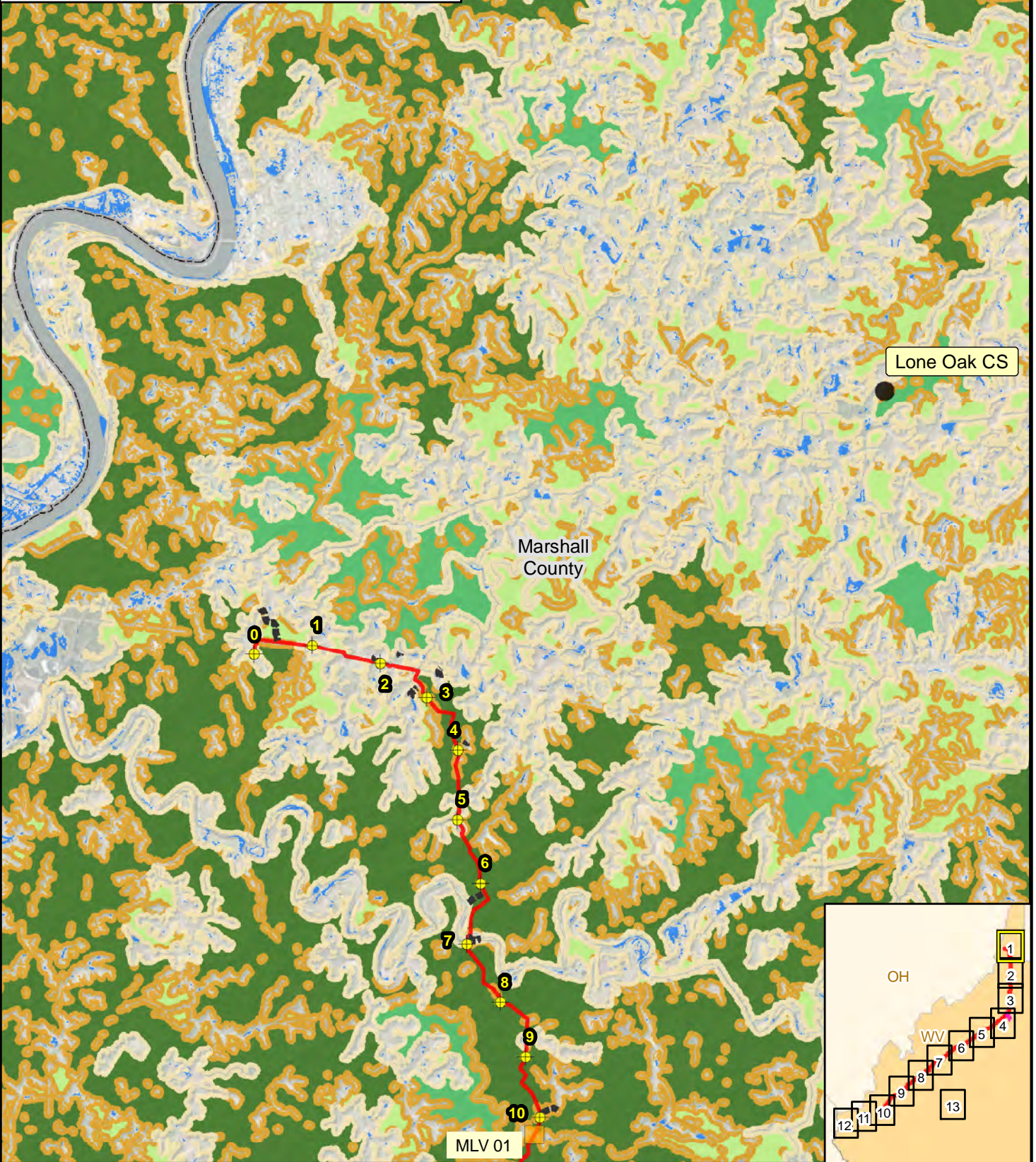


APPENDIX I
Core Forest Area Mapping for the Mountaineer XPress Project

Mountaineer XPress Project
Core Forest Maps – 1" = 10,000'

The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.

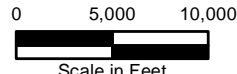


Lone Oak CS

Marshall County

MLV 01

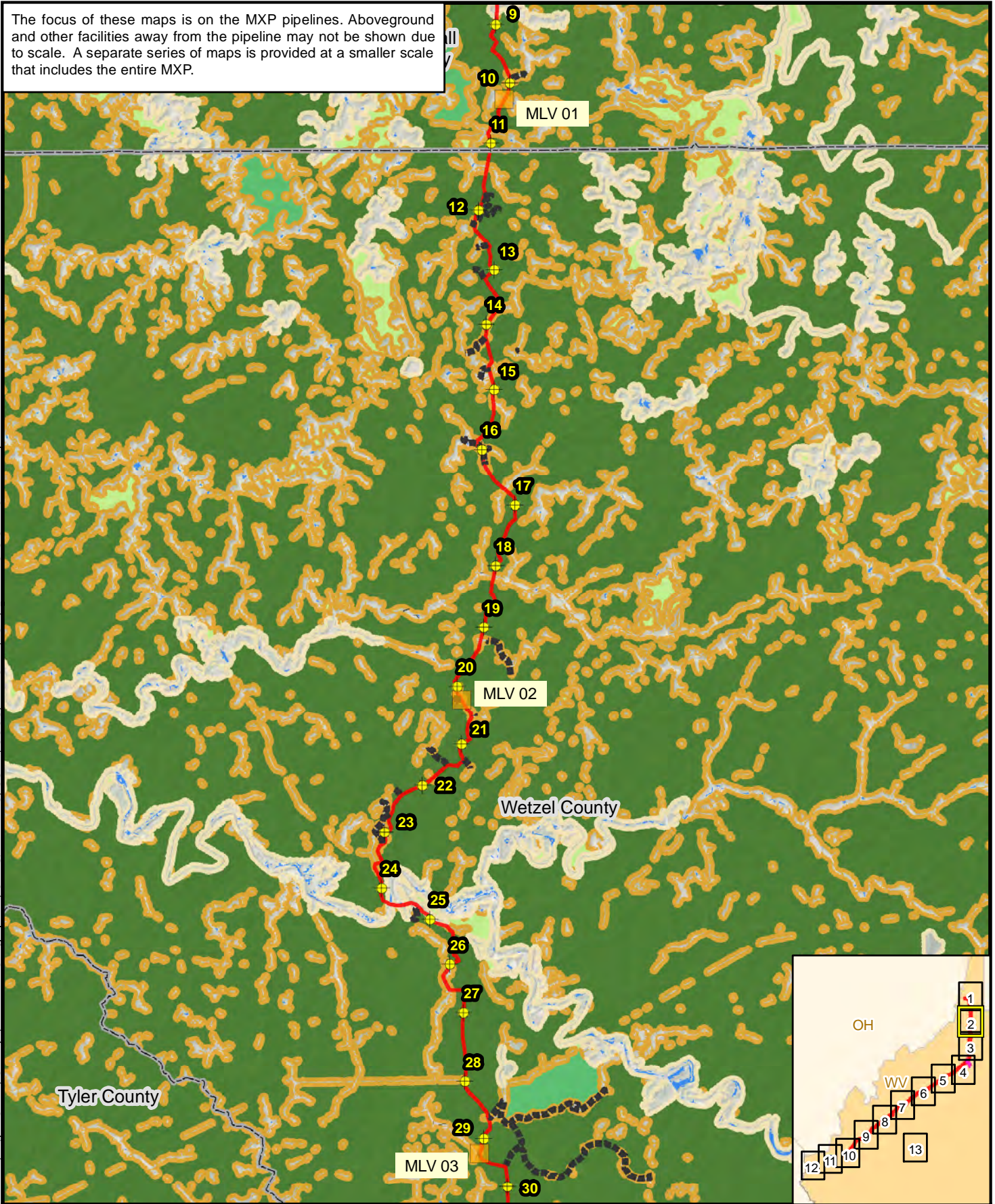
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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ■ Mainline Valve | — MXP-100 | ■ Patch |
| ○ Milepost | — MXP-200 | ■ Edge |
| — Access Road | — Ripley Tie-in | ■ Perforated |
| □ County | — SM-80 Line | ■ Small core (< 250 acres) |
| | — SM-80 Loop | ■ Medium core (250-500 acres) |
| | | ■ Large Core (> 500 acres) |



Appendix G Mountaineer XPress Project Core Forest Map

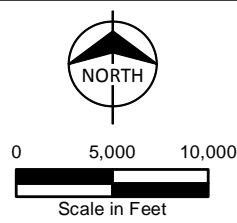
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The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.



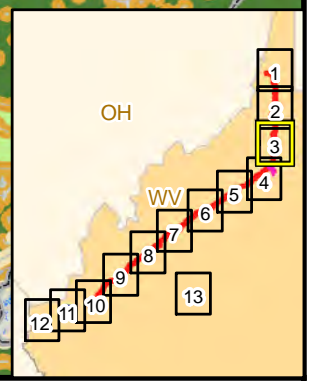
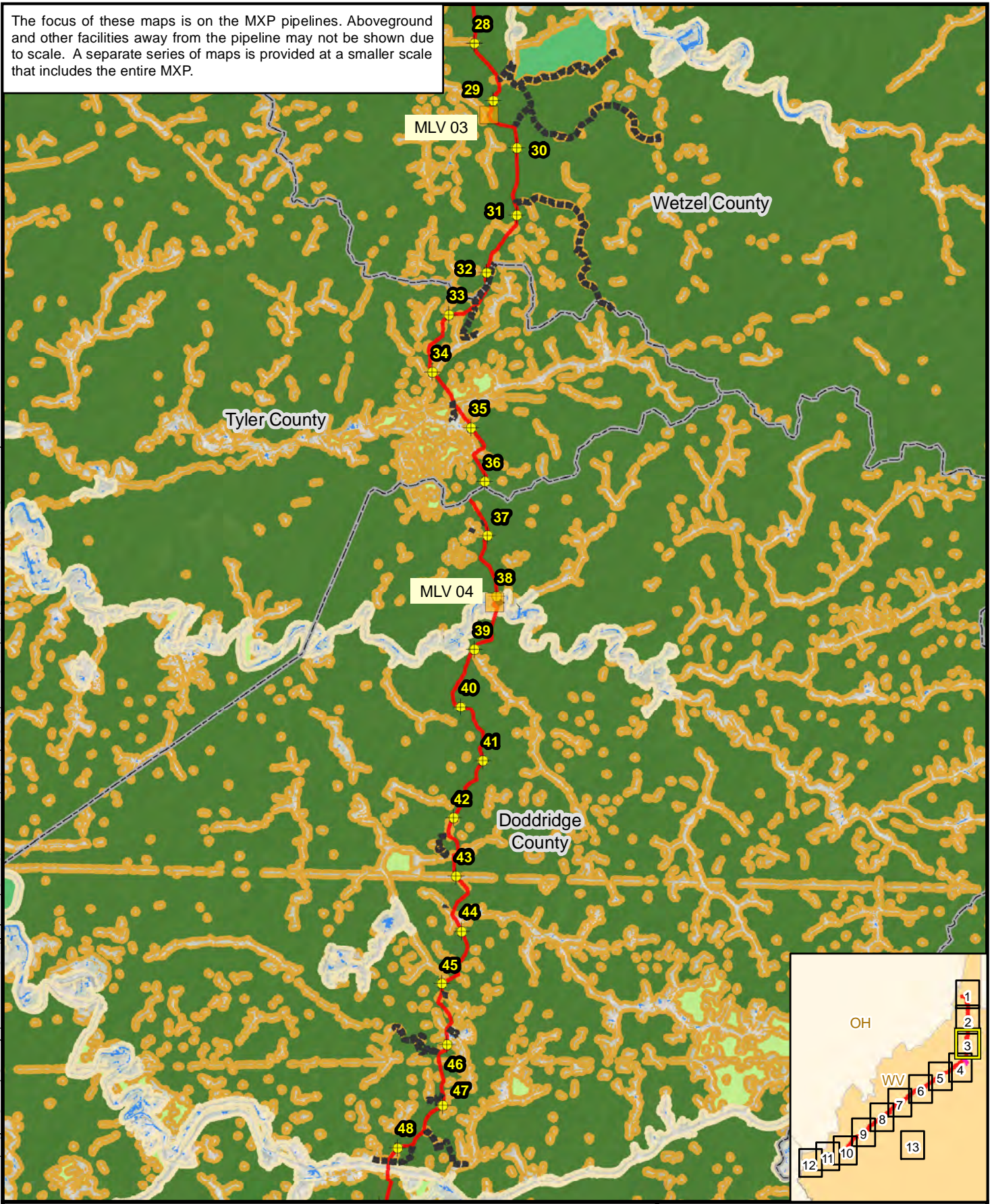
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|----------------------|--------------------------|-------------------------------|
| ● Compressor Station | Proposed Pipeline | Core Forest |
| ■ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
| — Access Road | — Ripley Tie-in | ■ Perforated |
| □ County | — SM-80 Line | ■ Small core (< 250 acres) |
| | — SM-80 Loop | ■ Medium core (250-500 acres) |
| | | ■ Large Core (> 500 acres) |



Appendix G
Mountaineer Xpress Project
Core Forest Map
 Page 2 of 13

The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.



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<ul style="list-style-type: none"> Compressor Station Mainline Valve Milepost Access Road County 	Proposed Pipeline <ul style="list-style-type: none"> MXP-100 MXP-200 Ripley Tie-in SM-80 Line SM-80 Loop 	Core Forest <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large Core (> 500 acres)
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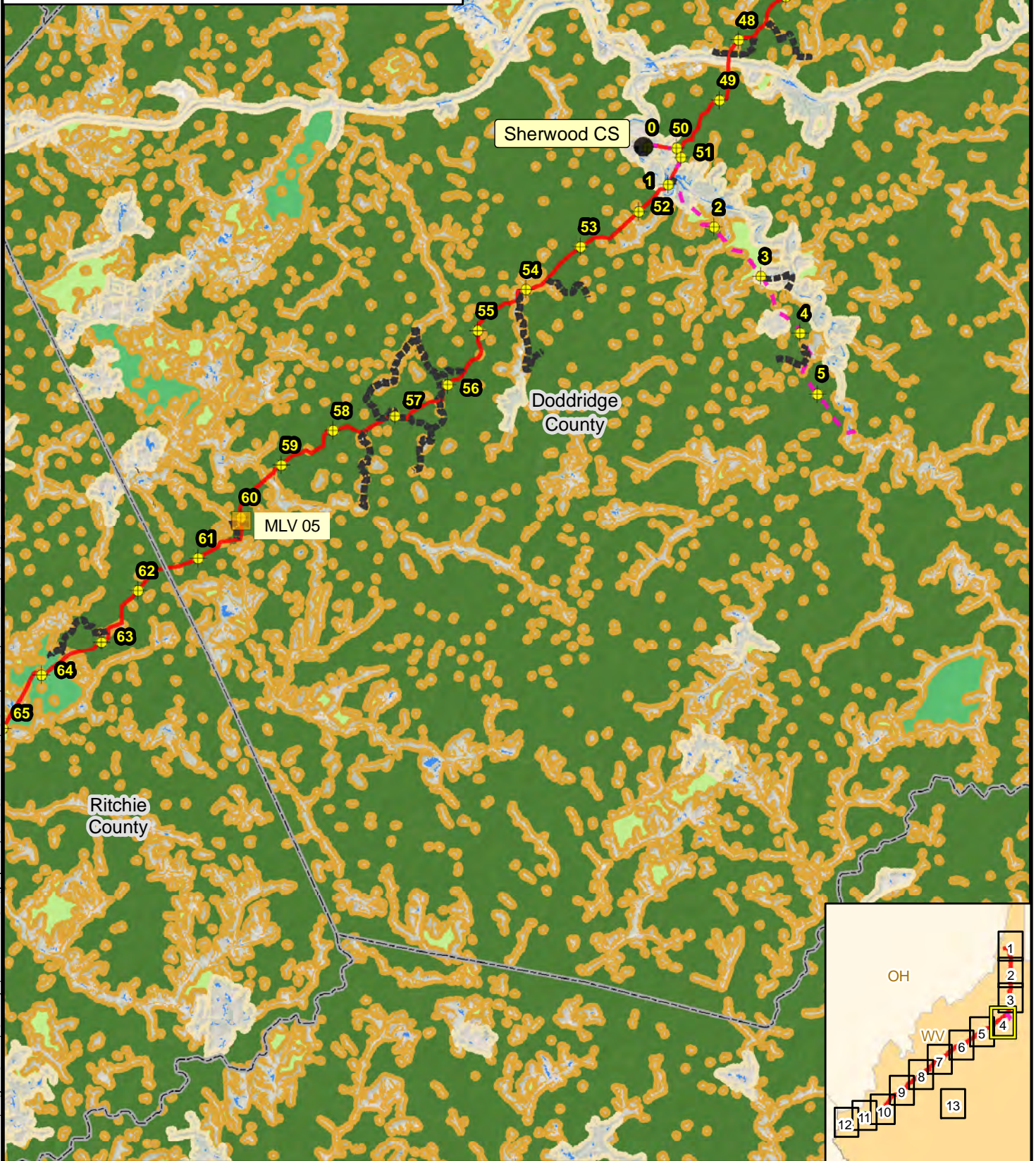
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Scale in Feet

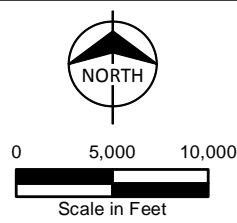
Appendix G
Mountaineer XPress Project
Core Forest Map
 Page 3 of 13

The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.



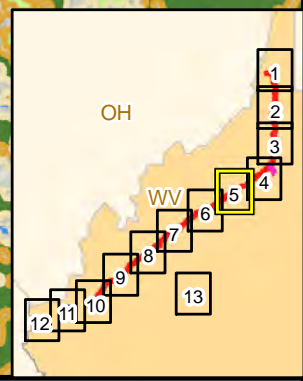
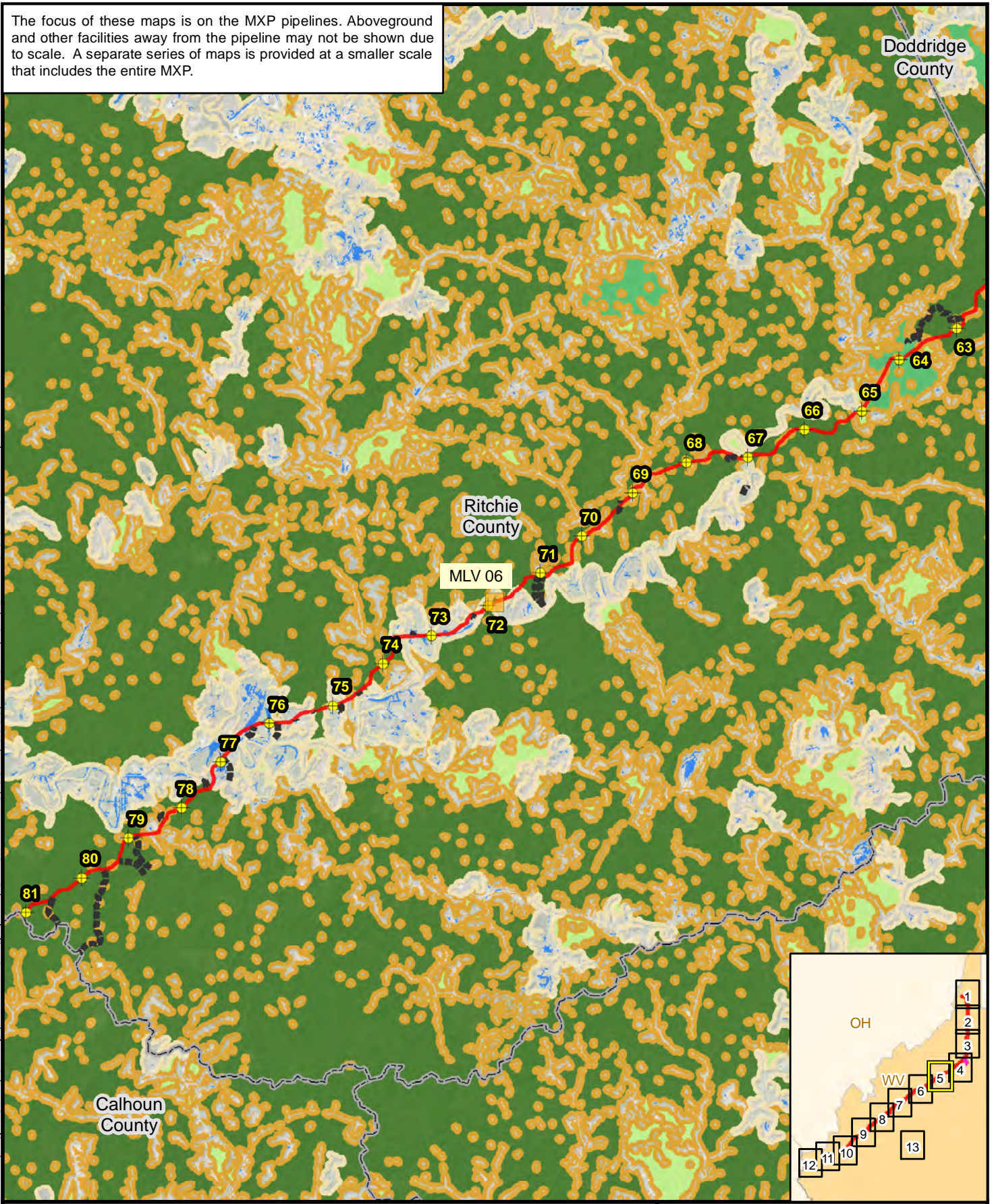
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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ■ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
| — Access Road | — Ripley Tie-in | ■ Perforated |
| □ County | — SM-80 Line | ■ Small core (< 250 acres) |
| | — SM-80 Loop | ■ Medium core (250-500 acres) |
| | | ■ Large Core (> 500 acres) |



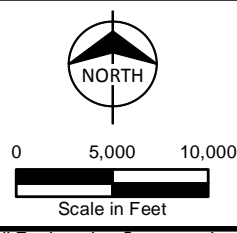
Appendix G Mountaineer XPress Project Core Forest Map

The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.



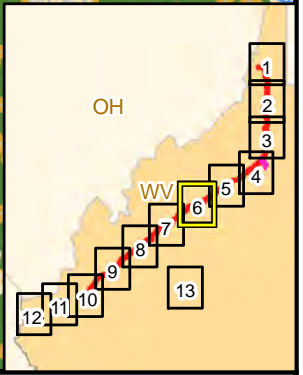
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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ■ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
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| □ County | — SM-80 Line | ■ Small core (< 250 acres) |
| | — SM-80 Loop | ■ Medium core (250-500 acres) |
| | | ■ Large Core (> 500 acres) |

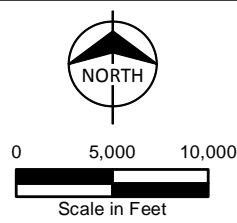


Appendix G Mountaineer XPress Project Core Forest Map

The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.



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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ■ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
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| | — SM-80 Loop | ■ Medium core (250-500 acres) |
| | | ■ Large Core (> 500 acres) |

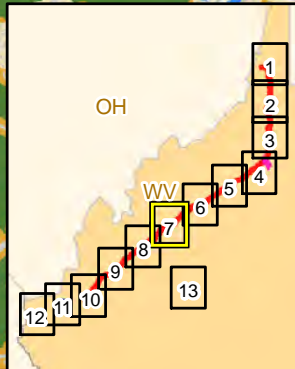
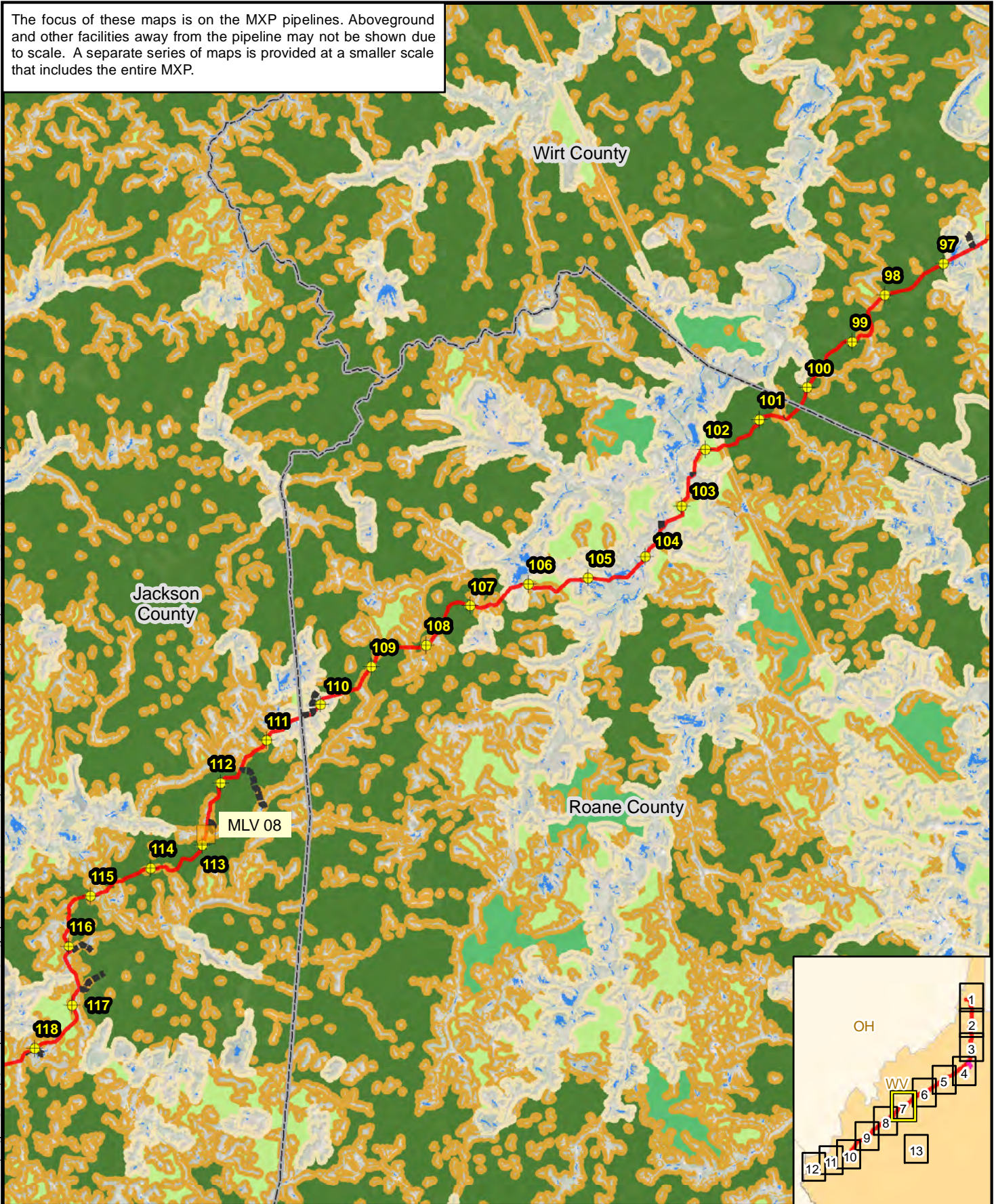


Appendix G Mountaineer XPress Project Core Forest Map

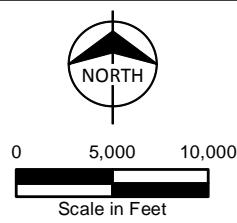
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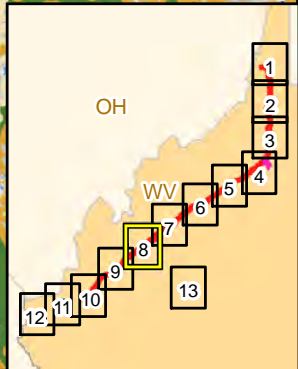
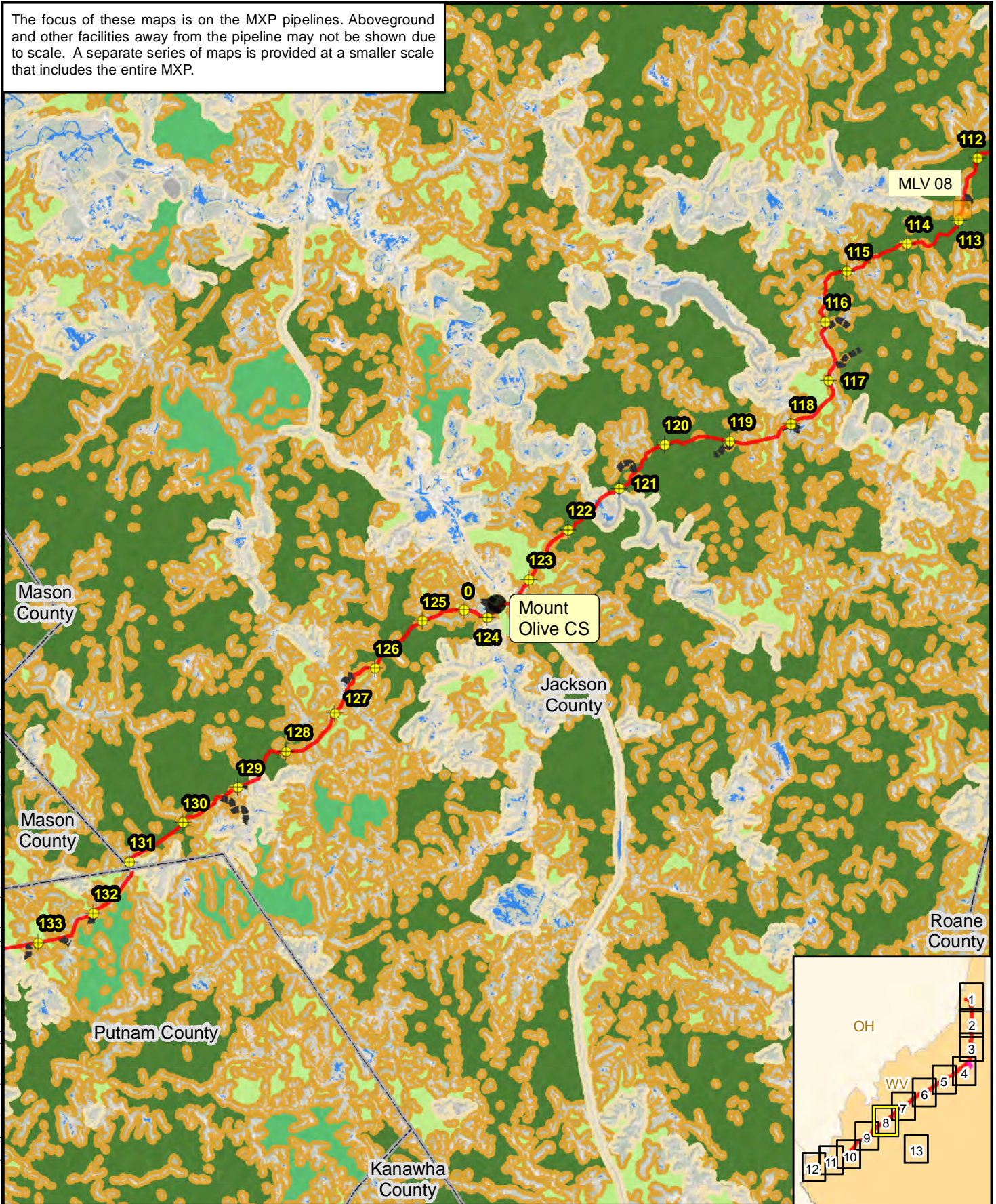
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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ■ Mainline Valve | — MXP-100 | ■ Patch |
| ● Milepost | — MXP-200 | ■ Edge |
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| □ County | — SM-80 Line | ■ Small core (< 250 acres) |
| | — SM-80 Loop | ■ Medium core (250-500 acres) |
| | | ■ Large Core (> 500 acres) |



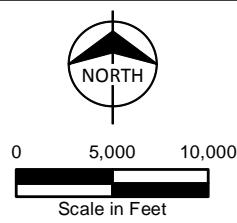
Appendix G Mountaineer XPress Project Core Forest Map

The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.

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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ○ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
| --- Access Road | — Ripley Tie-in | ■ Perforated |
| □ County | — SM-80 Line | ■ Small core (< 250 acres) |
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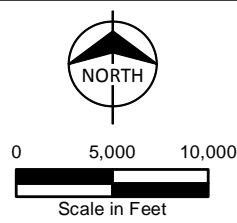
Appendix G Mountaineer XPress Project Core Forest Map

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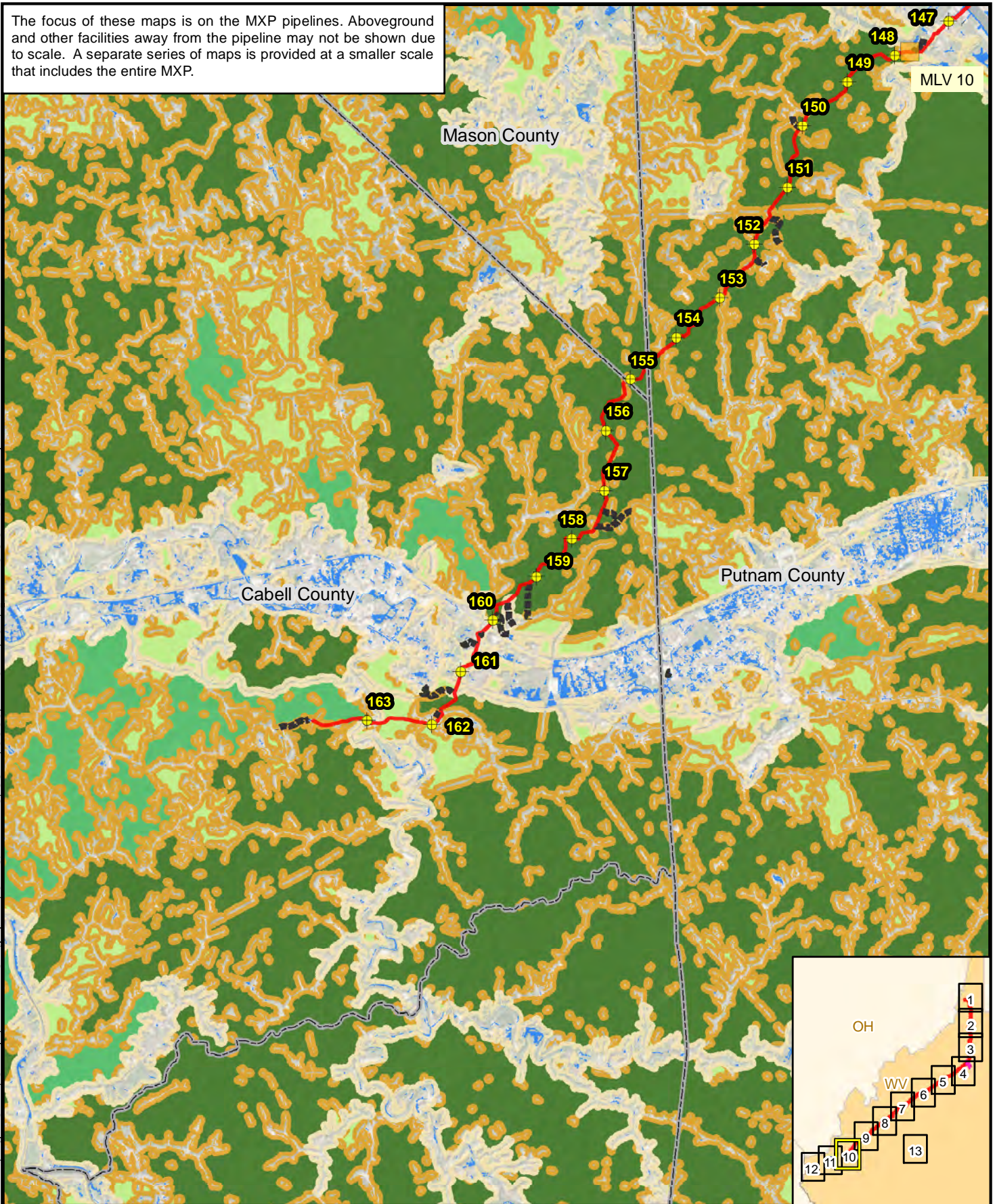
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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ■ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
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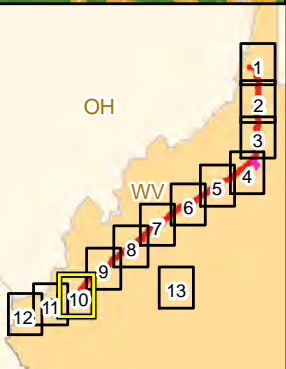
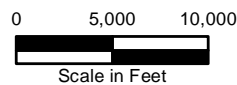


Appendix G Mountaineer XPress Project Core Forest Map

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|----------------------|--------------------------|-------------------------------|
| ● Compressor Station | Proposed Pipeline | Core Forest |
| ○ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
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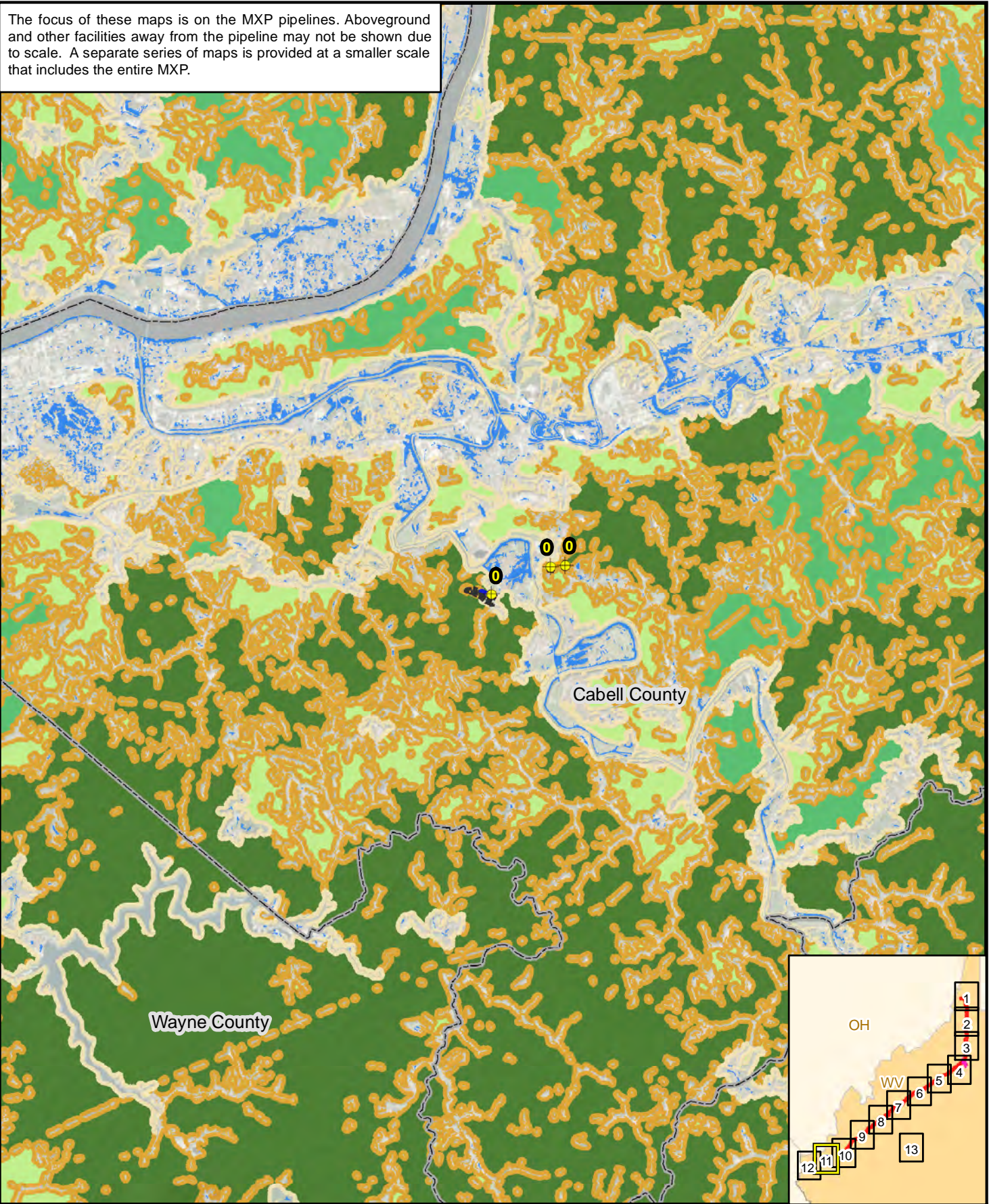


Appendix G Mountaineer XPress Project Core Forest Map


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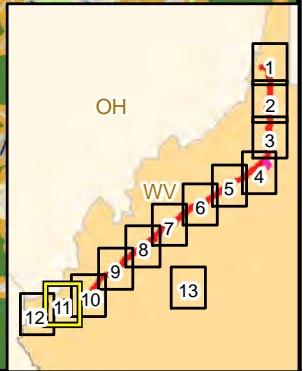
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○ Mainline Valve	— MXP-100	■ Patch
⊕ Milepost	— MXP-200	■ Edge
— Access Road	— Ripley Tie-in	■ Perforated
□ County	— SM-80 Line	■ Small core (< 250 acres)
	— SM-80 Loop	■ Medium core (250-500 acres)
		■ Large Core (> 500 acres)



NORTH

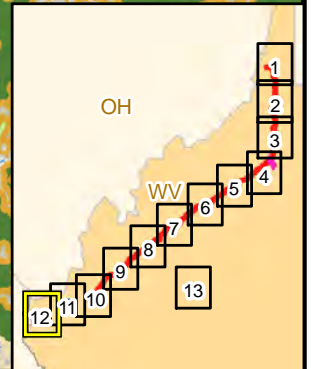
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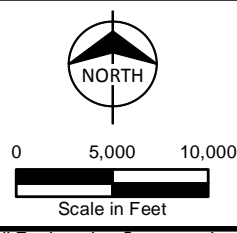
Appendix G Mountaineer XPress Project Core Forest Map

The focus of these maps is on the MXP pipelines. Aboveground and other facilities away from the pipeline may not be shown due to scale. A separate series of maps is provided at a smaller scale that includes the entire MXP.



