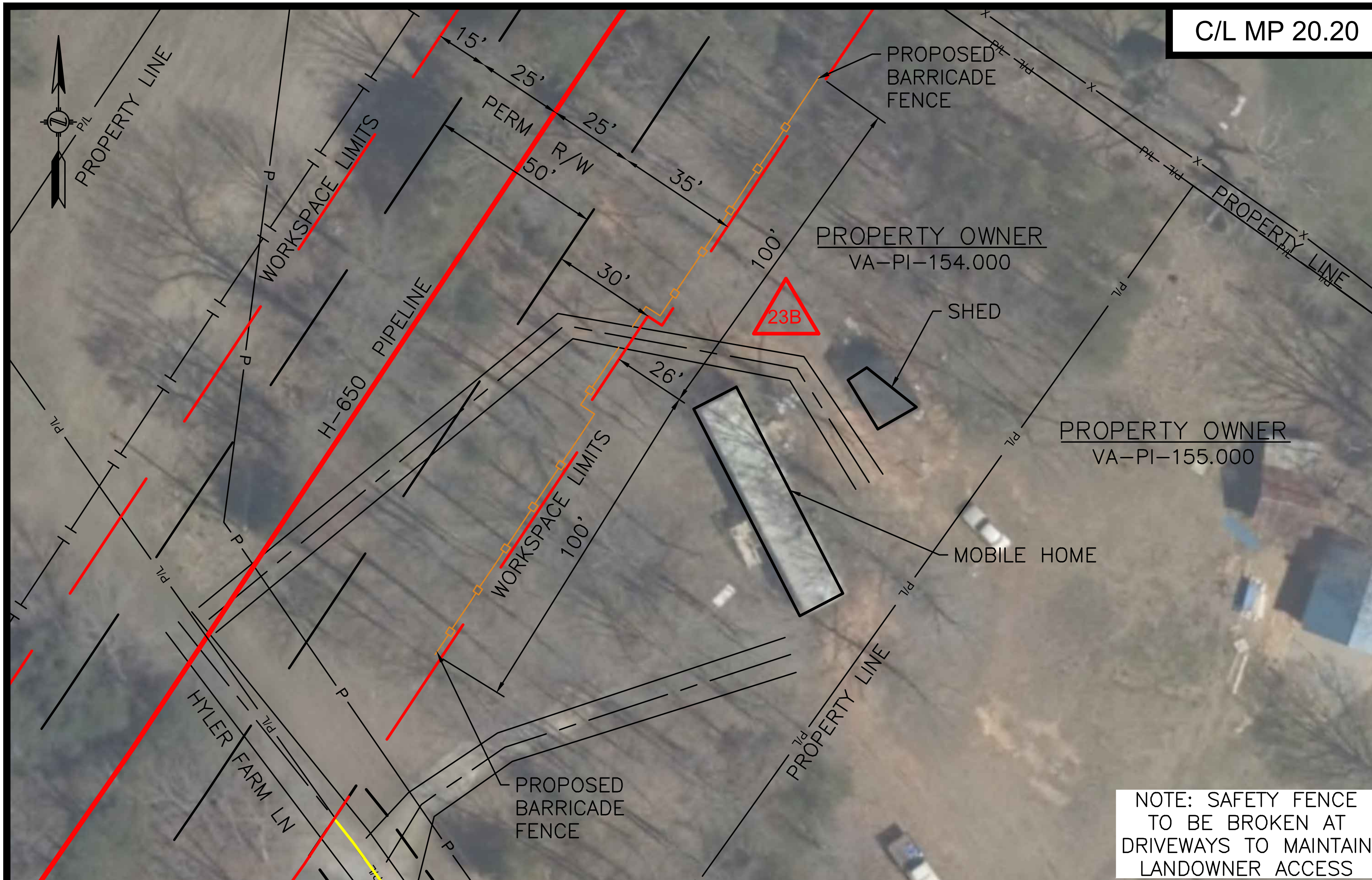
CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

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:	.	.
DETAIL SHEET:		
DRAWING NO.:	**RSS-H650-003**	
SCALE: 1" = 40'		REV. P4
DATE OF PLOT:	9/23/2019 12:43 PM	

B.7-7



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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:		
DRAWING NO.:	RSS-H650-004	
SCALE: 1" = 40'		REV. P4
DATE OF PLOT:	9/23/2019 12:44 PM	

B.7-8

C/L MP 20.25

NOTE: SAFETY FENCE TO BE BROKEN AT DRIVEWAYS TO MAINTAIN LANDOWNER ACCESS

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

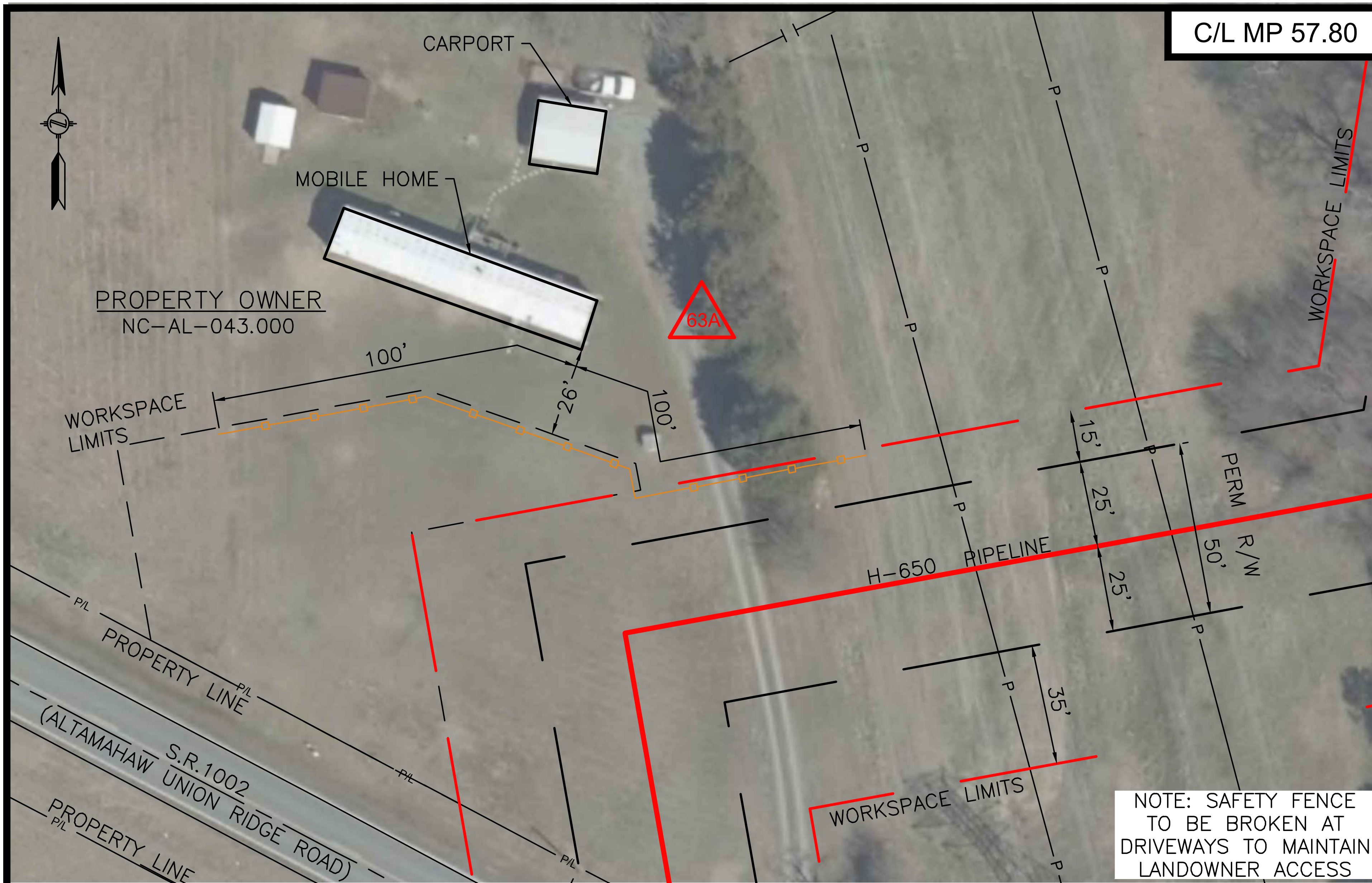
Mountain Valley PIPELINE LLC

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:		
DETAIL SHEET:		
DRAWING NO.:	**RSS-H650-005**	
SCALE: 1" = 40'		REV. P4
DATE OF PLOT: 9/23/2019 12:44 PM		



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

Mountain Valley PIPELINE LLC

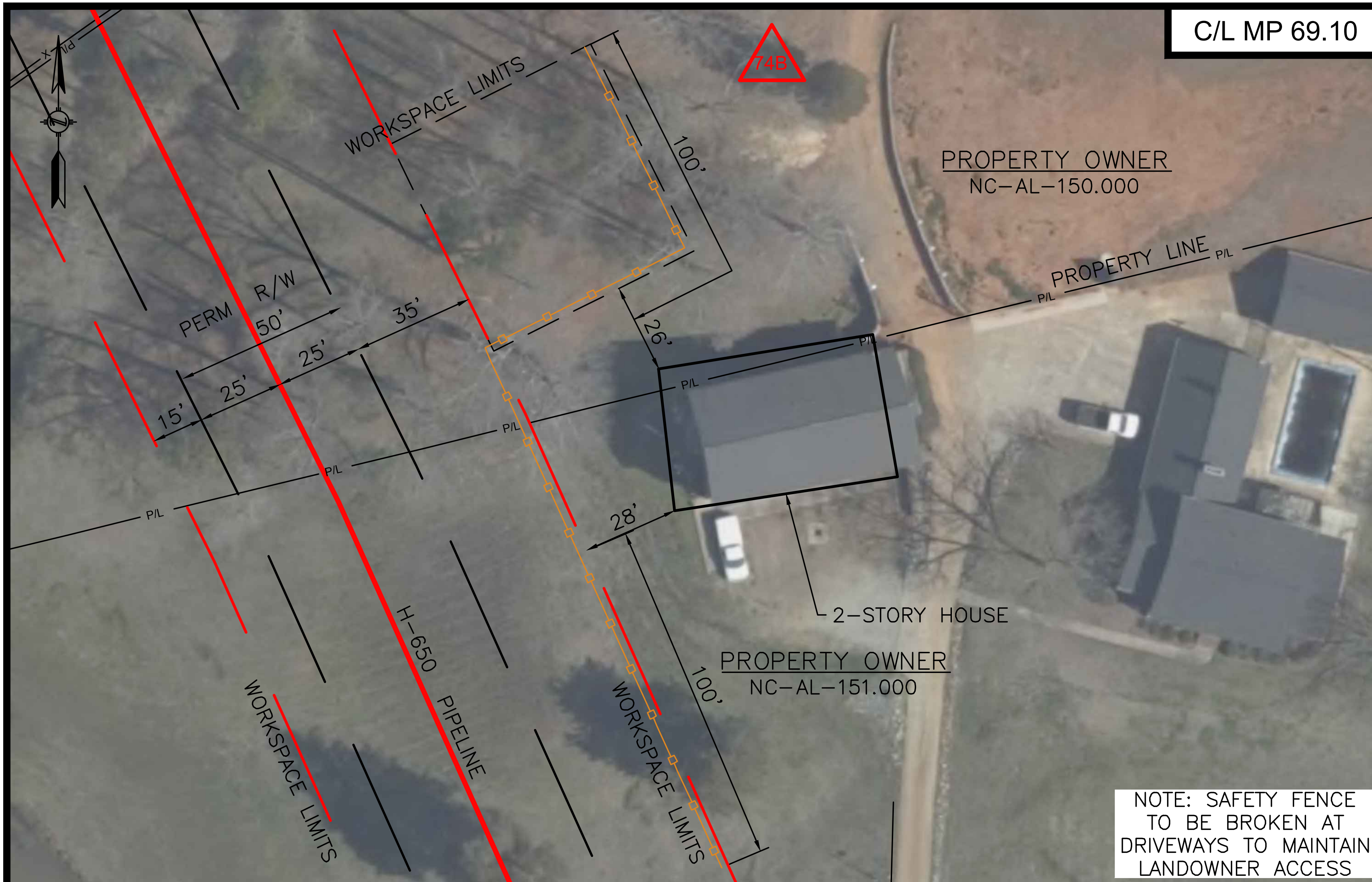
CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

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-H650-008**	
SCALE: 1" = 40'		REV. P4
DATE OF PLOT: 9/23/2019 12:45 PM		

B.7-10



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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. P3
DATE OF PLOT: 9/23/2019 12:46 PM	

B.7-11

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

Mountain Valley PIPELINE LLC

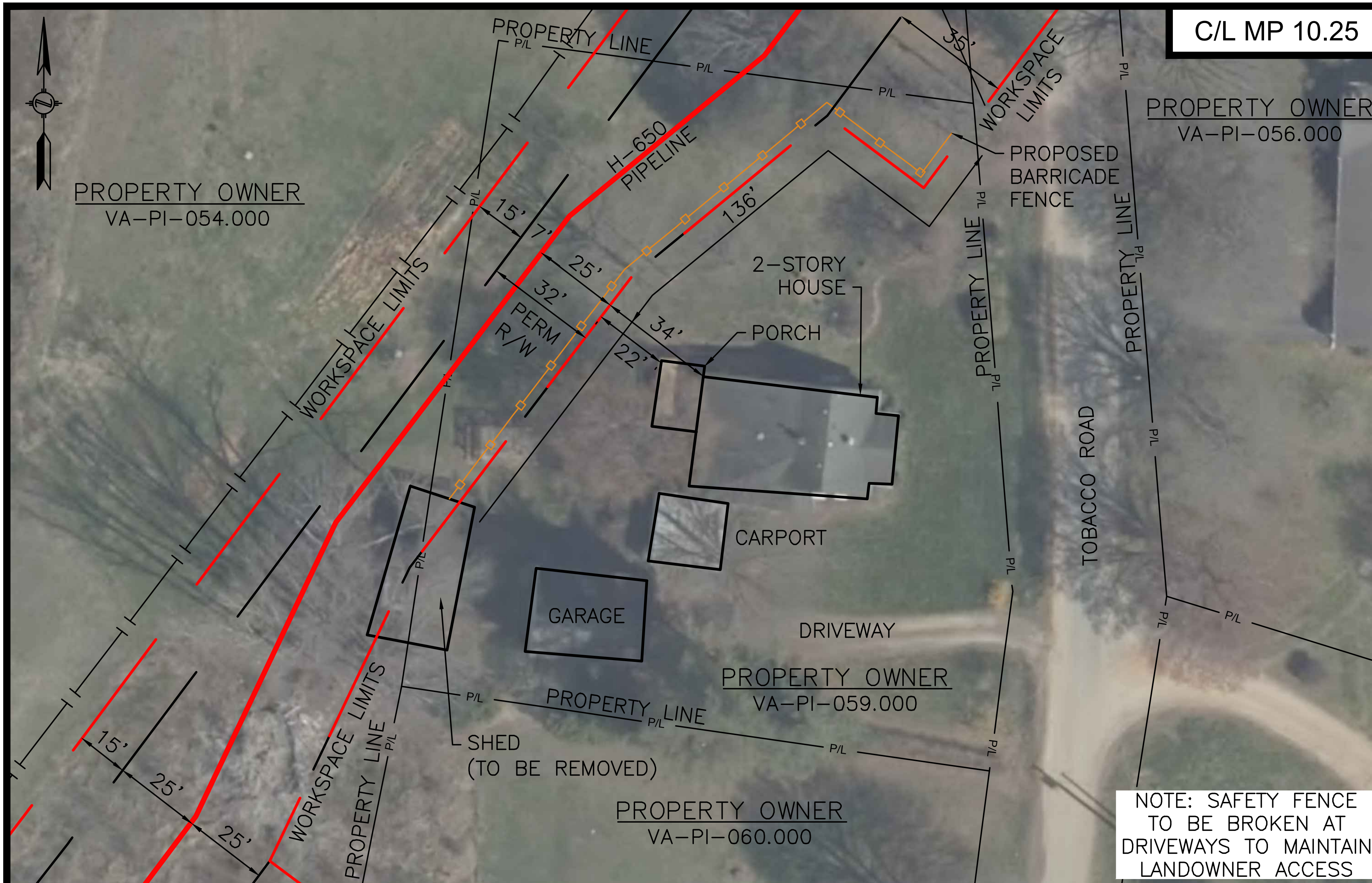
CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

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:		
DRAWING NO.:	**RSS-H650-015**	
SCALE: 1" = 40'		REV. P4
DATE OF PLOT:	9/23/2019 12:47 PM	

B.7-12



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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**	
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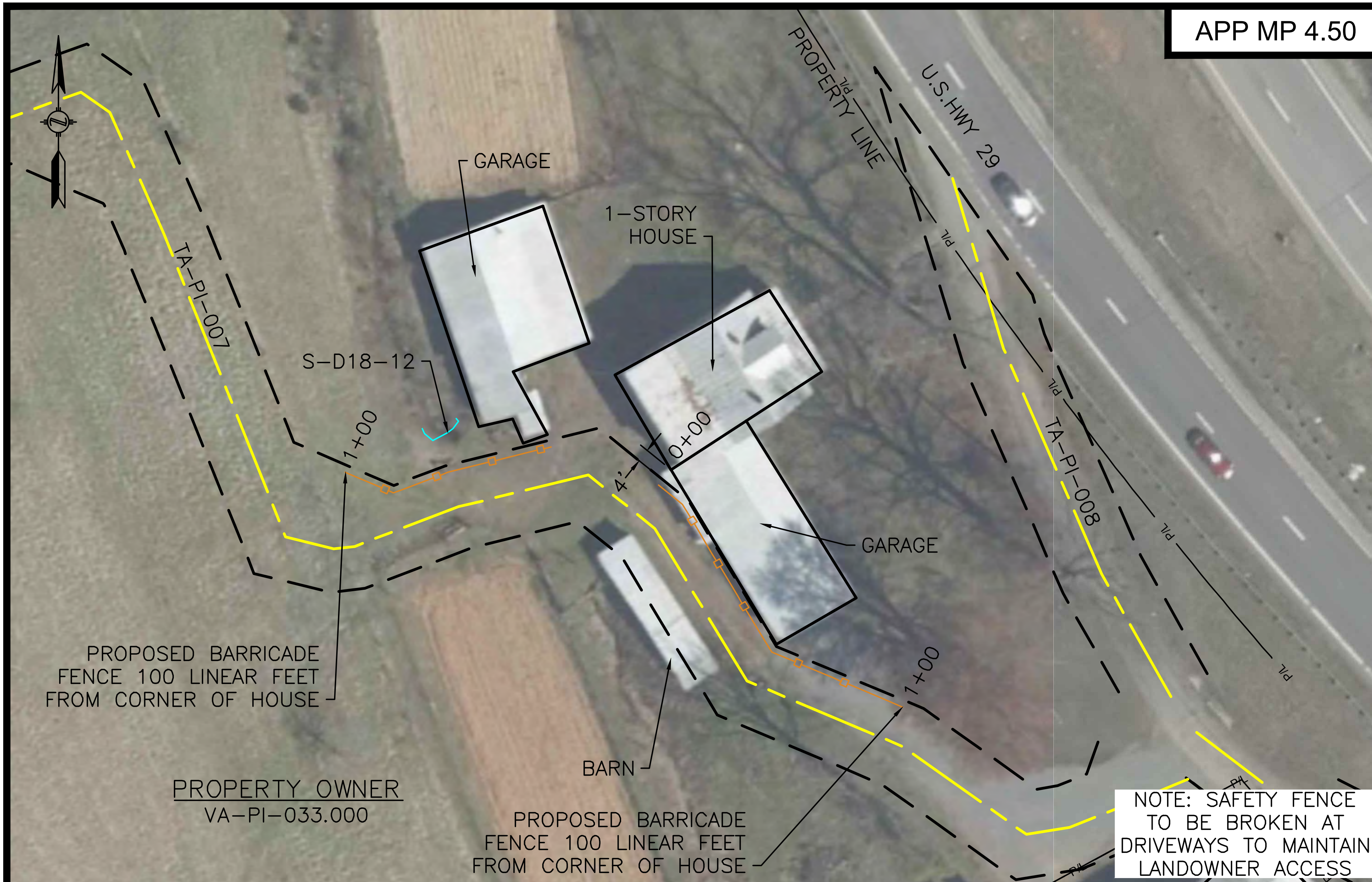
DATE OF PLOT: 9/23/2019 12:47 PM	



B.7-13

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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:	
DRAWING NO.: **RSS-H650-024**	
SCALE: 1" = 40'	REV. P2
DATE OF PLOT: 9/23/2019 12:48 PM	

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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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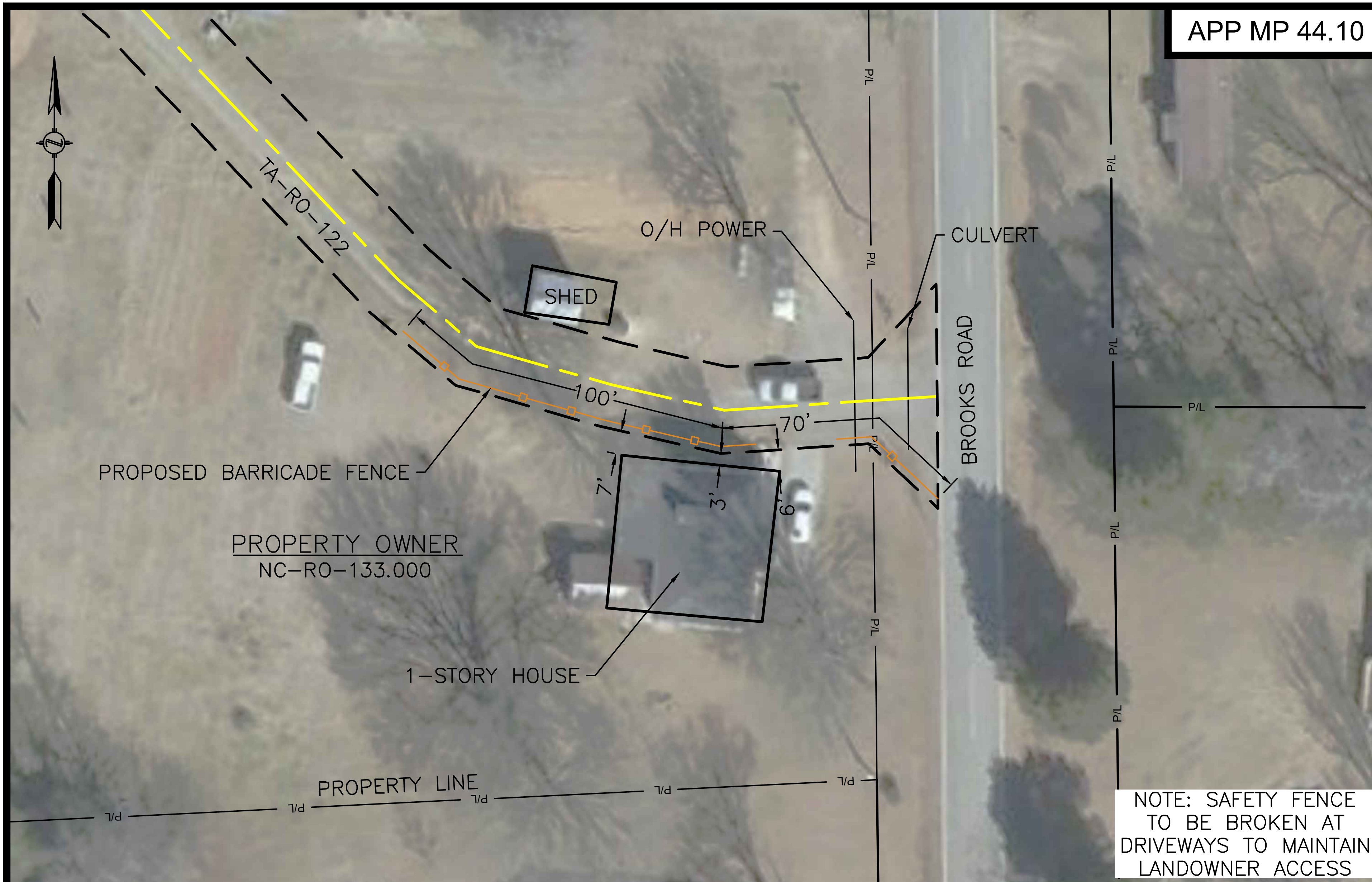
DATE OF PLOT:	9/23/2019 12:49 PM	



B.7-15

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

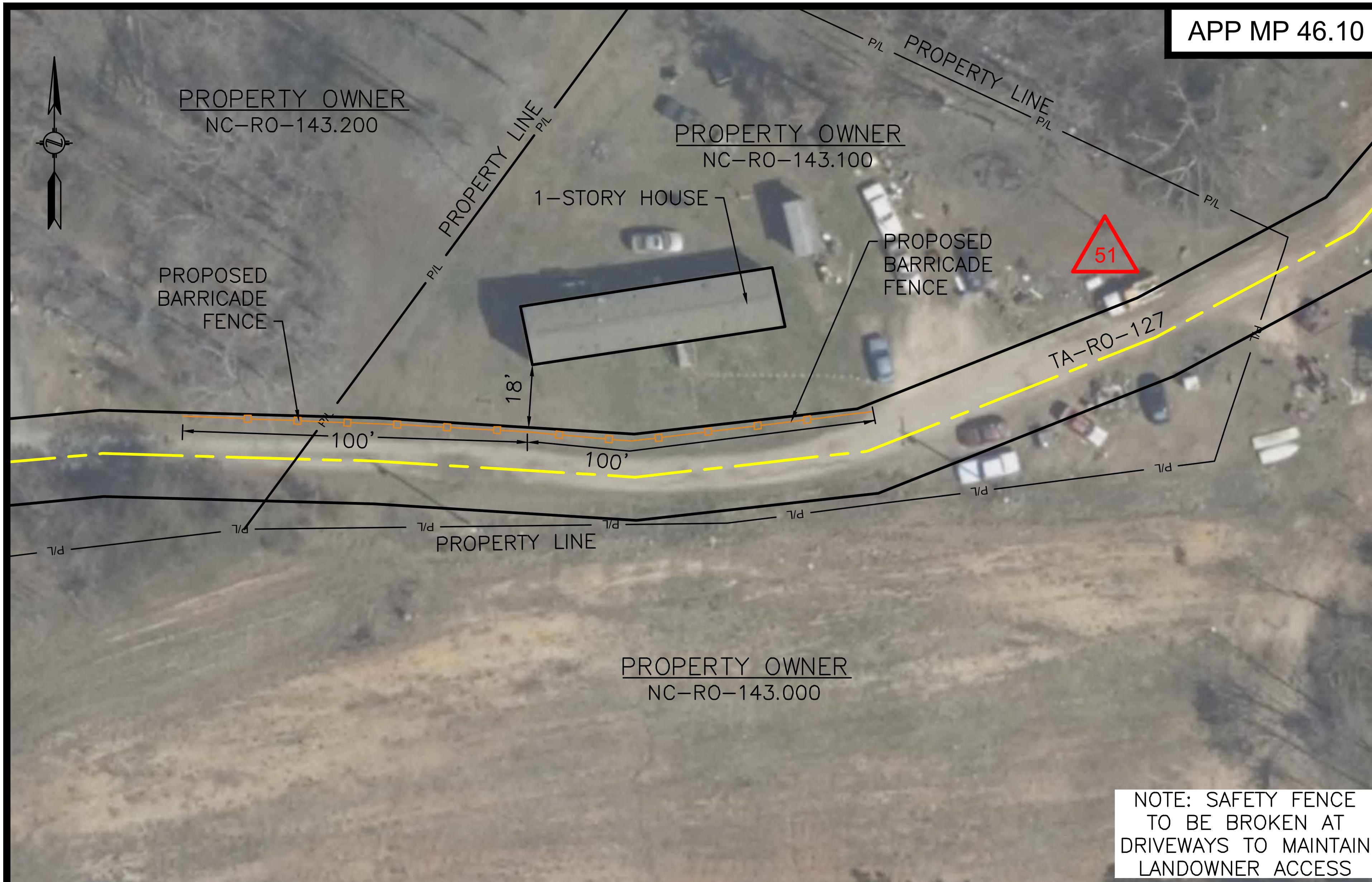
Mountain Valley PIPELINE LLC

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:	
DRAWING NO.: **RSS-H650-026**	
SCALE: 1" = 40'	REV. P2
DATE OF PLOT: 9/23/2019 12:49 PM	



B.7-16

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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:		
DRAWING NO.:	**RSS-H650-027**	
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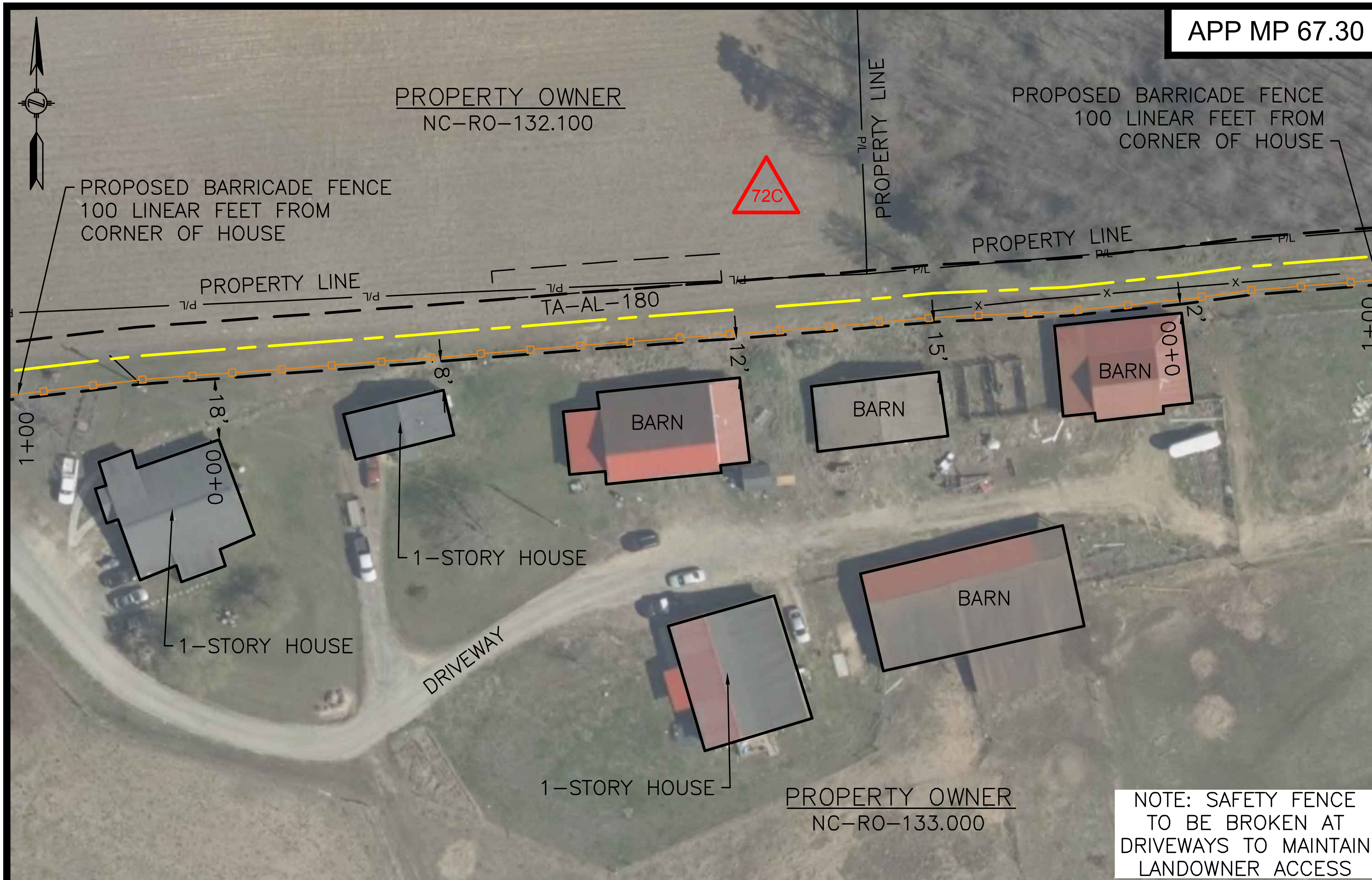
DATE OF PLOT: 9/23/2019 12:50 PM		



B.7-17

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

Mountain Valley PIPELINE LLC

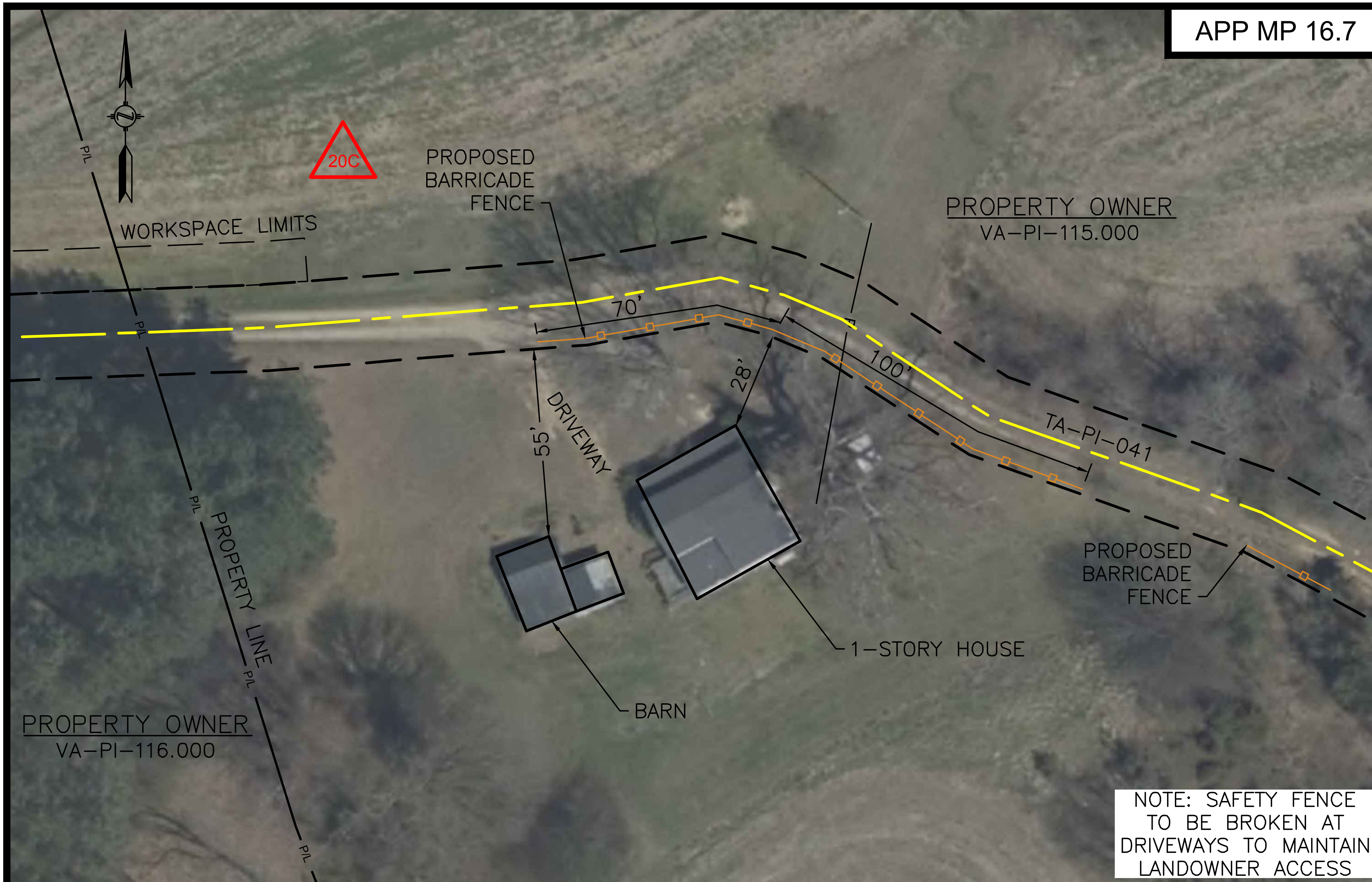
CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

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. P2
DATE OF PLOT: 9/23/2019 12:50 PM		

