

Table 13. Comparative Impact and Cost Summary – RIVER PLAINS SUBAREA

Features/Considerations	Preliminary Alternative Corridor Segment					
	Alternative G	Alternative H	Alternative I	Alternative J	Alternative K	Alternative L
General						
Centerline Length	1.1 miles	1.1 miles	1.1 miles	1.2 miles	1.2 miles	1.0 miles
Total Area in Alignment Corridor	54 acres	54 acres	53 acres	59 acres	58 acres	49 acres
Community and Land Use						
Potential Residential Displacements	0	0	0	0	0	17
Potential Commercial Displacements	0	0	0	0	0	6 (1 vacant)
Greenspaces – Private	1 (Old Fort; 6 acres)	0	0	0	0	0
Public (additional study required to determine Section 4(f) applicability)	0	0	0	0	0	0
Schools	0	0	0	0	0	0
Churches	0	0	0	0	0	0
Cemeteries	0	0	0	0	0	0
Hospitals/Emergency Service	0	0	0	0	0	0
Community Buildings/Facilities/County or State	1 (LMR Golf Center)	1 (LMR Golf Center)	1 (LMR Golf Center)	1 (LMR Golf Center)	1 (LMR Golf Center)	0
Potential Job Displacements	20-49	20-49	20-49	20-49	20-49	47-84
EJ Communities	None	None	None	None	None	Low income, elderly, and disabled populations at or above regional averages
Agricultural Land	21 acres	32 acres	0 acres	7 acres	31 acres	15 acres
Visual Resources	Little Miami River floodplain and surrounding bluffs, parks	Little Miami River floodplain and surrounding bluffs, parks	Little Miami River floodplain and surrounding bluffs, parks	Little Miami River floodplain and surrounding bluffs, parks	Little Miami River floodplain and surrounding bluffs, parks	Little Miami River floodplain and surrounding bluffs, parks
Public Involvement Considerations	Village of Mariemont concerned about noise; Village of Newtown concerned about businesses/residential impacts	Village of Newtown concerned about businesses/residential impacts	Village of Newtown concerned about businesses/residential impacts	Village of Newtown concerned about businesses/residential impacts	Village of Newtown concerned about businesses/residential impacts	Village of Newtown concerned about businesses/residential impacts
Little Miami River Crossing						
Channel Stability Considerations	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Crossing Suitability	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Floodplains and Groundwater						
100 Year FEMA Floodway/Floodplain	<u>Floodway Length Bridged:</u> Little Miami River (200 feet) <u>Floodplain:</u> Little Miami River (52 acres)	<u>Floodway Length Bridged:</u> None <u>Floodplain:</u> Little Miami River (54 acres)	<u>Floodway Length Bridged:</u> Clear Creek (850 feet) <u>Floodplain:</u> Little Miami River (47 acres)	<u>Floodway Length Bridged:</u> Clear Creek (700 feet) <u>Floodplain:</u> Little Miami River (56 acres)	<u>Floodway Length Bridged:</u> None <u>Floodplain:</u> Little Miami River (58 acres)	<u>Floodway Length Bridged:</u> None <u>Floodplain:</u> Little Miami River (47 acres)
Sole-Source Aquifer	54 acres	54 acres	53 acres	59 acres	58 acres	49 acres
Drinking Water Source Protection Area	0	0	0	0	0	0
Public Water Supplies	0	0	0	0	0	0
Ecological Resources						
Threatened and Endangered Species	Potential Indiana bat habitat (8 acres); limited potential running buffalo clover habitat	Indiana bat potential habitat (6 acres); limited potential running buffalo clover habitat	Indiana bat potential habitat (18 acres); limited potential running buffalo clover habitat	Indiana bat potential habitat (12 acres); limited potential running buffalo clover habitat	Indiana bat potential habitat (6 acres); limited potential running buffalo clover habitat	Indiana bat potential habitat (3 acres); limited potential running buffalo clover habitat
