



North Hamilton Crossing

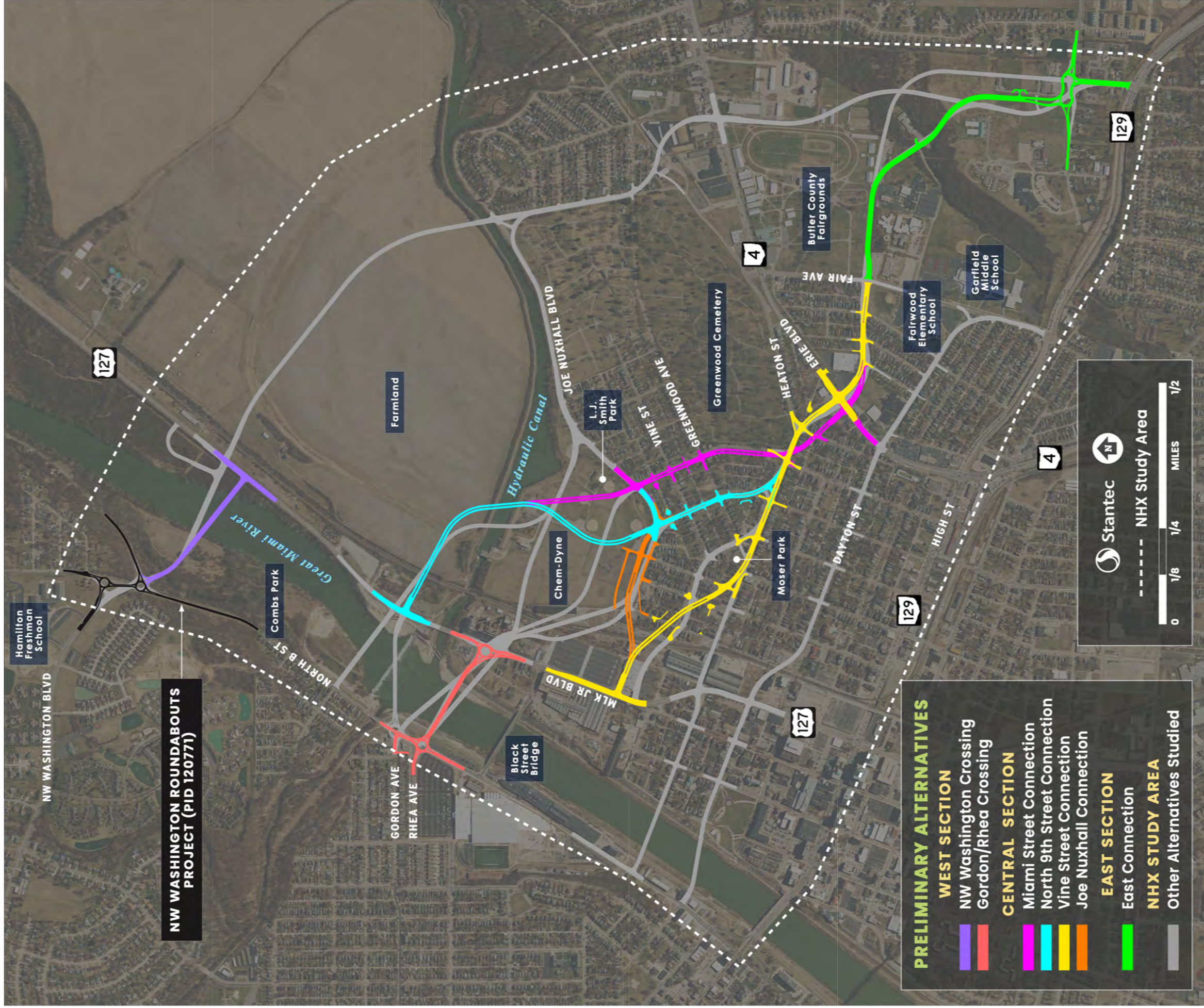
RECOMMENDED SECTION ALTERNATIVES

(Exhibited at the June 2024 Public Meeting & Virtual Open House)



