

**DRAFT NORTH HAMILTON CROSSING (NHX) CONCEPTUAL ALTERNATIVES EVALUATION MATRIX (PID 115755)**

Feature/Consideration	Preliminary Alternatives							
	No Build Alternative	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
<b>Purpose and Need - Primary Needs</b>								
Improves East-West Connectivity	No	Yes (Ties to NW Washington Blvd, providing connectivity further west)	Yes (Ties to Lagonda Ave with no direct connectivity further west)	Yes (Ties to relocated Rhea Ave, providing connectivity further west)	Yes (Ties to Gordon Ave, providing connectivity further west)	Yes (Ties to relocated Rhea Ave, providing connectivity further west)	Yes (Ties to relocated entrance of Spooky Nook, with no direct connectivity further west)	Yes (Ties to Wayne Ave, providing connectivity further west)
Improves Lack of Sufficient River Crossings.	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Improves Lack of Grade-Separated Railroad Crossings.	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Improves Mobility/Congestion on Local Road Network	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Improves Safety	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Purpose and Need - Secondary Needs</b>								
Supports Economic Development	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Improves Bike/Pedestrian Connectivity	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Improves Multimodal Linkage	No	Potentially	Potentially	Potentially	Potentially	Potentially	Potentially	Potentially
<b>Cultural Resources</b>								
NRHP-Listed Sites	None	Greenwood Cemetery	Greenwood Cemetery	Greenwood Cemetery	Greenwood Cemetery	Greenwood Cemetery	Greenwood Cemetery	None
NRHP-Listed Historic Districts	None	None	None	None	None	None	German Village	German Village, Dayton-Cambell
<b>Section 4(f)/6(f) Sites</b>								
Section 4(f)/6(f) Sites	None	Combs Park (bisects), GMR Recreational Trail (minor)	Combs Park (bisects), GMR Recreational Trail (minor), LJ Smith Park (bisects)	Beltline Trail (minor), GMR Recreational Trail (minor), LJ Smith Park (bisects)	Beltline Trail (minor), GMR Recreational Trail (minor), LJ Smith Park (minor)	Beltline Trail (minor), GMR Recreational Trail (minor), LJ Smith Park (minor)	Beltline Trail (minor), GMR Recreational Trail (minor), Moser Park (minor)	Beltline Trail (minor), GMR Recreational Trail (minor), Marcum Park (minor)
<b>Ecological Resources</b>								
Great Miami River / Hydraulic Canal	None	2 crossings	2 crossings	1 crossing	1 crossing	1 crossing	1 crossing	1 crossing
Other Streams	None	3 streams	3 streams	4 streams	3 streams	5 streams	8 streams	3 streams
Wetlands	None	None	1	None	None	1	1	None
<b>Floodplains and Floodway</b>								
100-Year Floodplain Encroachment (not including Floodway)	None	>20 ac	10 - 20 ac	< 1 ac	< 1 ac	< 1 ac	< 1 ac	< 1 ac
100-Year Floodway Encroachment	None	< 5 ac	< 5 ac	< 5 ac	< 5 ac	< 5 ac	< 5 ac	< 5 ac
<b>Hazardous Materials</b>								
Regulated Materials Review	None	7 LUST, 10 UST, 3 RCRA	11 LUST, 11 UST, 5 RCRA, 1 DERR site, 1 site with Institutional Controls	9 LUST, 13 UST, 7 RCRA, 1 NPL site, 1 DERR site, 1 site with Institutional Controls, 1 spill	10 LUST, 18 UST, 5 RCRA, 1 DERR site, 2 sites with Institutional Controls, 1 spill, 3 VAP2	4 LUST, 3 UST, 4 RCRA, 2 spills	3 LUST, 1 UST, 4 RCRA, 1 spill	7 LUST, 3 UST, 4 RCRA, 1 DERR site, 3 VAP2

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<b>Community and Land Use</b>								
Farmland Impacts	None	< 20 ac	< 5 ac	None	None	None	None	None
