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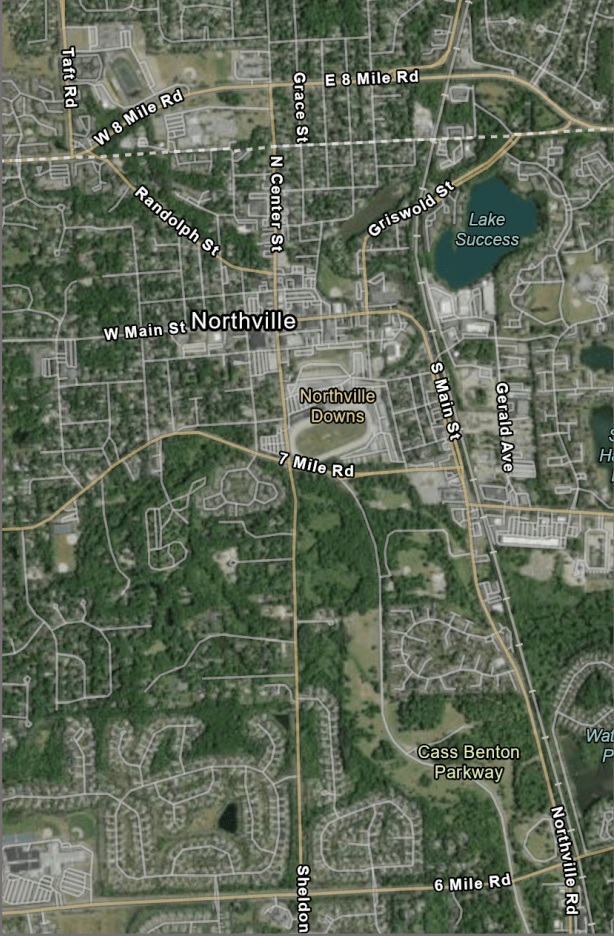
November 22, 2021



## Mobility Network Study



The City of Northville is experiencing exponential new growth due to the redevelopment of the Northville Downs Harness Racetrack and the Foundry Flask properties. These proposed projects offer the City a rare opportunity to daylight the river buried under the track, create new open spaces, and construct a Riverwalk along the middle branch of the Rouge River and the Johnson Creek with connections to regional trails.



Meeting the challenges the City of Northville faces with pending new developments, social district, closing streets, the desire to build an extensive Riverwalk, and changing traffic patterns will require thoughtful consideration of how to balance a desire for a walkable town and flowing traffic.

In 2020, the Northville City Council established the **River Restoration Task Force** and the **Sustainability Team**. Since then, the teams have been closely following proposed developments in the City to ensure that they achieve the community’s goals for economic development, clean water, recreational opportunities, walkability, and regional connectivity. The “Walkability” sub-team from the Sustainability Team and the sub-team from the River Task Force recently came together as a **Mobility Network Team** to review our work on routing, connectivity, and traffic. With a sense of urgency, the group was formed in the spirit of collaboration to meet our mutual goal of creating a “Livable” community.

The Sustainability Team had previously completed an extensive assessment of walkability factors of Northville’s current street system. The River Restoration Task Force has been studying how to integrate the Riverwalk within the network of existing and proposed streets.



- ❑ To outline the challenges related to safe walkable streets, effective traffic flow, and the creation of connections between city assets, business districts, and parks.
- ❑ To analyze the City mobility/connectivity in totality, while prioritizing areas requiring immediate attention.
- ❑ To request the City hire a consultant(s) to address solutions for specific critical action areas.

## Sustainability Team

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## Other Participants

Ryan McKindles/DDA/BRA

Mike Domine/DPW

### Key to other teams/responsibilities:

CH = Chairperson of Team

PC = Planning Commission

FM = Farmer's Market Task Force

FF = Ford Field Task Force

DDA = Downtown Development Authority

DPW = Department of Public Works

BZA = Board of Zoning Appeals

BRA = Brownfield Redevelopment Authority

- ❑ The Mobility Network Team respectfully recommends the City Council take action to secure a Mobility Integration consultant to review proposed solutions for the “Action Sites” that have been identified in this study.
- ❑ The consultants will need experience developing design solutions that provide integration of safe pathways for walking, cycling, and vehicular movement, while also providing access to parking.
- ❑ The qualified consultants must have experience working with County and State Road agencies, public utilities, and railroads.