B.7-18



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

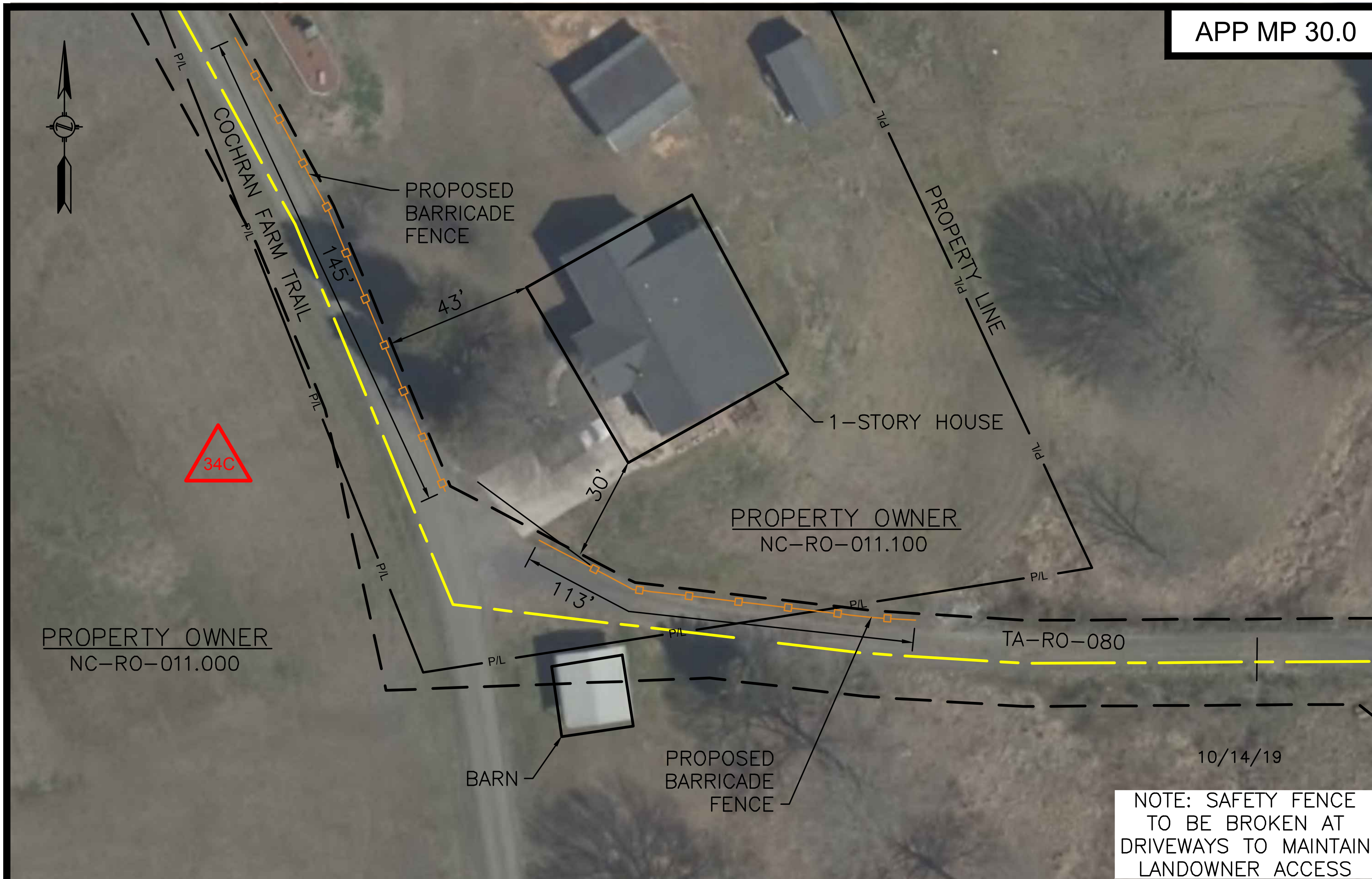
Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

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

SHEET 1 OF 1

DRAWN BY: KMB	05/02/19
DRAFTING CK: SSL	05/03/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-029**	
SCALE: 1" = 40'	REV. P1
DATE OF PLOT: 9/23/2019 12:51 PM	



B.7-19

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: KMB	05/02/19
DRAFTING CK: SSL	05/03/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-030**	
SCALE: 1" = 40'	REV. P1
DATE OF PLOT: 9/23/2019 12:52 PM	

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: KMB	05/03/19
DRAFTING CK: SSL	05/07/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: RSS-H650-031	
SCALE: 1" = 40'	REV. P1
DATE OF PLOT: 9/23/2019 12:52 PM	

B.7-21

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: KMB	05/06/19
DRAFTING CK: SSL	05/07/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: RSS-H650-032	
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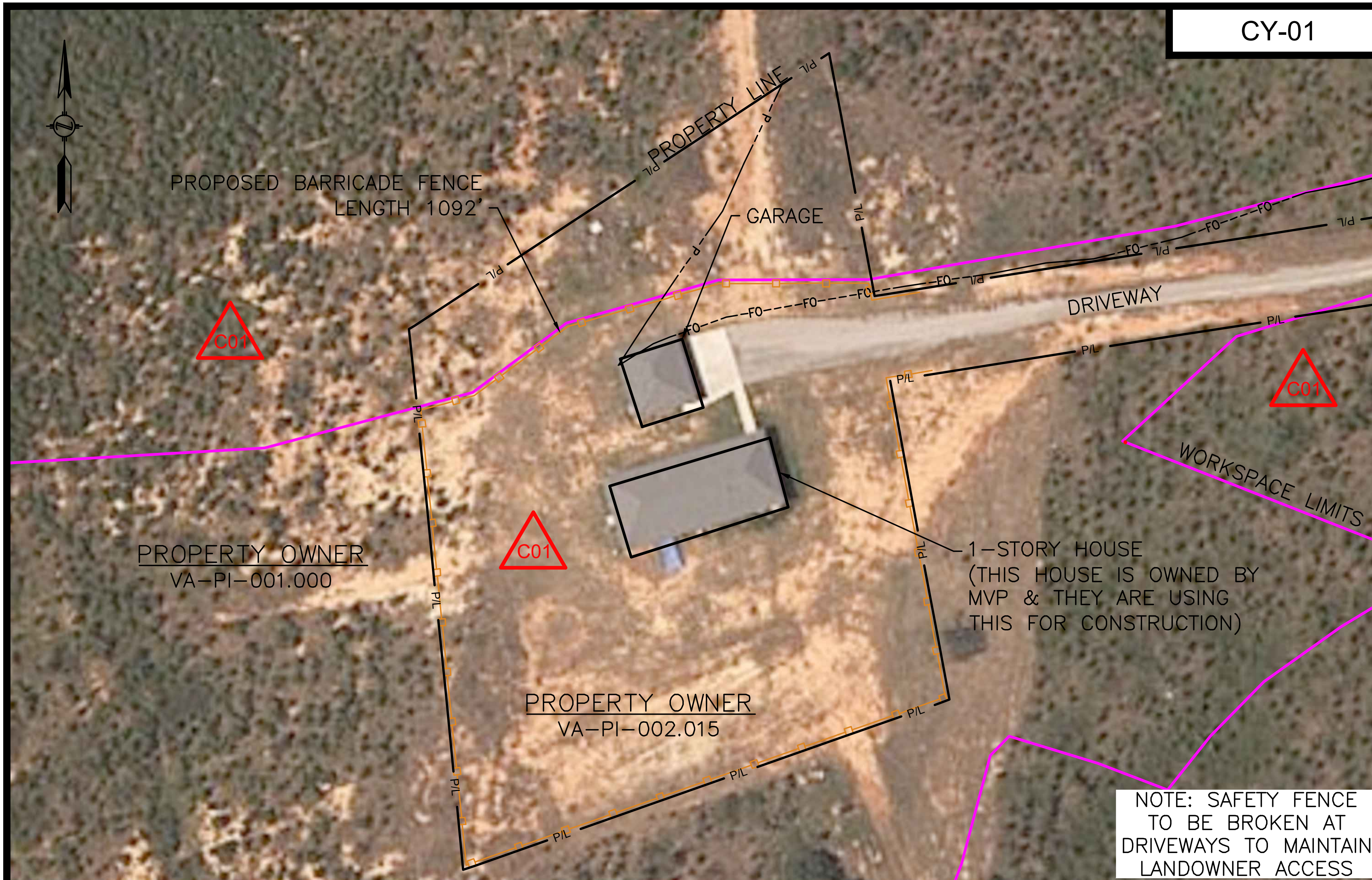
DATE OF PLOT: 9/23/2019 12:53 PM	



B.7-22

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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:	KMB	05/06/19
DRAFTING CK:	SSL	05/07/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.:	RSS-H650-033	
SCALE: 1" = 80'		REV. P1
DATE OF PLOT:	9/23/2019 4:54 PM	

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: KMB		05/09/19
DRAFTING CK: SSL		05/09/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.: RSS-H650-034		
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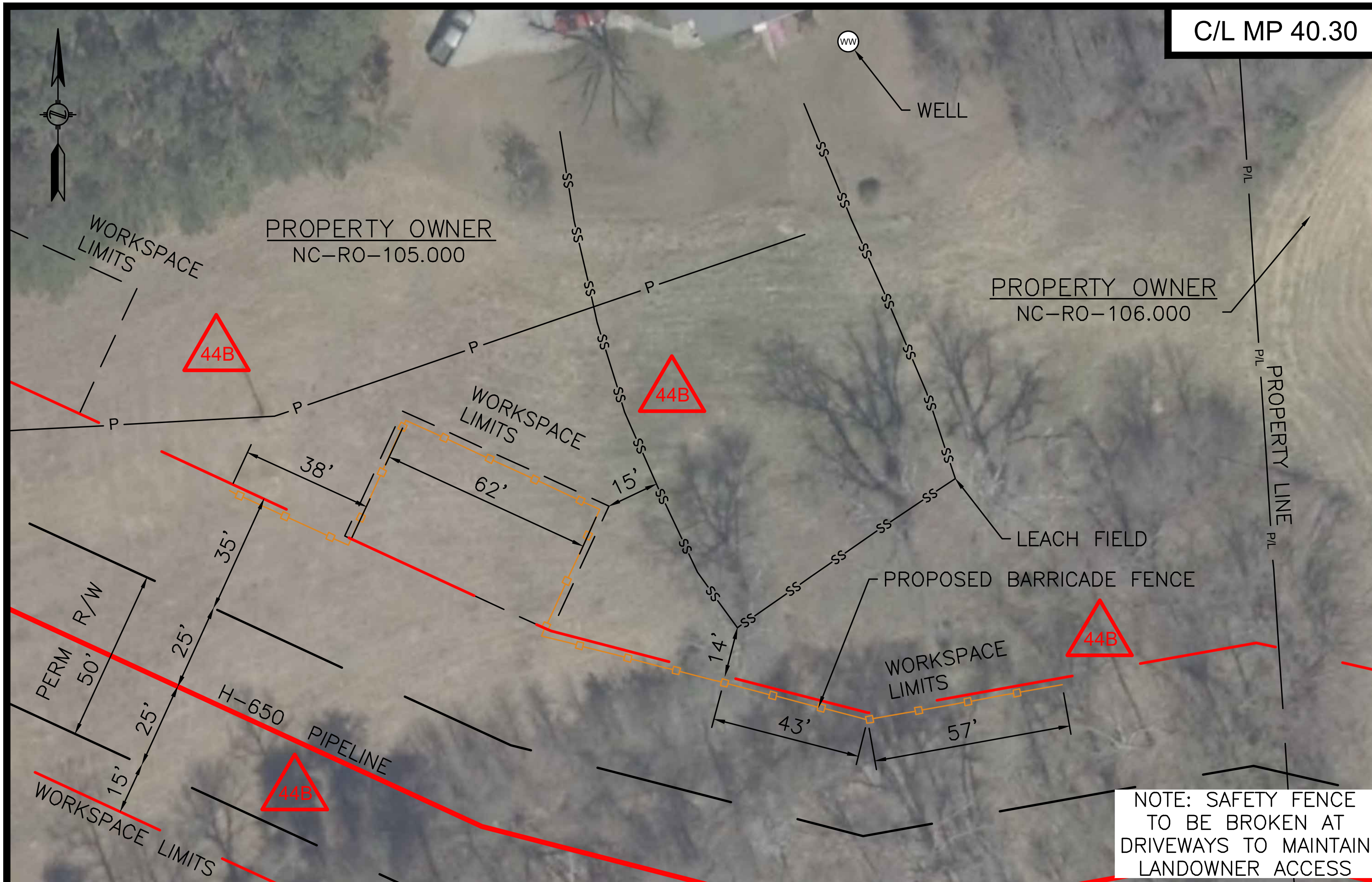
DATE OF PLOT: 9/23/2019 12:54 PM		



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: KMB		05/09/19
DRAFTING CK: SSL		05/09/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.: RSS-H650-035		
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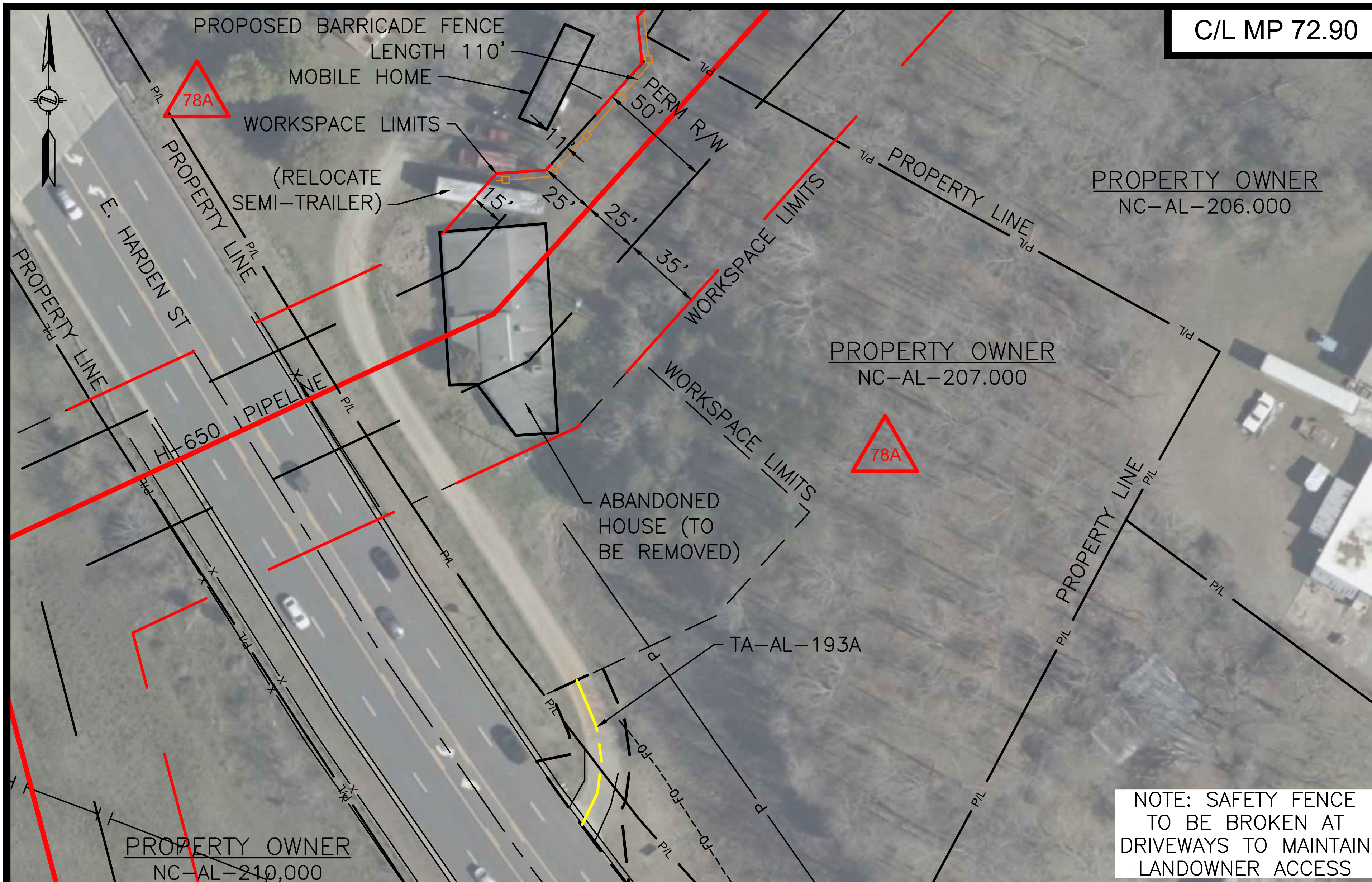
DATE OF PLOT: 9/23/2019 12:55 PM		



B.7-25

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

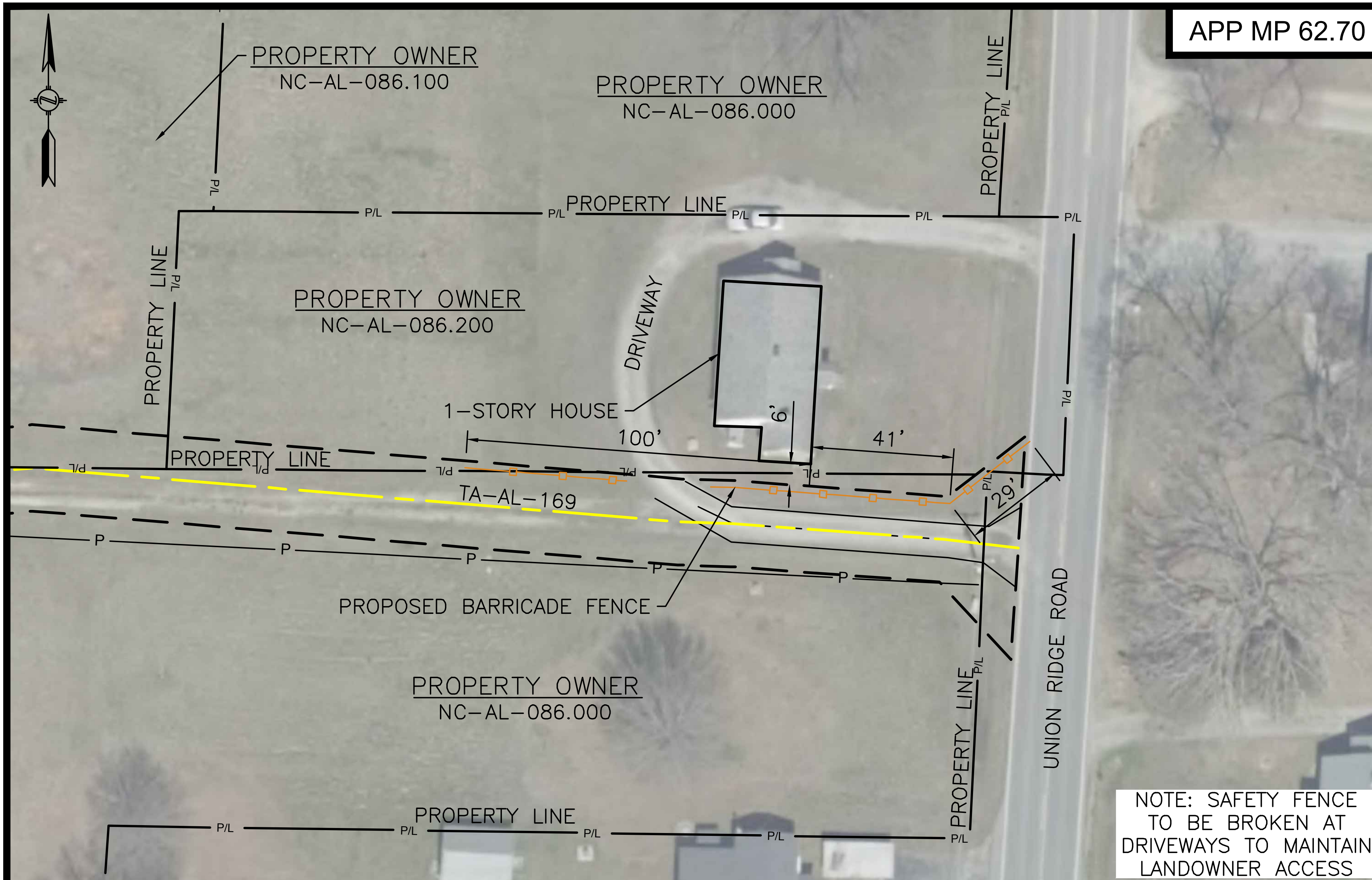
MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: KMB	05/15/19
DRAFTING CK: SSL	05/15/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-036**	
SCALE: 1" = 60'	REV. P1
DATE OF PLOT: 9/23/2019 12:55 PM	

B.7-26

APP MP 62.70



NOTE: SAFETY FENCE TO BE BROKEN AT DRIVEWAYS TO MAINTAIN LANDOWNER ACCESS

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: KMB	05/15/19
DRAFTING CK: DEM	09/19/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: RSS-H650-037	
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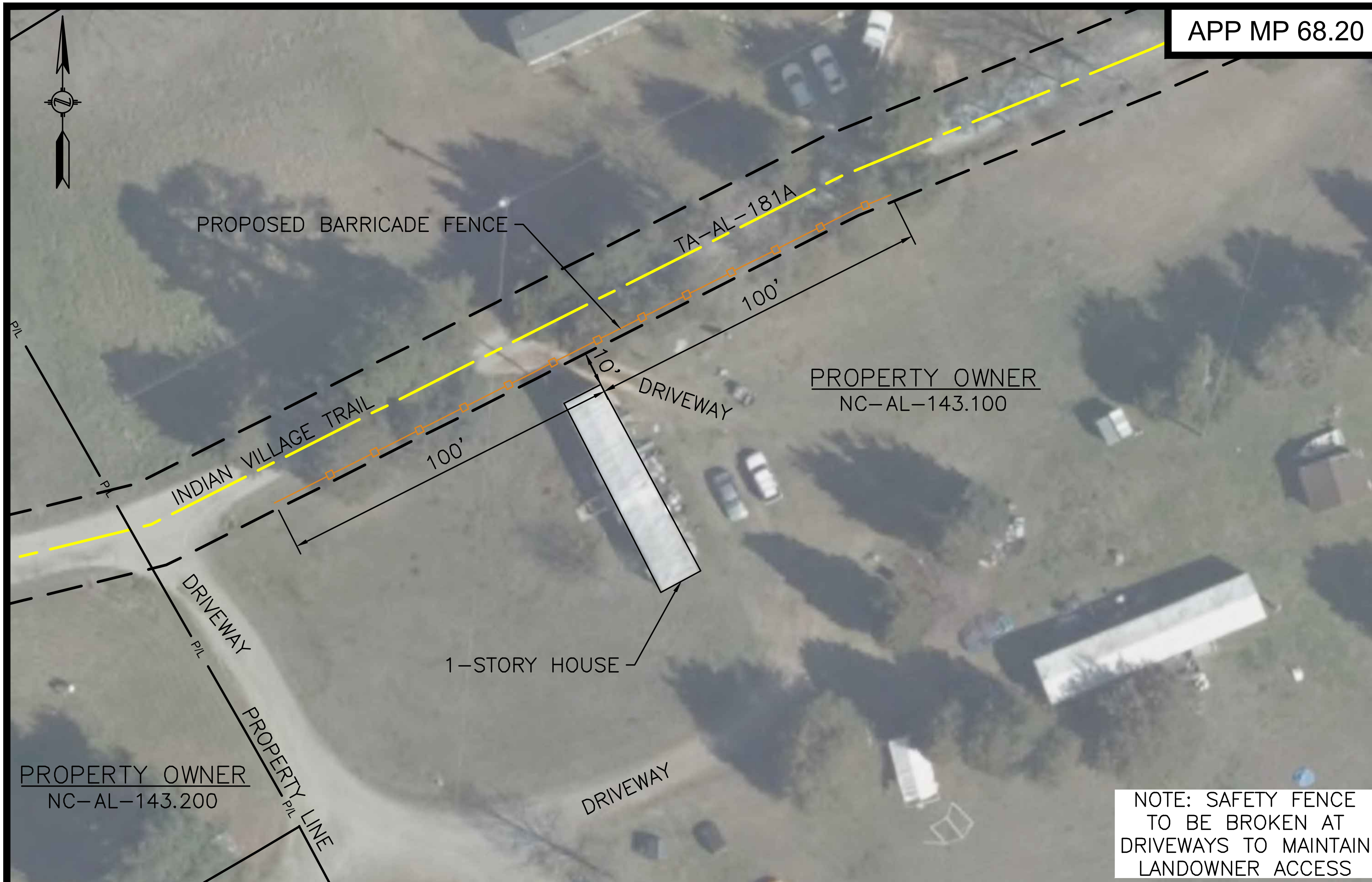


Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

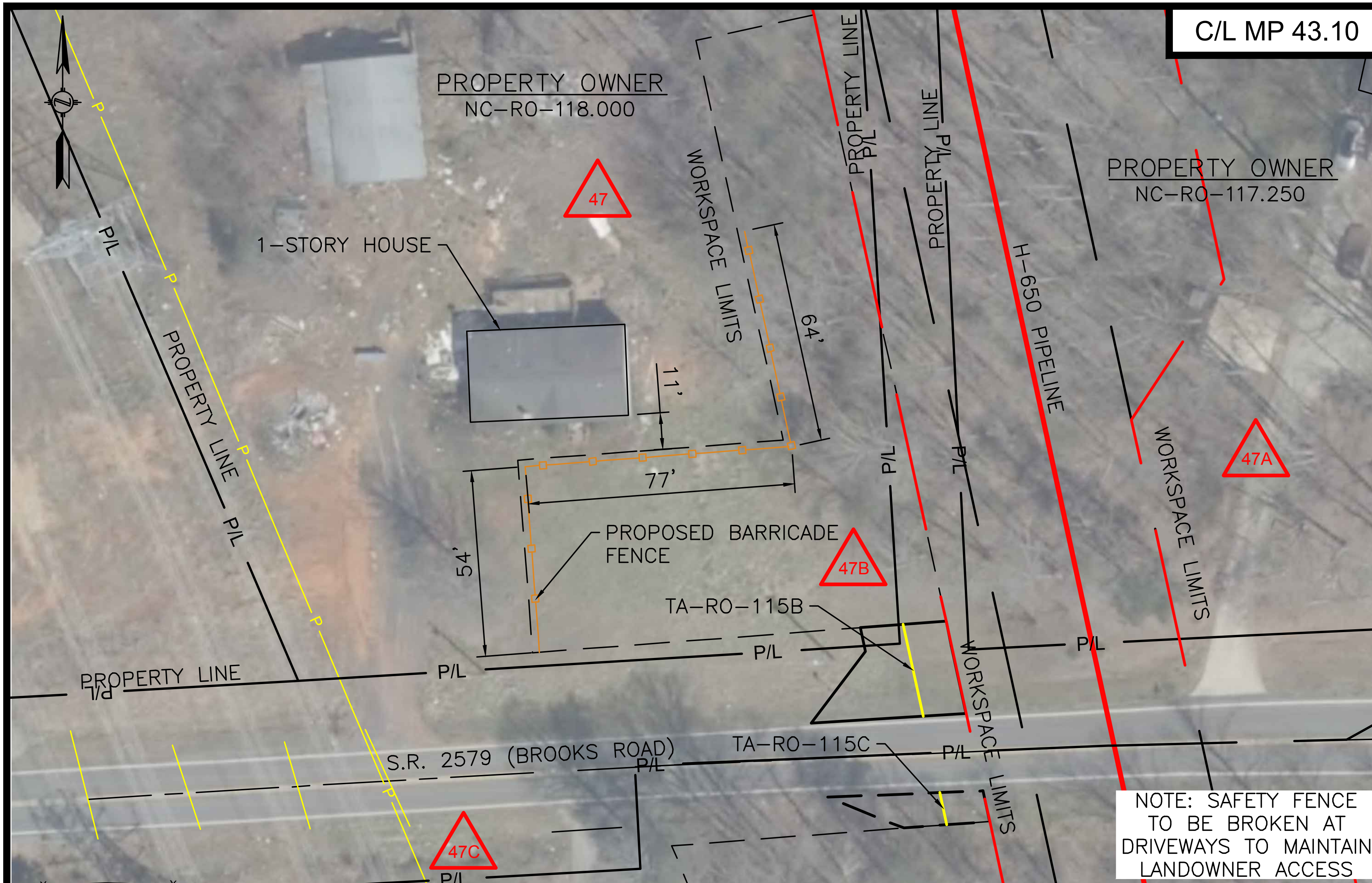
Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - RESIDENTIAL SITE SPECIFIC

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

SHEET 1 OF 1

DRAWN BY:	KMB	05/15/19
DRAFTING CK:	SSL	05/15/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.:	**RSS-H650-038**	
SCALE: 1" = 40'		REV. P1
DATE OF PLOT:	9/23/2019 12:56 PM	



Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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:	KMB	05/15/19
DRAFTING CK:	SSL	05/15/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.:	RSS-H650-039	
SCALE: 1" = 40'		REV. P1
DATE OF PLOT: 9/23/2019 12:56 PM		

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: CCH	05/17/19
DRAFTING CK: SSL	05/17/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: RSS-H650-040	
SCALE: 1" = 40'	REV. P1
DATE OF PLOT: 9/23/2019 12:57 PM	

APP MP 22.20

B.7-30

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: CCH	06/13/19
DRAFTING CK: DEM	09/16/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-041**	
SCALE: 1" = 40'	REV. P1
DATE OF PLOT: 9/23/2019 12:57 PM	

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: CCH	06/13/19
DRAFTING CK: DEM	09/16/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: RSS-H650-043	
SCALE: 1" = 40'	REV. P1
DATE OF PLOT: 9/23/2019 5:07 PM	

B.7-32

CY-22

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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:	CCH	06/13/19
DRAFTING CK:	DEM	09/16/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
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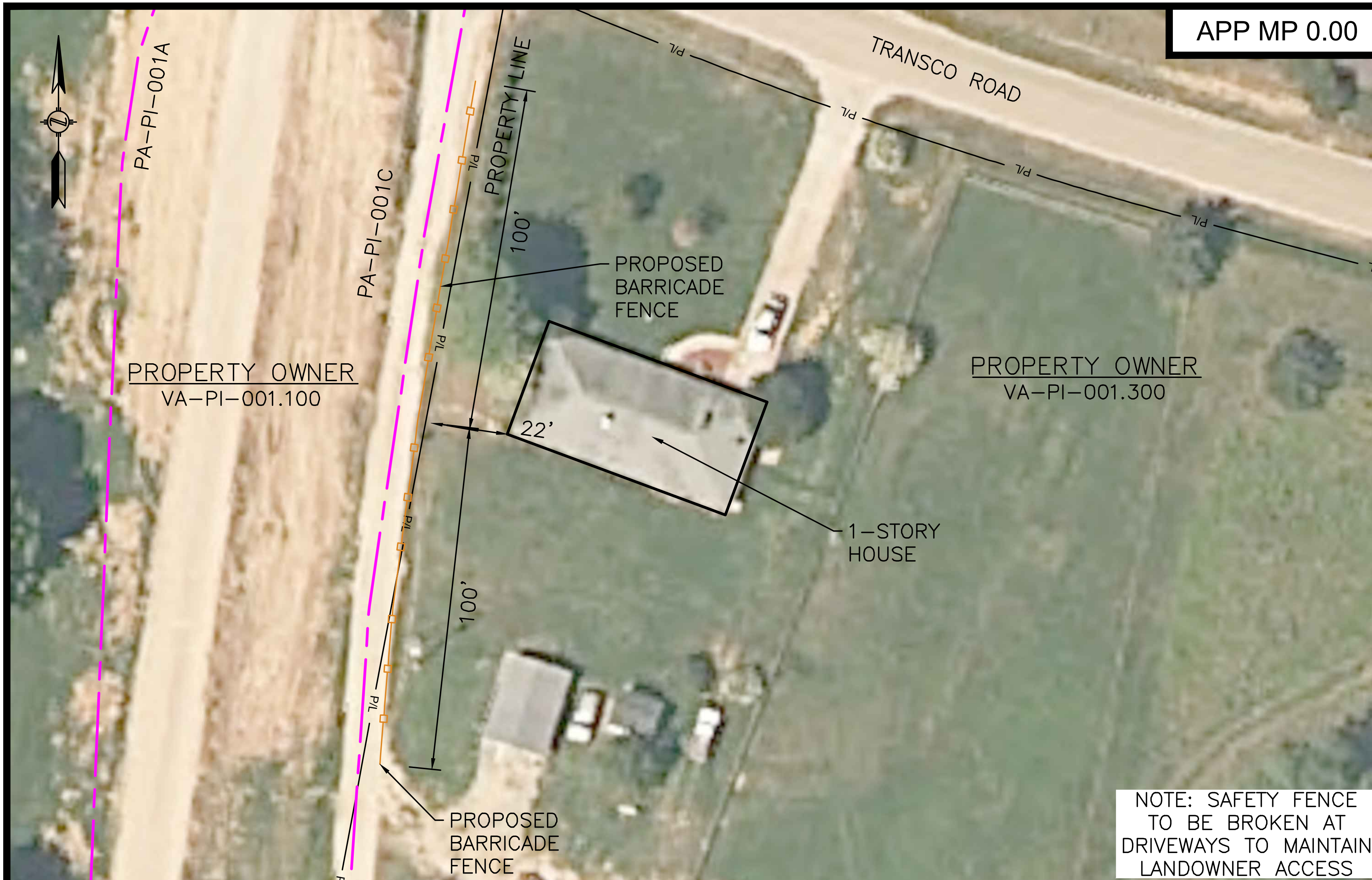

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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	08/29/19
DRAFTING CK: DEM	09/16/19
ENVIRONMENTAL CK:	
ENGINEERING CK: .	.
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-045**	
SCALE: 1" = 40'	REV. P
DATE OF PLOT: 9/23/2019 1:01 PM	

B.7-34

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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	08/30/19
DRAFTING CK:	DEM	09/16/19
ENVIRONMENTAL CK:		
ENGINEERING CK:	.	.
DETAIL SHEET:		
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DATE OF PLOT: 9/23/2019 1:01 PM		

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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		09/03/19
DRAFTING CK: DEM		09/16/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
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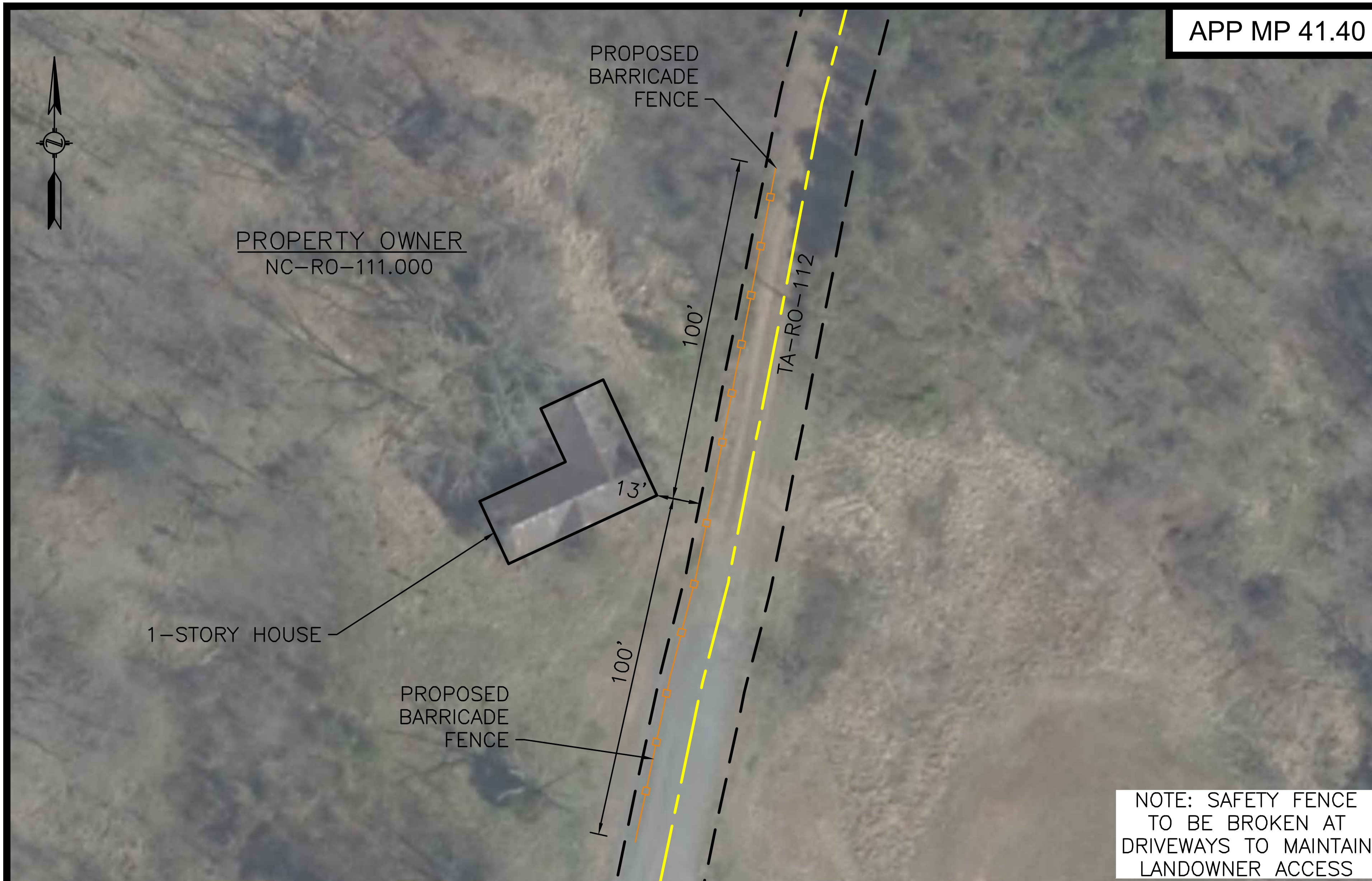