Community Facilities	None	Fairgrounds, BCESC Grant Early Learning Center, Transitional Learning Center	Fairgrounds, BCESC Grant Early Learning Center, Transitional Learning Center	Fairgrounds, BCESC Grant Early Learning Center, Transitional Learning Center, Electric Power House, Pentecostal Apostolic Church	Fairgrounds, BCESC Grant Early Learning Center, Transitional Learning Center, Electric Power House, True Free Christian Church of God	Fairgrounds, BCESC Main Building, Transitional Learning Center, Hamilton Fire Station 25, Fairwood Elementary School, Butler County Children Services, Juvenile Justice Center, Butler County Board of Developmental Disabilities, Electric Power House	Fairgrounds, BCESC Main Building, Transitional Learning Center, Cressmont Baptist Church, Hamilton Fire Station 25, Fairwood Elementary School, Butler County Children Services, Juvenile Justice Center, Butler County Board of Developmental Disabilities	Fairwood Elementary School, Garfield Middle School, Dayton Lane Community Christian Church, Hamilton City School District Office, Hamilton Lane Library, Consortium for Ongoing Reinvestment Efforts (CORE) property
Cemeteries (Non-Historic)	None	Greenwood Cemetery (<1 ac)	Greenwood Cemetery (<1 ac)	Greenwood Cemetery (>1 ac)	Greenwood Cemetery (<1 ac)	None	None	None
Traditionally Underserved Populations per Census Blocks	None	Minority, Low Income, Over 64	Minority, Low Income, Over 64	Minority, Low Income, Over 64	Minority, Low Income, Over 64	Minority, Low Income, Over 64	Minority, Low Income	Low Income
<b>Stakeholder/Public Involvement</b>								
Public Concerns	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Stakeholder Concerns	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
<b>Right-of-Way</b>								
Relocations	None	potentially < 10	potentially < 10	potentially > 10	potentially > 10	potentially > 50	potentially > 50	potentially > 40
Right-of-Way	None	potentially > 40 ac	potentially > 30 ac	potentially > 30 ac	potentially > 30 ac	potentially > 20 ac	potentially > 20 ac	potentially < 10 ac
<b>Engineering Considerations</b>								
Alternative Length (mi)	N/A	2.75	2.70	2.60	3.00	2.25	2.25	1.5
Design Speed (mph)	N/A	35	35	35	35	35	35	35
Roadway Design Issues	N/A	Proximity of Elkton Road / NW Washington Blvd intersection to roundabout and steep existing grades near roundabout. Significant fill required in floodplain. Steep grade on alignment near BCEO and requires retaining wall.	North B Street may require profile adjustments at west terminus. Requires US 127 to be raised roughly 10 feet. Bikepath along the canal was reduced to a 10 foot width. Steep grade on alignment near BCEO and requires retaining wall.	North B Street may require profile adjustments at west terminus. Requires US 127 to be raised roughly 13 feet. Intersection at US 127 is skewed. Proximity of US 127 intersection to power plant reduces sight distance. Bikepath along the canal was reduced to a 10 foot width. Steep grade on alignment near BCEO and requires retaining wall.	North B Street may require profile adjustments at west terminus. North B Street intersection is in a curve. Intersection at US 127 is skewed. Proximity of US 127 intersection to power plant reduces sight distance. Bikepath along the canal was reduced to a 10 foot width. Steep grade on alignment near BCEO and requires retaining wall.	North B Street may require profile adjustments at west terminus. Intersection at US 127 is skewed. Proximity of US 127 intersection to power plant reduces sight distance. Width of bikepath on Heaton Street reduced to 8 foot width at cemetery. Steep grade on alignment near Humane Society. Intersection of Princeton Road is skewed.	North B Street may require profile adjustments at west terminus. Intersection at US 127 is located in curves. No turn lanes provided along Heaton Street. Steep grade on alignment near Humane Society.	No on-street parking or turn lanes provided along Dayton Street.