## Mobility Network Summary & Conclusions

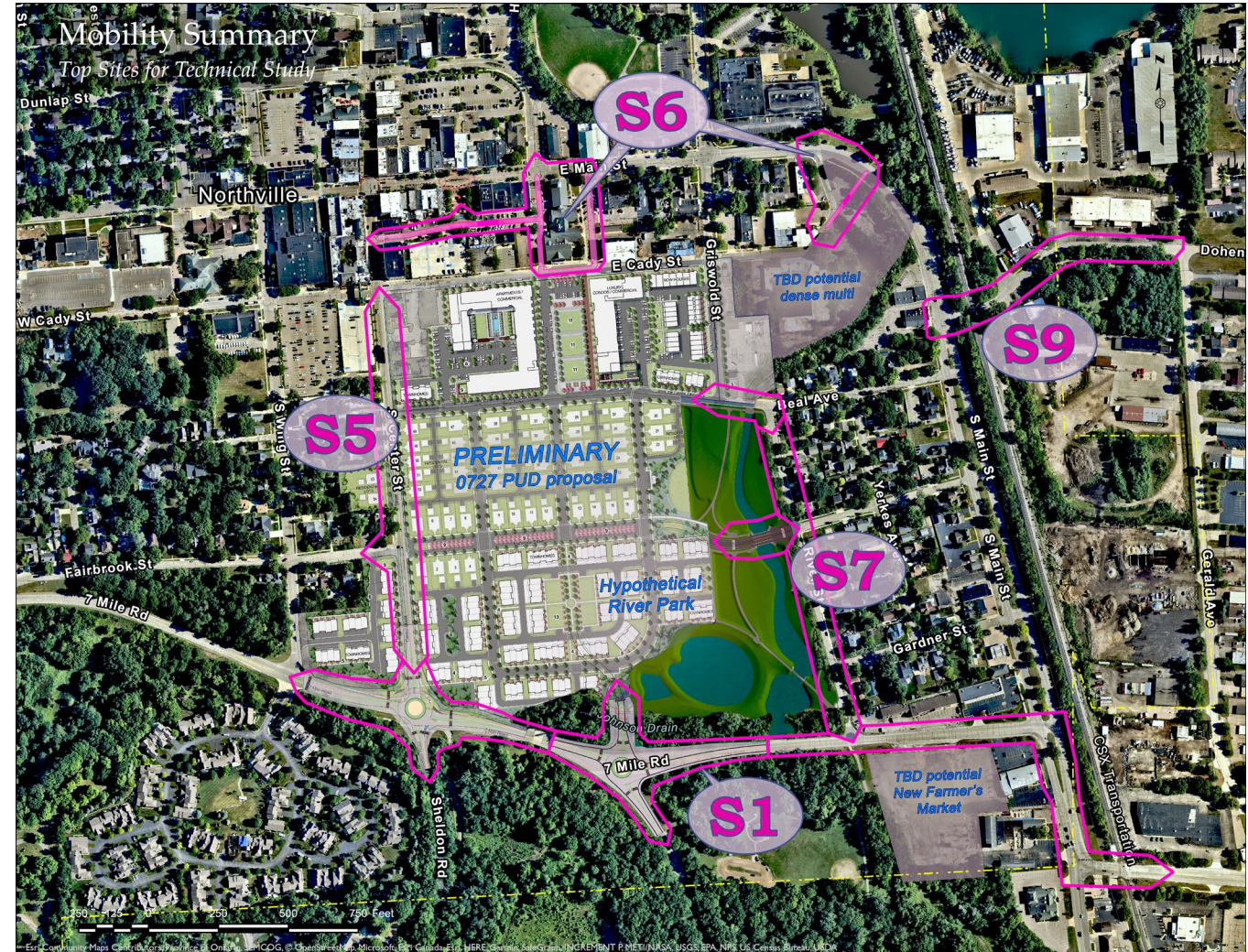
Unlike modern cities with streets laid out in grid patterns and widths that accommodate commercial vehicles, the roads of Northville evolved over time following the rivers, lakes, and streams where early pioneers settled.

- During the 1800's, the Village of Northville became a major manufacturing center growing out of its numerous mills that harnessed the waterpower of its flowing rivers.
- Freeways were built over time to improve shipping, railroad, and trucking routes. Pedestrian and non-motorized routes were not integrated into these roadways or railroad designs.
- Increased traffic flow and pedestrian needs associated with the recently proposed developments at Northville Downs Harness Racetrack and the Foundry Flask site are a major concern for the City.
- Improving our distribution of traffic and 'mobility network' connections is essential to addressing these concerns.
- The Northville Mobility Network Team has studied several sites where developing an integrated solution would improve traffic flow, pedestrian safety and non-vehicular trailway connections.
- The Northville Mobility Network Team has studied several sites where developing an integrated solution could improve traffic flow, pedestrian safety, and non-vehicular trailway connections.
- From these, the study prioritized the following five "**Action Sites**" for proposed improvement.