Alternatives Overview

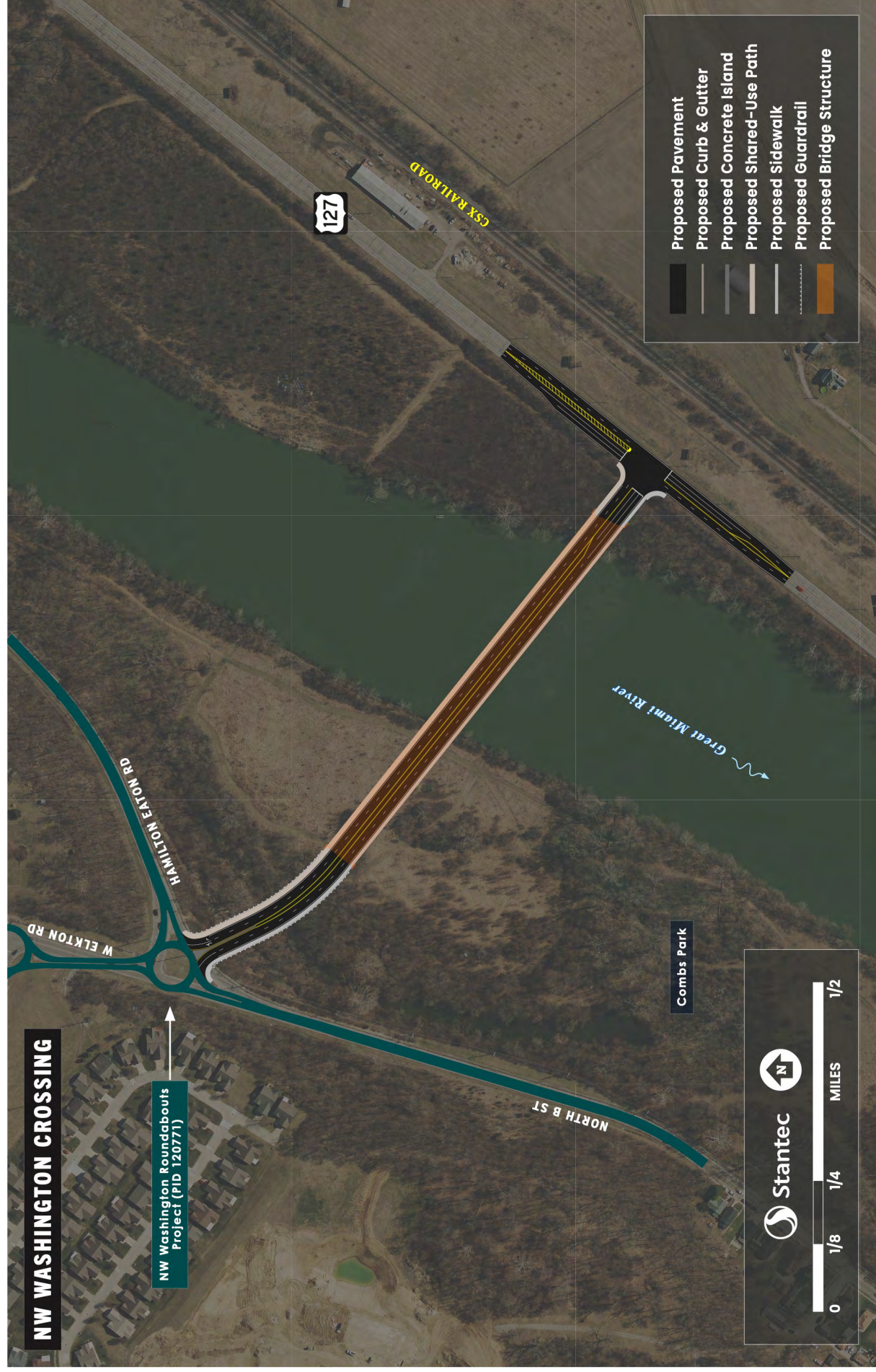
North Hamilton Crossing (NHX) • PID 115775