B.7-36

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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	09/03/19
DRAFTING CK: DEM	09/16/19
ENVIRONMENTAL CK:	
ENGINEERING CK: .	.
DETAIL SHEET:	
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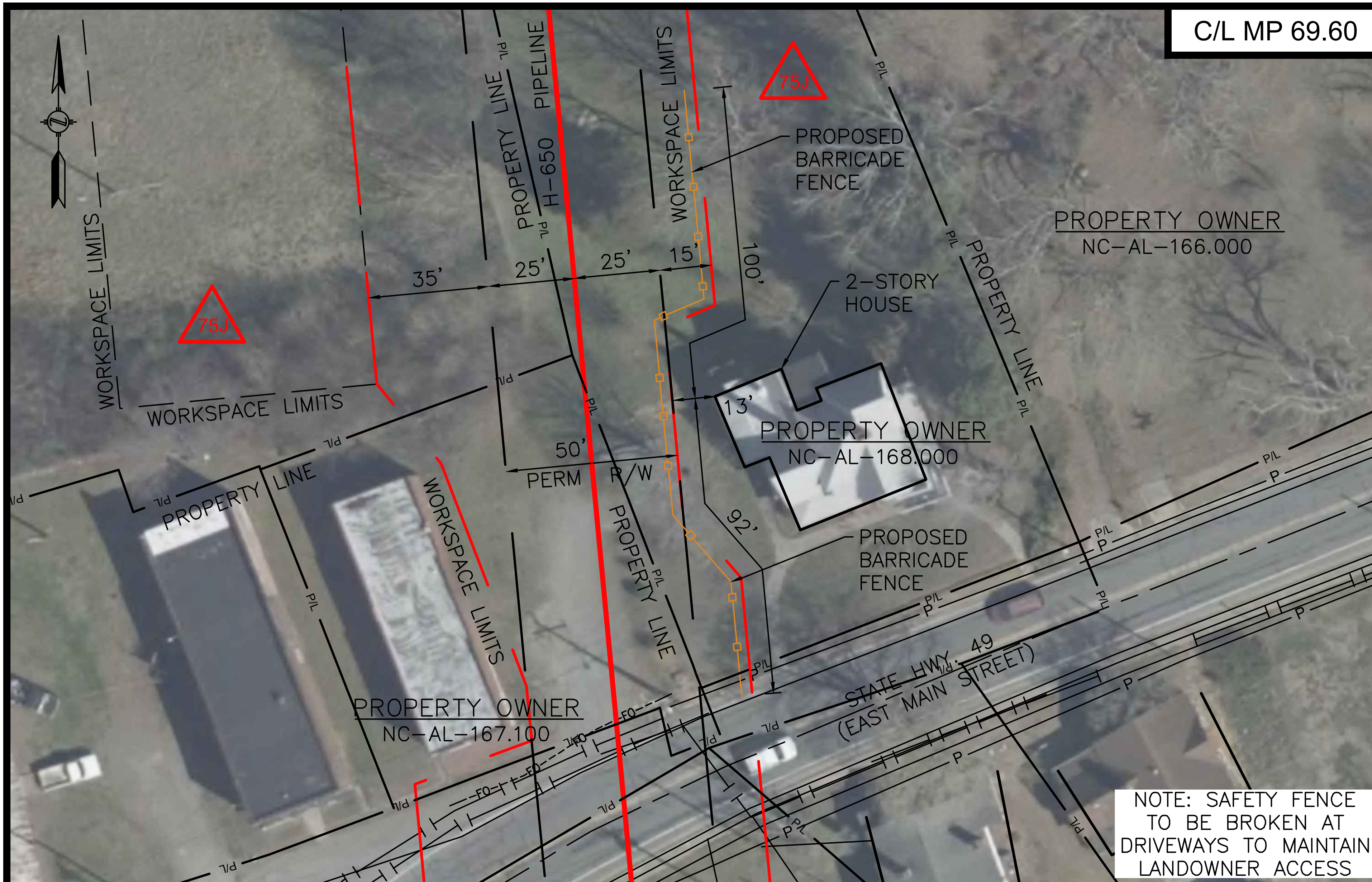

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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: SJS	09/03/19
DRAFTING CK: DEM	09/16/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSS-H650-050**	
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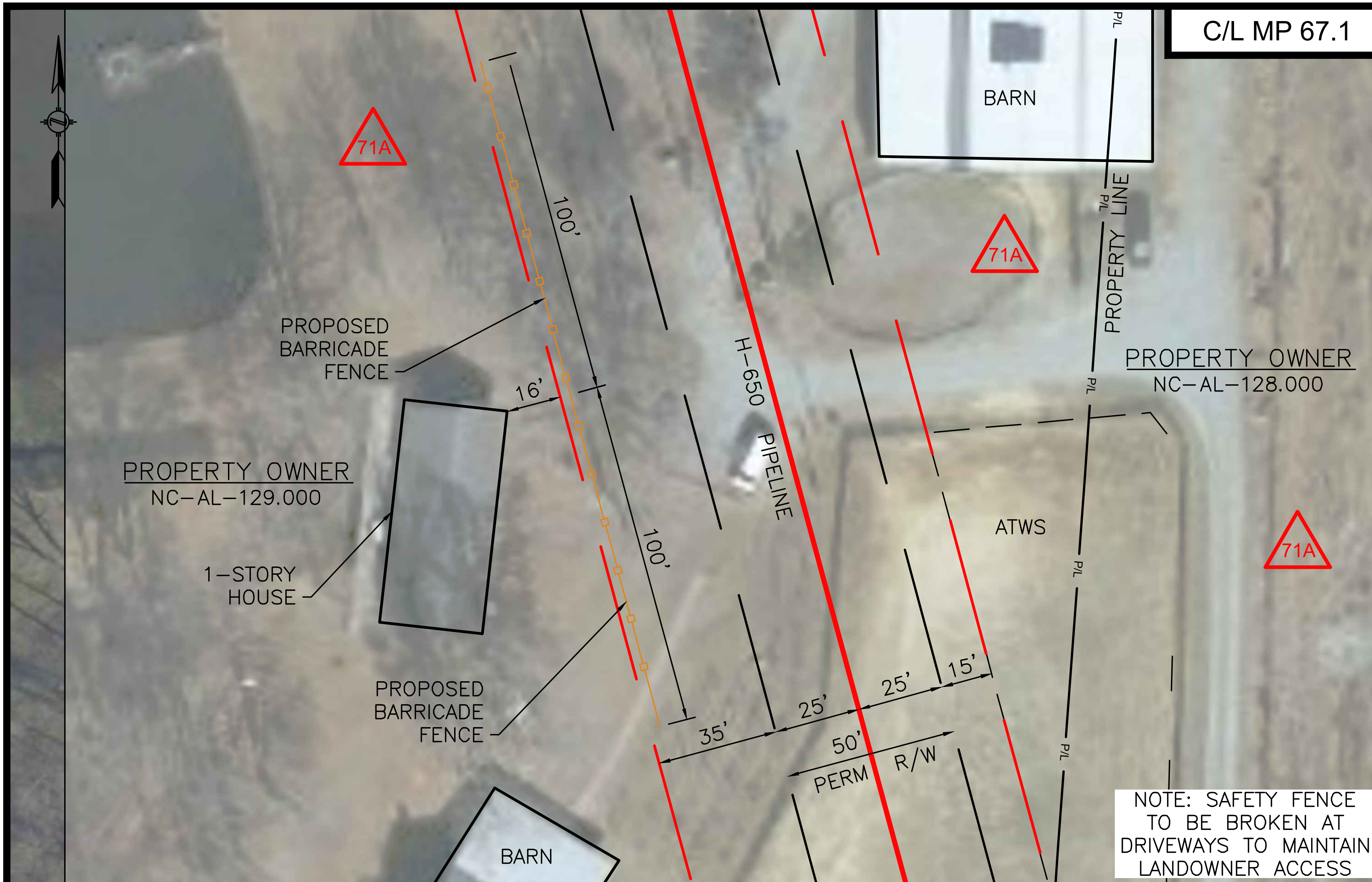

Legend

- Pipeline Centerline
- Temporary Workspace
- Permanent ROW
- Barricade Fence
- Access Road
- Contractor Yard Boundary

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:	SJS	09/25/19
DRAFTING CK:	DEM	09/27/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.: RSS-H650-051		
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DATE OF PLOT: 9/27/2019 11:06 AM		

APPENDIX B.8

Locations where Southgate Construction Workspace Parallel a Waterbody (or associated Wetland) within 15 feet

Appendix B-8

Locations where Southgate Construction Workspace Parallel a Waterbody (or associated Wetland) within 15 feet

Resource ID	MP	Length Parallel to Resource (feet)	Minimum Distance to Resource (feet) a/	Justification	FERC Comment
S-F18-10 / W-F18-11 (Trib. To Little Cherrystone Creek)	0.2	48 / 46	8	Collocation as route exits Lambert Compressor Station.	The request for construction workspace parallel to waterbody and wetland appears justified and minimizes impacts.
S-F18-17 (White Oak Creek)	9.9	60	0	Crossing location avoids sensitive resource site. Minimizes impact to wetlands. Constructability to avoid side slope construction.	14-18% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-F18-28 / W-F18-29 (Trib to Sandy Creek)	11.4	20/70	0	Collocation and constructability to avoid side slope construction.	30-60% side slopes present nearby. The request for construction workspace parallel to waterbody and wetland appears justified and minimizes impacts.
S-D18-37 (Trib. To Silver Creek)	15.6	60	5	Collocation and constructability to avoid side slope construction.	14-25% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
W-A18-204 / S-A16-205 (Trib. To Trotters Creek)	22.0	187	0	Collocation and constructability, to avoid residence and to support road bore.	The request for construction workspace parallel to waterbody and wetland appears justified and minimizes impacts.
S-E18-35/ W-E18-33 (Trib. To Dan River)	23.9	14 / 39	9	Collocation and constructability to avoid side slope construction.	30-50% side slopes present nearby. The request for construction workspace parallel to waterbody and wetland appears justified and minimizes impacts.
S-A18-143 (Trib. To Machine Creek)	31.9	22	11	Collocation and minimize the severity of slope construction.	50-80% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.

Appendix B-8

Locations where Southgate Construction Workspace Parallel a Waterbody (or associated Wetland) within 15 feet

Resource ID	MP	Length Parallel to Resource (feet)	Minimum Distance to Resource (feet) a/	Justification	FERC Comment
S-A18-151 (Town Creek)	32.7	90	0	Collocation and a route to the east of waterbody crossing includes side slope construction and pond.	14-50% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-A18-154 (Trib. To Town Creek)	33.0	38	0	Constructability to avoid side slope construction to the east and major utility corridor to the west.	14-18% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-A18-94 / W-A18-95 (Trib. To Wolf Island Creek)	37.0	40 / 61	0	Constructability to avoid side slope construction to the southwest and pond to the east.	14-50% side slopes present nearby. The request for construction workspace parallel to waterbody and wetland appears justified and minimizes impacts.
S-A18-4 (Trib. To Lick Fork)	38.5	180	0	Collocation to the northeast and avoids side slope construction to the southwest.	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-B18-44 (Trib. To Lick Fork)	41.6	52	0	Maintains collocation and supports space required for highway crossing	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-A18-212 (Trib. To Hogans Creek)	45.7	29	6	Maintaining collocation	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-A18-218 (Trib. To Haw River)	52.2RR	37	8	Support perpendicular stream crossing	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-A18-87 (Trib. To Haw River)	53.7	43	0	Maximize collocation	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.

Appendix B-8

Locations where Southgate Construction Workspace Parallel a Waterbody (or associated Wetland) within 15 feet

Resource ID	MP	Length Parallel to Resource (feet)	Minimum Distance to Resource (feet) a/	Justification	FERC Comment
S-B18-14 (Trib. To Stony Creek)	63.2RR	55	11	Collocation and constructability to avoid side slope construction and construct around utility towers.	30-50% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
W-B19-161 (Trib. To Boyds Creek)	65.5	81	1	Constructability to avoid residences	The request for construction workspace parallel wetland appears justified and minimizes impacts.
S-A19-353 (Trib. To Boyds Creek)	66.58RR	59	8	Supports request of landowner on route placement	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-B18-9 (Trib. To Haw River)	68.8	50	1	Route location dictated by major road bores north and south of stream and also maintains safe distance between transmission line towers for utility crossing	14-50% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-B18-11 (Trib. To Haw River)	68.9	31	9	Route location dictated by major road bores north and south of stream and maintains safe distance between transmission line towers for utility crossing.	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-A18-116 (Trib. To Haw River)	70.0RR	24	4	Route location dictated by alignment around Town of Haw River structures.	The request for construction workspace parallel to waterbody appears justified and minimizes impacts.
S-C18-82 (Trib. To Haw River)	70.4	93	0	Constructability to avoid side slope construction	30-50% side slopes present nearby. The request for construction workspace parallel to waterbody appears justified and minimizes impacts.

a/ Minimum distance from resource of 0 feet indicates that the wetland or waterbody is located within the Construction Workspace.

APPENDIX C.1

Surficial Geology Crossed by the Southgate Project

Appendix C.1

Surficial Geology Crossed by the Southgate Project

Project Facilities	County	Start MP	End MP	Surficial Geology Material
Pipeline Facilities				
Virginia				
H-605	Pittsylvania	0	0.28	Residual materials developed in sedimentary rocks, discontinuous
		0.28	0.47	Residual materials developed in bedrock, discontinuous
H-650	Pittsylvania	0	0.37	Residual materials developed in bedrock, discontinuous
		0.37	1.22	Residual materials developed in sedimentary rocks, discontinuous
		1.22	2.05	Residual materials developed in sedimentary rocks, discontinuous
		2.05	15.18	Residual materials developed in igneous and metamorphic rocks
		15.18	26.10	Residual materials developed in bedrock, discontinuous
North Carolina				
H-650	Rockingham	26.10	52.60	Residual materials developed in bedrock, discontinuous
H-650	Alamance	52.60	73.17	Residual materials developed in igneous and metamorphic rocks
Aboveground Facilities		**Area (acres)**	**Near MP**	
Lambert CS / Interconnect / MLV 1	Pittsylvania	3.2	0	Residual materials developed in bedrock, discontinuous
MLV 2		<0.1	7.4	Residual materials developed in igneous and metamorphic rocks
MLV 3		<0.1	18.3	Residual materials developed in bedrock, discontinuous
LN 3600 Interconnect	Rockingham	0.9	28.2	Residual materials developed in bedrock, discontinuous
T-15 Dan River Interconnect / MLV4		0.7	30.4	Residual materials developed in bedrock, discontinuous
MLV 5		<0.1	42.2	Residual materials developed in igneous and metamorphic rocks
MLV 6	Alamance	<0.1	55.1	Residual materials developed in igneous and metamorphic rocks
MLV 7		<0.1	68.7	Residual materials developed in igneous and metamorphic rocks
T-21 Haw River Interconnect / MLV 8		0.7	73.2RR	Residual materials developed in igneous and metamorphic rocks

Source: Soller and Reheis, 2004

APPENDIX C.2

Bedrock Geology Underlying the Southgate Project

Appendix C.2

Bedrock Geology Underlying the Southgate Project

Project Facilities	From Milepost	To Milepost	Crossing Length (Miles)	Formation Age	Primary Rock	Secondary Rock	Map Symbol
Pipeline Facilities							
H-605	0.00	0.07	0.07	Upper Triassic	sandstone	siltstone	TRss
	0.07	0.19	0.12	Upper Triassic	conglomerate		TRc
	0.19	0.47	0.28	Upper Triassic	sandstone	siltstone	Zfm
H-650	0 RR	0.39	0.41	Upper Triassic	sandstone	siltstone	lw
	0.39	0.95	0.56	Upper Triassic	conglomerate		Zfm
	0.95	1.2	0.25	Proterozoic Z-Cambrian	mica schist	gneiss	TRc
	1.2	1.86	0.68	Cambrian	granite		TRs
	1.86	14.95	13.17	Proterozoic Z-Cambrian	mica schist	gneiss	TRss
	14.95	16.19	1.24	Upper Triassic	conglomerate		TRc
	16.19	17.13	0.94	Upper Triassic	sandstone		Zau
	17.13	18.03	0.97	Upper Triassic	sandstone	siltstone	Zab
	18.03	18.7	0.67	Upper Triassic	conglomerate		my
	18.7	20.62	1.92	Proterozoic Z	biotite gneiss	amphibolite	TRss
	20.62	21.07	0.45	Proterozoic Z-Cambrian	mica schist	amphibolite	my
	21.07	22.35	1.28	Proterozoic - Paleozoic ?	mylonite	gneiss	TRss
	22.35	22.46RR	0.11	Upper Triassic	sandstone	siltstone	TRcs
	22.46 RR	22.46RR	0	Proterozoic - Paleozoic ?	mylonite	gneiss	TRdp
	22.46 RR	24.57	2.22	Upper Triassic	sandstone	siltstone	TRdc
	24.57	26.11	1.54	Triassic	sandstone	siltstone	TRdp
	26.11	28.99	2.89	Triassic	sandstone	mudstone	CZbg

Appendix C.2

Bedrock Geology Underlying the Southgate Project

Project Facilities	From Milepost	To Milepost	Crossing Length (Miles)	Formation Age	Primary Rock	Secondary Rock	Map Symbol
	28.99	29.35RR	0.36	Triassic	mudstone	sandstone	CZfg
	29.35 RR	31.11	1.78	Triassic	sandstone	mudstone	CZbg
	31.11	32.65	1.54	Cambrian/Late Proterozoic	biotite gneiss	mica schist	CZfg
	32.65	32.95	0.3	Cambrian/Late Proterozoic	felsic gneiss	mafic gneiss	CZbg
	32.95	34.12	1.17	Cambrian/Late Proterozoic	biotite gneiss	mica schist	CZfg
	34.12	34.93	0.82	Cambrian/Late Proterozoic	felsic gneiss	mafic gneiss	CZbg
	34.93	39.31	4.39	Cambrian/Late Proterozoic	biotite gneiss	mica schist	PPg
	39.31	41.28	2.02	Cambrian/Late Proterozoic	felsic gneiss	mafic gneiss	CZbg
	41.28	46.1RR	4.82	Cambrian/Late Proterozoic	biotite gneiss	mica schist	PPg
	46.1 RR	47.56	1.45	Permian/Pennsylvanian	granite		CZmv
	47.56	48.35	0.8	Cambrian/Late Proterozoic	biotite gneiss	mica schist	CZph
	48.35	49.29	0.94	Permian/Pennsylvanian	granite		CZmv
	49.29	50.57RR	1.28	Cambrian/Late Proterozoic	mafic metavolcanic rock	felsic metavolcanic rock	CZfv
	50.57 RR	50.63RR	0.05	Cambrian/Late Proterozoic	phyllite	schist	CZg
	50.63 RR	54.77	4.24	Cambrian/Late Proterozoic	mafic metavolcanic rock	felsic metavolcanic rock	PzZg
	54.77	55.37RR	0.6	Cambrian/Late Proterozoic	felsic metavolcanic rock	mafic metavolcanic rock	CZg

Appendix C.2

Bedrock Geology Underlying the Southgate Project

Project Facilities	From Milepost	To Milepost	Crossing Length (Miles)	Formation Age	Primary Rock	Secondary Rock	Map Symbol
	55.37 RR	58.32	3.23	Cambrian/Late Proterozoic	metamorphic rock		PzZg
	58.32	59.2RR	0.93	Paleozoic/Late Proterozoic	metamorphic rock		CZg
	59.2 RR	59.4RR	0.2	Cambrian/Late Proterozoic	metamorphic rock		PzZg
	59.4 RR	59.63	0.21	Paleozoic/Late Proterozoic	metamorphic rock		CZg
	59.63	60.55	0.92	Cambrian/Late Proterozoic	metamorphic rock		PzZg
	60.55	61.32	0.8	Paleozoic/Late Proterozoic	metamorphic rock		CZg
	61.32	61.54	0.22	Cambrian/Late Proterozoic	metamorphic rock		PzZg
	61.54	61.59	0.05	Paleozoic/Late Proterozoic	metamorphic rock		CZg
	61.59	61.86	0.27	Cambrian/Late Proterozoic	metamorphic rock		PzZg
	61.86	62.26RR	0.4	Paleozoic/Late Proterozoic	metamorphic rock		CZg
	62.26 RR	63.28RR	1.11	Cambrian/Late Proterozoic	metamorphic rock		CZmv
	63.28 RR	64.52	1.41	Paleozoic/Late Proterozoic	metamorphic rock		PzZg
	64.52	69.4	5.12	Cambrian/Late Proterozoic	metamorphic rock		CZmv
	69.4	72.89RR	3.59	Cambrian/Late Proterozoic	mafic metavolcanic rock	felsic metavolcanic rock	TRss

Appendix C.2

Bedrock Geology Underlying the Southgate Project

Project Facilities	From Milepost	To Milepost	Crossing Length (Miles)	Formation Age	Primary Rock	Secondary Rock	Map Symbol
	72.89 RR	73.16RR	0.29	Paleozoic/Late Proterozoic	metamorphic rock		TRc
	73.16 RR	73.17RR	0.01	Cambrian/Late Proterozoic	mafic metavolcanic rock	felsic metavolcanic rock	Zfm
Aboveground Facilities							
	Area (acres)	**Nearest Mile Post**					
Lambert Compressor Station/ Interconnect/ MLV 1	8.6	0		Upper Triassic	sandstone	siltstone	TRss
MLV 2	<0.01	7.4		Proterozoic Z-Cambrian	mica schist	gneiss	Zfm
MLV 3	<0.01	18.3		Upper Triassic	conglomerate		TRc
LN 3600 Interconnect	0.9	28.2		Triassic	sandstone	mudstone	TRdp
T-15 Dan River Interconnect/ MLV 4	0.8	30.4		Triassic	sandstone	mudstone	TRdp
MLV 5	<0.01	42.2		Cambrian/Late Proterozoic	biotite gneiss	mica schist	CZbg
MLV 6	<0.01	55.1		Cambrian/Late Proterozoic	felsic metavolcanic rock	mafic metavolcanic rock	CZfv
MLV 7	<0.01	68.2		Cambrian/Late Proterozoic	metamorphic rock		CZg
T-21 Haw River Interconnect/MLV8	0.06	73.2RR		Cambrian/Late Proterozoic	mafic metamorphic rock	felsic metavolcanic rock	CZmv

Source: USGS, 2018a

APPENDIX C.3

Potential Areas of Steep Slopes and Side Slopes Crossed by the Southgate Project

Appendix C.3-1 Potential Areas of Steep Slopes Crossed by the MVP Southgate Project				
Route	**Steep Slope Group**	**Milepost Begin**	**Milepost End**	**Length of slope crossed (feet)**
Southgate Lateral (H-605 Pipeline)	30 to 50	0.12 RR	0.13 RR	25
Southgate Mainline (H-650 Pipeline)	30 to 50	3.94 RR	3.94 RR	26
Southgate Mainline (H-650 Pipeline)	30 to 50	4.12	4.12	27
Southgate Mainline (H-650 Pipeline)	30 to 50	4.84	4.85	25
Southgate Mainline (H-650 Pipeline)	50 to 66	5.11	5.12	21
Southgate Mainline (H-650 Pipeline)	50 to 66	5.24	5.25	28
Southgate Mainline (H-650 Pipeline)	30 to 50	5.25	5.25	28
Southgate Mainline (H-650 Pipeline)	30 to 50	5.65	5.66	24
Southgate Mainline (H-650 Pipeline)	50 to 66	6.99	6.99	29
Southgate Mainline (H-650 Pipeline)	30 to 50	7.60	7.61	25
Southgate Mainline (H-650 Pipeline)	30 to 50	7.98	7.99	75
Southgate Mainline (H-650 Pipeline)	30 to 50	8.58	8.58	29
Southgate Mainline (H-650 Pipeline)	50 to 66	8.58	8.59	29
Southgate Mainline (H-650 Pipeline)	30 to 50	8.59	8.59	34
Southgate Mainline (H-650 Pipeline)	66 to 80	9.95	9.95	30
Southgate Mainline (H-650 Pipeline)	50 to 66	9.95	9.96	24
Southgate Mainline (H-650 Pipeline)	30 to 50	9.96	9.96	18
Southgate Mainline (H-650 Pipeline)	30 to 50	10.08	10.09	44
Southgate Mainline (H-650 Pipeline)	30 to 50	10.29	10.30	25
Southgate Mainline (H-650 Pipeline)	30 to 50	11.04	11.06	76
Southgate Mainline (H-650 Pipeline)	50 to 66	11.83	11.84	24
Southgate Mainline (H-650 Pipeline)	30 to 50	12.78	12.79	52
Southgate Mainline (H-650 Pipeline)	66 to 80	13.47 RR	13.47 RR	35
Southgate Mainline (H-650 Pipeline)	30 to 50	13.47 RR	13.48 RR	33
Southgate Mainline (H-650 Pipeline)	30 to 50	17.27	17.28	51
Southgate Mainline (H-650 Pipeline)	50 to 66	17.29	17.30	31
Southgate Mainline (H-650 Pipeline)	30 to 50	17.30	17.31	49
Southgate Mainline (H-650 Pipeline)	30 to 50	17.63 RR	17.63 RR	21
Southgate Mainline (H-650 Pipeline)	50 to 66	17.70 RR	17.71 RR	53
Southgate Mainline (H-650 Pipeline)	30 to 50	17.71 RR	17.72 RR	45
Southgate Mainline (H-650 Pipeline)	30 to 50	17.81 RR	17.72 RR	36
Southgate Mainline (H-650 Pipeline)	30 to 50	17.92	17.93	50
Southgate Mainline (H-650 Pipeline)	30 to 50	18.01	18.02	94
Southgate Mainline (H-650 Pipeline)	30 to 50	20.39	20.41	118
Southgate Mainline (H-650 Pipeline)	30 to 50	20.63	20.64	72
Southgate Mainline (H-650 Pipeline)	30 to 50	21.52	21.54	73
Southgate Mainline (H-650 Pipeline)	30 to 50	21.54	21.55	42
Southgate Mainline (H-650 Pipeline)	30 to 50	22.00	22.01	27

Appendix C.3-1

Potential Areas of Steep Slopes Crossed by the MVP Southgate Project

Route	Steep Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	30 to 50	22.35	22.36	32
Southgate Mainline (H-650 Pipeline)	30 to 50	22.50 RR	22.51 RR	32
Southgate Mainline (H-650 Pipeline)	30 to 50	22.71 RR	22.74 RR	120
Southgate Mainline (H-650 Pipeline)	30 to 50	22.83 RR	22.87 RR	193
Southgate Mainline (H-650 Pipeline)	30 to 50	22.90 RR	22.91 RR	26
Southgate Mainline (H-650 Pipeline)	30 to 50	22.95 RR	22.95 RR	32
Southgate Mainline (H-650 Pipeline)	30 to 50	23.20 RR	23.21 RR	22
Southgate Mainline (H-650 Pipeline)	50 to 66	23.21 RR	23.21 RR	20
Southgate Mainline (H-650 Pipeline)	30 to 50	23.21 RR	23.21 RR	20
Southgate Mainline (H-650 Pipeline)	30 to 50	23.24 RR	23.25 RR	90
Southgate Mainline (H-650 Pipeline)	30 to 50	24.37	24.37	31
Southgate Mainline (H-650 Pipeline)	30 to 50	24.78	24.79	77
Southgate Mainline (H-650 Pipeline)	30 to 50	24.99	25.00	56
Southgate Mainline (H-650 Pipeline)	30 to 50	25.16	25.17	45
Southgate Mainline (H-650 Pipeline)	30 to 50	26.19	26.20	21
Southgate Mainline (H-650 Pipeline)	30 to 50	27.49	27.50	22
Southgate Mainline (H-650 Pipeline)	66 to 80	27.52	27.52	16
Southgate Mainline (H-650 Pipeline)	30 to 50	27.52	27.52	10
Southgate Mainline (H-650 Pipeline)	30 to 50	28.82	28.85	142
Southgate Mainline (H-650 Pipeline)	30 to 50	28.95	28.96	63
Southgate Mainline (H-650 Pipeline)	30 to 50	29.28 RR	29.28 RR	39
Southgate Mainline (H-650 Pipeline)	30 to 50	29.34 RR	29.36 RR	124
Southgate Mainline (H-650 Pipeline)	30 to 50	29.41 RR	29.43 RR	133
Southgate Mainline (H-650 Pipeline)	30 to 50	29.52 RR	29.53 RR	23
Southgate Mainline (H-650 Pipeline)	50 to 66	29.53 RR	29.53 RR	9
Southgate Mainline (H-650 Pipeline)	50 to 66	30.05	30.06	31
Southgate Mainline (H-650 Pipeline)	30 to 50	31.06	31.06	22
Southgate Mainline (H-650 Pipeline)	30 to 50	31.06	31.07	36
Southgate Mainline (H-650 Pipeline)	30 to 50	31.09	31.12	139
Southgate Mainline (H-650 Pipeline)	30 to 50	31.28	31.29	68
Southgate Mainline (H-650 Pipeline)	30 to 50	31.30	31.31	57
Southgate Mainline (H-650 Pipeline)	30 to 50	31.31	31.32	31
Southgate Mainline (H-650 Pipeline)	30 to 50	31.67	31.68	97
Southgate Mainline (H-650 Pipeline)	30 to 50	31.70	31.70	34
Southgate Mainline (H-650 Pipeline)	30 to 50	31.72	31.73	66
Southgate Mainline (H-650 Pipeline)	30 to 50	31.86	31.87	51
Southgate Mainline (H-650 Pipeline)	30 to 50	31.87	31.88	40
Southgate Mainline (H-650 Pipeline)	66 to 80	31.88	31.89	54

Appendix C.3-1

Potential Areas of Steep Slopes Crossed by the MVP Southgate Project

Route	Steep Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	30 to 50	31.89	31.89	10
Southgate Mainline (H-650 Pipeline)	66 to 80	31.93	31.93	29
Southgate Mainline (H-650 Pipeline)	50 to 66	31.93	31.94	32
Southgate Mainline (H-650 Pipeline)	50 to 66	32.02	32.03	28
Southgate Mainline (H-650 Pipeline)	30 to 50	32.04	32.04	40
Southgate Mainline (H-650 Pipeline)	30 to 50	32.27	32.27	31
Southgate Mainline (H-650 Pipeline)	30 to 50	32.46	32.47	60
Southgate Mainline (H-650 Pipeline)	30 to 50	32.47	32.48	26
Southgate Mainline (H-650 Pipeline)	30 to 50	32.50	32.52	80
Southgate Mainline (H-650 Pipeline)	30 to 50	32.55	32.56	40
Southgate Mainline (H-650 Pipeline)	50 to 66	32.56	32.57	20
Southgate Mainline (H-650 Pipeline)	30 to 50	32.57	32.57	36
Southgate Mainline (H-650 Pipeline)	30 to 50	32.59	32.60	92
Southgate Mainline (H-650 Pipeline)	30 to 50	32.66	32.67	26
Southgate Mainline (H-650 Pipeline)	30 to 50	32.75	32.76	25
Southgate Mainline (H-650 Pipeline)	30 to 50	33.12	33.13	40
Southgate Mainline (H-650 Pipeline)	66 to 80	33.13	33.14	75
Southgate Mainline (H-650 Pipeline)	30 to 50	33.14	33.15	21
Southgate Mainline (H-650 Pipeline)	30 to 50	33.16	33.17	34
Southgate Mainline (H-650 Pipeline)	30 to 50	33.25	33.26	23
Southgate Mainline (H-650 Pipeline)	30 to 50	33.27	33.28	30
Southgate Mainline (H-650 Pipeline)	30 to 50	33.30	33.32	64
Southgate Mainline (H-650 Pipeline)	30 to 50	33.33	33.34	89
Southgate Mainline (H-650 Pipeline)	30 to 50	33.38	33.39	47
Southgate Mainline (H-650 Pipeline)	30 to 50	33.68	33.69	56
Southgate Mainline (H-650 Pipeline)	30 to 50	33.70	33.70	41
Southgate Mainline (H-650 Pipeline)	50 to 66	33.73	33.73	23
Southgate Mainline (H-650 Pipeline)	50 to 66	33.74	33.75	47
Southgate Mainline (H-650 Pipeline)	30 to 50	33.75	33.77	103
Southgate Mainline (H-650 Pipeline)	30 to 50	33.79	33.80	28
Southgate Mainline (H-650 Pipeline)	30 to 50	33.81	33.82	42
Southgate Mainline (H-650 Pipeline)	30 to 50	33.82	33.83	47
Southgate Mainline (H-650 Pipeline)	30 to 50	33.88	33.89	52
Southgate Mainline (H-650 Pipeline)	30 to 50	33.92	33.94	94
Southgate Mainline (H-650 Pipeline)	30 to 50	33.99	34.00	23
Southgate Mainline (H-650 Pipeline)	30 to 50	34.15	34.16	23
Southgate Mainline (H-650 Pipeline)	50 to 66	34.21 RR	34.21 RR	4
Southgate Mainline (H-650 Pipeline)	> 80+	34.21 RR	34.22 RR	8

Appendix C.3-1

Potential Areas of Steep Slopes Crossed by the MVP Southgate Project

Route	Steep Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	50 to 66	34.22 RR	34.22 RR	4
Southgate Mainline (H-650 Pipeline)	30 to 50	34.22 RR	34.23 RR	60
Southgate Mainline (H-650 Pipeline)	30 to 50	34.29	34.30	42
Southgate Mainline (H-650 Pipeline)	50 to 66	34.30	34.31	42
Southgate Mainline (H-650 Pipeline)	30 to 50	34.51	34.52	21
Southgate Mainline (H-650 Pipeline)	30 to 50	34.52	34.53	50
Southgate Mainline (H-650 Pipeline)	30 to 50	34.55	34.56	20
Southgate Mainline (H-650 Pipeline)	30 to 50	34.59	34.60	27
Southgate Mainline (H-650 Pipeline)	30 to 50	34.85	34.86	52
Southgate Mainline (H-650 Pipeline)	30 to 50	35.07	35.08	21
Southgate Mainline (H-650 Pipeline)	30 to 50	35.14	35.14	31
Southgate Mainline (H-650 Pipeline)	30 to 50	35.36	35.36	24
Southgate Mainline (H-650 Pipeline)	30 to 50	35.57	35.57	20
Southgate Mainline (H-650 Pipeline)	30 to 50	35.92	35.93	25
Southgate Mainline (H-650 Pipeline)	66 to 80	35.98	35.99	54
Southgate Mainline (H-650 Pipeline)	30 to 50	37.01	37.02	21
Southgate Mainline (H-650 Pipeline)	30 to 50	37.03	37.05	94
Southgate Mainline (H-650 Pipeline)	30 to 50	37.16	37.16	22
Southgate Mainline (H-650 Pipeline)	30 to 50	37.18	37.19	22
Southgate Mainline (H-650 Pipeline)	30 to 50	37.27	37.28	43
Southgate Mainline (H-650 Pipeline)	30 to 50	37.29	37.29	22
Southgate Mainline (H-650 Pipeline)	30 to 50	37.30	37.30	29
Southgate Mainline (H-650 Pipeline)	30 to 50	37.35	37.36	38
Southgate Mainline (H-650 Pipeline)	30 to 50	37.58	37.59	24
Southgate Mainline (H-650 Pipeline)	30 to 50	37.72	37.72	31
Southgate Mainline (H-650 Pipeline)	30 to 50	38.24	38.25	23
Southgate Mainline (H-650 Pipeline)	66 to 80	38.54	38.55	76
Southgate Mainline (H-650 Pipeline)	30 to 50	38.60	38.61	28
Southgate Mainline (H-650 Pipeline)	30 to 50	38.76	38.76	35
Southgate Mainline (H-650 Pipeline)	30 to 50	38.78	38.80	93
Southgate Mainline (H-650 Pipeline)	30 to 50	39.03	39.04	39
Southgate Mainline (H-650 Pipeline)	30 to 50	39.05	39.06	45
Southgate Mainline (H-650 Pipeline)	30 to 50	39.06	39.07	24
Southgate Mainline (H-650 Pipeline)	30 to 50	39.10	39.10	28
Southgate Mainline (H-650 Pipeline)	50 to 66	39.67	39.68	26
Southgate Mainline (H-650 Pipeline)	50 to 66	39.69	39.70	27
Southgate Mainline (H-650 Pipeline)	30 to 50	40.54	40.55	44
Southgate Mainline (H-650 Pipeline)	30 to 50	40.56	40.56	36