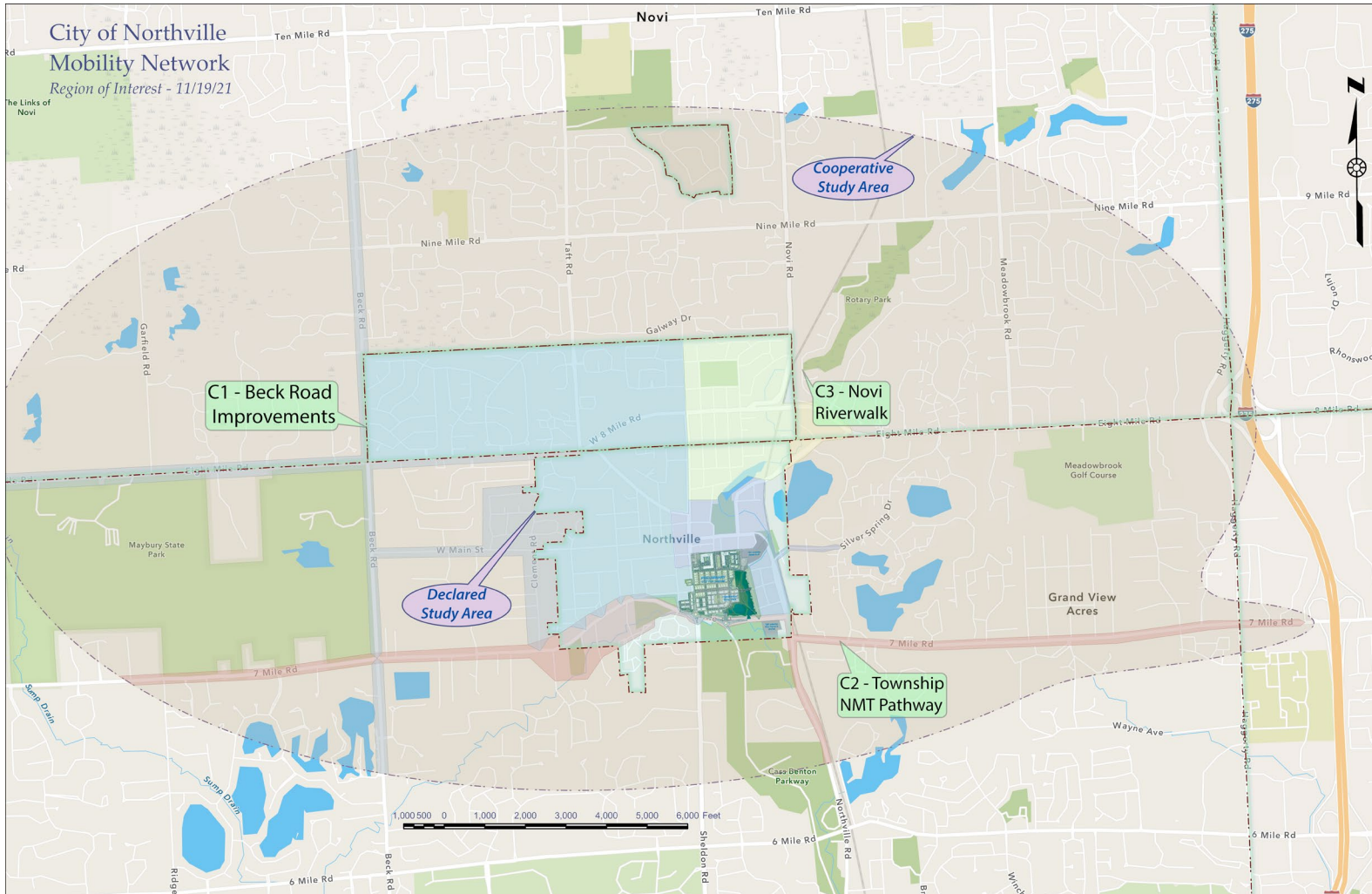
## Resulting “Action Sites” of Top Concern

- 1. Seven Mile Corridor (S1):** Improvements are to treat the length of Seven Mile Road from Main Street to Wing Street. Special attention is needed for the intersection of Hines Drive and Seven Mile Road, with a possible southern connection to the New Downs site. The entrance to the city at the intersection of Seven Mile Road and Center Street requires thorough consideration to ensure traffic flow while providing pedestrian and bike path integration.
- 2. South Center Street (S5):** Landscaping, bike lanes, and cross walk improvements are to be recommended to address walkability concerns along the road length, particularly at the Fairbrook Street and New Beal Street intersections.
- 3. Old Core (S6):** The heart of the City Business District has several roads that play an important role in the distribution of traffic. Improving the traffic flow and integration of pedestrian and bike connections is crucial to handling anticipated increased traffic loads from the new developments. Specifics include:
  - a. Cady Street** from Center Street to Main Street, needs to be evaluated for traffic capacity, parking, and pedestrian interface.
  - b. Hutton and Church Streets** from Main Street to Cady Street need to be evaluated for capacity, parking layout and direction of flow in that they are a major connector from the new developments to the business core.
  - c. Mary Alexander Court**, a one-way street, contributes to congestion on Center Street and needs to be re-evaluated for direction of flow.
  - d. Cady Street** alignment needs special attention as it intersects South Main Street for improved safety and traffic flow.
- 4. River Street (S7):** Aligning to the new Downs Project, this street will now play a heightened role as a connector to the site and the exiting regional trails within Hines Park. An evaluation of the type of connection, whether enhanced vehicular or multi-use bridge, is needed. An overall improved street cross section that includes two-way traffic, on-street parking, and walkways is also needed.
- 5. Doheny Safe School Passageway under Railroad (S9):** Accommodation is needed from CSX Railroad and Wayne County who have jurisdiction over the rights-of-way at this intersection. This effort will entail designing a box culvert opening to allow pedestrian and bike traffic under the railroad track separate from the Doheny/S. Main St. vehicular passage. It will also require the design of a non-motorized access route along Doheny Drive to the Silver Springs Elementary School.



Downtown Northville with pending Development Concepts and calling out **Action Sites** determined by this study

City of  
**Northville**  
Michigan



The Mobility Network Team concentrated on the areas that would be affected by the proposed developments, plus current and potential long-term street closures.