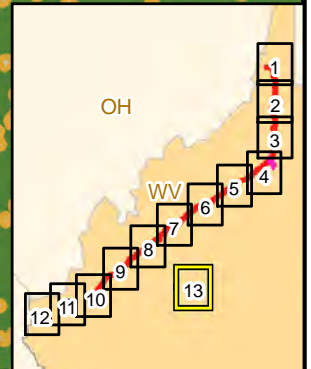
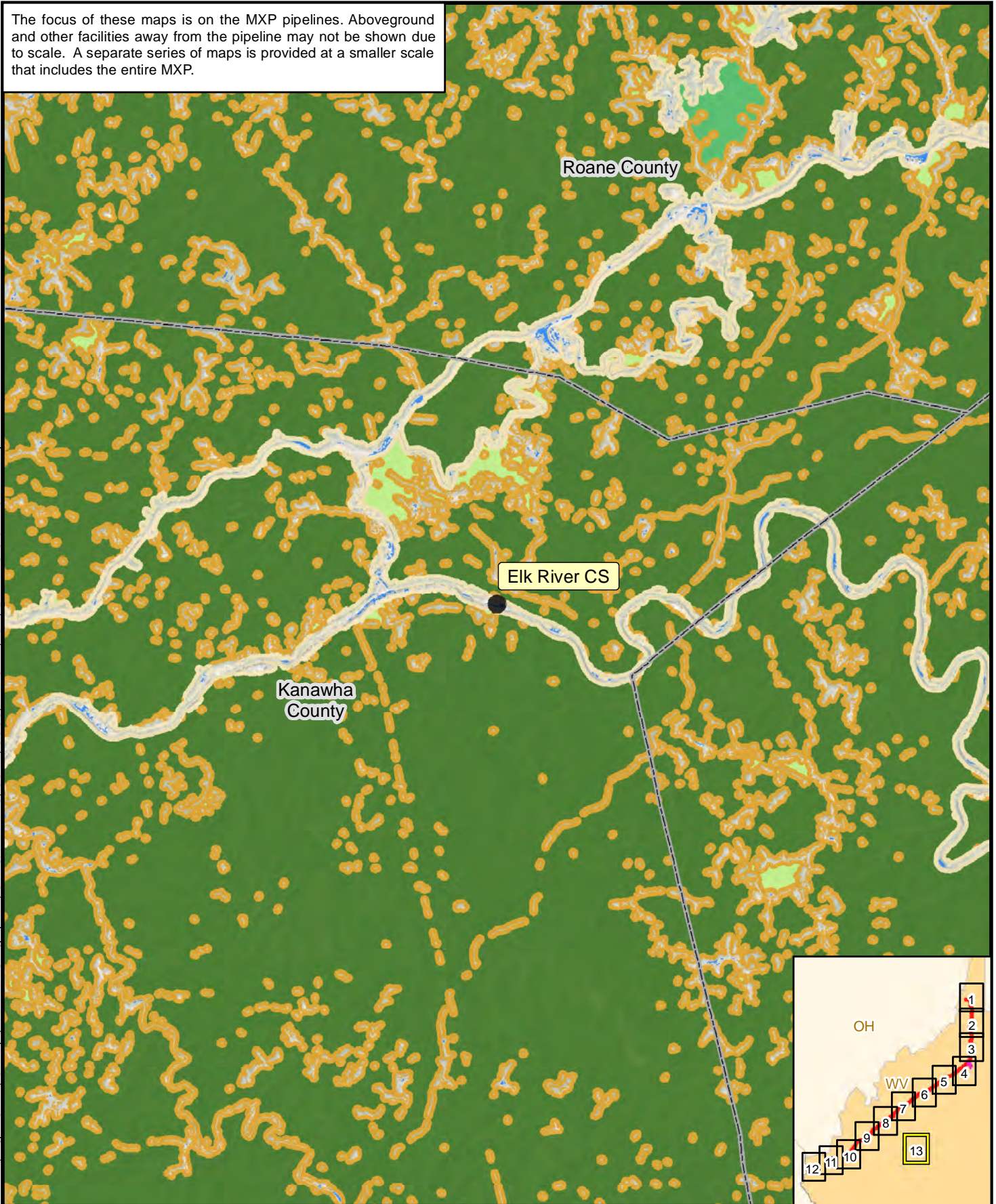
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| ● Compressor Station | Proposed Pipeline | Core Forest |
| ○ Mainline Valve | — MXP-100 | ■ Patch |
| ⊕ Milepost | — MXP-200 | ■ Edge |
| — Access Road | — Ripley Tie-in | ■ Perforated |
| ▭ County | — SM-80 Line | ■ Small core (< 250 acres) |
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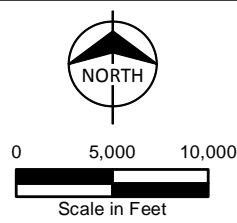


Appendix G Mountaineer XPress Project Core Forest Map

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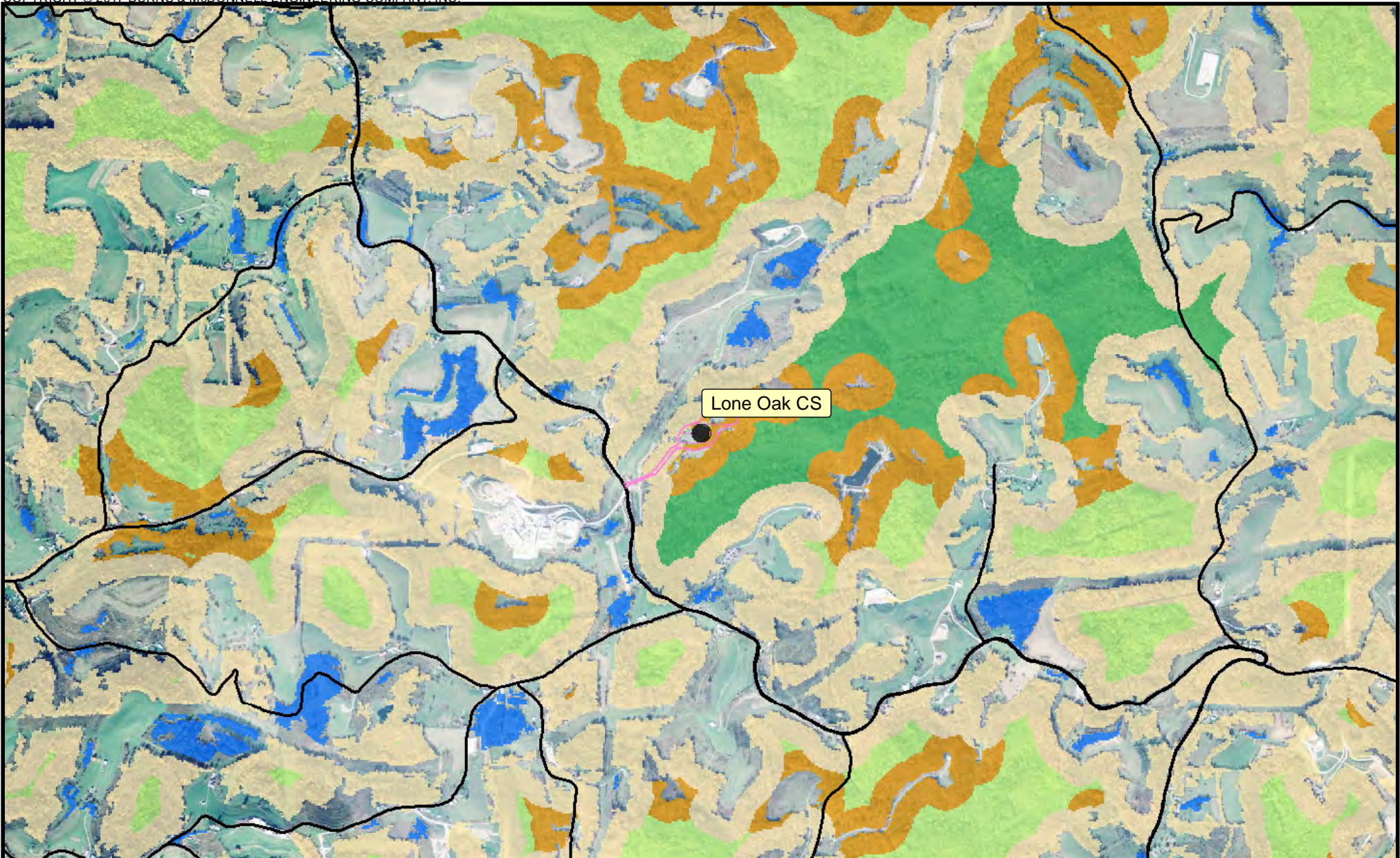
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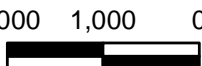
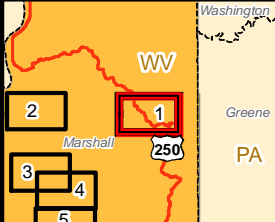


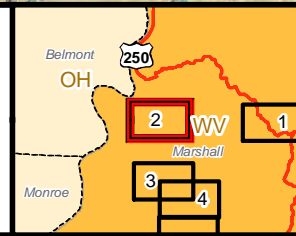
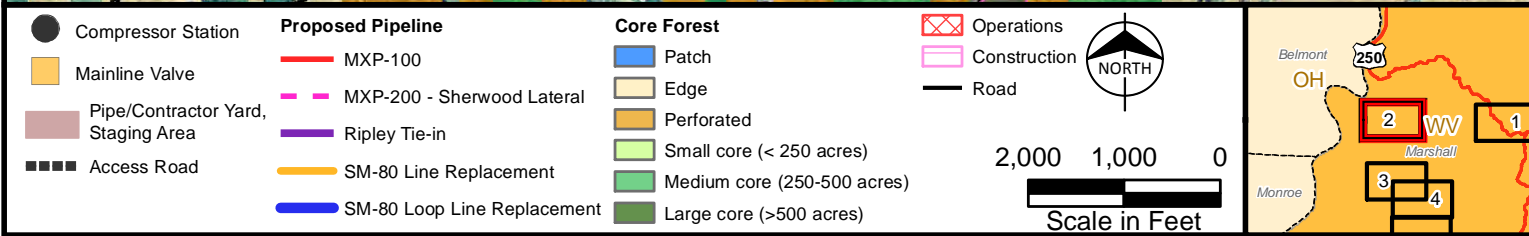
Appendix G Mountaineer XPress Project Core Forest Map

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Mountaineer XPress Project
Core Forest Maps – 1" = 2,000'

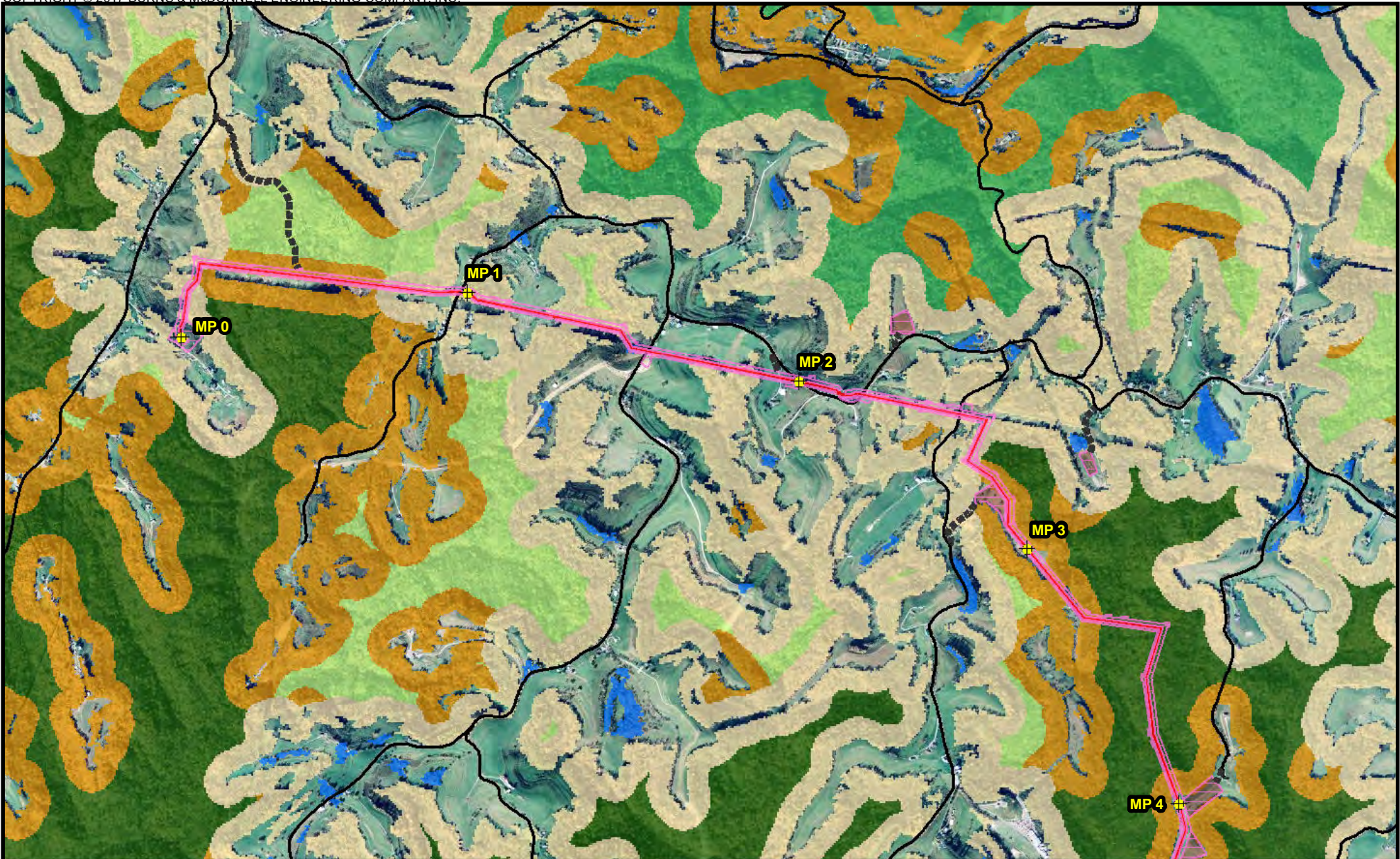


<ul style="list-style-type: none"> ● Compressor Station ■ Mainline Valve ■ Pipe/Contractor Yard, Staging Area ■ Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> — MXP-100 — MXP-200 - Sherwood Lateral — Ripley Tie-in — SM-80 Line Replacement — SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> ■ Patch ■ Edge ■ Perforated ■ Small core (< 250 acres) ■ Medium core (250-500 acres) ■ Large core (>500 acres) 	<ul style="list-style-type: none"> ▣ Operations ▣ Construction — Road <div style="text-align: center;">  <p>2,000 1,000 0</p>  <p>Scale in Feet</p> </div>		<p>Appendix G Mountaineer Xpress Project Core Forest Map</p> <p>Page 1 of 62</p>
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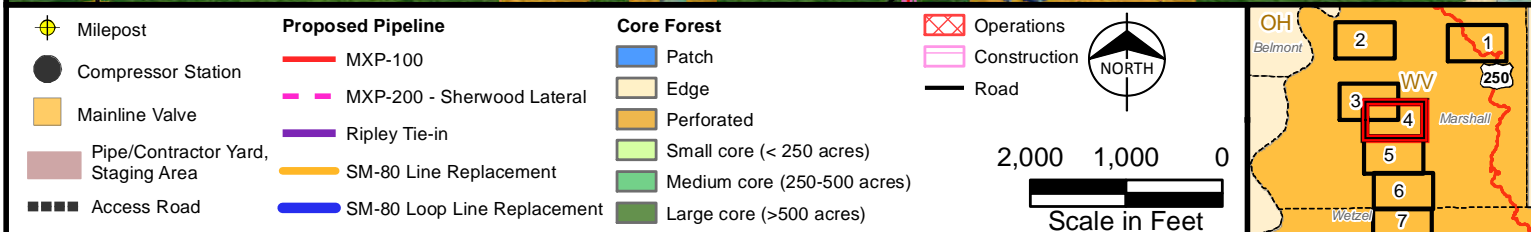


Appendix G
 Montaineer Xpress Project
 Core Forest Map

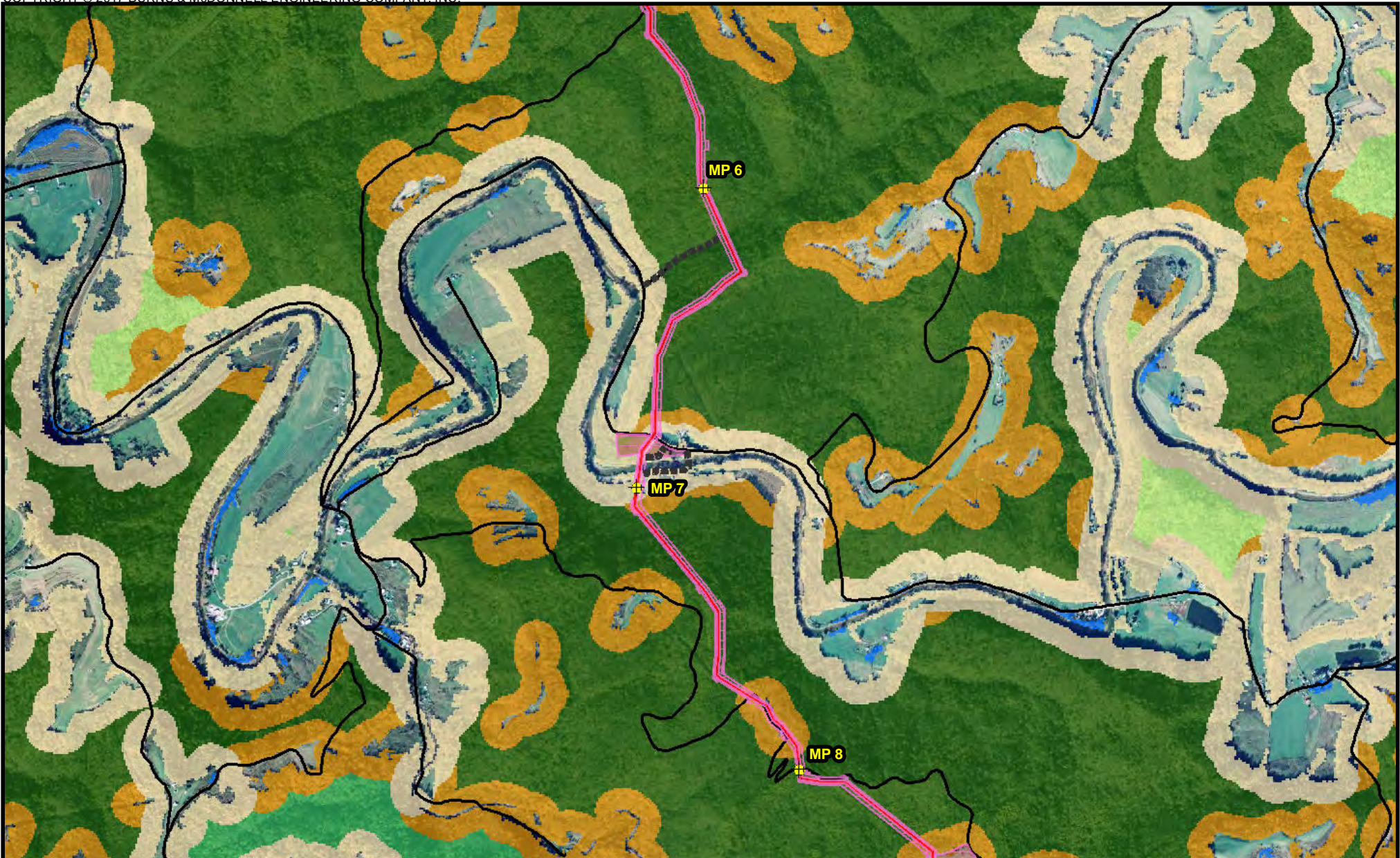
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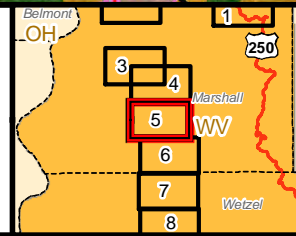
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Appendix G Mountaineer XPress Project Core Forest Map



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	<p>2,000 1,000 0</p> <p>Scale in Feet</p>
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Appendix G Mountaineer XPress Project Core Forest Map



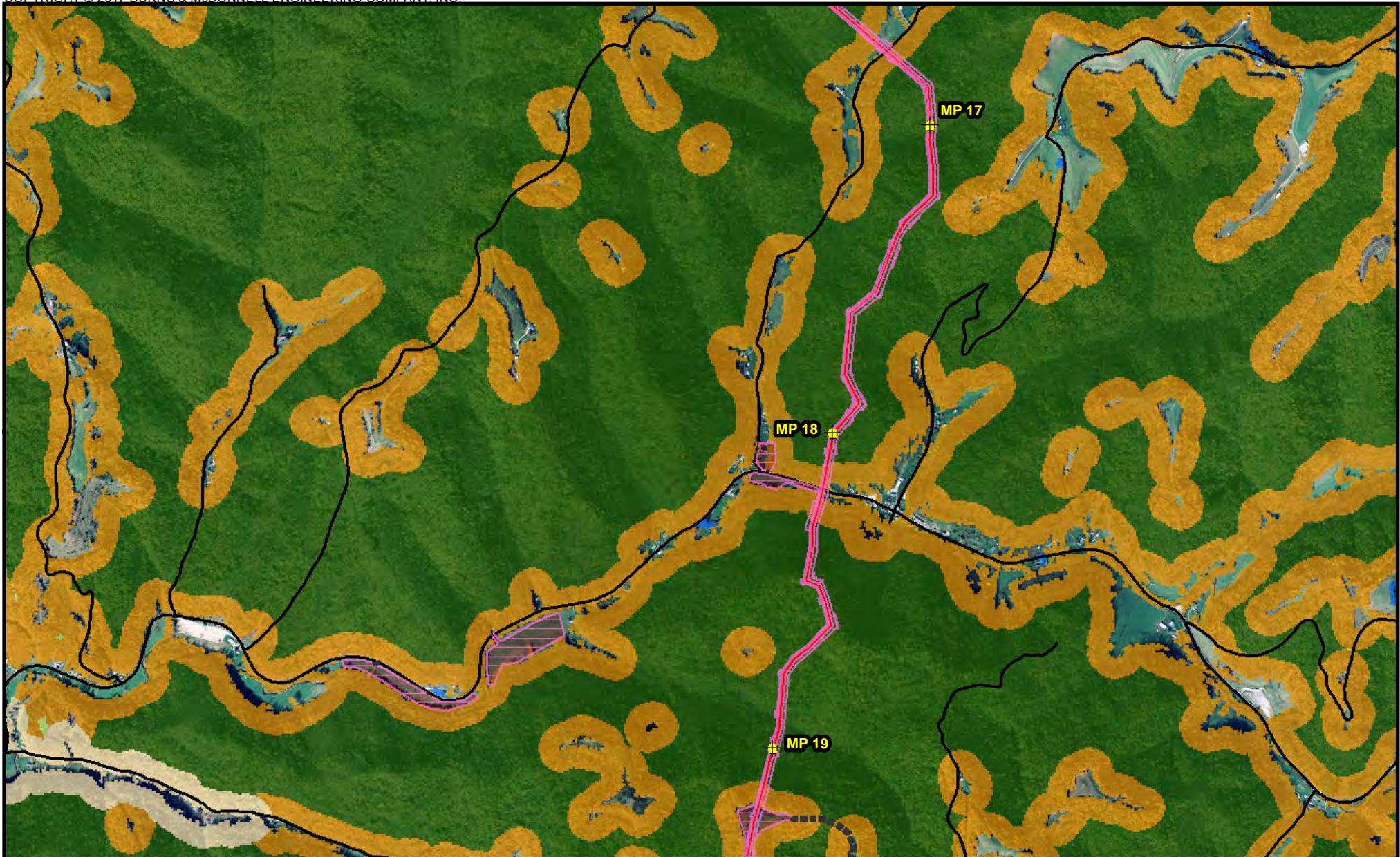
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<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	 NORTH 2,000 1,000 0 Scale in Feet		<p>Appendix G Mountaineer XPress Project Core Forest Map</p> <p>Page 7 of 62</p>
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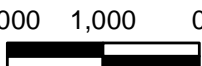
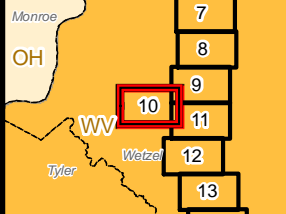
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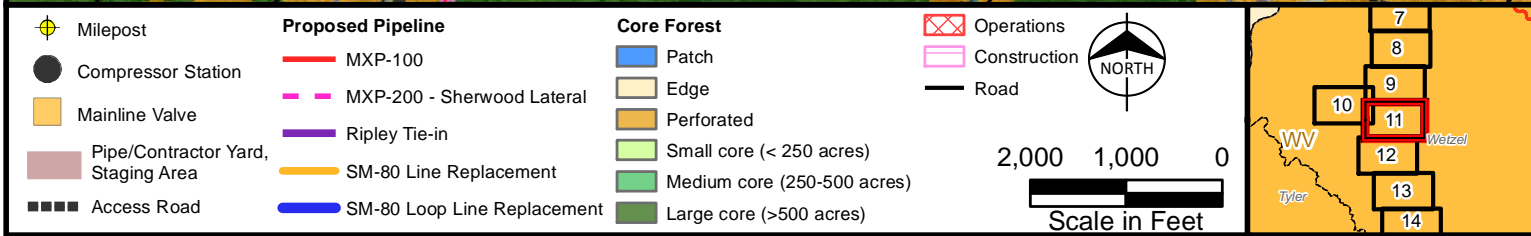
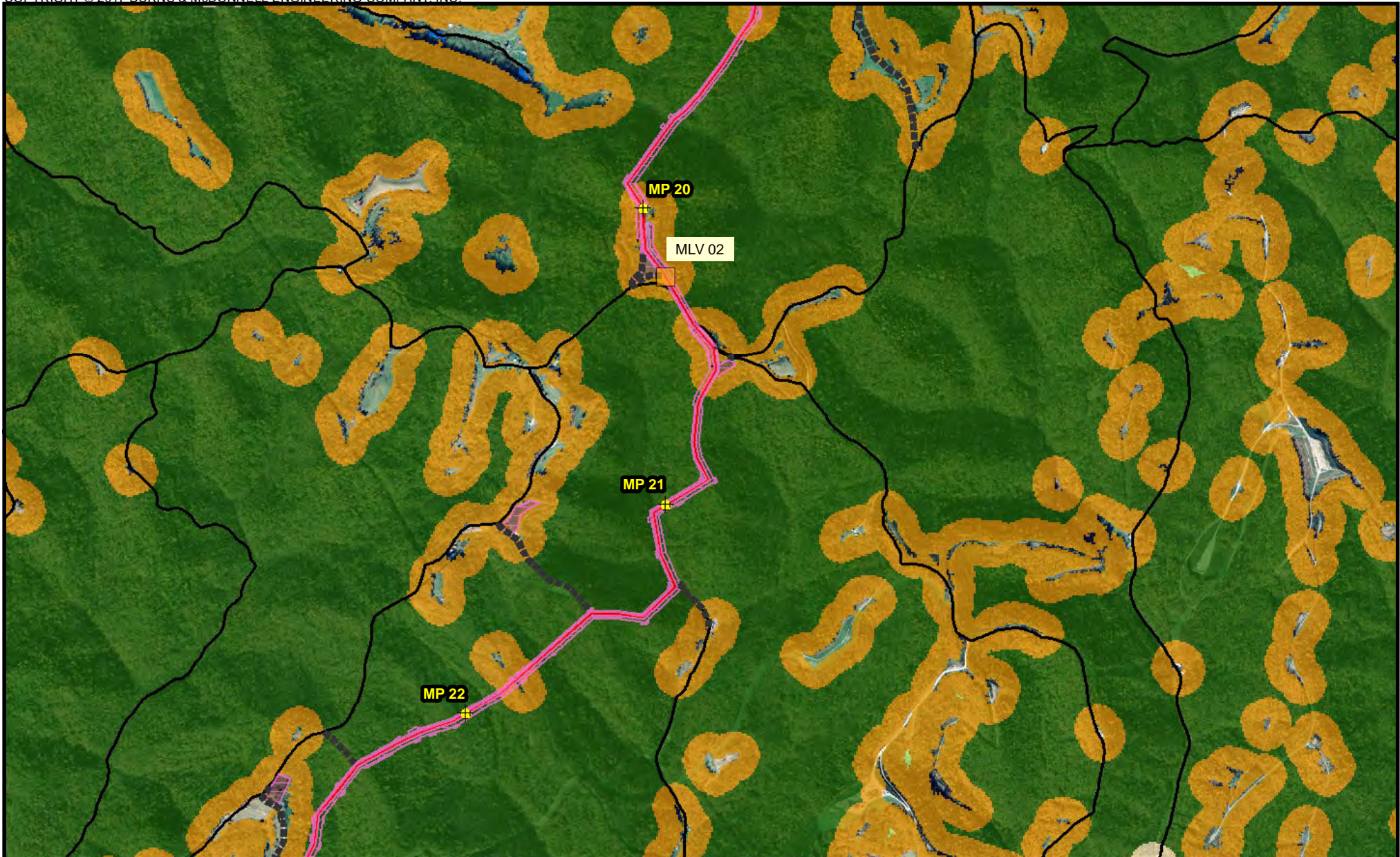


<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	<p>NORTH</p>	<p>2,000 1,000 0</p> <p>Scale in Feet</p>	<p>Inset map showing project location in West Virginia, with counties Marshall, Tyler, and Wetzel labeled. A red box highlights the area shown in the main map.</p>
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Appendix G Mountaineer XPress Project Core Forest Map



<ul style="list-style-type: none"> ● Compressor Station ■ Mainline Valve ■ Pipe/Contractor Yard, Staging Area ■ Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> — MXP-100 — MXP-200 - Sherwood Lateral — Ripley Tie-in — SM-80 Line Replacement — SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> ■ Patch ■ Edge ■ Perforated ■ Small core (< 250 acres) ■ Medium core (250-500 acres) ■ Large core (>500 acres) 	<ul style="list-style-type: none"> ▣ Operations ▣ Construction — Road <div style="text-align: center;">  <p>NORTH</p> </div> <div style="text-align: center;"> <p>2,000 1,000 0</p>  <p>Scale in Feet</p> </div>		<p>Appendix G Montaineer Xpress Project Core Forest Map</p> <p>Page 10 of 62</p>
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Appendix G
 Mountaineer Xpress Project
 Core Forest Map

Page 11 of 62

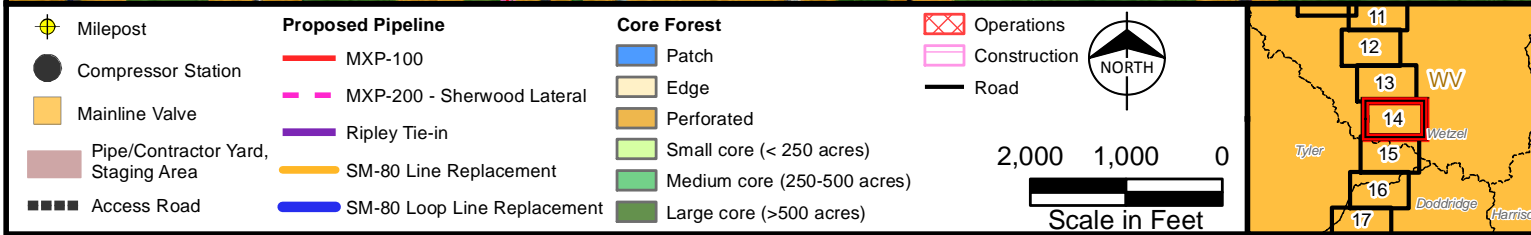


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Appendix G
 Montaineer Xpress Project
 Core Forest Map



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 		<p>Scale in Feet</p>		<p style="text-align: center;">Appendix G Mountaineer Xpress Project Core Forest Map</p> <p style="text-align: center;">Page 13 of 62</p>
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Appendix G
 Mountaineer XPress Project
 Core Forest Map



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 		<p>Scale in Feet</p>		<p style="text-align: center;">Appendix G Mountaineer XPress Project Core Forest Map</p> <p style="text-align: center;">Page 15 of 62</p>
<p>Source: Esri; Columbia Pipeline Group; West Virginia University; and Burns & McDonnell Engineering Company, Inc.</p>							



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (> 500 acres) 	<ul style="list-style-type: none"> Operations Construction Road <div style="text-align: center;"> <p>NORTH</p> </div> <div style="text-align: center;"> <p>2,000 1,000 0</p> <p>Scale in Feet</p> </div>		<p>Appendix G Mountaineer XPress Project Core Forest Map</p> <p>Page 16 of 62</p>
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<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	<p>NORTH</p>	<p>2,000 1,000 0</p> <p>Scale in Feet</p>	<p>Tyler WV, Wetzel, Doddridge, Harrison, 50</p>	<h2 style="margin: 0;">Appendix G</h2> <h3 style="margin: 0;">Mountaineer XPress Project</h3> <h3 style="margin: 0;">Core Forest Map</h3> <p style="margin: 10px 0 0 0;">Page 17 of 62</p>
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<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	<p>2,000 1,000 0 Scale in Feet</p>	<p>Inset map showing project location in West Virginia, with grid cells 15-23 and labels for Tyler, Weizel, WV, Harrison, and Doddridge.</p>
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Appendix G
 Montaineer Xpress Project
 Core Forest Map

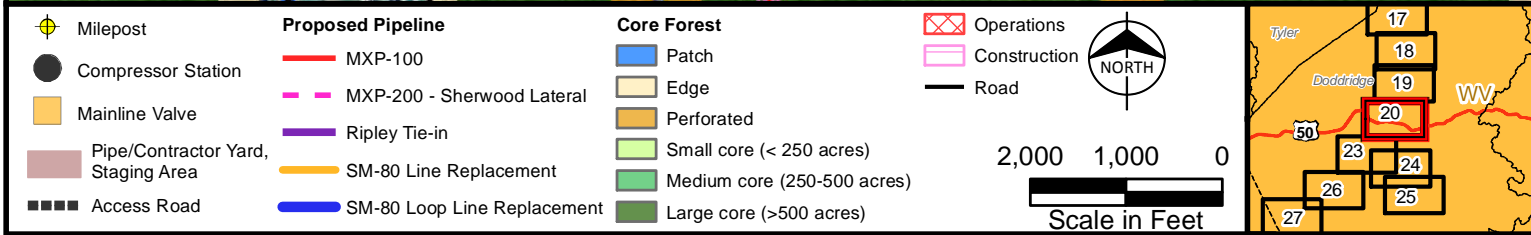
Page 18 of 62



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 		<p>2,000 1,000 0</p> <p>Scale in Feet</p>	
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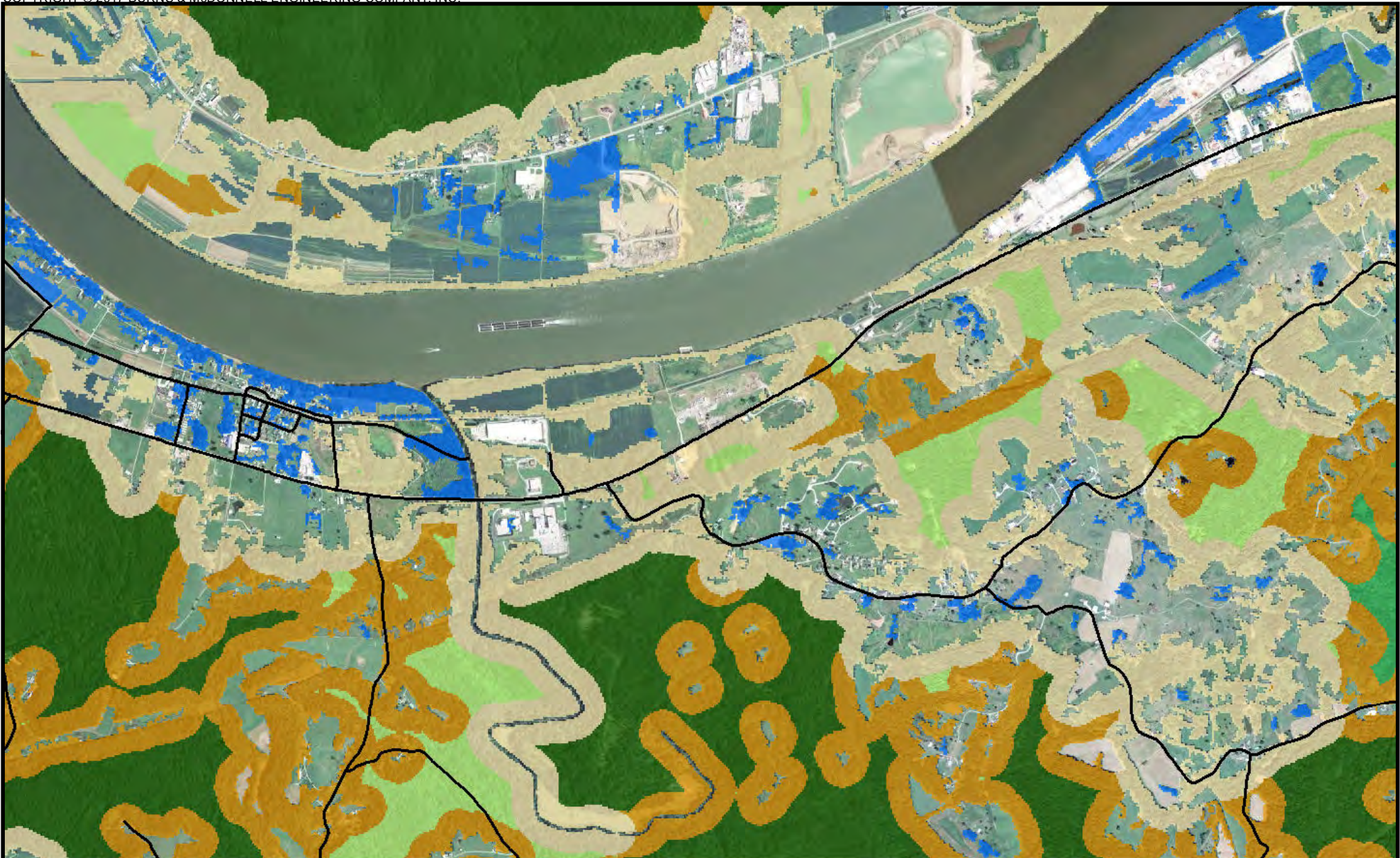
Appendix G
 Mountaineer XPress Project
 Core Forest Map

Page 19 of 62



Appendix G
 Montaineer Xpress Project
 Core Forest Map


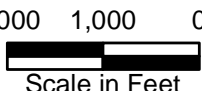
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<ul style="list-style-type: none"> ● Compressor Station ■ Mainline Valve ■ Pipe/Contractor Yard, Staging Area ■ Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> — MXP-100 — MXP-200 - Sherwood Lateral — Ripley Tie-in — SM-80 Line Replacement — SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> ■ Patch ■ Edge ■ Perforated ■ Small core (< 250 acres) ■ Medium core (250-500 acres) ■ Large core (>500 acres) 	<ul style="list-style-type: none"> ▣ Operations ▣ Construction — Road 	
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Appendix G Montaineer Xpress Project Core Forest Map

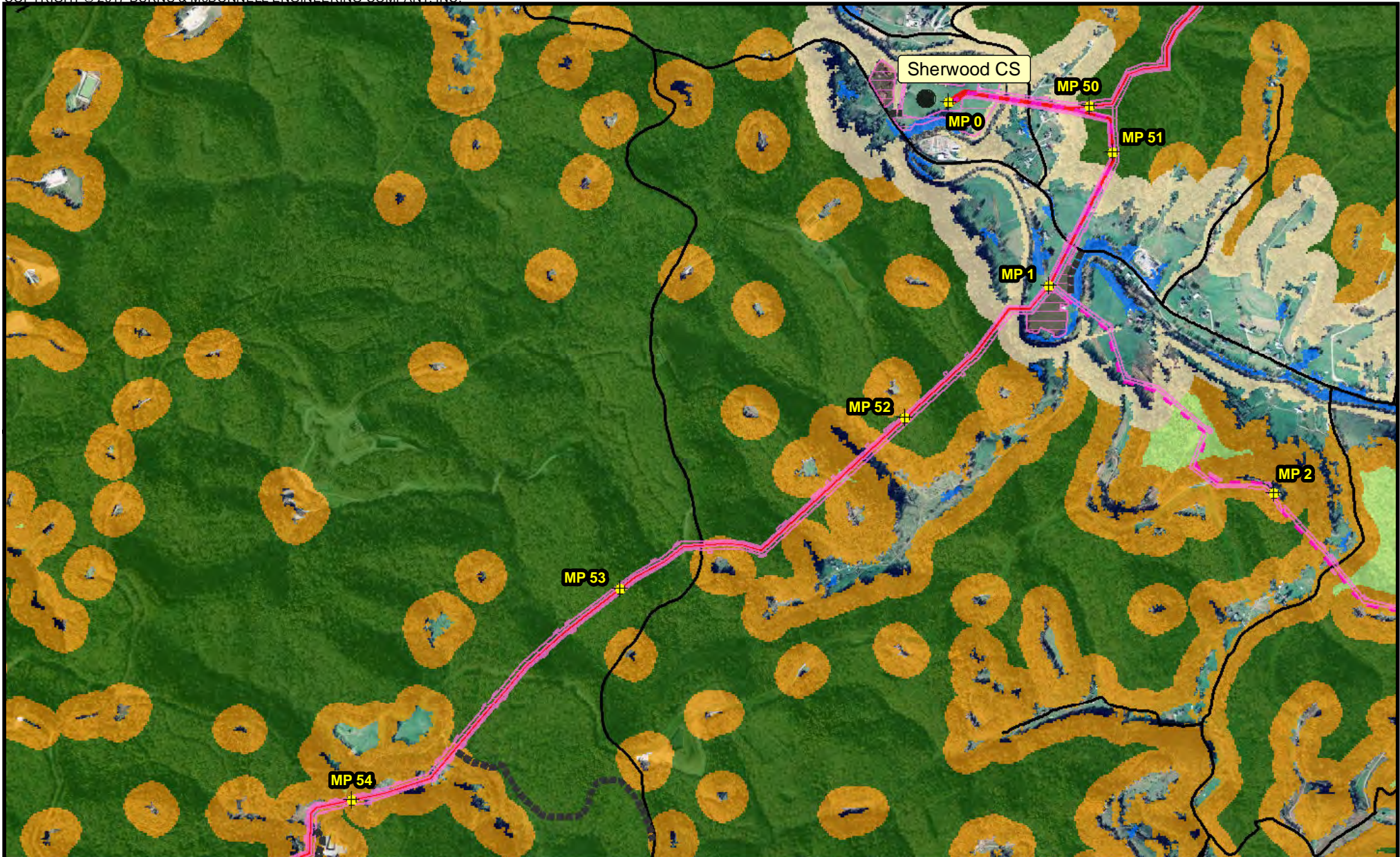


● Compressor Station	Proposed Pipeline	Core Forest	☒ Operations	  Scale in Feet
■ Mainline Valve	— MXP-100	■ Patch	☐ Construction	
■ Pipe/Contractor Yard, Staging Area	— MXP-200 - Sherwood Lateral	■ Edge	— Road	
— Access Road	— Ripley Tie-in	■ Perforated		
	— SM-80 Line Replacement	■ Small core (< 250 acres)		
	— SM-80 Loop Line Replacement	■ Medium core (250-500 acres)		
		■ Large core (>500 acres)		

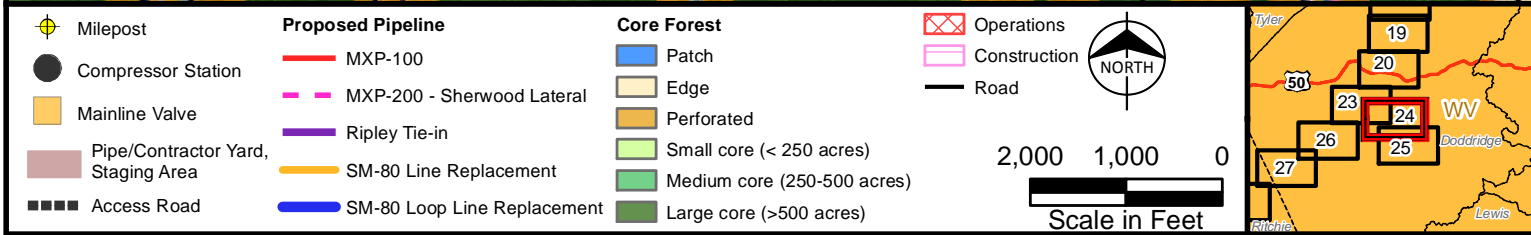
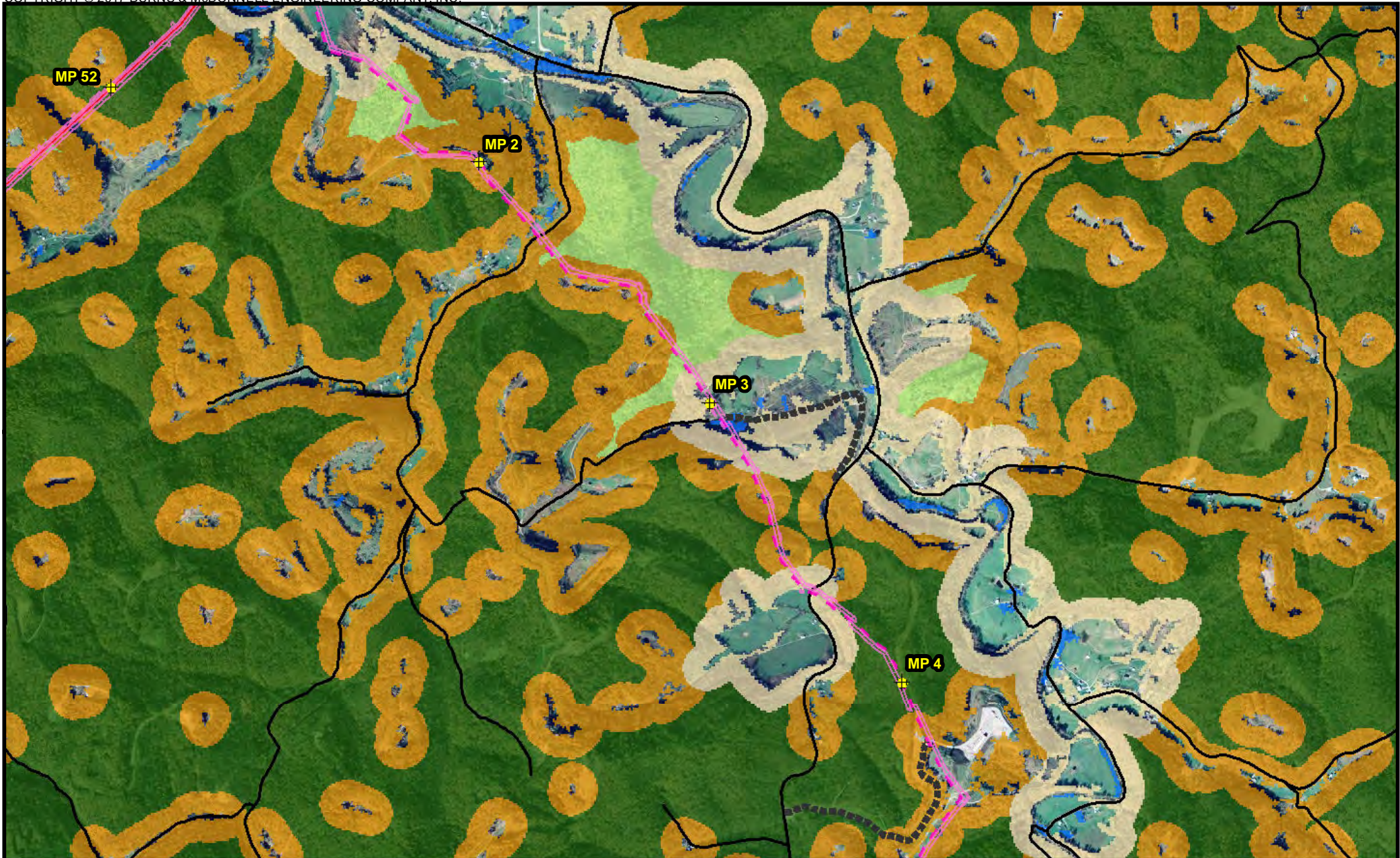


Appendix G
Montaineer Xpress Project
Core Forest Map

 Page 22 of 62



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	<p>2,000 1,000 0</p> <p>Scale in Feet</p>		<p style="text-align: center;">Appendix G Mountaineer XPress Project Core Forest Map</p> <p style="text-align: center;">Page 23 of 62</p>
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Appendix G
 Montaineer Xpress Project
 Core Forest Map
 Page 24 of 62