Appendix C.3-1

Potential Areas of Steep Slopes Crossed by the MVP Southgate Project

Route	Steep Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	66 to 80	40.57	40.57	24
Southgate Mainline (H-650 Pipeline)	30 to 50	40.64	40.64	25
Southgate Mainline (H-650 Pipeline)	30 to 50	40.74	40.74	23
Southgate Mainline (H-650 Pipeline)	30 to 50	40.75	40.75	41
Southgate Mainline (H-650 Pipeline)	30 to 50	40.88	40.89	40
Southgate Mainline (H-650 Pipeline)	30 to 50	41.11	41.11	39
Southgate Mainline (H-650 Pipeline)	30 to 50	41.56	41.57	23
Southgate Mainline (H-650 Pipeline)	30 to 50	41.57	41.58	25
Southgate Mainline (H-650 Pipeline)	50 to 66	41.67	41.67	20
Southgate Mainline (H-650 Pipeline)	30 to 50	41.67	41.68	32
Southgate Mainline (H-650 Pipeline)	30 to 50	42.25	42.26	44
Southgate Mainline (H-650 Pipeline)	30 to 50	43.69	43.69	28
Southgate Mainline (H-650 Pipeline)	30 to 50	43.70	43.71	31
Southgate Mainline (H-650 Pipeline)	30 to 50	43.81	43.82	23
Southgate Mainline (H-650 Pipeline)	30 to 50	43.93	43.93	36
Southgate Mainline (H-650 Pipeline)	50 to 66	43.98	43.99	53
Southgate Mainline (H-650 Pipeline)	30 to 50	44.02	44.03	32
Southgate Mainline (H-650 Pipeline)	50 to 66	44.03	44.03	24
Southgate Mainline (H-650 Pipeline)	30 to 50	44.03	44.03	9
Southgate Mainline (H-650 Pipeline)	50 to 66	44.06	44.06	20
Southgate Mainline (H-650 Pipeline)	30 to 50	44.14	44.14	26
Southgate Mainline (H-650 Pipeline)	30 to 50	44.15	44.19	169
Southgate Mainline (H-650 Pipeline)	30 to 50	44.56	44.57	22
Southgate Mainline (H-650 Pipeline)	30 to 50	45.72	45.73	45
Southgate Mainline (H-650 Pipeline)	30 to 50	45.83	45.85	134
Southgate Mainline (H-650 Pipeline)	30 to 50	46.01 RR	46.01 RR	22
Southgate Mainline (H-650 Pipeline)	30 to 50	46.02 RR	46.03 RR	56
Southgate Mainline (H-650 Pipeline)	30 to 50	46.03 RR	46.04 RR	47
Southgate Mainline (H-650 Pipeline)	30 to 50	46.08 RR	46.11 RR	131
Southgate Mainline (H-650 Pipeline)	30 to 50	46.20 RR	46.21 RR	24
Southgate Mainline (H-650 Pipeline)	30 to 50	46.22 RR	46.23 RR	33
Southgate Mainline (H-650 Pipeline)	30 to 50	46.48	46.49	37
Southgate Mainline (H-650 Pipeline)	50 to 66	46.50	46.50	39
Southgate Mainline (H-650 Pipeline)	30 to 50	46.53	46.54	29
Southgate Mainline (H-650 Pipeline)	30 to 50	46.89	46.91	78
Southgate Mainline (H-650 Pipeline)	50 to 66	47.01	47.02	26
Southgate Mainline (H-650 Pipeline)	30 to 50	47.35	47.36	27
Southgate Mainline (H-650 Pipeline)	30 to 50	47.37	47.39	142

Appendix C.3-1 Potential Areas of Steep Slopes Crossed by the MVP Southgate Project				
Route	**Steep Slope Group**	**Milepost Begin**	**Milepost End**	**Length of slope crossed (feet)**
Southgate Mainline (H-650 Pipeline)	30 to 50	47.42	47.44	125
Southgate Mainline (H-650 Pipeline)	50 to 66	47.44	47.45	39
Southgate Mainline (H-650 Pipeline)	30 to 50	47.45	47.46	36
Southgate Mainline (H-650 Pipeline)	30 to 50	47.46	47.47	50
Southgate Mainline (H-650 Pipeline)	30 to 50	47.54	47.56	107
Southgate Mainline (H-650 Pipeline)	30 to 50	47.57	47.57	31
Southgate Mainline (H-650 Pipeline)	30 to 50	47.58	47.59	83
Southgate Mainline (H-650 Pipeline)	30 to 50	47.60	47.61	55
Southgate Mainline (H-650 Pipeline)	30 to 50	47.61	47.62	26
Southgate Mainline (H-650 Pipeline)	30 to 50	47.65	47.66	33
Southgate Mainline (H-650 Pipeline)	30 to 50	47.66	47.66	23
Southgate Mainline (H-650 Pipeline)	30 to 50	47.67	47.67	23
Southgate Mainline (H-650 Pipeline)	30 to 50	47.67	47.68	26
Southgate Mainline (H-650 Pipeline)	30 to 50	47.76	47.77	58
Southgate Mainline (H-650 Pipeline)	30 to 50	47.78	47.79	55
Southgate Mainline (H-650 Pipeline)	30 to 50	50.80 RR	50.81 RR	52
Southgate Mainline (H-650 Pipeline)	30 to 50	50.82 RR	50.83 RR	47
Southgate Mainline (H-650 Pipeline)	30 to 50	51.35 RR	51.36 RR	28
Southgate Mainline (H-650 Pipeline)	30 to 50	58.91	58.91	31
Southgate Mainline (H-650 Pipeline)	30 to 50	63.21 RR	63.21 RR	40
Southgate Mainline (H-650 Pipeline)	30 to 50	63.58	63.58	40
Southgate Mainline (H-650 Pipeline)	30 to 50	63.65	63.65	24
Southgate Mainline (H-650 Pipeline)	30 to 50	64.47	64.48	20
Southgate Mainline (H-650 Pipeline)	30 to 50	64.07 RR	64.08 RR	27
Southgate Mainline (H-650 Pipeline)	30 to 50	64.08 RR	64.08 RR	30
Southgate Mainline (H-650 Pipeline)	30 to 50	68.74	68.74	20
Southgate Mainline (H-650 Pipeline)	30 to 50	68.79	68.80	20
Southgate Mainline (H-650 Pipeline)	30 to 50	69.10	69.11	60
Southgate Mainline (H-650 Pipeline)	30 to 50	69.37	69.38	23
Southgate Mainline (H-650 Pipeline)	30 to 50	69.39	69.40	30
Southgate Mainline (H-650 Pipeline)	30 to 50	69.65 RR	69.65 RR	20
Southgate Mainline (H-650 Pipeline)	66 to 80	69.70 RR	69.71 RR	36
Southgate Mainline (H-650 Pipeline)	50 to 66	69.71 RR	69.72 RR	40
Southgate Mainline (H-650 Pipeline)	50 to 66	69.72 RR	69.72 RR	36
Southgate Mainline (H-650 Pipeline)	30 to 50	69.80 RR	69.81 RR	70
Southgate Mainline (H-650 Pipeline)	30 to 50	69.93 RR	69.94 RR	68
Southgate Mainline (H-650 Pipeline)	30 to 50	69.96 RR	69.97 RR	20
Southgate Mainline (H-650 Pipeline)	30 to 50	70.02	70.03	21

Appendix C.3-1

Potential Areas of Steep Slopes Crossed by the MVP Southgate Project

Route	Steep Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	30 to 50	70.50	70.51	23
Southgate Mainline (H-650 Pipeline)	30 to 50	70.61	70.62	33
Southgate Mainline (H-650 Pipeline)	50 to 66	70.75	70.76	47
Southgate Mainline (H-650 Pipeline)	30 to 50	70.76	70.77	21
Southgate Mainline (H-650 Pipeline)	30 to 50	71.13	71.13	20
Southgate Mainline (H-650 Pipeline)	30 to 50	71.19	71.20	28
Southgate Mainline (H-650 Pipeline)	30 to 50	71.21	71.22	78
Southgate Mainline (H-650 Pipeline)	30 to 50	71.25	71.26	54
Southgate Mainline (H-650 Pipeline)	30 to 50	71.31	71.32	28
Southgate Mainline (H-650 Pipeline)	30 to 50	71.49	71.49	33
Southgate Mainline (H-650 Pipeline)	30 to 50	71.62	71.63	37
Southgate Mainline (H-650 Pipeline)	30 to 50	71.82	71.83	70
Southgate Mainline (H-650 Pipeline)	30 to 50	71.90	71.92	103
Southgate Mainline (H-650 Pipeline)	30 to 50	72.19	72.20	24
Southgate Mainline (H-650 Pipeline)	30 to 50	72.71	72.72	30
Southgate Mainline (H-650 Pipeline)	50 to 66	72.72	72.72	40
Southgate Mainline (H-650 Pipeline)	30 to 50	72.72	72.73	25
Southgate Mainline (H-650 Pipeline)	30 to 50	72.79 RR	72.79 RR	29
Southgate Mainline (H-650 Pipeline)	30 to 50	72.80 RR	72.80 RR	21
Southgate Mainline (H-650 Pipeline)	50 to 66	72.91 RR	72.92 RR	25

Methodology:

1. Steep Slope percentages are grouped as follows:
   30-50%
   50-66%
   66-80%
   80%+
2. Only crossings that are longer than 20 feet are considered. Some locations may seem smaller but they are still considered if they are a continuation of another slope group.
3. For crossings that have multiple variations of slope group within small lengths, an average slope group is assigned.
4. The length of slope crossed might be slightly shorter than actual mile post lengths because of small stretches of data that are not in slope groups.

Notes: Results based on desktop analysis. Data to be verified in field.

Appendix C.3-2

Potential Areas of Side Slopes Crossed by the MVP Southgate Project H-650

Route	Side Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	18 to 25	3.82 RR	3.83 RR	56
Southgate Mainline (H-650 Pipeline)	14 to 18	3.90 RR	3.91 RR	27
Southgate Mainline (H-650 Pipeline)	18 to 25	3.91 RR	3.92 RR	86
Southgate Mainline (H-650 Pipeline)	25+	3.92 RR	3.94 RR	111
Southgate Mainline (H-650 Pipeline)	18 to 25	3.94 RR	3.96 RR	59
Southgate Mainline (H-650 Pipeline)	14 to 18	8.63	8.71	298
Southgate Mainline (H-650 Pipeline)	14 to 18	9	9.02	70
Southgate Mainline (H-650 Pipeline)	14 to 18	9.97	10.03	283
Southgate Mainline (H-650 Pipeline)	14 to 18	13.68 RR	13.69 RR	86
Southgate Mainline (H-650 Pipeline)	18 to 25	13.78 RR	13.80 RR	60
Southgate Mainline (H-650 Pipeline)	25+	13.80 RR	13.81 RR	66
Southgate Mainline (H-650 Pipeline)	14 to 18	15.51	15.58	244
Southgate Mainline (H-650 Pipeline)	18 to 25	16.01	16.02	40
Southgate Mainline (H-650 Pipeline)	14 to 18	16.55	16.58	98
Southgate Mainline (H-650 Pipeline)	14 to 18	16.59	16.6	43
Southgate Mainline (H-650 Pipeline)	18 to 25	17.49 RR	17.49 RR	37
Southgate Mainline (H-650 Pipeline)	14 to 18	17.49 RR	17.53 RR	178
Southgate Mainline (H-650 Pipeline)	18 to 25	17.53 RR	17.54 RR	46
Southgate Mainline (H-650 Pipeline)	14 to 18	17.54 RR	17.55 RR	46
Southgate Mainline (H-650 Pipeline)	18 to 25	17.98	18.01	157
Southgate Mainline (H-650 Pipeline)	18 to 25	18.04	18.05	52
Southgate Mainline (H-650 Pipeline)	14 to 18	19.49	19.5	62
Southgate Mainline (H-650 Pipeline)	18 to 25	19.54	19.6	233
Southgate Mainline (H-650 Pipeline)	14 to 18	19.63	19.64	40
Southgate Mainline (H-650 Pipeline)	18 to 25	21.58	21.6	87
Southgate Mainline (H-650 Pipeline)	18 to 25	21.74	21.78	155
Southgate Mainline (H-650 Pipeline)	14 to 18	22	22.04	134
Southgate Mainline (H-650 Pipeline)	14 to 18	22.36	22.38	87
Southgate Mainline (H-650 Pipeline)	25+	22.72 RR	22.76 RR	186
Southgate Mainline (H-650 Pipeline)	18 to 25	22.76 RR	22.78 RR	97
Southgate Mainline (H-650 Pipeline)	14 to 18	22.78 RR	22.79 RR	53
Southgate Mainline (H-650 Pipeline)	18 to 25	22.98 RR	22.99 RR	63
Southgate Mainline (H-650 Pipeline)	18 to 25	25.15	25.22	216
Southgate Mainline (H-650 Pipeline)	14 to 18	28.71	28.74	70
Southgate Mainline (H-650 Pipeline)	14 to 18	29.01	29.06	177
Southgate Mainline (H-650 Pipeline)	25+	29.1	29.14	100
Southgate Mainline (H-650 Pipeline)	14 to 18	29.29 RR	29.30 RR	60
Southgate Mainline (H-650 Pipeline)	18 to 25	31.34	31.37	86

Appendix C.3-2

Potential Areas of Side Slopes Crossed by the MVP Southgate Project H-650

Route	Side Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	18 to 25	31.67	31.69	56
Southgate Mainline (H-650 Pipeline)	18 to 25	31.88	31.95	236
Southgate Mainline (H-650 Pipeline)	25+	32.18	32.2	46
Southgate Mainline (H-650 Pipeline)	18 to 25	32.55	32.59	75
Southgate Mainline (H-650 Pipeline)	14 to 18	32.78	32.89	355
Southgate Mainline (H-650 Pipeline)	18 to 25	33.28	33.3	89
Southgate Mainline (H-650 Pipeline)	18 to 25	33.35	33.41	217
Southgate Mainline (H-650 Pipeline)	14 to 18	33.45	33.47	47
Southgate Mainline (H-650 Pipeline)	18 to 25	33.64	33.67	146
Southgate Mainline (H-650 Pipeline)	18 to 25	33.7	33.73	104
Southgate Mainline (H-650 Pipeline)	18 to 25	33.88	33.92	110
Southgate Mainline (H-650 Pipeline)	18 to 25	33.95	34.01	280
Southgate Mainline (H-650 Pipeline)	18 to 25	34.33	34.35	93
Southgate Mainline (H-650 Pipeline)	18 to 25	34.56	34.6	171
Southgate Mainline (H-650 Pipeline)	18 to 25	35.03	35.11	283
Southgate Mainline (H-650 Pipeline)	14 to 18	35.21	35.26	160
Southgate Mainline (H-650 Pipeline)	18 to 25	35.3	35.34	190
Southgate Mainline (H-650 Pipeline)	14 to 18	35.52	35.53	48
Southgate Mainline (H-650 Pipeline)	18 to 25	35.55	35.56	56
Southgate Mainline (H-650 Pipeline)	18 to 25	35.93	35.95	57
Southgate Mainline (H-650 Pipeline)	14 to 18	36.18	36.22	85
Southgate Mainline (H-650 Pipeline)	18 to 25	36.67	36.74	252
Southgate Mainline (H-650 Pipeline)	18 to 25	36.9	36.93	135
Southgate Mainline (H-650 Pipeline)	14 to 18	36.96	36.98	93
Southgate Mainline (H-650 Pipeline)	14 to 18	37.05	37.09	158
Southgate Mainline (H-650 Pipeline)	14 to 18	37.21	37.22	40
Southgate Mainline (H-650 Pipeline)	18 to 25	37.53	37.55	74
Southgate Mainline (H-650 Pipeline)	14 to 18	37.63	37.66	122
Southgate Mainline (H-650 Pipeline)	14 to 18	37.78	37.81	122
Southgate Mainline (H-650 Pipeline)	14 to 18	37.84	37.86	74
Southgate Mainline (H-650 Pipeline)	14 to 18	37.9	37.92	77
Southgate Mainline (H-650 Pipeline)	14 to 18	38.02	38.05	117
Southgate Mainline (H-650 Pipeline)	18 to 25	39.05	39.09	136
Southgate Mainline (H-650 Pipeline)	14 to 18	39.37	39.45	291
Southgate Mainline (H-650 Pipeline)	14 to 18	39.48	39.49	71
Southgate Mainline (H-650 Pipeline)	14 to 18	40.40 RR	40.41 RR	51
Southgate Mainline (H-650 Pipeline)	18 to 25	40.41 RR	40.43 RR	65
Southgate Mainline (H-650 Pipeline)	18 to 25	40.49 RR	40.50 RR	61

Appendix C.3-2 Potential Areas of Side Slopes Crossed by the MVP Southgate Project H-650				
Route	**Side Slope Group**	**Milepost Begin**	**Milepost End**	**Length of slope crossed (feet)**
Southgate Mainline (H-650 Pipeline)	14 to 18	40.64	40.66	63
Southgate Mainline (H-650 Pipeline)	18 to 25	41.42	41.5	423
Southgate Mainline (H-650 Pipeline)	18 to 25	41.58	41.59	78
Southgate Mainline (H-650 Pipeline)	18 to 25	41.69	41.77	384
Southgate Mainline (H-650 Pipeline)	18 to 25	41.97	41.99	85
Southgate Mainline (H-650 Pipeline)	18 to 25	42.13	42.16	99
Southgate Mainline (H-650 Pipeline)	18 to 25	42.35	42.42	309
Southgate Mainline (H-650 Pipeline)	14 to 18	42.46	42.48	113
Southgate Mainline (H-650 Pipeline)	18 to 25	42.84	42.85	41
Southgate Mainline (H-650 Pipeline)	18 to 25	43.8	43.82	48
Southgate Mainline (H-650 Pipeline)	25+	43.86	43.88	78
Southgate Mainline (H-650 Pipeline)	18 to 25	43.99	44.02	102
Southgate Mainline (H-650 Pipeline)	18 to 25	44.07	44.1	132
Southgate Mainline (H-650 Pipeline)	14 to 18	45.06	45.09	108
Southgate Mainline (H-650 Pipeline)	14 to 18	45.86	45.91	221
Southgate Mainline (H-650 Pipeline)	14 to 18	45.95	45.98	85
Southgate Mainline (H-650 Pipeline)	18 to 25	46.12 RR	46.13 RR	61
Southgate Mainline (H-650 Pipeline)	14 to 18	46.16 RR	46.17 RR	67
Southgate Mainline (H-650 Pipeline)	25+	47.47	47.5	131
Southgate Mainline (H-650 Pipeline)	14 to 18	47.99	48.02	97
Southgate Mainline (H-650 Pipeline)	18 to 25	49.64	49.68	173
Southgate Mainline (H-650 Pipeline)	18 to 25	49.75 RR	49.76 RR	42
Southgate Mainline (H-650 Pipeline)	14 to 18	50.12 RR	50.13 RR	42
Southgate Mainline (H-650 Pipeline)	18 to 25	50.74 RR	50.76 RR	90
Southgate Mainline (H-650 Pipeline)	14 to 18	50.78 RR	50.80 RR	56
Southgate Mainline (H-650 Pipeline)	25+	50.80 RR	50.81 RR	61
Southgate Mainline (H-650 Pipeline)	18 to 25	50.81 RR	50.83 RR	99
Southgate Mainline (H-650 Pipeline)	18 to 25	52.04 RR	52.08 RR	224
Southgate Mainline (H-650 Pipeline)	18 to 25	52.19	52.24	213
Southgate Mainline (H-650 Pipeline)	14 to 18	54.36	54.38	64
Southgate Mainline (H-650 Pipeline)	18 to 25	54.47	54.49	75
Southgate Mainline (H-650 Pipeline)	25+	54.51	54.54	131
Southgate Mainline (H-650 Pipeline)	18 to 25	63.5	63.52	130
Southgate Mainline (H-650 Pipeline)	14 to 18	65.10 RR	65.12 RR	93
Southgate Mainline (H-650 Pipeline)	18 to 25	65.12 RR	65.12 RR	31
Southgate Mainline (H-650 Pipeline)	14 to 18	65.12 RR	65.13 RR	41
Southgate Mainline (H-650 Pipeline)	14 to 18	65.18 RR	65.19 RR	58
Southgate Mainline (H-650 Pipeline)	14 to 18	66.97 RR	66.98 RR	69

Appendix C.3-2

Potential Areas of Side Slopes Crossed by the MVP Southgate Project H-650

Route	Side Slope Group	Milepost Begin	Milepost End	Length of slope crossed (feet)
Southgate Mainline (H-650 Pipeline)	18 to 25	68.28	68.31	149
Southgate Mainline (H-650 Pipeline)	14 to 18	68.47	68.48	41
Southgate Mainline (H-650 Pipeline)	14 to 18	68.48	68.49	48
Southgate Mainline (H-650 Pipeline)	14 to 18	68.55	68.56	51
Southgate Mainline (H-650 Pipeline)	14 to 18	68.67	68.68	44
Southgate Mainline (H-650 Pipeline)	18 to 25	69.08	69.11	124
Southgate Mainline (H-650 Pipeline)	18 to 25	69.24	69.25	48
Southgate Mainline (H-650 Pipeline)	18 to 25	69.33	69.45	445
Southgate Mainline (H-650 Pipeline)	14 to 18	69.56 RR	69.58 RR	65
Southgate Mainline (H-650 Pipeline)	18 to 25	69.58 RR	69.58 RR	40
Southgate Mainline (H-650 Pipeline)	25+	69.70 RR	69.72 RR	112
Southgate Mainline (H-650 Pipeline)	25+	69.80 RR	69.82 RR	109
Southgate Mainline (H-650 Pipeline)	18 to 25	69.83 RR	69.84 RR	40
Southgate Mainline (H-650 Pipeline)	14 to 18	69.84 RR	69.85 RR	48
Southgate Mainline (H-650 Pipeline)	14 to 18	69.85 RR	69.86 RR	36
Southgate Mainline (H-650 Pipeline)	14 to 18	70.58	70.59	47
Southgate Mainline (H-650 Pipeline)	18 to 25	70.6	70.63	96
Southgate Mainline (H-650 Pipeline)	18 to 25	71.09	71.27	616
Southgate Mainline (H-650 Pipeline)	14 to 18	71.78	71.8	78
Southgate Mainline (H-650 Pipeline)	18 to 25	71.85	71.88	144
Southgate Mainline (H-650 Pipeline)	18 to 25	71.98 RR	71.99 RR	72
Southgate Mainline (H-650 Pipeline)	14 to 18	71.99 RR	72.00 RR	50
Southgate Mainline (H-650 Pipeline)	18 to 25	72.01 RR	72.03 RR	138
Southgate Mainline (H-650 Pipeline)	18 to 25	72.16	72.21	180
Southgate Mainline (H-650 Pipeline)	18 to 25	72.73 RR	72.74 RR	50
Southgate Mainline (H-650 Pipeline)	14 to 18	72.74 RR	72.75 RR	69
Southgate Mainline (H-650 Pipeline)	18 to 25	72.81 RR	72.82 RR	65
Southgate Mainline (H-650 Pipeline)	18 to 25	72.84 RR	72.86 RR	116
Southgate Mainline (H-650 Pipeline)	25+	72.86 RR	72.87 RR	54

Methodology:

1. Side Slope percentages are grouped as follows:
   14-18%
   18-25%
   25%+
2. Only crossings that are longer than 40 feet are considered. Some locations may seem smaller but they are still considered if they are a continuation of another slope group.
3. For crossings that have multiple variations of slope group within small lengths, an average slope group is assigned.
4. The length of slope crossed might be slightly shorter than actual mile post lengths because of small stretches of data that are not in slope groups.

Notes: Results based on desktop analysis. Data to be verified in field.

APPENDIX C.4

Areas of Landslide Concern

Appendix C.4 Areas of Landslide Concern along the Southgate Project					
Line Name	**MP**	**Downslope Resource**	**Distance from Downslope Resource**	**Percent Slope**	**Assigned Mitigation/Stabilization Control Measures**
H-650	5.11	Wetland	0	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	7.99	Stream	9	49	Trench Breaker Daylight Drain
H-650	8.59	Wetland	0	47	Trench Breaker Daylight Drain
H-650	9.97	Wetland	10	58	Trench Breaker Daylight Drain
H-650	9.99	Wetland	94.7	17.6 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	10.09	Wetland	10	34	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	12.79	Stream	57	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	13.48RR	Wetland	0	49	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	17.3	Stream	0	47	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	17.7RR	Wetland	12	49	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	17.75RR	Stream	78	19.4 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	17.81 RR	Stream	5	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	18.03	Wetland	27	36	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	20.61	Stream	96	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	21.55	Wetland	1100	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	22.7RR	Stream	1500	17.6 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	22.85RR	Stream	792	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain

Appendix C.4 Areas of Landslide Concern along the Southgate Project					
Line Name	**MP**	**Downslope Resource**	**Distance from Downslope Resource**	**Percent Slope**	**Assigned Mitigation/Stabilization Control Measures**
H-650	23.21RR	Stream	160	34	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	23.21	Stream	160	34	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	25	Stream	675	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	28.81	Stream	29	38	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	29.37RR	Stream	400	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	29.4RR	Stream	334	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	31.08	Stream	0	36	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	31.1	Stream	5	38	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	31.1	Stream	14.5	38	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	31.3	Stream	5	N/A	Trench Breaker Daylight Drain
H-650	31.3	Stream	20	42	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	31.7	Stream	175	17.6 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	32.5	Stream	68.2	34	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	32.6	Wetland	39	36	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	32.8	Stream	290.6	19.4 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	33.15	Wetland	18.5	61	Trench Breaker Daylight Drain
H-650	33.3	Stream	36.5	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain

Appendix C.4

Areas of Landslide Concern along the Southgate Project

Line Name	MP	Downslope Resource	Distance from Downslope Resource	Percent Slope	Assigned Mitigation/Stabilization Control Measures
H-650	33.35	Stream	50	60	Trench Breaker Daylight Drain
H-650	33.35	Wetland	234	21 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	33.68	Wetland	212	19.4 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	33.69	Wetland	0	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	33.7	Wetland	5	42	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	33.75	Stream	16.7	47	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	33.82	Stream	600	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	33.9	Stream	291	21 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	34.05	Stream	336	23 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	34.2	Stream	16	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	34.5	Stream	83	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	34.5	Stream	45	32	
H-650	35.05	Stream	122	17.6 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	35.3	Stream	149	17.6 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	36	Stream	0	51	Trench Breaker Daylight Drain
H-650	36.7	Stream	88	23 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	38.55	Wetland	10	76	Steep Slope Revetment, Trench Breaker Daylight Drain
H-650	38.8	Wetland	16	42	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	39.08	Stream	56	23 - Side Slope	Transverse Trench Drain, Cutoff Drain

Appendix C.4 Areas of Landslide Concern along the Southgate Project					
Line Name	**MP**	**Downslope Resource**	**Distance from Downslope Resource**	**Percent Slope**	**Assigned Mitigation/Stabilization Control Measures**
H-650	40.58	Stream	0	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	40.58	Stream	0	34	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	40.75	Stream	34	40	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	41.1	Wetland	0	38	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	41.54	Stream	375	19.4 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	41.69	Stream	45	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	42.25	Stream	16	34	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	42.37	Home	150	17.6 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	44.1	Stream	148	21 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	44.15	Stream	81	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	45.7	Stream	72.8	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	45.88	Stream	89	51	Trench Breaker Daylight Drain
H-650	46.01RR	Stream	29	18	Trench Breaker Daylight Drain
H-650	46.1RR	Stream	201	21 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	47.03	Wetland	0	36	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	47.4	Stream	45	32	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	47.45	Stream	183	21 - Side Slope	Transverse Trench Drain, Cutoff Drain

Appendix C.4

Areas of Landslide Concern along the Southgate Project

Line Name	MP	Downslope Resource	Distance from Downslope Resource	Percent Slope	Assigned Mitigation/Stabilization Control Measures
H-650	47.6	Stream	10	38	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	49.75	Home	411	21 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	69.4	Stream	87.9	23 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	69.7RR	Stream	61	49	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	69.85RR	Stream	260	21 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	70.6	Stream	360	19.4 - Side Slope	Transverse Trench Drain, Cutoff Drain
H-650	70.75	Stream	122	49	Trench Breaker Daylight Drain
H-650	71.2	River	186	27	Transverse Trench Drain, Cutoff Drain
H-650	71.8	Stream	20	36	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	71.9	River	326	38	Trench Breaker Daylight Drain, Trench Breaker Pass-through Drain
H-650	72.72	River	52.4	47	Trench Breaker Daylight Drain
H-650	72.85RR	Stream	50	19.4 - Side Slope	Transverse Trench Drain, Cutoff Drain

APPENDIX C.5

Areas of Shallow Bedrock That May Require Blasting Along the Southgate Project

Appendix C.5-1

Areas of Shallow Bedrock That May Require Blasting Along the Southgate Project Pipeline

Pipeline	Start MP	End MP	Approximate Bedrock Depth (inches)	Formation Age	Primary Bedrock Rock Type	Crossing Length (miles)
H-650	21.6	21.8	18.1	Proterozoic - Paleozoic	mylonite	0.2
H-650	22.2	22.3	18.1	Proterozoic - Paleozoic	mylonite	0.05
H-650	22.6 RR	22.9 RR	18.1	Upper Triassic	sandstone	0.33
H-650	23.0 RR	23.1 RR	29.1	Upper Triassic	sandstone	0.08
H-650	24.3	24.4	18.1	Upper Triassic	sandstone	0.09
H-650	24.6	24.8	29.1	Triassic	sandstone	0.23
H-650	24.9	25	18.1	Triassic	sandstone	0.06
H-650	25.5	25.7	18.1	Triassic	sandstone	0.22
H-650	32.5	32.6	15	Cambrian/Late Proterozoic	biotite gneiss	0.14
H-650	33.7	33.8	25.2	Cambrian/Late Proterozoic	biotite gneiss	0.05
H-650	33.8	33.9	25.2	Cambrian/Late Proterozoic	biotite gneiss	0.06
H-650	34.5	34.5	15	Cambrian/Late Proterozoic	felsic gneiss	0.07
H-650	38.8	39.1	15	Cambrian/Late Proterozoic	biotite gneiss	0.22
H-650	39.2	39.3	15	Cambrian/Late Proterozoic	biotite gneiss	0.08
H-650	39.3	39.3	25.2	Cambrian/Late Proterozoic	biotite gneiss	0.06
H-650	39.3	39.4	25.2	Cambrian/Late Proterozoic	felsic gneiss	0.05
H-650	40.3 RR	40.5	15	Cambrian/Late Proterozoic	felsic gneiss	0.21
H-650	40.5	40.7	15	Cambrian/Late Proterozoic	felsic gneiss	0.19
H-650	40.7	40.8	15	Cambrian/Late Proterozoic	felsic gneiss	0.12
H-650	41.2	41.3	15	Cambrian/Late Proterozoic	felsic gneiss	0.1
H-650	41.3	41.3	15	Cambrian/Late Proterozoic	biotite gneiss	0.04
H-650	42.5	42.6	15	Cambrian/Late Proterozoic	biotite gneiss	0.14
H-650	42.9	42.9	15	Cambrian/Late Proterozoic	biotite gneiss	0.05
H-650	43.8	44.2	15	Cambrian/Late Proterozoic	biotite gneiss	0.46
H-650	45.6	46.3 RR	15	Cambrian/Late Proterozoic	biotite gneiss	0.73
H-650	46.3 RR	46.5	15	Permian/Pennsylvanian	granite	0.22
H-650	47	47.6	15	Permian/Pennsylvanian	granite	0.55
H-650	47.6	47.7	15	Cambrian/Late Proterozoic	biotite gneiss	0.17
H-650	53.7	53.8	29.9	Cambrian/Late Proterozoic	mafic metavolcanic rock	0.02
H-650	67.6	67.7	29.9	Cambrian/Late Proterozoic	metamorphic rock	0.07

Appendix C.5-1

Areas of Shallow Bedrock That May Require Blasting Along the Southgate Project Pipeline

Pipeline	Start MP	End MP	Approximate Bedrock Depth (inches)	Formation Age	Primary Bedrock Rock Type	Crossing Length (miles)
H-650	67.9	68	29.9	Cambrian/Late Proterozoic	metamorphic rock	0.04
H-650	68.1	68.1	29.9	Cambrian/Late Proterozoic	metamorphic rock	0.06
H-650	68.9	68.9	29.9	Cambrian/Late Proterozoic	metamorphic rock	0.04
H-650	69.7 RR	69.7 RR	29.9	Cambrian/Late Proterozoic	mafic metavolcanic rock	0.07
H-650	69.9 RR	69.9 RR	29.9	Cambrian/Late Proterozoic	mafic metavolcanic rock	0
H-650	71	71	29.9	Cambrian/Late Proterozoic	mafic metavolcanic rock	0.06
H-650	72.6	72.6	29.9	Cambrian/Late Proterozoic	mafic metavolcanic rock	0.04
H-650	72.7	72.7	29.9	Cambrian/Late Proterozoic	mafic metavolcanic rock	0
H-650	72.7	72.8 RR	29.9	Cambrian/Late Proterozoic	mafic metavolcanic rock	0.17
H-650	72.8 RR	72.8 RR	29.9	Paleozoic/Late Proterozoic	Metagabbro rock	0
					Total	**5.54**

Notes:
Sums may not equal addends due to rounding. Addends consist of three decimal digits.

Appendix C.5-2

Areas of Potential FAE for Right of Way Grade and Pipeline Trench Excavation

From Milepost	To Milepost	Need for FAE			FAE Potential
		Slope	Depth to Bedrock	Rock Type	
0	0.95	X			Low
1.2	1.85			X	Low
17.28	33.89	X	X	X	High
34.5	48.23	X	X	X	High
49.29	68.05	X	X	X	High
70.94	72.81 RR	X			Low
Lambert Interconnect and Main Valve		X	X		Low
LN 3600 Interconnect		X	X		Low
T-15 Dan River Interconnect					None
T-21 Haw River Interconnect					None
Mainline Valves		Included within Mainline FAE Potential			

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

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

(4) "High" - FAE will be needed within these sections to achieve grade. FAE will not be continuous.