The criteria used to prioritize the road and intersection systems within each subnet was as follows:

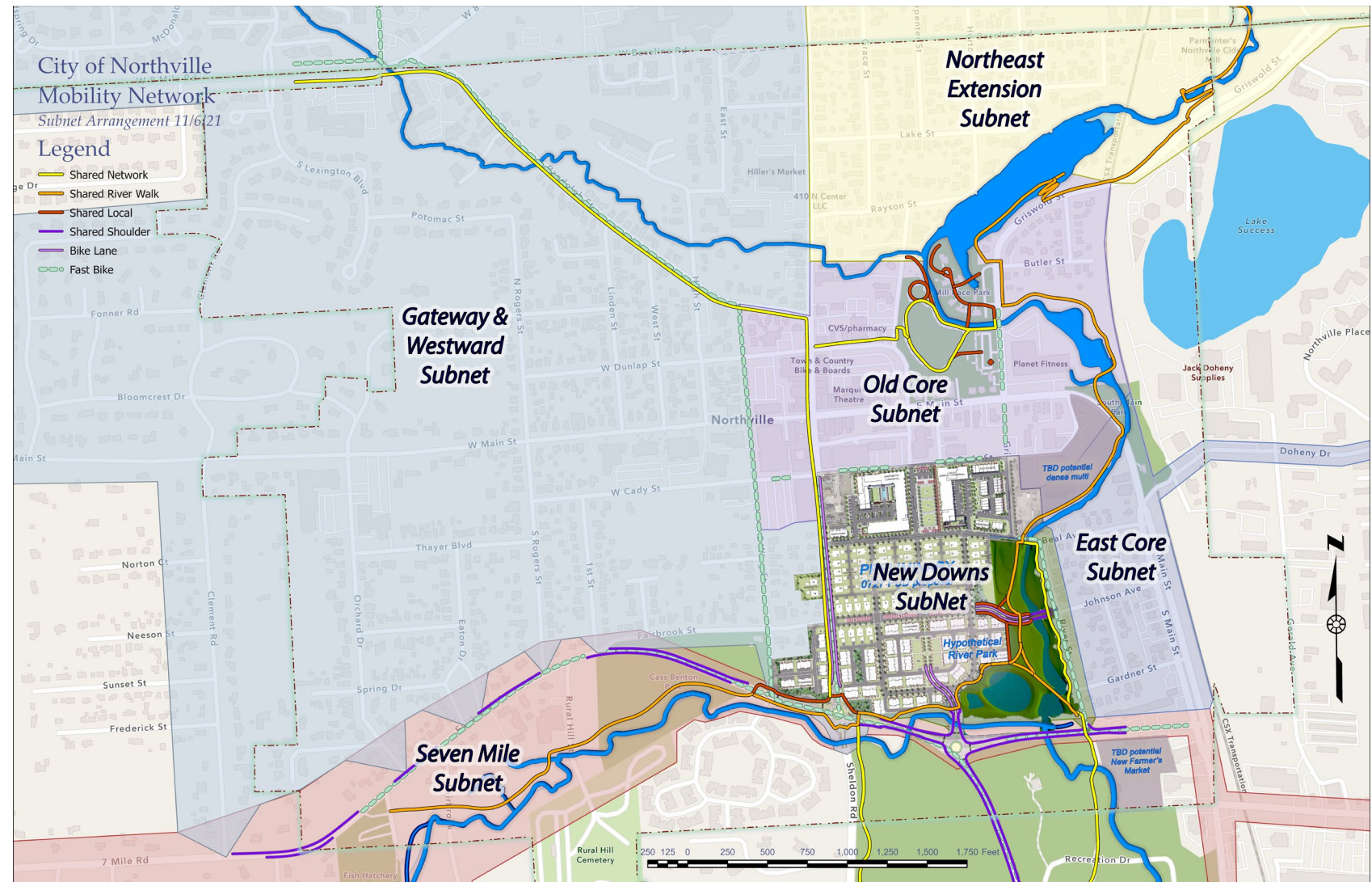
- How well do these roads and intersections function currently?
- How do these roads and intersections relate to proposed major development in the City?
- Is long-lead time design and construction likely needed to achieve the City's "livable" goals?