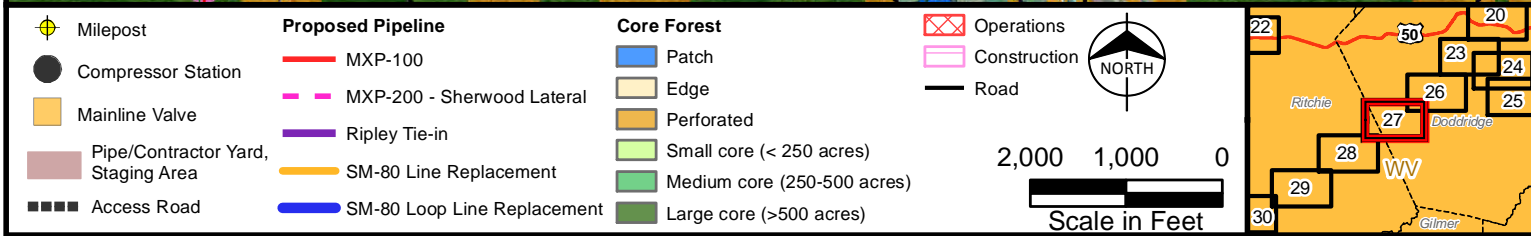
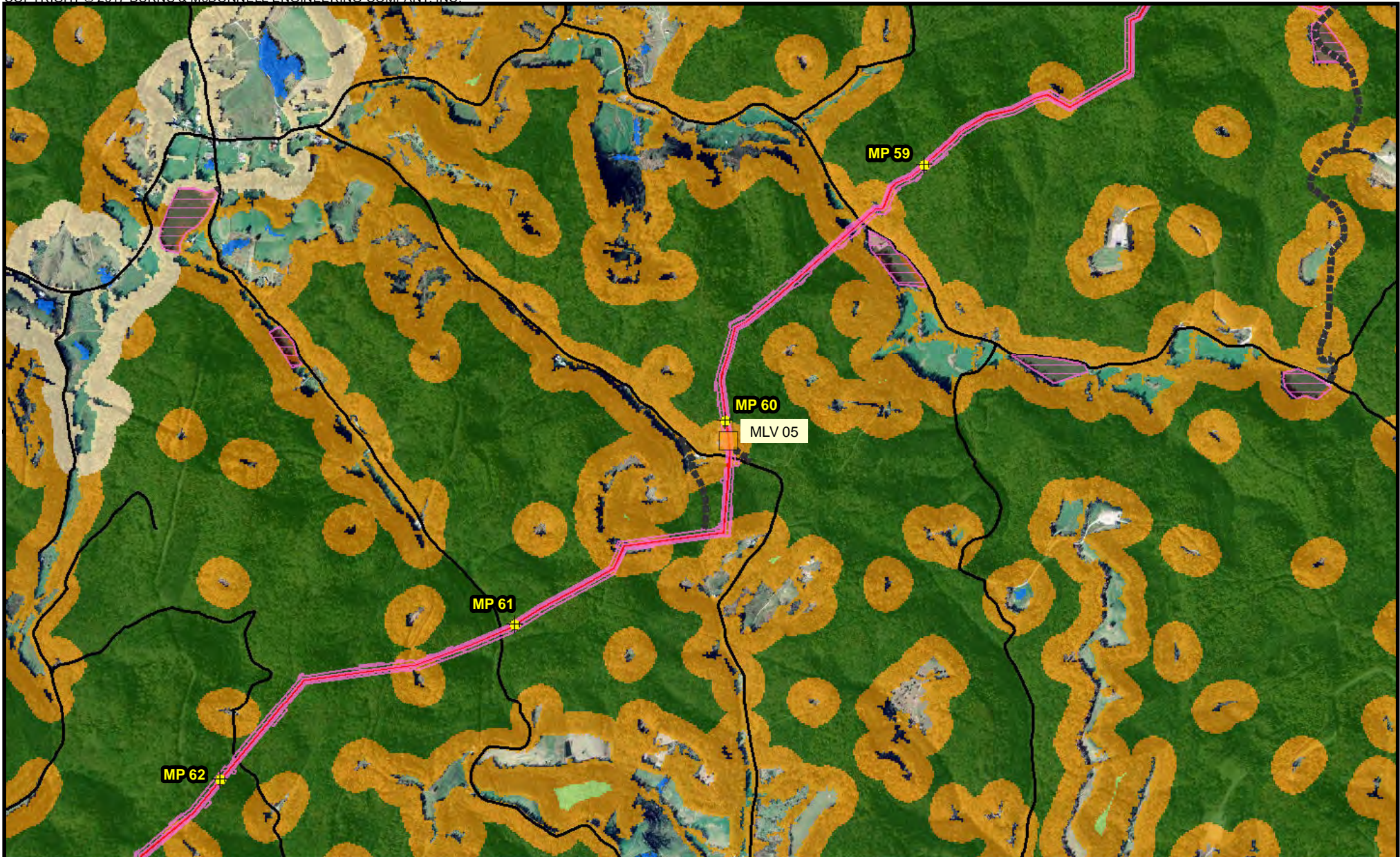
<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road <div style="text-align: center;"> <p>2,000 1,000 0</p> <p>Scale in Feet</p> </div>		<p>Appendix G Mountaineer XPress Project Core Forest Map</p> <p>Page 25 of 62</p>
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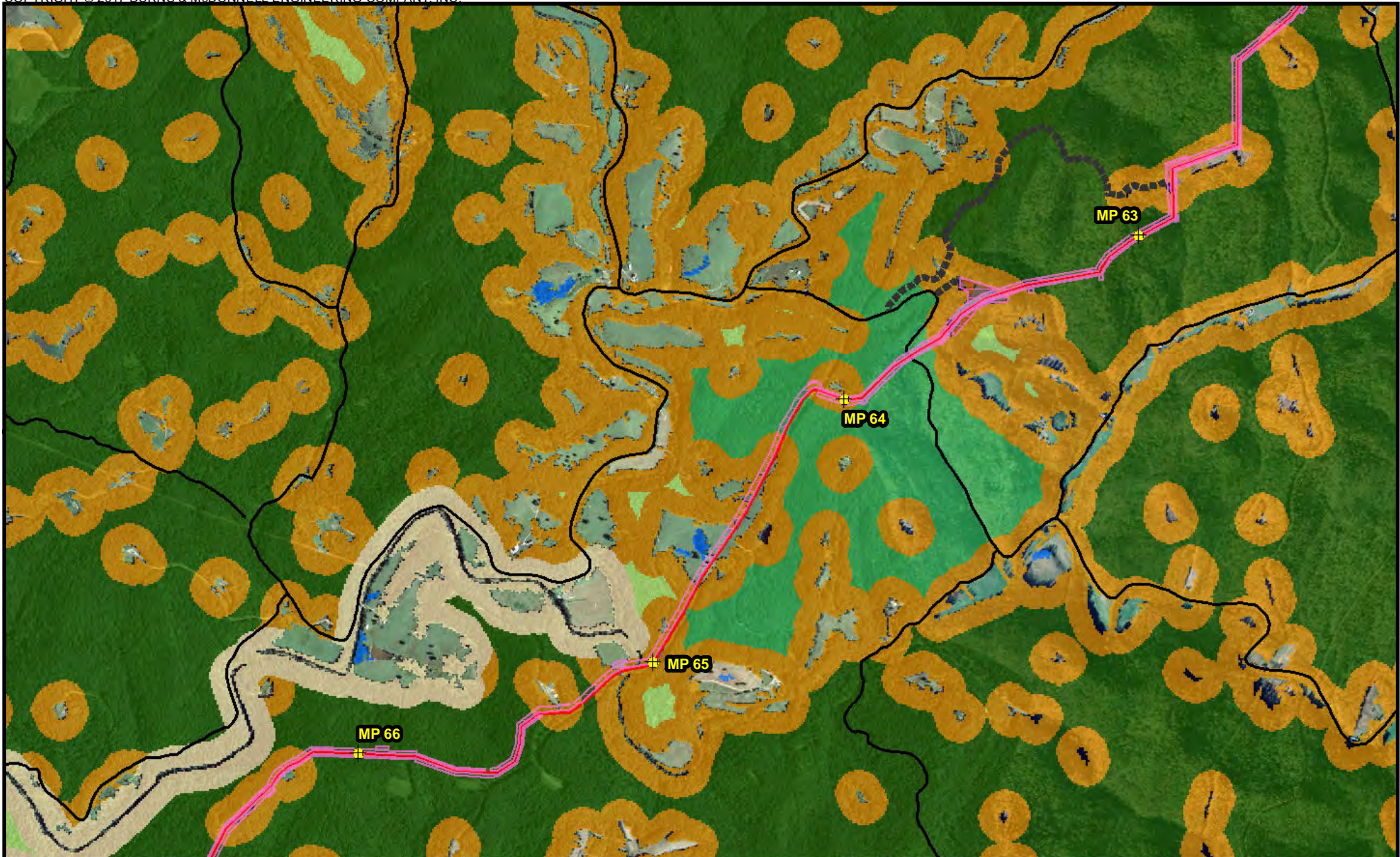
<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	<p>2,000 1,000 0</p> <p>Scale in Feet</p>	
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Appendix G
 Mountaineer XPress Project
 Core Forest Map

Page 26 of 62

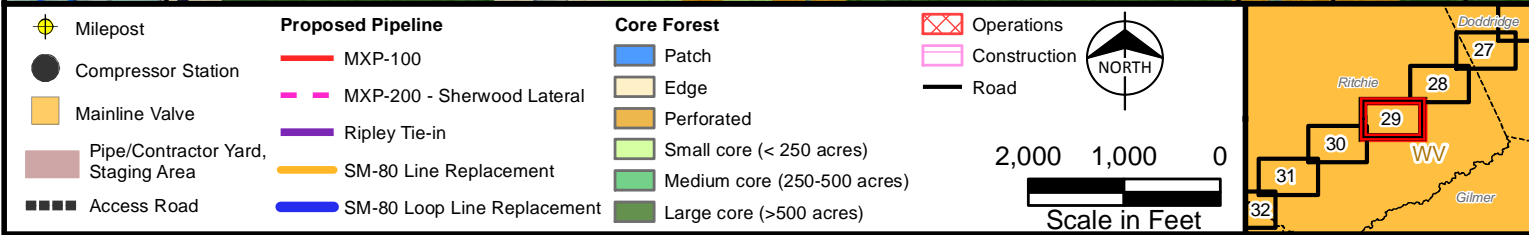
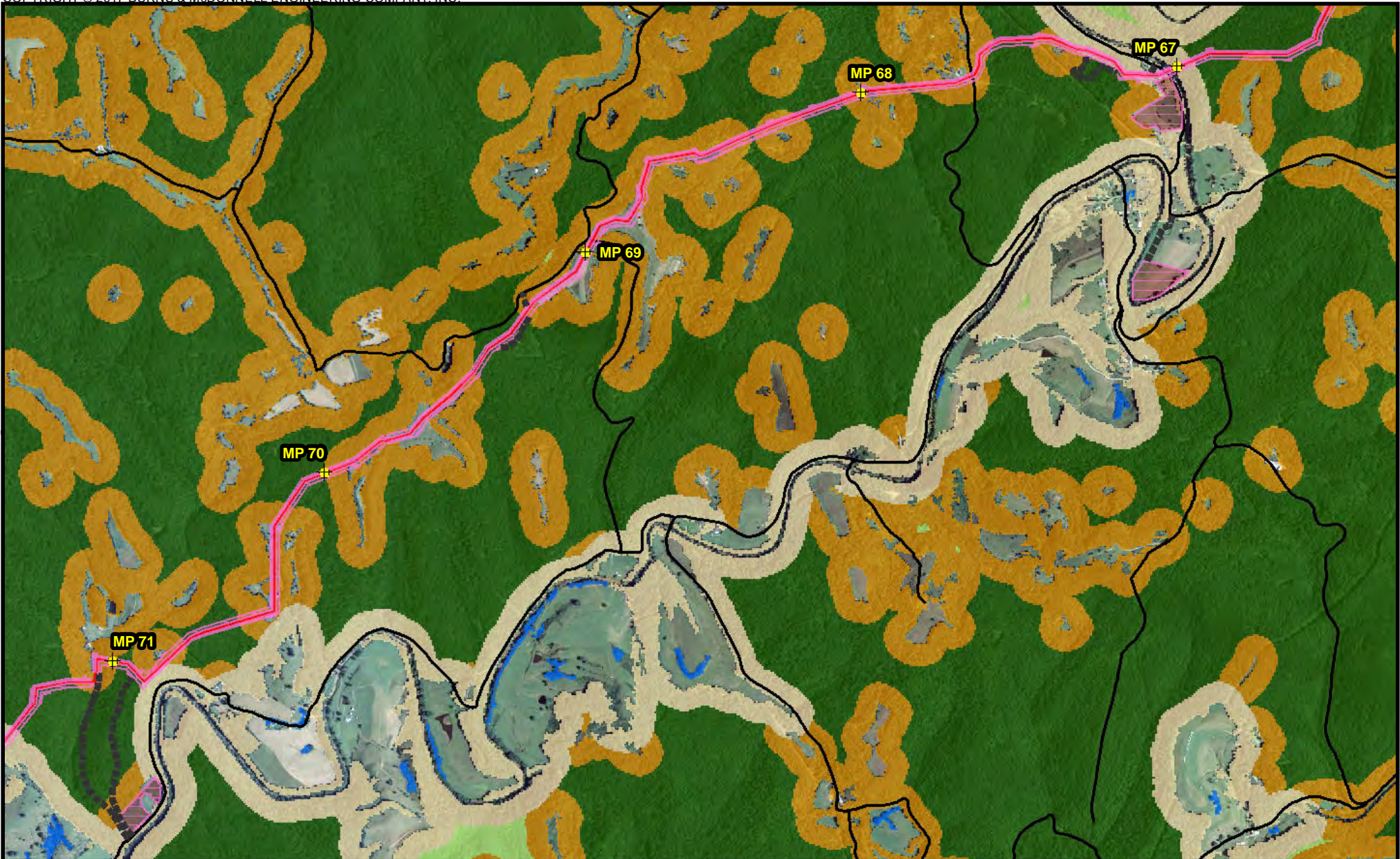


Appendix G
 Mountaineer Xpress Project
 Core Forest Map



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 		<p>Scale in Feet</p>	
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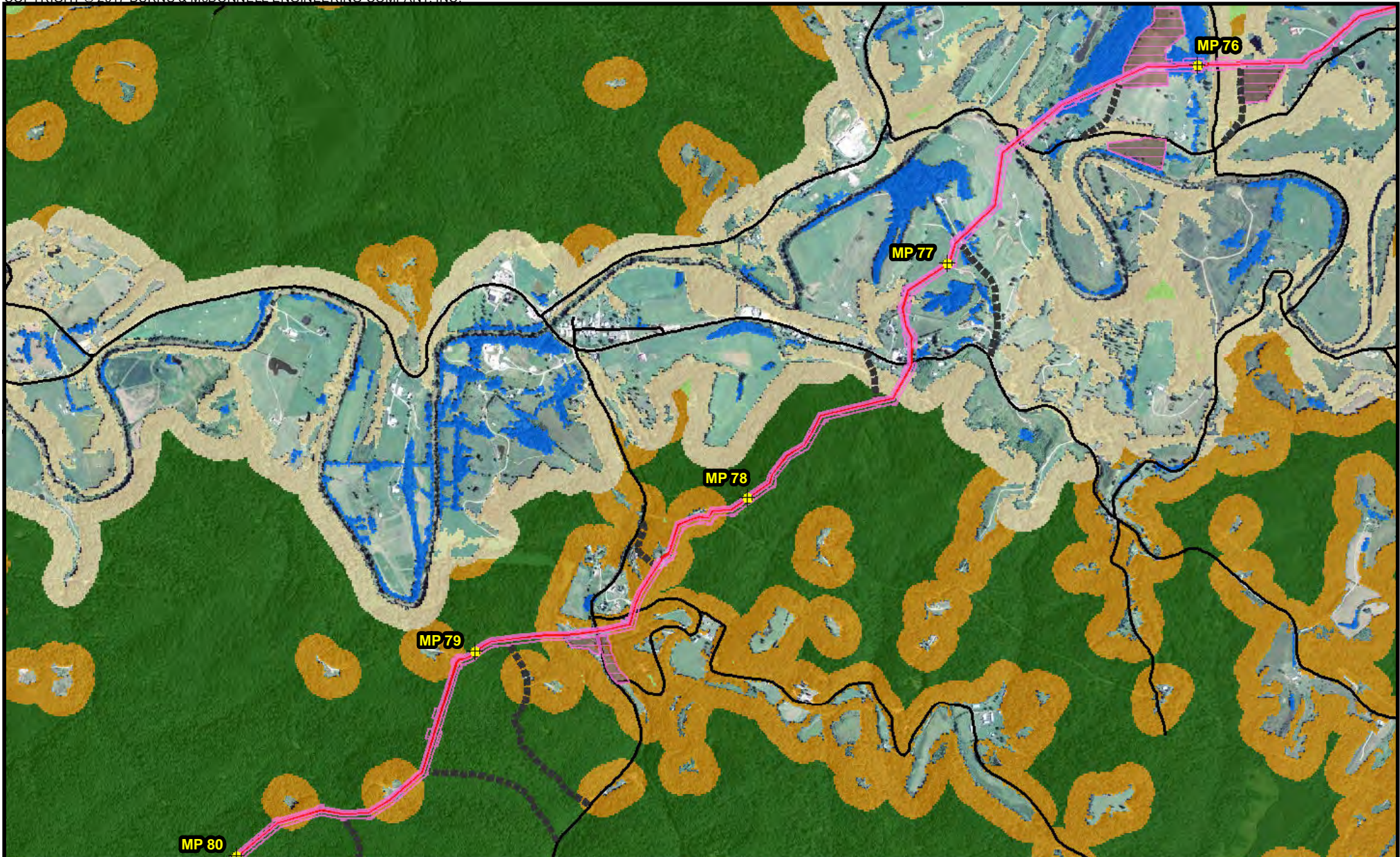
Appendix G Montaineer Xpress Project Core Forest Map



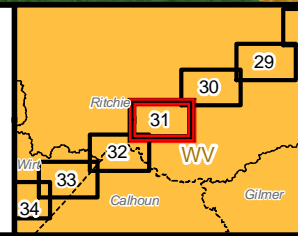
Appendix G Mountaineer XPress Project Core Forest Map



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 		<p>Scale in Feet</p>		<p style="text-align: center;">Appendix G Mountaineer XPress Project Core Forest Map</p> <p style="text-align: center;">Page 30 of 62</p>
<p>Source: Esri; Columbia Pipeline Group; West Virginia University; and Burns & McDonnell Engineering Company, Inc.</p>							



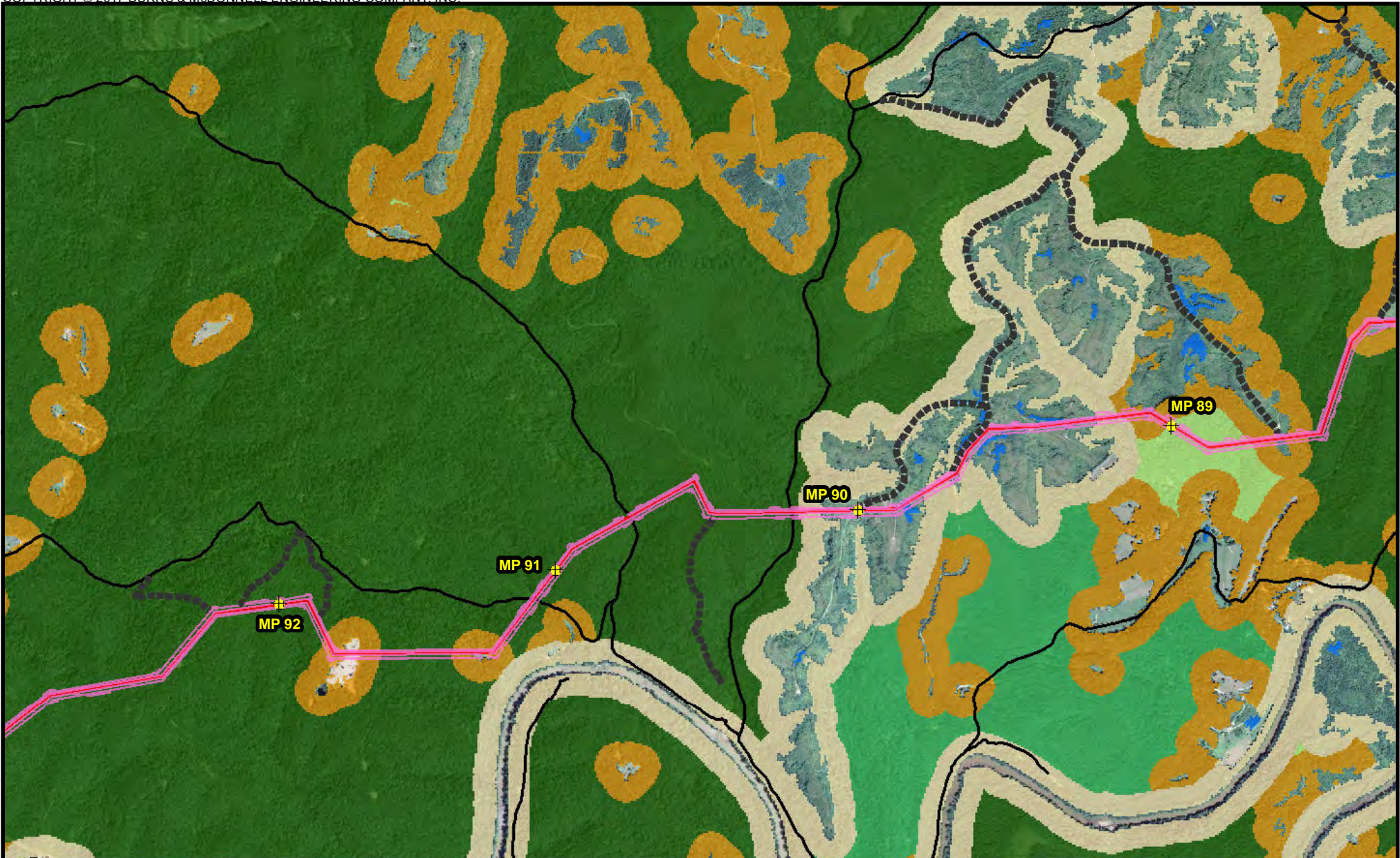
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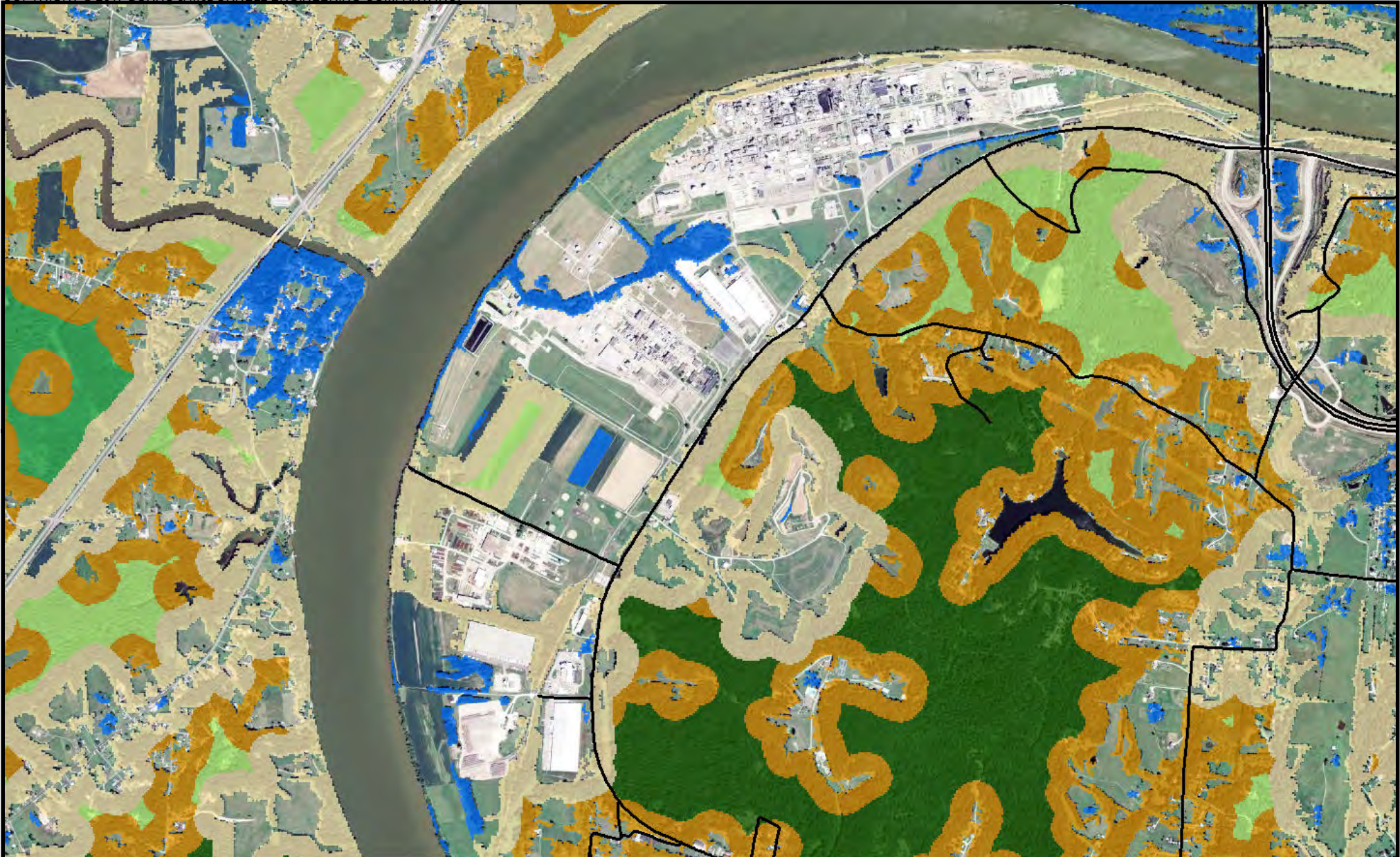
Appendix G
 Mountaineer XPress Project
 Core Forest Map



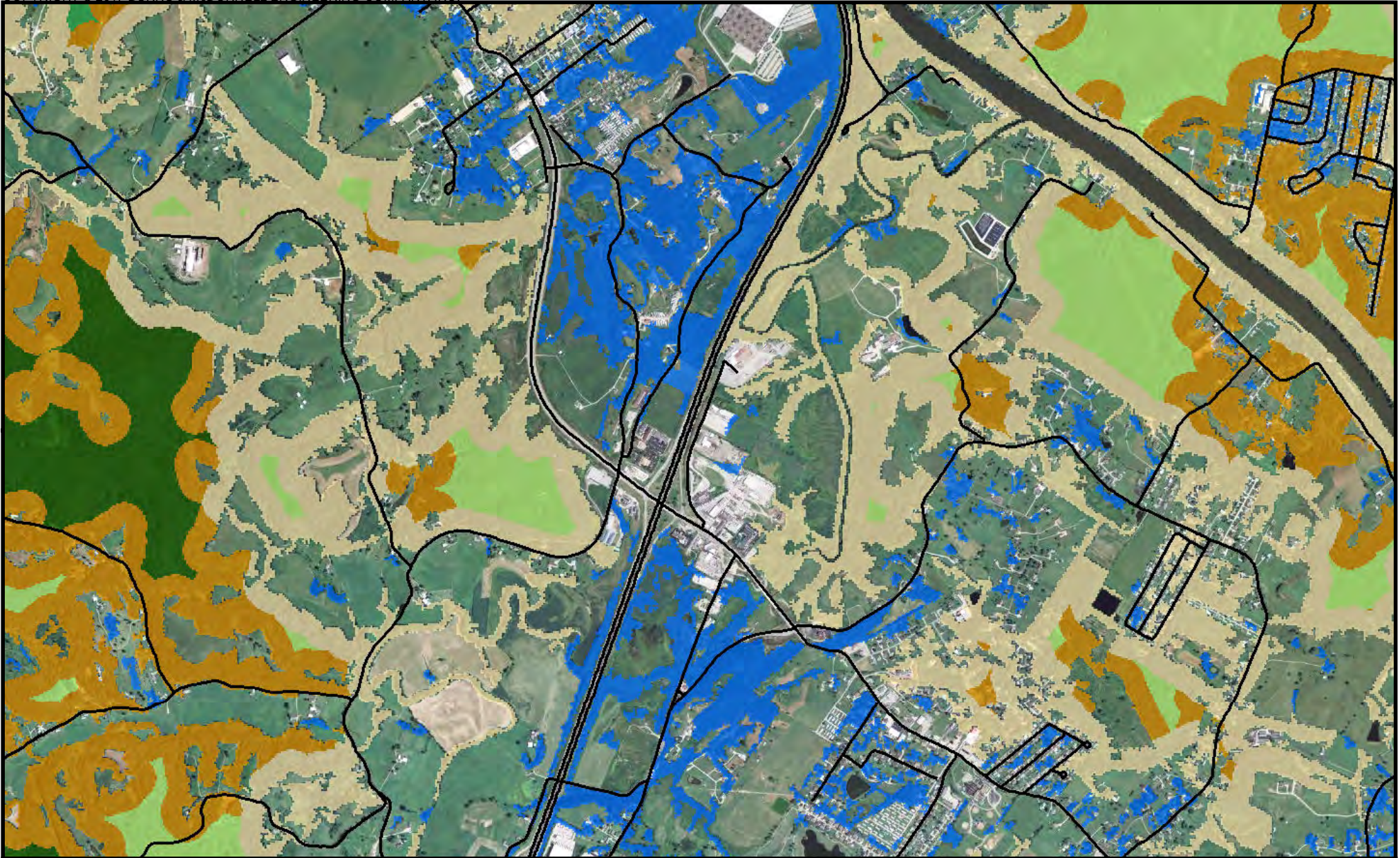
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<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road <div style="text-align: center;"> <p>NORTH</p> </div> <div style="text-align: center;"> <p>2,000 1,000 0</p> <p>Scale in Feet</p> </div>		<p>Appendix G Mountaineer XPress Project Core Forest Map</p> <p>Page 34 of 62</p>
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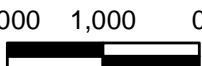
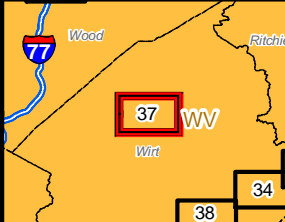
<ul style="list-style-type: none"> ● Compressor Station ■ Mainline Valve ■ Pipe/Contractor Yard, Staging Area ■ Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> — MXP-100 — MXP-200 - Sherwood Lateral — Ripley Tie-in — SM-80 Line Replacement — SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> ■ Patch ■ Edge ■ Perforated ■ Small core (< 250 acres) ■ Medium core (250-500 acres) ■ Large core (>500 acres) 	<ul style="list-style-type: none"> ▨ Operations ▨ Construction — Road 	<p style="text-align: center;">Scale in Feet</p>		<p style="text-align: center;">Appendix G Montaineer Xpress Project Core Forest Map</p> <p style="text-align: center;">Page 35 of 62</p>
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<ul style="list-style-type: none"> ● Compressor Station ■ Mainline Valve ■ Pipe/Contractor Yard, Staging Area ■ Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> — MXP-100 — MXP-200 - Sherwood Lateral — Ripley Tie-in — SM-80 Line Replacement — SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> ■ Patch ■ Edge ■ Perforated ■ Small core (< 250 acres) ■ Medium core (250-500 acres) ■ Large core (>500 acres) 	<ul style="list-style-type: none"> ▣ Operations ▣ Construction — Road 	
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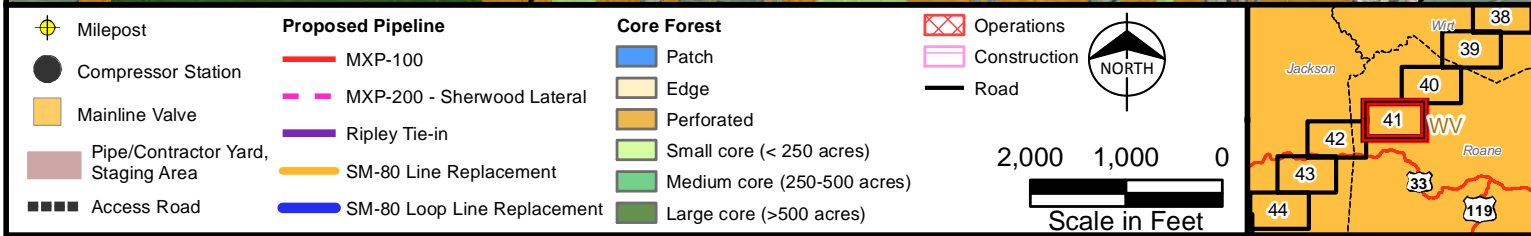
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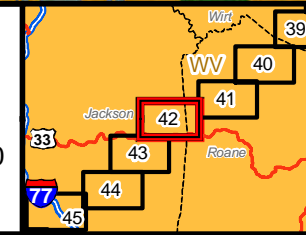
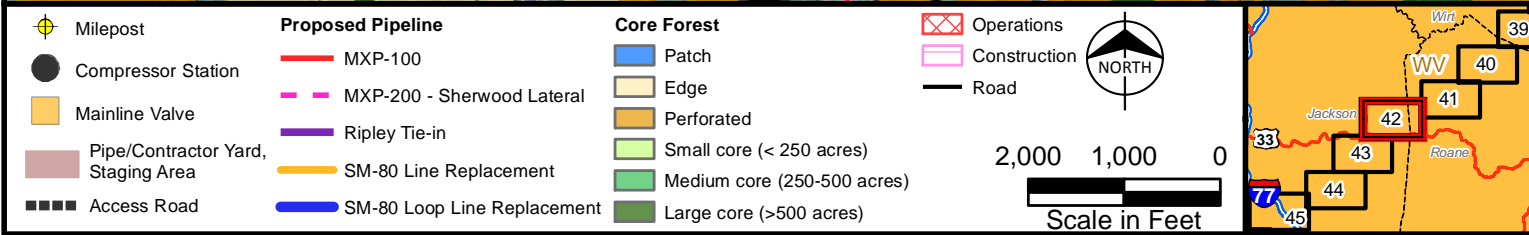
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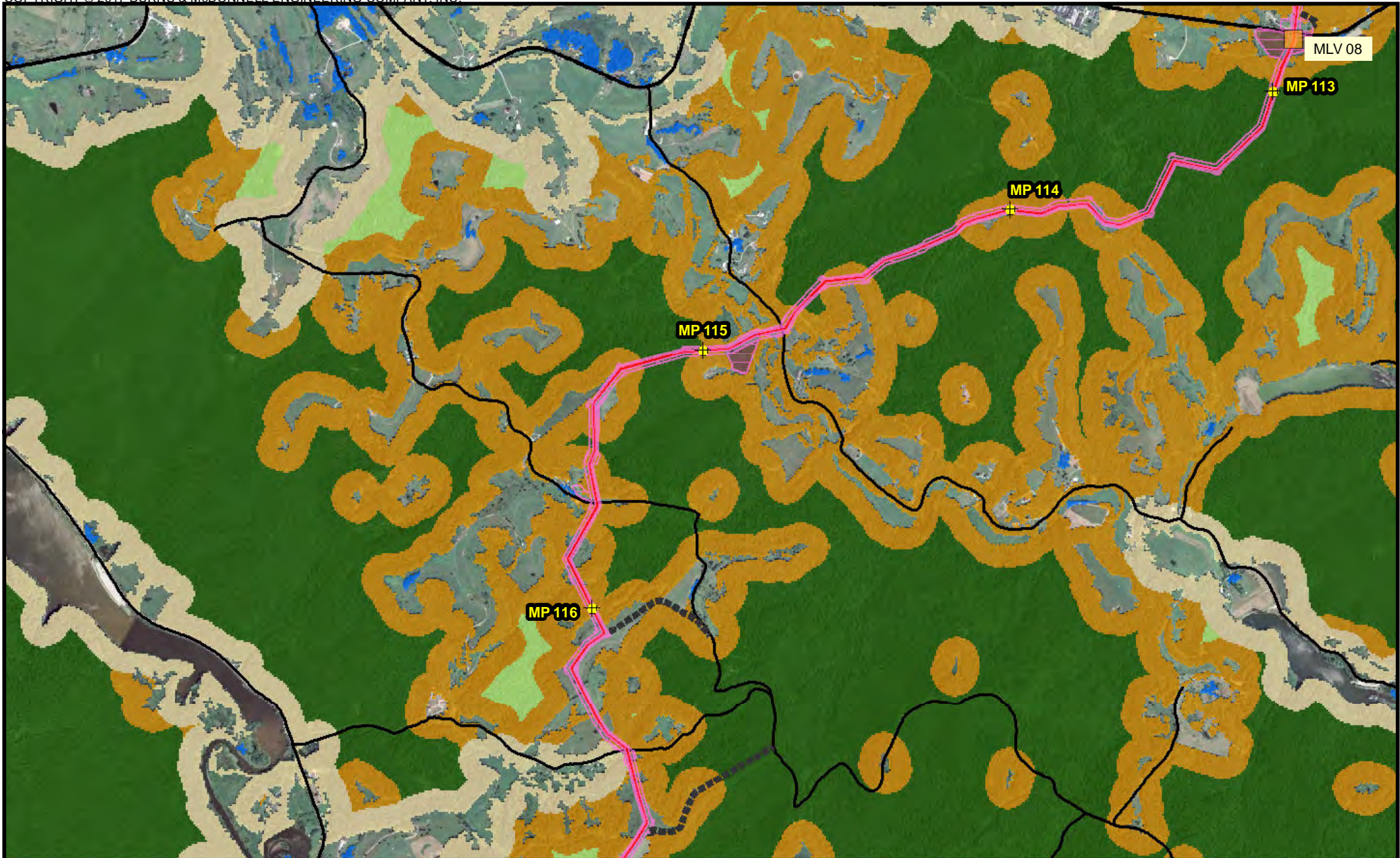
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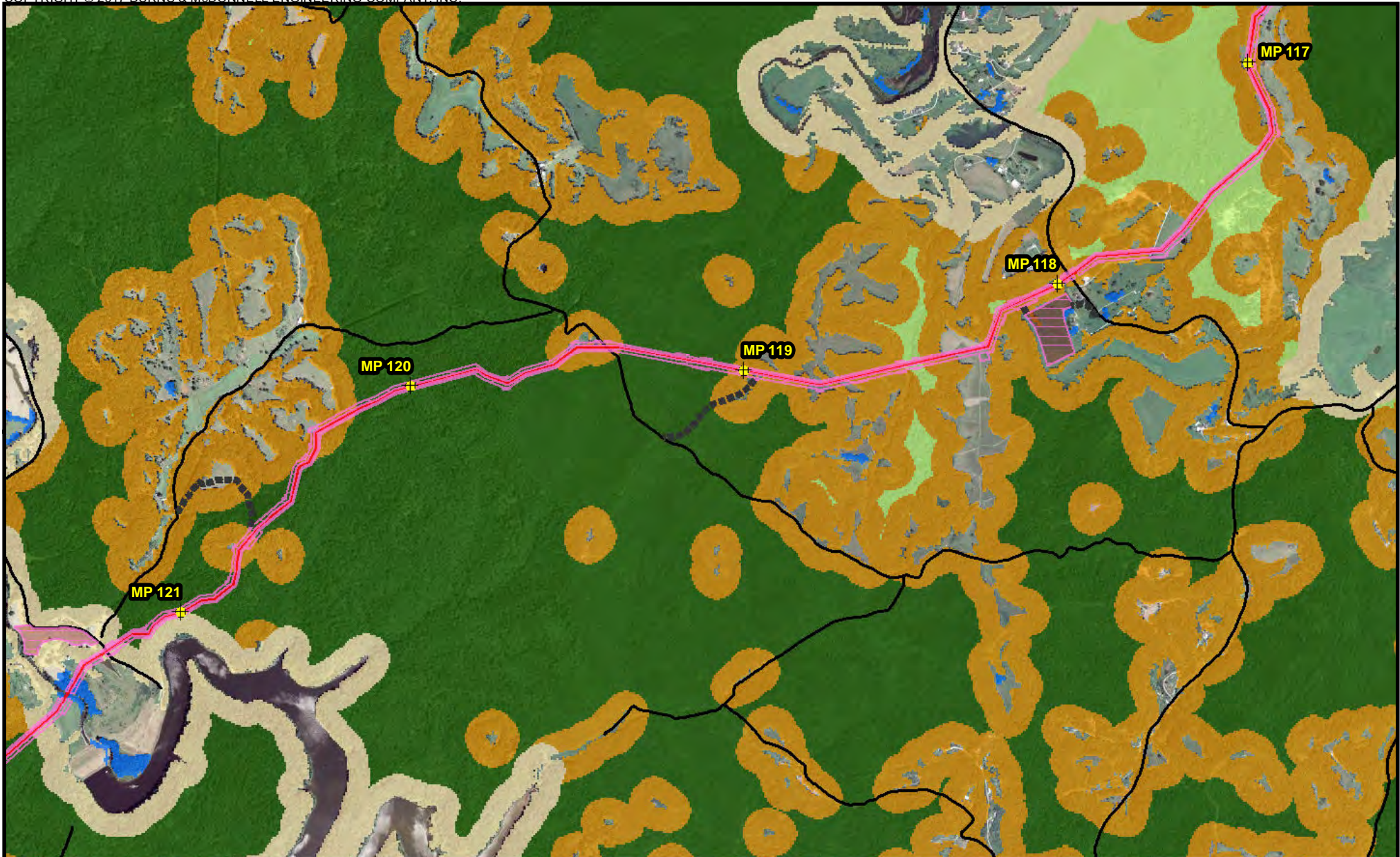
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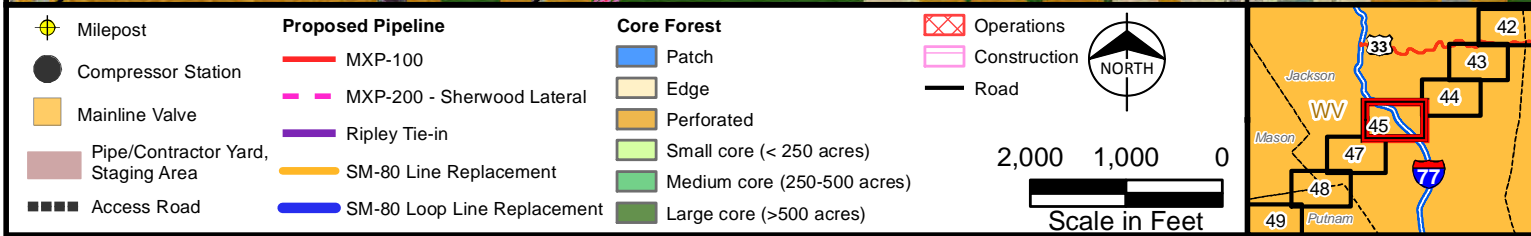
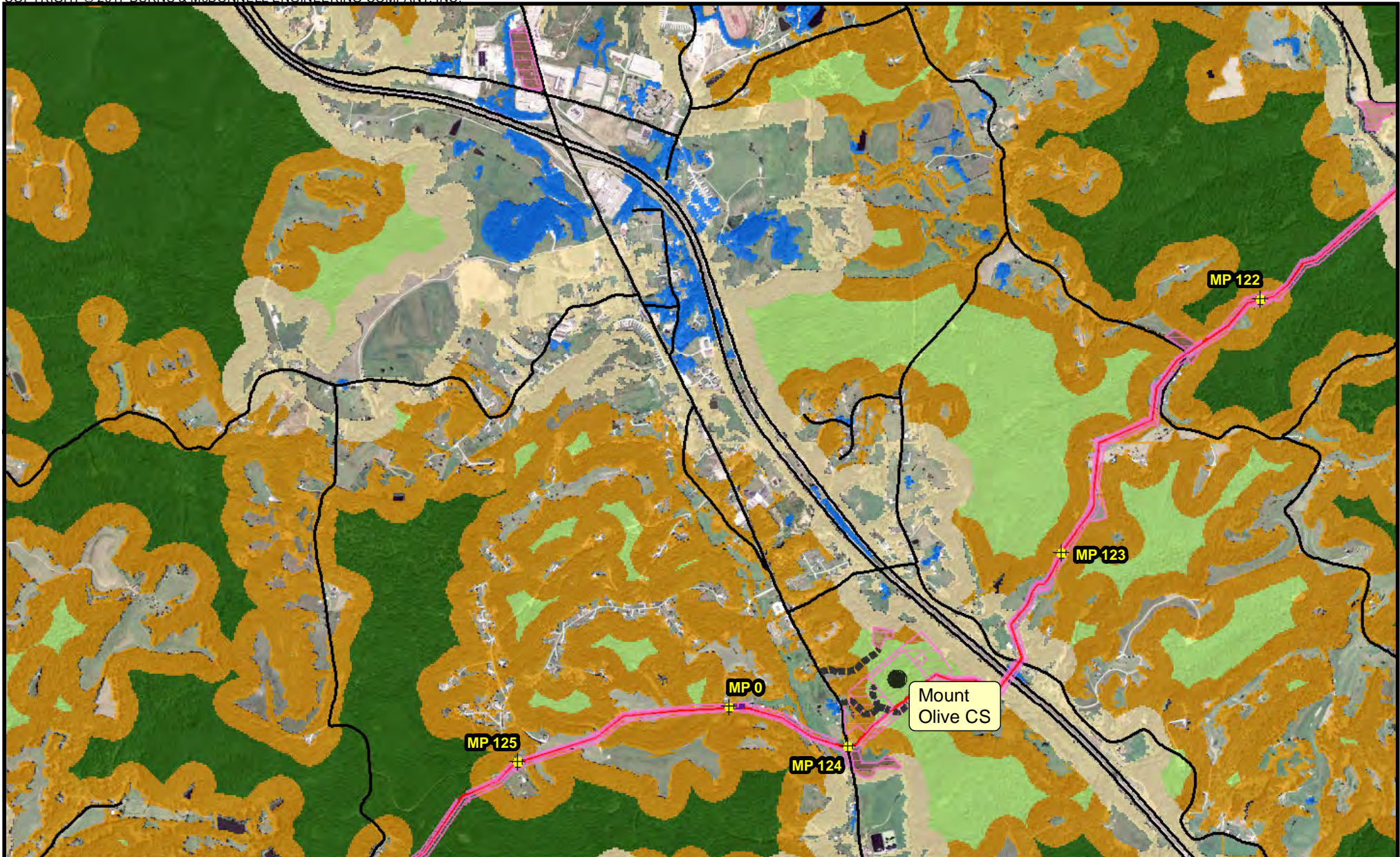
Appendix G Mountaineer XPress Project Core Forest Map