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

Appendix C.5-3

Area of Potential FAE for Waterbody Crossings

State/County	Milepost	Waterbody Name	Need for FAE: Slope	Need for FAE: Depth to Bedrock	Need for FAE: Rock Type	FAE Potential	Projected Depth to Bedrock (Inches)
Virginia							
Pittsylvania	23.0RR	Tributary to Trotters Creek		X	X	High	24 to 31
	23.2RR	Trotters Creek	X	X	X	High	16 to 20
	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	Tributary to Wolf Island Creek		X	X	High	10 to 20
	40.5RR	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
Alamance	68.1	Tributary to Boyds Creek	X	X	X	Low	>80
	68.9	Tributary to Haw River	X	X	X	Low	>80
	71	Tributary to Haw River	X	X	X	Low	>80
	72.6	Tributary to Haw River	X	X	X	Low	>80

APPENDIX D

Soil Types Crossed by the Southgate Project

Appendix D

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	0.08	446	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
9B	Creedmoor fine sandy loam, 2 to 7 percent slopes	0.08	0.1	58	Yes	3	0.2	Predominantly Non-Hydric	Moderate	>60	No	No	Moderately well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	0.1	0.17	374	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	1,609	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 RR	0.13	802	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	0.13	0.3	928	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
8A	Chenneby-Toccoa complex, 0 to 2 percent slopes, frequently flooded	0.3	0.4	495	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
9C	Creedmoor fine sandy loam, 7 to 15 percent slopes	0.4	0.45	251	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	444	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	412	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	132	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	732	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	616	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	232	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	691	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	468	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	1.25 RR	541	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
9C	Creedmoor fine sandy loam, 7 to 15 percent slopes	1.25 RR	1.35 RR	490	Yes	3	0.2	Predominantly Non-Hydric	Low	>60	No	No	Moderately well drained
7A	Chenneby loam, 0 to 2 percent slopes, occasionally flooded	1.35 RR	1.86	2,872	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	1,589	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	152	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	3,536	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained

Appendix D

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	2.95	3.16	1,076	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	129	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	585	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
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	3.41	3.64	1,182	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	3.89 RR	1,337	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	3.89 RR	4.15	1,440	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	862	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	1,958	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	69	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	2,073	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	910	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
1C	Appling sandy loam, 7 to 15 percent slopes	5.64	5.7	306	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	5.7	6.03	1,747	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	284	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	272	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	590	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
39	Udorthents, loamy	6.25	6.32	366	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	1,347	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	104	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	814	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	617	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	486	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	218	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	523	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	835	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	183	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	213	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	261	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	7.5	636	Yes	5	0.19	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
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	7.5	7.55	303	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	276	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	563	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	7.71	7.78	350	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	334	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	657	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	279	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	516	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	8.2	457	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	8.2	8.33	644	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	715	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	8.5	190	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	8.5	8.53	149	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	292	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	358	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	586	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	421	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	166	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	265	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	644	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	207	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	180	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	1,017	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	318	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	229	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	289	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	299	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	440	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	807	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	371	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	314	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	89	No	6	0.27	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
21D	Madison fine sandy loam, 15 to 25 percent slopes	9.91	10.02	598	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	167	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	10.05	10.12	385	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	757	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	290	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	2,113	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	1,105	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	1,711	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	933	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	589	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	589	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	11.8	742	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	11.8	11.86	351	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	503	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	388	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	485	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	1,159	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	156	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	620	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	1,381	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	12.8	257	No	5	0.38	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	12.8	12.86	286	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	1,045	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
17B	Hiwassee loam, 2 to 7 percent slopes	13.05	13.21	810	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 RR	1,106	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 RR	13.47 RR	276	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 RR	13.51 RR	207	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	13.51 RR	13.54 RR	186	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	13.54 RR	13.6 RR	296	Yes	3	0.37	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
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	13.6 RR	13.73 RR	700	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	13.73 RR	13.9 RR	901	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	13.9 RR	13.99 RR	465	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	13.99 RR	14.04 RR	289	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	14.04 RR	14.14 RR	481	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	14.14 RR	14.22 RR	464	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	14.22 RR	14.35 RR	688	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	14.35 RR	14.39 RR	185	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	14.39 RR	14.42 RR	175	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
11C3	Cullen clay loam, 7 to 15 percent slopes, severely eroded	14.42 RR	14.51 RR	481	No	6	0.27	Non-Hydric	Moderate	>60	No	No	Well drained
5B3	Cecil sandy clay loam, 2 to 7 percent slopes, severely eroded	14.51 RR	14.63 RR	635	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	14.63 RR	14.69 RR	293	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
11B3	Cullen clay loam, 2 to 7 percent slopes, severely eroded	14.69 RR	14.73 RR	212	No	6	0.27	Non-Hydric	High	>60	No	No	Well drained
4C	Cecil sandy loam, 7 to 15 percent slopes	14.73 RR	14.69	167	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	169	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	302	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	847	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	2720	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	15.45	15.49	178	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	15.49	15.88	2049	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	15.88	15.95	391	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	381	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	219	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	821	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	1,388	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained

Appendix D

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	16.48	16.98	2,601	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	16.98	17.25	1439	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	17.25	17.32	390	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	17.32	17.4	397	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	17.4	17.65 RR	1324	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
W	Water	17.65 RR	17.67 RR	120	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	17.67 RR	17.82 RR	788	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	17.82 RR	17.85 RR	187	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	17.85 RR	17.89 RR	200	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	17.89 RR	17.95 RR	287	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	17.95 RR	18.01	686	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	18.01	18.4	2095	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	18.4	18.45	228	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	18.45	18.82	1990	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	294	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	585	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	340	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	327	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	519	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	19.3	442	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
4B	Clifford sandy loam, 2 to 7 percent slopes	19.3	19.35	268	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	1259	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	295	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	174	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	480	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	656	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	496	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	142	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	135	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained

Appendix D

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	20.04	20.09	251	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	521	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	735	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	448	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	288	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	297	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	294	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	429	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	291	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	200	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	1345	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	21	21.05	250	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	502	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	703	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	302	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	21.34	21.48	753	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	404	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	866	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	214	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	1393	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	252	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	412	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
21D	Madison fine sandy loam, 15 to 25 percent slopes	22.15	22.2	267	Yes	3	0.37	Non-Hydric	Moderate	>60	No	No	Well drained
28C	Pinkston cobbly sandy loam, 7 to 15 percent slopes	22.2	22.25	284	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	140	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	184	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	98	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	22.33	22.47 RR	720	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
5C3	Cecil sandy clay loam, 7 to 15 percent slopes, severely eroded	22.47 RR	22.49 RR	100	Yes	5	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	22.49 RR	22.59 RR	555	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained

Appendix D

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
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	22.59 RR	22.66 RR	349	No	5	0.27	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29D	Pinkston-Mayodan complex, 15 to 35 percent slopes, very stony	22.66 RR	22.77 RR	603	No	5	0.28	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	22.77 RR	22.83 RR	302	No	5	0.27	Non-Hydric	Low	18.1	Yes	No	Excessively drained
29E	Pinkston-Mayodan complex, 35 to 50 percent slopes, very stony	22.83 RR	22.93 RR	500	No	5	0.28	Non-Hydric	Low	18.1	Yes	No	Excessively drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	22.93 RR	23 RR	398	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
34B	Sheva fine sandy loam, 2 to 7 percent slopes	23 RR	23.08 RR	432	No	3	0.35	Non-Hydric	Moderate	29.1	Yes	No	Moderately well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	23.08 RR	23.2 RR	589	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23D	Mayodan fine sandy loam, 15 to 25 percent slopes	23.2 RR	23.27 RR	397	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	23.27 RR	23.36 RR	470	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	23.36 RR	23.7 RR	1816	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	23.7 RR	23.78 RR	424	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
23C	Mayodan fine sandy loam, 7 to 15 percent slopes	23.78 RR	23.91 RR	677	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	23.91 RR	23.89	497	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	617	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
23B	Mayodan fine sandy loam, 2 to 7 percent slopes	24.01	24.3	1,563	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
29C	Pinkston-Mayodan complex, 7 to 15 percent slopes, very stony	24.3	24.39	482	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	1023	Yes	6	0.21	Non-Hydric	High	>60	No	No	Well drained
34B	Sheva fine sandy loam, 2 to 7 percent slopes	24.59	24.82	1212	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	454	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	170	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	313	No	5	0.3	Non-Hydric	Low	18.1	Yes	No	Excessively drained
17B	Hiwassee loam, 2 to 7 percent slopes	25	25.08	386	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	955	Yes	3	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
17B	Hiwassee loam, 2 to 7 percent slopes	25.26	25.46	1067	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	1137	No	5	0.3	Non-Hydric	Low	18.1	Yes	No	Excessively drained

Appendix D

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	25.68	25.77	480	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	295	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	1164	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	218	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	1,834	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 RR	930	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	26.61 RR	26.66 RR	259	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	26.66 RR	26.76 RR	550	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 RR	26.84	438	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	26.97 RR	662	No	5	0.21	Non-Hydric	Moderate	>60	No	No	Well drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	26.97 RR	27.3	1,781	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	27.3	27.66 RR	1,893	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 RR	27.92 RR	1,369	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	27.92 RR	28.14 RR	1,192	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	28.14 RR	28.36 RR	1,177	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
BaB	Banister loam, 0 to 4 percent slopes, rarely flooded	28.36 RR	28.43 RR	343	Yes	5	0.26	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CmB	Clover sandy loam, 2 to 8 percent slopes	28.43 RR	28.55 RR	613	Yes	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	28.55 RR	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	482	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	484	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	334	No	3	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
CmD	Clover sandy loam, 8 to 15 percent slopes	29.02	29.08	304	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	552	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	340	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	1,523	No	5	0.21	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
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	29.51	29.84	1,759	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	1,103	No	5	0.31	Predominantly Non-Hydric	High	>60	No	No	Well drained
W	Water	30.05	30.1	226	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	30.1	30.21	606	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	627	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	1,486	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	378	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	680	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	280	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	128	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	419	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	337	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	436	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	162	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	170	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	286	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	533	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	1,040	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	263	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	171	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	188	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	88	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	311	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	447	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	1,751	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	486	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	32.3	353	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained

Appendix D

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	32.3	32.33	176	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	587	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	183	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	32.48	32.5	117	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	32.5	32.56	327	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	32.56	32.61	283	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
DaA	Dan River loam, 0 to 2 percent slopes, frequently flooded	32.61	32.72	549	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	147	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	436	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	468	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	349	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	128	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	366	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	180	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	151	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	948	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	1,141	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	267	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	800	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	290	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	190	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	308	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	257	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	133	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	137	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	843	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	34.15	34.21 RR	309	Yes	3	0.25	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
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	34.21 RR	34.32	661	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	97	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	584	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	395	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	34.53	34.77	1,274	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	382	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	500	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	316	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	35	35.03	170	No	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	35.03	35.1	400	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	35.1	35.23	673	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	420	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	379	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	406	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	641	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	796	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	175	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
RnB	Rhodhiss sandy loam, 2 to 8 percent slopes	35.77	35.8	170	Yes	3	0.25	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	35.8	35.91	612	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	854	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	727	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	172	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	2,316	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	560	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	394	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	1,036	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	239	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	415	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	129	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	562	Yes	3	0.25	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
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	37.32	37.34	131	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	253	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	846	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	37.6	257	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
Ud	Udorthents, loamy	37.6	37.67	402	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
PpE2	Poplar Forest sandy clay loam, 15 to 25 percent slopes, moderately eroded	37.67	37.72	243	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	250	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	1,143	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	228	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	38.03	38.17 RR	744	Yes	3	0.25	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	38.17 RR	38.22	291	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	815	No	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CsA	Codorus loam, 0 to 2 percent slopes, frequently flooded	38.37	38.5	646	No	6	0.41	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
FpE	Fairview-Poplar Forest complex, 15 to 25 percent slopes	38.5	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	113	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	122	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	1,001	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	333	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	103	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	38.86	38.94	396	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	38.94	38.99	260	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	38.99	39.02	188	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	39.02	39.07	235	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
RnE	Rhodhiss sandy loam, 15 to 30 percent slopes	39.07	39.14	372	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	194	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	404	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
DeD	Devotion fine sandy loam, 6 to 15 percent slopes	39.25	39.37	616	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	469	No	3	0.25	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
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	39.46	39.65	1,044	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	969	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	466	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
Ur	Urban land	39.93	40.13	1,090	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
CaD	Casville sandy loam, 8 to 15 percent slopes	40.13	40.13	12	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	40.13	40.27 RR	708	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	40.27 RR	40.49 RR	1145	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	40.49 RR	40.51 RR	118	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	40.51 RR	40.51	343	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	40.51	40.52	19	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	101	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	40.54	40.62	452	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	40.62	40.71	461	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	40.71	40.72	51	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	608	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
RnD	Rhodhiss sandy loam, 8 to 15 percent slopes	40.83	41.11	1,459	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	374	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	402	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	41.26	41.32	323	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	41.32	41.41	456	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	247	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	374	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	1,595	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	1,348	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	144	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	293	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	225	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	553	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	719	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained

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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	42.45	42.5	260	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	42.5	42.63	713	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
PpB2	Poplar Forest sandy clay loam, 2 to 8 percent slopes, moderately eroded	42.63	42.7	385	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	42.7	42.82	623	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	144	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	125	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	36	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	281	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
PpD2	Poplar Forest sandy clay loam, 8 to 15 percent slopes, moderately eroded	42.93	43.04	545	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	515	No	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
PpB2	Poplar Forest sandy clay loam, 2 to 8 percent slopes, moderately eroded	43.13	43.17	206	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	213	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	395	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	378	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	553	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	243	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	43.6	473	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	43.6	43.64	187	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	182	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	398	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	237	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	43.79	43.87	418	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	43.87	43.92	291	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	43.92	43.97	216	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	43.97	44.06	512	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	44.06	44.09	168	No	3	0.22	Non-Hydric	High	15	No	No	Well drained

Appendix D

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
SmF	Siloam sandy loam, 10 to 45 percent slopes	44.09	44.15	307	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	44.15	44.21	297	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	44.21	44.45	1,268	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	305	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	399	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	301	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	631	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	3,067	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	368	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	325	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	421	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	123	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	768	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	45.72	45.76	229	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	45.76	45.86	534	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	45.86	45.93	352	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	45.93	45.96	163	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	45.96	45.96	8	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
OkB2	Oak Level sandy clay loam, 2 to 8 percent slopes, moderately eroded	45.96	45.98 RR	84	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	45.98 RR	46 RR	98	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	46 RR	46.1 RR	548	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	46.1 RR	46.16 RR	299	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	46.16 RR	46.25 RR	466	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	46.25 RR	46.3 RR	264	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	46.3 RR	46.33	148	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	46.33	46.36	147	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	46.36	46.52	869	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained

Appendix D

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
OkB2	Oak Level sandy clay loam, 2 to 8 percent slopes, moderately eroded	46.52	46.63	592	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	187	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	46.8	721	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	46.8	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	259	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	225	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	434	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	390	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	47.08	47.33	1287	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	47.33	47.48	806	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	47.48	47.51	171	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	47.51	47.58	369	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
SmC	Siloam sandy loam, 4 to 10 percent slopes	47.58	47.63	245	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	47.63	47.73	530	No	3	0.22	Non-Hydric	Moderate	15	No	No	Well drained
FrE2	Fairview-Poplar Forest complex, 15 to 25 percent slopes, moderately eroded	47.73	47.75	121	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	223	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	47.9	576	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
FrD2	Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded	47.9	47.96	328	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	276	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	35	Yes	5	0.31	Non-Hydric	Moderate	>60	No	No	Well drained
CgB2	Clifford sandy clay loam, 2 to 8 percent slopes, moderately eroded	48.02	48.02	12	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	48.04	61	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	2736	Yes	5	0.21	Non-Hydric	High	>60	No	No	Well drained
HaB	Halifax sandy loam, 2 to 8 percent slopes	48.55	48.61	281	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	269	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	92	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	2960	Yes	3	0.26	Non-Hydric	High	>60	No	No	Well drained

Appendix D

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	49.24	49.3	327	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	49.3	49.67	1987	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	49.67	49.84 RR	884	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 8 percent slopes	49.84 RR	49.94 RR	506	Yes	3	0.22	Non-Hydric	Moderate	>60	No	No	Moderately well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	49.94 RR	50.06 RR	652	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 8 percent slopes	50.06 RR	50.17 RR	548	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.17 RR	50.23 RR	357	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 8 percent slopes	50.23 RR	50.44 RR	1119	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.44 RR	50.52 RR	411	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 8 percent slopes	50.52 RR	50.69 RR	862	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.69 RR	50.76 RR	410	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CeA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	50.76 RR	50.81 RR	238	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	50.81 RR	50.98 RR	893	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	50.98 RR	51.18 RR	1070	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 RR	51.25 RR	363	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	51.25 RR	51.3 RR	280	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
MkB2	Mecklenburg sandy clay loam, 2 to 8 percent slopes, moderately eroded	51.3 RR	51.32 RR	119	Yes	6	0.29	Non-Hydric	High	>60	No	No	Well drained
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	51.32 RR	51.44 RR	618	Yes	5	0.29	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	51.44 RR	51.98	3000	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	51.98	52.07 RR	456	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	52.07 RR	52.1 RR	187	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	52.1 RR	52.19 RR	460	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 8 percent slopes	52.19 RR	52.16	97	Yes	3	0.22	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
PaD	Pacolet sandy loam, 8 to 15 percent slopes	52.16	52.17	20	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 RR	1025	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	52.36 RR	52.42 RR	314	Yes	3	0.19	Non-Hydric	Moderate	>60	No	No	Well drained
CdB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	52.42 RR	52.48 RR	297	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 8 to 15 percent slopes	52.48 RR	52.51	271	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	258	Yes	5	0.25	Non-Hydric	High	>60	No	No	Well drained
PcD2	Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	52.56	52.59	146	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	3	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	224	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	245	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	296	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	172	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	314	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	1,262	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	118	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	483	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	179	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	480	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	186	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	922	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	94	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	53.6	330	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	53.6	53.63	163	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	77	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	215	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	181	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	154	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly 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
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	53.74	53.77	117	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	53.77	53.8	191	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	53.8	53.89	441	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	53.89	53.9	57	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	53.9	53.92	94	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	143	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	86	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	186	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	297	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	54.05	54.07	115	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	369	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	23	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	48	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	143	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	141	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	170	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	231	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	54.3	81	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	54.3	54.33	174	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	386	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	248	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	98	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	207	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	117	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	316	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	157	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	123	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	96	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	662	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	314	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained

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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	54.85	54.88	168	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
FgB	Frogsboro sandy loam, 2 to 6 percent slopes	54.88	54.9	97	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
VaC	Vance sandy loam, 6 to 10 percent slopes	54.9	54.93	163	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	198	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	107	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	55.25 RR	1,382	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	55.25 RR	55.29 RR	193	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	55.29 RR	55.3 RR	90	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	55.3 RR	55.32 RR	85	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	55.32 RR	55.37 RR	293	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	55.37 RR	55.45 RR	422	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	55.45 RR	55.54 RR	460	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	55.54 RR	55.62 RR	404	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	55.62 RR	55.64 RR	134	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	55.64 RR	55.51	474	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	219	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	55.56	55.6	260	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	55.6	55.8	1029	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	55.8	55.8	3	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained
PaE	Pacolet sandy loam, 15 to 45 percent slopes	55.8	55.82	99	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	149	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	322	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	1983	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	213	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	56.32	56.42 RR	486	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained

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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
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	56.42 RR	56.44 RR	134	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 RR	56.55 RR	615	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	56.55 RR	56.69 RR	744	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	56.69 RR	56.71 RR	112	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	56.71 RR	56.73 RR	96	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	56.73 RR	56.81	709	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	1190	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	45	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	386	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	187	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	175	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	374	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	398	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	562	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	614	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	1568	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	124	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	187	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	458	No	3	0.26	Non-Hydric	High	>60	No	Yes	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58	58	26	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	58	58.03	150	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.03	58.04	48	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained

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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
HeB	Helena sandy loam, 2 to 6 percent slopes	58.04	58.08	183	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	195	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	58.11	58.15	225	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.15	58.27	611	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	43	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	1030	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	208	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	58.51	58.62 RR	542	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	58.62 RR	58.65 RR	184	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	58.65 RR	58.67 RR	123	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
EnD	Enon sandy loam, 10 to 15 percent slopes	58.67 RR	58.69 RR	108	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	58.69 RR	58.85	1052	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 RR	815	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 RR	59.35 RR	1846	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	59.35 RR	59.39 RR	201	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	59.39 RR	59.44 RR	259	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	59.44 RR	59.5 RR	341	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	59.5 RR	59.6	385	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	59.6	59.63	144	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	59.63	59.63	9	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	59.63	59.65	95	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	59.65	59.68	182	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	697	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained

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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
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	59.81	60.05	1,258	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	877	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	2406	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	26	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	60.68	60.72 RR	218	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	60.72 RR	60.76 RR	232	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	60.76 RR	60.82 RR	328	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	60.82 RR	60.84 RR	100	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	60.84 RR	60.86 RR	82	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	60.86 RR	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	235	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	320	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	351	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	61.1	94	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	61.1	61.15	283	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
IrB	Iredell loam, 2 to 6 percent slopes	61.15	61.31	820	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	296	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	1605	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	492	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	352	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	61.83	61.9	405	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	61.9	61.93	141	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	82	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	224	Yes	3	0.31	Non-Hydric	Moderate	>60	No	No	Moderately well drained

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HeB	Helena sandy loam, 2 to 6 percent slopes	61.99	62.13	771	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	62.32 RR	1005	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	62.32 RR	62.33 RR	37	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	62.33 RR	62.38 RR	246	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	62.38 RR	62.38 RR	6	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	62.38 RR	62.39 RR	80	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	62.39 RR	62.44 RR	244	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	62.44 RR	62.52 RR	403	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	62.52 RR	62.54 RR	118	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	62.54 RR	62.56 RR	121	No	5	0.26	Predominantly Non-Hydric	High	>60	No	No	Somewhat poorly drained
HeC	Helena sandy loam, 6 to 10 percent slopes	62.56 RR	62.58	518	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	306	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	312	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	147	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	62.72	63 RR	1490	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	63 RR	63.09 RR	479	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	63.09 RR	63.22 RR	681	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	63.22 RR	63.27 RR	275	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	63.27 RR	63.32 RR	247	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	63.32 RR	63.34 RR	106	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	63.34 RR	63.37 RR	139	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
LoE	Louisburg coarse sandy loam, 15 to 45 percent slopes	63.37 RR	63.44 RR	368	No	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	63.44 RR	63.35	299	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained

Appendix D

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	63.35	63.45	557	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	57	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	246	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	225	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	188	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
W	Water	63.59	63.64	273	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
EnD	Enon sandy loam, 10 to 15 percent slopes	63.64	63.69	256	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	247	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	232	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	351	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	46	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	63.85	63.9	231	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	63.9	64 RR	558	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 RR	64.01 RR	8	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	64.01 RR	64.03 RR	110	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	64.03 RR	64.06 RR	202	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	64.06 RR	64.09 RR	141	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	64.09 RR	64.11	202	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	1115	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	64.32	64.4	395	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	64.4	64.42	100	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	557	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	312	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	456	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	64.7	151	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	64.7	64.95 RR	1363	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	64.95 RR	64.97 RR	66	Yes	3	0.28	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
HeC	Helena sandy loam, 6 to 10 percent slopes	64.97 RR	65.03 RR	307	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.03 RR	65.09 RR	329	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.09 RR	65.1 RR	88	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	65.1 RR	65.12 RR	89	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	65.12 RR	65.16 RR	220	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	65.16 RR	65.26 RR	516	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	65.26 RR	65.3 RR	234	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	65.3 RR	65.41 RR	534	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
CeB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	65.41 RR	65.48 RR	374	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.48 RR	65.51 RR	166	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	65.51 RR	65.56 RR	265	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.56 RR	65.52	268	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	51	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	279	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	302	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	10	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	229	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	746	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	180	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	65.86	65.96 RR	554	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	65.96 RR	65.98 RR	66	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	65.98 RR	66 RR	128	Yes	3	0.24	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
HeB	Helena sandy loam, 2 to 6 percent slopes	66 RR	66.02 RR	103	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	66.02 RR	66.28 RR	1396	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	66.28 RR	66.32 RR	214	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	66.32 RR	66.48 RR	811	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	66.48 RR	66.56 RR	429	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	66.56 RR	66.6 RR	208	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
HeC	Helena sandy loam, 6 to 10 percent slopes	66.6 RR	66.63 RR	186	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
W	Water	66.63 RR	66.64 RR	49	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
VaC	Vance sandy loam, 6 to 10 percent slopes	66.64 RR	66.72 RR	403	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	66.72 RR	66.79 RR	378	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
HeB	Helena sandy loam, 2 to 6 percent slopes	66.79 RR	66.91 RR	605	Yes	3	0.27	Non-Hydric	Moderate	>60	No	No	Moderately well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	66.91 RR	66.94 RR	209	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	66.94 RR	67.02 RR	375	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	67.02 RR	67.07 RR	310	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	67.07 RR	67.19 RR	617	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	67.19 RR	67.4 RR	1095	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EoB2	Enon clay loam, 2 to 6 percent slopes, moderately eroded	67.4 RR	67.44 RR	225	Yes	6	0.28	Non-Hydric	High	>60	No	No	Well drained
EnC	Enon sandy loam, 6 to 10 percent slopes	67.44 RR	67.47 RR	156	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
VaD	Vance sandy loam, 10 to 15 percent slopes	67.47 RR	67.51 RR	188	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Well drained
VaB	Vance sandy loam, 2 to 6 percent slopes	67.51 RR	67.55 RR	244	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
VaC	Vance sandy loam, 6 to 10 percent slopes	67.55 RR	67.6 RR	245	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	67.6 RR	67.62 RR	131	Yes	3	0.22	Non-Hydric	High	>60	No	No	Well drained

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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	67.62 RR	67.5	139	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
CcB	Cecil sandy loam, 2 to 6 percent slopes	67.5	67.54	237	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	269	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	124	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	121	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	122	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	255	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	326	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	176	Yes	5	0.28	Non-Hydric	High	>60	No	No	Well drained
PaD	Pacolet sandy loam, 10 to 15 percent slopes	67.88	67.9	137	Yes	3	0.33	Non-Hydric	Moderate	>60	No	No	Well drained
PaE	Pacolet sandy loam, 15 to 45 percent slopes	67.9	67.93	134	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	207	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	496	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	110	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	331	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	233	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	281	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.24	68.3	330	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	68.3	68.33	139	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	240	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	71	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	234	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	228	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	68.6	640	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnB2	Cullen clay loam, 2 to 6 percent slopes, moderately eroded	68.6	68.63	168	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	75	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	414	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	68.72	68.83	555	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	159	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	79	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained

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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	68.87	68.91	187	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	260	Yes	6	0.23	Non-Hydric	High	>60	No	No	Well drained
Ud	Udorthents, loamy 0 to 25 percent slopes	68.96	69.03	394	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	594	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	153	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	237	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	69.5	1512	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	69.5	69.59 RR	438	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
Ur	Urban land	69.59 RR	69.65 RR	335	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	69.65 RR	69.72 RR	392	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
Ur	Urban land	69.72 RR	69.8 RR	384	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
EnD	Enon sandy loam, 10 to 15 percent slopes	69.8 RR	69.84 RR	246	Yes	3	0.28	Non-Hydric	Moderate	>60	No	No	Well drained
Ur	Urban land	69.84 RR	69.92 RR	419	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
Ud	Udorthents, loamy 0 to 25 percent slopes	69.92 RR	69.95 RR	150	No	5	0.2	Non-Hydric	Moderate	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	69.95 RR	69.98 RR	178	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	69.98 RR	70.03 RR	218	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.03 RR	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	255	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	186	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	198	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	279	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 RR	32	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 RR	70.26 RR	456	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	70.26 RR	70.28 RR	93	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	70.28 RR	70.3	147	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained

Appendix D

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
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.3	70.32	117	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	250	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	51	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	240	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	60	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnB	Enon sandy loam, 2 to 6 percent slopes	70.43	70.5	324	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	70.5	70.51	87	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	220	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	467	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	400	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	138	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	99	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	241	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	95	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	678	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	305	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	1288	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	362	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
Ur	Urban land	71.36	71.46	532	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	71.46	71.73	1472	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	191	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	830	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	71.96 RR	152	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnE2	Cullen clay loam, 15 to 45 percent slopes, moderately eroded	71.96 RR	72.01 RR	280	No	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	72.01 RR	72.07	409	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	80	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	156	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	670	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	164	Yes	3	0.28	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
EnC	Enon sandy loam, 6 to 10 percent slopes	72.28	72.3	144	Yes	3	0.28	Non-Hydric	High	>60	No	No	Well drained
EnD	Enon sandy loam, 10 to 15 percent slopes	72.3	72.34	188	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	356	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	187	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	665	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	72.57	72.6	196	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
RvA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	72.6	72.67	349	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	72.67	72.67	5	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	82	Yes	5	0.39	Non-Hydric	High	>60	No	No	Well drained
RxE	Rowan-Poindexter complex, 15 to 45 percent slopes	72.69	72.88 RR	1011	No	3	0.35	Non-Hydric	Moderate	29.9	No	No	Well drained
CnD2	Cullen clay loam, 10 to 15 percent slopes, moderately eroded	72.88 RR	72.93 RR	289	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	72.93 RR	73.05	709	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	73.16 RR	586	Yes	6	0.23	Non-Hydric	Moderate	>60	No	No	Well drained
CnC2	Cullen clay loam, 6 to 10 percent slopes, moderately eroded	73.16 RR	73.17 RR	70	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													
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
1B	Appling sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.19	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
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

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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
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
4B	Clifford sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.24	Non-Hydric	High	>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
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
Access Roads													
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
4B	Clifford sandy loam, 2 to 7 percent slopes	NA	NA	NA	Yes	3	0.24	Non-Hydric	High	>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
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
39	Udorthents, loamy	NA	NA	NA	No	Unknown	Unknown	Non-Hydric	High	>60	Unknown	Unknown	Unknown
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
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
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
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
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
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

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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	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
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
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	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
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
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

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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
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
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
CfB	Clifford sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.24	Non-Hydric	High	>60	No	No	Well 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
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
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
CnB2	Clover 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
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
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
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
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
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
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
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

Appendix D

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	NA	NA	NA	No	3	0.22	Non-Hydric	High	15	No	No	Well drained
SmF	Siloam sandy loam, 10 to 45 percent slopes	NA	NA	NA	No	3	0.22	Non-Hydric	Moderate	15	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
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
Alamance County, North Carolina													
Mainline valves 6 and 7 (MP 55.1 and 68.7)													
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
EnB	Enon sandy loam, 2 to 6 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													
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
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
EnB	Enon sandy loam, 2 to 6 percent slopes	NA	NA	NA	Yes	3	0.28	Non-Hydric	High	>60	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
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
DAM	Dam	NA	NA	NA	No	Unknown	Unknown	Non-Hydric	Low	>60	Unknown	Unknown	Unknown
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
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

Appendix D

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
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
W	Water	NA	NA	NA	No	Unknown	Unknown	Non-Hydric	Unknown	>60	Unknown	Unknown	Unknown
WtC	Wynott-Enon complex, 6 to 10 percent slopes	NA	NA	NA	Yes	5	0.25	Non-Hydric	High	28	No	No	Well drained
Contractor Yards													
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
HnB	Herndon silt loam, 2 to 6 percent slopes	NA	NA	NA	Yes	6	0.36	Non-Hydric	High	>60	No	No	Well drained
HnC	Herndon silt loam, 6 to 10 percent slopes	NA	NA	NA	Yes	6	0.36	Non-Hydric	High	>60	No	No	Well drained
HnD	Herndon silt loam, 10 to 15 percent slopes	NA	NA	NA	Yes	6	0.36	Non-Hydric	Moderate	>60	No	No	Well drained
WtB	Wynott-Enon complex, 2 to 6 percent slopes	NA	NA	NA	Yes	5	0.25	Non-Hydric	High	28	No	No	Well drained
WtC	Wynott-Enon complex, 6 to 10 percent slopes	NA	NA	NA	Yes	5	0.25	Non-Hydric	High	28	No	No	Well drained
WtD	Wynott-Enon complex, 10 to 15 percent slopes	NA	NA	NA	Yes	5	0.25	Non-Hydric	Moderate	28	No	No	Well drained
Caswell County, North Carolina													
Contractor Yards													
CaB	Casville sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
FbB2	Fairview sandy clay loam, 2 to 8 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.23	Non-Hydric	High	>60	No	No	Well drained
HaC	Halifax sandy loam, 8 to 15 percent slopes	NA	NA	NA	Yes	3	0.24	Non-Hydric	Moderate	>60	No	No	Moderately well drained
ReC	Rasalo-Enott complex, 8 to 15 percent slopes	NA	NA	NA	Yes	3	0.28	Non-Hydric	Moderate	48	No	No	Well drained
SkE	Spriggs-Mocksville complex, 25 to 45 percent slopes	NA	NA	NA	No	3	0.3	Non-Hydric	Moderate	29.9	No	No	Well drained

Appendix D

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
Access Roads													
CaB	Casville sandy loam, 2 to 8 percent slopes	NA	NA	NA	Yes	3	0.23	Non-Hydric	High	>60	No	No	Well drained
FbB2	Fairview sandy clay loam, 2 to 8 percent slopes, moderately eroded	NA	NA	NA	Yes	5	0.23	Non-Hydric	High	>60	No	No	Well drained
HaC	Halifax sandy loam, 8 to 15 percent slopes	NA	NA	NA	Yes	3	0.24	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.

APPENDIX E.1

Railroads and Roads Crossed by the Southgate Project

Appendix E.1-1

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 RR	Norfolk Southern Railway	Active	Conventional Bore

Appendix E.1-2

Roadways Crossed by the Southgate Project

Facility, State, County	Milepost	Road Name	Surface Type	Jurisdiction	Public or Private	Crossing Method
H-605 PIPELINE						
<u>Virginia</u>						
Pittsylvania	N/A	N/A	N/A	N/A	N/A	N/A
H-650 PIPELINE						
<u>Virginia</u>						
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	4.2	County Road 1437 / Woodlawn Academy Road	Asphalt	County	Public	Bore
Pittsylvania	4.3	County Road 1437 / Woodlawn Academy Road	Asphalt	County	Public	Bore
Pittsylvania	4.3	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

Appendix E.1-2

Roadways Crossed by the Southgate Project

Facility, State, County	Milepost	Road Name	Surface Type	Jurisdiction	Public or Private	Crossing Method
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
Pittsylvania	22.1	County Road 875 / Horseshoe Road	Asphalt	County	Public	Bore
Pittsylvania	23.7 RR	County Road 862 / Oak Hill Road	Asphalt	County	Public	Bore
<u>North Carolina</u>						
Rockingham	26.2	State Road 1745 / Buffalo Road	Asphalt	State	Public	Bore
Rockingham	26.6	U.S HWY 311 / Hwy770	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	51.6 RR	State Road 2619 / Kernodle Road	Asphalt	State	Public	Bore

Appendix E.1-2

Roadways Crossed by the Southgate Project

Facility, State, County	Milepost	Road Name	Surface Type	Jurisdiction	Public or Private	Crossing Method
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
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	56.5	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	59.3 RR	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 RR	State Highway 62	Asphalt	State	Public	Bore
Alamance	64.8	State Route 1750 / Faucette Lane	Asphalt	State	Public	Bore
Alamance	65.3 RR	State Road 1729 / Deep Creek Church Road	Asphalt	State	Public	Bore
Alamance	66.1 RR	State Road 1735 / N. Fonville Rd	Asphalt	State	Public	Bore

Appendix E.1-2

Roadways Crossed by the Southgate Project

Facility, State, County	Milepost	Road Name	Surface Type	Jurisdiction	Public or Private	Crossing Method
Alamance	66.4 RR	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	69.6 RR	State Highway 49 / W. Main Street	Asphalt	State	Public	Bore
Alamance	69.7 RR	State Road 1935 / Stone St	Asphalt	State	Public	Bore
Alamance	71.3	Interstate 40 / Interstate 85	Asphalt	U.S.	Public	Bore
Alamance	72.9 RR	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.

APPENDIX E.2

Structures within 50 Feet of the Construction Work Area

Appendix E.2 Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from centerline of easement (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	0.0	House	Yes	North	22	2,563	RSS-H650-045	Stay within access road PA-PI-001C limits. Proposed barricade fence 100 linear feet from house.
Pittsylvania	0.1	House	No	South	27	911	N/A	Protect
Pittsylvania	0.1	Barn	No	South	42	1,037	N/A	Protect
Pittsylvania	2.3	Shed	No	East	50	1,278	N/A	Stay within access road TA-PI-005 limits.
Pittsylvania	2.3	Shed	No	East	7	1,720	N/A	Stay within access road TA-PI-005 limits.
Pittsylvania	2.3	Shed	No	East	35	1,828	N/A	Stay within access road TA-PI-005 limits.
Pittsylvania	2.3	Shed	No	East	4	1,871	N/A	Stay within access road TA-PI-005 limits.
Pittsylvania	2.3	Shed	No	East	0	1,821	N/A	Protect
Pittsylvania	2.3	Shed	No	East	20	1,967	N/A	Stay within access road TA-PI-005 limits.
Pittsylvania	2.3	Shed	No	East	0	2,012	N/A	Protect
Pittsylvania	4.5	House	No	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

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	4.5	Farm Stalls	No	East	10	880	N/A	Stay within access road TA-PI-007 limits.
Pittsylvania	4.5	Barn	No	East	0	930	RSS-H650-024	Protect
Pittsylvania	4.5	Well Pump House	No	East	17	921	N/A	Stay within access road TA-PI-007 limits.
Pittsylvania	5.1	House	Yes	East	48	2,886	N/A	Stay within access road TA-PI-011 limits.
Pittsylvania	6.5	Office	Yes	West	28	1,283	N/A	Stay within access road TA-PI-016 limits.
Pittsylvania	8.5	Shed	No	East	25	930	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	8.5	Shed	No	East	47	923	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	8.5	House	Yes	East	46	862	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	8.5	Shed	No	East	0	917	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	8.5	Shed	No	East	6	943	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	8.5	Shed	No	East	7	877	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	8.5	Shed	No	East	5	935	N/A	Stay within access road TA-PI-022 limits.
Pittsylvania	9.0	Barn	No	West	10	1,445	N/A	Stay within access road TA-PI-023 limits.
Pittsylvania	9.0	Barn	No	West	13	1,482	N/A	Stay within access road TA-PI-023 limits.