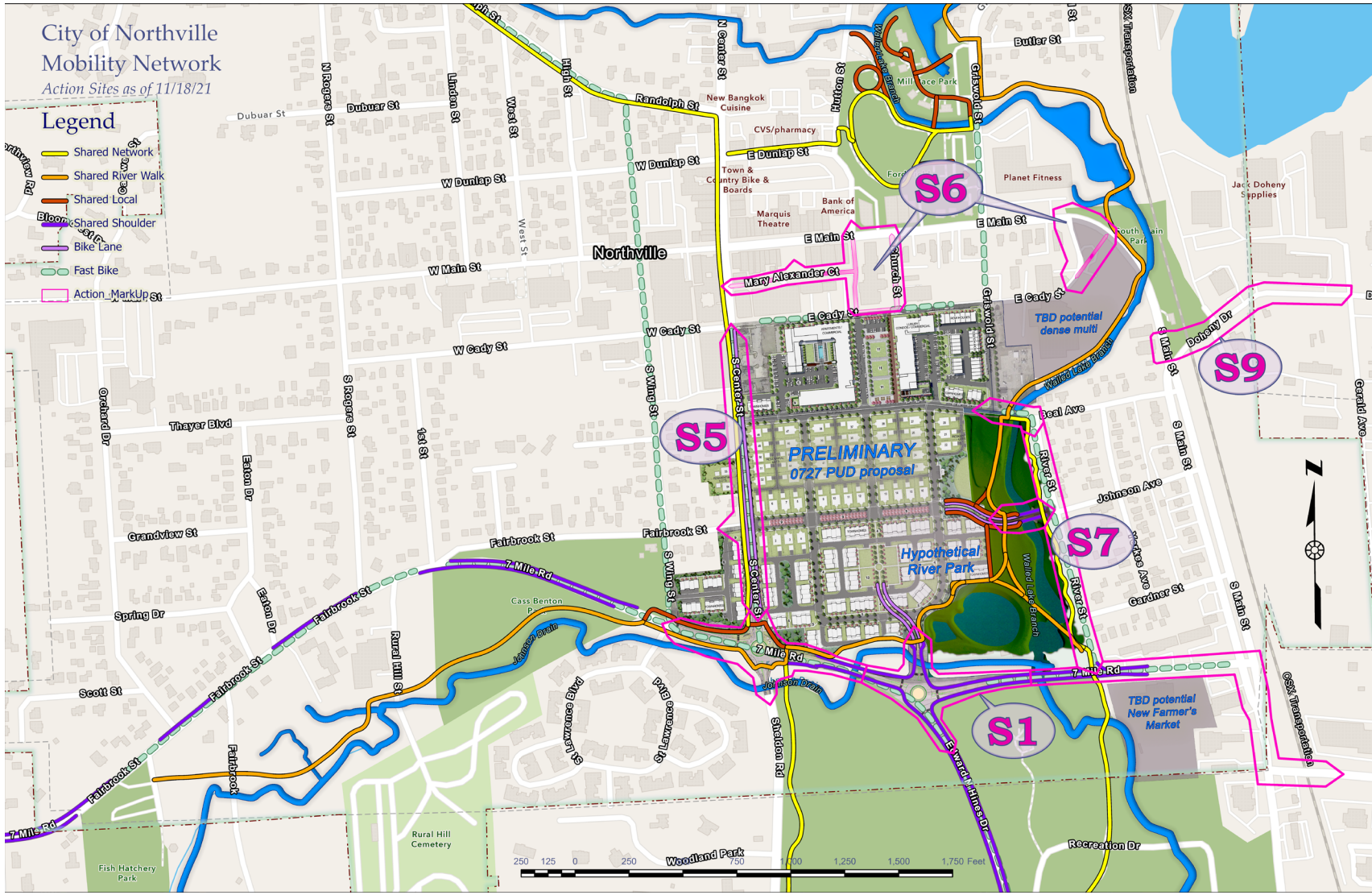
From this evaluation, a list of high priority "Actions Sites" were identified along with specific challenges and opportunities for intervention.



- Seven Mile Subnet
- Gateway & Westward Subnet
- Old Core Subnet
- East Core Subnet
- New Downs Subnet
- Northeast Extension Subnet\*

\* No present Action Sites in this SubNet





## Action Sites

1. Seven Mile Corridor (S1)
2. South Center Improvements (S5)
3. Old Core Improvements (S6)
4. River St. Neighborhood Parkway (S7)
5. Doheny Safe School Passageway (S9)

## Cooperation Site

- C1. Beck Road Corridor Improvement  
(see pages 7 and 29)

*The Mobility Network Team will cooperate with and report out from the ongoing work of the 'Beck to the Future' Task Force. They execute the actual project.*

<b>S1 Seven Mile Corridor</b>		
1.1	A02	Seven Mile RR Grade Crossing Relief
	A04	Main/Seven West Side (NB left turn)
	A05	Seven Mile 500 Block (Main->River)
	A06	RiverSt/Seven Intersection Safety
1.2	A10	Hines-NewDowns/Seven Pose: New all-mode intersection
1.3	A11	Sheldon-Center/Seven Pose: New all-mode intersection and Gateway
<b>S5 South Center Improvements</b>		
	B01	South Center Passageway
	B02	Center/Fairbrook-Downs(SW)
	B03	Center/NewFairbrook-Downs(East)
	B05	Center/NewBeal - Downs (East)

<b>S6 Old Core Improvements</b>		
	C02	Center/Cady (East Side)
	C03	Center/Cady (West Side)
	C20	Wing Bypass CadyLot-to-Main-to-Dunlap-to-Center
	C50	Griswold/E.Main (from north)
	C55	Cady-from-S.Main-to-Center
6.1	C46	Church Cady-to-Main
	C40	Hutton/Main (north and south)
	C41	MaryAlexander Hutton-to-Center
	C42	Hutton St. Cady-to-Main
6.2	C58	Cady/S.Main Intersection

<b>S7 River St. Neighborhood Parkway</b>		
7	E01	River Street Passageway
7	E03	Griswold-River/Beal Bridge Joggle
7.1	E10	River St/Fairbrook Connection Pose: New All-Mode or NMT Connection
<b>S9 Doheny Safe School Passageway</b>		
	D10	Doheny Passageway NMT Content
	D11	Main/Doheny Intersection Safety
	D12	Doheny RR Underpass NMT Provision
<b>External Coordination Tasks</b>		
C1	B30	Beck Road Corridor Improvement

**NOTE:** Line items are specific intersections and passageways comprising or affecting each **Action Site**.

## Seven Mile Corridor Entrance

### Description & Concerns

**CURRENT CONDITIONS:** Seven Mile Road is a major entryway into the City. The Seven Mile intersection is offset at S. Main Street, causing confusion. In order to connect to Seven Mile, a driver must turn on Main Street and cross an island to continue. There are no pedestrian or bike path accommodations along Seven Mile or Main Street.

**LEFT-TURN BACKUP:** Much of this northbound flow turns left (west) onto Seven Mile. No signal or special control exists here. As a result, left-turn traffic backs up, leading to lane jockeying and the blocking of Seven Mile northbound turners. This has been a long-standing pinch point with significant collision counts. Additionally, there is no bike or pedestrian crosswalk or signage.