Wetlands [total number (acres)]	0	1 (0.02 acre)	1 (0.14 acre)	2 (0.13 acre)	0	0
Surface Streams						
Culvert Crossings (number/linear feet filled)	0 (0 feet)	1 (187 feet)	2 (515 feet)	1 (225 feet)	2 (557 feet)	0 (0 feet)
Bridge Crossings (number)	0	0	3	2	0	0
High Quality WWH/Class III PHWH Crossings	0	0	0	0	0	0
Ponds	0	0	0	0	0	0
Woodlands	8 acres	6 acres	18 acres	12 acres	6 acres	3 acres
Other Notable Ecological Features	0	0	Disrupts Clear Creek stream corridor	0	0	0
Cultural Resources						
Section 4(f) History/Architecture						
NRHP District?	No	No	No	No	No	No
Previously-Determined NRHP-Eligible Sites?	No	No	No	No	No	No
Sites Warranting Further Study?	Yes (1 site)	Yes (1 site)	Yes (2 sites)	Yes (2 sites)	Yes (2 sites)	Yes (2 sites)
Section 4(f) Archaeology						
NRHP District?	Yes (Hahn, Perin)	Yes (Hahn, Perin)	Yes (Hahn, Perin)	Yes (Hahn, Perin)	Yes (Hahn, Perin)	Yes (Hahn)
High-Sensitivity Areas? (Gray & Pape, 2009)	Yes (2 sites)	Yes (3 sites)	Yes (3 sites)	Yes (5 sites)	Yes (6 sites)	Yes (4 sites)
Recorded/Unrecorded Sites? (Gray & Pape, 2010)	Yes (2 sites)	Yes (4 sites)	Yes (6 sites)	Yes (4 sites)	Yes (5 sites)	Yes (3 sites)
Site Complexity (Gray & Pape, 2010)	Complex (2)	Complex (3), Unknown (1)	Complex (3), Simple (1), Unknown (2)	Complex (3), Unknown (1)	Complex (3), Simple (1), Unknown (1)	Complex (1), Simple (1), Unknown (1)
Site Disturbance Level (Gray & Pape, 2010)	Moderate (1), Minimal (1)	Moderate (2), Minimal (2)	Moderate (3), Minimal (3)	Moderate (1), Minimal (3)	Moderate (3), Minimal (2)	Moderate (1), Minimal (2)
Sites with Human Burials Confirmed or Suspected? (Gray & Pape, 2010)	Yes (2)	Yes (2), Suspected (1)	Yes (3)	Yes (3)	Yes (3)	Yes (1)
Public Parks and Recreation Areas						
Section 4(f) Public Parks/Recreation Areas	2 Little Miami Golf Center (20 acres); Little Miami Scenic Trail (346 feet)	2 Little Miami Golf Center (21 acres); Little Miami Scenic Trail (346 feet)	4 Clear Creek Park (11 acres); Short Park (0.2 acre); Little Miami Golf Center (25 acres); Little Miami Scenic Trail (323 feet)	3 Clear Creek Park (13 acres); Little Miami Golf Center (28 acres); Little Miami Scenic Trail (401 feet)	4 Clear Creek Park (14 acres); Short Park (0.3 acre); Little Miami Golf Center (17 acres); Little Miami Scenic Trail (322 feet)	3 Clear Creek Park (14 acres); Short Park (0.5 acre); Anderson Township Park District Property (0.4 acre)
Section 6(f) Public Parks/Recreation Areas	0	0	1 Short Park (0.2 acre)	0	1 Short Park (0.3 acre)	1 Short Park (0.5 acre)
Noise and Air Quality						
Adjacent Noise Sensitive Areas	2	0	0	0	0	2
Preliminary Estimated Cost of Noise Mitigation	\$406,400	Not Applicable	Not Applicable	Not Applicable	Not Applicable	\$1,959,600
Potential Air Quality Issues	Located in non-attainment area for eight-hour ozone and PM _{2.5} ; project-level hot-spot analyses not anticipated; MSAT analysis required	Located in non-attainment area for eight-hour ozone and PM _{2.5} ; project-level hot-spot analyses not anticipated; MSAT analysis required	Located in non-attainment area for eight-hour ozone and PM _{2.5} ; project-level hot-spot analyses not anticipated; MSAT analysis required	Located in non-attainment area for eight-hour ozone and PM _{2.5} ; project-level hot-spot analyses not anticipated; MSAT analysis required	Located in non-attainment area for eight-hour ozone and PM _{2.5} ; project-level hot-spot analyses not anticipated; MSAT analysis required	Located in non-attainment area for eight-hour ozone and PM _{2.5} ; project-level hot-spot analyses not anticipated; MSAT analysis required