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	Stay within access road TA-PI-023 limits.
Pittsylvania	10.3	House	Yes	East	34	59	RSS-H650-016	Protect – Proposed barricade fence.
Pittsylvania	10.3	Porch	Yes	East	22	46	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	To be removed
Pittsylvania	10.6	Shed	No	East	49	110	N/A	Protect
Pittsylvania	10.7	House	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	11	205	N/A	Stay within access road TA-PI-032 limits.
Pittsylvania	14.9	House	Yes	East	46	152	N/A	Protect
Pittsylvania	15.9	Garage	No	East	5	55	N/A	Protect
Pittsylvania	16.0	Shed	No	East	0	164	N/A	Protect
Pittsylvania	16.3	Mobile home - single wide	Yes	East	28	86	N/A	Protect
Pittsylvania	16.3	Garage	No	East	28	133	N/A	Protect

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	28	282	RSS-H650-029	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	18.4	Tobacco Shed	No	West	5	29	N/A	Protect
Pittsylvania	18.4	Tobacco Shed	No	West	10	34	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	35	288	N/A	Stay within access road TA-PI-050 limits.
Pittsylvania	20.2	Garage	No	East	18	35	N/A	Protect
Pittsylvania	20.2	Mobile home	Yes	East	26	81	RSS-H650-004	Install safety fence at limit of workspace extending 100 feet from house.
Pittsylvania	20.3	Car awning	No	East	5	44	RSS-H650-005	Proposed barricade fence. Protect
Pittsylvania	20.3	Mobile home	Yes	East	26	61	RSS-H650-005	The workspace has been adjusted in this location. Proposed barricade fence. Protect
Pittsylvania	22.0	House	Yes	East	45	133	N/A	Protect

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	22.2	House - fallen down	No	East	0	79	RSS-H650-041	Protect if possible or Remove
North Carolina								
Rockingham	28.1	Shed	No	West	33	3,678	N/A	Protect
Rockingham	29.2	Shed	No	West	37	1,331	N/A	Protect
Rockingham	29.2	Shed	No	West	23	1,217	N/A	Protect
Rockingham	29.2	Shed	No	West	26	1,185	N/A	Protect
Rockingham	29.6	Mobile home	Yes	West	43	1,680	N/A	Protect
Rockingham	30.0	Barn	No	West	0	1,397	RSS-H650-030	Protect
Rockingham	30.0	House	Yes	West	30	1,422	RSS-H650-030	Stay within access road TA-RO-080 limits.
Rockingham	30.5	House - abandoned	No	North	3	43	RSS-H650-031	Protect
Rockingham	30.5	House	Yes	South	29	122	N/A	Protect
Rockingham	30.7	House	Yes	East	40	100	N/A	Protect
Rockingham	31.7	House	Yes	North	46	86	N/A	Protect
Rockingham	32.4	Shed	No	East	4	1,467	N/A	Stay within access road TA-RO-085 limits.
Rockingham	32.5	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.

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	32.8	Barn	No	West	4	959	N/A	Stay within limits of access road TA-RO-087.
Rockingham	32.8	Barn	No	West	4	1551	N/A	Stay within limits of access road TA- RO-087.
Rockingham	35.4	Shed - abandoned	No	North	0	232	N/A	Protect if possible or remove
Rockingham	35.4	Mobile home	Yes	North	32	512	N/A	Stay within limits of access road TA- RO-092.
Rockingham	35.4	House	Yes	North	27	560	N/A	Stay within limits of access road TA- RO-092.
Rockingham	36.4	Abandoned cabin	No	North	37	97	N/A	Protect
Rockingham	36.5	Abandoned cabin	No	North	32	91	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	36.6	Barn	No	South	25	64	N/A	Protect
Rockingham	36.6	Garage	No	South	35	150	N/A	Protect
Rockingham	36.6	House	No	South	36	151	N/A	Protect
Rockingham	37.1	House - abandoned	No	East	0	48	RSS-H650-032	Protect if possible or remove.
Rockingham	37.70	House	Yes	West	45	1,365	N/A	Stay within limits of access road TA- RO-102.
Rockingham	39.60	Barn	No	West	12	493	N/A	Stay within limits of access road TA- RO-107.
Rockingham	39.60	Barn	No	West	14	502	RSS-H650-046	Stay within limits of access road TA- RO-107.

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	39.60	House	Yes	West	12	490	RSS-H650-046	Stay within limits of access road TA- RO-107.
Rockingham	40.3	House	Yes	East	26	65	RSS-H650-034	The workspace has been adjusted in this location. Proposed barricade fence. Protect
Rockingham	40.9	Shed	No	West	44	1,229	N/A	Stay within limits of access road TA- RO-111.
Rockingham	40.9	House	Yes	West	50	1,304	N/A	Stay within limits of access road TA- RO-111.
Rockingham	40.9	Shed	No	West	22	1,313	N/A	Stay within limits of access road TA- RO-111.
Rockingham	41.4	Abandoned Old House	No	West	0	0	RSS-H650-047	Remove
Rockingham	41.4	House	No	West	13	1,514	RSS-H650-048	Stay within limits of access road TA- RO-112.
Rockingham	41.4	House	Yes	West	50	1,697	N/A	Stay within limits of access road TA- RO-112.
Rockingham	41.8	Barn	No	North	23	804	N/A	Stay within limits of access road TA- RO-113A.
Rockingham	42.4	Shed	No	West	9	47	N/A	Protect
Rockingham	43.1	Garage	No	East	5	46	N/A	Protect
Rockingham	43.1	House	No	West	11	114	RSS-H650-039	Protect
Rockingham	43.9	Shed, abandoned	No	East	2	886	N/A	Stay within limits of access road TA- RO-119.

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	44.1	Shed	No	East	5	1,328	N/A	Stay within limits of access road TA- RO-122.
Rockingham	44.1	Shed	No	East	0	1,615	RSS-H650-026	Protect
Rockingham	44.1	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 - abandoned	No	West	26	110	N/A	Stay within limits of access road TA- RO-125.
Rockingham	46.1	Storage building	No	West	24	718	N/A	Protect
Rockingham	46.1	Shed	No	West	47	750	N/A	Stay within limits of access road TA- RO-127.
Rockingham	46.1	Shed	No	West	0	884	N/A	Stay within limits of access road TA- RO-127.
Rockingham	46.1	Shed	No	West	21	928	N/A	Stay within limits of access road TA- RO-127.
Rockingham	46.1	Mobile home	Yes	North	32	925	N/A	Stay within limits of access road TA- RO-127.
Rockingham	46.1	House	Yes	West	18	1,058	RSS-H650-027	Stay within limits of access road TA-RO-127. Proposed barricade fence.
Rockingham	46.1	House	Yes	West	35	2,205	N/A	Stay within limits of access road TA- RO-127.
Rockingham	49.1	House log cabin, abandoned	No	Crosses	0	0	RSS-H650-001	To be removed
Rockingham	49.2	Dilapidated shack	No	West	0	3	RSS-H650-002	To be removed
Rockingham	49.2	Smoke House	No	East	0	10	RSS-H650-002	To be removed

Appendix E.2 Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from centerline of easement (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	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 abandoned	No	East	11	59	RSS-H650-002	The workspace has been adjusted in this location Protect
Rockingham	49.3	Shed	No	East	0	62	N/A	Relocate if possible, or remove.
Rockingham	49.8	Car awning	No	West	44	635	N/A	Stay within limits of access road TA- RO-138.
Rockingham	52.6	Tractor awning	No	North	21	153	N/A	Protect
Alamance	52.9	House	Yes	East	32	125	N/A	Protect
Alamance	53.0	Barn, abandoned	No	East	7	154	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	54.7	Barn	No	West	10	1,907	N/A	Stay within limits of access road TA- AL-155.
Alamance	54.7	Barn	No	West	18	1,962	N/A	Stay within limits of access road TA- AL-155.
Alamance	54.7	Barn	No	West	5	1,976	N/A	Stay within limits of access road TA- AL-155.
Alamance	54.7	Barn	No	West	15	2,071	N/A	Stay within limits of access road TA- AL-155.

Appendix E.2 Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from centerline of easement (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	54.7	Barn	No	West	0	2,058	N/A	Protect
Alamance	54.7	Barn	No	West	0	2,210	N/A	Protect
Alamance	54.7	Garage	No	West	21	2,256	N/A	Stay within limits of access road TA- AL-155.
Alamance	54.7	House	No	West	29 b/	2,100	RSS-H650-040	Protect
Alamance	55.1	Shed	No	East	21	126	N/A	Protect
Alamance	56.5 RR	Garage	No	East	35	193	N/A	Protect
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	15	106	N/A	Protect
Alamance	57.8	Barn, abandoned	No	East	6	120	N/A	Protect
Alamance	57.8	Mobile home	Yes	North	26	83	RSS-H650-008	The workspace has been adjusted in this location. Proposed barricade fence. Protect
Alamance	57.8	Barn	No	East	12	256	N/A	Stay within limits of access road TA- AL-161.
Alamance	58.0	Barn	No	East	18	434	N/A	Stay within limits of access road TA- AL-162.
Alamance	59.1	House	Yes	South	43	115	N/A	Protect
Alamance	59.1	Shed	No	South	0	91	N/A	Protect
Alamance	59.2	House	Yes	South	44	84	N/A	Protect

Appendix E.2 Structures within 50 Feet of the Southgate Project								
State, County	**Approximate Milepost**	**Building Type (House, Shed, Garage, etc.)**	**Occupied (yes/no)**	**Direction from centerline of easement (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	59.2 RR	Shed	No	North	8	75	N/A	Protect
Alamance	59.2 RR	Shed	No	North	10	106	N/A	Protect
Alamance	59.4 RR	House	Yes	North	47	82	N/A	Protect
Alamance	61.5	Shed	No	East	26	180	N/A	Stay within limits of access road TA- AL-168.
Alamance	61.5	Shed	No	East	38	175	N/A	Stay within limits of access road TA- AL-168.
Alamance	62.5	Shed	No	North	0	327	N/A	Protect
Alamance	62.7	House	No	North	6	515	RSS-H650-037	Protect
Alamance	62.5	Barn	No	North	0	62	N/A	To be removed
Alamance	65.0 RR	Shed	No	Crosses	0	0	N/A	To be removed
Alamance	66.4 RR	Barn	No	Crosses	0	0	N/A	To be removed
Alamance	66.9 RR	Shed	No	West	0	31	N/A	To be removed
Alamance	67.0 RR	Shed	No	East	26	167	N/A	Protect
Alamance	67.0 RR	Barn	No	East	3	43	N/A	Protect
Alamance	67.1 RR	House	Yes	West	16	76	RSS-H650-051	Protect
Alamance	67.1 RR	Barn	No	West	22	82	N/A	Protect
Alamance	67.3 RR	House	Yes	West	18	1,013	RSS-H650-028	Stay within limits of access road TA- AL-180. Proposed barricade fence 100 linear feet from corner of house.

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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 RR	House	Yes	West	8	921	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 RR	Barn	Yes	West	12	795	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 RR	Barn	Yes	West	15	708	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 RR	Barn	Yes	West	2	600	RSS-H650-028	Stay within limits of access road TA- AL-180. Proposed barricade fence 100 linear feet from corner of house.
Alamance	67.9	Barn	No	East	6	1,146	N/A	Stay within limits of access road TA- AL-181.
Alamance	68.2	House	No	West	28	1,203	N/A	Stay within limits of access road TA- AL-181A.
Alamance	68.2	Mobile home	No	West	28	1,143	N/A	Stay within limits of access road TA- AL-181A.
Alamance	68.2	House	Yes	West	43	1,055	N/A	Stay within limits of access road TA- AL-181A.
Alamance	68.2	House	No	West	10	863	RSS-H650-038	Protect
Alamance	68.2	Car port	No	West	34	655	N/A	Stay within limits of access road TA- AL-181A.

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	68.2	Garage	No	West	36	479	N/A	Stay within limits of access road TA- AL-181A.
Alamance	68.6	Barn	No	North	5	76	N/A	Protect
Alamance	69.1	House	Yes	East	26	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	69.3	Chicken / rabbit coop	No	Crosses	0	0	N/A	Remove or Relocate
Alamance	69.3	Shed	No	North	0	4	N/A	Remove or Relocate
Alamance	69.4	Shed	No	North	31	117	N/A	Protect
Alamance	69.4	Portable building	No	North	32	116	N/A	Protect
Alamance	69.4	Shed in concrete	No	North	28	87	N/A	Protect
Alamance	69.4	Shed	No	North	43	104	N/A	Protect
Alamance	69.5	Shed	No	East	48	117	N/A	Protect
Alamance	69.6 RR	House	Yes	East	13	35	RSS-H650-050	Protect
Alamance	69.6 RR	Store	No	West	2	27	N/A	Protect
Alamance	69.6 RR	Store	No	West	16	76	N/A	Protect
Alamance	69.6 RR	House	Yes	East	31	71	N/A	Protect
Alamance	69.7 RR	House	Yes	West	26	77	N/A	Protect
Alamance	69.7 RR	House	Yes	West	26	98	N/A	Protect

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	69.7 RR	Abandoned clothing factory	No	East	5	48	N/A	Protect
Alamance	69.9 RR	Abandoned clothing factory	No	East	5	47	N/A	Protect
Alamance	69.9 RR	Commercial building	No	East	0	32	N/A	To be removed
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	48	174	N/A	Protect
Alamance	72.7	Garage	No	East	38	97	N/A	Protect
Alamance	72.8 RR	Shed	No	East	16	64	N/A	Protect
Alamance	72.8 RR	Garage	No	West	48	56	RSS-H650-015	N/A
Alamance	72.8 RR	Garage	No	Crosses	0	0	RSS-H650-015	To be removed
Alamance	72.8 RR	Camper	No	Crosses	0	0	RSS-H650-015	To be removed
Alamance	72.8 RR	Shed	No	East	45	182	N/A	Protect
Alamance	72.9 RR	Mobile home	No	West	11	37	RSS-H650-036	Protect
Alamance	72.9 RR	House - Abandoned	No	Crosses	0	0	RSS-H650-036	To be removed
Pittsylvania	CY-01	House	No	North	0	1,511	RSS-H650-033	Install safety fence around the house at a 1-foot off-set from the property line.

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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	CY-01	Garage	No	North	0	1,586	RSS-H650-033	Install safety fence around the house at a 1-foot off-set from the property line.
Pittsylvania	CY-03	Warehouse	No	East	0	58,418	N/A	N/A
Rockingham	CY-05	House	No	West	0	15,620	RSS-H650-003	Available for CY office space as offered by the Landowner. Install safety fence around the house at a 1- foot off-set from the property line and 15-foot offset from the house.
Rockingham	CY-05	Fuel bays	No	West	0	15,418	N/A	N/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
Pittsylvania	CY-19	House	Yes	West	26	10,188	RSS-H650-043	The limit of disturbance for the contractor yard will be trimmed to allow 26 feet between the limit of the yard and the residence
Pittsylvania	CY-22	House – Fallen Down	No	West	26	11,527	RSS-H650-044	The limit of disturbance for the contractor yard will be trimmed to allow 26 feet between the limit of the yard and the residence

Appendix E.2

Structures within 50 Feet of the Southgate Project

State, County	Approximate Milepost	Building Type (House, Shed, Garage, etc.)	Occupied (yes/no)	Direction from centerline of easement (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/

a/ See Appendix B-7.
b/ Pending civil survey, approximate distance based on aerial photography.

N/A = Not Applicable.

APPENDIX E.3

Cultural Resources Tables

TABLE 4.10-1 **Communications between Mountain Valley and the Virginia and North Carolina SHPOs for the Southgate Project**			
Date	**Type/Author (Affiliation)**	**Recipient (Affiliation)**	**Subject**
VIRGINIA DEPARTMENT OF HISTORIC RESOURCES			
4/27/2018	Letter – Alex Miller (MV) a/	Roger Kirchen (VADHR)	Project introduction package and request for comment
5/17/2018	Presentation – Alex Miller (MV)	VADHR staff	PowerPoint presentation on Project
6/4/2018	Letter – Alex Miller (MV)	Roger Kirchen (VADHR)	Historic structures work plan, shapefile submittal
7/2/1018	Email – Alex Miller (MV)	Roger Kirchen (VADHR)	Work plans follow up
8/3/2018	Email – Paul Web (TRC)	Roger Kirchen (VADHR)	Plans to file Resource Report (RR) 4 including Unanticipated Discovery Plan (UDP); invitation to site visits
9/14/2018	Roger Kirchen (VADHR)	Alex Miller (MV)	RR 4 review, acceptance of UDP
11/6/2018	Letter – Tracy Millis (TRC)	Roger Kirchen (VADHR)	Submittal of first draft Phase I archaeological survey report and first draft historic architectural survey report
2/13/2019	Letter - Roger Kirchen (VADHR)	Paul Web (TRC)	VA SHPO comments on first draft Phase I archaeological survey report and first draft historic architectural survey report
2/22/2019	Letter – Tracy Millis (TRC)	Roger Kirchen (VADHR)	Submittal of final first Phase I archaeological survey report
2/22/2019	Letter - Tracy Millis (TRC)	Roger Kirchen (VADHR)	Submittal of first draft report on Phase II testing at archaeological sites 44PY271, PY445, and PY451
3/25/2019	Letter – Tracy Millis (TRC)	Roger Kirchen (VADHR)	Submittal of second draft report on Phase II testing at archaeological sites 44PY375, PY449, and PY455
5/3/2019	Email – Paul Webb (TRC)	Rodger Kirchen (VADHR)	Attached PowerPoint slides of 4/25/19 visit to site 31RK217

TABLE 4.10-1 **Communications between Mountain Valley and the Virginia and North Carolina SHPOs for the Southgate Project**			
Date	**Type/Author (Affiliation)**	**Recipient (Affiliation)**	**Subject**
5/10/2019	Letter – Roger Kirchen (VADHR)	Paul Web (TRC)	VA SHPO comments on first draft Phase II testing report
5/16/2019	Letter – Roger Kirchen (VADHR)	Paul Webb (TRC)	VA SHPO comments on report of Supplemental Phase II Testing at sites 44PY375, 44PY449, and 44PY55
10/14/2019	Letter – Tracy Millis (TRC)	Roger Kirchen (VADHR)	Submission of draft preservation and avoidance documentation
11/8/2019	Letter – Roger Kirchen (VADHR)	Paul Webb (TRC)	VA SHPO review of Addendum I Historic Architectural Survey Report
NORTH CAROLINA DEPARTMENT OF NATURAL AND CULTURAL RESOURCES			
4/27/2018	Letter – Alex Miller (MV)	Renee Gledhill-Earley (NCDNCR)	Project introduction package and request for comment
5/10/2018	Presentation – Alex Miller (MV)	NCDNRCR staff	PowerPoint presentation on Project
5/10/2018	Email – Susan Myers (NCDNRCR)	Paul Webb (TRC)	List of historical museums
5/17/2018	Email – Susan Myers (NCDNRCR)	Paul Webb (TRC)	Information on other cultural resources contacts
5/17/2018	Email – Alex Miller (MV)	Renee Gledhill-Earley (NCDNCR)	Project meeting
5/21/2018	Letter – Renee Gledhill-Earley (NCDNRCR)	Alex Miller (MV)	Comments on Project introduction package
5/21/2018	Letter – Ramona Bartos (NCDNCR)	Alex Miller (MV)	Survey recommendation
5/22/2018	Email – Susan Meyers (NCDNCR)	Paul Webb (TRC)	Information on other cultural resources contacts; Alamance and Rockingham listings
5/22/2018	Email – Renee Gledhill-Earley (NCDNCR)	Alex Miller (MV)	Request for map and consultation with federally-recognized tribes, state-recognized tribes, and NC Commission on Indian Affairs
5/29/2018	Email – Renee Gledhill-Earley (NCDNRCR)	Alex Miller (MV)	Request for map; no additional meeting needed

TABLE 4.10-1

Communications between Mountain Valley and the Virginia and North Carolina SHPOs for the Southgate Project

Date	Type/Author (Affiliation)	Recipient (Affiliation)	Subject
5/29/2018	Email – Alex Miller (MV)	Renee Gledhill-Earley (NCDNCR)	Approval to submit shapefiles
6/4/2018	Email – Alex Miller (MV)	Renee Gledhill-Earley (NCDNCR)	Work plans and shapefile submittal
6/12/2018	Telephone call – Paul Webb (TRC)	Susan Myers (NCDNRCR)	Project update; transition to Rosie Blewitt-Golsch
7/3/2018	Email – Paul Webb (TRC)	Rosie Blewitt-Golsch (NCDNCR)	Site number request
7/3/2018	Email – Alex Miller (MV)	NCDNCR	Request for 50 site numbers
7/5/2018	Letter – Renee Gledhill-Earley (NCDNCR)	Alex Miller (MV)	Comments on work plans, shape file; two historic properties may be affected (31AM867 and AM1516)
7/6/2018	Email – Rosie Blewitt-Golsch (NCDNRCR)	Paul Webb (TRC)	Site numbers
7/24/2018	Telephone call – Paul Webb (TRC)	John Mintz (NCDNCR)	Project website inquiry, site visit discussion
7/24/2018	Email – Paul Webb (TRC)	John Mintz (NCDNCR)	Scheduling site visit
7/24/2018	Email – John Mintz (NCDNCR)	Paul Webb (TRC)	Scheduling site visit
7/27/2018	Email – Lindsay Ferrante (NCDNCR)	Paul Webb (TRC)	Scheduling site visit
7/27/2018	Email – Paul Webb (TRC)	Lindsay Ferrante (NCDNCR)	Scheduling site visit
7/27/2018	Email – Lindsay Ferrante (NCDNCR)	Paul Webb (TRC)	Scheduling site visit
8/3/2018	Email – Paul Webb (TRC)	Renee Gledhill-Earley, John Mintz, Lindsay Ferrante, Rose Blewitt-Golsch (NCDNCR)	Site visits; upcoming RR 4 and UDP submittal
8/13/2018	Telephone call – Katie Harville (NCDNRCR)	Alex Miller (MV)	Landowner contact concerning Kerr Scott Farm
8/13/2018	Email – Paul Webb (TRC)	Renee Gledhill-Earley (NCDNCR)	Public version of RR4, privileged Figure 4-5.1
8/13/2018	ftp – Paul Webb (TRC)	Renee Gledhill-Earley (NCDNCR)	Sending privileged version of SHPO correspondence

TABLE 4.10-1

Communications between Mountain Valley and the Virginia and North Carolina SHPOs for the Southgate Project

Date	Type/Author (Affiliation)	Recipient (Affiliation)	Subject
8/13/2018	Email – Paul Webb (TRC)	Renee Gledhill-Earley (NCDNCR)	Revision of Archaeological Survey-Testing-Deep Testing Plan addressing 7/5/18 NCDNCR comments
8/21/2018	Meeting – Alex Miller (MV), Paul Webb, Tracy Milliis (TRC)	Lindsay Ferrante, Rosie Blewitt-Golsch, Kim Urban, Katie Harville (NCDNCR)	Field visit
9/6/2018	Letter - Ramona Bartos (NCDNCR)	Paul Webb (TRC)	Acknowledging receipt of draft survey reports, amended work plans for survey and testing, and approval of the UDP
9/6/2018	Email – Renee Gledhill-Earley (NCDNCR)	Alex Miller (MV)	Comments on revised work plan, RR4, and UDP
9/11/2018	Email – Paul Webb (TRC)	Rosie Blewitt-Golsch (NCDNRCR)	Site numbers requested
9/12/2018	Email – Paul Webb (TRC)	Rosie Blewitt-Golsch (NCDNCR)	Requested information on 31AM431
9/12/2018	Email – Rosie Blewitt-Golsch (NCDNCR)	Email – Paul Webb (TRC)	Site numbers, AM431 site form
9/26/2018	Email – Tracy Millis (TRC)	Rosie Blewitt-Golsch (NCDNCR)	Site numbers request
9/26/2018	Email – Rosie Blewitt-Golsch (NCDNCR)	Email – Tracy Millis (TRC)	Site numbers
10/2/2018	Email – Paul Webb (TRC)	Lindsay Ferrante (NCDNCR)	Setting up October meeting
10/2/2018	Email – Lindsay Ferrante (NCDNCR)	Paul Webb (TRC)	Setting up October meeting
11/6/2018	Letter - Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Submittal of draft Phase I Archaeological Survey reports and draft Historic Architecture Survey reports for NC
12/20/2018	Letter - Renee Gledhill-Earley (NCDNCR)	Tracy Millis (TRC)	NC SHPO comments on draft Phase I Archaeological Survey report and draft Historic Architecture Survey Report for NC
1/14/2019	Telephone call - John Mintz (NCDNCR)	Paul Webb (TRC)	Setting up a site visit

TABLE 4.10-1

Communications between Mountain Valley and the Virginia and North Carolina SHPOs for the Southgate Project

Date	Type/Author (Affiliation)	Recipient (Affiliation)	Subject
1/25/2019	Site Visit Meeting – Paul Webb, Jeff Johnson, Missy Emery, John Haefner, Chandra Wilson (TRC), Rich Estabrook (NextEra)	David Cranfored, Cassandra Pardo (NCDNCR)	Visit to archaeological field work in Alamance County, NC
3/13/2019	Letter – Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Conveyed copy of draft Phase II Testing Report for two sites in NC
3/28/2019	Letter – Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Conveyed copy of draft Phase I Archaeological Survey Addendum report for NC
4/15/2019	Letter – Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO comments on first draft Phase II Testing Report
4/24/2019	Letter – Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Conveyed copy of draft Phase II Testing Report for sites 31RK222, RK259, and RK261
4/29/2019	Letter – Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Conveyed copy of final Historic Architectural Survey report
5/3/2019	Email – Paul Webb (TRC)	John Mintz and Rosemarie Blewitt (NCDNCR)	Attached PowerPoint slides of 4/25/19 visit to site 31RK217
5/7/2019	Letter – Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO comments on first draft Phase I Archaeological Survey Addendum I Report
5/13/2019	Letter – Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Conveyed copy of draft Addendum Report 1 of the Historic Architectural Survey
5/20/2019	Email –Paul Webb (TRC)	John Mintz and Rosemarie Blewitt (NCDNCR)	Work plan for sites 31AM442 and AM447
5/24/2019	Letter – Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO comments on Phase II Archaeological Testing Report
6/18/2019	Letter – Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO comments on Revised Historic Architectural Survey Report

TABLE 4.10-1

Communications between Mountain Valley and the Virginia and North Carolina SHPOs for the Southgate Project

Date	Type/Author (Affiliation)	Recipient (Affiliation)	Subject
7/1/2019	Letter – Renee Gledhill-Early (NCDNCR)	Tracy Millis (TRC)	NC SHPO comments on Revised Historic Architectural Survey Report
7/22/2019	Letter – Ramona Bartos (NCDNCR)	Ted Karpynec (TRC)	NC SHPO comments on Draft Addendum Historic Architectural Survey Report
7/30/2019	Letter – Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO review of Final Addendum Report
9/19/2019	Letter – Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO review of draft Addendum 2 Archaeological Survey Report
10/2/2019	Letter – Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Conveyed copies of draft Treatment Plan for Site 31RK259 and Avoidance Plans for Sites 31RK216, 31RK228, 31RK230, 31RK237, 31RK239, and 31RK261
10/14/2019	Letter – Tracy Millis (TRC)	Renee Gledhill-Earley (NCDNCR)	Conveyed copies of draft Avoidance Plans for Sites 31AM441 and 31AM443
11/18/2019	Letter - Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO review of Final Archaeological Addendum 3 Survey Report
11/18/2019	Letter - Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO review of draft Treatment Plan for 31RK259 and Protection Plans for 31RK216, 31RK228, 31RK230, 31RK237, 31RK239, 31RK261, 31AM441, and 31AM443
12/3/2019	Letter - Ramona Bartos (NCDNCR)	Tracy Millis (TRC)	NC SHPO review of Phase II Archaeological Testing Report

a/ MV = Mountain Valley

TABLE 4.10-2

Indian Tribes and Native American Organizations Contacted by the FERC for the Southgate Project

Indian Tribes or Native American Organizations (contacts)	Sent the FERC's 8/9/18 NOI	Sent Letter from FERC on 10/16/18	Responses to FERC Contacts
FEDERALLY-RECOGNIZED TRIBES			
Absentee Shawnee Tribe of Oklahoma (c/o Edwina Butler-Wolfe, Governor; and Erin Thompson, THPO **a/**)	Yes	Yes	11/1/18 letter to FERC from Devon Frazier THPO conveyed a finding of "no adverse effects" and stated that the Tribe has no objections to the Project. The Tribe remains interested and should be contacted in the event of a discovery during construction
Catawba Indian Nation of South Carolina (c/o William Harris, Chief; and Wenonah Haire, THPO)	Yes	Yes	8/15/19 filing with FERC Caitlin Rodgers stated that Catawba Tribe has no concerns about impacts on traditional cultural properties, sacred sites, or Native American archaeological sites
Cayuga Nation of New York c/o Clint Halftown, Representative	Yes	Yes	None filed to date
Cherokee Nation of Oklahoma (c/o Bill John Baker, Chief; and Elizabeth Toombs, THPO)	Yes	Yes	1/8/19 email to FERC staff from Elizabeth Toombs THPO stating that Pittsylvania County, VA is outside the AOI for the Cherokee Nation of Oklahoma
Chickahominy Indian Tribe of Virginia (c/o Stephen Adkins, Chief)	Yes	No	None filed to date
Chickasaw Nation of Oklahoma c/o Bill Anoatubby, Governor	Yes	No	9/7/18 letter to FERC from Lisa John of Tribal Culture and Humanities Department stated that Virginia and North Carolina are outside of the homeland for the Chickasaw Nation

TABLE 4.10-2

Indian Tribes and Native American Organizations Contacted by the FERC for the Southgate Project

Indian Tribes or Native American Organizations (contacts)	Sent the FERC's 8/9/18 NOI	Sent Letter from FERC on 10/16/18	Responses to FERC Contacts
Choctaw Nation of Oklahoma (c/o Gary Batton, Chief)	Yes	Yes	9/7/18 letter to FERC stated that both Virginia and North Carolina are outside of the Tribe's homeland area. 1/24/19 letter to FERC from Lindsey Bilyeu, Senior Compliance Review Officer, stated that the Project area is outside the area of historic interest for the Choctaw Nation of Oklahoma. 9/18/19 letter to FERC from Lindsey Bilyeu, Senior Compliance Review Officer, stated that the Project is outside of the Tribe's area of historic interest.
Delaware Nation of Oklahoma (c/o Deborah Dotson, President; and Darren Hill, Cultural Preservation)	Yes	Yes	None filed to date
Delaware Tribe of Oklahoma (c/o Chester Brooks, Chief; and Susan Bachor, Historic Preservation)	Yes	Yes	None filed to date
Eastern Band of Cherokee Indians in North Carolina (c/o Richard Sneed, Chief; and Russell Townsend, THPO)	Yes	Yes	None filed to date
Eastern Division of Chickahominy Indian in Virginia (c/o Gerald Stewart)	Yes	Yes	None filed to date
Eastern Shawnee Tribe of Oklahoma (c/o Glenna Wallace, Chief; and Brett Barnes, THPO)	Yes	Yes	None filed to date
Jena Band of Choctaw Indians in Louisiana (c/o Cheryl Smith, Chief; and Alina Shively, THPO)	Yes	Yes	None filed to date

TABLE 4.10-2

Indian Tribes and Native American Organizations Contacted by the FERC for the Southgate Project

Indian Tribes or Native American Organizations (contacts)	Sent the FERC's 8/9/18 NOI	Sent Letter from FERC on 10/16/18	Responses to FERC Contacts
Mattaponi Tribe in Virginia (c/o Mark Custalow, Chief)	Yes	No	None filed to date
Mississippi Band of Choctaw Indians (c/o Phyliss Anderson, Chief)	Yes	Yes	None filed to date
Monacan Indian Nation in Virginia (c/o Dean Branham, Chief)	Yes	Yes	8/3/18 letter to FERC stated that Project would cross Tribe's ancestral lands and may affect properties of cultural significance to the Tribe. Requested meeting with FERC staff 11/16/18 letter to FERC requested Tribal attendance at all planning meetings, and requested copies of all cultural resources investigation reports for Tribal review. 12/31/18 motion to intervene 2/20/19 letter to FERC reiterating previous requests 7/1/19 letter to FERC commenting on cultural resources reports 9/16/19 letter to FERC commented on DEIS 11/11/19 letter to FERC with additional comments on DEIS
Muscogee (Creek) Nation of Oklahoma (c/o Raelynn Butler, Preservation Office)	Yes	Yes	None filed to date
Nansemond Indian Tribe in Virginia (c/o Lee Lockamy, Chief)	Yes	Yes	12/9/18 letter to FERC from Chief Samuel Bass requested meeting with FERC staff

TABLE 4.10-2

Indian Tribes and Native American Organizations Contacted by the FERC for the Southgate Project

Indian Tribes or Native American Organizations (contacts)	Sent the FERC's 8/9/18 NOI	Sent Letter from FERC on 10/16/18	Responses to FERC Contacts
Oneida Indian Nation of New York (c/o Raymond Halbritter, Representative; and Jessie Bergevin, Historian)	Yes	Yes	None filed to date
Oneida Nation of Wisconsin (c/o Tehassi Hill Chair; and Corina Williams, THPO)	Yes	Yes	None filed to date
Onondaga Nation of New York (c/o Sidney Hill, Chief; and Tony Gonyea, Faithkeeper)	Yes	Yes	None filed to date
Ottawa Tribe of Oklahoma (c/o Ethel Cook, Chief)	Yes	No	None filed to date
Pamunkey Indian Tribe in Virginia (c/o Robert Gray, Chief)	Yes	Yes	None filed to date
Poarch Band of Creek Indians in Alabama (c/o Stephanie Bryan, Chair; and Carolyn White, THPO)	Yes	Yes	None filed to date
Rappahannock Tribe in Virginia (c/o Ann Richardson, Chief	Yes	Yes	None filed to date
Saint Regis Mohawk Tribe of New York (Beverly Cook, Chief; and Arnold Printup, THPO)	Yes	Yes	None filed to date
Seneca Nation of New York (c/o Todd Gates, President; and Morris Abrams, THPO)	Yes	Yes	None filed to date
Seneca-Cayuga Nation of Oklahoma (c/o William Fisher, Chief; and William Tarrant, THPO)	Yes	Yes	None filed to date
Shawnee Tribe of Oklahoma (c/o Ron Sparkman, Chief; and Kim Jumper, Preservation Office)	Yes	Yes	None filed to date
Stockbridge-Munsee Community of Wisconsin (c/o Shannon Holsey, President; and Bonney Hartley, THPO)	Yes	No	None filed to date

TABLE 4.10-2 **Indian Tribes and Native American Organizations Contacted by the FERC for the Southgate Project**			
Indian Tribes or Native American Organizations (contacts)	**Sent the FERC's 8/9/18 NOI**	**Sent Letter from FERC on 10/16/18**	**Responses to FERC Contacts**
Tonawanda Band of Seneca in New York (c/o Rodger Hill, Chief; and Kevin Jonathan, NAGPRA Contact)	Yes	Yes	None filed to date
Tuscarora Nation of New York (c/o Leo Henry, Chief; and Neil Patterson, Environmental Program)	Yes	Yes	None filed to date
United Keetoowah Band of Cherokee Indians (c/o Joe Bunch, Chief; and Lisa Stopp, THPO)	Yes	Yes	None filed to date
Upper Mattaponi Tribe in Virginia (c/o Frank Adams, Chief)	Yes	Yes	12/7/18 letter to FERC from Chief Frank Adams requested meeting with FERC staff
STATE-RECOGNIZED NATIVE AMERICAN ORGANIZATIONS			
Cheroenhaka-Nottoway Tribe in Virginia (c/o Walt Brown, Chief)	Yes	No	None filed to date
Cohaire Tribe in North Carolina (c/o Freddie Carter, Chief; and Greg Jacobs, Executive Director)	Yes	No	None filed to date
Haliwa-Saponi Tribe in North Carolina (c/o Ogletree Richardson, Chief; and Michael Richardson, Chair)	Yes	No	None filed to date
Lumbee Tribe of North Carolina (c/o Harvey Godwin, Chair; and Dock Locklear, Administrator)	Yes	No	None filed to date
Meherrin Indian Tribe in North Carolina (c/o Wayne Brown, Chief; and Jonathan Caudill, Chair)	Yes	No	None filed to date
Nottoway Indian Tribe in Virginia (c/o Lynette Allston, Chief)	Yes	No	4/11/19 letter to FERC requesting consultations
Occaneechi Band of the Saponi Nation (c/o W.A. Hayes, Chair; and Vicki Jeffries, Administrator)	Yes	No	10/15/18 letter to FERC requested meeting with FERC staff