River Crossing Alternatives

North Hamilton Crossing (NHX) • PID 115775 WEST SECTION



Alternatives Comparison: West Section

North Hamilton Crossing (NHX) • PID 115775

ALTERNATIVE	POSITIVES	NEGATIVES	RECOMMENDATION
NORTHWEST WASHINGTON CROSSING	• Allows traffic bound for northwestern Hamilton and western Butler County to bypass Spooky Nook area • Avoids impacts to major utility infrastructure • Avoids impacts to regulated materials sites	• Less effective at redirecting traffic from SR 129 • Does not accommodate projected traffic demand resulting from anticipated economic development in the Spooky Nook area • Bisects Combs Park, impacting up to five acres • Greater ecological impacts (streams, wetlands, forested land) • Greater impact to floodplain and floodway areas • More costly to construct (\$45-\$50 million)	Not Recommended
GORDON/RHEA CROSSING	• More effective at redirecting traffic from SR 129 • Minimizes disruption to current travel patterns by constructing the new bridge near the existing Black Street Bridge • Addresses traffic demand due to economic development in the Spooky Nook area • Provides direct access between Spooky Nook development on the west bank of the river and prime development areas on the east bank • No impacts to Combs Park • Opportunities to connect with the Beltline Trail and Great Miami River Trail • Fewer ecological impacts (streams, wetlands, forested land) • Lesser impact to floodplain and floodway areas • Less costly to construct (\$35-\$40 million)	• Does not allow traffic bound for northwestern Hamilton and western Butler County to bypass Spooky Nook area as efficiently as other alternative • Requires access changes for adjacent properties along Gordon Avenue • Coordination required to maintain existing flood control levees • Requires coordination with major utilities • Construction required in the vicinity of properties with regulated materials concerns	Recommended Preferred Alternative



Miami Street Connection

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North 9th Street Connection

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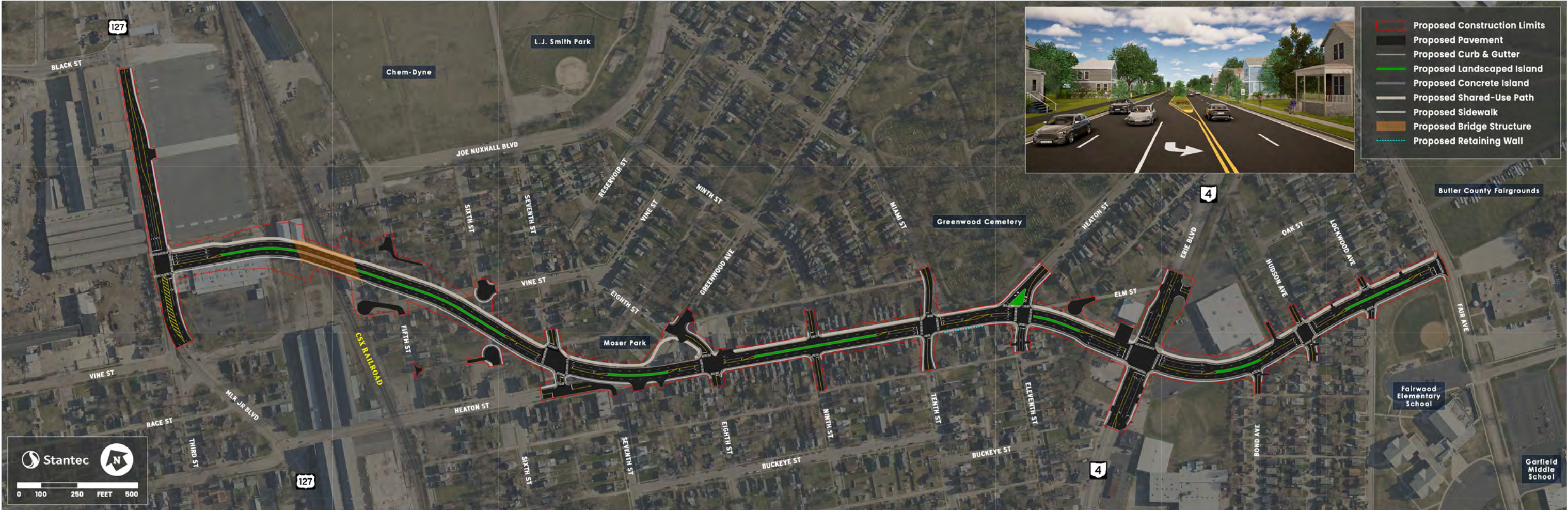