**SEVEN MILE BETWEEN S. MAIN AND RIVER ST:** Paving is continuous from parking lot to driving lanes on the north & south sides of 7 Mile. With no curb and gutter, dedicated entryway, or greenbelt, there is no stormwater runoff absorption or control. This results in heavy sheet flow and erosion. No sidewalks or shoulders exist for bikes and pedestrians (NMT).

**AT RIVER STREET:** The River Street approach to Seven Mile rises due to a significant grade change resulting in ponding of storm water. River Street serves as a connector to the Hines Park Bikeway with only a faded, non-signalized crosswalk, making it dangerous for pedestrians and cyclists trying to connect between River St. and Hines Park. (see Action Item S7, River St. Neighborhood Parkway). Vegetation over-growth blocks sightlines from River Street to westbound Seven Mile.

### 1.1 Seven Mile Corridor, Eastern Entrance Segment

A02	Seven Mile RR Grade Crossing Relief	Separate Mobility Network Task outside engineering scope of work Crossing and barrier width has no margin beyond car lanes. Engage CSX, County, and Twp toward robust NMT pathway by widening or other means.
A04	Main/Seven West Side (NB left turn)	Relieve NB Main-to-Seven LoS Pinch Point: consider left turn lane & signal. Improve Pedestrian and Bike Marks/Signs/Ctrls. Integrate non-motorized pathways with Township in time.
A05	Seven Mile 500 Block (Main->River)	Shape terrain and pavement to control flooding. Ensure at least good shared shoulder; Consider Shared Sidewalk. Comprehend entry/exit to potential Farmer's Market.
A06	RiverSt/Seven Intersection Safety	Fix sightlines (cut back growth); consider River St. sunken approach. Strengthen Seven Mile Crosswalk (consider active signal and/or refuge island). Complete intersection Marks/Signs/Ctrls and wayfinding/pathway signage.



**NOTE:** “NMT” (non-motorized transport) is used to represent all variations of non-motorized users. Existing conditions shown in photo.

## Seven Mile Corridor Entrance (cont.)

### Opportunities & Objectives

**SEVEN MILE CORRIDOR:** Seven Mile Road is a primary connector for non-motorized vehicles and pedestrians entering Hines Park and will serve as the interface with the proposed Northville Riverwalk.

Bike and pedestrian markings and signs to enhance safety are needed.

Current planning efforts are underway to create bikeway connections along Seven Mile from Legacy Park to the east to Hines Park, Fish Hatchery Park, and Maybury State Park to the west.

**MAIN/SEVEN NB LEFT TURN:** Prior traffic study recommends a northbound left turn lane on Northville Road/S. Main with signal.

To facilitate a safe left-hand turn from Northville Road/S. Main to westbound Seven Mile, consider eliminating the boulevard initiation between the Seven Mile eastward and the Seven Mile westward.

Reduce travel lanes from 4 to 3 with a dedicated center turn lane.

**SEVEN MILE (Main to River):** A new cross section for Seven Mile Road that separates the driving lanes from the parking lots is recommended along with buffered sidewalks and bike paths.

Wide paved shoulders would also serve the bike community.

**CROSS WALK AT RIVER ST:** Both volume and speed of vehicular traffic argue for a stronger crosswalk at River Street as it crosses Seven Mile. HAWK signalization and/or a refuge island would provide additional needed safety.

**STORMWATER FLOODING:** Provision for stormwater management should be a parallel task that especially addresses frequent ponding of water on River Street approaching Seven Mile.

### 1.1 Seven Mile Corridor, Eastern Entrance Segment

A02	Seven Mile RR Grade Crossing Relief	Separate Mobility Network Task outside engineering scope of work Crossing and barrier width has no margin beyond car lanes. Engage CSX, County, and Twp toward robust NMT pathway by widening or other means.
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## Seven Mile Corridor Entrance (cont.)

### Seven Mile Railroad Grade Crossing

#### Description & Concerns:

The Seven Mile crossing over the railroad roadbed is limited to the width of driving lanes with no provision for pedestrians or cyclists.

The barricade arms of the crossing gate in its current layout do not allow for the inclusion of a pedestrian crossing.

This completely blocks connection of the sidewalk along Seven Mile to the sidewalk along S. Main Street and Northville Road (present and anticipated).

#### Opportunities & Objectives:

Increase span of crossing gate barricade to provide room for at least one Shared-Width NMT passage. Adjust motor guardrails accordingly.

If only one side is possible, anticipate provision for NMT crossing to appropriate travel side when clear of grade crossing constraint.

### 1.1 Seven Mile Corridor, Eastern Entrance Segment

A02

Seven Mile RR Grade Crossing Relief

Separate Mobility Network Task outside engineering scope of work  
Crossing and barrier width has no margin beyond car lanes.  
Engage CSX, County, and Twp toward robust NMT pathway by widening or other means.



**NOTE:** Photos of existing conditions

# Hines – Downs /Seven Intersection

## Description & Concerns

**CURRENT CONDITIONS:** Seven Mile intersects Hines Drive in a “Y” formation that presents left turn hazards from both Seven Mile onto Hines Drive and vice versa. As a truck route, the geometrics of this intersection are inadequate for commercial vehicles turning radii.

**HINES AND SEVEN INTERCHANGE:** Eastbound traffic on Seven Mile from Center Street has through-traffic right-of-way at the intersection with Hines Drive, while turning left in front of vehicles northwest-bound on Hines. Northwest traffic on Hines Dr. must stop at the intersection. Confusion and false start-or-stop are routine adding to backup of northwesterly traffic on Hines.