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Structural Design Issues	Black Street Bridge reaching end of serviceable life for vehicular traffic and cannot be widened. Replacement on same alignment would result in closure during construction.	4 bridges required	3 bridges required	2 bridges required	2 bridges required River Bridge - Curve at NW end of bridge complicates design RR bridge - Severe skew complicates design	2 bridges required River Bridge - Curve at SE end of bridge & taper at NW end complicates design RR bridge - Severe skew complicates design	2 bridges required Temporary RR runaround required for construction of new RR bridge over roadway	2 bridges required Temporary RR runaround required for construction of new RR bridge over roadway
Major Utility Relocations and/or Issues	None	Electric Transmission Line relocations required at NW Washington Blvd and near SR 4.	Electric Transmission Line relocations required near SR 4. Coordination with hydroelectric plant.	Power plant located on US 127 impacted.	Electric Transmission Line relocations required for Railroad overpass and near SR 4. Power plant located on US 127 impacted.	Electric Transmission & Distribution Line relocations required near US 127. Power plant located on US 127 impacted.	Electric Transmission & Distribution Line, Water Line and Sanitary Sewer Line relocations required for underpass. Electric Transmission & Distribution Line relocations required behind fairgrounds.	Electric Transmission & Distribution Line, Substation 9 Impacted, Water Line and Sanitary Sewer Line relocations required for underpass.
<b>Traffic/Maintenance of Traffic Considerations</b>								
Anticipated Alternative Travel Time (MM:SS)	N/A	05:16	06:11	06:15	06:10	05:45	05:45	05:19
Anticipated High Street (SR 129) Travel Time Savings (MM:SS)	AM Peak-Hour - 00:00 PM Peak-Hour - 00:00	AM Peak-Hour - 00:30 PM Peak-Hour - 02:10	AM Peak-Hour - 00:34 PM Peak-Hour - 02:08	AM Peak-Hour - 00:33 PM Peak-Hour - 02:04	AM Peak-Hour - 00:29 PM Peak-Hour - 02:02	AM Peak-Hour - 00:35 PM Peak-Hour - 02:11	AM Peak-Hour - 00:41 PM Peak-Hour - 02:13	AM Peak-Hour - 00:50 PM Peak-Hour - 02:19
Anticipated % Reduction in High Street (SR 129) Traffic	AM Peak-Hour - 0% PM Peak-Hour - 0%	AM Peak-Hour - 12% PM Peak-Hour - 10%	AM Peak-Hour - 13% PM Peak-Hour - 9%	AM Peak-Hour - 12% PM Peak-Hour - 9%	AM Peak-Hour - 9% PM Peak-Hour - 6%	AM Peak-Hour - 13% PM Peak-Hour - 11%	AM Peak-Hour - 17% PM Peak-Hour - 16%	AM Peak-Hour - 21% PM Peak-Hour - 17%
Maintenance of Traffic Concerns	None	Construction of roundabout at the intersection of W Elkton Rd and N B St will likely require a closure. Intersection of Neal Blvd and Joe Nuxhall Blvd will likely require short term closures.	Complicated construction staging at North B Street. US 127 may require a closure to raise the profile. Complex detour would be required.	Complicated construction staging at North B Street. US 127 may require a closure to raise the profile. Complex detour would be required.	Complicated construction staging at North B Street. Construction of roundabout at Neal Blvd and Joe Nuxhall Blvd will likely require a closure.	Complicated construction staging at North B Street.	Complicated construction staging at North B Street. Long term closure of Heaton St for the RR underpass.	Complicated construction staging at North B Street. Long term closure of Dayton St for the RR underpass.
<b>Preliminary Cost Estimates</b>								
Preliminary Construction Costs	N/A	\$80 - \$90 million	\$75 - \$85 million	\$55 - \$ 65 million	\$65 - \$75 million	\$65 - \$75 million	\$50 - \$60 million	\$50 - \$60 million
Preliminary Right of Way Costs	N/A	\$15 - \$25 million	\$15 - \$25 million	\$15 - \$25 million	\$15 - \$25 million	\$15 - \$25 million	\$25 - \$35 million	\$10 - \$20 million
<b>Conclusion</b>								
Recommended for Further Study?	N/A							