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road <div style="text-align: center;"> <p>2,000 1,000 0</p> <p>Scale in Feet</p> </div>		<p>Appendix G Mountaineer Xpress Project Core Forest Map</p> <p>Page 43 of 62</p>
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<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road <div style="text-align: center;"> <p>2,000 1,000 0</p> <p>Scale in Feet</p> </div>		<p>Appendix G Mountaineer XPress Project Core Forest Map</p> <p>Page 44 of 62</p>
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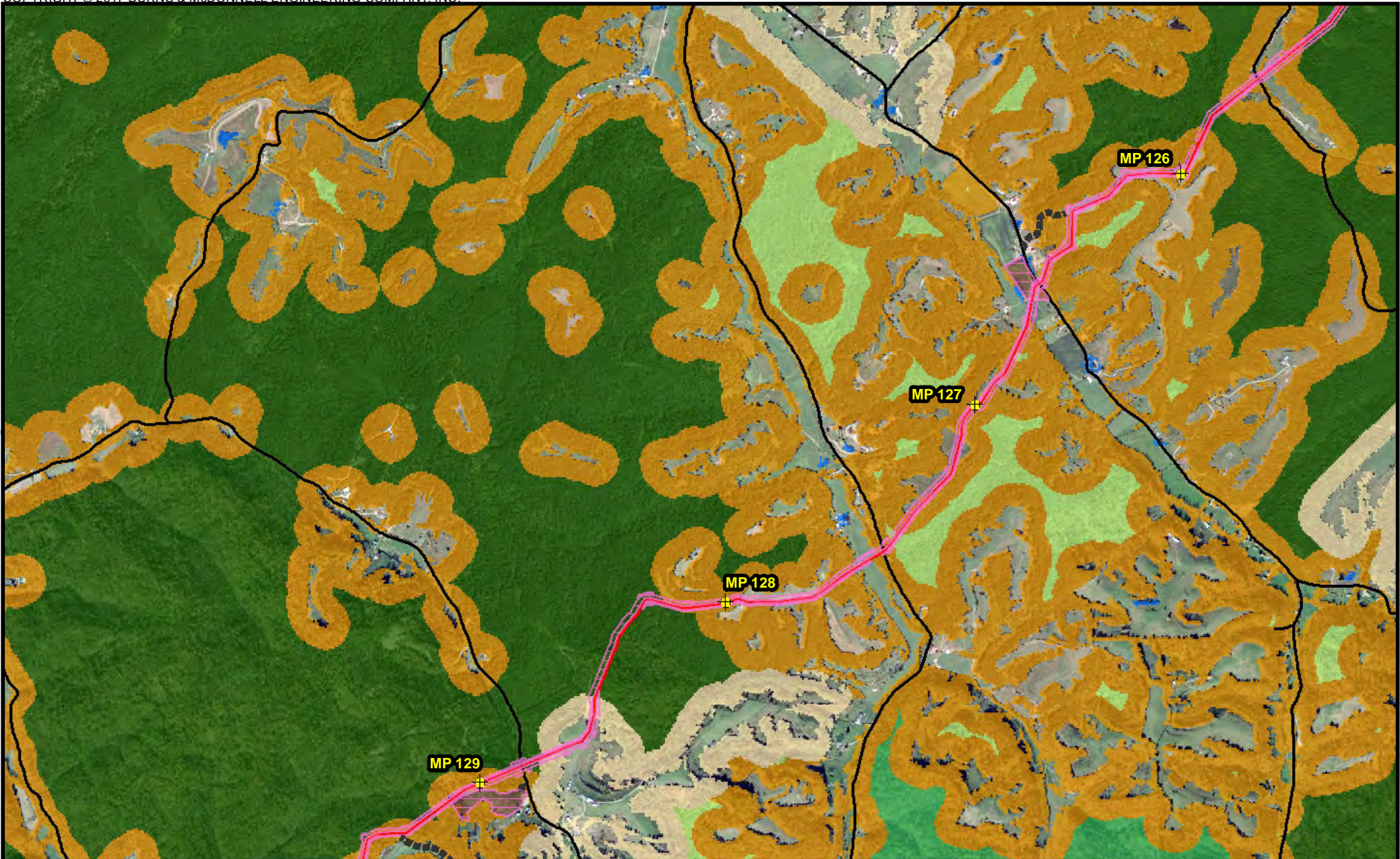


Appendix G
 Mountaineer XPress Project
 Core Forest Map

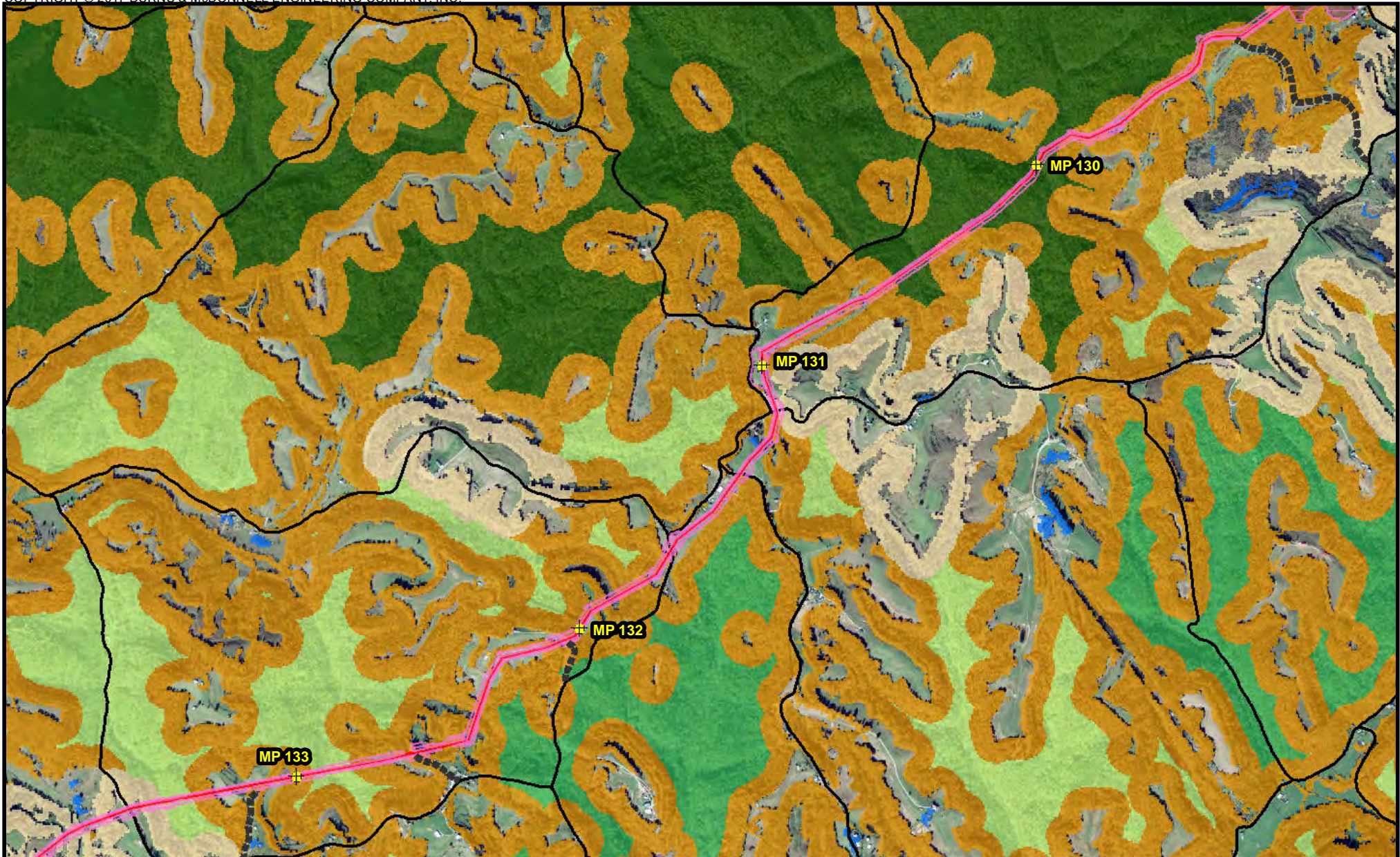
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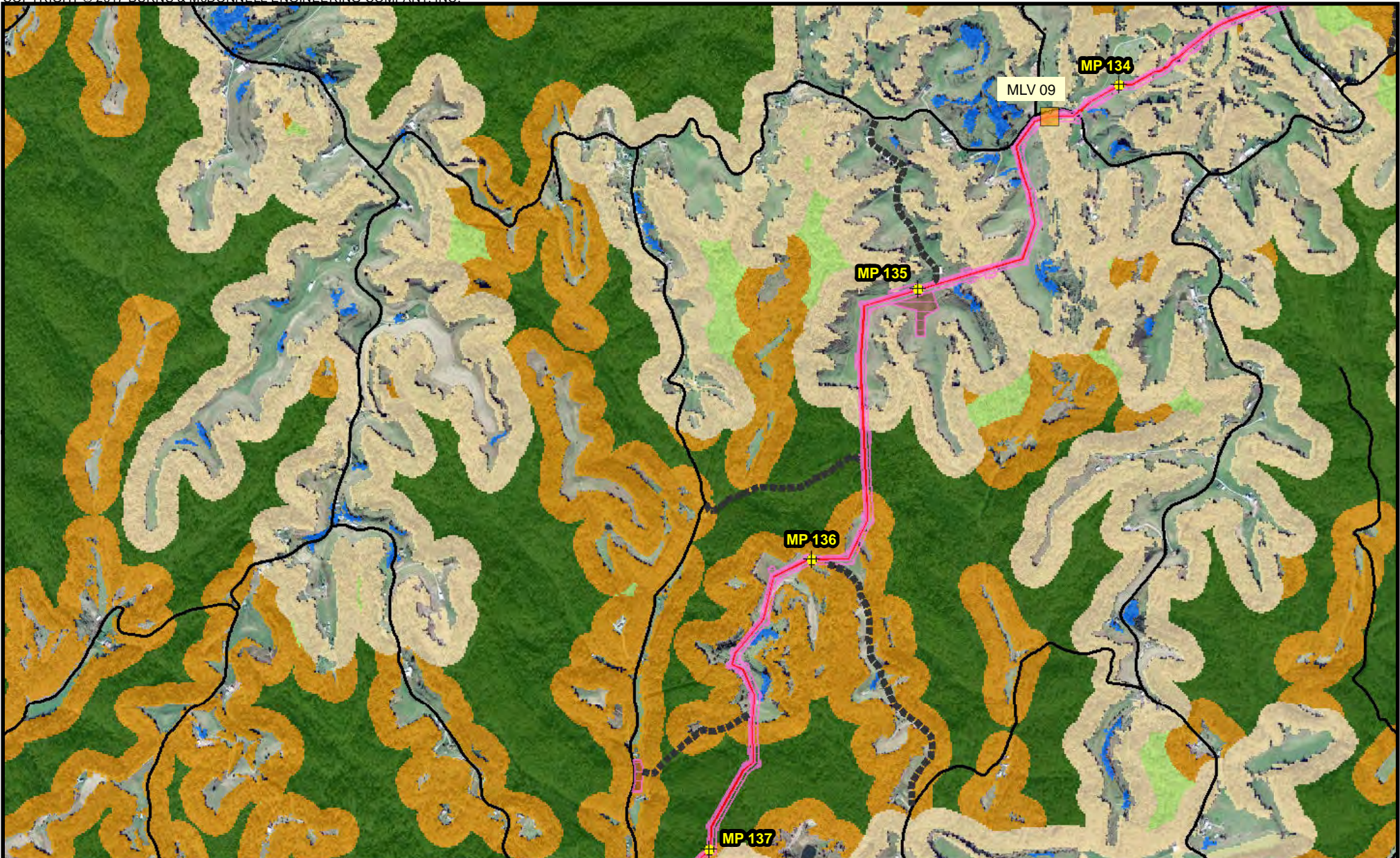
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<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (>500 acres) 	<ul style="list-style-type: none"> Operations Construction Road <div style="text-align: center;"> <p>2,000 1,000 0</p> <p>Scale in Feet</p> </div>		<p>Appendix G Mountaineer XPress Project Core Forest Map</p> <p>Page 47 of 62</p>
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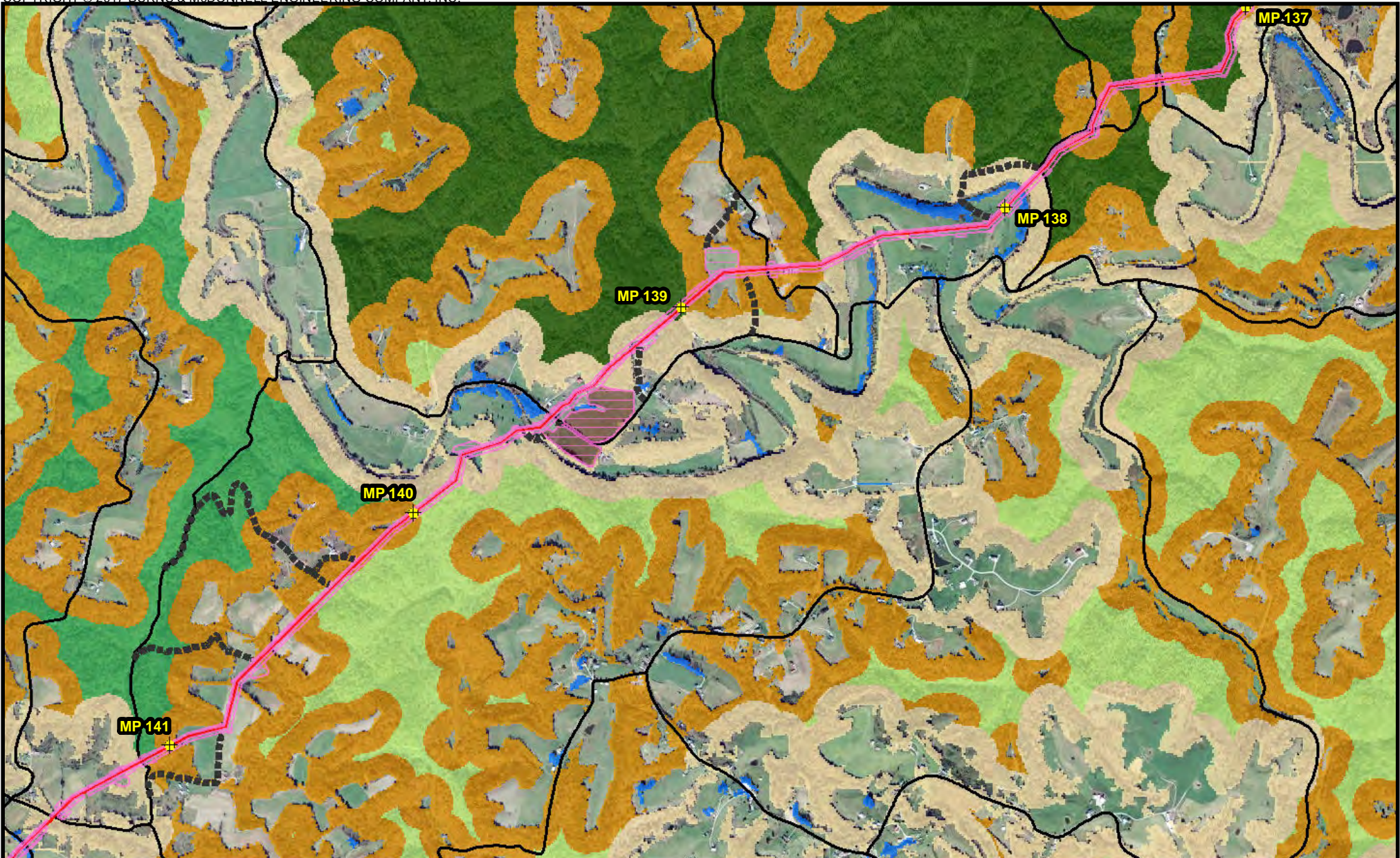


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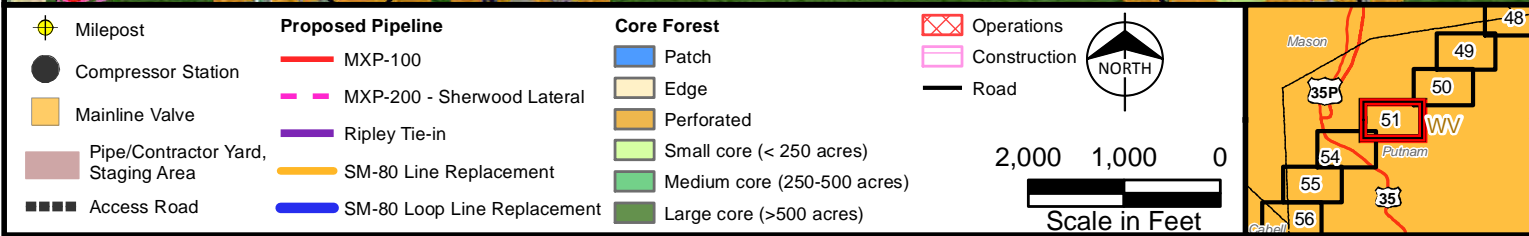
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Appendix G
 Mountaineer XPress Project
 Core Forest Map

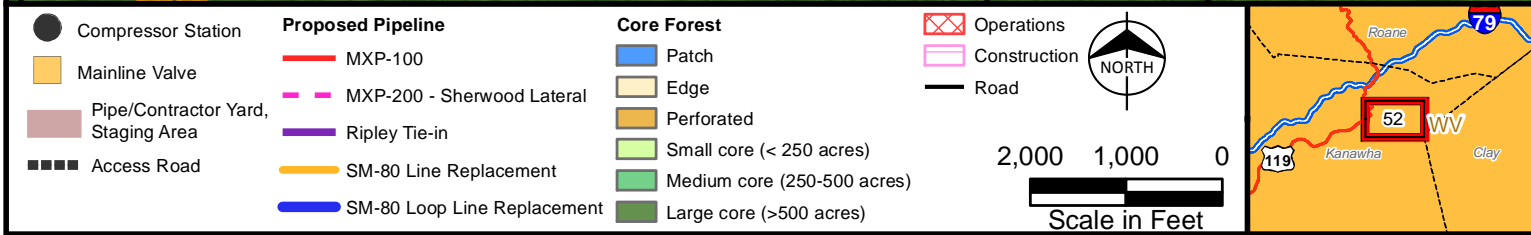


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Appendix G Mountaineer XPress Project Core Forest Map

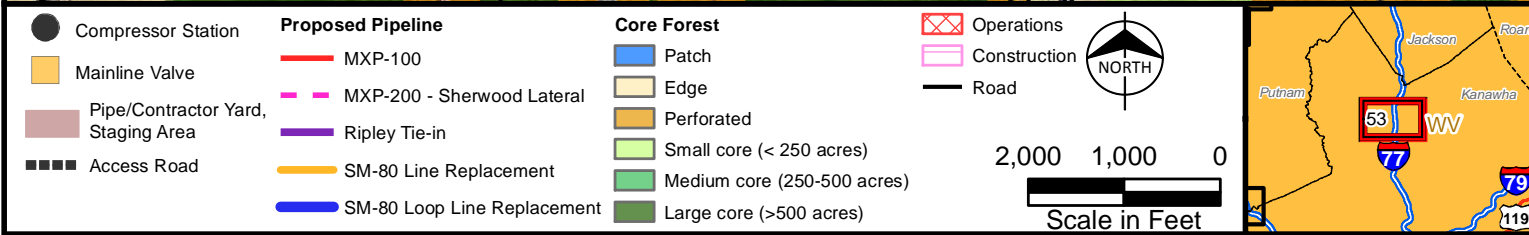


Appendix G Mountaineer XPress Project Core Forest Map



Appendix G
 Mountaineer XPress Project
 Core Forest Map

Page 52 of 62

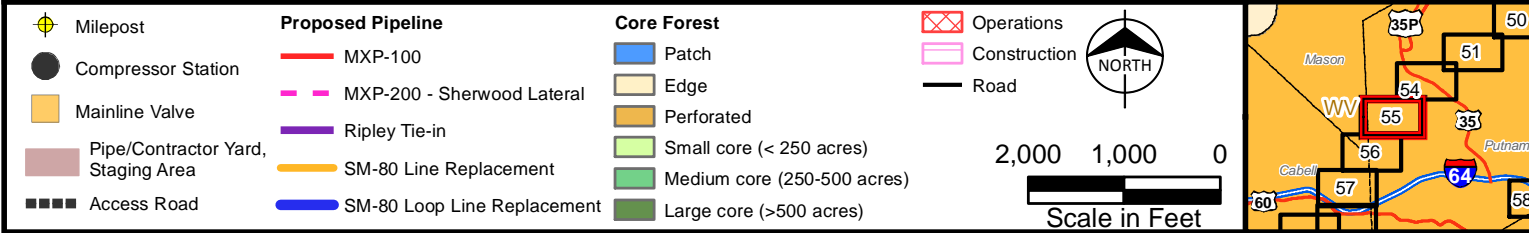


Appendix G Montaineer Xpress Project Core Forest Map

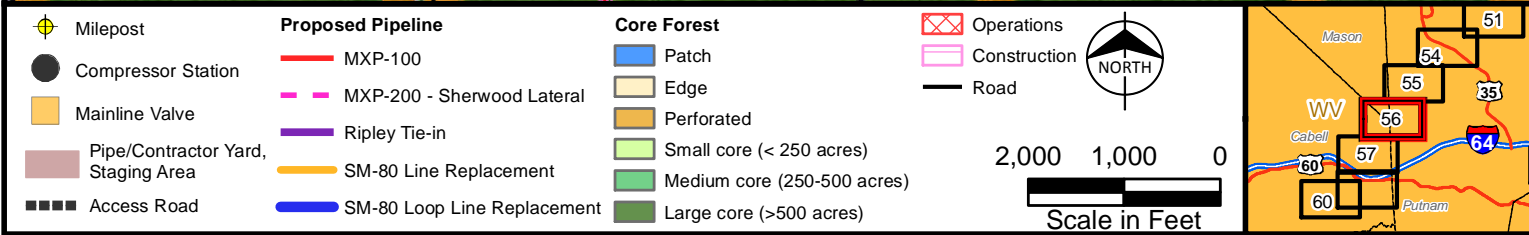


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Appendix G Mountaineer Xpress Project Core Forest Map



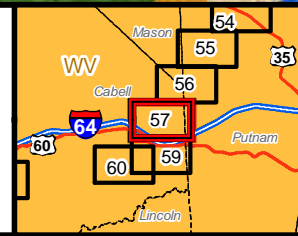
Appendix G Mountaineer XPress Project Core Forest Map



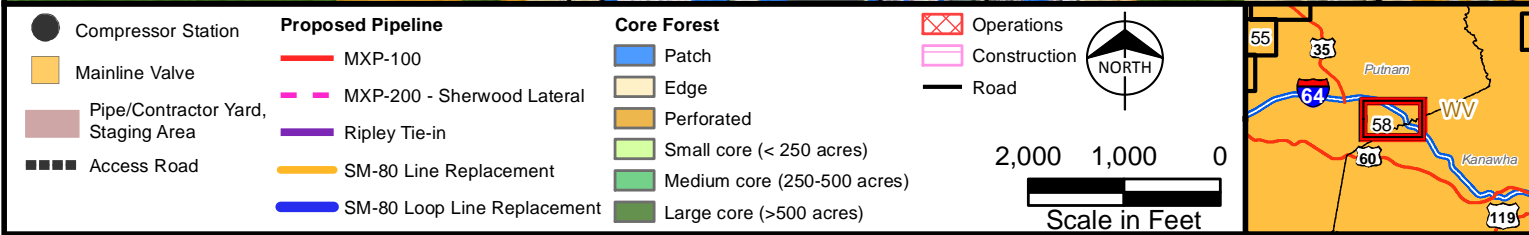
Appendix G Mountaineer XPress Project Core Forest Map



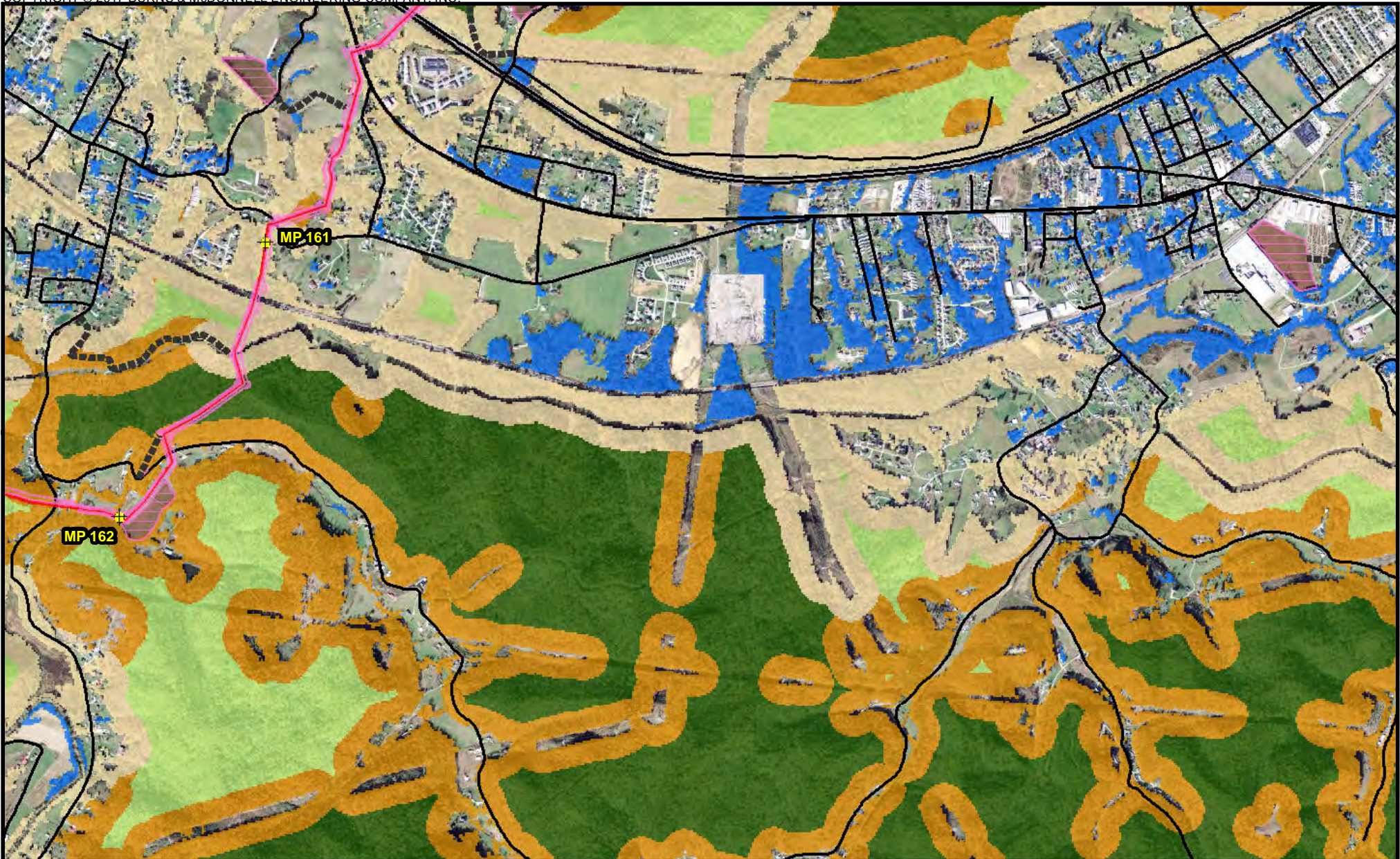
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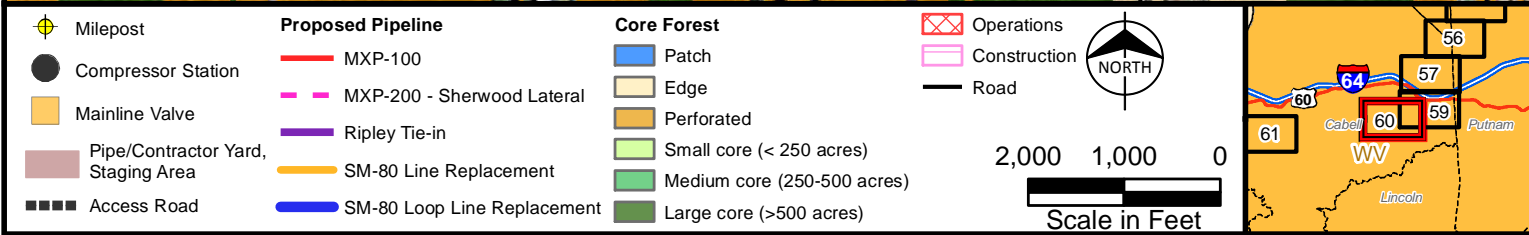
Appendix G Mountaineer XPress Project Core Forest Map



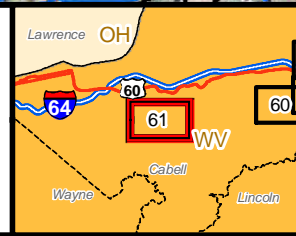
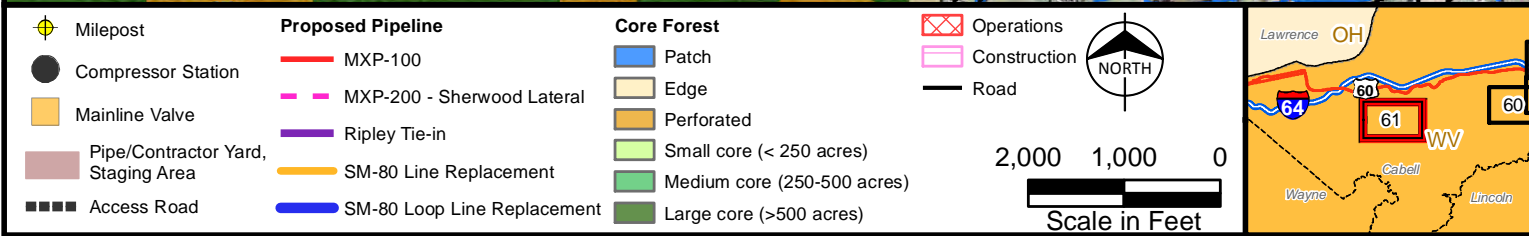
Appendix G
 Mountaineer XPress Project
 Core Forest Map



<ul style="list-style-type: none"> Milepost Compressor Station Mainline Valve Pipe/Contractor Yard, Staging Area Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> MXP-100 MXP-200 - Sherwood Lateral Ripley Tie-in SM-80 Line Replacement SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> Patch Edge Perforated Small core (< 250 acres) Medium core (250-500 acres) Large core (> 500 acres) 	<ul style="list-style-type: none"> Operations Construction Road 	<p>2,000 1,000 0</p> <p>Scale in Feet</p>		<p style="text-align: center;">Appendix G Montaineer Xpress Project Core Forest Map</p> <p style="text-align: center;">Page 59 of 62</p>
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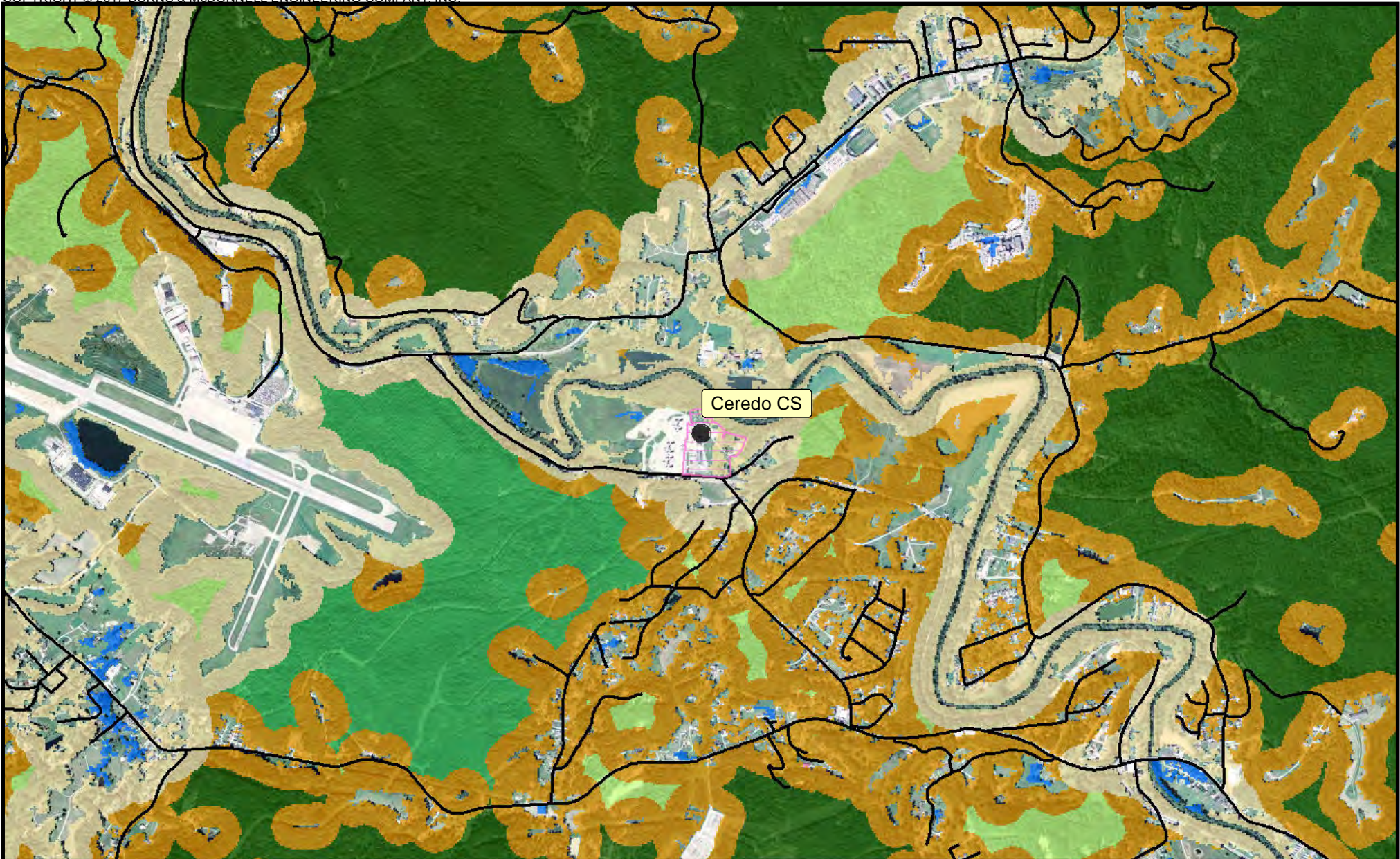


Appendix G Mountaineer XPress Project Core Forest Map



Appendix G
 Montaineer Xpress Project
 Core Forest Map

Page 61 of 62



<ul style="list-style-type: none"> ● Compressor Station ■ Mainline Valve ■ Pipe/Contractor Yard, Staging Area ■ Access Road 	<p>Proposed Pipeline</p> <ul style="list-style-type: none"> — MXP-100 — MXP-200 - Sherwood Lateral — Ripley Tie-in — SM-80 Line Replacement — SM-80 Loop Line Replacement 	<p>Core Forest</p> <ul style="list-style-type: none"> ■ Patch ■ Edge ■ Perforated ■ Small core (< 250 acres) ■ Medium core (250-500 acres) ■ Large core (>500 acres) 	<ul style="list-style-type: none"> ▣ Operations ▣ Construction — Road 	<p>NORTH</p>	<p>2,000 1,000 0 Scale in Feet</p>		<p style="text-align: center;">Appendix G Montaineer XPress Project Core Forest Map</p> <p style="text-align: center;">Page 62 of 62</p>
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APPENDIX J-1
MSHCP Interagency ESA Consultation Checklists for the
Mountaineer XPress Project

INTERAGENCY ENDANGERED SPECIES ACT CONSULTATION CHECKLIST FOR THE NiSOURCE MULTI-SPECIES HABITAT CONSERVATION PLAN

APPLICANT SECTION

ACTION AGENCY (Recipient): Federal Energy Regulatory Agency

OTHER INVOLVED FEDERAL AGENCIES: US Army Corps and US Fish and Wildlife Service

PROJECT NAME: Mountaineer Xpress Project

PROJECT I.D. NO. (if applicable): PF15-31-000

NiSource and Columbia Pipeline Group (Columbia) has provided the attached documentation to involved federal agencies in accordance with "Project Review and Documentation Protocols" of the NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance⁴. This documentation describes if and how the project is covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP), programmatic biological opinion (BO), and/or programmatic concurrence letters. In addition, the action agency could refer to the following sections and/or pages of the MSHCP, BO, and/or concurrence letters to verify that the activity is covered by the MSHCP and associated Section 7 consultation under the Endangered Species Act (ESA):

Reference:

- NiSource MSHCP Chapter 2.3 Covered Lands (pp 2-11)
- NiSource MSHCP Chapter 2.4 Covered Activities (pp 11- 25)
- NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance Quick Reference for Species Consultation Categories (pp 5-6)
- NiSource/Columbia Pipeline Group's, "Habitat Conservation Program Best Management Practices Guidebook", v.1.0, March 12, 2014 (specific pages for each species are referenced in the attached application material)

By signing below, Columbia certifies that its proposed activity, as outlined in the accompanying application or notification, is consistent with the MSHCP, BO, and/or concurrence letters.

Erik Duncan

Columbia Pipeline representative

4-20-2016

Date

By checking the box, Columbia is notifying the involved federal agencies that the proposed activity will require additional ESA Section 7 consultation because part of the activity may include: (1) any of the 10 Likely to Adversely Affect (LAA) species that are not included in the MSHCP⁵, (2) species not addressed in the MSHCP, BO, or concurrence letters⁵, (3) non-covered activities, (4) activities outside of the covered lands, or (5) activities otherwise deviating from the MSHCP, BO, and/or concurrence letters. Additional biological information about the species, habitat, or effects of the action may be required. The federal agencies can contact the U.S. Fish and Wildlife Service's NiSource/Columbia MSHCP Implementation Coordinator (Karen Herrington, 850.348.6495, karen_herrington@fws.gov) for more information.

⁴ See NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance. May 8, 2014. Pg 11.

⁵ See NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance. May 8, 2014. Pg. 5.

FEDERAL AGENCY SECTION

This checklist serves as the official documentation that each action agency involved has completed its Section 7 responsibilities under the ESA for NiSource and Columbia Pipeline Group (Columbia) projects conducted as described in the MSHCP, BO, and/or concurrence letters. Every agency that receives a copy of this checklist should fill it out. The MSHCP, BO, and concurrence letters can be found on the U.S. Fish and Wildlife Service (FWS) NiSource website:

<http://www.fws.gov/midwest/endangered/permits/hcp/nisource/index.html>

Quick access to the required Avoidance and Minimization Measures (AMMs) and Best Management Practices (BMP) can be found in the Columbia BMP Guidebook, which is also posted on the above website.

1. Does the federal action occur entirely within the covered lands as described in the MSHCP?
 Yes. Go to #2.
 No. Additional consultation is required because the action is not consistent with the MSHCP, BO, and/or concurrence letters. If the project may affect listed species, contact your local FWS Field Office.
2. Is the proposed action as described in the MSHCP, programmatic BO, and/or concurrence letter?
 Yes. Go to #3.
 No. Additional consultation is required because the action is not consistent with the MSHCP, BO, and/or concurrence letters. If the project may affect listed species, contact your local FWS Field Office.
3. Does the proposed action pose any effects on species not included in the MSHCP, BO or concurrence letters⁶?
 Yes. Additional consultation is required because the species was not included in the MSHCP, BO, and/or concurrence letters. If the project may affect listed species not included in the consultation, contact your local FWS Field Office.
 No. Go to #4.
4. Does the proposed action include MSHCP species⁶ only?
 Yes. Go to #6.
 No. Go to #5.
5. Does the proposed action include any of the 10 Likely to Adversely Affect (LAA) species that are not included in the MSHCP (i.e., LAA non-MSHCP species) as addressed in the BO?
 Yes. Additional consultation is required. Enter into tiered consultation with your local FWS office for any LAA non-MSHCP species.
 No. Go to #6.
6. Are all mandatory AMMs and/or BMPs for each species included in the action?⁷
 Yes. Go to #7.
 No. Additional consultation is required because the proposed action is not consistent with the MSHCP, BO, and/or concurrence letter. Request additional information from Columbia about AMMs.

⁶ See NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance. May 8, 2014. Pg. 5

7. Are all non-mandatory AMMs and/or BMPs for each species included in the action?
 Yes. Consultation is complete because the proposed action is consistent with the MSHCP, BO, and/or concurrence letter.
 No. Go to #8.
8. Are reasons provided for not including non-mandatory AMMs for each species?⁸
 Yes. Consultation is complete.
 No. Request justification from Columbia, and attach documentation here. Once justification is provided, consultation is complete.

It is the federal agency's responsibility to comply with ESA Section 7 requirements for this project. The programmatic BO and/or the concurrence letters cover most of Columbia's activities implemented under the MSHCP within the covered lands. By signing below, the federal agency verifies that the proposed action within the agency's authority complies with the programmatic BO, and/or concurrence letters. If additional Section 7 consultation is required, the U.S. Fish and Wildlife Service's supplemental concurrence letter or biological opinion will be attached to this documentation.

COLUMBIA COMMENTS:

The project is in on-going consultations with the USFWS and will provide documentation as it becomes available. Species surveys being conducted are for Indiana Bat, Northern Long Eared Bat and multiple species of mussels. In addition, specific surveys are being conducted for the greenfield facilities but a portion of the project falls within the MSHCP, including the project components in Marshall, Wetzel and Jackson Counties, as well as multiple existing Columbia infrastructure crossings or tie-in locations. For these areas the HCP will be used to provide guidance and specific Avoidance and Minimization Measures for the potential affected species.

AGENCY COMMENTS:

 Federal Agency representative

 Date

⁷ See NiSource/Columbia Pipeline Group's, "Habitat Conservation Program Best Management Practices Guidebook", v.1.0, March 12, 2014.

⁸ Per the MSHCP, explanation for non-mandatory AMM use is not required for the Indiana Bat.

APPENDIX J-2
MSHCP Interagency ESA Consultation Checklists for the
Gulf XPress Project

INTERAGENCY ENDANGERED SPECIES ACT CONSULTATION CHECKLIST FOR THE NiSOURCE MULTI-SPECIES HABITAT CONSERVATION PLAN

APPLICANT SECTION

ACTION AGENCY (Recipient): Federal Energy Regulatory Commission

OTHER INVOLVED FEDERAL AGENCIES: Army Corps of Engineers, U.S. Fish and Wildlife Service

PROJECT NAME: Columbia Pipeline Group Gulf XPress Project

PROJECT I.D. NO. (if applicable): CP16-361

NiSource and Columbia Pipeline Group (Columbia) has provided the attached documentation to involved federal agencies in accordance with "Project Review and Documentation Protocols" of the NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance⁴. This documentation describes if and how the project is covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP), programmatic biological opinion (BO), and/or programmatic concurrence letters. In addition, the action agency could refer to the following sections and/or pages of the MSHCP, BO, and/or concurrence letters to verify that the activity is covered by the MSHCP and associated Section 7 consultation under the Endangered Species Act (ESA):

Reference:

- NiSource MSHCP Chapter 2.3 Covered Lands (pp 2-11)
- NiSource MSHCP Chapter 2.4 Covered Activities (pp 11- 25)
- NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance Quick Reference for Species Consultation Categories (pp 5-6)
- NiSource/Columbia Pipeline Group's, "Habitat Conservation Program Best Management Practices Guidebook", v.1.0, March 12, 2014 (specific pages for each species are referenced in the attached application material)

By signing below, Columbia certifies that its proposed activity, as outlined in the accompanying application or notification, is consistent with the MSHCP, BO, and/or concurrence letters.



July 28, 2016

Columbia Pipeline representative

Date

By checking the box, Columbia is notifying the involved federal agencies that the proposed activity will require additional ESA Section 7 consultation because part of the activity may include: (1) any of the 10 Likely to Adversely Affect (LAA) species that are not included in the MSHCP⁵, (2) species not addressed in the MSHCP, BO, or concurrence letters⁵, (3) non-covered activities, (4) activities outside of the covered lands, or (5) activities otherwise deviating from the MSHCP, BO, and/or concurrence letters. Additional biological information about the species, habitat, or effects of the action may be required. The federal agencies can contact the U.S. Fish and

⁴ See NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance. February 13, 2014. Pg 11.

⁵ See NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance. February 13, 2014. Pg. 5.

Wildlife Service's NiSource/Columbia MSHCP Implementation Coordinator (Karen Herrington, 850.348.6495, karen_herrington@fws.gov) for more information.

FEDERAL AGENCY SECTION

This checklist serves as the official documentation that each action agency involved has completed its Section 7 responsibilities under the ESA for NiSource and Columbia Pipeline Group (Columbia) projects conducted as described in the MSHCP, BO, and/or concurrence letters. Every agency that receives a copy of this checklist should fill it out. The MSHCP, BO, and concurrence letters can be found on the U.S. Fish and Wildlife Service (FWS) NiSource website:

<http://www.fws.gov/midwest/endangered/permits/hcp/nisource/index.html>

Quick access to the required Avoidance and Minimization Measures (AMMs) and Best Management Practices (BMP) can be found in the Columbia BMP Guidebook, which is also posted on the above website.

1. Does the federal action occur entirely within the covered lands as described in the MSHCP?
 Yes. Go to #2.
 No. Additional consultation is required because the action is not consistent with the MSHCP, BO, and/or concurrence letters. If the project may affect listed species, contact your local FWS Field Office.

2. Is the proposed action as described in the MSHCP, programmatic BO, and/or concurrence letter?
 Yes. Go to #3.
 No. Additional consultation is required because the action is not consistent with the MSHCP, BO, and/or concurrence letters. If the project may affect listed species, contact your local FWS Field Office.

3. Does the proposed action pose any effects on species not included in the MSHCP, BO or concurrence letters⁵⁵?
 Yes. Additional consultation is required because the species was not included in the MSHCP, BO, and/or concurrence letters. If the project may affect listed species not included in the consultation, contact your local FWS Field Office
Several non-HCP species have the potential to occur in the project area. These non-MSHCP species were evaluated outside the context of the MSHCP and consultations with local Field Offices occurred to verify that impacts to these species are not likely to occur. Please see attached consultation letters and concurrence letters received from the local Field Offices.
 No. Go to #4.