**CROSSOVER/MERGE SECTION:** West of the intersection, there is a lane crossover/merge of unimpeded Seven Mile traffic with uneven fits-and-starts of Hines Dr. traffic, all jockeying to align with chosen direction lane at Center Street.

**NO PROVISION FOR NMT:** Aside from reasonably wide shoulders on Hines Parkway, there are no provisions for NMT at the Seven Mile intersection – no crosswalks or bike lanes. It is unsafe for pedestrians and cyclists to cross westbound Seven Mile. Eastbound Seven Mile at the intersection is nearly as fast. Walking to Hines Park is unsecure because the drivers are distracted, and southbound cars are at speed limit or higher mph. Further, northbound bicycles on this popular bike route cross or merge with full-speed vehicle streams a total of three times before making it to Center Street.

**SOUTH DOWNS DEVELOPMENT AND SEVEN MILE:** The southern boundary of the Down’s property runs over 1,500 feet from River St. to Center St. paralleling Johnson Creek with no access point. Hines Dr. merges into Seven Mile about midway in this span. Both roads are major entryways into the city and the point of their merger during peak times results in backups. Additional loads on these roads from the new developments will compound the problem. Additional access route directly into the new Downs neighborhood appears beneficial.

**FUTURE TRAFFIC SPIKE:** Without a north-south connection from the Seven Mile/Hines Dr intersection through the Downs property, traffic generated by the proposed new development can only enter or exit at Fairbrook and Center or northward toward Cady, where LOS is already a concern.

### 1.2 Seven Mile Corridor, Hines Parkway Intersection

A10	<b>Hines-NewDowns/Seven</b> Pose: New all-mode intersection	Relieve LoS FAIL with new balanced-direction, multi-modal intersection. Incorporate essential dispersion pathway for New Downs (relieve other LoS FAILS). Investigate, assess, and explain potential for roundabout vs. cruciform type. Ensure Shared Shoulders; Crosswalks; Marks/Signs/Ctrls per intersection type.
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**NOTE:** Photo of existing conditions

## Hines – Downs /Seven Intersection (cont.)

### Opportunities & Objectives

**TRAFFIC OBJECTIVE:** Much like the human body circulation system, this study recognizes that the “Motor Network” must flow vehicles evenly – that is, unimpeded at a regular, steady pace in a safe manner that interfaces with pedestrians and bikes. This requires ample and nearly immediate grid-like connections across all Subnets of our traffic network; and to the regional systems beyond.

**NEW CONNECTIONS REQUIRED:** The proposed development at the Downs and Foundry Flask sites will introduce new traffic and routing patterns. The dispersement of these traffic volumes evenly through the city core is of great concern.

To address the concern that traffic will be funneled to Center and Cady Streets, a complete analysis is needed of potential road connections to the existing road network.

Making minor alterations to Center and Cady Street will not provide adequate dispersion of traffic. Potential access to the Downs development from the south along Seven Mile or the east along River Street must be carefully considered.

**TAKE CARE OF NMT:** All proposed roadway connections need to ensure full NMT capability in the new design. The configuration might be roundabout or conventional cruciform, each having their own best practices for NMT safety and convenience. Expert analysis and specification of alternatives (along with guidance) is essential to this task.

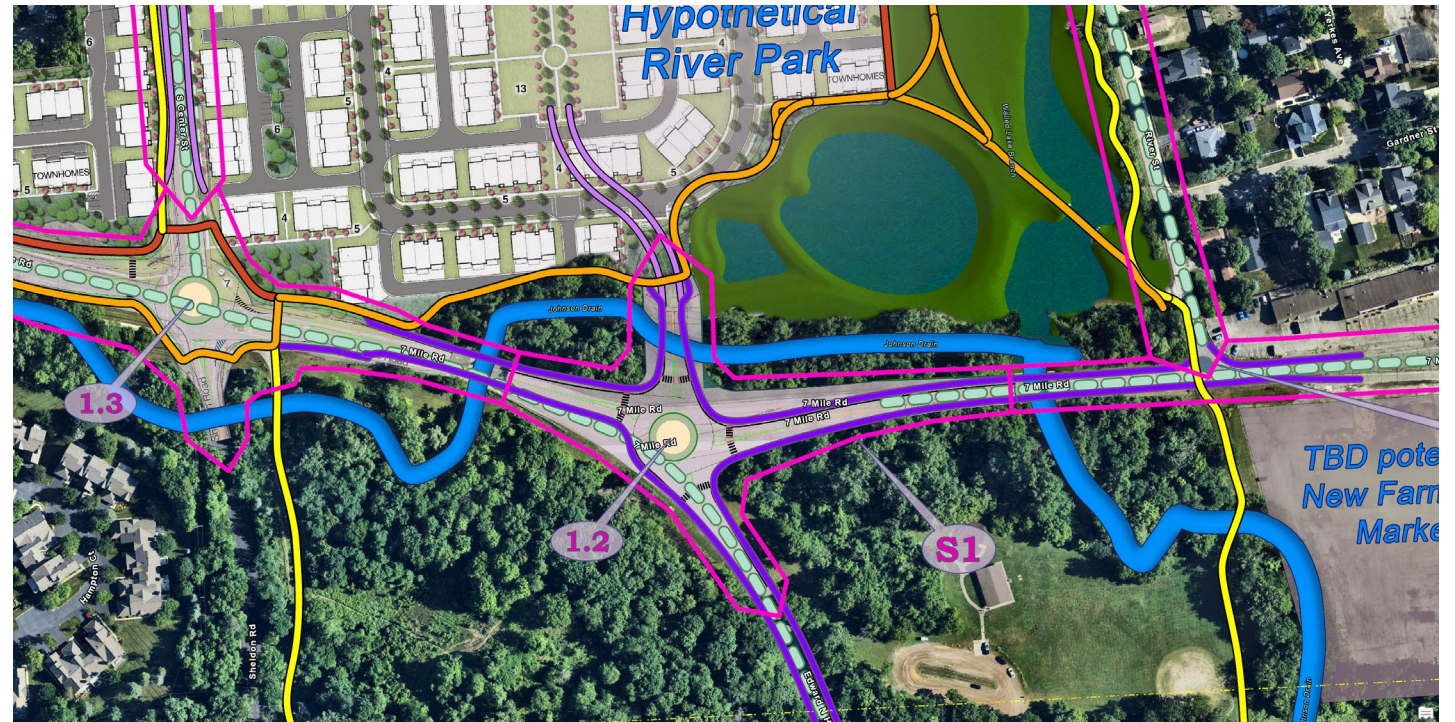
**FALLBACK:** If a motor connection is rejected, an alternative fully safe and capable NMT connection scheme, including upgrade of present Seven Mile NMT pathway shortfalls, should be sought.