Vine Street Connection

North Hamilton Crossing (NHX) • PID 115775

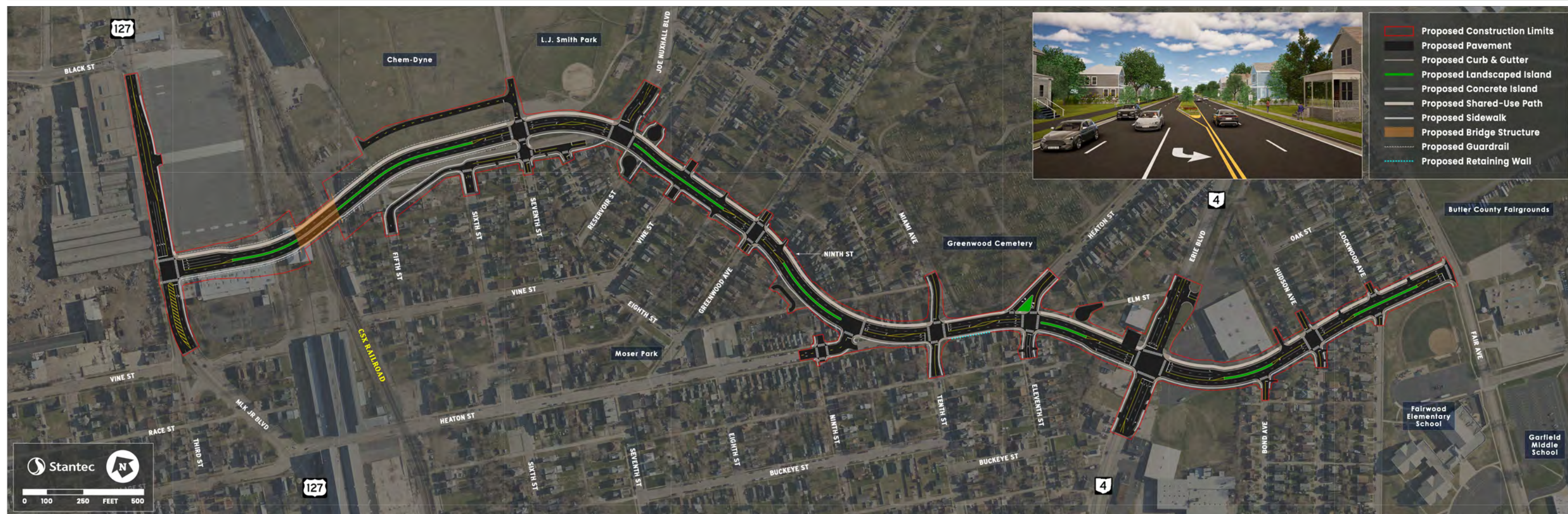
CENTRAL SECTION





Joe Nuxhall Connection

North Hamilton Crossing (NHX) • PID 115775 **CENTRAL SECTION**



Alternatives Comparison: Central Section

North Hamilton Crossing (NHX) • PID 115775

ALTERNATIVE	POSITIVES	NEGATIVES	RECOMMENDATION
MIAMI STREET CONNECTION	• Avoids impacts to Chem-Dyne property • Requires fewer (<5) business relocations	• Requires more (55-65) residential relocations • Less effective at redirecting traffic from SR 129 • Bisects L.J. Smith Park, impacting up to five acres, separates splashpad and impacts baseball diamonds and structures • Impacts large areas of active farmland (>20 acres) • Impacts large areas within the 100-year floodplain (>20 acres) • Greater ecological impacts (streams, wetlands, forested land) • Requires a new bridge structure over hydraulic canal • Redirects traffic through the North End neighborhood • More costly to construct (\$55-\$60 million)	Not Recommended
NORTH 9TH STREET CONNECTION	• Requires fewest (45-55) residential relocations • Requires fewer (<5) business relocations	• Less effective at pulling traffic from SR 129 • Impacts Chem-Dyne property • Bisects L.J. Smith Park, impacting up to five acres, including baseball diamonds and structures • Impacts large areas of active farmland (>20 acres) • Impacts large areas within the 100-year floodplain (>20 acres) • Greater ecological impacts (streams, wetlands, forested land) • Requires a new bridge structure over hydraulic canal • Redirects traffic through the North End neighborhood • Impacts Hose House No. 5 (recommended eligible for the National Register of Historic Places) • Most costly to construct (\$60-\$65 million)	Not Recommended
VINE STREET CONNECTION	• More effective at redirecting traffic from SR 129 • Avoids impacts to Chem-Dyne property • Avoids impacts to L.J. Smith Park • Avoids impacts to farmland, floodplain • Fewer ecological impacts (streams, wetlands, forested land) • Avoids need for additional structure over hydraulic canal • Less costly to construct (\$30-\$35 million)	• Requires more (55-65) residential relocations • Requires most (10-15) business relocations • Impacts Moser Park • Grading for railroad overpass will require pedestrians and vehicles to use alternate routes to access the roadway and nearby properties	Recommended Preferred Alternative
JOE NUXHALL CONNECTION	• More effective at redirecting traffic from SR 129 • Avoids impacts to farmland, floodplain • Fewer ecological impacts (streams, wetlands, forested land) • Avoids need for additional structure over hydraulic canal • Least costly to construct (\$25-\$30)	• Requires more (5-10) business relocations • Requires more (50-60) residential relocations • Impacts required on Chem-Dyne property • Redirects traffic through the North End neighborhood • Impacts Hose House No. 5 (recommended eligible for the National Register of Historic Places)	Not Recommended