4. Does the proposed action include MSHCP species⁶⁵ only?
 Yes. Go to #6.
 No. Go to #5.

5. Does the proposed action include any of the 10 Likely to Adversely Affect (LAA) species that are not included in the MSHCP (i.e., LAA non-MSHCP species) as addressed in the BO?
 Yes. Additional consultation is required. Enter into tiered consultation with your local FWS office for any LAA non-MSHCP species.
See note under #3
 No Go to #6

⁶ See NiSource/Columbia Pipeline MSHCP Consultation Implementation Guidance. February 13, 2014. Pg. 5

6. Are all mandatory AMMs and/or BMPs for each species included in the action?⁷
 Yes. Go to #7.
 No. Additional consultation is required because the proposed action is not consistent with the MSHCP, BO, and/or concurrence letter. Request additional information from Columbia about AMMs.
7. Are all non-mandatory AMMs and/or BMPs for each species included in the action?
 Yes. Consultation is complete because the proposed action is consistent with the MSHCP, BO, and/or concurrence letter.
 No. Go to #8.
8. Are reasons provided for not including non-mandatory AMMs for each species?⁸
 Yes. Consultation is complete.
 No. Request justification from Columbia, and attach documentation here. Once justification is provided, consultation is complete.

It is the federal agency's responsibility to comply with ESA Section 7 requirements for this project. The programmatic BO and/or the concurrence letters cover most of Columbia's activities implemented under the MSHCP within the covered lands. By signing below, the federal agency verifies that the proposed action within the agency's authority complies with the programmatic BO, and/or concurrence letters. If additional Section 7 consultation is required, the U.S. Fish and Wildlife Service's supplemental concurrence letter or biological opinion will be attached to this documentation.

AGENCY COMMENTS:

 Federal Agency representative

 Date

⁷ See NiSource/Columbia Pipeline Group's, "Habitat Conservation Program Best Management Practices Guidebook", v.1.0, March 12, 2014.

⁸ Per the MSHCP, explanation for non-mandatory AMM use is not required for the Indiana Bat.

APPENDIX K
State Protected Species List for the Gulf XPress Project

**Appendix K
State-Listed Threatened and Endangered Species with the Potential to Occur in the Columbia Gulf XPress Project Areas**

Common Name (<i>Scientific name</i>)	State-Listed Status <u>a/</u>	Federal Status	Habitats	Aboveground Facilities <u>b/</u>									Habitat Present within Project Area (yes/no)
				Kentucky					Tennessee		Mississippi		
				Morehead CS - Rowan County	Paint Lick CS - Garrard County	Grayson CS - Carter County	Leach C MS - Boyd County	Good Luck CS - Metcalfe County	Cane Ridge CS - Davidson County	Clifton Junction CS <small>Wayne County</small>	New Albany CS - Union County	Holcomb CS - Grenada County	
Amphibian													
Eastern Hellbender (<i>Cryptobranchus alleganiensis alleganiensis</i>)	E	--	Creeks and small to medium rivers with high gradient riffles characterized by large, irregularly shaped rocks	X		X							No
Bird													
American Coot (<i>Fulica americana</i>) <u>c/</u>	E	--	Marshes, reservoirs, edges of lakes.	X			X						No
Bachman's Sparrow (<i>Aimophila aestivalis</i>)	E	--	Dry open pine or oak woods; nests on the ground in dense cover						X				No
Bald Eagle (<i>Haliaeetus leucocephalus</i>) <u>c/</u>	T	D	Near lakes, reservoirs, rivers, marshes, and coasts.	X			X						No
Bewick's Wren (<i>Thryomanes bewickii</i>)	E	--	Brushy areas, thickets and scrub in open country, open and riparian woodland.						X		X		No
Black-crowned Night-heron (<i>Nycticorax nycticorax</i>) <u>c/</u>	T	--	Fresh, salt, and brackish wetlands. Breed in colonies of stick nests usually built over water.	X									No
Blackburnian Warbler (<i>Setophaga fusca</i>) <u>c/</u>	T	--	Breeds in mature coniferous and mixed coniferous/deciduous forests and winters in montane forests.	X									No
Blue-winged Teal (<i>Anas discors</i>) <u>c/</u>	T	--	Calm bodies of water from marshes to small lakes; prairie potholes.	X									No

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Brown Creeper (<i>Certhia americana</i>) <u>c/</u>	E	--	Breed primarily in mature evergreen or mixed evergreen-deciduous forests; winter in more varied woodlands, including deciduous forests.	X			X	X					No
Common Gallinule (<i>Gallinula galeata</i>) <u>c/</u>	T	--	Marshes and ponds.	X									No
Common Raven (<i>Corvus corax</i>) <u>c/</u>	T	--	Boreal and mountain forests, coastal cliffs, tundra, desert.			X							No
Double-crested Cormorant (<i>Phalacrocorax auritus</i>) <u>c/</u>	T	--	Coastal areas; large inland lakes.	X		X	X	X					No
Golden-winged Warbler (<i>Vermivora chrysoptera</i>) <u>c/</u>	T	C	Open woodlands, brushy clearings, undergrowth.			X							No
Great Egret (<i>Ardea alba</i>) <u>c/</u>	T	--	Freshwater and saltwater habitats.	X									No
Hooded Merganser (<i>Lophodytes cucullatus</i>)	T	--	Forested wetlands	X		X							No
Least Bittern (<i>Ixobrychus exilis</i>)	T	--	Freshwater marshes with tall grasses, cattails, and reeds	X									No
Least Flycatcher (<i>Epidonax minimus</i>) <u>c/</u>	E	--	Open woods, aspen groves, orchards, shade trees. Breeds in deciduous or mixed woodlands, seldom in purely coniferous groves. Usually around clearings or edges, but sometimes in the interior of dry woods.	X									No

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State-Listed Threatened and Endangered Species with the Potential to Occur in the Columbia Gulf XPress Project Areas**

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Little Blue Heron (<i>Egretta caerulea</i>) <u>c/</u>	E	--	Marshes and estuaries.	X										No
Northern Harrier (<i>Circus cyaneus</i>) <u>c/</u>	T	--	Marshes, fields, prairies. Found in many kinds of open terrain, both wet and dry habitats, where there is good ground cover.	X			X							No
Northern Shoveler (<i>Anas clypeata</i>) <u>c/</u>	E	--	Open, shallow wetlands.	X										No
Peregrine Falcon (<i>Falco peregrinus</i>)	E	--	Varied habitats including farmlands, marshes, river mouths, and cities; often nests on ledges	X						X				No
Pied-billed Grebe (<i>Podilymbus podiceps</i>) <u>c/</u>	E	--	Sluggish rivers, freshwater marshes, lakes, and estuaries.	X										No
Short-eared Owl (<i>Asio flammeus</i>) <u>c/</u>	E	--	Found in open country (tundra, prairie, marshes, dunes) supporting high numbers of small rodents.				X							No
Snowy Egret (<i>Egretta thula</i>) <u>c/</u>	E	--	Mudflats, beaches, wetlands. Rarely inland.	X										No
Spotted sandpiper (<i>Actitis macularius</i>) <u>c/</u>	E	--	Streambanks, rivers, ponds, lakes, and beaches, particularly on rocky shores.	X										No
Wood Stork (<i>Mycteria americana</i>)	E	T	Primarily freshwater wetlands including ponds, bayheads, flowed pastures, oxbow lakes, and ditches										X	No

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Crustacean													
An Amphipod (<i>Crangonyx caecus</i>)	T	--	Pools within caves			X							No
Nashville Crayfish (<i>Orconectes shoupi</i>)	E	E	1st-order & larger streams, generally with bedrock bottom, under slabrock; endemic to Mill Creek watershed						X				No
Fish													
American Brook Lamprey (<i>Lampetra appendix</i>)	T	--	Pools and backwater areas during larval stage and fast moving riffles of high- to medium-gradient streams over rocky substrate during adult stage			X	X						No
Blue Sucker (<i>Cyprinella elongatus</i>)	T	--	Swift waters over firm substrates in big rivers						X				No
Northern Brook Lamprey (<i>Ichthyomyzon fossor</i>)	T	--	Soft-bottomed areas of upland streams during larval stage and small gravelly areas during adult stage				X						No
Lake Sturgeon (<i>Acipenser fulvescens</i>)	E	--	Bottoms of large, clean rivers and lakes.						X				No
Redspotted Sunfish (<i>Lepomis miniatus</i>)	T	--	Shallow and highly vegetative slow moving water	X									No
Spotted Darter (<i>Etheostoma maculatum</i>)	T	--	Fast-flowing rocky riffles of medium-sized and smaller rivers					X					No
Insects													
A Cave Obligate Mite (<i>Macrocheles stygius</i>)	T	--	Subterranean areas				X						No

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An Olethreutine Moth (<i>Hystrichophora loricana</i>)	T	--	Appears to be strongly tied to the presence of French-grass (<i>Orbexilum onobrychis</i>)		X									No
Early Hairstreak (<i>Erora laeta</i>)	T	--	Mature beech forests					X						No
Frosted Elfyn (<i>Callophrys irus</i>)	E	--	Oak savannah and pine barren habitats and open woods and forest edges with wild blue lupine		X									No
Karst Snowfly (<i>Allocapnia cunninghami</i>)	T	C	Spring-fed streams in karst habitats					X						No
Kentucky Stonefly (<i>Acroneuria hitchcocki</i>)	T	--	Streams	X										No
Pygmy Snaketail (<i>Ophiogomphus howei</i>)	T	--	High quality, clear, fast flowing, large or medium-sized rivers with gravel or sand substrate in largely forested watersheds				X							No
Silphium Borer Moth (<i>Papaipema silphii</i>)	E	--	Wet to dry-mesic prairie	X										No
Sparkling Jewelwing (<i>Calopteryx dimidiata</i>)	E	--	Forest streams with moderate to swift currents, sandy soil, and aquatic vegetation				X							No
Mammals														
Eastern Small-footed Myotis (<i>Myotis leibii</i>)	T	--	Roosts in rock bluffs, buildings, and turnpike tunnels as well as rocky cliffs, talus slopes and shale fields	X		X								No
Gray Bat (<i>Myotis grisescens</i>)	T	E	Roost almost exclusively in caves		X		X	X						No

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Indiana Bat (<i>Myotis sodalists</i>)	E	E	Roosts singly or in colonies underneath bark and in crevices of dead or dying trees	X			X							Yes
Northern Long-Eared Bat (<i>Myotis septentrionalis</i>)	E	T	Roosts singly or in colonies underneath bark, in crevices, and in cavities of live and dead trees				X	X						Yes
Virginia Big-eared Bat (<i>Corynorhinus townsendii virginianus</i>)	E	E	Roosts singly or in colonies in caves typically in limestone karst regions dominated by mature hardwood forests of hickory, beech, maple, and hemlock	X										No
Mussels														
Clubshell (<i>Pleurobema clava</i>)	E	E	Small to medium-sized rivers with swift currents and sand substrates		X									No
Creek Heelsplitter (<i>Lasmigona compressa</i>)	E	--	Small to medium streams. Within Kentucky, found only in Tygart's Creek.				X							No
Cumberlandian Combshell (<i>Epioblasma brevidens</i>)	E	E	Large creeks to large rivers, in coarse sand or mixtures of gravel, cobble, or rocks; Tennessee & Cumberland river systems						X					No
Elktoe (<i>Alasmidonta marginata</i>)	T	--	Generally a large river species, preferring sand and gravel substrates with mod-strong currents	X										No
Fanshell (<i>Cyprogenia stegaria</i>)	E	E	Medium to large rivers with gravel substrate and strong current			X	X							No

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Northern Riffleshell (<i>Epioblasma torulosa rangiana</i>)	E	E	Creeks and small to medium rivers with high gradient riffles	X										No
Orangefoot Pimpleback (<i>Plethobasus cooperianus</i>)	E	E	Large rivers in sand-gravel-cobble substrates in riffles and shoals in deep flowing water; Cumberland & Tennessee river systems.							X				No
Pink Mucket (<i>Lampsilis abrupta</i>)	E	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents	X						X				No
Salamander Mussel (<i>Simpsonaias ambigua</i>)	T	C	Sand or silt under large, flat rocks in shallow areas with swift currents			X	X	X						No
Sheepnose (<i>Plethobasus cyphus</i>)	E	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents	X	X									No
Snuffbox (<i>Epioblasma triquetra</i>)	E	E	Small to medium-sized creeks with swift currents	X			X							No
Tan Riffleshell (<i>Epioblasma florentina walker</i>)	E	E	Found in river headwaters, in riffles and shoals in sand and gravel substrates; Tennessee & Cumberland river systems.							X				No
Plants														
A Hair Cap Moss (<i>Polytrichum pallidisetum</i>)	T	--	Spray cliffs and ravines	X										No
American Cow-wheat (<i>Melampyrum lineare var. latifolium</i>)	T	--	Calcareous barrens	X										No

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American Golden-saxifrage (<i>Chrysosplenium americanum</i>)	T	--	Wet shady woods, seeps, shallow streams	X										No
American Water-pennywort (<i>Hydrocotyle americana</i>)	E	--	Wet Soils And Pools							X				No
Bent Reedgrass (<i>Calamagrostis porteri</i> ssp. <i>Insperrata</i>)	E	--	Dry, rocky ridges	X										No
Braun's Rockcress (<i>Boechera perstellata</i>)	E	E	Limestone Bluffs							X				No
Butternut (<i>Juglans cinerea</i>)	T	--	Rich Woods And Hollows			X				X	X			No
Canadian Yew (<i>Taxus canadensis</i>)	T	--	Cool, acidic, moist soils	X		X								No
Canby's Mountain-lover (<i>Paxistima canbyi</i>)	T	--	Calcareous rocks and slopes, rocky woods in the mountains, usually above major streams.			X								No
Carolina Anemone (<i>Anemone caroliniana</i>)	E	--	Glades And Cedar Woodlands							X				No
Carolina Anglepod (<i>Matelea carolinensis</i>)	E	--	Open deciduous woods and stream banks					X						No
Cutleaf Meadow-parsnip (<i>Thaspium pinnatifidum</i>)	T	--	Limestone cedar glades	X		X								No
Downy Arrowwood (<i>Viburnum rafinesquianum</i> var. <i>rafinesquianum</i>)	T	--	Dry banks of streams		X	X								No

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Eastern Featherbells (<i>Stenanthium gramineum</i>)	T	--	Moist woodlands	X										No
Eastern Yampah (<i>Perideridia americana</i>)	E	--	Cedar Barrens							X	X			No
Eggert's Sunflower (<i>Helianthus eggertii</i>)	T	D	Barrens					X						No
Feathered Neckera (<i>Neckera pennata</i>)	T	--	Base of trees or rocks with abundant moisture	X										No
Filmy Angelica (<i>Angelica triquinata</i>)	E	--	Open areas in forests	X										No
Glade Cleft Phlox (<i>Phlox bifida ssp. stellaria</i>)	T	--	Glades							X				No
Glade Onion (<i>Allium stellatum</i>)	E	--	Glades							X				No
Globe Bladderpod (<i>Physaria globosa</i>)	E	--	South to west facing dry, open limestone ledges on river bluffs, talus of lower bluff slopes, and shale at cliff bases		X									No
Grape Honeysuckle (<i>Lonicera reticulata</i>)	T	--	Rocky woods and banks		X									No
Grassleaf Arrowhead (<i>Sagittaria graminea</i>)	T	--	Freshwater marshes	X										No
Grass Pink (<i>Calopogon tuberosus</i>)	E	--	Bogs, meadows, ditches and fens	X										No
Great Plains Ladies'-tresses (<i>Spiranthes magnicamporum</i>)	T	--	Limestone grasslands		X									No

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Hairy False Gromwell (<i>Onosmodium hispidissimum</i>)	E	--	Calcareous barrens		X									No
Harbison's Hawthorn (<i>Crataegus harbisonii</i>)	E	--	Dry Rocky Calcareous Woods							X				No
Hispid Falsemouth (<i>Malvastrum hispidum</i>)	T	--	Glades, edges of bluffs, and barrens		X									No
Kentucky Lady's-slipper (<i>Cypripedium kentuckiense</i>)	E	--	Mesophytic woods, calcareous forests	X		X								No
Leafy Prairie-clover (<i>Dalea foliosa</i>)	E	E	Rocky Washes In Glades							X	X			No
Mountain Maple (<i>Acer spicatum</i>)	E	--	Cool, moist, mesic woods.			X								No
No common name (<i>Bryum cyclophyllum</i>)	E	--	Wet seepage areas near tree roots	X										No
Northern Fox Grape (<i>Vitis labrusca</i>)	T	--	Edges of mature forests or young stands of woods		X									No
Pale Umbrella-wort (<i>Mirabilis albida</i>)	T	--	Glades							X				No
Plains Muhly (<i>Muhlenbergia cuspidate</i>)	T	--	Cedar glades		X									No
Poison Sumac (<i>Toxicodendron vernix</i>)	E	--	Wet forests or thickets such as bottomland hardwood forests; peaty seepage areas.			X								No
Pope's Sand-parsley (<i>Ammoselinum popei</i>)	T	--	Glades							X				No
Porter's Reedgrass (<i>Calamagrostis porteri</i> ssp. <i>porteri</i>)	T	--	Dry, rocky ridges	X										No

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Prairie Parsley (<i>Polytaenia nuttallii</i>)	T	--	Prairies And Open Dry Areas							X				No
Price's Potato-bean (<i>Apios priceana</i>)	E	T	Openings In Rich Woods							X	X			No
Purple Oat (<i>Schizachne purpurascens</i>)	T	--	Poor sandy pastures and savannahs		X									No
Purple Prairie-clover (<i>Dalea purpurea</i>)	E	--	Barrens							X				No
Pyne's Ground-plum (<i>Astragalus bibullatus</i>)	E	E	Ordovician Limestone Glades							X				No
Rafinesque's seedbox (<i>Ludwigia hirtella</i>)	E	--	Savannahs, ditches, bogs					X						No
Roan Mountain Goldenrod (<i>Solidago roanensis</i>)	T	--	Balds	X										No
Rock Skullcap (<i>Scutellaria saxatilis</i>)	T	--	Rich woodlands	X										No
Rose Pogonia (<i>Pogonia ophioglossoides</i>)	E	--	Bogs, meadows, ditches and fens	X										No
Rosy Twisted-stalk (<i>Streptopus lanceolatus</i>)	E	--	Rich woodlands	X										No
Sand Grape (<i>Vitis rupestris</i>)	E	--	Sandy, Rocky Riverbanks							X				No
Scarlet Indian Paintbrush (<i>Castilleja coccinea</i>)	E	--	Damp, open sandy or rocky soil in meadows and woodland edges; also fens, barrens rock outcrops, wet pastures, and grassy openings.			X								No

**Appendix K
State-Listed Threatened and Endangered Species with the Potential to Occur in the Columbia Gulf XPress Project Areas**

Common Name (<i>Scientific name</i>)	State-Listed Status <u>a/</u>	Federal Status	Habitats	Aboveground Facilities <u>b/</u>									Habitat Present within Project Area (yes/no)	
				Kentucky					Tennessee		Mississippi			
				Morehead CS - Rowan County	Paint Lick CS - Garrard County	Grayson CS - Carter County	Leach C MS - Boyd County	Good Luck CS - Metcalfe County	Cane Ridge CS - Davidson County	Clifton Junction CS - Wayne County	New Albany CS - Union County	Holcomb CS - Grenada County		
Shaggy False Gromwell (<i>Onosmodium hispidissimum</i>)	E	--	Dry Woods							X				No
Short's Bladderpod (<i>Physaria globosa</i>)	E	E	Limestone Talus Slopes And Cliffs							X				No
Slender Marsh Pink (<i>Sabatia campanulata</i>)	E	--	Sandy or peaty shores and marshes	X										No
Small Yellow Lady's-slipper (<i>Cypripedium parviflorum</i>)	T	--	Shady, damp forest understory of mixed deciduous and coniferous forests to open meadows	X		X								No
Spoon-leaved Sundew (<i>Drosera intermedia</i>)	E	--	Bogs, meadows, ditches and fens	X										No
Spotted Pondweed (<i>Potamogeton pulcher</i>)	T	--	Stagnant to slow-moving waters of lakes, ponds, and streams					X						No
Starflower False Solomon's-seal (<i>Maianthemum stellatum</i>)	E	--	Moist meadows and edges of woods	X		X								No
Starry-cleft Phlox (<i>Phlox bifida ssp. Stellaria</i>)	E	--	Glades		X									No
Straw Sedge (<i>Carex straminea</i>)	T	--	Open freshwater swamps, grassy marshes	X										No
Svenson's Wild-rye (<i>Elymus svensonii</i>)	T	--	Rocky Bluffs						X					No
Tall Hairy Groovebur (<i>Agrimonia gryposepala</i>)	T	--	Moderately to very moist forest		X									No
Tennessee Coneflower (<i>Echinacea tennesseensis</i>)	T	D	Ordovician Limestone Glades						X					No

**Appendix K
State-Listed Threatened and Endangered Species with the Potential to Occur in the Columbia Gulf XPress Project Areas**

Common Name (<i>Scientific name</i>)	State-Listed Status <u>a/</u>	Federal Status	Habitats	Aboveground Facilities <u>b/</u>									Habitat Present within Project Area (yes/no)	
				Kentucky					Tennessee		Mississippi			
				Morehead CS - Rowan County	Paint Lick CS - Garrard County	Grayson CS - Carter County	Leach C MS - Boyd County	Good Luck CS - Metcalfe County	Cane Ridge CS - Davidson County	Clifton Junction CS - Wayne County	New Albany CS - Union County	Holcomb CS - Grenada County		
Tufted Hairgrass (<i>Deschampsia cespitosa</i>)	E	--	Fields, roadsides and disturbed sites		X									No
Umbel-like Sedge (<i>Carex tonsa</i> var. <i>rugosperma</i>)	T	--	Dry, mesic woodland, prairie.			X								No
Vetchling Peavine (<i>Lathyrus palustris</i>)	T	--	Wet meadows, swamps, wet woods; cobble bars along creeks and rivers.			X								No
Virginia Mallow (<i>Sida hermaphrodita</i>)	T	--	Loose sandy or rocky soil in open areas resulting from flooding along riverbanks, floodplains			X	X							No
Walter's Violet (<i>Viola walteri</i>)	T	--	Dry-mesic upland forests, often with thin canopies.			X								No
Weak Stellate Sedge (<i>Carex seorsa</i>)	T	--	Forest understory	X										No
Western Wallflower (<i>Erysimum capitatum</i>)	E	E	Rocky Bluffs						X					No
Wire Fern Moss (<i>Abietinella abietina</i>)	T	--	Unimproved grassland overlying chalk or limestone	X										No
Wild Honeysuckle (<i>Lonicera dioica</i> var. <i>orientalis</i>)	E	--	Moist woods and thickets, associated with limestone derived soils.			X								No
Wild Sarsaparilla (<i>Aralia nudicaulis</i>)	E	--	Open areas in forests	X										No
Willow Aster (<i>Symphotrichum praealtum</i>)	E	--	Moist Prairies And Marshes						X					No
White Prairie-clover (<i>Dalea candida</i>)	T	--	Barrens						X					No

**Appendix K
State-Listed Threatened and Endangered Species with the Potential to Occur in the Columbia Gulf XPress Project Areas**

Common Name (<i>Scientific name</i>)	State-Listed Status <u>a</u> /	Federal Status	Habitats	Aboveground Facilities <u>b</u> /									Habitat Present within Project Area (yes/no)	
				Kentucky					Tennessee		Mississippi			
				Morehead CS - Rowan County	Paint Lick CS - Garrard County	Grayson CS - Carter County	Leach C MS - Boyd County	Good Luck CS - Metcalfe County	Cane Ridge CS - Davidson County	Clifton Junction CS - Wayne County	New Albany CS - Union County	Holcomb CS - Grenada County		
White Water-buttercup (<i>Ranunculus aquatilis var. diffuses</i>)	E	--	Ponds And Streams							X				No
White Rattlesnake-root (<i>Prenanthes alba</i>)	E	--	Rich woodlands	X										No
Wood Lily (<i>Lilium philadelphicum</i>)	T	--	Dry woods, meadows, prairies	X		X								No
Woodland Beakrush (<i>Scirpus expansus</i>)	E	--	Marshes, wet meadows, and swales	X										No
Yellow Gentian (<i>Gentiana flavida</i>)	E	--	Open woods and meadows	X										No
Yellow Honeysuckle (<i>Lonicera flava</i>)	T	--	Rocky Woods And Thickets							X				No
Yellow Nodding Ladies'-tresses (<i>Spiranthes ochroleuca</i>)	T	--	Damp (seasonally) acid soil of open woods and grassy openings.			X								No
Yellow Screwstem (<i>Bartonia virginica</i>)	T	--	Sandy bogs	X										No
Yellow Sunnybell (<i>Schoenolirion croceum</i>)	T	--	Wet Areas In Glades							X				No
Reptile														
Coal Skink (<i>Eumeces anthracinus</i>)	T	--	Moist forested areas near swamps and other wetlands		X									No
Sources: KDFWR Species Information: (http://app.fw.ky.gov/speciesinfo/speciesinfo.asp); Kentucky State Nature Preserves Commission (http://eppcapp.ky.gov/nprareplants); MDWFP's Mississippi Endangered Species Packet; and TDEC's Natural Heritage Inventory Program data.														
a Status is indicated for the state where species may occur at GXP facilities. E=Endangered, T=Threatened, C=Candidate, D=Delisted due to recovery.														
b CS=Compressor Station.														
c Consultation ongoing; awaiting concurrence from KDFWR.														

APPENDIX L
List of ATWS for the Mountaineer XPress Project

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
NEW PIPELINE FACILITIES										
MXP-100										
ATWS #1	431	200	0.00	2.0	0.1	0.2	0.0	0.0	0.0	Pipeline tie-in location
ATWS #2	249	59	0.01	0.2	<0.1	0.1	<0.1	0.0	0.0	Pipeline tie-in location
ATWS #3	25	99	0.11	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #4	25	79	0.23	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #4A	25	124	0.24	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #4B	25	99	0.28	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #5	25	100	0.51	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #5A	25	99	0.64	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #5B	25	99	0.74	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #6	25	100	1.08	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #7	25	99	1.12	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #7A	25	100	1.28	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #7B	25	55	1.32	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #7C	25	107	1.38	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #7D	25	100	1.50	0.1	0.0	0.0	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #7E	25	210	1.51	0.1	<0.1	0.0	0.0	0.0	0.0	Access road access to right of way
ATWS #7F	25	148	1.58	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #10	150	126	1.61	0.4	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #10A	25	110	1.63	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #10B	25	100	1.80	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #10C	25	100	1.81	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #10D	50	100	1.89	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #10E	25	108	1.93	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #10F	25	108	1.94	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #10G	25	135	2.03	0.1	<0.1	0.0	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #10H	25	113	2.03	0.1	<0.1	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #11	50	213	2.08	0.2	0.0	0.0	0.0	0.0	0.0	Road crossing
ATWS #12	50	100	2.13	0.0	0.0	0.0	0.1	0.0	0.0	Road crossing
ATWS #13	56	157	2.25	0.0	<0.1	0.0	0.2	0.0	0.0	Road crossing
ATWS #14	50	158	2.30	0.2	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #15	25	99	2.46	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #16	25	99	2.48	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #17	50	217	2.55	0.0	<0.1	<0.1	0.2	0.0	0.0	Road crossing
ATWS #18	100	153	2.59	0.0	<0.1	<0.1	0.3	0.0	0.0	Road crossing
ATWS #19	25	131	2.65	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #20	50	44	2.78	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #21	25	119	2.76	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #22	25	104	2.86	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #24	25	108	2.95	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #25	25	109	3.00	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #25A	50	249	3.34	0.0	0.0	<0.1	0.3	0.0	0.0	Top of steep slopes
ATWS #29	25	99	3.43	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #30	25	99	3.47	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #31	50	334	3.58	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #32	25	105	3.72	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #33	25	103	3.88	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #34	23	99	3.92	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #36	25	107	4.17	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #39	25	100	4.46	0.0	0.0	0.0	0.1	0.0	0.0	Top of steep slopes
ATWS #40	25	99	4.47	0.0	0.0	<0.1	<0.1	0.0	0.0	Top of steep slopes
ATWS #41	25	99	4.56	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #42	25	100	4.60	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #45	25	113	4.89	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #47	50	371	5.06	0.2	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #48	50	257	5.32	0.1	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #51	25	100	5.38	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #51A	50	294	5.53	0.0	0.1	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #52	50	50	5.54	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #53	50	119	5.56	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #54	15	75	5.56	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #55	25	109	5.62	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #56	25	99	5.88	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #57	50	130	5.98	0.0	0.0	0.2	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #58	25	69	6.07	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #59	25	74	6.25	0.0	0.0	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #60	50	285	6.37	0.0	0.0	0.3	0.0	0.0	0.0	Pipe bend location
ATWS #60A	25	100	6.40	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #60B	25	100	6.44	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #60C	25	100	6.51	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #60D	25	100	6.55	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #60E	25	100	6.60	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #60F	50	299	6.87	0.0	0.0	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #61	25	100	6.96	<0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #65	25	135	7.13	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #66	25	99	7.19	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #66A	75	275	7.18	0.4	<0.1	0.0	0.0	0.0	0.0	Truck Turnaround Area
ATWS #67	25	100	7.48	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #68	25	1108	7.70	0.0	0.0	0.6	0.0	0.0	0.0	Side slope
ATWS #69	25	100	7.75	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #70	25	63	7.86	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #71	25	103	8.02	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #72	25	118	8.17	0.0	<0.1	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #72A	25	118	8.15	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #73	25	108	8.27	0.0	<0.1	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #80	25	100	9.02	<0.1	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #81	25	117	9.31	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #82	25	117	9.43	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #83	25	121	9.56	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #84	49	50	9.87	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #85	50	50	9.90	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #91A	50	321	10.57	0.0	0.0	0.3	<0.1	0.0	0.0	Top of steep slopes
ATWS #91B	25	111	10.68	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #91C	50	405	10.83	0.0	0.0	0.5	0.0	0.0	0.0	Top of steep slopes
ATWS #92	50	131	11.13	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #93	50	99	11.17	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #94	50	50	11.25	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #95	50	50	11.31	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #96	25	492	11.40	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #97	106	76	11.47	0.1	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #98	25	200	11.59	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #99	25	230	11.83	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #100	25	784	12.00	0.0	<0.1	0.4	0.0	0.0	0.0	Side slope
ATWS #101	25	100	12.17	0.0	<0.1	<0.1	0.0	0.0	0.0	Top of ridge turnaround
ATWS #102	25	311	12.18	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #103	25	102	12.20	0.0	<0.1	<0.1	0.0	0.0	0.0	Top of ridge turnaround
ATWS #104	25	103	12.29	0.0	<0.1	<0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #105	25	1185	12.45	0.0	<0.1	0.6	0.0	0.0	0.0	Side slope
ATWS #106	25	100	12.35	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #108	50	303	12.71	0.0	0.0	0.3	<0.1	0.0	0.0	Top of steep slopes
ATWS #109	47	50	12.90	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #110	49	50	12.93	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #111	25	126	13.14	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #112	25	125	13.15	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #113	49	50	13.21	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #114	49	50	13.26	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #115	25	120	13.32	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #116	25	121	13.34	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #117	25	250	13.41	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #118	49	50	13.55	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #119	50	50	13.59	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #120	25	98	13.72	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #121	25	215	13.82	0.1	<0.1	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #122	25	192	13.83	<0.1	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #123	25	602	14.11	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #124	25	111	14.17	0.0	<0.1	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #125	25	220	14.23	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #126	25	152	14.32	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #126A	50	304	14.34	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #126B	50	50	14.43	0.0	0.0	0.1	0.0	0.0	0.0	Bottom of steep slopes
ATWS #126C	49	50	14.48	0.0	0.0	0.1	0.0	0.0	0.0	Bottom of steep slopes
ATWS #126D	25	173	14.72	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #126E	50	325	14.81	0.0	0.1	0.2	<0.1	0.0	0.0	Top of steep slopes
ATWS #126F	25	99	14.66	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #138	25	58	14.84	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #139	50	99	14.88	0.0	0.0	<0.1	0.1	0.0	0.0	Top of steep slopes
ATWS #140	100	74	14.96	<0.1	0.0	0.2	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #141	25	307	15.13	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #142	25	149	15.24	0.1	0.0	<0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #143	25	118	15.37	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #144	25	118	15.40	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #145	25	106	15.40	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #146	25	113	15.96	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #149	760	9	16.15	0.0	0.1	0.0	<0.1	0.0	0.0	Access road access to right of way
ATWS #149A	10	250	16.06	<0.1	<0.1	0.0	<0.1	0.0	0.0	Access road access to right of way
ATWS #150	25	FALSE	16.29	0.1	0.1	0.7	FALSE	0.0	0.0	Side slope
ATWS #151	25	2419	16.26	0.0	0.1	<0.1	0.5	0.0	0.0	Access road access to right of way
ATWS #152	25	98	16.40	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #154	25	99	16.47	0.0	0.0	<0.1	<0.1	0.0	0.0	Top of ridge passing
ATWS #155	25	244	16.60	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #156	25	150	16.59	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #157	25	99	16.84	<0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #158	50	127	16.85	0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #159	25	99	16.89	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #160	25	114	17.03	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #160A	50	322	17.02	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #161	50	322	17.34	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #162	25	250	17.42	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #163	25	59	17.44	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #164	25	100	17.51	0.0	0.0	0.1	0.0	0.0	0.0	Top of ridge passing
ATWS #165	25	380	17.54	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #166	25	99	17.58	0.0	0.0	0.1	0.0	0.0	0.0	Top of ridge passing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #167	25	106	17.66	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #168	25	110	17.75	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #169	25	107	17.92	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #171	25	199	17.94	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #172	25	116	18.01	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #173	25	300	18.02	0.0	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #174	25	75	18.06	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #175	25	100	18.08	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #176	25	85	18.18	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #177	25	85	18.19	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #179	24	943	18.38	0.0	0.0	0.5	0.0	0.0	0.0	Waterbody crossing
ATWS #180	25	119	18.54	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #181	25	119	18.56	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #182	25	49	18.60	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #183	25	105	18.64	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #185	25	234	18.71	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #186	25	95	18.91	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #187	25	100	19.03	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #188	25	75	19.11	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #189	25	49	19.15	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #192	25	150	19.44	<0.1	0.0	0.1	0.0	0.0	0.0	Equipment staging area
ATWS #193	25	50	19.57	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #194	50	55	19.82	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #195	50	50	19.86	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #196	25	441	20.05	0.0	0.0	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #198	25	357	20.09	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #202	25	716	20.57	0.0	0.0	0.4	<0.1	0.0	0.0	Side slope
ATWS #204	50	355	20.99	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #205	25	124	20.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #206	25	100	21.10	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #207	50	75	21.19	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #208	25	103	21.29	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #209	25	117	21.39	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #210	25	112	21.52	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #211	25	110	21.67	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #212	25	49	21.83	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #213	25	49	21.92	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #214	25	50	21.94	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #215	25	99	21.95	0.0	0.0	0.1	<0.1	0.0	0.0	Top of steep slopes
ATWS #216	25	50	21.97	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #217	25	101	22.18	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #218	25	100	22.24	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #219	179	46	22.29	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #220	25	94	22.29	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #221	25	100	22.34	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #222	25	466	22.42	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #223	25	49	22.56	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #224	25	100	22.57	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #225	25	100	22.67	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #226	25	100	22.67	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #227	25	88	22.73	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #228	25	104	22.74	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #229	25	100	22.81	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #230	50	56	22.85	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #231	25	105	22.93	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #232	25	100	22.95	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #233	25	99	23.03	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #234	25	49	23.07	0.0	0.0	<0.1	0.0	0.0	0.0	Side slope
ATWS #235	25	100	23.16	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #236	25	100	23.21	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #237	25	100	23.24	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #238	50	100	23.24	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #239	25	99	23.37	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #240	25	99	23.40	0.0	0.0	<0.1	<0.1	0.0	0.0	Side slope
ATWS #241	25	99	23.44	0.0	0.0	<0.1	0.1	0.0	0.0	Side slope
ATWS #242	25	145	23.51	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #243	25	145	23.52	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #244	25	100	23.61	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #245	25	100	23.61	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #246	25	99	23.64	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #247	25	106	23.66	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #248	25	75	23.74	0.0	0.0	<0.1	<0.1	0.0	0.0	Top of steep slopes
ATWS #249	25	118	23.76	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #250	25	109	23.82	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #251	25	65	23.90	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #252	25	100	24.04	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #253	25	99	24.09	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #254	25	100	24.14	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #255	25	100	24.26	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #256	25	57	24.32	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #256A	80	184	24.37	0.0	0.0	0.3	0.0	0.0	0.0	Road crossing
ATWS #257	25	75	24.44	0.0	0.0	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #258	50	215	24.54	0.0	0.0	0.2	0.0	0.0	0.0	Railroad crossing
ATWS #258A	74	75	24.50	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #261	25	99	24.87	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #261A	50	115	24.76	0.0	0.1	0.0	0.1	0.0	0.0	Top of steep slopes
ATWS #262	25	112	25.18	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #264	25	126	26.02	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #265	25	100	26.00	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #266	25	99	26.05	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #267	25	99	26.09	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #268	25	104	26.12	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #269	25	104	26.23	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #270	25	100	26.29	<0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #271	25	99	26.33	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #272	25	102	26.39	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #273	25	97	26.39	0.1	0.0	0.0	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #274	25	99	26.46	0.1	0.0	0.0	0.0	0.0	0.0	Equipment passing
ATWS #275	25	196	26.57	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #276	50	379	26.81	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #277	25	121	26.82	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #278	25	96	26.97	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #278A	25	100	27.01	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #278B	25	100	27.02	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #278C	25	100	27.06	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #278D	25	100	27.08	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #278E	25	100	27.24	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #278F	50	300	27.29	0.0	0.0	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #280	25	77	27.34	0.0	0.0	<0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #281	25	101	27.34	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #282	25	102	27.92	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #283	25	49	28.14	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #284	25	109	28.21	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #285	25	98	28.30	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #286	25	101	28.30	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #288	25	98	28.36	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #289	25	99	28.45	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #290	25	99	28.47	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #290A	75	149	28.73	0.0	0.2	<0.1	0.1	0.0	0.0	Truck turnaround area
ATWS #291	25	98	28.81	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #293	25	87	29.26	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #294	25	114	29.30	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #296	25	74	29.34	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #297	25	49	29.37	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #298	25	381	29.49	0.0	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #299	25	96	29.64	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #300	25	157	29.85	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #301	25	117	29.84	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #302	25	98	30.06	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #303	25	99	30.22	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #304	25	100	30.24	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #305	25	100	30.32	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #306	25	99	30.42	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #307	25	100	30.49	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #308	25	100	30.58	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #309	25	103	30.64	0.0	0.0	0.1	0.0	0.0	0.0	Side slope

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #310	25	101	30.71	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #311	25	91	30.84	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #313	25	126	30.95	0.0	0.0	0.1	<0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #314	25	94	30.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #315	25	104	31.04	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #316	25	101	31.08	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #317	25	100	31.19	0.0	0.0	0.1	0.0	0.0	0.0	Top of ridge turnaround
ATWS #318	25	1043	31.24	0.0	0.0	0.6	0.0	0.0	0.0	Side slope
ATWS #319	25	90	31.31	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #321	25	49	31.35	0.0	0.0	<0.1	<0.1	0.0	0.0	Top of steep slopes
ATWS #322	50	146	31.42	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #323	25	47	31.42	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #324	25	97	31.49	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #325	25	49	32.38	0.0	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #326	25	98	32.46	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #327	25	49	32.62	0.0	0.0	<0.1	0.0	0.0	0.0	Side slope
ATWS #328	25	456	32.73	0.0	0.0	0.3	0.0	0.0	0.0	Truck turnaround area
ATWS #329	25	99	33.01	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #330	25	99	33.01	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #332	31	74	33.16	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #333	25	3186	33.57	0.0	0.0	1.7	0.1	0.0	0.0	Side slope
ATWS #334	25	100	33.54	0.0	0.0	<0.1	<0.1	0.0	0.0	Top of ridge turnaround
ATWS #335	25	99	33.60	0.0	0.0	<0.1	<0.1	0.0	0.0	Top of ridge turnaround
ATWS #336	25	108	33.74	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #337	50	108	34.18	0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #338	25	49	34.42	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #339	25	50	34.45	0.0	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #340	25	100	34.49	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #341	25	100	34.50	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #341A	50	159	34.79	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #342	25	52	34.83	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #343	25	53	34.84	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #344	25	100	34.90	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #345	25	99	34.90	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #346	25	191	35.07	<0.1	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #348	25	50	35.09	0.0	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #349	25	50	35.17	0.0	0.0	0.0	<0.1	0.0	0.0	Top of steep slopes
ATWS #350	25	50	35.21	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #351	25	49	35.21	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #352	25	201	35.50	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #354	25	87	35.57	0.0	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #355	25	99	35.59	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #357	25	121	35.72	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #358	25	111	36.07	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #359	25	112	36.22	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #360	25	111	36.49	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #362	25	111	36.53	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #364	25	99	37.22	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #365	25	117	37.35	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #366	25	99	37.35	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #368	25	58	37.47	0.0	0.0	<0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #369	25	134	37.64	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #370	25	105	37.91	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #371	25	99	38.08	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #372	25	172	38.18	<0.1	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #373	25	105	38.19	<0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #373A	25	200	38.46	0.0	0.0	0.1	0.0	<0.1	0.0	Waterbody crossing
ATWS #373B	25	275	38.59	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #376	25	107	38.67	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #379	25	131	38.88	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #380	25	120	38.86	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #381	25	91	39.08	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #382	25	51	39.21	0.0	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #382A	50	150	39.18	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #383	25	62	39.22	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #384	25	46	39.24	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #385	25	50	39.30	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #386	25	50	39.30	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #387	25	97	39.41	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #388	50	285	39.43	0.0	0.0	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #390	25	50	39.47	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #391	25	49	39.53	0.0	0.0	<0.1	0.0	0.0	0.0	Side slope
ATWS #392	25	50	39.54	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #393	25	100	39.65	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #394	25	104	40.24	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #396	25	345	40.31	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #397	25	105	40.61	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #398	25	148	40.71	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #399	131	35	40.72	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #400	25	114	40.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #401	25	166	41.47	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #402	25	336	41.82	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #405	25	100	42.01	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #406	25	100	42.02	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #406A	50	300	42.09	0.0	0.0	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #406B	25	100	42.18	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #407	25	105	42.27	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #408	25	94	42.30	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #409	25	112	42.47	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #410	50	85	42.93	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #411	25	100	43.16	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #412	25	100	43.15	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #413	50	50	43.65	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #414	49	50	43.67	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #414A	25	301	43.86	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #420	25	184	44.46	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #421	25	141	44.93	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #422	25	120	44.95	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #422A	50	300	45.07	0.0	0.0	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #423	50	185	45.37	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #424	25	640	45.58	0.0	0.0	0.4	0.0	0.0	0.0	Side slope
ATWS #425	25	125	45.65	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #425A	25	120	45.82	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #425B	25	120	45.83	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #425C	93	106	46.00	0.2	0.0	<0.1	0.0	0.0	0.0	Bottom of steep slopes
ATWS #425D	25	276	46.24	0.1	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #425E	25	121	46.26	<0.1	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #425F	25	100	46.33	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #425G	25	100	46.38	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #428A	25	100	47.21	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #428B	25	164	47.80	0.0	0.0	0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #428C	25	100	48.10	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #428D	25	279	48.35	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #431	25	230	48.54	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #431A	25	51	48.66	0.0	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #432	50	86	48.70	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #433	25	117	48.87	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #434	25	1432	49.31	0.0	0.0	0.8	0.0	0.0	0.0	Side slope
ATWS #435	25	542	49.66	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #436	25	122	50.04	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #437	25	99	50.43	0.0	0.0	<0.1	0.1	0.0	0.0	Road crossing
ATWS #440	25	96	51.57	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #441	25	102	51.60	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #443	50	50	52.05	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #444	50	50	52.09	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #445	50	50	52.13	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #446	25	199	52.35	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #447	50	50	52.43	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #448	49	50	52.56	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #449	49	50	52.59	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #450	25	200	52.63	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #451	25	199	52.76	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #452	25	114	52.85	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #453	49	50	53.00	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #453A	25	150	53.01	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #453B	25	20	53.03	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #453C	25	675	53.05	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #454	25	175	53.08	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #455	25	111	53.17	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #456	25	101	53.48	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #457	25	101	53.48	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #458	25	101	53.52	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #459	25	101	53.58	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #460	25	101	53.75	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #461	25	101	53.76	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #462	25	101	53.78	0.0	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #463	25	101	53.81	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #464	25	101	53.93	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #465	25	101	53.94	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #466	25	101	53.97	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #467	25	101	53.99	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #468	25	101	54.01	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #469	25	107	54.06	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #470	25	91	54.16	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #471	25	99	54.23	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #472	25	101	54.26	0.0	0.0	0.0	0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #473	25	176	54.28	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #474	25	126	54.35	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #475	25	86	54.38	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #476	25	286	54.40	0.2	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #477	25	100	54.45	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #478	25	100	54.50	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #479	25	99	54.55	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #480	25	251	55.24	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #481	25	93	55.58	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #482	25	99	56.02	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #483	25	99	56.59	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #484	25	99	57.10	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #485	25	226	57.36	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #486	25	126	57.37	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #487	25	99	57.63	0.0	0.0	0.1	0.0	0.0	0.0	Equipment passing
ATWS #488	25	111	57.86	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #489	50	199	58.04	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #490	25	99	58.36	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #491	25	113	58.38	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #492	25	99	58.62	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #493	25	274	59.26	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #494	25	100	59.34	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #495	25	109	59.41	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #496	25	134	59.48	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #496A	50	99	59.54	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #496B	25	100	59.54	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #497	25	100	59.59	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #498	25	148	59.59	0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #499	25	100	59.64	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #500	25	99	59.80	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #501	25	399	59.91	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #502	25	308	60.01	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #503	25	148	60.20	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #504	25	100	60.25	0.0	0.0	0.1	0.0	0.0	0.0	Side slope