Potential Hazardous Materials Sites						
Suspect Sites Requiring Phase I Studies	3 (0 landfills)	3 (0 landfills)	3 (0 landfills)	2 (0 landfills)	3 (0 landfills)	2 (0 landfills)

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Features/Considerations	Preliminary Alternative Corridor Segment					
	Alternative G	Alternative H	Alternative I	Alternative J	Alternative K	Alternative L
Rail Freight Considerations						
Rail Freight Considerations	Crosses existing Norfolk-Southern freight line	Crosses existing Norfolk-Southern freight line	Crosses existing Norfolk-Southern freight line	Crosses existing Norfolk-Southern freight line	Crosses existing Norfolk-Southern freight line	Parallels existing Norfolk-Southern freight line
Engineering and Design Considerations						
Geotechnical Issues	No issues identified	No issues identified	No issues identified	No issues identified	No issues identified	No issues identified
Major Utilities	1 electric, 1 sewer	1 sewer	1 sewer	1 sewer	1 sewer	1 sewer
Earthwork and Drainage	Little Miami River floodplain	Little Miami River floodplain	Little Miami River floodplain	Little Miami River floodplain	Little Miami River floodplain	Little Miami River floodplain
Horizontal and Vertical Geometry	Location and configuration of at-grade intersection in Newtown	Location and configuration of at-grade intersection in Newtown	Location and configuration of at-grade intersection in Newtown	Location and configuration of at-grade intersection in Newtown	Location and configuration of at-grade intersection in Newtown	Location and configuration of at-grade intersection in Newtown
Eastern Corridor Considerations						
Fit With Eastern Corridor Improvements/Plans LUVP = Land Use Vision Plan GIP = Green Infrastructure Master Plan	Maximizes preservation of existing agricultural, park and natural bottomland along Little Miami River floodplain (supports identified LUVP and GIP goals for protection/preservation)	Bisects existing agricultural, park and natural bottomland along Little Miami River floodplain (identified by LUVP and GIP for protection/preservation)	Bisects existing agricultural, park and natural bottomland along Little Miami River floodplain and substantially disrupts the Clear Creek riparian corridor (identified by LUVP and GIP for protection/preservation)	Bisects existing agricultural, park and natural bottomland along Little Miami River floodplain (identified by LUVP and GIP for protection/preservation)	Bisects existing agricultural, park and natural bottomland along Little Miami River floodplain (identified by LUVP and GIP for protection/preservation)	Bisects existing agricultural, park and natural bottomland along Little Miami River floodplain (identified by LUVP and GIP for protection/preservation); substantial relocations in Newtown (does not support identified Newtown-area LUVP goals) Follows existing rail freight corridor and provides opportunity to evaluate joint (or side-by-side) rail transit use, as well as potential highway/ rail transit mode-split through Newtown as project further develops
Preliminary Cost Estimates (current \$\$)						
Multi-modal Construction Cost Estimate (Highway and Rail Transit)	\$29.4 Million	\$28.1 Million	\$49.1 Million	\$33.6 Million	\$27.3 Million	\$19.4 Million
Right-of-Way Cost Estimate	\$800,000	\$530,000	\$550,000	\$1.5 Million	\$540,000	\$6.8 Million
SEGMENT RECOMMENDATION:	EXPAND AND ADVANCE	ELIMINATE	ELIMINATE	ELIMINATE	ELIMINATE	MODIFY AND ADVANCE