East Connection

North Hamilton Crossing (NHX) • PID 115775 EAST SECTION





Alternatives Comparison: East Section

North Hamilton Crossing (NHX) • PID 115775

ALTERNATIVE	POSITIVES	NEGATIVES	RECOMMENDATION
EAST CONNECTION	• Improves traffic on SR 129 compared to the no build • Traffic benefits anticipated by removing through traffic from SR 129 to SR 4 on N Fair Ave in front of Garfield Middle School and Fairwood Elementary • Avoids impacts to farmland, floodplain, parks and trails • No business or residential relocations are necessary • Addresses congestion issues at intersection of Princeton Road and Hampshire Drive	• Will have ecological impacts (streams, wetlands, forested land) • Travels along the southern boundary of the Butler County Fairgrounds where some physical and proximity impacts are expected	Recommended Preferred Alternative



Recommended Preferred Alternative

North Hamilton Crossing (NHX) • PID 115775



West Section Evaluation Matrix

North Hamilton Crossing (NHX) • PID 115755

CATEGORY	NO BUILD ALTERNATIVE	NW WASHINGTON CROSSING	GORDON/RHEA CROSSING
PURPOSE & NEED			
Meets Primary and Secondary Needs	Does not meet Primary and Secondary Needs	Meets Primary and Secondary Needs	Meets Primary and Secondary Needs
CULTURAL RESOURCES			
NRHP-Listed Sites and Districts	N/A	None	None
NRHP-Recommended Eligible Sites	N/A	None	None
SECTION 4(F)/6(F) SITES			
Section 4(f)/6(f) Recreational Sites	N/A	Combs Park (bisects park, Great Miami River Water Trail (minimal impacts)	Beltline Trail (minimal impacts), Great Miami River Trail (minimal impacts), Great Miami River Water Trail (minimal impacts)
ECOLOGICAL RESOURCES			
Stream & Wetland Impacts	N/A	Great Miami River (~600 linear feet) unnamed stream (~60 linear feet) < 1 ac wetland impact	Great Miami River (~490 linear feet) no wetland impacts
Mussel Population Impacts	N/A	Freshwater mussels present (6 species) Further study and relocation required	Freshwater mussels present (8 species) Further study and relocation required
Suitable Wooded Habitatat (SWH) for Listed Bat Species	N/A	8-10 acres of tree clearing 3 Potential Maternity Roost Trees impacted	<0.5 acre of tree clearing No Potential Maternity Roost Trees impacted
FLOODPLAINS AND FLOODWAY			
100-year Floodplain and Floodway Impacts	N/A	<5 acres impact to 100-year floodplain <5 acres impact to Great Miami River floodway	<0.5 acre impact to 100-year floodplain <5 acres impact to Great Miami River floodway
HAZARDOUS MATERIALS			
Regulated Materials Review	N/A	None	4 sites that require further RMR action
DRINKING WATER RESOURCES			
Sole-Source Aquifer	N/A	Crosses the Greater Miami Sole Source Aquifer	Crosses the Greater Miami Sole Source Aquifer
COMMUNITY RESOURCES AND LAND USE			
Farmland Impacts	N/A	None	None
Markets/Grocery Stores	N/A	None	Adjacent to Riverview Food Mart
Schools	N/A	None	None
Houses of Worship	N/A	None	None
Community Cohesion	N/A	No impacts to community cohesion	No impacts to community cohesion
Minority/Low-Income Populations Impacts	N/A	No displacements of Minority and/or Low-Income Populations	No displacements of Minority and/or Low-Income Populations
RIGHT-OF-WAY			
Residential Relocations	N/A	0	0
Commercial Relocations	N/A	0	0
ENGINEERING CONSIDERATIONS			
Alternative Length (mi)	N/A	0.32	0.32
Design Speed (mph)	N/A	35	35
Design Considerations	Black Street Bridge is > 100 years old and will require replacement or closure to vehicular traffic	Bridge structure would be an additional 200' long	Requires 140' of 2-8' tall retaining wall
Number of New Structures	N/A	1 (Bridge over Great Miami River)	1 (Bridge over Great Miami River)
Major Utility Relocations and/or Issues	N/A	None	Requires relocation of overhead electric transmission lines West roundabout is near underground electric lines Proposed bridge pier crosses Great Miami River in vicinity of existing sanitary sewer East roundabout close to electric substation
TRAFFIC/MAINTENANCE OF TRAFFIC CONSIDERATIONS			
SR 129 Daily Traffic Diversion	None	8% to 13%	10% to 21%
Safety Improvements	None	New sidewalks and shared use paths will improve bicyclist and pedestrian safety	New sidewalks and shared use paths will improve bicyclist and pedestrian safety
Maintenance of Traffic Concerns	None	None	Construction of roundabouts may require temporary closures of North B St and SR 127
PRELIMINARY COST ESTIMATES			
Preliminary Construction Costs	N/A	\$45-\$50 million	\$35-\$40 million
CONCLUSION			
Recommendation	Not Recommended	Not Recommended	Recommended