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #505	50	50	60.37	0.0	0.0	<0.1	0.1	0.0	0.0	Road crossing
ATWS #506	75	75	60.42	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #507	49	50	60.47	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #508	25	498	60.58	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #509	25	120	60.61	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #510	25	100	60.67	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #511	25	299	60.85	0.1	0.0	<0.1	0.0	0.0	0.0	Side slope
ATWS #512	25	99	60.91	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #512A	25	98	61.33	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #512B	50	99	61.39	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #512C	25	99	61.40	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #513	25	99	61.50	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #514	25	100	61.56	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #515	25	99	61.63	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #516	25	99	61.65	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #517	25	450	61.73	0.0	0.0	0.3	0.0	0.0	0.0	Waterbody crossing
ATWS #518	25	109	61.93	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #519	50	324	62.06	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #519A	25	99	62.21	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #520	50	100	62.27	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #521	50	124	62.38	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #522	25	247	62.47	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #523	25	111	62.62	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #524	25	168	62.86	<0.1	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #525	25	650	63.05	<0.1	0.0	0.4	0.0	0.0	0.0	Side slope
ATWS #525A	25	50	63.18	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #525B	25	50	63.21	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #530	70	65	63.46	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #531	69	70	63.66	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #534	25	204	63.97	0.0	0.0	0.1	<0.1	0.0	0.0	Side slope
ATWS #535	25	107	64.25	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #536	25	165	64.40	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #537	50	210	65.40	0.2	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #538	25	110	65.60	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #540	50	200	66.24	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #541	25	150	66.61	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #542	25	111	66.89	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #543	25	106	66.99	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #544	25	660	67.25	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #547	37	152	67.36	0.0	<0.1	0.1	0.1	0.0	0.0	Road crossing
ATWS #548	49	50	67.42	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #549	25	95	67.46	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #549A	22	80	67.52	0.0	0.0	<0.1	0.0	0.0	0.0	Access road access to right of way
ATWS #550	25	102	67.59	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #552	25	100	67.74	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #553	25	100	67.76	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #553A	50	83	67.96	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #554	49	50	68.23	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #555	50	100	68.30	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #556	25	124	68.35	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #557	25	69	68.38	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #558	25	98	68.45	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #559	25	99	68.58	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #560	25	1326	68.70	0.1	0.0	0.7	0.0	0.0	0.0	Side slope
ATWS #561	25	61	68.82	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #562	25	115	68.95	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #563	25	238	69.04	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #564	25	87	69.12	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #565	25	100	69.14	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #566	25	106	69.17	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #568	25	108	69.21	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #570	48	50	69.27	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #571	25	132	69.37	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #572	25	99	69.68	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #573	25	103	69.78	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #574	25	200	70.01	0.0	0.0	0.0	0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #575	25	96	70.22	0.0	<0.1	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #576	25	107	70.53	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #578	25	99	70.78	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #579	25	99	71.11	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #580	25	124	71.20	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #581	25	65	71.22	0.0	0.0	<0.1	0.0	0.0	0.0	Wetland crossing
ATWS #582	25	106	71.24	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #583	25	126	71.35	0.0	<0.1	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #584	49	50	71.45	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #585	25	315	71.57	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #586	25	232	71.61	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #587	25	207	71.95	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #588	50	200	72.16	0.0	0.0	0.0	0.1	0.0	0.0	Wetland crossing
ATWS #589	50	355	72.17	0.0	0.0	0.0	0.4	0.0	0.0	Wetland crossing
ATWS #589A	50	246	72.29	0.0	0.0	0.3	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #591	25	363	72.42	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #592	25	213	72.45	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #593	25	225	72.54	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #594	25	137	72.63	0.1	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #596	25	99	73.03	0.1	<0.1	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #597	459	79	73.11	0.5	0.4	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #601	24	1352	73.81	0.2	<0.1	0.5	0.0	0.0	0.0	Top of steep slopes
ATWS #602	25	225	73.83	<0.1	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #603	25	103	73.97	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #604	25	205	73.97	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #606	24	451	74.06	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #607	25	108	74.14	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #608	25	165	74.13	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #611	50	170	74.30	0.0	0.0	0.2	0.0	0.0	0.0	Road crossing
ATWS #612	50	570	74.38	0.0	0.0	0.6	0.0	0.0	0.0	Waterbody crossing
ATWS #613	25	689	74.58	0.0	0.0	0.4	0.0	0.0	0.0	Side slope
ATWS #614	25	546	74.59	0.0	0.0	0.3	<0.1	0.0	0.0	Top of steep slopes
ATWS #615	25	110	74.66	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #616	25	320	74.67	0.0	0.0	0.2	<0.1	0.0	0.0	Top of steep slopes
ATWS #618	50	149	74.86	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #619	50	148	74.86	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #620	50	149	74.91	0.0	0.0	0.2	0.0	0.0	0.0	Wetland crossing
ATWS #621	50	143	74.92	0.0	0.0	0.2	0.0	0.0	0.0	Wetland crossing
ATWS #622	383	30	75.05	0.2	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #623	25	99	75.11	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #624	25	99	75.15	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #625	25	744	75.21	0.2	<0.1	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #626	25	99	75.27	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #627	25	153	75.35	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #628	25	197	75.35	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #629	25	99	75.39	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #630	25	199	75.41	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #631	144	18	75.47	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #632	50	141	75.56	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #633	50	173	75.63	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #634	25	277	75.80	0.2	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #635	25	99	75.92	<0.1	<0.1	0.0	0.0	0.0	0.0	Truck turnaround area
ATWS #636	25	92	75.97	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #637	25	109	76.01	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #639	50	156	76.24	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #639A	25	30	76.27	<0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #640	25	163	76.31	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #641	50	311	76.32	0.0	0.0	0.4	0.0	0.0	0.0	Wetland crossing
ATWS #644	37	282	76.85	0.1	0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #644A	25	79	76.89	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #645	50	148	76.87	0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #646	50	169	76.94	0.2	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #647	50	116	76.95	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #648	25	100	77.09	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #649	25	76	77.22	<0.1	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #650	25	99	77.24	<0.1	<0.1	0.0	<0.1	0.0	0.0	Truck turnaround area
ATWS #651	25	142	77.25	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #652	25	109	77.31	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #653	25	119	77.43	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #654	25	228	77.45	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #655	25	162	77.51	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #656	25	150	77.50	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #657	50	212	77.60	0.2	0.0	0.0	0.0	0.0	0.0	Top soil segregation
ATWS #659	320	32	77.60	0.2	0.0	<0.1	0.0	0.0	0.0	Top soil segregation
ATWS #659A	25	51	77.66	<0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #660	25	138	77.69	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #661	25	250	77.78	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #661A	25	99	77.77	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #662	25	100	77.82	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #663	25	111	77.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #665	25	108	78.24	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #666	25	106	78.37	0.0	<0.1	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #667	25	88	78.42	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #669	25	115	78.45	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #670	25	105	78.48	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #672	25	111	78.53	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #674	25	263	78.63	0.0	0.0	0.1	0.1	0.0	0.0	Pipe bend location
ATWS #675	25	100	78.67	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #676	25	FALS E	78.86	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #679	25	100	79.20	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #679A	25	200	79.22	0.0	<0.1	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #680	25	230	79.36	0.0	0.1	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #681	25	113	79.35	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #682	50	149	79.53	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #683	50	149	79.59	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #684	25	229	79.60	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #685	25	100	79.69	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #686	25	106	79.89	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #687	25	102	79.96	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #688	25	105	80.03	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #689	25	105	80.15	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #690	25	434	80.34	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #691	25	220	80.43	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #692	25	124	80.56	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #693	25	154	80.67	0.0	<0.1	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #694	25	99	80.83	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #695	25	100	80.87	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #696	25	106	80.92	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #698	50	150	81.05	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #699	50	183	81.18	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #700	25	109	81.31	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #701	25	105	81.50	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #702	25	109	81.73	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #703	25	105	81.80	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #706A	389	36	82.34	0.3	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #706B	25	100	82.41	<0.1	0.0	<0.1	0.0	0.0	0.0	Top of ridge passing
ATWS #707	25	260	82.51	0.0	0.0	0.1	0.1	0.0	0.0	Pipe bend location
ATWS #708	25	108	82.70	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #709	25	457	82.81	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #710	25	98	83.49	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #711	25	157	83.55	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #712	50	303	83.55	0.0	0.0	0.3	0.0	0.0	0.0	Waterbody crossing
ATWS #713	25	282	83.62	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #714	25	152	83.63	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #718	25	136	83.75	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #719	25	136	83.79	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #720	50	150	83.84	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #721	50	179	84.06	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #722	33	55	84.11	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #723	50	135	84.13	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #724	50	99	84.23	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #725	25	99	84.23	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #726	25	99	84.26	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #727	50	149	84.36	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #728	50	85	84.41	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #729	30	115	84.48	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #730	25	282	85.01	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #731	25	198	85.03	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #732	50	99	85.35	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #732A	50	100	85.24	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #732B	50	100	85.24	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #732C	25	100	85.29	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #732D	25	100	85.29	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #733	50	100	85.42	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #734	25	352	85.50	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #735	25	118	85.55	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #735A	25	105	85.75	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #736	25	100	85.78	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #736A	25	107	85.83	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #736B	25	115	85.89	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #737	25	111	86.00	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #737A	25	50	85.97	0.0	0.0	<0.1	0.0	0.0	0.0	Side slope
ATWS #737B	25	50	85.99	0.0	0.0	<0.1	0.0	0.0	0.0	Side slope
ATWS #737C	25	96	86.05	0.0	0.0	0.1	<0.1	0.0	0.0	Truck turnaround area

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #738	25	112	86.34	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #739	25	112	86.34	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #741	149	39	86.45	0.0	<0.1	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #742	25	99	86.53	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #743	25	128	86.54	0.0	<0.1	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #744	25	93	86.56	0.0	<0.1	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #745	25	105	86.58	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #746	25	178	86.67	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #747	25	99	86.68	0.0	<0.1	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #748	25	63	86.72	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #749	25	111	86.81	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #750	435	54	86.82	0.0	<0.1	0.5	0.0	0.0	0.0	Side slope
ATWS #751	25	216	87.03	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #752	25	286	87.04	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #753	25	109	87.20	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #754	25	109	87.21	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #755	50	146	87.47	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #756	50	149	87.54	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #757	100	356	87.67	0.8	0.0	0.0	0.0	0.0	0.0	Top of steep slopes
ATWS #759	174	34	87.75	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #760	50	112	87.81	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #761	50	222	87.89	0.0	0.0	0.3	0.0	0.0	0.0	Waterbody crossing
ATWS #762	50	150	87.99	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #764	50	193	88.23	0.0	0.1	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #765	151	315	88.25	0.0	<0.1	1.0	0.0	0.0	0.0	Top of steep slopes
ATWS #766	50	176	88.31	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #767	342	47	88.53	0.0	0.1	<0.1	0.3	0.0	0.0	Top of steep slopes
ATWS #768	25	332	88.53	0.0	<0.1	0.1	<0.1	0.0	0.0	Truck turnaround area

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #769	25	99	88.78	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #770	25	100	88.78	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #771	25	99	88.83	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #772	25	341	88.86	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #773	25	184	88.89	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #774	50	100	88.95	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #775	25	99	89.02	0.0	0.0	<0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #776	50	118	89.11	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #777	50	112	89.16	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #778	25	108	89.21	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #779	25	108	89.22	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #781	50	152	89.30	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #782	50	150	89.35	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #783	25	91	89.41	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #784	25	146	89.41	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #786	50	167	89.47	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #787	50	217	89.54	0.0	0.0	0.2	<0.1	0.0	0.0	Waterbody crossing
ATWS #788	25	100	89.79	0.0	0.0	0.0	0.1	0.0	0.0	Ridge passing
ATWS #789	25	106	89.87	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #790	956	15	89.97	0.0	0.1	0.0	0.4	0.0	0.0	Access road access to right of way
ATWS #791	25	113	90.07	0.0	<0.1	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #792	25	129	90.08	0.0	<0.1	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #793	25	128	90.10	0.0	<0.1	0.2	<0.1	0.0	0.0	Waterbody crossing
ATWS #794	25	215	90.25	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #795	25	109	90.25	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #796	25	100	90.35	0.0	0.0	0.0	0.1	0.0	0.0	Truck turnaround area
ATWS #797	25	232	90.38	0.0	0.0	0.0	0.1	0.0	0.0	Top of steep slopes
ATWS #798	25	139	90.53	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #799	25	152	90.53	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #800	25	130	90.58	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #801	25	149	90.59	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #802	25	212	90.78	0.0	<0.1	0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #803	25	116	90.79	0.0	<0.1	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #804	25	126	90.90	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #805	25	126	90.88	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #806	25	100	91.05	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #807	25	103	91.07	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #808	25	103	91.11	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #809	25	99	91.13	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #810	25	105	91.27	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #811	25	105	91.28	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #813	25	144	91.41	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #814	25	149	91.42	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #815	25	149	91.48	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #816	25	162	91.50	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #817	25	112	91.65	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #818	25	116	92.10	0.0	<0.1	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #819	25	116	92.09	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #820	25	118	92.29	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #821	25	118	92.27	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #822	25	99	92.35	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #823	25	365	92.42	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #824	25	127	92.54	0.0	<0.1	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #825	25	136	92.79	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #826	25	352	92.96	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #827	25	156	93.09	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #828	25	201	93.10	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #830	25	82	93.29	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #831	25	106	93.30	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #832	25	217	93.67	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #833	25	105	93.72	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #834	25	152	93.73	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #835	25	359	93.82	<0.1	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #835A	25	157	93.82	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #836	365	31	93.87	0.0	<0.1	0.2	<0.1	0.0	0.0	Pipe bend location
ATWS #837	25	196	94.08	0.0	<0.1	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #838	150	160	94.11	0.5	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #840	23	125	94.19	0.0	<0.1	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #841	26	143	94.23	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #842	25	104	94.23	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #843	32	86	94.25	0.0	<0.1	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #844	25	58	94.25	0.0	<0.1	0.0	<0.1	0.0	0.0	Waterbody crossing
ATWS #845	25	185	94.30	0.0	<0.1	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #846	25	125	94.42	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #847	25	99	94.47	<0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #848	25	100	94.48	<0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #849	25	149	94.55	0.1	0.0	0.0	0.0	0.0	0.0	Wetland crossing
ATWS #850	553	179	94.65	1.6	0.0	0.7	0.0	0.0	0.0	Waterbody crossing
ATWS #851	425	84	94.66	0.8	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #852	167	255	94.80	0.0	0.1	0.2	0.7	0.0	0.0	Waterbody crossing
ATWS #853	25	385	94.84	0.0	<0.1	0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #854	25	95	94.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #856	25	99	95.18	0.0	0.0	<0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #856A	25	100	95.22	0.0	<0.1	0.0	0.1	0.0	0.0	Truck turnaround area

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #857	25	111	95.32	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #858	25	111	95.31	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #860	25	99	95.53	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #861	25	99	95.53	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #862	25	114	95.60	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #863	25	114	95.59	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #864	25	155	95.82	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #865	25	106	96.09	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #866	25	99	96.11	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #867	50	263	96.47	0.2	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #868	50	312	96.47	0.3	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #869	25	368	96.56	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #870	25	372	96.56	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #871	25	105	96.68	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #872	25	105	96.67	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #874	102	207	96.82	0.3	0.1	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #875	100	271	96.84	0.6	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #876	100	200	96.94	0.4	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #877	100	255	97.13	0.5	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #878	85	304	97.15	0.6	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #879	123	129	97.21	0.3	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #880	235	132	97.25	0.7	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #880A	25	89	97.29	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #880C	25	159	97.31	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #881	25	190	97.39	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #882	25	379	97.37	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #883	25	199	97.58	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #884	25	199	97.58	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #885	25	99	97.63	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #886	25	100	97.63	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #887	25	187	97.67	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #888	25	187	97.68	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #889	25	145	97.73	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #890	25	149	97.74	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #891	25	543	98.04	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #892	25	92	98.36	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #893	25	302	98.37	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #897	25	108	98.69	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #898	25	112	98.73	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #899	25	334	98.75	0.0	<0.1	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #900	25	152	98.77	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #901	25	112	98.80	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #902	25	94	98.95	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #903	25	105	98.99	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #904	25	107	99.06	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #905	25	107	99.10	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #906	25	112	99.20	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #907	25	112	99.21	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #909	25	103	99.33	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #910	25	94	99.46	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #911	25	93	99.51	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #912	25	90	99.80	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #913	25	195	99.81	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #915	25	93	99.88	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #916	25	106	99.89	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #916A	25	148	100.02	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #918	137	70	100.05	0.0	<0.1	0.1	0.1	0.0	0.0	Road crossing
ATWS #919	50	149	100.08	0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #920	25	94	100.36	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #921	25	105	100.37	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #923	25	96	100.67	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #924	25	103	100.67	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #927	25	135	101.16	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #928	25	999	101.24	0.0	0.0	0.6	0.0	0.0	0.0	Side slope
ATWS #929	25	109	101.32	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #930	25	103	101.35	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #931	25	109	101.43	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #932	25	108	101.51	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #934	25	110	101.63	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #935	25	110	101.62	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #937	25	88	101.81	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #938	25	111	101.82	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #940	25	87	101.89	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #941	25	112	101.88	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #943	25	145	101.99	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #944	25	104	101.99	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #946	25	109	102.07	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #947	25	108	102.08	0.0	0.0	0.1	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #949	25	109	102.19	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #950	25	109	102.18	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #952	25	116	102.41	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #953	25	116	102.40	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #954	100	104	102.75	0.0	0.0	<0.1	0.2	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #955	100	104	102.76	0.0	<0.1	0.1	0.1	0.0	0.0	Road crossing
ATWS #956	85	111	102.78	0.2	<0.1	0.0	FALSE	0.0	0.0	Waterbody crossing
ATWS #956A	17	75	102.78	<0.1	<0.1	0.0	0.0	0.0	0.0	Access road access to right of way
ATWS #958	25	109	103.18	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #959	25	90	103.18	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #961	25	88	103.33	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #962	25	88	103.32	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #964	25	118	103.48	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #965	25	81	103.49	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #966	25	91	103.74	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #967	25	93	103.74	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #969	25	110	103.89	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #970	25	346	103.90	0.2	0.0	<0.1	0.0	0.0	0.0	Wetland crossing
ATWS #971	25	110	104.09	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #972	25	89	104.09	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #974	25	100	104.25	0.1	0.0	0.0	0.0	0.0	0.0	Wetland crossing
ATWS #975	25	68	104.45	<0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #976	25	202	104.47	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #977	50	206	104.55	0.2	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #978	25	99	104.57	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #979	340	64	104.61	0.0	<0.1	0.0	0.5	0.0	0.0	Road crossing
ATWS #980	25	111	104.79	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #981	25	111	104.78	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #983	25	108	104.96	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #987	25	103	105.36	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #988	25	99	105.36	<0.1	<0.1	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #990	25	94	105.45	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #991	25	110	105.63	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #992	25	89	105.64	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #994	25	150	105.76	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #995	50	100	105.76	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #996	50	94	105.81	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #997	25	222	105.88	0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #998	25	342	105.89	0.2	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #999	25	90	106.02	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1000	25	109	106.01	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1002	25	112	106.24	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1003	25	190	106.25	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1005	25	99	106.33	0.0	<0.1	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1006	25	100	106.36	<0.1	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1007	25	99	106.36	<0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1008	25	105	106.46	<0.1	<0.1	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1010	25	108	106.62	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1011	25	91	106.63	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1013	25	110	106.96	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #1015	25	104	107.00	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1016	25	249	107.06	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #1017	25	106	107.12	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #1018	387	149	107.21	0.0	0.0	0.2	1.2	0.0	0.0	Top of steep slopes
ATWS #1019	267	302	107.28	0.0	0.2	0.2	1.5	0.0	0.0	Top of steep slopes
ATWS #1020	50	108	107.37	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1021	50	112	107.38	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1022	25	149	107.42	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1023	25	150	107.42	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1024	25	94	107.53	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1025	25	614	107.58	0.0	0.0	0.4	0.0	0.0	0.0	Side slope

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1026	25	108	107.64	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1027	25	287	107.74	0.0	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #1028	25	267	107.75	0.0	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #1029	25	95	107.99	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1030	25	107	108.33	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1031	25	150	108.34	0.1	0.0	0.0	0.0	0.0	0.0	Top of steep slopes
ATWS #1032	50	150	108.38	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #1033	50	150	108.45	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #1034	50	150	108.52	0.0	0.0	0.2	0.0	0.0	0.0	Road crossing
ATWS #1035	192	162	108.60	0.7	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1036	50	226	108.62	0.2	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1037	25	100	108.72	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1038	25	100	108.79	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1039	25	99	108.79	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1040	25	111	109.04	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1041	25	111	109.06	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1041A	25	111	109.14	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1042A	25	99	109.30	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1043	25	100	109.34	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1044	25	100	109.49	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1045	25	112	109.75	<0.1	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1046	25	87	109.74	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1048	25	188	109.79	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1049	25	151	109.85	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1050	25	99	109.90	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1051	25	99	109.97	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1052	25	93	109.98	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1053	25	150	110.02	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1058	50	100	110.45	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1059A	25	1081	110.57	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1060	25	100	110.71	<0.1	<0.1	0.0	0.0	0.0	0.0	Truck turnaround area
ATWS #1061	25	110	111.23	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1062	25	109	111.23	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1063	25	212	111.41	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1064	25	99	111.48	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1065	25	109	111.49	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1066	25	99	111.57	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1067	50	203	111.58	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1068	25	149	111.62	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1069	25	99	111.64	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #1070	25	103	111.75	0.0	<0.1	0.0	<0.1	0.0	0.0	Road crossing
ATWS #1071	25	181	111.77	0.0	<0.1	<0.1	0.1	0.0	0.0	Road crossing
ATWS #1072	25	99	111.93	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1073	25	115	112.11	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1074	25	84	112.10	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1076	25	111	112.28	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1077	25	88	112.29	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1079	25	111	112.45	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1080	25	111	112.44	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1082	25	119	112.52	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1084	25	107	112.59	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1086	25	124	112.74	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #1087	25	152	112.74	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1089	25	231	113.05	0.0	0.0	<0.1	0.1	0.0	0.0	Truck turnaround area
ATWS #1090	199	203	113.20	0.0	0.3	0.2	0.4	0.0	0.0	Road crossing
ATWS #1091	164	160	113.21	0.0	0.2	<0.1	0.4	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1091A	25	113	113.69	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1091B	25	119	113.81	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1091C	25	109	113.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1091D	25	112	114.18	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1100	25	107	114.88	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1101	25	108	114.99	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1102	25	98	115.00	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1103	25	175	115.14	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1104	25	211	115.16	<0.1	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1105	25	101	115.19	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1106	25	350	115.27	0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1108	25	279	115.44	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1109	25	91	115.65	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1110	25	89	115.65	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1112	25	626	115.76	0.3	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1113	25	131	115.73	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1114	50	162	115.92	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #1115	25	150	115.93	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1116	134	249	116.02	0.0	<0.1	0.2	0.5	0.0	0.0	Road crossing
ATWS #1117	25	89	116.08	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1118	25	103	116.26	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1118A	25	167	116.32	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1119	25	121	116.47	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1120	25	121	116.46	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1121	25	115	116.63	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1122	25	99	116.62	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1124	25	108	116.87	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1125	25	107	116.93	0.0	0.0	<0.1	<0.1	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1126	25	93	116.93	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1127	25	214	117.11	0.1	0.0	0.0	0.0	0.0	0.0	Truck turnaround area
ATWS #1128	25	109	117.25	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1130	25	107	117.39	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1131	25	109	117.61	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1132	25	254	118.08	0.1	0.0	0.0	0.0	0.0	0.0	Road crossing
ATWS #1133	25	207	118.26	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1134	25	73	118.34	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1135A	25	125	118.38	<0.1	<0.1	0.1	<0.1	0.0	0.0	Road crossing
ATWS #1136	25	133	118.51	0.0	0.0	0.1	0.0	0.0	0.0	Wetland crossing
ATWS #1137	25	200	118.53	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1138	25	150	118.59	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1139	25	149	118.60	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1140	25	113	118.69	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1142	227	81	118.70	0.4	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1143	25	99	118.89	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1144	25	99	118.89	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1145	25	153	118.94	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1146	25	153	118.94	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1147	25	200	119.06	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1148	25	105	119.18	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1149	25	99	119.37	0.0	0.0	<0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #1150	25	177	119.51	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1151	25	267	119.52	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #1152	25	199	119.58	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1153	25	110	119.79	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1154	25	110	119.82	0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1155	25	108	119.88	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1156	25	108	119.88	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1157	25	112	120.10	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1158	25	112	120.12	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1159	25	115	120.70	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1160	25	115	120.69	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1161	25	106	120.74	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1163	25	108	120.80	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1165	25	108	120.93	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1167	25	100	121.06	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1168	50	328	121.08	0.0	0.0	0.4	0.0	0.0	0.0	Side slope
ATWS #1169	25	106	121.13	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #1170	25	49	121.17	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1170A	25	49	121.21	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1172	25	114	121.53	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1174	25	150	121.63	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1175	25	150	121.63	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1176	25	231	121.74	0.1	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1177	50	228	121.86	0.3	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1178	25	174	121.86	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1179	25	105	122.35	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1180	25	234	122.39	0.0	0.0	<0.1	0.1	0.0	0.0	Top of steep slopes
ATWS #1181	25	426	122.41	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1181A	25	98	122.68	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1184	25	93	122.79	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1185	25	85	122.89	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1186	25	95	122.91	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1187	25	114	123.05	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1188	25	97	123.07	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1189	25	100	123.10	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1190	25	143	123.24	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #1191	395	98	123.24	0.0	0.0	0.2	0.7	0.0	0.0	Top of ridge turnaround
ATWS #1192	25	211	123.50	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1193	25	90	123.78	0.0	<0.1	0.1	0.2	0.0	0.0	Road crossing
ATWS #1193A	115	115	123.90	0.0	0.0	0.3	<0.1	0.0	0.0	Road crossing
ATWS #1194	25	226	123.88	0.0	0.0	0.1	0.1	0.0	0.0	Road crossing
ATWS #1197	216	50	124.40	0.2	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1197A	29	284	124.91	0.0	<0.1	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1197B	125	144	124.92	0.0	0.0	0.2	0.2	0.0	0.0	Top of steep slopes
ATWS #1198	25	107	125.05	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1200	25	95	125.15	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1201	25	93	125.39	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1203	25	106	125.57	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1205	50	323	125.95	0.3	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1206	25	64	126.01	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1207	25	107	126.03	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1208	25	116	126.39	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1209	25	116	126.38	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1210	25	109	126.54	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1211	25	109	126.54	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1213	25	109	126.70	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1214	25	116	126.72	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1216	25	113	126.83	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1219	25	63	126.98	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1222	25	99	127.07	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1223	25	100	127.09	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1223A	25	210	127.39	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1223B	25	220	127.47	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1223C	25	96	127.55	0.1	0.0	0.0	0.0	0.0	0.0	Pipeline or foreign utility crossover
ATWS #1224	25	106	127.61	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1225	25	107	127.87	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1226	25	96	127.88	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1227	25	322	127.94	0.1	<0.1	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1227A	50	190	128.14	0.2	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1228	25	202	128.50	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1229	25	266	128.62	0.0	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #1230	25	214	128.62	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1231	25	105	129.04	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1232	25	107	129.07	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1233	25	100	129.13	0.1	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1234	50	50	129.24	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1235	50	54	129.25	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1236	50	111	129.27	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1237	50	95	129.28	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1239	25	741	129.70	0.0	0.0	0.4	0.0	0.0	0.0	Side slope
ATWS #1242	25	90	129.84	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1243	25	301	130.11	0.0	0.0	0.2	<0.1	0.0	0.0	Top of steep slopes
ATWS #1244	25	421	130.13	0.0	0.0	0.1	0.1	0.0	0.0	Side slope
ATWS #1245	25	108	130.20	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1246	25	109	130.25	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1247	25	106	130.34	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1247A	25	100	130.37	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1247B	25	97	130.42	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1247C	50	200	130.50	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1248	25	195	130.65	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1248A	50	100	130.81	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1248B	50	99	130.86	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1248C	25	190	130.93	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1248D	25	100	130.96	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1248E	25	100	131.04	<0.1	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1248F	25	106	131.44	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1248G	25	84	131.54	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1248H	25	193	131.53	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1248I	25	100	131.58	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1248J	25	100	131.59	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1248K	25	100	131.62	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1248L	25	100	131.67	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1248M	25	100	131.75	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1248N	25	100	131.76	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1248O	25	107	131.81	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1256	151	133	131.91	0.0	<0.1	0.1	0.3	0.0	0.0	Road crossing
ATWS #1257	25	227	131.96	0.2	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1258	51	224	131.95	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1260	25	106	132.08	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1261	25	193	132.08	0.0	0.0	0.0	0.1	0.0	0.0	Top of steep slopes
ATWS #1263	25	106	132.28	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1263A	25	100	132.30	<0.1	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1264	25	194	132.38	<0.1	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1265	25	216	132.39	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1266	25	95	132.40	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1267	50	221	132.43	0.2	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1268	25	89	132.59	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1269	15	106	132.58	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1269A	50	199	132.70	0.2	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1270	25	447	132.83	0.1	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1271	25	350	132.87	<0.1	0.0	0.1	0.1	0.0	0.0	Wetland crossing
ATWS #1272	50	354	132.96	0.1	<0.1	0.2	<0.1	0.0	0.0	Road crossing
ATWS #1273	50	345	132.97	0.3	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1274	50	117	133.01	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1274A	50	200	133.15	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1275	25	99	133.45	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1276	25	162	133.72	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1277	25	99	133.77	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1278	50	79	133.82	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1279	50	148	133.85	0.2	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1280	25	149	134.10	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1281	25	146	134.15	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1282	25	310	134.41	0.2	0.0	0.0	0.0	0.0	0.0	Wetland crossing
ATWS #1283	187	18	134.44	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1284	50	104	134.50	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1285	304	26	134.54	0.1	0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1286	11	47	134.58	<0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1287	25	119	134.63	0.1	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1288	25	111	134.72	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1289	25	106	134.71	0.1	<0.1	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1290	25	106	134.93	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1291	25	112	135.04	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1291A	25	112	135.05	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1292	50	150	135.14	0.0	0.0	0.2	<0.1	0.0	0.0	Waterbody crossing
ATWS #1293	50	149	135.19	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1294	50	150	135.20	0.2	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1296	50	429	135.39	0.3	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #1297	25	117	135.51	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1298	25	117	135.49	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1299	25	239	135.67	0.1	0.0	0.0	0.0	0.0	0.0	Top of steep slopes
ATWS #1300	25	180	135.89	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1301	25	100	135.94	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1302	25	545	136.33	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1303	25	100	136.41	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1304	25	100	136.45	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1305	25	100	136.51	<0.1	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1306	25	100	136.64	<0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1307	25	100	136.74	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #1308	25	100	136.86	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1309	25	100	136.88	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1320	25	100	137.16	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1321	25	113	137.19	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1322	25	100	137.21	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1323	25	94	137.40	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1324	25	105	137.41	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1326	25	90	137.47	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1327	25	953	137.65	0.0	0.0	0.5	0.0	0.0	0.0	Side slope
ATWS #1328	25	113	137.69	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1330	50	129	137.79	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1331	25	145	137.83	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1331A	25	31	137.85	0.0	<0.1	<0.1	<0.1	0.0	0.0	Wetland crossing
ATWS #1332	25	113	137.84	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1333	24	25	137.86	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1334	25	55	137.86	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1335	25	95	137.88	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1336	25	87	137.99	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1338	25	146	138.04	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1339	25	95	138.11	<0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1340	22	24	138.13	<0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1341	25	170	138.14	0.0	<0.1	0.1	<0.1	0.0	0.0	Road crossing
ATWS #1342	737	24	138.23	0.0	0.1	0.3	0.0	0.0	0.0	Road crossing
ATWS #1343	25	123	138.32	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1344	50	350	138.45	0.4	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1345	50	294	138.46	0.3	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1346	25	166	138.54	0.1	0.0	0.0	0.0	0.0	0.0	Truck turnaround area
ATWS #1347	25	109	138.55	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1348	50	149	138.63	0.2	0.0	0.0	0.0	0.0	0.0	Top soil segregation
ATWS #1349	25	104	138.85	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1349A	50	422	138.83	0.4	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1350	50	240	138.93	0.2	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1351	50	107	139.18	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1352	50	96	139.18	0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1352A	50	189	139.22	0.0	<0.1	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #1353	25	99	139.26	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1355	25	92	139.34	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1356	25	300	139.41	0.0	0.0	0.2	0.0	0.0	0.0	Waterbody crossing
ATWS #1356A	25	143	139.49	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1357	75	243	139.62	0.0	0.2	<0.1	0.2	0.0	0.0	Side slope
ATWS #1359	25	222	139.94	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1360	25	65	139.97	<0.1	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1362	25	109	140.02	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1363	25	106	140.07	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1364	25	106	140.08	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1366	25	95	140.14	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1367	374	100	140.23	0.8	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1368	25	108	140.33	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1369	25	108	140.33	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1371	25	100	140.70	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1372	25	100	140.83	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1372A	50	150	141.03	0.2	0.0	0.0	0.0	0.0	0.0	Top of steep slopes
ATWS #1373	25	99	141.10	<0.1	0.0	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1374	293	122	141.11	0.6	0.0	0.3	0.0	0.0	0.0	Top of steep slopes
ATWS #1375	25	49	141.18	<0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1376	25	233	141.31	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1378	25	89	141.54	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1379	25	101	141.56	0.0	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1380	214	113	141.65	0.4	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1381	25	215	141.65	0.1	0.0	<0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1382	50	150	141.84	0.1	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1383	50	179	141.84	0.2	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1383A	25	100	141.91	<0.1	0.0	<0.1	0.0	0.0	0.0	Wetland crossing
ATWS #1384	25	249	141.96	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1385	25	143	142.00	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1386	25	115	142.13	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1388	25	105	142.29	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1389	25	106	142.39	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1390	25	108	142.56	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1391	25	300	142.65	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1392	25	100	142.74	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1393	25	99	142.78	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1394	25	100	142.81	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1395	25	98	142.94	<0.1	0.0	<0.1	0.0	0.0	0.0	Side slope
ATWS #1398	25	100	143.21	0.0	0.0	<0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1399	25	110	143.24	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1400	25	110	143.25	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1402	171	41	143.29	<0.1	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1403	25	100	143.31	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1404	25	98	143.40	<0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1405	25	100	143.46	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1406	50	98	143.47	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1407	25	114	143.50	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1407A	50	130	143.49	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #1408	25	139	143.51	0.1	0.0	0.0	0.0	0.0	0.0	Road crossing
ATWS #1409	25	100	143.54	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1409A	25	100	143.63	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1410	25	110	143.66	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1410A	25	100	143.69	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1411	50	151	143.80	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1412	25	149	143.80	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1414	25	110	143.96	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #1414A	544	17	143.96	0.0	<0.1	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1416	23	149	144.04	0.0	0.0	0.0	0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #1417	25	114	144.14	0.0	0.0	0.0	0.1	0.0	0.0	Top of steep slopes
ATWS #1418	386	48	144.21	0.0	0.0	0.1	0.3	0.0	0.0	Side slope
ATWS #1419	25	112	144.27	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1420	25	81	144.29	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1421	25	84	144.35	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1422	25	115	144.35	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1423	25	106	144.45	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1424	25	106	144.44	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1426	25	243	144.51	0.0	0.0	0.1	<0.1	0.0	0.0	Top of steep slopes
ATWS #1426A	25	100	144.59	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1426B	25	100	144.63	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1426C	25	200	144.71	0.0	0.0	0.1	<0.1	0.0	0.0	Pipeline or foreign utility crossover
ATWS #1427	25	106	144.71	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1428	25	100	144.82	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1429	25	99	144.85	0.0	0.0	<0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #1430	25	105	144.89	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1431	25	105	144.89	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1433	25	100	145.04	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1434	25	103	145.05	0.0	<0.1	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1435	25	107	145.32	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1436	25	94	145.32	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1438	25	100	145.40	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1439	25	322	145.45	0.2	0.0	0.0	0.0	0.0	0.0	Waterbody crossing
ATWS #1440	25	104	145.57	0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1441	25	104	145.57	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1442	25	100	145.60	<0.1	0.0	<0.1	0.0	0.0	0.0	Wetland crossing
ATWS #1443	25	124	145.63	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1444	25	100	145.64	0.1	0.0	<0.1	0.0	0.0	0.0	Wetland crossing
ATWS #1445	25	139	145.69	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1446	25	140	145.70	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1447	50	173	145.80	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1448	25	100	145.95	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1449	25	166	146.04	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1450	171	116	146.08	0.4	<0.1	0.1	0.0	0.0	0.0	Road crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1450A	25	100	146.13	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1451	25	100	146.20	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1452	25	103	146.26	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1454	75	199	146.36	0.0	0.0	0.3	0.1	0.0	0.0	Waterbody crossing
ATWS #1455	25	111	146.44	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1455A	25	111	146.43	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1456	25	120	146.54	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1457	25	114	146.55	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1458	25	102	146.57	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1459	25	90	146.63	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1461	25	324	146.74	0.1	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1462	25	265	146.79	0.1	<0.1	<0.1	0.0	0.0	0.0	Horizontal directional drill (HDD) locations
ATWS #1462A	50	50	146.99	0.0	0.0	0.1	0.0	0.0	0.0	Water appropriation location
ATWS #1462B	50	287	146.85	0.3	0.0	0.0	0.0	0.0	0.0	Horizontal directional drill (HDD) locations
ATWS #1462C	55	2031	147.56	1.4	0.0	1.0	0.1	<0.1	0.0	Horizontal directional drill (HDD) locations
ATWS #1467	50	104	148.02	0.0	0.0	0.1	0.1	0.0	0.0	Road crossing
ATWS #1469A	369	71	148.15	0.0	0.1	0.4	0.2	0.0	0.0	Road crossing
ATWS #1470	25	92	148.42	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1472	25	115	148.60	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1473	25	115	148.58	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1474	16	145	148.73	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1475	25	72	148.75	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1476	25	93	148.90	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1477	25	106	148.91	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1479	25	147	149.08	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1480	25	147	149.06	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1481	25	106	149.40	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1482	25	1002	149.85	0.0	0.0	0.6	0.0	0.0	0.0	Side slope
ATWS #1483	25	107	150.01	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1484	25	313	150.23	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1485	25	113	150.25	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1485A	50	99	150.30	0.1	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1485B	50	99	150.41	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1485C	25	69	150.54	<0.1	0.0	<0.1	0.0	0.0	0.0	Road crossing
ATWS #1487	25	131	150.59	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1488	25	90	150.60	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1490	25	107	150.72	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1491	25	113	150.95	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1492	25	113	150.94	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1494	25	106	150.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1495	25	106	150.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1495A	50	99	151.05	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1495B	50	149	151.17	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1496	25	104	151.39	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1498	25	326	151.40	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #1499	25	112	151.94	0.0	0.0	<0.1	0.1	0.0	0.0	Pipe bend location
ATWS #1503	25	99	152.02	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1504	25	104	152.25	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1505	25	200	152.31	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1505A	25	97	152.38	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1506	75	141	152.44	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #1507	25	100	152.71	0.0	<0.1	<0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1508	25	107	152.74	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1509	25	414	152.76	0.0	0.0	0.2	0.0	0.0	0.0	Side slope

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1512	25	105	152.83	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #1513	25	334	152.90	0.0	0.0	0.2	0.0	0.0	0.0	Side slope
ATWS #1514	25	99	153.08	0.0	0.0	<0.1	0.1	0.0	0.0	Top of steep slopes
ATWS #1515	25	50	153.11	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1516	25	254	153.15	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1517	25	104	153.21	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1518	25	110	153.37	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1519	25	138	153.39	0.0	0.0	0.1	0.0	0.0	0.0	Road crossing
ATWS #1520	25	99	153.43	0.0	0.0	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1521	25	120	153.44	0.0	0.0	0.1	<0.1	0.0	0.0	Road crossing
ATWS #1521A	100	174	153.52	0.0	0.0	0.4	0.0	0.0	0.0	Top of steep slopes
ATWS #1522	25	113	153.81	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1523	25	103	153.85	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1524	25	103	153.86	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1525	25	117	153.90	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1526	25	117	153.92	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1526A	25	107	154.17	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1526B	25	110	154.21	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1526C	25	115	154.28	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1527	25	0	154.30	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1528	25	0	154.45	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1529	25	91	154.48	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1529A	25	139	154.66	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1529B	35	50	154.74	0.0	0.0	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #1529C	25	199	154.90	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1529D	25	109	154.98	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1530	25	119	155.03	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1531	25	119	155.01	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1531A	25	199	155.07	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1532	25	107	155.50	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1533	25	92	155.50	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1533A	25	115	155.61	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1533B	25	115	155.63	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1533C	25	113	155.77	0.0	0.0	0.0	0.1	0.0	0.0	Pipe bend location
ATWS #1533D	25	99	155.92	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1533E	25	100	155.98	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1534	25	110	156.03	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1535	25	110	156.04	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1536	25	199	156.09	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1536A	25	125	156.18	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1537	25	110	156.27	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1538	25	110	156.28	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1538A	25	200	156.36	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1539	25	105	156.48	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1540	25	200	156.52	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1541	25	681	156.81	0.0	0.0	0.4	0.0	0.0	0.0	Side slope
ATWS #1542	25	681	156.75	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1543	25	103	157.10	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1544	25	105	157.13	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1545	25	90	157.19	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1546	25	92	157.18	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1547	25	99	157.43	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1547A	25	159	157.52	0.0	0.0	0.1	0.0	0.0	0.0	Top of steep slopes
ATWS #1548	25	108	157.60	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1549	25	108	157.61	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1549A	25	219	157.68	0.0	0.0	0.1	0.0	0.0	0.0	Side slope

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1550	25	100	157.72	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1551	25	99	157.80	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1552	50	106	157.93	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1553	25	100	158.03	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1554	25	113	158.14	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1555	25	113	158.15	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1556	25	111	158.29	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1557	25	111	158.28	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1558	25	115	158.40	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1559	25	115	158.39	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1560	25	269	158.57	0.0	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #1561	25	123	158.55	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1562	25	106	158.73	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1563	25	106	158.74	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1565	25	105	158.81	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1566	25	213	158.83	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1567	25	103	158.84	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1568	25	107	158.91	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1569	25	107	158.91	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1571	25	114	159.00	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1572	25	114	158.99	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1574	25	107	159.10	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1575	25	107	159.11	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1577	25	101	159.18	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1578	25	101	159.18	0.0	0.0	0.1	0.0	0.0	0.0	Side slope
ATWS #1580	25	103	159.24	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1581	25	112	159.28	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1582	25	112	159.29	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1584	25	118	159.51	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1585	25	183	159.52	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1586	25	107	159.63	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1587	25	113	159.76	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1588	25	113	159.77	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1590	25	94	159.91	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1595	25	120	160.26	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1596	25	120	160.24	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1597	25	106	160.35	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1598	25	99	160.44	0.0	0.0	0.1	0.0	0.0	0.0	Truck turnaround area
ATWS #1599	54	290	160.54	0.0	0.0	0.4	<0.1	0.0	0.0	Road crossing
ATWS #1599A	75	107	160.55	0.0	0.0	0.2	0.0	0.0	0.0	Road crossing
ATWS #1600	86	186	160.65	0.4	0.0	0.0	0.0	0.0	0.0	Road crossing
ATWS #1601	25	275	160.69	0.2	0.0	0.0	0.0	0.0	0.0	Road crossing
ATWS #1601A	50	165	160.75	0.0	0.0	<0.1	0.1	0.0	0.0	Road crossing
ATWS #1602	200	315	160.80	1.4	0.0	0.0	0.0	0.0	0.0	Road crossing
ATWS #1604	25	220	160.99	0.1	0.0	0.0	0.0	0.0	0.0	Truck turnaround area
ATWS #1605	50	302	161.08	0.3	0.0	0.0	0.0	0.0	0.0	Wetland crossing
ATWS #1606	25	250	161.15	0.0	0.0	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #1607	25	168	161.26	0.0	0.0	0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1608	25	114	161.27	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #1608A	50	371	161.34	0.0	0.0	0.3	0.1	0.0	0.0	Waterbody crossing
ATWS #1609	50	99	161.34	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #1610	50	257	161.40	0.0	<0.1	0.3	<0.1	0.0	0.0	Road crossing
ATWS #1610A	41	50	161.43	0.0	<0.1	0.0	<0.1	0.0	0.0	Road crossing
ATWS #1611	50	149	161.62	0.0	0.0	0.2	0.0	0.0	0.0	Railroad crossing
ATWS #1612	50	192	161.68	0.0	<0.1	0.2	0.0	0.0	0.0	Railroad crossing
ATWS #1613	25	223	161.82	0.0	0.0	0.1	<0.1	0.0	0.0	Side slope

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #1614	25	99	161.82	0.0	0.0	<0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #1615	25	117	161.90	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1616	25	117	161.91	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1617	25	345	162.16	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #1618	25	540	162.12	0.0	0.0	0.3	0.0	0.0	0.0	Side slope
ATWS #1619	238	40	162.33	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #1621	25	120	162.44	0.1	<0.1	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #1622	50	255	162.64	0.0	<0.1	<0.1	0.1	0.0	0.2	Road crossing
ATWS #1622A	50	107	162.69	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #1623	25	162	163.12	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #1624	25	278	163.12	0.0	0.0	0.2	0.0	0.0	0.0	Pipe bend location
ATWS #1625	124	349	163.41	0.0	0.0	0.8	0.4	0.0	0.0	Waterbody crossing
ATWS #1626	47	71	163.47	0.0	0.0	<0.1	0.1	0.0	0.0	Road crossing
ATWS #1627	25	298	163.53	0.0	<0.1	0.2	0.0	0.0	0.0	Road crossing
ATWS #1628	25	233	163.74	0.0	0.0	0.1	0.1	0.0	0.0	Pipe bend location
ATWS #1629	456	248	164.32	0.0	0.0	1.5	1.1	0.0	0.0	Regulator station
ATWS #1631	28	148	164.32	0.0	0.0	<0.1	0.1	0.0	0.0	Truck turnaround area
Subtotal ^a				41.8	5.8	124.4	19.9	<0.1	.2	
MXP-200										
ATWS #SL 1	501	86	0.45	0.0	0.0	1.0	0.0	0.0	0.0	Top of steep slopes
ATWS #SL 2	25	100	0.81	0.1	0.0	0.0	0.0	0.0	0.0	Bottom of steep slopes
ATWS #SL 3	25	100	0.85	0.1	<0.1	0.0	0.0	0.0	0.0	Road crossing
ATWS #SL 3A	25	125	1.09	<0.1	<0.1	<0.1	0.1	0.0	0.0	Waterbody crossing
ATWS #SL 3B	25	125	1.15	0.1	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #SL 5	25	108	1.21	<0.1	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 6	25	113	1.37	0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #SL 8	25	124	1.65	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 9	25	230	1.82	0.0	<0.1	0.1	0.0	0.0	0.0	Top of steep slopes