TABLE 4.10-2

Indian Tribes and Native American Organizations Contacted by the FERC for the Southgate Project

Indian Tribes or Native American Organizations (contacts)	Sent the FERC's 8/9/18 NOI	Sent Letter from FERC on 10/16/18	Responses to FERC Contacts
Patawomeck Indians of Virginia (c/o John Lightner, Chief)	Yes	No	None filed to date
Sappony Tribe in North Carolina (c/o Otis Martin, Chief; and Dante Desiderio, Executive Director)	Yes	No	8/2/18, 11/16/18, and 2/25/19 letters to FERC requested meeting with FERC staff 7/1/19 letter to FERC commenting on cultural resources reports 9/16/19 letter to FERC commented on DEIS 12/12/19 letter to FERC with additional comments on DEIS
Waccamaw Tribe in North Carolina (c/o Lacy Freeman, Chief; and Brenda Moore, Coordinator)	Yes	No	None filed to date

a/ THPO = Tribal Historic Preservation Officer

TABLE 4.10-3

Indian Tribes and Native American Organizations Contacted by Mountain Valley for the Southgate Project

Indian Tribes and Native American Organizations	Dates Contacted by Mountain Valley	Responses Back to Mountain Valley
FEDERALLY-RECOGNIZED TRIBES		
Absentee Shawnee Tribe of Oklahoma	11/2/18	None filed to date
Catawba Indian Nation in South Carolina	5/31/18, 6/1/18, 6/28/18, 7/11/18, 8/31/18, 9/5/18, 9/28/18, 11/2/18; 2/6/19, 2/27/19, 8/7/19	9/28/18 letter to Mountain Valley from Wenonah Haire, THPO, stated that the Tribe has no concerns about the Project's potential impacts on traditional cultural properties, sacred sites, or Native American archaeological sites 9/5/19 letter to Mountain Valley from Wenonah Haire, THPO, stated that the Tribe has no concerns about the Project's potential impacts on traditional cultural properties, sacred sites, or Native American archaeological sites
Cherokee Nation of Oklahoma	8/31/18, 11/2/18	None filed to date
Cheyenne River Sioux Tribe in South Dakota	6/6/18, 7/11/18, 8/31/18	None filed to date
Chickahominy Tribe in Virginia	5/31/18, 6/1/18, 6/12/18, 6/14/18,6/25/18 6/29/18, 7/11/18, 8/31/18, 9/6/18, 11/2/18; 2/6/19, 2/10/19, 2/27/19, 2/28/19, 8/7/19	5/1/19 meeting between Mountain Valley and Stephen Adkins and Ruth Hennamen regarding investigations
Choctaw Nation of Oklahoma	11/2/18	None filed to date
Delaware Nation of Oklahoma	6/6/18, 7/11/18, 8/31/18, 11/2/18	None filed to date
Delaware Tribe of Oklahoma	6/6/18, 7/11/18, 11/2/18	6/7/18 email to Mountain Valley from Brice Obermeyer stating that the Project is outside the Tribe's AOI
Eastern Band of Cherokee Indians in North Carolina	5/31/18, 6/1/18; 6/11/18, 6/29/18, 7/11/18, 8/31/18, 11/2/18; 2/6/19; 2/27/19, 2/28/19	6/29/18 email to Mountain Valley from Stephen Yerka requesting GIS shapefiles. 10/15/18 email to Mountain Valley from Stephen Yerka, Historic Preservation Specialist, stated that the Project is outside the designated traditional territory of the Tribe
Eastern Division of the Chickahominy Tribe in Virginia	5/31/18, 6/1/18, 6/12/18, 6/14/18, 8/21/18, 8/31/18, 9/6/18, 2/20/19, 2/27/19, 2/28/19, 4/16/19, 8/7/19	None filed to date
Eastern Shawnee Tribe of Oklahoma	6/6/18, 7/11/18, 8/31/18, 11/2/18	None filed to date

TABLE 4.10-3 **Indian Tribes and Native American Organizations Contacted by Mountain Valley for the Southgate Project**		
Indian Tribes and Native American Organizations	**Dates Contacted by Mountain Valley**	**Responses Back to Mountain Valley**
Jena Band of Choctaw Indians in Louisiana	11/2/18	None filed to date
Mattaponi Tribe in Virginia	11/2/18	None filed to date
Monacan Indian Nation in Virginia	5/31/18, 6/1/18; 6/12/18, 6/27/18, 7/11/18, 8/9/18, 8/15/18, 8/31/18, 10/9/18, 11/2/18, 2/6/19, 2/21/19, 2/26/19, 2/28/18, 3/29/19, 4/16/19	8/7/18 email from Marion Werkheiser (Cultural Heritage Partners) stating that her law firm represents Monacan Nation 10/9/18 telephone call to Mountain Valley from Marion Werkheiser (Cultural Heritage Partners) requesting updated maps 2/21/19 two emails to Mountain Valley from Ellen Chapman (Cultural Heritage Partners) regarding ftp site access 2/21/19 email to Mountain Valley from Ellen Chapman (Cultural Heritage Partners) acknowledging receipt of survey reports through ftp online site 2/25/19 email from Ellen Chapman (Cultural Heritage Partners) to Mountain Valley regarding confidential report sharing 2/26/19 email from Ellen Chapman (Cultural Heritage Partners) to Mountain Valley regarding confidential report sharing 2/27/19 email from Ellen Chapman (Cultural Heritage Partners) to Mountain Valley regarding project information 4/18/19 telephone call between Mountain Valley and Ellen Chapman (Cultural Heritage Partners) regarding tribal site visit
Muscogee (Creek) Nation of Oklahoma	6/6/18, 7/11/18, 8/31/18, 11/2/18	6/8/18 email to Mountain Valley from LeeAnne Wendt stating that the Project is outside the Tribe's AOI

TABLE 4.10-3

Indian Tribes and Native American Organizations Contacted by Mountain Valley for the Southgate Project

Indian Tribes and Native American Organizations	Dates Contacted by Mountain Valley	Responses Back to Mountain Valley
Nansemond Tribe in Virginia	5/31/18, 6/1/18, 6/11/18, 6/26/18, 7/11/18, 8/31/18, 9/6/18, 11/2/18, 2/6/19, 2/10/19, 2/18/19, 2/27/19, 2/28/19, 4/16/19, 8/7/19	6/11/18 email to Mountain Valley from Lee Lockamy with questions about the Project 4/29/19 telephone call between Mountain Valley and Sam Bass regarding meeting 5/1/19 meeting between Mountain Valley and Barry Bass in which he stated the tribe has no concerns at this point
Oneida Nation of Wisconsin	11/2/18	None filed to date
Ottawa Tribe of Oklahoma	11/2/18	None filed to date
Pamunkey Tribe in Virginia	5/31/18, 8/31/18, 11/2/18 2/6/19, 2/27/19, 2/28/19, 4/16/19	None filed to date
Poarch Band of Creek Indians in Alabama	11/2/18	None filed to date
Rappahannock Tribe in Virginia	5/31/18, 6/5/18, 7/11/18, 8/31/18, 9/6/18, 11/2/18, 2/6/19, 2/10/19, 2/27/19, 2/28/19, 4/16/19	9/6/18 5/10/2019 telephone call between Mountain Valley and Chief Anne Richardson regarding project
Rosebud Sioux Tribe in South Dakota	6/6/18, 6/7/18, 7/11/18, 8/31/18	None filed to date
Saint Regis Mohawk Tribe of New York	11/2/18	None filed to date
Seneca-Cayuga Nation of Oklahoma	11/2/18	None filed to date
Seneca Nation of Indians in New York	11/2/18	None filed to date
Shawnee Tribe of Oklahoma	11/2/18	None filed to date
Stockbridge-Munsee Community of Wisconsin	11/2/18	None filed to date
Tonawanda Band of Seneca in New York	11/218	None filed to date
Tuscarora Nation of New York	6/6/18, 7/11/18, 8/31/18	None filed to date
United Keetoowah Band of Cherokee Indians in Oklahoma	11/2/18	None filed to date
Upper Mattaponi Tribe in Virginia	5/30/18, 6/12/18, 6/25/18, 7/11/18, 8/31/18, 9/6/18, 11/2/18, 2/6/19, 2/27/19, 2/28/19, 4/16/19, 5/1/19, 8/7/19	5/1/19 telephone call between Mountain Valley and Chief Adams regarding reports

TABLE 4.10-3

Indian Tribes and Native American Organizations Contacted by Mountain Valley for the Southgate Project

Indian Tribes and Native American Organizations	Dates Contacted by Mountain Valley	Responses Back to Mountain Valley
STATE-RECOGNIZED NATIVE AMERICANS ORGANIZATIONS		
Cheroenhaka (Nottoway) Tribe in Virginia	8/3/18, 8/31/18, 11/2/18	None filed to date
Cohare Tribe in North Carolina	8/3/18, 8/31/18, 11/2/18	None filed to date
Haliwa-Saponi Indian Tribe in North Carolina	8/3/18, 8/31/18, 11/2/18	None filed to date
Lumbee Tribe in North Carolina	8/3/18, 8/31/18, 11/2/18	None filed to date
Meherrin Indian Tribe in North Carolina	8/3/18, 8/31/18, 11/2/18	None filed to date
Nottoway Tribe in Virginia	8/3/18, 8/31/18, 11/2/18, 4/23/19	4/23/19 email to Mountain Valley from Leroy Hardy confirming email received
Occaneechi Band of the Saponi Nation in North Carolina	8/3/18, 8/6/18, 8/14/18, 8/20/18, 8/31/18, 10/2/18, 10/4/18, 11/2/18, 2/6/19, 2/21/19, 2/25/19, 4/15/19, 5/17/19, 8/7/19, 10/4/19	8/17/18 email to Mountain Valley from Tony Hayes with copy of letter Tribe sent to Alamance County 8/24/18 telephone call to Mountain Valley from Tony Hayes with invitation for company to speak to the Band 10/5/18 email to Mountain Valley from Tony Hayes regarding company presentation to Band 4/15/19 email from Tony Hayes confirming attendance at site visit 5/15/19 telephone call between Mountain Valley and Tony Hayes regarding delivery of reports
Patawomeck Tribe in Virginia	8/3/18, 8/31/18, 11/2/18	None filed to date
Sappony Tribe in North Carolina	8/3/18, 8/9/18, 8/15/18, 8/31/18, 10/9/18, 11/2/18, 2/6/19, 2/21/19, 2/26/19, 2/28/18, 3/29/19	8/7/18 email from Marion Werkheiser (Cultural Heritage Partners) stating that her law firm represents Sappony 10/9/18 telephone call to Mountain Valley from Marion Werkheiser, (Cultural Heritage Partners) requesting updated maps of Project 2/10/19 email to Mountain Valley from Charlene Martin of Sappony stating intention to attend 3/14/19 meeting and site visit 2/21/19 two emails to Mountain Valley from Ellen Chapman (Cultural Heritage Partners) regarding FTP site access

TABLE 4.10-3 **Indian Tribes and Native American Organizations Contacted by Mountain Valley for the Southgate Project**		
Indian Tribes and Native American Organizations	**Dates Contacted by Mountain Valley**	**Responses Back to Mountain Valley**
		2/25/19 email from Ellen Chapman (Cultural Heritage Partners) to Mountain Valley regarding confidential report sharing 2/26/19 email from Ellen Chapman (Cultural Heritage Partners) to Mountain Valley regarding confidential report sharing 2/27/19 email from Ellen Chapman (Cultural Heritage Partners) to Mountain Valley regarding project information
Waccamaw Siouan Tribe in North Carolina	8/3/18, 8/31/18, 11/2/18	None filed to date

TABLE 4.10-6

Cultural Resources Issues Raised to the FERC from Citizens During Scoping, and Public Sessions for Comments on the DEIS for the Southgate Project.

Name	Date/Session	Accession No.	Comments
LETTERS FILED WITH THE FERC DURING THE SCOPING PERIOD			
Mel Aldridge and Angela Hinton	August 30, 2018	20180830-0008	Their property has two buildings listed on the Alamance County Architectural Inventory as Historic Places and two family cemeteries dating before 1835
William Fonville	September 5, 2018	200180905-0027	Home was built in late eighteen hundreds
Bruce and Susan Taylor	September 6, 2018	20180906-0014	Historic site (Burlington-Hillsborough Stage Coach Trail) on property
Abigayle Faulkner	September 10, 2018	20180910-5050	Archaeological site 31AM431 on property
Kate Buble	September 10, 2018	20180910-5120	Concerned about impacts on Haw River Trail, Glencoe Mill Village, and Arches Grove United Church of Christ
Susan Moore	September 12, 2018	20180912-0008	Farm dates back to 1810 and includes family cemetery and Native American archaeological site
STATEMENTS MADE AT PUBLIC SCOPING MEETINGS			
Susan Moore	August 20, 2018 Reidsville, NC	20181004-4006; 20180921-4000	Farm dates back to 1810. There is a family cemetery on the property
William Hunt	August 20, 2018 Reidsville, NC	20181004-4006	He is Native American (Lumberton). The Haliwa Tribe is in the area. Project should not interfere with the use of sacred burial grounds. There is a native graveyard on land of neighbor Slate Stones
Jake Helms	August 20, 2018 Reidsville, NC	20180921-4000	Home sits within Car Scott Farm dating to 1760s, listed on state historic register and federal NRHP
Michelle Morris	August 23, 2018 Haw River, NC	20180921-4000	Home of Governor Scott, designed and built by Jessie Ray – Car Scott Farm (AM641) on NRHP
Patsy Madrin	August 23, 2018 Haw River, NC	20180921-4000	Family has been on land since 1819. Sissiphaw Indians on land, found Native American artifacts
LETTERS FILED WITH THE FERC COMMENTING ON THE DEIS			
Robert Wiltaskins	August 19, 2019	20190906-3055	Indian mound would be in the way of the pipeline route
Crystal Chandler	August 22, 2019	20190906-3055	Avoid Deep Creek Church and Cemetery

TABLE 4.10-6

Cultural Resources Issues Raised to the FERC from Citizens During Scoping, and Public Sessions for Comments on the DEIS for the Southgate Project.

Name	Date/Session	Accession No.	Comments
Jeannie Ambrose	September 16, 2019	20190917-0006	Damages to potential archaeological sites and historic structures could occur. What are the mitigation measures that would be taken and when.
Blue Ridge Environmental Defense League	September 16, 2019	20190916-5106	More input from tribes is needed.
Ann Rodgers	September 16, 2019	20190916-5178	Avoid Little Cherrystone historic site
STATEMENTS MADE AT PUBLIC SESSIONS TO TAKE COMMENTS ON THE DEIS			
Amiee Tilley	August 19, 2019 Wentworth, NC	201990923-4000	Church and cemetery near her land
Dr. Walker	August 19, 2019 Wentworth, NC	201990923-4000	Old homeplace built in 1857
Ann Rodgers	August 20, 2019 Chatham, VA	201990923-4001	Interested in FOIA request about cultural resources
Mark Joyner	August 20, 2019 Chatham, VA	201990923-4001	Contact Danville Historical Society. Project may affect Mountain View historical site
Sonja Ingram	August 20, 2019 Chatham, VA	201990923-4001	Send copies of survey reports to Preservation Virginia. Avoid Little Cherrystone historical site and cemetery
Carolyn Hansely-Mece	August 22, 2019 Haw River, NC	201990923-4002	Archaeological surveys not completed
Crystal Cavalier	August 22, 2019 Haw River, NC	201990923-4002	Member of Occaneechi Band of Saponi Nation. There are undocumented graves where the pipeline is going. Clams are culturally utilized
Jason Crazy Bear Tircuit Keck	August 22, 2019 Haw River, NC	201990923-4002	Married into Occaneechi Saponi Tribe. Found where the burial grounds are. Haw River is sacred.

TABLE 4.10-8

Archaeological Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia

Site Number (Name)	Cultural Type	TRC Evaluation	SHPO Evaluation (Date)	Future Work
44PY261 a/	Historic artifact scatter	Not eligible	Not eligible (2/13/19)	None
44PY270 a/	Prehistoric camp with Early and Late Woodland occupations	After testing – Eligible	Potentially eligible (2/13/19)	No additional work in APE - fence and avoid
44PY271 a/	Prehistoric lithic scatter	After testing – Not eligible	Not eligible (5/10/19)	None
44PY281 a/	Prehistoric lithic scatter	Unassessed	Potentially eligible (2/13/19)	Avoid
44PY358 a/	Multi-component: Prehistoric lithic scatter; and Historic isolated find	Unassessed	Unevaluated (2/13/19)	Avoid
44PY375 a/	Multi-component: Prehistoric lithic scatter; and Historic farmstead	After testing – Not eligible	Portion in APE not significant (5/16/19)	None
44PY442 a/	Historic farmstead	Not eligible	Not eligible (2/13/19)	None
44PY445 b/	Historic farmstead	After testing – Not eligible	Portion in APE not significant (5/10/19)	None
44PY446 b/	Prehistoric lithic scatter with an Early Woodland occupation	Not eligible	Not eligible (2/13/19)	None
44PY447 b/	Prehistoric lithic scatter with an Late Archaic and Woodland occupations	Unassessed	Potentially eligible (2/13/19)	Avoid
44PY448 b/	Prehistoric lithic scatter	Not eligible	Not eligible (2/13/19)	None
44PY449 b/	Multi-component: Prehistoric lithic scatter with Woodland occupation; and Historic isolated find	After testing - Eligible	Potentially eligible (2/13/19)	Avoid
44PY450 b/	Prehistoric lithic scatter	Not eligible	Not eligible (2/13/19)	None

TABLE 4.10-8 **Archaeological Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia**				
Site Number (Name)	**Cultural Type**	**TRC Evaluation**	**SHPO Evaluation (Date)**	**Future Work**
44PY451 b/	Multi-component: Prehistoric lithic scatter; and Historic farmstead	After testing – Not eligible	Portion in APE not significant (5/10/19)	None
44PY452 b/	Prehistoric lithic scatter with Woodland occupation	Unassessed	Unevaluated (2/13/19)	Avoid
44PY453 b/	Multi-component: Prehistoric lithic scatter; and Historic isolated find	Not eligible	Not eligible (2/13/19)	None
44PY454 b/	Historic structural ruins	Unassessed	Potentially eligible (2/13/19)	Avoid
44PY455 b/	Historic structural ruins	After testing – Not eligible	Portion in APE not significant (5/16/19)	None
44PY456 b/	Multi-component: Prehistoric lithic scatter with Woodland occupation; and Historic artifact scatter	Not eligible	Not eligible (2/13/19)	None
44PY457 b/	Prehistoric lithic scatter	Not eligible	Not eligible (2/13/19)	None
44PY458 b/	Prehistoric lithic scatter	Not eligible	Not eligible (2/13/19)	None
44PY459 b/	Prehistoric camp with Early Archaic occupation	Not eligible	Not eligible (2/13/19)	None
44PY460 b/	Prehistoric camp with Early Archaic occupation	Not eligible	Not eligible (2/13/19)	None
44PY473	Prehistoric lithic scatter	Not eligible	Not eligible (11/8/19)	None
44PY474	Prehistoric lithic scatter	Not eligible	Not eligible (11/8/19)	None
44PY475	Prehistoric lithic scatter	Not eligible	Not eligible (11/8/19)	None
44PY476	Multicomponent: Prehistoric lithic	Portion in APE- Not eligible	Unevaluated (11/8/19)	None

TABLE 4.10-8

Archaeological Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia

Site Number (Name)	Cultural Type	TRC Evaluation	SHPO Evaluation (Date)	Future Work
	scatter and Historic artifact scatter			
44PY477/71-5732	Historic farmstead	Potentially eligible	Potentially eligible (11/8/19)	Avoid
44PY478	Historic house	Not eligible	Not eligible (11/8/19)	None
44PY479 c/	Prehistoric camp with Late Archaic, and Middle and Late Woodland occupations	After testing – Eligible	Unknown	Avoid or mitigate

a/ Previously recorded site relocated by Mountain Valley
b/ Site newly recorded by Mountain Valley during 2018 surveys
c/ Site newly recorded by Mountain Valley during 2018-2019 surveys

TABLE 4.10-9

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
ALONG PIPELINE ROUTE					
71-4 Belle Grove Manor a/	House (1796) and cemetery	VADHR (2014) TRC (2019)	Potentially eligible	Unknown	Avoid
b/ 25 Mountain View Manor a/	House (1840) and cemetery	VHLC (1979) TRC (2019)	Listed in NRHP	Unknown	Avoid
36 Little Cherrystone Manor/Wooding Cemetery a/	House (1800) and cemetery	(1969) TRC (2018)	Listed in NRHP	2/13/19 Listed in NRHP	Avoid
5033 Belle Grove Church a/	Church and cemetery (1940)	VDOT (1997) TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5208 a/	House (1946)	Berger (2005) TRC (2018)	Not eligible	2/13/19 Not eligible	None
5209 a/	House (1945)	Berger (2005) TRC (2018)	Not eligible	2/13/19 Not eligible	None
5210 a/	House (1935)	Berger (2005) TRC (2018)	Not eligible	2/13/19 Not eligible	None
5211 a/	Farm with house (1880)	Berger (2005) TRC (2018)	Not eligible	2/13/19 Not eligible	None
5212 a/	Farm with house (1923)	Berger (2006) TRC (2018)	Not eligible	2/13/19 Eligible	Avoid
5218 a/	House (1900)	Berger (2006) TRC (2018)	Not eligible	2/13/19 Not eligible	None
5219 a/	Log tobacco barn (1900)	VADHR (2006) TRC (2019)	Not eligible	Unknown	None
5225 (44PY284) Wells Cemetery a/	Cemetery (1910-1940)	Berger (2005) TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5226 (44PY272) a/	Cemetery	Berger (2006) TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5227 (44PY273) Wallor Family Cemetery a/	Cemetery (1812-1894)	Berger (2005) TRC (2018)	Eligible	2/13/19 Treat as eligible	Avoid
5228 a/	House foundations	Berger (2016) TRC (2019)	Not eligible	2016 Unevaluated	None
5333	House (1900)	TRC (2019)	Not eligible	Unknown	None

TABLE 4.10-9

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
5566	Tobacco barn	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5567 Lowe Residence	Farm with house (1952)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5585	House (1965)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5586	House (1965)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5588	House (1950)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5594	House (1936)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5595 Perkins Cemetery	Farm with houses (1900, 1960) and cemetery	TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5597	House (1940)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5598 Norfolk Southern Railroad	Active railroad (1894)	TRC (2018)	Potentially eligible	2/13/19 Treat as eligible	Avoid or research
5599	House (1964)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5600	Tobacco barn	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5601	Storage shed associated with mobile home	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5602	House (1888)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5604	House (1964)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5615	House (1960)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5622	Cemetery (1918)	TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5623	Cemetery	TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5723	House (1960)	TRC (2019)	Not eligible	Unknown	None
5724	House (1961)	TRC (2019)	Not eligible	Unknown	None

TABLE 4.10-9 **Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia**					
Site Number (Name)	**Type (Year Built)**	**Recorder (Year)**	**TRC Evaluation**	**SHPO Evaluation**	**Future Work**
5728	Log house and tobacco barn	TRC (2019)	Not eligible	Unknown	None
WITHIN YARDS AND STAGING AREAS					
5525 a/ Gafford Cemetery	Cemetery associated with Gafford house	New South Associates (2017) TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5526 Gafford House a/	House (1850)	New South Associates (2017) TRC (2018)	Not eligible	6/27/17 Not eligible 2/13/19 Not eligible	None
5727 Norfolk Southern Railroad	Active railroad (1929)	TRC (2019)	Potentially eligible	Unknown	Avoid or mitigate
5730	House (1963)	TRC (2019)	Not eligible	Unknown	None
5731 Cascade Primitive Baptist Church	Church (1920) and cemetery	TRC (2019)	Not eligible	Unknown	Avoid
5732 (44PY477)	Houses (1900) and cemetery	TRC (2019)	Potentially eligible	Unknown	Avoid or mitigate
5733	House (1900)	TRC (2019)	Not eligible	Unknown	None
5734	House (1940)	TRC (2019)	Not eligible	Unknown	None
5735	Cemetery	TRC (2019)	Not eligible	Unknown	Avoid
5736	Farm with two houses (1900 and 1944)	TRC (2019)	Not eligible	Unknown	None
5737	Building ruins	TRC (2019)	Not eligible	Unknown	None
5738	Commercial building	TRC (2019)	Not eligible	Unknown	None
5739	House (1969)	TRC (2019)	Not eligible	Unknown	None
5740	House (1969)	TRC (2019)	Not eligible	Unknown	None
5741	House (1973)	TRC (2019)	Not eligible	Unknown	None
5742	Tobacco barn	TRC (2019)	Not eligible	Unknown	None
ALONG ACCESS ROADS					
71-5219 a/	Tobacco barn (1900)	Berger (2006) TRC (2019)	Not eligible	Unknown	None

TABLE 4.10-9

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
5222 Giles Log House a/	House (1930)	Berger (2006) TRC (2018)	Potentially eligible	2/13/19 Potentially eligible	Avoid
5521 a/	Farm with house (1900)	Berger (2006) TRC (2018)	Not eligible	2/13/19 Not eligible	None
5524 Transco Compressor Station 165 a/	Industrial facility (1949)	New South (2015) TRC (2019)	Not eligible	Unknown	None
5545 a/	House (1958)	Cardno (2018) TRC (2019)	Not eligible	Unknown	None
5570	Farm with house (1920)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5571 Batterman Family Farm	Farm with house (1923)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5572	House (1939)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5581	Farm with house (1935)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5582	Farm with house (1950)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5583	Farm with house (1870)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5584	Farm with house (1940)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5592	Tobacco barn (1870)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5593	House, tobacco barn, and cemetery	TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5596 Green Cemetery	Cemetery	TRC (2018)	Not eligible	2/13/19 Not eligible	Avoid
5606 Keatts Farm	Farm with houses (1880, 1970)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5607	Farm with house (1920)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5608	House (1950)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5609	Farm with house (1900)	TRC (2018)	Not eligible	2/13/19 Not eligible	None

TABLE 4.10-9

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in Virginia

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
5612	Farm with house (1870)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5614	House (1880)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5618	House (1966)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5619	Tobacco barn (1881)	TRC (2018)	Not eligible	2/13/19 Not eligible	None
5620	Cemetery	TRC (2019)	Not eligible	Unknown	Avoid
5712	House (1880)	TRC (2019)	Not eligible	Unknown	None

a/ Previously recorded site relocated by Mountain Valley

b/ All site numbers for historic architectural sites recorded in Pittsylvania County, Virginia have the prefix "71" – which is deleted from this table because it is redundant

TABLE 4.10-10

Archaeological Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Cultural Type	TRC Evaluation	SHPO Evaluation (Date)	Future Work
ALAMANCE COUNTY				
31AM414	Multi-component: Prehistoric lithic scatter with Early and Late Archaic occupations; and Historic artifact scatter	Not eligible in APE	Unassessed (12/20/18) Not eligible in APE (12/3/19)	Fence and avoid
31AM416	Prehistoric lithic scatter	Not eligible	Not eligible (12/29/18)	None
31AM424	Prehistoric lithic scatter	Not eligible	Not eligible (12/29/18)	None
31AM425	Prehistoric lithic scatter with a Middle Archaic occupation	Not eligible	Not eligible (12/29/18)	None
31AM426	Multi-component: Prehistoric lithic scatter and Historic artifact scatter	Not eligible	Not eligible (12/29/18)	None
31AM427	Historic springhouse	Not eligible	Not eligible (12/29/18)	None
31AM428	Multi-component: Prehistoric lithic scatter with a Woodland occupation; and Historic artifact scatter	Not eligible	Not eligible (12/29/18)	None
31AM432	Prehistoric lithic scatter with a Woodland occupation;	Not eligible	Not eligible (12/29/18)	None
31AM435	Prehistoric lithic scatter with Middle and Late Archaic occupations	Not eligible	Not eligible in direct APE; unassessed outside (12/20/18)	None
31AM437	Prehistoric lithic scatter	Not eligible	Not eligible (12/29/18)	None
31AM438	Multi-component: Prehistoric lithic scatter; and Historic artifact scatter	Not eligible	Not eligible in APE (5/7/19)	None
31AM439	Historic structure and artifact scatter	Not eligible	Not eligible in APE (5/7/19)	None

TABLE 4.10-10

Archaeological Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Cultural Type	TRC Evaluation	SHPO Evaluation (Date)	Future Work
31AM440	Prehistoric lithic scatter	Not eligible	Not eligible (5/7/19)	None
31AM441	Prehistoric lithic scatter with Woodland occupation	Unassessed	Needs additional investigations (5/7/19)	Avoid
31AM442	Prehistoric lithic scatter with Middle to Late Woodland occupations	Not eligible in APE	Unassessed (5/7/19) Not eligible in APE (12/3/19)	Fence and avoid
31AM443 Deep Creek Primitive Baptist Church	Historic church (1890) and cemetery	Not eligible	Not eligible (5/7/19)	Avoid
31AM445	Multi-component: Prehistoric isolated artifact and Historic artifact scatter	Not eligible in APE	Not eligible (9/19/19)	None
31AM447	Prehistoric lithic scatter with a Woodland occupation	Not eligible in APE	Unassessed (9/19/19) Not eligible in APE (12/3/19)	None
31AM451	Prehistoric lithic scatter with Woodland occupation	Unassessed	Unassessed Avoid (11/18/19)	Avoid
31AM452	Prehistoric lithic scatter	Unassessed	Potentially eligible (11/18/19)	Avoid or test
31AM454	Prehistoric lithic scatter with Middle Archaic occupation	Not eligible	Not eligible (11/18/19)	None
31AM455	Prehistoric lithic scatter	Not eligible	Not eligible (11/18/19)	None
ROCKINGHAM COUNTY				
31RK44 a/	Multi-component: Prehistoric lithic scatter with Woodland occupation; and Historic artifact scatter	Unassessed	Unassessed (12/20/18)	Avoid
31RK97 a/	Prehistoric lithic scatter with Middle Archaic and Late Woodland occupations	Unevaluated	Needs additional investigations (5/7/19)	Test

TABLE 4.10-10

Archaeological Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Cultural Type	TRC Evaluation	SHPO Evaluation (Date)	Future Work
31RK216	Historic cemetery	Not eligible	Unassessed (12/20/18)	Avoid
31RK217	Prehistoric lithic scatter with Late Woodland occupation	Not eligible in APE	Unassessed (12/20/18) Not eligible in APE (12/3/19)	Avoid with HDD
31RK220	Historic ruins and artifact scatter	Not eligible	Not eligible (12/29/18)	None
31RK221	Historic ruins and artifact scatter	After testing – Not eligible	Unassessed (12/20/18) Not eligible in APE (4/15/19)	None
31RK222	Prehistoric lithic scatter with a Woodland occupation	After testing - Eligible	Eligible (5/24/19)	Avoid
31RK225	Prehistoric lithic scatter with a Woodland occupation	Not eligible	Not eligible (12/29/18)	None
31RK226	Prehistoric lithic scatter	Not eligible	Not eligible (12/29/18)	None
31RK228	Historic cemetery	Not eligible	Unassessed (12/20/18)	Avoid
31RK229	Historic ruins and artifact scatter	Unassessed	Unassessed (12/20/18)	Test
31RK230	Historic ruins and artifact scatter	Unassessed	Unassessed (12/20/18)	Avoid
31RK234 Settle Cemetery RK1531	Historic cemetery (1829 – 1900)	Unassessed	Unassessed (12/20/18)	Fence and avoid
31RK235	Multi-component: Prehistoric lithic scatter with Early Archaic and Woodland occupations; and Historic artifacts	After testing Not eligible in APE	Not eligible in APE (12/3/19)	Avoid
31RK236	Historic cemetery	Not eligible	Not eligible	Avoid
31RK237	Historic cemetery	Not eligible	Unassessed (12/20/18)	Avoid
31RK238	Prehistoric lithic scatter	After testing Not eligible	Not eligible in APE (4/15/19)	None
31RK239	Prehistoric lithic scatter	Unassessed	Unassessed (12/20/18)	Avoid

TABLE 4.10-10

Archaeological Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Cultural Type	TRC Evaluation	SHPO Evaluation (Date)	Future Work
31RK242	Prehistoric lithic scatter	Not eligible	Not eligible (12/20/18)	None
31RK243	Prehistoric lithic scatter with Late Archaic occupation	Not eligible	Unknown	None
31RK244	Historic ruins and artifact scatter	Not eligible	Not eligible in direct APE; unassessed outside (12/20/18)	None
31RK245	Multi-component: Prehistoric lithic scatter; and Historic ruins and artifact scatter	After testing – Not eligible	Not eligible (12/20/18)	None
31RK247	Multi-component: Prehistoric lithic scatter; and Historic artifact scatter	After testing Not eligible	Unassessed (12/20/18) Not eligible in APE (12/3/19)	Fence and avoid
31RK249	Prehistoric lithic scatter	Not eligible	Not eligible (12/20/18)	None
31RK259	Prehistoric lithic scatter with a Late Woodland occupation	After testing - Eligible	Eligible (5/24/19) Accepted Treatment Plan (11/18/19)	Mitigate
31RK261	Prehistoric lithic scatter with a Late Woodland occupation	After testing -- Eligible – non-contributing in APE	Eligible (5/24/19)	Avoid
31RK262	Prehistoric lithic scatter	Not eligible	Not eligible (5/7/19)	None
31RK266	Prehistoric lithic scatter	Not eligible	Not eligible in APE (5/7/19)	None
31RK268	Prehistoric lithic scatter	Not eligible	Not eligible in APE (5/7/19)	None

a/ Previously recorded site relocated by Mountain Valley

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
ALONG PIPELINE ROUTE					
<u>Alamance County</u>					
AM203/1516 <u>a/</u> T.M. Holt Mfg	Textile mill (1844)	NCDAH (1978) TRC (2018) (April 2019)	Not eligible	12/20/18 Likely eligible 7/1/19 Not eligible	None
AM209 John Ruffines House	House	Lounsbury 1978 TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM225 <u>a/</u> Triple A Mill House	House (1890)	Alamance County (1978) TRC (2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM266 <u>a/</u> Jim McClure House	House (1897)	Alamance County (1978) TRC (2018) (April 2019)	Potentially eligible – No effect	12/20/18 May be eligible 7/1/19 No effect	None
AM350 <u>a/</u> Robertson House	House (1890)	Alamance County (1978) TRC (2018) (April 2019)	Potentially eligible – No effect	12/20/18 May be eligible 7/1/19 No effect	None
AM360 <u>a/</u> Chesley Roney House	House (1890)	ACHPC (2014) TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM447 <u>a/</u> Captain Sam Vest House	House (1896)	Alamance County (1978) TRC (2018) (April 2019) (December 2019)	Eligible – No effect	12/20/18 May be eligible 7/1/19 No effect	None
AM867 <u>a/</u> Granite Mill	Textile mill (1844)	Fearnbach (2017) TRC (2018) (April 2019)	Listed in NRHP – No effect	12/20/18 Listed in NRHP	Avoid
AM1520 <u>a/</u> J.M. Jordan House	House (1915)	Briggs (2002) TRC (November 2018) (April 2019)	Not eligible	12/20/18 Assessment incomplete 6/18/19 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
AM1522 a/ G.L. Lewis Farmstead	House (1910)	Bakau et al. (2001) TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM1603 a/ Deep Creek Primitive Baptist Church	Church (1890) & cemetery	ACHPC (2014) TRC (May 2019)	Not eligible	7/22/19 Not eligible	Avoid
AM2407/2408 a/ Cora Mill/ Tabardrey Mill Warehouse	Textile mill (1895)	Kim et al. (2002) TRC (November 2018) (April 2019)	Not eligible	12/20/18 Assessment incomplete 7/18/19 Not eligible	None
AM2506 Ace Speedway	Automobile race track (1956)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2538	House (1939)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2539	House (1915)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2544	House (1950)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2557	House (1950)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2558	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2559	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2560	House (1957)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
AM2561	House (1952)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2562	House (1956)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2563	House (1956)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2565	House (1957)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2566	House (1954)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2567	House (1954)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2568	House (1954)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2569	House (1960)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2570	House (1958)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2571	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2572	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2573	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2574	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
AM2575	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2576	House (1954)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2577	House (1958)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2578	House (1956)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2579	House (1956)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2580	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2581	House (1958)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2582	House (1958)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2583	House (1958)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2584	House (1920)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2585 First Baptist Church of Haw River	Church (1960)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2586 Remnants & Textiles Decorative Fabrics	Commercial structure (1956)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
AM2587	House (1961)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2588 Edwards Automotive Products and Childrey House WWII Home Front Museum	Commercial buildings (1947 & 1950)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2589	House (1917)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2590 R. Flynt Building	Commercial structure (1920)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2592	Commercial structure (1903)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2593	House (1924)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2594	House (1929)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2595	Warehouse (1968)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2597	Commercial structure (1901)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2598	Culvert (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2600	House (1920)	TRC (November 2018) (April 2019)	Not eligible	6/18/19 Not eligible	None
AM2601	House (1912)	TRC (November 2018) (April 2019)	Not eligible	6/18/19 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
AM2602	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2603 North Carolina Railroad	Two-sets active railroad tracks (1894)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2610	House (1954)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2611	Commercial structure (1960)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2613	Commercial structure (1966)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2617	House (1973)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2618	House (1973)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2619	House (1964)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2620	House (1955)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2621	House (1935)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2622	House (1900)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2625	House (1971)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2626	House (1971)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2627	House (1974)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2629	Houses (1952 - 1969)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2630	House (1971)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2631	House (1893)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
AM2632	House (1900)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2635	House (1910)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2636	House (1972)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2648	House (1952)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2649	House (1940)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2650	House (1928)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2652	House (1962)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2653	House (1936)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2655	House (1950)	TRC (October 2019)	Not eligible	Unknown	None
AM2656	House (1938)	TRC (October 2019)	Not eligible	Unknown	None
Rockingham County					
RK1661	House (1947)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1664 Abandoned former bus station	Commercial structure (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1668 RK1792	Outbuilding	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1676	Tobacco barn (1930)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1681	Tobacco barn (1920)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None