Central Section Evaluation Matrix

North Hamilton Crossing (NHX) • PID 115755

CATEGORY	NO BUILD ALT	MIAMI ST	NORTH 9TH ST	VINE ST	JOE NUXHALL
PURPOSE AND NEED					
Meets Primary and Secondary Needs	Does not meet Primary or Secondary Needs	Meets Primary and Secondary Needs	Meets Primary and Secondary Needs	Meets Primary and Secondary Needs	Meets Primary and Secondary Needs
CULTURAL RESOURCES					
NRHP-Listed Sites and Districts	N/A	Adjacent to Greenwood Cemetery Potential for minor impact to property No graves, monuments or other features impacted	Adjacent to Greenwood Cemetery Potential for minor impact to property No graves, monuments or other features impacted	Adjacent to Greenwood Cemetery Potential for minor impact to property No graves, monuments or other features impacted	Adjacent to Greenwood Cemetery Potential for minor impact to property No graves, monuments or other features impacted
NRHP-Recommended Eligible Sites	N/A	None	Hose House #5 impacted	None	Hose House #5 impacted
SECTION 4(f)/6(f) SITES					
Section 4(f)/6(f) Recreational Sites	N/A	*Fairwood Elementary School (minimal impacts) Great Miami River Trail (minimal impacts) LJ Smith Park (bisects park)	*Fairwood Elementary School (minimal impacts) Great Miami River Trail (minimal impacts) LJ Smith Park (bisects park)	*Fairwood Elementary School (minimal impacts) Great Miami River Trail (minimal impacts) Moser Park (Impacts to structure)	*Fairwood Elementary School (minimal impacts) Great Miami River Trail (minimal impacts)
ECOLOGICAL RESOURCES					
Stream & Wetland Impacts	N/A	Hydraulic Canal (~450 linear feet) No wetland impacts	Hydraulic Canal (~450 linear feet) No wetland impacts	No stream or wetland impacts	No stream or wetland impacts
Mussel Population Impacts	N/A	Freshwater mussels present (7 species) Further study and relocation required	Freshwater mussels present (7 species) Further study and relocation required	No impacts to freshwater mussels	No impacts to freshwater mussels
Suitable Wooded Habitat (SWH) for Listed Bat Species	N/A	3-4 acres of tree clearing No Potential Maternity Roost Trees impacted	3-4 acres of tree clearing No Potential Maternity Roost Trees impacted	<1 acre of tree clearing No Potential Maternity Roost Trees impacted	<1 acre of tree clearing No Potential Maternity Roost Trees impacted
FLOODPLAINS AND FLOODWAY					
100-year Floodplain and Floodway Impacts	N/A	>20 acres impact to 100-year floodplain No impacts to floodway	>20 acres impact to 100-year floodplain No impacts to floodway	No impacts to floodplain/floodway	No impacts to floodplain/floodway
HAZARDOUS MATERIALS					
Regulated Materials Review (RMR)	N/A	7 sites require further RMR action Minimal property impacts at Chem-Dyne Site	6 sites require further RMR action Minimal property impacts at Chem-Dyne Site	9 sites require further RMR action	8 sites require further RMR action Minimal property impacts at Chem-Dyne Site
DRINKING WATER RESOURCES					
Sole-Source Aquifer	N/A	Crosses the Greater Miami Sole Source Aquifer	Crosses the Greater Miami Sole Source Aquifer	Crosses the Greater Miami Sole Source Aquifer	Crosses the Greater Miami Sole Source Aquifer
COMMUNITY RESOURCES AND LAND USE					
Farmland Impacts	N/A	>20 acres farmland impacts	>20 acres farmland impacts	No impacts to farmland	No impacts to farmland
Markets/Grocery Stores	N/A	One block east of North End Market Additional traffic between eastern portion of North End and Market	One block east of North End Market Additional traffic between eastern portion of North End and Market	Increases walking distance to Food Town for residents north of Vine Street Impacts to Minnicks Drive Thru	One block east of North End Market Additional traffic between eastern portion of North End and Market
Schools	N/A	Minimal right-of-way impacts to Fairwood Elementary School (no facilities impacted)	Minimal right-of-way impacts to Fairwood Elementary School (no facilities impacted)	Minimal right-of-way impacts to Fairwood Elementary School (no facilities impacted)	Minimal right-of-way impacts to Fairwood Elementary School (no facilities impacted)
Houses of Worship	N/A	None	None	Increases walking distance to Friendship United Baptist Church for residents south of new alignment Increases walking distance to the Hamilton Christian Family Center for residents north of new alignment	None
Community Cohesion	N/A	Bisects North End neighborhood, isolates residences south of Heaton and west of N 11th St	Bisects North End neighborhood	Isolates area north of Heaton and south of new Vine Connection from surrounding neighborhood Uses Heaton corridor (already a significant transportation route)	Bisects North End neighborhood
Minority/Low-Income Populations Impacts	N/A	Displacements of Minority and/or Low-Income Populations	Displacements of Minority and/or Low-Income Populations	Displacements of Minority and/or Low-Income Populations	Displacements of Minority and/or Low-Income Populations
*Fairwood Elementary School is potential Section 4(f). Coordination with the Official With Jurisdiction (OWJ) is required to determine if the school meets criteria for Section 4(f) protection.					