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces^{a, b}

Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #SL 10	25	108	1.97	0.0	0.1	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 11	25	93	2.21	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #SL 12	25	149	2.26	0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #SL 13	25	101	2.29	0.0	<0.1	0.1	0.0	0.0	0.0	Road crossing
ATWS #SL 14	25	109	2.42	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 16	25	109	2.61	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 17	25	215	2.64	0.0	0.0	<0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 17A	25	100	2.96	0.0	<0.1	0.0	<0.1	0.0	0.0	Truck turnaround area
ATWS #SL 17B	25	100	3.19	0.0	0.0	<0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #SL 18	25	100	3.03	0.0	0.0	<0.1	0.1	0.0	0.0	Road crossing
ATWS #SL 19	25	100	3.07	0.0	<0.1	<0.1	<0.1	0.0	0.0	Road crossing
ATWS #SL 20	25	66	3.23	0.0	0.0	<0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #SL 21	25	272	3.32	0.0	0.0	0.1	<0.1	0.0	0.0	Waterbody crossing
ATWS #SL 22	25	100	3.43	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #SL 22A	50	251	3.47	0.0	0.0	0.3	<0.1	0.0	0.0	Top of steep slopes
ATWS #SL 23	25	66	3.61	0.2	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #SL 24	25	109	3.61	<0.1	<0.1	<0.1	0.0	0.0	0.0	Road crossing
ATWS #SL 25	25	99	3.70	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #SL 26	25	100	4.31	<0.1	0.0	0.0	0.0	0.0	0.0	Pipe bend location
ATWS #SL 28	25	114	4.56	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipe bend location
ATWS #SL 30	25	99	4.84	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #SL 31	25	100	4.88	0.0	0.0	0.1	0.0	0.0	0.0	Waterbody crossing
ATWS #SL 32	25	103	5.19	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 33	25	97	5.24	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 33A	50	100	5.58	0.0	0.0	0.1	<0.1	0.0	0.0	Truck turnaround area
ATWS #SL 33B	25	100	5.64	0.0	0.0	0.1	0.0	0.0	0.0	Pipe bend location
ATWS #SL 33C	25	300	5.68	0.0	0.0	0.2	0.0	0.0	0.0	Top of steep slopes
ATWS #SL 35	50	50	5.89	0.1	0.0	0.0	0.0	0.0	0.0	Waterbody crossing

APPENDIX L
Mountaineer XPress Project
Additional Temporary Workspaces ^{a, b}

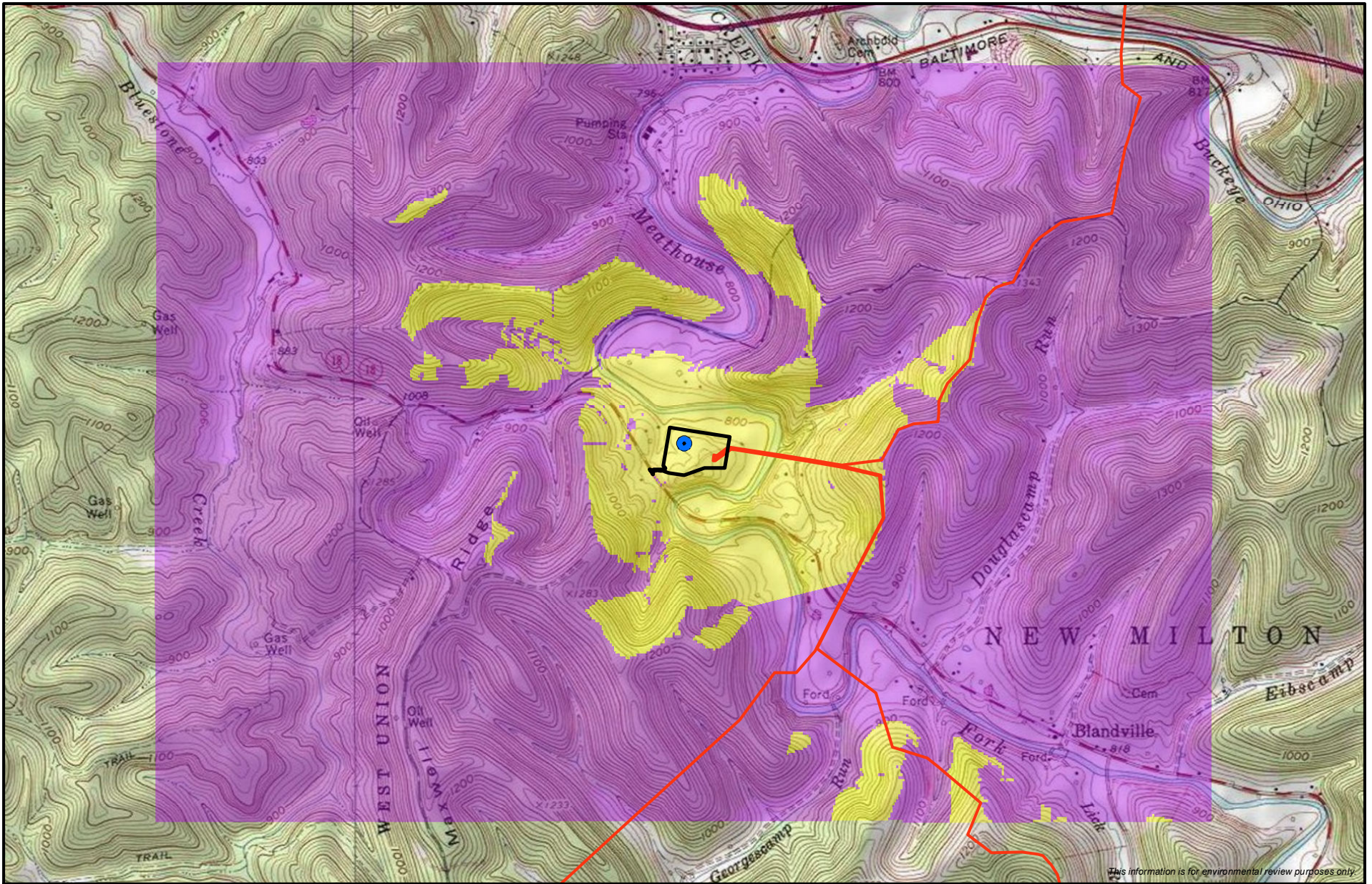
Facility/ATWS ID	Dimensions (feet)		Milepost	Land Use (acres)						Justification
	Length	Width		Agricultural	Developed	Forested	Open Land	Open Water	Wetland	
ATWS #SL 36	25	86	5.89	<0.1	0.0	0.0	0.0	0.0	0.0	Wetland Crossing
Subtotal ^a				0.7	0.2	2.8	0.3	0.0	0.0	
REPLACEMENT PIPELINE FACILITIES										
SM80 Line										
ATWS #SM80 1	25	1,300	21.12 ^c	0.0	0.0	0.7	<0.1	0.0	0.0	Pipeline Replacement
ATWS #SM80 2	66	246	20.95 ^c	0.0	0.0	<0.1	0.4	0.0	0.0	Pipeline Replacement
Subtotal ^a				0.0	0.0	0.7	0.4	0.0	0.0	
SM80 Loop										
ATWS #SM80 3	25	1,270	20.66 ^c	0.0	0.0	0.6	0.1	0.0	0.0	Pipeline Replacement
ATWS #SM80 4	25	81	20.59 ^c	0.0	0.0	<0.1	<0.1	0.0	0.0	Pipeline Replacement
Subtotal ^a				0.0	0.0	0.7	0.1	0.0	0.0	
NEW ABOVEGROUND FACILITIES										
Ripley Regulator Station										
ATWS #R 1	306	13	0.03	0.0	0.1	<0.1	<0.1	<0.1	0.0	Regulator station
Subtotal ^a				0.0	0.1	<0.1	<0.1	<0.1	0.0	
TOTAL ^a				42.5	6.1	128.6	20.6	<0.1	0.2	

^a The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the exact sum of the addends in all cases.



^b Land uses were only marked as having been changed (red text) if the change in acreage from the Application filing was at least 0.1 acre.

^c Mileposts for pipeline replacement segments are associated with the respective existing pipeline system.

APPENDIX M-1
Viewshed Analysis for New Compressor Stations Associated with the
Mountaineer XPress Project



This information is for environmental review purposes only.

	Compressor Station	Viewshed
	Proposed Centerline	 Not Visible
	Compressor Station Permanent Boundary	 Visible

0 1,000 2,000 Feet

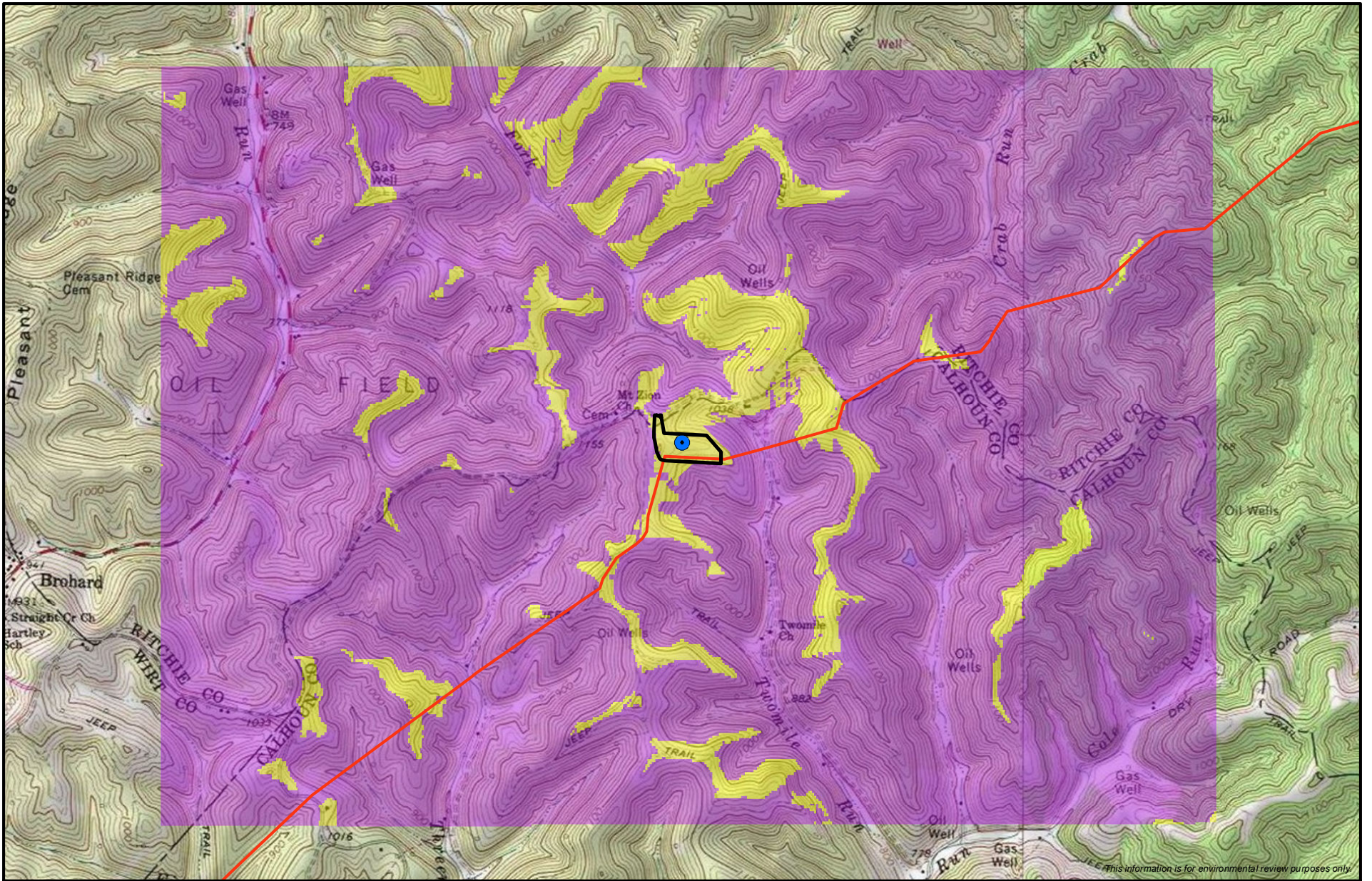
Sheet 1 of 3

Viewshed Analysis
Mountaineer XPress Project
 Columbia Gas Transmission
 Sherwood Compressor Station

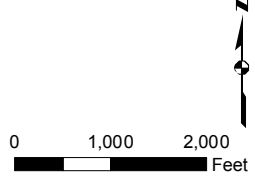


an ERM Group company

DRAWN BY: JPB



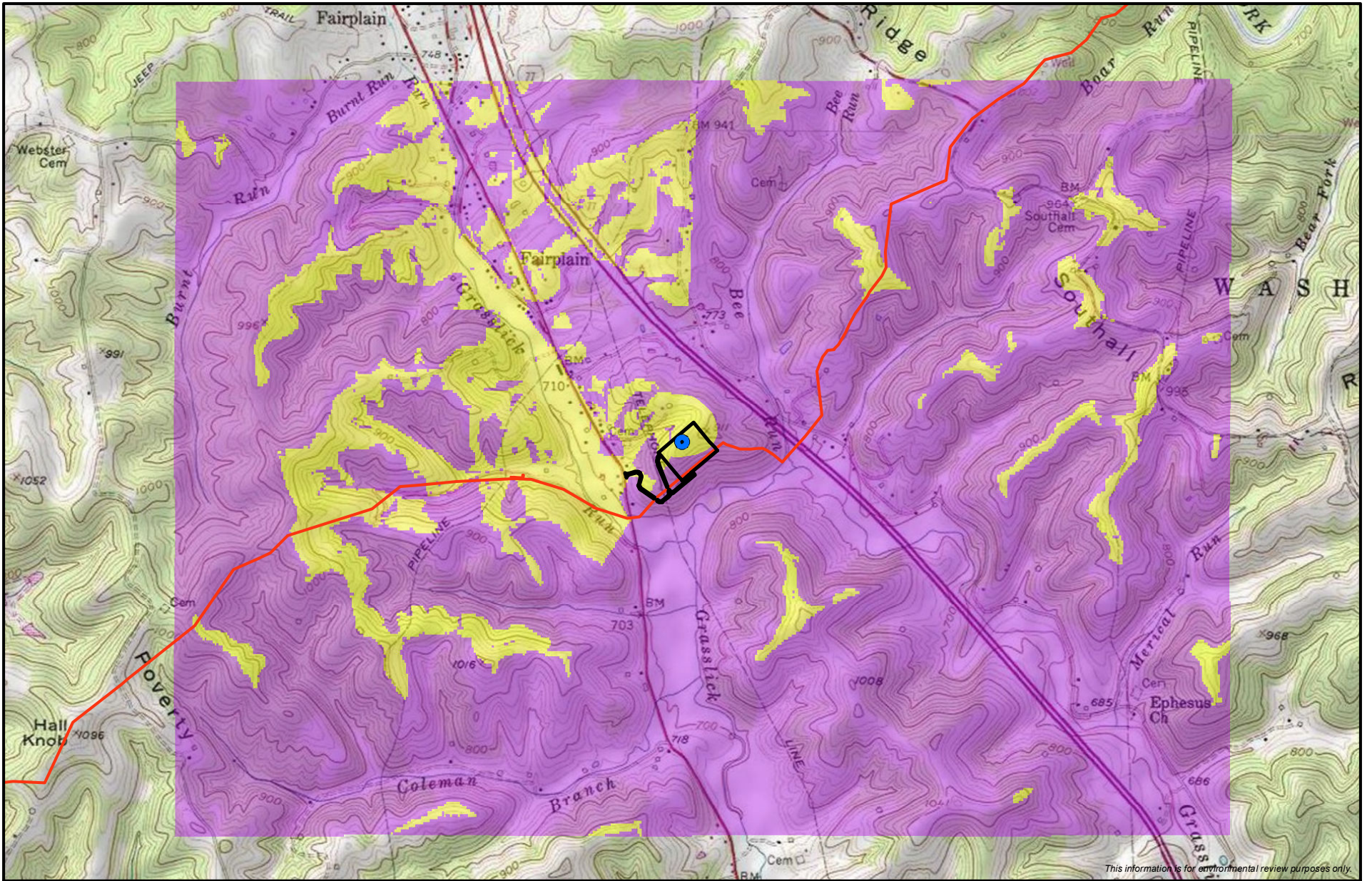
- Compressor Station
- Proposed Centerline
- Compressor Station Permanent Boundary
- Viewshed**
- Not Visible
- Visible





Sheet 2 of 3

Viewshed Analysis
Mountaineer Xpress Project
 Columbia Gas Transmission
 White Oak Compressor Station





This information is for environmental review purposes only.

 Compressor Station	Viewshed
 Proposed Centerline	 Not Visible
 Compressor Station Permanent Boundary	 Visible

0 1,000 2,000 Feet

Sheet 3 of 3

Viewshed Analysis
Mountaineer XPress Project
 Columbia Gas Transmission
 Mount Olive Compressor Station



an ERM Group company

DRAWN BY: JPB

APPENDIX M-2
Viewshed Analysis for Facilities Associated with the Gulf XPress Project

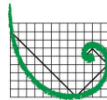


COLUMBIA GULF TRANSMISSION, LLC

**Gulf XPress Project
Docket No. CP16-361-000**

**VISUAL IMPACT ASSESSMENT
FOR THE
MOREHEAD, PAINT LICK, AND CANE RIDGE COMPRESSOR STATIONS**

Prepared by



ERM

November 2016

TABLE OF CONTENTS

1.0 INTRODUCTION..... 1

 1.1 METHODOLOGY..... 1

 1.2 MOREHEAD COMPRESSOR STATION 5

 1.2.1 Mitigation..... 9

 1.3 PAINT LICK COMPRESSOR STATION 10

 1.3.1 Mitigation..... 15

 1.4 CANE RIDGE COMPRESSOR STATION..... 16

 1.4.1 Mitigation..... 21

2.0 REFERENCES.....23

LIST OF TABLES

Table 1 Morehead Compressor Station Potentially Sensitive Features 3

Table 2 Paint Lick Compressor Station Potentially Sensitive Features..... 4

Table 3 Cane Ridge Compressor Station Potentially Sensitive Features 4

Table 4 Cane Ridge Compressor Station Photographs of Current Conditions20

LIST OF FIGURES

Figure 1 Visibility Analysis Overview Morehead Compressor Station 7

Figure 2 Morehead Compressor Station 8

Figure 3 Morehead Compressor Station Site from Stegall Cemetery Road, facing northeast..... 9

Figure 4 Existing Landscape from Proposed Compressor Station site, facing southwest .11

Figure 5 Water Tower about 0.6 mile east of Proposed Paint Lick Compressor Station. ...12

Figure 6 Visibility Analysis Overview Paint Lick Compressor Station. 13

Figure 7 Paint Lick Compressor Station. 14

Figure 8 Visibility Analysis Overview Cane Ridge Compressor Station. 17

Figure 9 Cane Ridge Compressor Station..... 18

LIST OF APPENDICES

Appendix 17-1 Landscape Plans

Appendix 17-2 Landscape Plans (Contains CEII – Filed Under Separate Cover)

Appendix 17-3 Lighting Plans (Contains CEII – Filed Under Separate Cover)

1.0 INTRODUCTION

Columbia Gulf Transmission, LLC (Columbia Gulf), conducted a visual impact assessment to describe conditions and potential visual impacts on sensitive features near the Morehead, Paint Lick, and Cane Ridge Compressor Stations. Residential and recreational land use areas are considered to be sensitive locations because the scenic values of a landscape may be used as part of a leisure experience for varying durations. Transportation corridors¹, agricultural fields, and commercial areas are not considered sensitive areas as they are not typically associated with leisure use. This assessment uses topographic data in a Geographic Information System (GIS) to determine areas that would be visible from each compressor station. This analysis assumes clear weather and no intervening vegetation or structures (i.e., a “cleared ground surface” analysis) and therefore, represents the maximum potentially visible area of the Project or a “worst-case” scenario. The interaction between the proposed Gulf XPress Project (Project) and visually sensitive locations will help define the basis for assessing impacts and developing mitigation strategies.

1.1 METHODOLOGY

The Morehead, Paint Lick, and Cane Ridge Compressor Stations are located on private lands; therefore, they are not subject to federal visual resource management plans and standards. The visual impact assessment methodology applied in this analysis is based on the general concepts found in the United States Forest Service (USFS) Scenery Management System (SMS) (U.S. Department of Agriculture [USDA], 1995) and is described in the *Agriculture Handbook 701, Landscape Aesthetics - A Handbook for Scenery Management* and the National Park Service (NPS) Guide to Evaluating Visual Impact Assessments for Renewable Energy Projects (NPS, 2014).

The SMS establishes a method for measuring the scenic value of lands in National Forests, according to the opinions of various types of viewers and takes into account a wide variety of existing characteristics, such as (but not limited to) slope; vegetative cover type, pattern, height and distribution; soils; geology; and the “edge effect” where different landscape elements meet.

The USFS defines distance zones as the generalized groupings used to describe how viewers see the landscape. The SMS identifies four distance zones:

- immediate foreground (0 to 300 feet);
- foreground (300 feet to 0.5 mile);
- middleground (0.5 mile to 4 miles); and
- background (4 miles to the horizon).

Immediate foreground and foreground views tend to highlight details ranging from individual leaves to individual trees. The middleground “is usually the predominant distance zone at which National Forest landscapes are seen, except for regions lands or tall, dense vegetation.” In the background, “texture has disappeared and color has flattened, but large patterns of vegetation or rock are still distinguishable” (USDA, 1995 4-12). Foreground and the immediate foreground are usually the most visually sensitive areas. This assessment considers views within a 2-mile-wide buffer of each compressor station to capture the area in which visual impacts would be the greatest (Figures 1, 6, and 7).

¹ The compressor stations are not located along scenic byways.

Visual impacts are defined by the NPS as “changes to the scenic attributes of the landscape brought about by the introduction of visual contrasts from a proposed project, and associated changes in the human visual experience of the landscape” (NPS, 2014:17). They describe the change to the visual qualities of the landscape resulting from the introduction of visual contrasts as well as the human response to that change (NPS, 2014). Specifically for the compressor stations, the visual contrast created by the exhaust stack extending above the tree line could give viewers the perception of a natural landscape being interrupted by manmade elements.

The visual analysis is based on topography from 10-meter Digital Elevation Model (DEM) data available from the United States Geological Survey (USGS). The analysis was performed using the Viewshed Analysis tool in ArcGIS (specifically ArcMap 10.3.1), the industry standard for GIS mapping and analysis. The GIS-based analysis identified areas where the top of the exhaust stack (the tallest component of each compressor station) at the Morehead, Paint Lick, and Cane Ridge Compressor Stations could potentially be visible. The other components of the compressor stations are not necessarily insignificant, but have less significant visual effect due to a lack vertical scale. Tables 1 through 3 provide a list of potentially sensitive features identified as a result of the GIS analysis. These features are depicted on Figures 2, 7, and 9.

The visual impact area was further refined through identification of surrounding vegetation and structures that potentially obscure views and restrict views from sensitive locations. Aerial photography of current conditions (2015) was examined to refine the visual analysis. Additionally, as requested in the Federal Energy Regulatory Commission’s Data Request dated August 24, 2016, the views of the Cane Ridge Compressor Station include photographs taken from public locations within nearby communities of Mill Run; the residences along Hidden Creek Drive; Mill Creek Park and the Mill Creek Greenway; and Stanford Village. The location of each photograph location was recorded by a global position system (GPS) unit. These photographs are included in Attachment 17-1 along with an overview map depicting the locations from which the photographs were taken.

Columbia Gulf Transmission, LLC – Gulf XPress Project
Visual Impact Assessment

TABLE 1

**Gulf XPress Project
Morehead Compressor Station
Potentially Sensitive Features**

ID	Description	Latitude (decimal degrees)	Longitude (decimal degrees)	Distance from Project (miles)	Distance Zone
Business 1	Business			218 feet	Immediate Foreground
Business 2	Business			248 feet	Immediate Foreground
1	Residence	38.27	-83.43	1.0	Middleground
2	Residence	38.26	-83.44	0.7	Middleground
3	Residence	38.26	-83.44	0.6	Middleground
4	Residence	38.26	-83.44	0.6	Middleground
5	Residence	38.26	-83.44	0.6	Foreground
6	Residence	38.26	-83.44	0.5	Foreground
7	Residence	38.26	-83.44	0.4	Foreground
8	Residence	38.26	-83.44	0.4	Foreground
9	Residence	38.26	-83.44	0.4	Middleground
10	Residence	38.26	-83.44	0.5	Foreground
11	Residence	38.26	-83.44	0.5	Foreground
12	Residence	38.25	-83.44	0.4	Foreground
13	Residence	38.25	-83.44	0.3	Foreground
14	Residence	38.25	-83.44	0.3	Foreground
15	Residence	38.25	-83.44	0.2	Foreground
16	Residence	38.25	-83.44	0.2	Foreground
17	Residence	38.26	-83.44	0.5	Foreground
20	Residence	38.25	-83.44	0.2	Foreground
21	Residence	38.25	-83.44	0.1	Foreground
22	Residence	38.25	-83.44	0.1	Foreground
23	Residence	38.25	-83.44	0.2	Foreground
24	Residence	38.24	-83.44	0.3	Foreground
25	Residence	38.24	-83.45	0.6	Middleground
26	Residence	38.24	-83.45	0.8	Middleground
27	Residence	38.24	-83.44	0.5	Middleground
28	Residence	38.24	-83.45	0.7	Middleground
29	Residence	38.24	-83.45	0.7	Middleground
30	Business	38.24	-83.45	0.8	Middleground
31	Residence	38.24	-83.45	0.8	Middleground
32	Residence	38.24	-83.45	0.8	Middleground
33	Residence	38.24	-83.45	0.8	Middleground
34	Residence	38.24	-83.45	0.8	Middleground
35	Residence	38.24	-83.45	0.8	Middleground
36	Residence	38.24	-83.45	0.8	Middleground
37	Residence	38.24	-83.45	0.8	Middleground
38	Residence	38.24	-83.45	0.9	Middleground

TABLE 2					
Gulf XPress Project Paint Lick Compressor Station Potentially Sensitive Features					
ID	Description	Latitude (decimal degrees)	Longitude (decimal degrees)	Distance from Project (miles)	Distance Zone
NSA 1 ^a	Residence	37.58	-84.46	0.1	Foreground
NSA 2 ^a	Residence	37.58	-84.46	0.2	Foreground
NSA 4 ^a	Residence	37.58	-84.45	0.4	Foreground
NSA 5 ^a	Residence	37.58	-84.47	0.4	Foreground
1	Residence	37.58	-84.46	0.1	Foreground
2	Residence	37.58	-84.45	0.6	Middleground
3	Residence	37.59	-84.45	0.8	Middleground
4	Residence	37.58	-84.44	0.9	Middleground
5	Residence	37.59	-84.44	1.0	Middleground
6	Residence	37.59	-84.46	0.7	Middleground
7	Residence	37.59	-84.46	0.8	Middleground
8	Residence	37.57	-84.46	0.9	Middleground
9	Residence	37.59	-84.47	0.7	Middleground

Notes

^a Resource Report 9, Appendix 9D-Noise Sensitive Areas identified the ambient sound survey for Paint Lick Compressor Station (April 2016).

TABLE 3					
Gulf XPress Project Cane Ridge Compressor Station Potentially Sensitive Features					
ID	Description	Latitude (decimal degrees)	Longitude (decimal degrees)	Distance from Project (miles)	Distance Zone
NSA 1	Residence, Closest house in Delvin Downs	36.03	-86.69	255 feet	Immediate Foreground
NSA 2	Residence, Closest house in Stanford Village	36.02	-86.69	135 feet	Immediate Foreground
NSA 3	Residence	36.03	-86.68	0.3	Foreground
NSA 4	Residence	36.03	-86.69	0.2	Foreground
1	Residence	36.03	-86.68	0.3	Foreground
2	Residence	36.03	-86.70	0.3	Foreground
3	Residence, Closest house on Hidden Creek Drive	36.02	-86.68	0.3	Foreground
4	Residence	36.01	-86.68	0.6	Middleground
5	Residence, Closest house in Mill Run Neighborhood	36.02	-86.69	0.3	Foreground

Notes

^a Resource Report 9, Appendix 9D-Noise Sensitive Areas identified in the ambient sound survey for Cane Ridge Compressor Station (April 2016).

1.2 MOREHEAD COMPRESSOR STATION

A visual assessment was conducted to determine if the Morehead Compressor Station would have a visual effect on the nearby residences, the Daniel Boone National Forest (DBNF), and the Sheltoewe Trace National Recreation Trail within the DBNF. Sheltoewe Trace National Recreation Trail is an approximately 290-mile-long trail that interconnects with many other trails. The trail traverses narrow ridges and deep ravines past historic homesteads, old logging tracts, and oil and gas wells (USDA, 2016).

The Morehead Compressor Station includes a paved access road, control building (approximately 26 feet tall), auxiliary building (approximately 24 feet tall), and compressor building (approximately 48 feet tall) with an exhaust stack (an additional 9 feet). The total combined height of the compressor building and stack would be approximately 57 feet above the ground surface consisting of 10 foot by 10 foot square ducting. Security chain link fencing will be installed around the perimeter of the permanent facility. The security fencing would be 8 feet in height with three strand barb wire extending an additional 1 foot above the top rail of the chain link fence.

Generally, the lighting system can be classified into the following categories:

- Compressor station operations
- Security; and
- Emergency

The Morehead Compressor station is situated within the Appalachian Plateaus (Kanawha) physiographic region which is characterized by relatively flat-lying rock beds with elevation ranging from 500 feet to 1,300 feet above mean sea level (AMSL) (USDA, 2006). Most of the region consists of farms, farm woodlots, and state and national forests. The proposed site is located at an elevation of 756 feet AMSL in relatively flat agricultural farmland. The proposed site is situated in a narrow valley surrounded by dissected uplands reaching approximately 1,260 feet AMSL on either side of the valley. State Route 377 (Cranston Road) is adjacent to the site along the western property boundary and Interstate 64 is to the east. An overhead utility distribution line is aligned along the western property boundary. DeBord Branch flows from west to east through the northern portion of the site into North Fork Triplett Creek, which is located east of the site. The area is surrounded by a combination of agricultural fields, public and private forest lands, and residential areas. The property is bordered to the north and south by private woodlots, which would provide natural visual screening. The DBNF is heavily forested and located east of Interstate 64 and west of Cranston Road. The Sheltoewe Trace National Recreation Trail is located within the DBNF approximately 1.5 miles east of the compressor station at an elevation of approximately 1,000 feet AMSL.

The results of the GIS analysis are depicted in Figure 1 and suggest that the Morehead Compressor Station would primarily be visible in the valley from the northeast and the southwest. Figure 2 identifies the residences and other areas that may have a view of the compressor station. The proposed compressor station may be visible to two businesses (a gas station and an unknown business) within the immediate foreground distance zone, 16 residences within the foreground distance zone, and 19 residences within the middleground distance zone.

There is no visual barrier between the compressor station and the businesses within the immediate foreground; however, these are not considered to be sensitive viewpoints. The

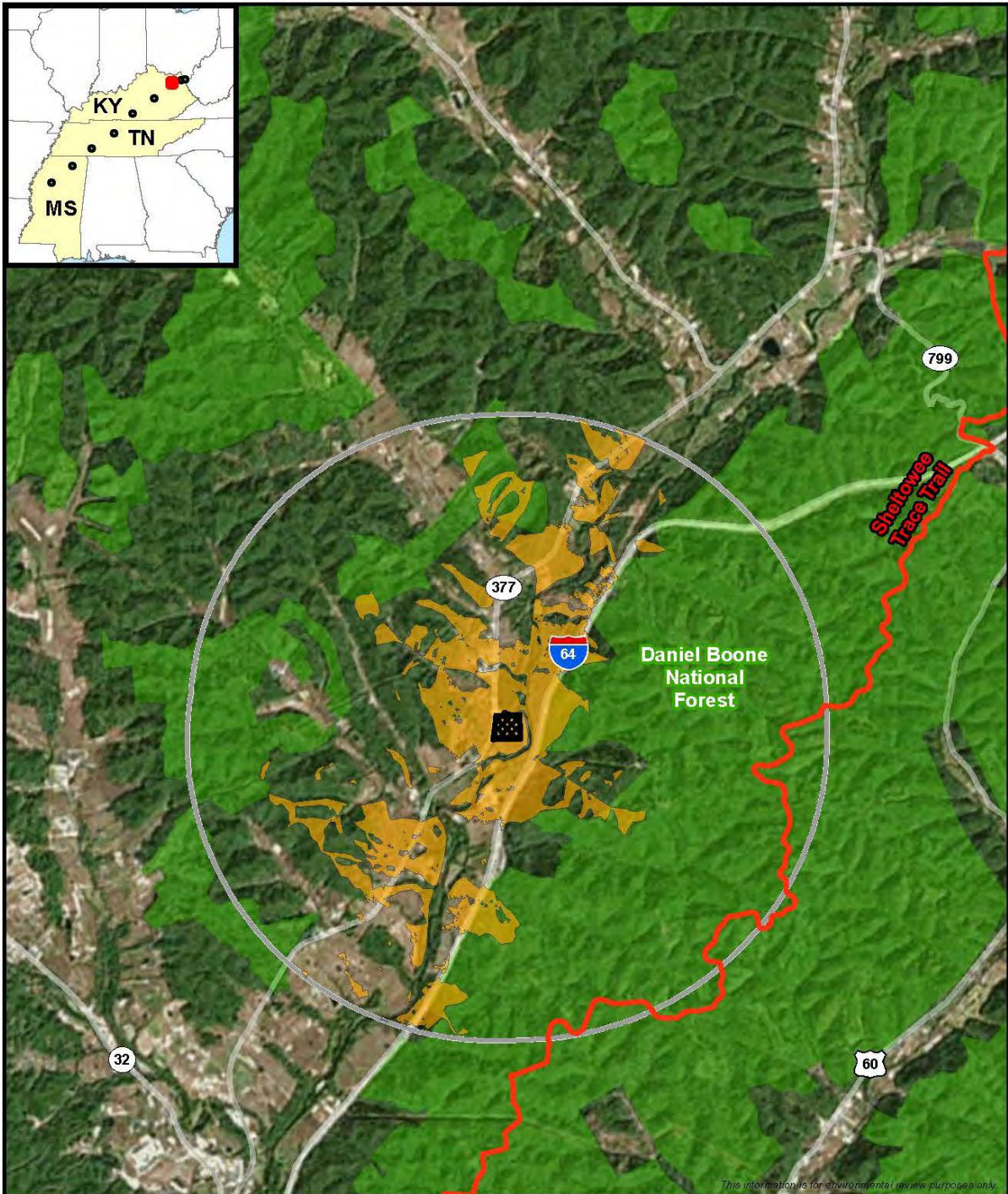
compressor station will not be visible to hikers on the Sheltopee Trace Trail due to the topographic relief and the screening effect of existing forested land in the DBNF.

The visual contrast created by the compressor station would be most evident from the three residences located southwest of the compressor station within the foreground distance zone (Figure 2: points 20, 21, and 22). A representative photograph of this view is depicted in Figure 3.

The compressor station would introduce new elements into the existing landscape that would alter the form, line, and color of the existing landscape. However, the remainder of the residences in the foreground distance zone with the potential to view the compressor station are at the same approximate elevation. They are not within a direct line of site of the compressor station due to intervening trees in windbreaks or forested areas. While portions of the compressor stations buildings may be visible above the trees, through gaps in vegetation, or during winter months when the deciduous trees have shed their leaves, the most visible part of the Morehead Compressor Station would be the exhaust stack.

The residences in the middleground distance zone with the potential to view the compressor station are not within a direct line of site of the compressor station. These residences range in distance between 0.7 and 0.9 mile from the compressor station site. Residences near the North Fork Triplett Creek to the southwest and residences along Democrat Road to the northwest would not see the compressor station due to intervening trees in windbreaks or forested areas, and at a distance of 0.5 mile or greater the compressor station, particularly the stack, would not dominate the landscape.

The existing source of nighttime lighting would be the gas station (Business 2 on Figure 2) on the west side of Cranston Road. There are no street lights along Cranston Road, but other sources of light would be from residences. The Morehead Compressor Station would be lit at night for Project and public safety. Night lighting would increase the visibility of the compressor station from sensitive views.



This information is for environmental review purposes only.

-  Compressor Station
-  Visible
-  2-mile Radius
-  U.S. Forest Service Land

0 2,500 5,000
 Feet



Figure 1
 Visibility Analysis Overview
 Morehead Compressor Station
 Rowan County, Kentucky
 Gulf XPress Project



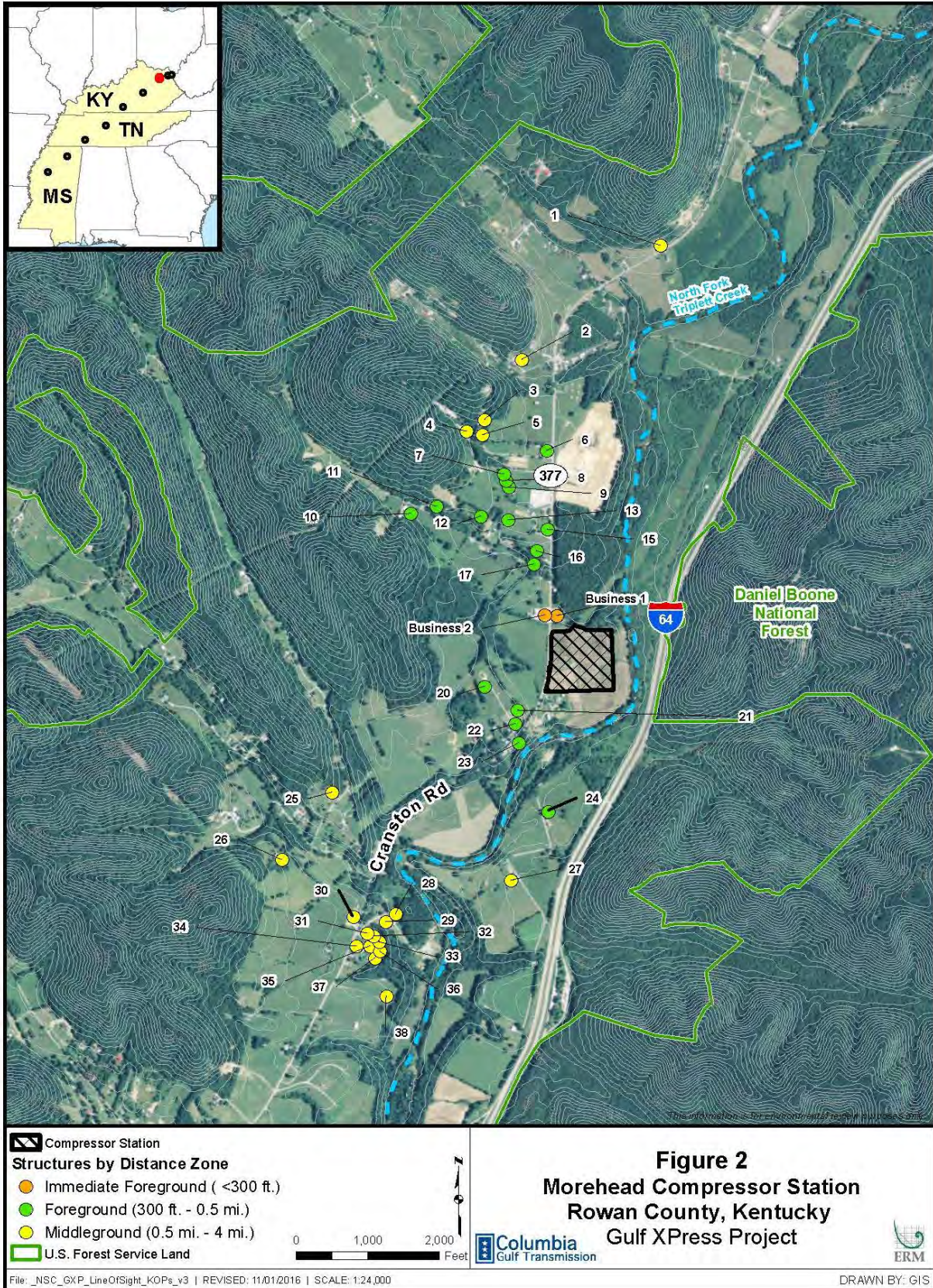




Figure 3. Morehead Compressor Station Site from Stegall Cemetery Road, facing northeast.

1.2.1 Mitigation

1.2.1.1 Facility Color

The exterior color of the proposed buildings at Morehead Compressor Station is CS-200, or Columbia Green. The majority of the equipment and piping will be the same Columbia Green color. The exhaust stack of the turbine will be a shade of gray per the manufacturer's Federal Standard Color (<http://www.federalstandardcolor.com/>).

The color of the stack will consist of non-reflective neutral gray. The stack will be viewed against the background sky and gray is conducive to minimizing the visual contrast with the background sky. When viewed against the sky, the color contrasts will vary depending on the weather conditions and distance of the viewer. For instance, the stack located in the middleground could be visible on a sunny day, but on a cloudy day the color contrast will be less. Contrast with vegetation is also an important element. Typical vegetation colors include shades of green, brown, and tan. Similar to the contrast with the background sky, the color contrast will vary depending on distance and weather conditions and will generally be more pronounced the closer the viewer is to the compressor station.

1.2.1.2 Landscape Plan

The most visible portion of the facility is along Cranston Road to the north and south of the Morehead Compressor Station. Landscaping will be established to screen the length of the security fencing along Cranston Road between the north and south property line. A combination of native evergreen shrubs and trees will be planted along the west side property

boundary that will extend to the southwestern property corner to provide visual relief of the Morehead Compressor Station. The shrubs and trees will be planted approximately 15 feet apart in the area described above, with exception of the pipeline right-of-way area, as presented on Drawing FD-GC21-150, titled “Morehead Landscape Plan” in Appendix 17-2 and marked as CEII.

1.2.1.3 Lighting Plan

The objective of this plan is to provide adequate lighting at the compressor station, to comply with applicable regulatory requirements, and to minimize light pollution and trespass affecting the surrounding environment.

Minimum illumination levels were determined in accordance with current industry standards. Outdoor lighting may consist of general illumination (area lighting) and local illumination (task lighting) in order to provide sufficient lighting for the necessary operating and maintenance activities performed at the site.

The outdoor lighting systems are designed to ensure that minimal stray light will leave the site, and that glare is not encountered by personnel performing normal operations activities. At the compressor station facilities, the yard lighting will be directionally aimed inward to the center of the facility. The illumination levels at the property line are significantly less than 0.5 footcandles (fc). The yard lights will be automated so that the station lighting will only illuminate if maintenance work is being performed after hours or in the event of certain unanticipated conditions. In addition, dark-sky compliant lighting will be installed to reduce light pollution and trespass when illuminated. The lighting plan is presented on Drawing FD-GC21-SK01-P3 in Appendix 17-3 and marked as Critical Energy Infrastructure (CEII).

Generally, emergency lighting will provide for fit-for-purpose safety needs resulting from a loss of power to the facility due to weather events or interrupted service from the electricity provider.

1.3 PAINT LICK COMPRESSOR STATION

A visual assessment was conducted to determine if the Paint Lick Compressor Station would have a visual impact on potential sensitive views. The Paint Lick Compressor Station includes a paved access road, the control building (approximately 27 feet tall), an auxiliary building (approximately 25 feet tall), and the compressor building (approximately 48 feet tall) with an exhaust stack (an additional 9 feet). The total combined height of the compressor building and stack would be approximately 57 feet above the ground surface consisting of 10 foot by 10 foot square ducting. Security chain link fencing will be installed around the perimeter of the permanent facility. The security fencing would be 8 feet in height with three strand barb wire extending an additional 1 foot above the top rail of the chain link fence. Generally, the lighting system can be classified into the following categories:

- Compressor station operations
- Security; and
- Emergency

The Paint Lick Compressor station is situated within the Interior Low Plateaus physiographic region which is characterized by gently rolling hills and rich, fertile soils (USDA, 2006). Most of the region consists of farms and pasture interspersed with mixed hardwood forest. Elevation ranges from about 660 feet to 1,100 feet. The proposed site is at an elevation of 995 feet AMSL within an area of low rolling hills. The site is located away from the town center of Lancaster, which lies about 6.8 miles to the west, and population within the area is sparse. Medium to large farming operations with scattered residences surround the site. Kentucky Route 52 borders the property to the north and an overhead utility distribution line is aligned along the north side of the highway. A windbreak along the western edge of the compressor station property creates a visual screen that helps minimize the visibility of the compressor station to the west (Figure 4). The photograph in Figure 5 was taken from the southwestern corner of the proposed facility fence line toward a water tower located about 0.6 mile east. Without access to the property, the water tower height was estimated from the highway to be about 80 feet. Only the top of the water tower is visible due to the undulating topography and natural vegetative screening.



Figure 4. Existing Landscape from Proposed Compressor Station site, facing southwest

The results of the GIS analysis are depicted in Figure 6 and suggest that the Paint Lick Station would be visible in patches in all directions around the compressor station site. Figure 7 identifies the residences and other areas that may have a view of the compressor station. No sensitive viewpoints are located in the immediate foreground. Five residences are within the foreground distance zone and eight residences are within the middleground distance zone. The Paint Lick Elementary School and the Fariview Christian Church are west of the Paint Lick Compressor Station along Kentucky Route 52, but would have no views of the facility.