TABLE 4.10-11					
Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina					
Site Number (Name)	**Type (Year Built)**	**Recorder (Year)**	**TRC Evaluation**	**SHPO Evaluation**	**Future Work**
RK1682	Farmstead with house (1932)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1685	House (1930)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1689	Tobacco barn (1920)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1696	House (1962)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1699	House (1947)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1701	House (1906)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1702	Commercial structure (1932)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1704 American Tobacco Company Plant	Commercial structure (1920)	TRC (November 2018) (April 2019)	Not eligible	6/18/19 Not eligible	None
RK1705	House (1949)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1706	House (1947)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1707	House (1925)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1708	House (1929)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1711	House (1950)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
RK1717	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1718	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1719	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1720	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1721	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1722	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1723	House (1940)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1745	House (1955)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1758	Farm with house (1926)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1760	Tobacco barn (1930) and shed	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1768	House (1900)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1790	House (1924)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1791	House (1947)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1792	Farm with house (1921)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
RK1793	House (1955)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1794	House (1970)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1796	House (1915)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1798	House (1911)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1799	House (1956)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1800	House (1920)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1801	House (1962)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1818	Farm with house (1958)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1819	Farm outbuildings (1945)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
RK1820	Log house (1940)	TRC (May 2019)	Not eligible	7/22/18 Not eligible	None
WITHIN YARDS AND STAGING AREAS					
<u>**Guilford County**</u>					
GF1536 Shopping Strip	Commercial structures (1972)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
GF9109	House (1927)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
GF9110	House (1970)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
GF9111	House (1969)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
GF9114	House (1957)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
GF9115	Commercial structure (1960)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
GF9116 Norfolk Southern Railroad	Two sets active railroad tracks (1894/1939)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
Rockingham County					
RK1769 Norfolk Southern	Two active sets of railroad tracks (1894)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1770 First Baptist Church of Draper	Church (1962)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1802 Norfolk Southern	One set of active railroad tracks (1894)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1803	Commercial plant (1967)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1804	Commercial (1973)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1808	House (1932)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1811	Commercial (1922)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1812	House (1945)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
ALONG ACCESS ROADS					
Alamance County					
AM2527	House (1942)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2564	House (1954)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
AM2623	House (1955)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2624	House (1969)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
AM2634	House (1960)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2644	House (1961)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2645	House (1930)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2646	House (1963)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2647	House (1950)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
AM2654	House (1972)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
Rockingham County					
RK1086 a/ part of Willow Oak Plantation	Barn (1890)	Butler et al. (1975) TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1396 a/	House (1900)	Woodward (2002) TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1672	Hunting cabin (1970)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1738	Farmstead with house (1900)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1753	House (1967)	TRC (November 2018) (April 2019)	Not eligible	12/20/18 Not eligible	None
RK1784	House (1946)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1787	Farm with house (1959)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1789	House (1936)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1795	House (1971)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None

TABLE 4.10-11

Historic Architectural Sites Identified by Mountain Valley in the Direct APE of the Southgate Project in North Carolina

Site Number (Name)	Type (Year Built)	Recorder (Year)	TRC Evaluation	SHPO Evaluation	Future Work
RK1797	House (1965)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1821	House (1950)	TRC (May 2019)	Not eligible	7/22/19 Not eligible	None
RK1822	House (1930)	TRC (December 2019)	Not eligible	Unknown	None

a/ Previously recorded site

APPENDIX F.1

Figures of Projects Contributing to Cumulative Impacts

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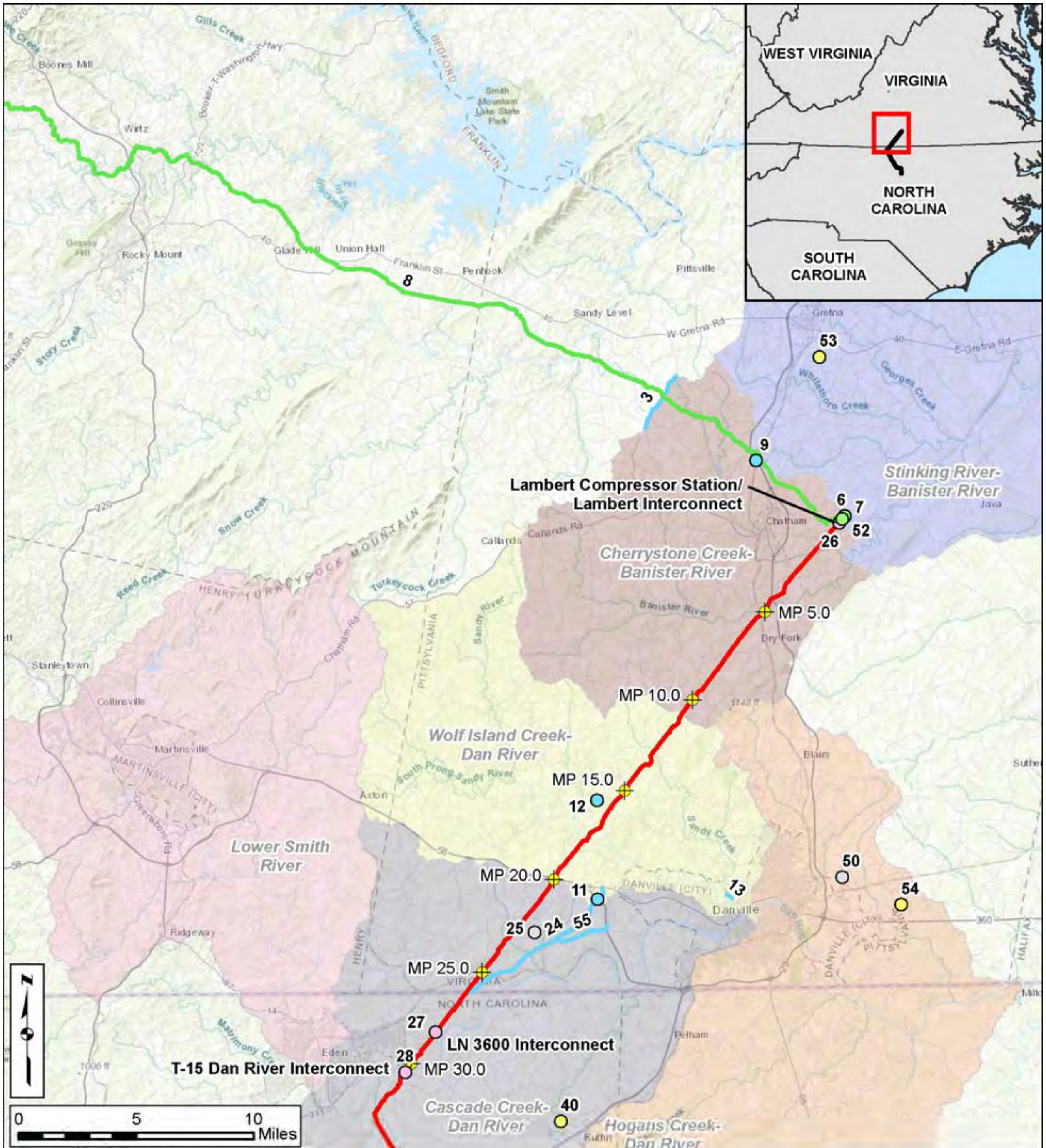


Proposed Pipeline Route
FERC-Jurisdictional
Transportation
Milepost
Energy
FERC-Jurisdictional
Non-Jurisdictional
Transportation
Other

Contains ID related to projects in Table 1

Figure 1

Southgate Project

Projects Contributing to Cumulative Impacts
HUC 10 Watersheds

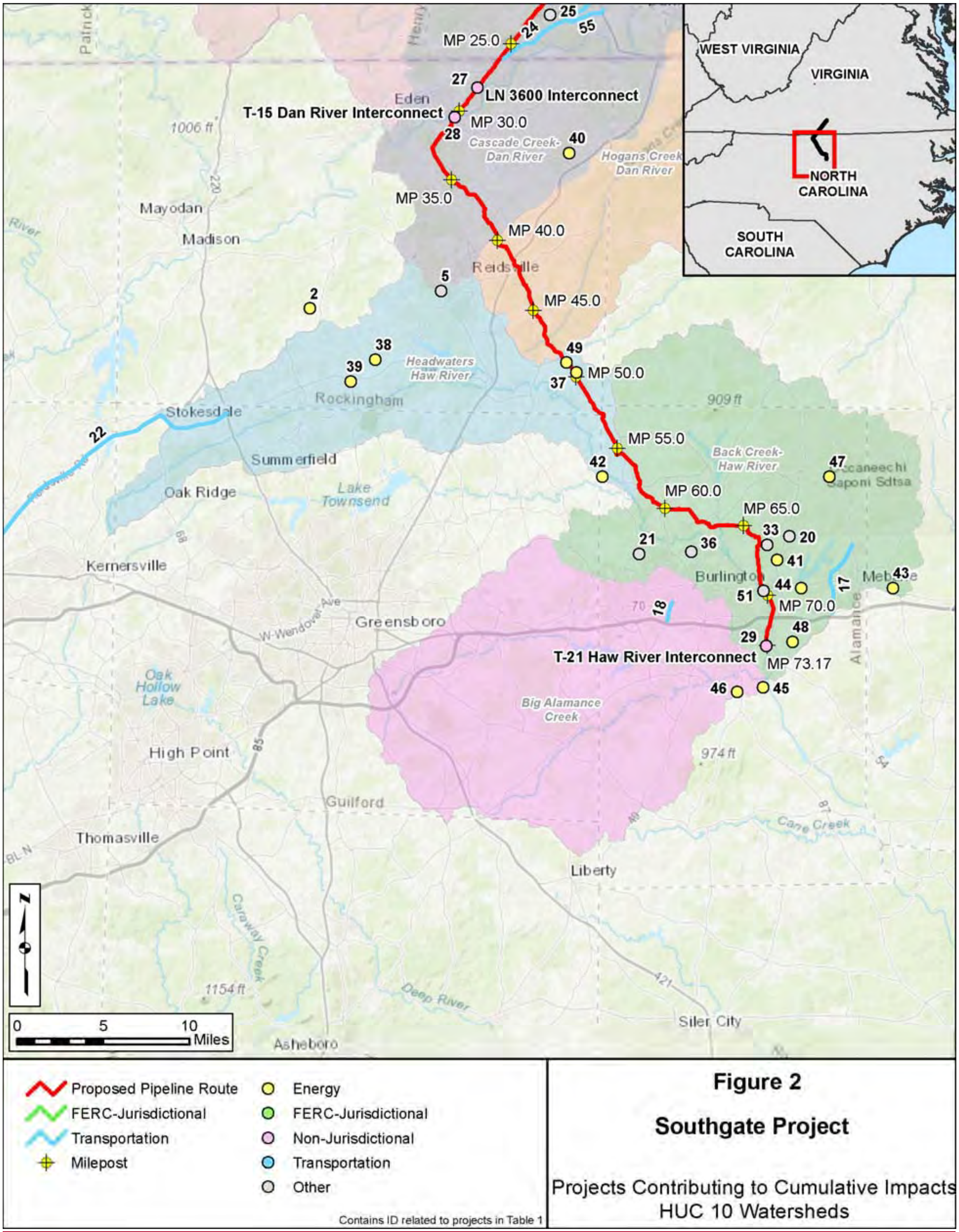
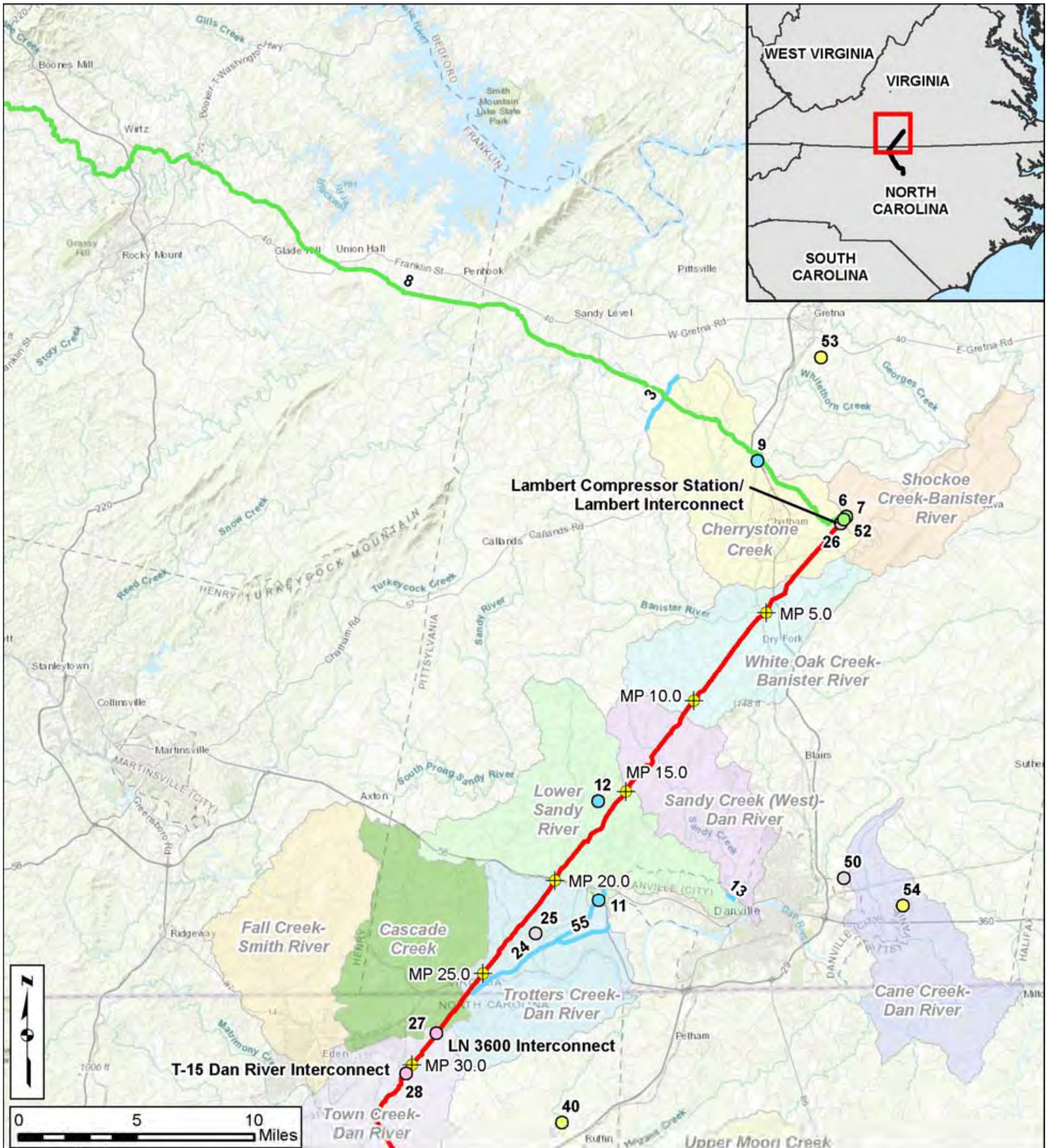


Figure 2

Southgate Project

Projects Contributing to Cumulative Impacts
HUC 10 Watersheds



Proposed Pipeline Route
FERC-Jurisdictional
Transportation
Milepost

Energy
FERC-Jurisdictional
Non-Jurisdictional
Transportation
Other

Contains ID related to projects in Table 1

Figure 3

Southgate Project

Projects Contributing to Cumulative Impacts
HUC 12 Watersheds

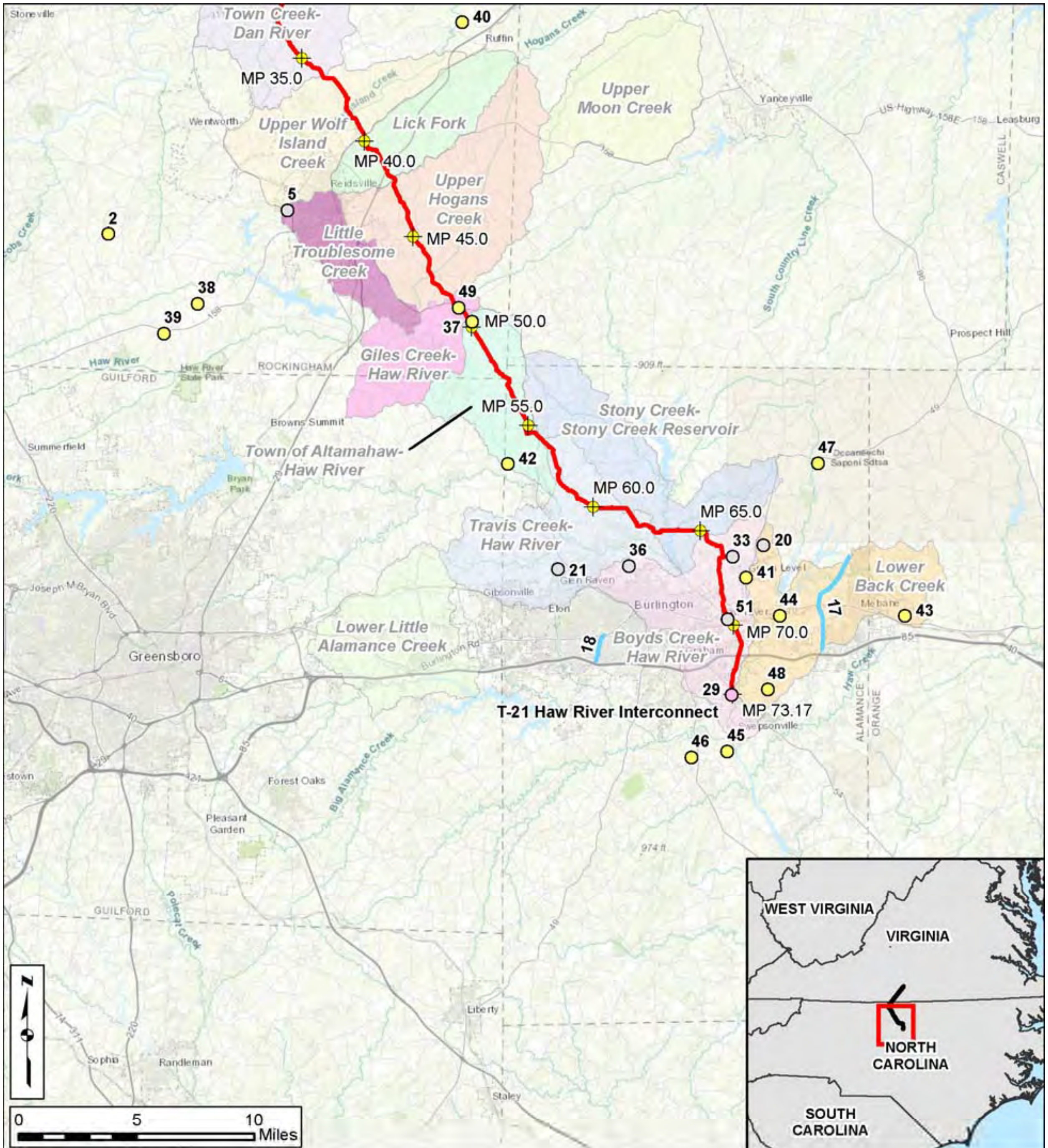


Figure 4

Southgate Project

Projects Contributing to Cumulative Impacts
HUC 12 Watersheds

APPENDIX F.2

Table of Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts

APPENDIX F.2

Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts

Project Type	Project ID / Project Facility a/	Description of Facilities	Temporal Status	Acres Affected b/	Approximate Distance from Southgate Project d/	Shared Watershed (Level/ HUC-12)	Socioeconomics/ Environmental Justice	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise
[No Shared HUC 10 watershed] (Rockingham County, NC) c/												
Energy Projects	(2) Reidsville Energy Center	500 MW natural gas electric generating facility owned by NTE Energy in Rockingham County, North Carolina.	Construction to start Summer 2019, pending financing	20 acres	12 miles	No shared HUC 12 watershed	X					
Stinking River – Banister River HUC 10 Watershed (Pittsylvania County, VA) c/												
Energy Projects	(53) Whitehorn Solar, LLC	50 MW Solar PV System will deliver power to the existing high-voltage transmission line in the area owned by VA Electric Power Company.	Application for Special Use Permit approved by Pittsylvania County June 4, 2019. NOI submitted June 5, 2019.	700 acres	8 miles	No shared HUC 12 watershed	X	X				X
Cherrystone Creek-Banister River HUC 10 Watershed (Pittsylvania County, VA) c/												
FERC-jurisdictional Natural Gas Interstate Transportation Projects	(6) Virginia Southside Expansion	Also shares Stinking River-Banister River HUC 10 watershed. Approximately 10 miles (out of 100 miles total) of new 24-inch diameter pipeline from Transco mainline in Pittsylvania County, Virginia and into Halifax, Charlotte, and Mecklenburg. Terminates in Brunswick County, Virginia. Construction of CS 166 in Pittsylvania County, Virginia. Operated by Transco.	In-service	1,454.3 acres for construction 119.0 acres for operation	0.4 miles	Cherrystone Creek Shockoe Creek-Banister River	X	X	X	X	X	X
FERC-jurisdictional Natural Gas Interstate Transportation Projects	(52) Virginia Southside Expansion II	Also shares Stinking River-Banister River HUC 10 watershed. Upgrades to CS 166 in Pittsylvania County, Virginia. Modifications to 19 existing facilities in North Carolina and Virginia. Construction activities in Brunswick and Greensville County, Virginia. New CS in Prince William County, Virginia	In-service	180.1 acres for construction 29.3 acres for operation	0 miles	Cherrystone Creek Shockoe Creek-Banister River	X	X	X	X	X	X
FERC-jurisdictional Natural Gas Interstate Transportation Projects	(8) Mountain Valley Pipeline	Also shares Stinking River-Banister River HUC 10 watershed. Approximately 303 miles of 42-inch pipeline and 3 new compressor stations from northwestern West Virginia to southern Virginia. Operated by Mountain Valley Pipeline, LLC and Equitrans, LP	Under Construction.	6,363.4 acres for construction 2,117.8 acres for operation	0 miles	Cherrystone Creek Shockoe Creek-Banister River	X	X	X	X	X	X
FERC-jurisdictional Natural Gas Interstate Transportation Projects	(7) Southeastern Trail	Also shares Stinking River-Banister River HUC 10 watershed Approximately 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 Compressor Station 165 upgrade in Chatham, VA within Pittsylvania County, VA. Operated by Transco.	Application Filed April 2018. Construction to begin Q3 of 2019. Planned in-service November 2020	466 acres construction 42.6 acres for operation	0.4 miles	Cherrystone Creek	X	X	X	X	X	X
Non-Jurisdictional Facilities associated with Southgate	(26) Lambert interconnect and MLV 1	New interconnecting facility to the Mountain Valley Pipeline system via the H-605 pipeline	Will be reviewed by local agencies prior to construction	20.5 acres construction 11.7 acres operation	0 miles	Cherrystone Creek7	X	X	X	X	X	X

APPENDIX F.2

Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts

Project Type	Project ID / Project Facility a/	Description of Facilities	Temporal Status	Acres Affected b/	Approximate Distance from Southgate Project d/	Shared Watershed (Level/ HUC-12)	Socioeconomics/ Environmental Justice	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise
Transportation/ Roadway Projects	(3) Climax Road Widening	Road widening to a minimum of 20 feet to accommodate traffic	Planning	Not Available	8.9 miles	Cherrystone Creek						
Transportation/ Roadway Projects	(9) U.S. Route 29 South over Norfolk Southern Railroad / VADOT	Replacement of the bridge on U.S. Route 29 South over Norfolk Southern Railroad with approaches on this Principal Rural Arterial roadway in Pittsylvania County	Complete 2017	0.4 acres	4.4 miles	Cherrystone Creek	X	X	X			X
Wolf Island Creek-Dan River HUC 10 Watershed (Henry/**Pittsylvania Counties, VA) c/**												
Transportation/ Roadway Projects	(11) Route 58 over Route 311 / VADOT	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	Planning	8 acres	2.0 miles	Lower Sandy River						
Transportation/ Roadway Projects	(12) Stony Mill Road / VADOT	The construction of a single lane roundabout at the intersection of Stony Mill Road and Tunstall High Road- 2.2 million	Planning	0.4 acres	0.5 miles	Lower Sandy River						
Transportation/ Roadway Projects	(13) Mount Cross Road / VADOT	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	Planning	3.3 acres	6.1 miles	Sandy Creek (West) –Dan River						
Cascade Creek-Dan River HUC 10 Watershed (Caswell/**Rockingham Counties, NC and** Henry/**Pittsylvania Counties, VA) c/**												
Non-Jurisdictional Facilities associated with Southgate	(27) LN 3600 Interconnect and Receipt Meter Station	New interconnect to the East Tennessee pipeline system near MP 28.2	Will be reviewed by local agencies prior to construction	4.8 acres construction 0.7 acres operation	0 miles	Cascade Creek	X	X	X	X	X	X
Energy Projects	(40) Old Road Solar	5 MW facility. CPCN issued January 10, 2017	Projected in-service date was October 2016. No construction to-date	18 acres	5.8 miles	No shared HUC 12 watershed	X	X				
Non-Jurisdictional Facilities associated with Southgate	(28) T-15 Dan River Interconnect and MLV 4	New interconnect to the PSNC distribution system near MP 30.4	Will be reviewed by local agencies prior to construction	5.2 acres construction 0.8 acres operation	0 miles	Town Creek – Dan River	X	X	X	X	X	X
Commercial/Industrial Projects	(25) Berry Hill Industrial Park	A 3,500 acres mega-park open for potential development owned by City of Danville and Pittsylvania County. 133 acres of site preparation occurred in March 2017. No further development has occurred at the site	Planning. No construction to-date.	133 acres	1.3 miles	Trotters Creek – Dan River						
Transportation/ Roadway Projects	(24) Berry Hill Road / VADOT	Also crossed Wolf Island Creek – Dan River HUC 10 watershed. Reconstruction of Berry Hill Road in order to accommodate more traffic- 23.7 million	Planning	Not Available	2 miles	Trotters Creek - Dan River						
Transportation/ Roadway Projects	(55) Route 311 Connector Road	Construction of a connector road from the existing interchange of State Route 1260 and US Route 58	Planning – Construction to begin Sept 2022- May 2025	Not Available	3.5 miles	Trotters Creek - Dan River	X	X	X			X
Hogans Creek-Dan River HUC 10 Watershed (Caswell/**Rockingham Counties, NC and Pittsylvania County, VA) c/**												

APPENDIX F.2

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Project Type	Project ID / Project Facility a/	Description of Facilities	Temporal Status	Acres Affected b/	Approximate Distance from Southgate Project d/	Shared Watershed (Level/ HUC-12)	Socioeconomics/ Environmental Justice	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise
Commercial/Industrial Projects	(50) Panaceutics Research and Development Facility / Panaceutics, Inc.	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.	Under Construction	112 acres	10 miles	No shared HUC 12 watershed	X	X				
Energy Projects	(54) Danville Farm Solar	12 MW facility to be developed by Strata Solar Services, LLC on land previously used as a golf course.	Planning. Small Renewable Energy Project Permit received by VADEQ July 10, 2019	185 acres	13 miles	Cane Creek – Dan River	X	X	X			X
Headwaters Haw River HUC 10 Watershed (Guilford/Caswell/**Rockingham/Alamance Counties, NC) c/**												
Residential Projects	(5) Carter Ridge / Keystone Homes	Carter Ridge new construction homes, Carter Ridge Drive, Reidsville, NC	Under Construction	30 acres	5 miles	Little Troublesome Creek	X	X	X			
Energy Projects	(38) Gallant Solar Farm	45 MW facility, CPCN issued March 27, 3018	Projected online June 1, 2019	276 acres	10 miles	No shared HUC 12 watershed	X	X				
Energy Projects	(49) Husky Solar, LLC	7.02 megawatt DC solar photovoltaic facility located on both sides of NC Highway 87 adjacent to Project at MP 49	In operation; Permitted prior to 2015	29 acres	0 miles	Giles Creek-Haw River	X	X	X	X	X	X
Energy Projects	(42) Osceola Solar Project	5 MW facility.	Permitted 2016. Projected in-service September 1, 2017	70 acres	1.8 miles	Town of Altamahaw – Haw River	X	X	X			
Transportation/ Roadway Projects	(22) U.S. 158 (Reidsville Road) Improvements / NCDOT	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	In Development	71 acres	18.6 miles	No shared HUC 12 watershed						
Energy Projects	(39) Washington Solar Farm	5 MW solar facility. CPCN issued September 9, 2015	Projected online December 2016	30 acres	13 miles	No shared HUC 12 watershed	X	X				
Energy Projects	(37) Cypress Creek Renewables Solar Farm	174,000 MW 600 acre solar farm. Adjacent to Southgate Project at MP 50	Permitted; Construction to begin in 2019	341 acres	0 miles	Giles Creek - Haw River	X	X	X	X	X	X
Back Creek-Haw River HUC 10 Watershed (Guilford/Caswell/**Alamance Counties, NC) c/**												
Non-Jurisdictional Facilities associated with Southgate	(29) T-21 Haw River Interconnect and MLV 8	New interconnect to the PSNC distribution system and the terminus for the Southgate project	Will be reviewed by local agencies prior to construction	1.4 acres construction 0.6 acres operation	0 miles	Boyds Creek – Haw River	X	X	X	X	X	X
Energy Projects	(48) Kimery Road Solar Farm	2 MW Solar Facility	Planning	Not available	1.5 miles	Lower Back Creek	X	X	X			
Energy Projects	(43) Bakatsias Solar Farm	5 MW facility. CPCN issued November 6, 2017.	Expected in-service December 20, 2017	24 acres	7.0 miles	Lower Back Creek	X	X	X			
Residential Projects	(36) Brassfield Meadows	New construction housing development; 18 units	Under Construction	5 acres	1.7 miles	Boyds Creek – Haw River	X	X	X			
Transportation/ Roadway Projects	(17) NC 119 Relocation / NCDOT	Proposed relocation of a portion of N.C. 119 in Mebane – from I-85 to existing the N.C. 119 near Mrs. White Lane	In Development	12 acres	5 miles	Lower Back Creek						
Energy Projects	(41) Green Level-Charles Drew Solar Farm	5 MW solar energy facility	Projected online March 30, 2019	5 acres	0.9 miles	Boyds Creek – Haw River	X	X	X	X	X	X

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Other Projects in the Geographic Scope of Analysis Considered for Cumulative Impacts

Project Type	Project ID / Project Facility a/	Description of Facilities	Temporal Status	Acres Affected b/	Approximate Distance from Southgate Project d/	Shared Watershed (Level/ HUC-12)	Socioeconomics/ Environmental Justice	Water Resources and Wetlands	Vegetation, Wildlife and Fisheries	Land Use, Recreation, and Visual Resources	Cultural Resources	Air Quality and Noise
Residential Projects	(20) LGI Homes- Bedford Hills	New construction housing development single family homes near 111 Pillow Ln., Burlington, NC	Under Construction	95 acres	1.5 miles	Lower Back Creek	X	X	X			
Residential Projects	(21) Forest Creek / True Homes	New construction housing development 5 new homes in development	Under Construction	40 acres	3.5 miles	Travis Creek – Haw River	X	X	X			
Energy Projects	(47) Necal Solar Farm	5 MW solar facility. CPCN issued November 28, 2017	Planning	42 acres	5.3 miles	No shared HUC 12 watershed	X	X	X			
Energy Projects	(44) Norris Solar Farm	5 MW solar facility. Application September 9, 2016. Projected in-service December 31, 2017	In service	24 acres	1.9 miles	Lower Back Creek	X	X	X			
Resource Extraction	(33) East Alamance Quarry	Gravel, sand, crushed stone aggregates operation. Owned and operated by Martin Marietta Materials, Inc.	In operation	240 acres for operation.	0.1 miles	Boyds Creek – Haw River	X	X	X	X	X	X
Residential Projects	(51) Granite Mill	Development of 176 apartments and 15,000 sq. ft. of commercial space in an abandoned mill.	Planning	6 acres	0 miles	Boyds Creek – Haw River	X	X	X	X	X	X
Big Alamance Creek HUC 10 Watershed (Guilford/**Alamance Counties, NC) c/**												
Energy Projects	(46) Woodgriff Solar	3 MW solar facility	Intent to construct permit expires June, 2019	38 acres	3.2 miles	No shared HUC 12 watershed	X	X	X			
Transportation/ Roadway Projects	(18) N.C. 62 Widening - Ramada Road to U.S. 70 / NCDOT	Proposed widening an approximately 1-mile stretch of N.C. 62 to improve traffic flow and safety	In Development	9 acres	4 miles	No shared HUC 12 watershed						
Energy Projects	(45) Southwick Solar Farm, LLC	3 MW solar facility	Application filed 2017; pending site review	26 acres	2.5 miles	No shared HUC 12 watershed	X	X				

a/ Contains ID related to projects illustrated on Figures 1 through 4.

b/ Acres affected includes the acreage of project that occurs within the watershed and not just the county shared with the Southgate Project. Acreages are estimated based on information available from various sources including the FERC eLibrary, the North Carolina Utilities Commission Website, the Virginia and North Carolina Department of Transportation websites, County websites, Bing aerials, and Google Earth imagery. Estimated acres affected are not based on final engineered project designs, as that level of detail is not available for all other projects. With the exception of the Virginia Southside Expansion project, the Transco Southeastern Trail project, and the MVP Pipeline project, acres affected by construction and operation are assumed to be the same.

c/ HUC-10 Watersheds/counties/states identified in bold indicate watersheds and counties that the Southgate Project would cross. County names that are not bolded are located within a shared HUC-10 watershed, but are not crossed by the Southgate Project.

d/ Distance estimate from Southgate Project centerline.

APPENDIX G

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Cardno, Inc. is a third party contractor assisting the Commission staff in reviewing the environmental aspects of the project application and preparing the environmental documents required by NEPA. Third party contractors are selected by Commission staff and funded by project applicants. Per the procedures in 40 CFR 1506.5(c), third party contractors execute a disclosure statement specifying that they have no financial or other conflicting interest in the outcome of the project. Third party contractors are required to self-report any changes in financial situation and to refresh their disclosure statements annually. The Commission staff solely directs the scope, content, quality, and schedule of the contractor's work. The Commission staff independently evaluates the results of the third-party contractor's work and the Commission, through its staff, bears ultimate responsibility for full compliance with the requirements of NEPA.

APPENDIX H

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