Central Section Evaluation Matrix

North Hamilton Crossing (NHX) • PID 115755

CATEGORY	NO BUILD ALT	MIAMI ST	NORTH 9TH ST	VINE ST	JOE NUXHALL
RIGHT OF WAY					
Residential Relocations	N/A	55-65	45-55	55-65	50-60
Commercial Relocations	N/A	<5	<5	10-15	5-10
ENGINEERING CONSIDERATIONS					
Alternative Length (mi)	N/A	1.36	1.42	1.05	1.12
Design Speed (mph)	N/A	35	35	35	35
Design Considerations	N/A	Requires steep grade between US 127 and railroad Fill required in areas near ChemDyne – excavation to be avoided where possible Requires construction in close to buildings Intersection design at N Fair Ave TBD by future study	Requires steep grade between US 127 and railroad Fill required in areas near ChemDyne – excavation to be avoided where possible Requires construction in close to buildings Requires 150' of 2-3' tall retaining wall Shared use path requires a reduced width to avoid impacts to cemetery Intersection design at N Fair Ave TBD by future study	Requires steep grade between US 127 and railroad Requires raising profile of Heaton Ave by 1-3' Requires construction in close to buildings Requires 150' of 2-3' tall retaining wall Shared use path requires a reduced width to avoid impacts to cemetery Intersection design at N Fair Ave TBD by future study	Requires steep grade between US 127 and railroad Fill required in areas near ChemDyne – excavation to be avoided where possible Requires construction in close to buildings Requires 150' of 2-3' tall retaining wall Shared use path requires a reduced width to avoid impacts to cemetery Intersection design at N Fair Ave TBD by future study
Number of New Structures	N/A	2 (railroad overpass & hydraulic canal crossing)	2 (railroad overpass & hydraulic canal crossing)	1 (railroad overpass)	1 (railroad overpass)
Major Utility Relocations and/or Issues	N/A	Potential electric substation impacts at US 127 Coordination and FERC Permit modification required for crossing of hydraulic canal due to hydroelectric plant	Potential electric substation impacts at US 127 Coordination and FERC Permit modification required for crossing of hydraulic canal due to hydroelectric plant	No significant issues	No significant issues
TRAFFIC/MAINTENANCE OF TRAFFIC CONSIDERATIONS					
SR 129 Daily Traffic Diversion	None	8% to 10%	8% to 10%	13% to 21%	13% to 21%
Safety Improvements	None	At-grade rail crossing at Heaton Street to be replaced by overpass Dedicated bicycle and pedestrian facilities to be constructed	At-grade rail crossing at Heaton Street to be replaced by overpass Dedicated bicycle and pedestrian facilities to be constructed	At-grade rail crossing at Heaton Street to be replaced by overpass Dedicated bicycle and pedestrian facilities to be constructed	At-grade rail crossing at Heaton Street to be replaced by overpass Dedicated bicycle and pedestrian facilities to be constructed
Maintenance of Traffic Concerns	N/A	No major maintenance of traffic concerns	No major maintenance of traffic concerns	Heaton Street to be temporarily closed during construction	No major maintenance of traffic concerns
PRELIMINARY COST ESTIMATES					
Preliminary Construction Costs	N/A	\$55-\$60 million	\$60-\$65 million	\$30-\$35 million	\$25-\$30 million
CONCLUSION					
Recommendation	Not Recommended	Not Recommended	Not Recommended	Recommended	Not Recommended