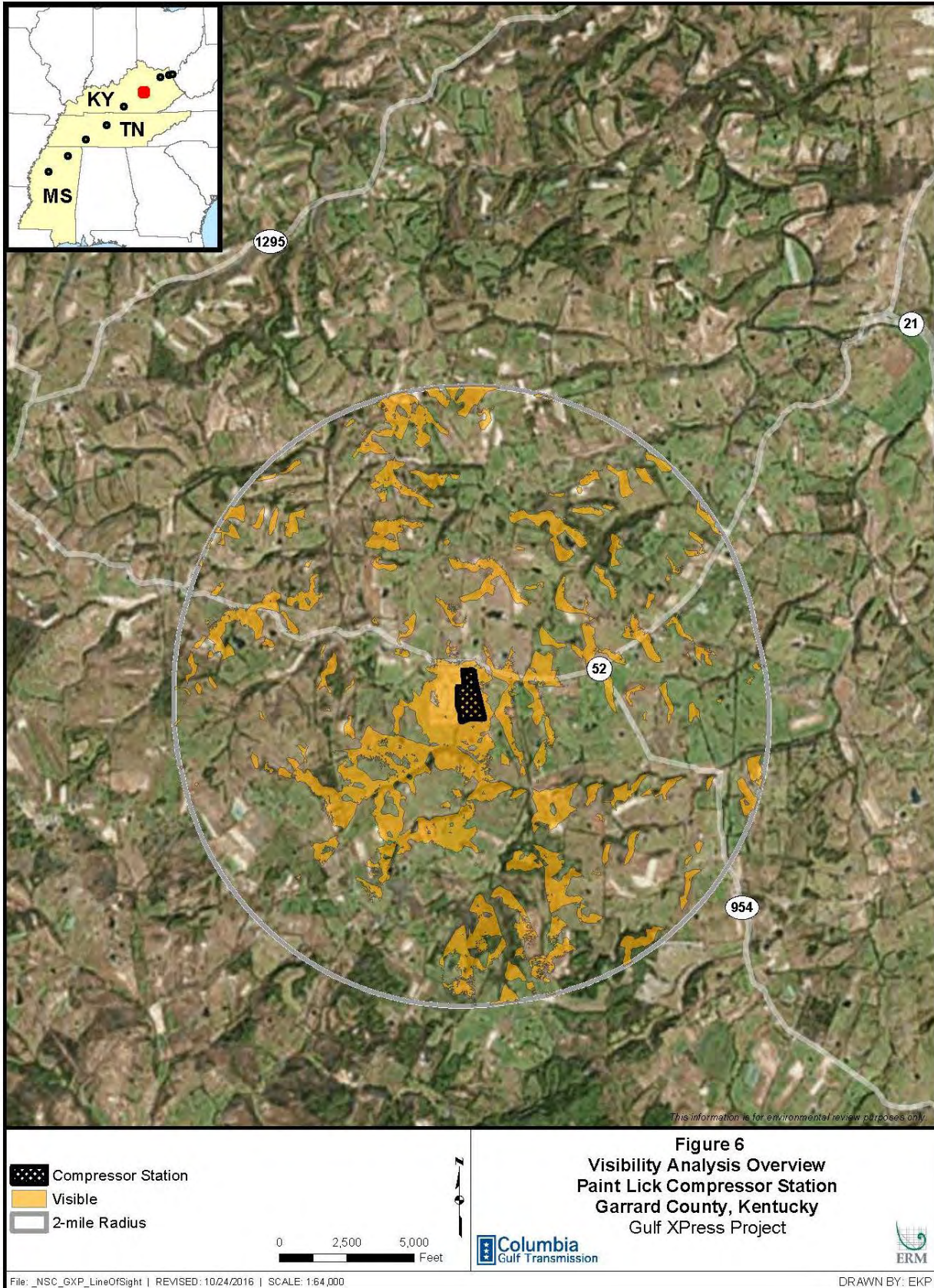


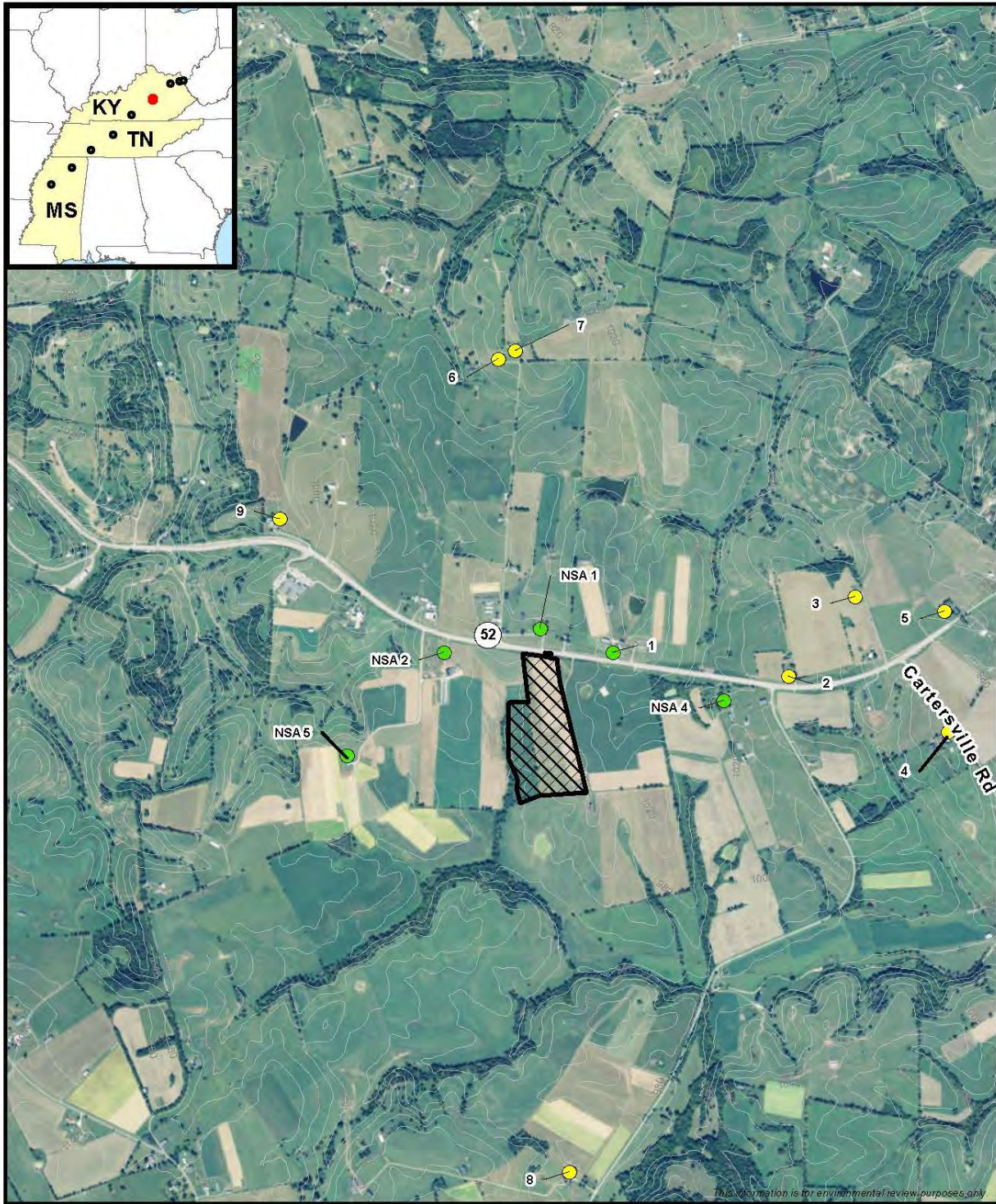
Figure 5. Water Tower about 0.6 mile east of Proposed Paint Lick Compressor Station.

Three residences within the foreground distance zone would have a direct view of the compressor station (Figure 7, points NSA1, NSA2, and 1). The compressor station would introduce new elements into the existing landscape that would alter the form, line, and color of the existing landscape for these direct viewers. However, for these viewers the geometric forms of the buildings would be similar to those of the surrounding farming operations. The remaining residences in the foreground may have views blocked by trees that are part of windbreaks located to the east and west of the proposed compressor station. While portions of the compressor stations buildings may be visible above the trees, through gaps in vegetation, or during winter months when the deciduous trees have shed their leaves, the most visible part of the Paint Lick Compressor Station would be the exhaust stack (similar to the existing water tower).

A small number of potential viewers are in the middleground distance zone. However, the residences in the middleground distance zone with the potential to view the compressor station are not within a direct line of site of the compressor station due to intervening trees in windbreaks or forested areas, although at a distance of 0.5 mile or greater the compressor station would not dominate the landscape.

There are no street lights along Kentucky Route 52, but other sources of nighttime lighting would be from residences. The Paint Lick Compressor Station would be lit at night for Project and public safety. Night lighting would increase the visibility of the compressor station from sensitive views.





Compressor Station
Structures by Distance Zone
 Foreground (300 ft. - 0.5 mi.)
 Middleground (0.5 mi. - 4 mi.)

0 1,000 2,000 Feet

Figure 7
Paint Lick Compressor Station
Garrard County, Kentucky
Gulf XPress Project

File: _NSC_GXP_LineOfSight_KOPs_v3 | REVISED: 11/01/2016 | SCALE: 1:24,000

DRAWN BY: GIS

1.3.1 Mitigation

1.3.1.1 Facility Color

The exterior color of the proposed buildings at Paint Lick Compressor Station is CS-200, or Columbia Green. The majority of the equipment and piping will be the same Columbia Green color. The exhaust stack of the turbine will be a shade of gray per the manufacturer's Federal Standard Color (<http://www.federalstandardcolor.com/>).

The color of the stack will consist of non-reflective neutral gray. The stack will be viewed against the background sky and gray is conducive to minimizing the visual contrast with the background sky. When viewed against the sky, the color contrasts will vary depending on the weather conditions and distance of the viewer. For instance, the stack located in the middleground could be visible on a sunny day, but on a cloudy day the color contrast will be less. Contrast with vegetation is also an important element. Typical vegetation colors include shades of green, brown, and tan. Similar to the contrast with the background sky, the color contrast will vary depending on distance and weather conditions and will generally be more pronounced the closer the viewer is to the compressor station.

1.3.1.2 Landscape Plan

The most visible portion of the facility is immediately north and northwest of the Paint Lick Compressor Station across Kentucky Route 52. Landscaping will be established parallel to and north of Columbia Gulf's existing pipelines at a bearing of 35 degrees (reciprocal bearing of 215 degrees) across the width of the property. A combination of native evergreen shrubs and trees will be planted along the existing northern ridge to provide visual relief of the Paint Lick Compressor Station. The shrubs and trees will be planted approximately 15 feet apart in the area described above, with exception of the pipeline right-of-way area, as presented on Drawing FD-GC22-150, titled "Paint Lick Landscape Plan" included in Appendix 17-2 and marked as CEII.

1.3.1.3 Lighting Plan

The objective of this plan is to provide adequate lighting at the compressor station, to comply with applicable regulatory requirements, while minimizing light pollution and trespass affecting the surrounding environment.

Minimum illumination levels were determined in accordance with current industry standards. Outdoor lighting may consist of general illumination (area lighting) and local illumination (task lighting) in order to provide sufficient lighting for the necessary operating and maintenance activities performed at the site.

The outdoor lighting systems are designed to ensure that minimal stray light will leave the site, and that glare is not encountered by personnel performing normal operations activities. At the compressor station facilities, the yard lighting will be directionally aimed inward to the center of the facility. The illumination levels at the property line are significantly less than 0.5 fc. The yard lights will be automated so that the station lighting will only illuminate if maintenance work is being performed after hours or in the event of certain unanticipated conditions. In addition, dark-sky compliant lighting will be installed to reduce light pollution and trespass when illuminated. The lighting plan is presented on Drawing FD-GC22-SK01-P3 in Appendix 17-3 and marked as CEII.

Generally, emergency lighting will provide for fit-for-purpose safety needs resulting from a loss of power to the facility due to weather events or interrupted service from the electricity provider.

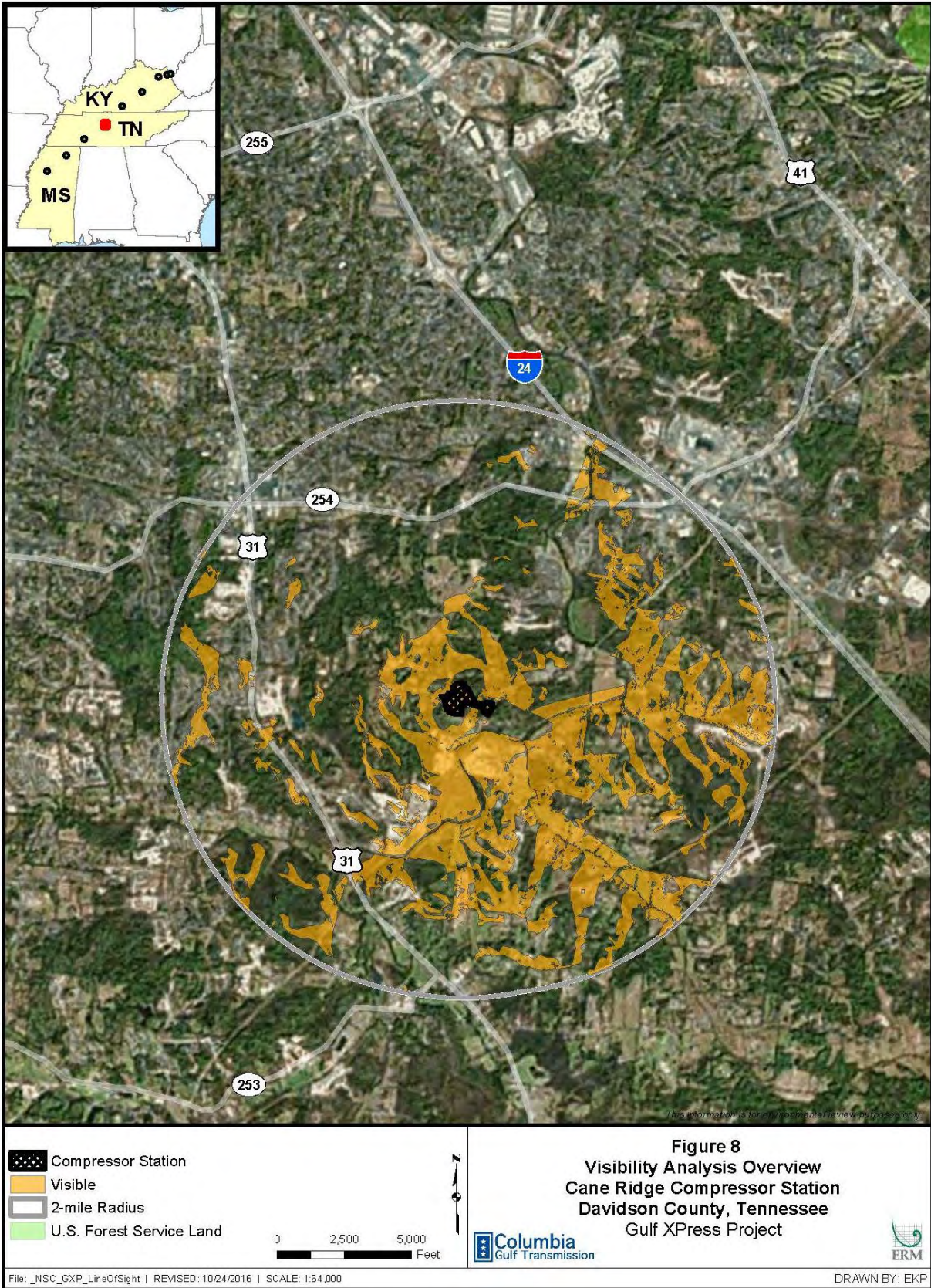
1.4 CANE RIDGE COMPRESSOR STATION

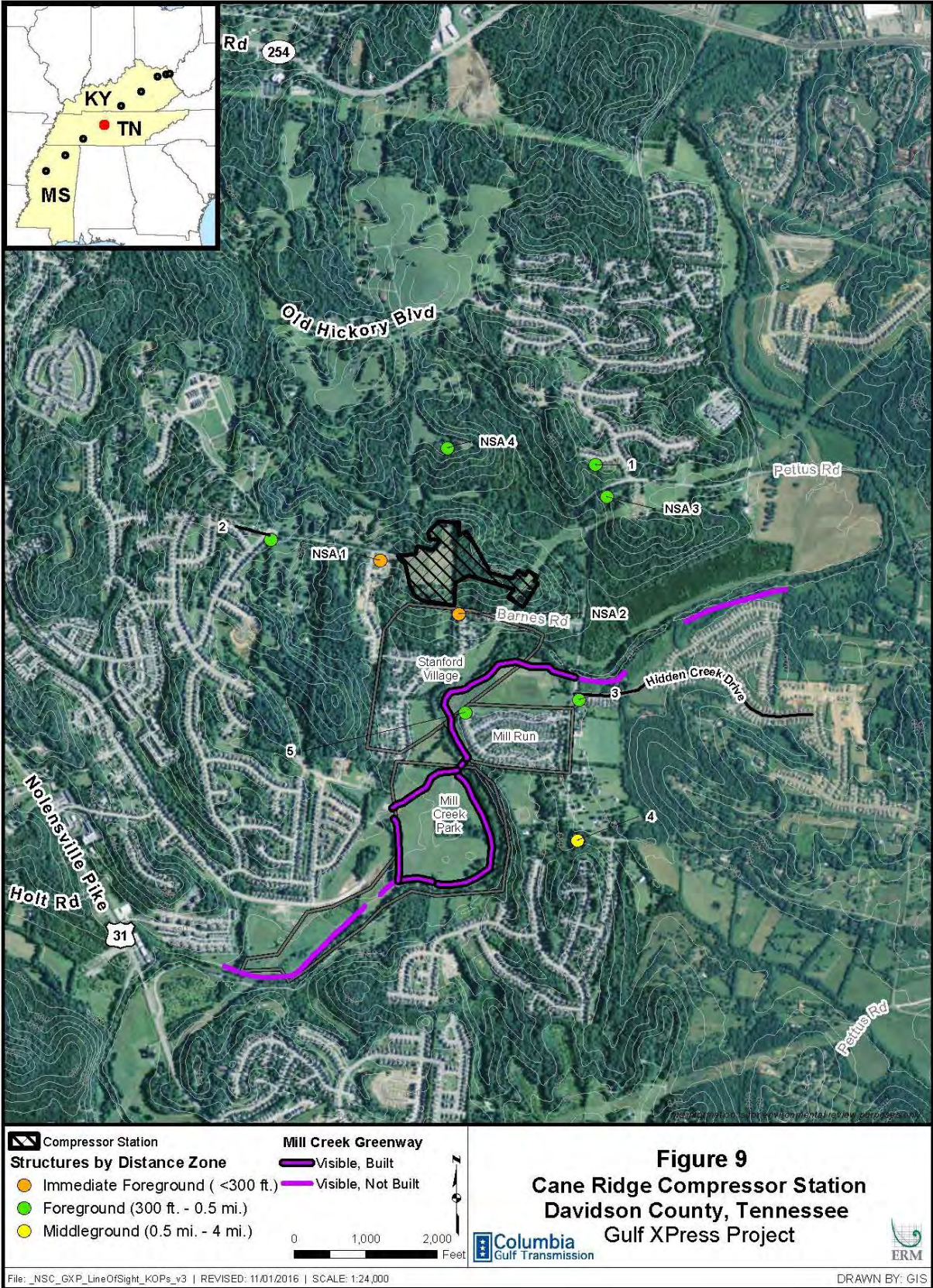
The area proposed for the Cane Ridge Compressor Station site is grass/hay and forest with a general topographic gradient toward the southeast. The property is situated adjacent to the north side of Barnes Road. Columbia Gulf has purchased about 90 acres of land surrounding the site as a visual and noise buffer and to provide a buffer against future encroachment resulting from outside development. Columbia Gulf has no plans to develop the land within the buffer. Much of the farmland in this area south of Nashville has been converted to residential use. The surrounding suburban residential subdivisions and commercial and industrial uses establish the urban form and character of the overall landscape within this greater Nashville metropolitan area. Interstate 24 is located about 2.2 miles to the northeast of the site. Development along the interstate corridor is mixed residential, commercial, and industrial. In addition to the overhead utility distribution lines within the residential subdivisions, overhead distribution lines are aligned with Barnes Road, Old Hickory Boulevard, and Pettus Road. A 500 kilovolt electric transmission corridor traverses the landscape generally parallel to Columbia Gulf's pipeline right-of-way about 1.5 miles to the south. There are no street lights along Barnes Road and the suburban residences would be the main source of nighttime lighting.

The Cane Ridge Compressor Station includes a paved access road, the control building (approximately 27 feet tall), an auxiliary building (approximately 25 feet tall), and the compressor building (approximately 48 feet tall) with an exhaust stack (an additional 9 feet). The total combined height of the compressor building and stack would be approximately 57 feet above the ground surface consisting of 10 foot by 10 foot square ducting. Security chain link fencing will be installed around the perimeter of the permanent facility. The security fencing would be 8 feet in height with three strand barb wire extending an additional 1 foot above the top rail of the chain link fence.

The Cane Ridge Compressor Station is located in the Nashville Basin which is characterized as “deeply dissected and consists of steep slopes between narrow, rolling ridgetops and narrow valleys” underlain by limestone bedrock (USDA, 2006: 395). This area is densely populated and much of the former farmland around Nashville has been converted to residential use.

The results of the GIS analysis are depicted in Figure 8 and suggest that the Cane Ridge Compressor Station would be visible at certain locations along Mill Creek and its tributaries as well as the wooded area around the site. Figure 9 identifies the residences or nearest residences in subdivisions that may have a view of the compressor station. The proposed compressor station may be visible to houses along Barnes Road in the immediate foreground, residences within Mill Run subdivision, along Hidden Creek Drive or three residences to the northeast in the foreground distance zone, and 1 residence within the middleground distance zone.





In Columbia Gulf's response to the Federal Energy Regulatory Commission's August 24, 2016 Data Request, the results of the visual video simulation along Barnes Road and the Stanford Village subdivision was filed to the Project docket on September 7, 2016. This visual simulation includes conceptual buildings and landscaping that would minimize views of the compressor station. Additional photographs were taken subsequent to the September 7 submittal to document the existing conditions from the Mill Run subdivision, along Hidden Creek Drive, Mill Creek Park, the Mill Creek Greenway, and Stanford Village subdivision. Figures 10 through 12 in Appendix 17-1 depict locations from which photographs were taken in each subdivision, park or path toward the proposed Cane Ridge Compressor Station.

Views from Hidden Creek Subdivision

Hidden Creek Subdivision is situated between Old Hickory Boulevard and Pettus Road. The Hidden Creek subdivision is an established neighborhood primarily with 1.5-story and 2-story houses. An overhead utility distribution line is aligned with Hidden Creek Drive. The majority of this subdivision is within the middleground distance zone except near Old Hickory Boulevard where the residences fall within the foreground distance zone. Figures 13 through 21 are photographs taken from the Hidden Creek subdivision toward the Cane Ridge Compressor station (Appendix 17-1). Table 4 lists the bearing of each photograph point depicted on Figure 10 (Appendix 17-1).

Views from Mill Run

The Mill Run subdivision is located southeast of the compressor station site east of Mill Creek. The Mill Creek subdivision is an established neighborhood primarily with 2-story houses. The Mill Creek Greenway is located north and west of the subdivision along Mill Creek. The neighborhood is accessible from Old Hickory Boulevard. This subdivision is within the foreground distance zone. Figures 22 through 26 in Appendix 17-1 are photographs taken in the Mill Run subdivision toward the proposed Cane Ridge Compressor Station. Table 4 lists the bearing of each photograph point depicted on Figure 11 (Appendix 17-1).

Views from Mill Creek Park and Mill Creek Greenway

The Mill Creek Greenway is a paved trail from its intersection with Old Hickory Boulevard west to Mill Creek Park; other segments are planned, but not yet built to connect various communities (Nashville Metropolitan Government, 2016). Nashville actively works with the Metro Greenway Division of the Metropolitan Board of Parks and Recreation to build greenway trails for recreation and transportation. Figure 9 depicts the potentially visible built and planned segments near the Project. Figures 37 through 47 are photographs taken along the path toward the compressor station. Table 4 lists each photograph point and the bearing. West of Old Hickory Boulevard for about 0.6 mile, the path borders Mill Creek which is lined with mature hardwood trees. The path intersect Columbia Gulf's pipeline corridor (see Figures 29 through 32, photo points 16, 16a, and 17 depicted on Figure 11). The path crosses Mill Creek and enters Mill Creek Park where it is a trail loop. Mill Creek Park is an open grassy area bordered to the east and south by Mill Creek and residential subdivisions to the west.

Views from Stanford Village

Stanford Village subdivision is situated south of Barnes Road and is within the foreground distance zone. This subdivision is an established neighborhood primarily with 2-story houses. Several overhead utility distribution lines are visible within the subdivision.

Figures 38 through 46 are photographs taken from this subdivision toward the proposed Cane Ridge Compressor Station. Table 4 lists the bearing of each photograph point depicted on Figure 12 (Appendix 17-1).

TABLE 4			
Gulf XPress Project Cane Ridge Compressor Station Photographs of Current Conditions			
Photo Point	Location	Bearing	Figure in Appendix 17-1
1	Stanford Village	343	38
2	Stanford Village	355	39
3	Stanford Village	16	40
4	Stanford Village	18	41
5	Stanford Village	15	42
6	Stanford Village	33	43
6a	Stanford Village	36	44
7	Stanford Village	56	45
8	Stanford Village	93	46
9	Mill Run	353	22
10	Mill Run	327	23
11	Mill Run	341	24
12	Mill Run	334	25
13	Mill Run	346	26
14	Mill Creek Greenway	314	27
15	Mill Creek Greenway	327	28
16	Mill Creek Greenway	349	29
16a	Mill Creek Greenway	234	31
16a	Mill Creek Greenway	46	31
17	Mill Creek Greenway	2	32
18	Mill Creek Greenway	7	33
19	Mill Creek Greenway	291	34
20	Mill Creek Greenway	9	35
21	Mill Creek Greenway	352	36
22	Mill Creek Greenway	355	37
23	Hidden Creek Subdivision	314	13
24	Hidden Creek Subdivision	304	14
25	Hidden Creek Subdivision	293	15
26	Hidden Creek Subdivision	295	16
27	Hidden Creek Subdivision	296	17
28	Hidden Creek Subdivision	295	18
29	Hidden Creek Subdivision	301	19
30	Hidden Creek Subdivision	299	20
31	Hidden Creek Subdivision	303	21

Field observation and the photographs of the residential subdivisions included in Appendix 17-1 confirm a moderate to high level of man-made changes to the landscape which was formerly agricultural. The residences and the greenway path generally do not have direct views of the proposed compressor station due to intervening vegetation, including Columbia Gulf's forested buffer surrounding the Cane Ridge Compressor Station. The large mature trees in these areas along with 1- and 2- storied structures would likely block views in the direction of the Project site. While portions of the compressor stations buildings may be visible above the

trees, through gaps in vegetation, or during winter months when the deciduous trees have shed their leaves, the most visible part of the Cane Ridge Compressor Station would be the exhaust stack.

1.4.1 Mitigation

1.4.1.1 Facility Color

The exterior color of the proposed buildings at Cane Ridge Compressor Station is CS-200, or Columbia Green. The majority of the equipment and piping will be the same Columbia Green color. The exhaust stack of the turbine will be a shade of gray per the manufacturer's Federal Standard Color (<http://www.federalstandardcolor.com/>).

The color of the stack will consist of non-reflective neutral gray. The stack will be viewed against the background sky and gray is conducive to minimizing the visual contrast with the background sky. When viewed against the sky, the color contrasts will vary depending on the weather conditions and distance of the viewer. For instance, the stack located in the middleground could be visible on a sunny day, but on a cloudy day the color contrast will be less. Contrast with vegetation is also an important element. Typical vegetation colors include shades of green, brown, and tan. Similar to the contrast with the background sky, the color contrast will vary depending on distance and weather conditions and will generally be more pronounced the closer the viewer is to the compressor station.

1.4.1.2 Landscape Plan

The most visible portion of the facility is along Barnes Road to the south of the Cane Ridge Compressor Station. Landscaping will be established to screen the length of the security fencing along Barnes Road. A combination of native evergreen shrubs and trees along with native deciduous tree behind the evergreens will be planted along the west side property boundary that will extend to the southwestern property corner to provide visual relief of the Cane Ridge Compressor Station. The shrubs and trees will be planted approximately 15 feet apart in the area described above as presented on Drawing FD-GC24-150, titled "Cane Ridge Landscape Plan" included in Appendix 17-2 and marked as CEII. This has also been represented in the Truescape video simulation shown during open houses and referenced in the September 7, 2016 filing.

1.4.1.3 Lighting Plan

The objective of this plan is to provide adequate lighting at the compressor station, to comply with applicable regulatory requirements, while minimizing light pollution and trespass affecting the surrounding environment.

Minimum illumination levels were determined in accordance with current industry standards. Outdoor lighting may consist of general illumination (area lighting) and local illumination (task lighting) in order to provide sufficient lighting for the necessary operating and maintenance activities performed at the site.

The outdoor lighting systems are designed to ensure that minimal stray light will leave the site, and that glare is not encountered by personnel performing normal operations activities. At the compressor station facilities, the yard lighting will be directionally aimed inward to the center of the facility. The illumination levels at the property line are significantly less than 0.5 fc.

The yard lights will be automated so that the station lighting will only illuminate if maintenance work is being performed after hours or in the event of certain unanticipated conditions. In addition, dark-sky compliant lighting will be installed to reduce light pollution and trespass when illuminated. The lighting plan is presented on Drawing FD-GC24-SK01-P3 in Attachment 17-3.

Generally, emergency lighting will provide for fit-for-purpose safety needs resulting from a loss of power to the facility due to weather events or interrupted service from the electricity provider.

2.0 REFERENCES

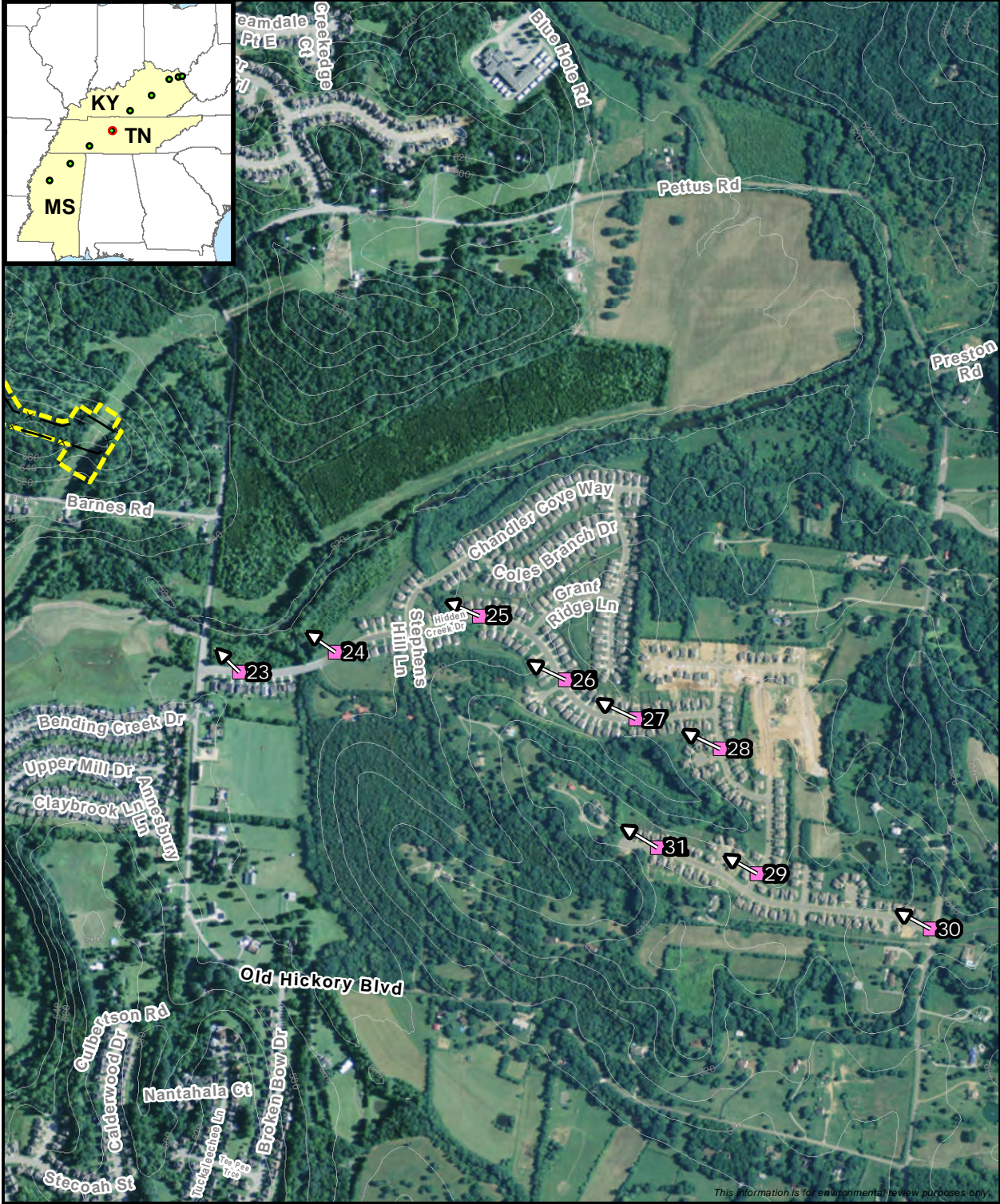
- Nashville Metropolitan Government. 2016. Nashville's Trails & Greenways, Mill Creek Greenway Details. Available online at: <http://www.nashville.gov/Portals/0/SiteContent/Parks/images/greenways/MC%20Park-Lenox.jpg>. Accessed September 2016.
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Data Request Pursuant to:
OEP/DG2E/Gas Branch 4
Data Request Pursuant to:
OEP/DG2E/Gas Branch 4
Columbia Gulf Transmission, LLC
Gulf XPress Project
Docket No. CP16-361-000
§ 375.308(x)

**COLUMBIA GULF TRANSMISSION, LLC
DOCKET NO. CP16-361-000**

**RESPONSE TO AUGUST 24, 2016
ENVIRONMENTAL DATA REQUEST 17
NOVEMBER 3, 2016
3, 2016**


APPENDIX 17-1

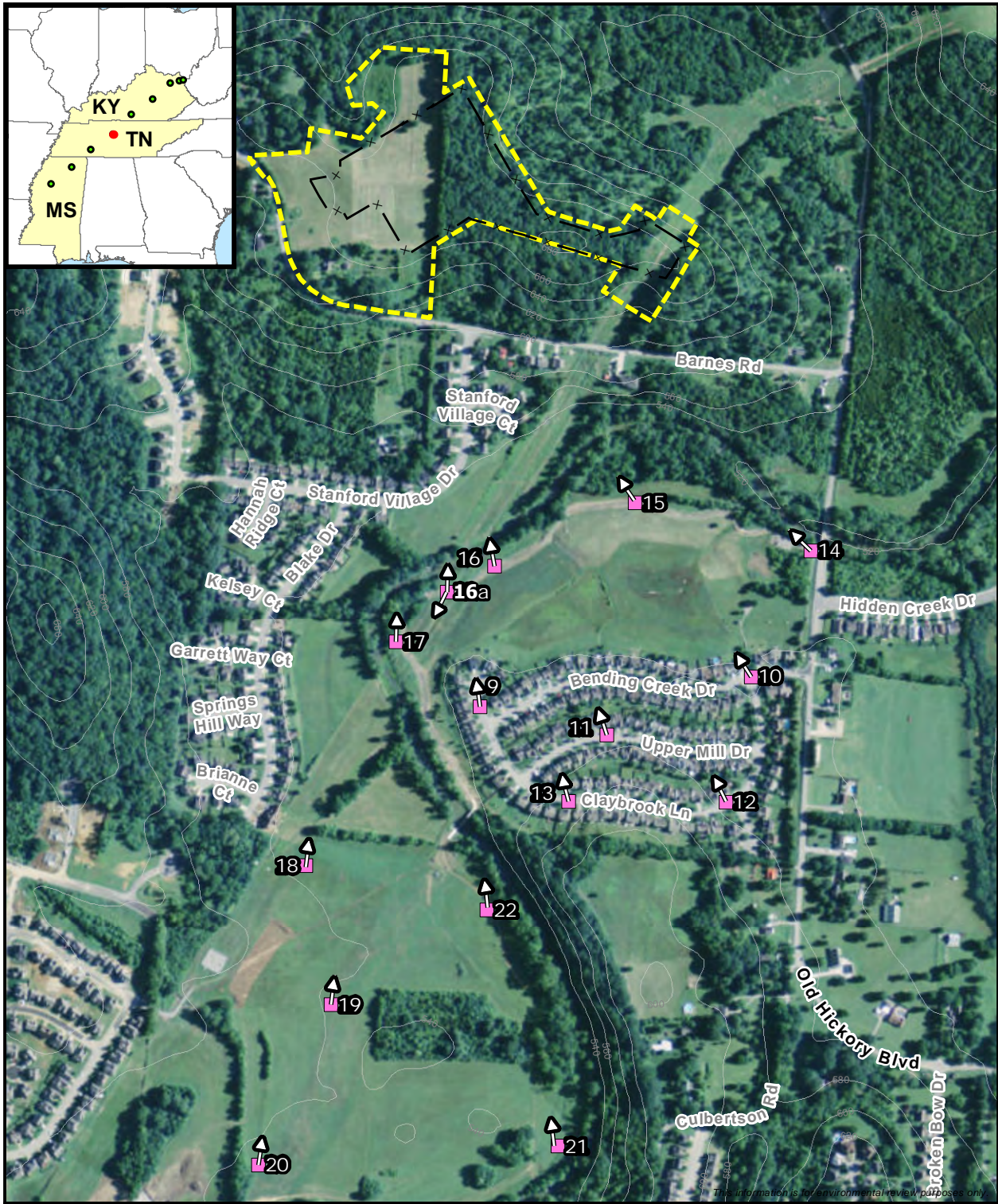


- Photo Point
- Photo Direction
- Fenced Area
- Compressor Station

0 380 760
Feet

Figure 10
Photo Points along Hidden Creek Drive
Cane Ridge Compressor Station
 Gulf XPress Project

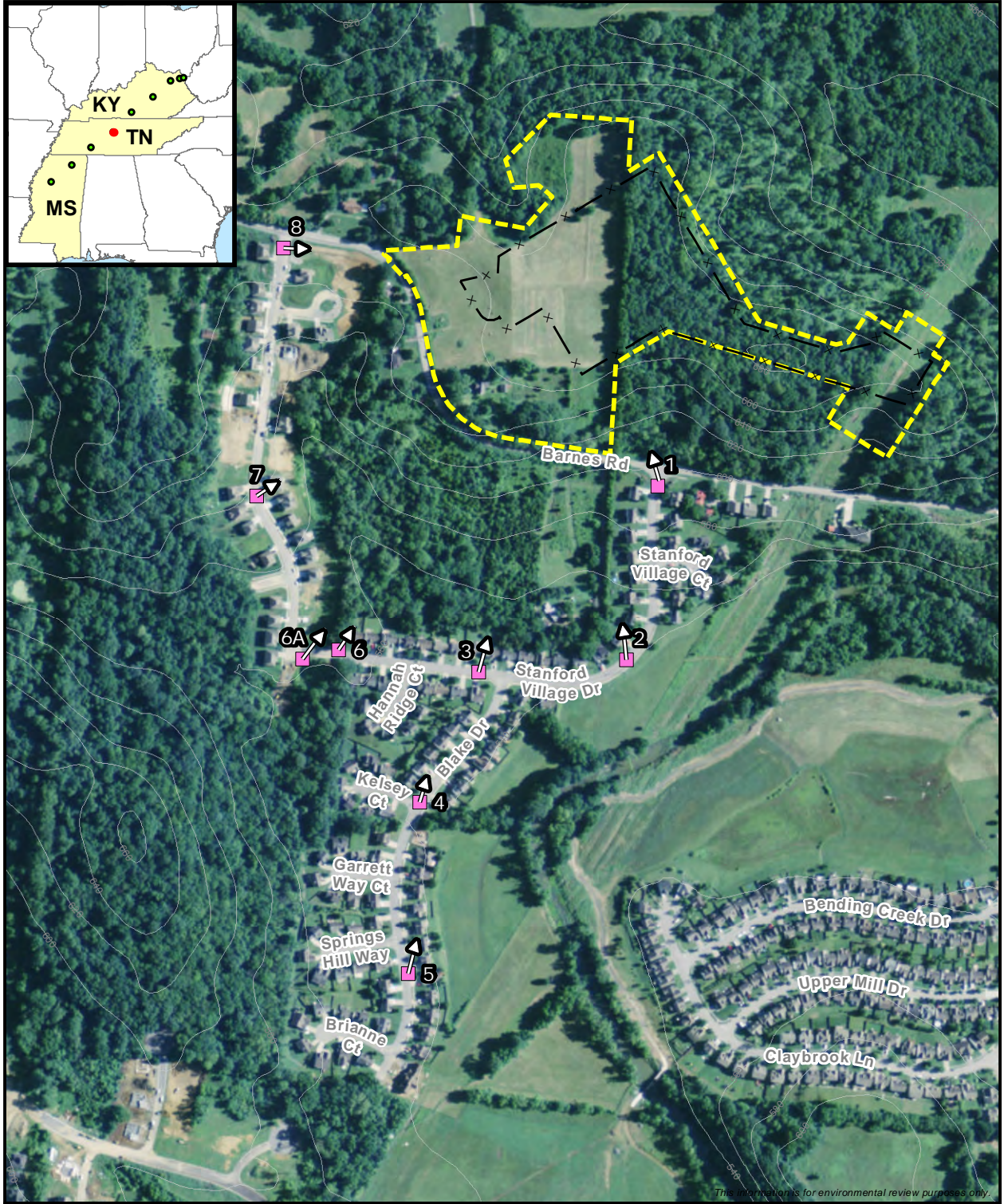
 ERM



- Photo Point
- Photo Direction
- Fenced Area
- Compressor Station

0 250 500
Feet

Figure 11
Photo Points in Mill Run Neighborhood, Mill Creek Park and Greenway
Cane Ridge Compressor Station
 Gulf XPress Project



■ Photo Point
⇨ Photo Direction
x Fenced Area
 Compressor Station

0 200 400
 Feet



Figure 12
Photo Points in Stanford Village
Cane Ridge Compressor Station
 Gulf XPress Project





Figure 13. Hidden Creek Subdivision, Photo Point 23



Figure 14. Hidden Creek Drive, Photo Point 24



Figure 15. Hidden Creek Subdivision, Photo Point 25



Figure 16. Hidden Creek Subdivision, Photo Point 26



Figure 17. Hidden Creek Subdivision, Photo Point 27



Figure 18. Hidden Creek Subdivision, Photo Point 28



Figure 19. Hidden Creek Subdivision, Photo Point 29



Figure 20. Hidden Creek Subdivision, Photo Point 30



Figure 21. Hidden Creek Subdivision, Photo Point 31



Figure 22. Mill Run, Photo Point 9



Figure 23. Mill Run, Photo Point 10



Figure 24. Mill Run, Photo Point 11



Figure 25. Mill Run, Photo Point 12



Figure 26. Mill Run, Photo Point 13



Figure 27. Mill Creek Greenway at intersection with Old Hickory Boulevard, Photo Point 14



Figure 28. Mill Creek Greenway, Photo Point 15



Figure 29. Mill Creek Greenway, Photo Point 16



Figure 30. Mill Creek Greenway toward pipeline right-of-way, Photo Point 16a (234 degrees)



Figure 31. Mill Creek Greenway toward pipeline right-of-way, Photo Point 16b (46 degrees)



Figure 32. Mill Creek Greenway, Photo Point 17



Figure 33. Mill Creek Greenway, Photo Point 18



Figure 34. Mill Creek Greenway, Photo Point 19



Figure 35. Mill Creek Greenway, Photo Point 20



Figure 36. Mill Creek Greenway, Photo Point 21



Figure 37. Mill Creek Greenway, Photo Point 22



Figure 38. Stanford Village, Photo Point 1



Figure 39. Stanford Village, Photo Point 2



Figure 40. Stanford Village, Photo Point 3



Figure 41. Stanford Village, Photo Point 4



Figure 42. Stanford Village, Photo Point 5



Figure 43. Stanford Village, Photo Point 6



Figure 44. Stanford Village, Photo Point 6a



Figure 45. Stanford Village, Photo Point 7



Figure 46. Stanford Village, Photo Point 8

Data Request Pursuant to:
OEP/DG2E/Gas Branch 4
Columbia Gulf Transmission, LLC
Gulf XPress Project
Docket No. CP16-361-000
§ 375.308(x)

**COLUMBIA GULF TRANSMISSION, LLC
DOCKET NO. CP16-361-000**

**RESPONSE TO AUGUST 24, 2016
ENVIRONMENTAL DATA REQUEST 17
NOVEMBER 3, 2016**

APPENDIX 17-2

Landscape Plans

Provided Separately

Contains Critical Energy Infrastructure

(CEII) – Do Not Release

Data Request Pursuant to:
OEP/DG2E/Gas Branch 4
Columbia Gulf Transmission, LLC
Gulf XPress Project
Docket No. CP16-361-000
§ 375.308(x)

**COLUMBIA GULF TRANSMISSION, LLC
DOCKET NO. CP16-361-000**

**RESPONSE TO AUGUST 24, 2016
ENVIRONMENTAL DATA REQUEST 17
NOVEMBER 3, 2016**

APPENDIX 17-3

Lighting Plans

Provided Separately

Contains Critical Energy Infrastructure

(CEII) – Do Not Release