East Section Evaluation Matrix

North Hamilton Crossing (NHX) • PID 115755

CATEGORY	NO BUILD ALTERNATIVE	EAST CONNECTION
PURPOSE & NEED		
Meets Primary and Secondary Needs	Does not meet Primary and Secondary Needs	Meets Primary and Secondary Needs
CULTURAL RESOURCES		
NRHP-Listed Sites and Districts	N/A	None
NRHP-Recommended Eligible Sites	N/A	None
SECTION 4(F)/6(F) SITES		
Section 4(f)/6(f) Recreational Sites	N/A	None
ECOLOGICAL RESOURCES		
Stream & Wetland Impacts	N/A	No stream impacts, <0.5 ac wetland impact
Mussel Population Impacts	N/A	None
Suitable Wooded Habitat (SWH) for Listed Bat Species	N/A	4-6 acres of tree clearing No Potential Maternity Roost Trees Impacted
FLOODPLAINS AND FLOODWAY		
100-year Floodplain and Floodway Impacts	N/A	None
HAZARDOUS MATERIALS		
Regulated Materials Review	N/A	None
DRINKING WATER RESOURCES		
Sole-Source Aquifer	N/A	Crosses the Greater Miami Sole Source Aquifer
COMMUNITY RESOURCES AND LAND USE		
Farmland Impacts	N/A	None
Markets/Grocery Stores	N/A	None
Schools	N/A	Traffic benefits anticipated by removing through traffic from SR 129 to SR 4 on N Fair Ave at Garfield Middle School and Fairwood Elementary
Houses of Worship	N/A	None
Community Cohesion	N/A	No impacts to community cohesion
Minority/Low-Income Populations Impacts	N/A	No displacements of minority and/or low-income populations
RIGHT-OF-WAY		
Residential Relocations	N/A	0
Commercial Relocations	N/A	0
ENGINEERING CONSIDERATIONS		
Alternative Length (mi)	N/A	0.89
Design Speed (mph)	N/A	35
Design Considerations	N/A	Intersection design at N Fair Ave to be determined in future study New roadway would have steep grades near Sojourner Recovery Services Impacts to driveways and parking lot at Sojourner Recovery Services
Number of New Structures	N/A	None
Major Utility Relocations and/or Issues	N/A	No significant issues
TRAFFIC/MAINTENANCE OF TRAFFIC CONSIDERATIONS		
SR 129 Daily Traffic Diversion	None	8% to 21%
Safety Improvements	None	New sidewalks and shared use paths will improve bicyclist and pedestrian safety
Maintenance of Traffic Concerns	N/A	Construction of peanut roundabout requires temporary closure of Princeton Rd
PRELIMINARY COST ESTIMATES		
Preliminary Construction Costs	N/A	\$15-\$20 million
CONCLUSION		
Recommendation	Not recommended	Recommended