### 1.2 Seven Mile Corridor, Hines Parkway Intersection

A10

Hines-NewDowns/Seven  
Pose: New all-mode intersection

Relieve LoS FAIL with new balanced-direction, multi-modal intersection.  
Incorporate essential dispersion pathway for New Downs (relieve other LoS FAILS).  
Investigate, assess, and explain potential for roundabout vs. cruciform type.  
Ensure Shared Shoulders; Crosswalks; Marks/Signs/Ctrls per intersection type.





# Sheldon-Center/Seven Intersection

## Description & Concerns

**CURRENT STATUS:** Hines Drive and Seven Mile carry regionally significant east-west traffic flows, Seven having the added designation as a Truck Route. Sheldon carries regionally significant north-south flows and becomes Center Street serving much of the core city. These two flows cross and mix at Sheldon/Center & Seven Mile (NOTE: We label Seven Mile as the continuous “highway” run from S. Main to Clement, as does Google Maps).

**PRESENT CONCERNS (TRAFFIC):** The convergence and redirection of these flows is a multi-directional, multi-peak, significant duration traffic-service concern. The 2018 Downs PUD Study predicts LOS (Level of Service) FAILS with new development for the following: Eastbound Seven to southbound Sheldon; northbound Sheldon to eastbound Seven; southbound Center to westbound Seven; and as an overall score. Prior lived experience of traffic here is unsatisfactory. Notably, these LOS grades were not as poor as the final prediction. Crash data is another indicator of safety problems.

**PRESENT CONCERNS (NMT):** While there are serviceable connecting sidewalks (though not of ‘shared-use’ width), only faded remnants of crosswalk markings remain with no warnings to motorists to yield or stop for crosswalks. The southbound Center bike lane disappears into high-speed jockeying among right-turn and thru cars, while avoiding stacked-up left turners. Many right-turners hold their speed as they surge over the crosswalk. There is no safe space for southbound left-turning bikes heading to Hines on this roadway.

**OTHER CROSSWALK ISSUES:** The other crosswalk directions are equally threatened by timing-challenged, high-speed turn traffic as it crosses oncoming flows, often hard to anticipate due to lack of turn lanes north and south. These issues compound and intensify with the planned shared-pathway Riverwalk being routed right through this intersection.

**SUMMARY:** With the goal of “Walkability” as the backbone of our interface with Hines Park & Parkway, Sheldon Path, and expected connections to parks further east and west, this intersection is a keystone-impediment, contributing to a broad, outdated, and highway-centric NMT shortfall all along the Seven Mile Corridor.

### 1.3 Seven Mile Corridor, Sheldon-Center Intersection

A11	<b>Sheldon-Center/Seven</b> Pose: New all-mode intersection and Gateway	Relieve LoS MULTI-FAIL with new direction & turn capable multi-modal intersection. Participate in downtown and regional dispersion (relieve other LoS FAILS). Investigate, assess, and explain potential for roundabout vs. cruciform type. Ensure sound Shared Sidewalks; Crosswalks; Marks/Signs/Ctrlrs per intersection type.
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**NOTE:** Photo of existing conditions

## Sheldon-Center/Seven Intersection (cont.)

### Opportunities & Objectives

**OBJECTIVE 1:** As with Action Item S1.2, we seek a comprehensive all-mode solution to this long-standing deficiency. It is certain to worsen with impending development, both for vehicles and the full spectrum of NMT, if not comprehensively addressed.

**OBJECTIVE 2:** We seek a safe, flow-capable intersection for all users all day, every day. We also must ensure full NMT capability and protections.

**CONFIGURATION CHOICES:** The configuration might be roundabout or conventional cruciform, each having their own best practices for NMT safety, comfort, and convenience. We note that prior analysis (by OHM) has pointed to a “two-lane top” for volume if a roundabout, a further challenge to NMT. Expert analysis and specification of best-practice alternatives is essential to this task.

**CITY GATEWAY:** Beyond capable function, please note that this intersection is intended as a southern Gateway to the City of Northville. Coordination with voices of architecture and aesthetics will be required.

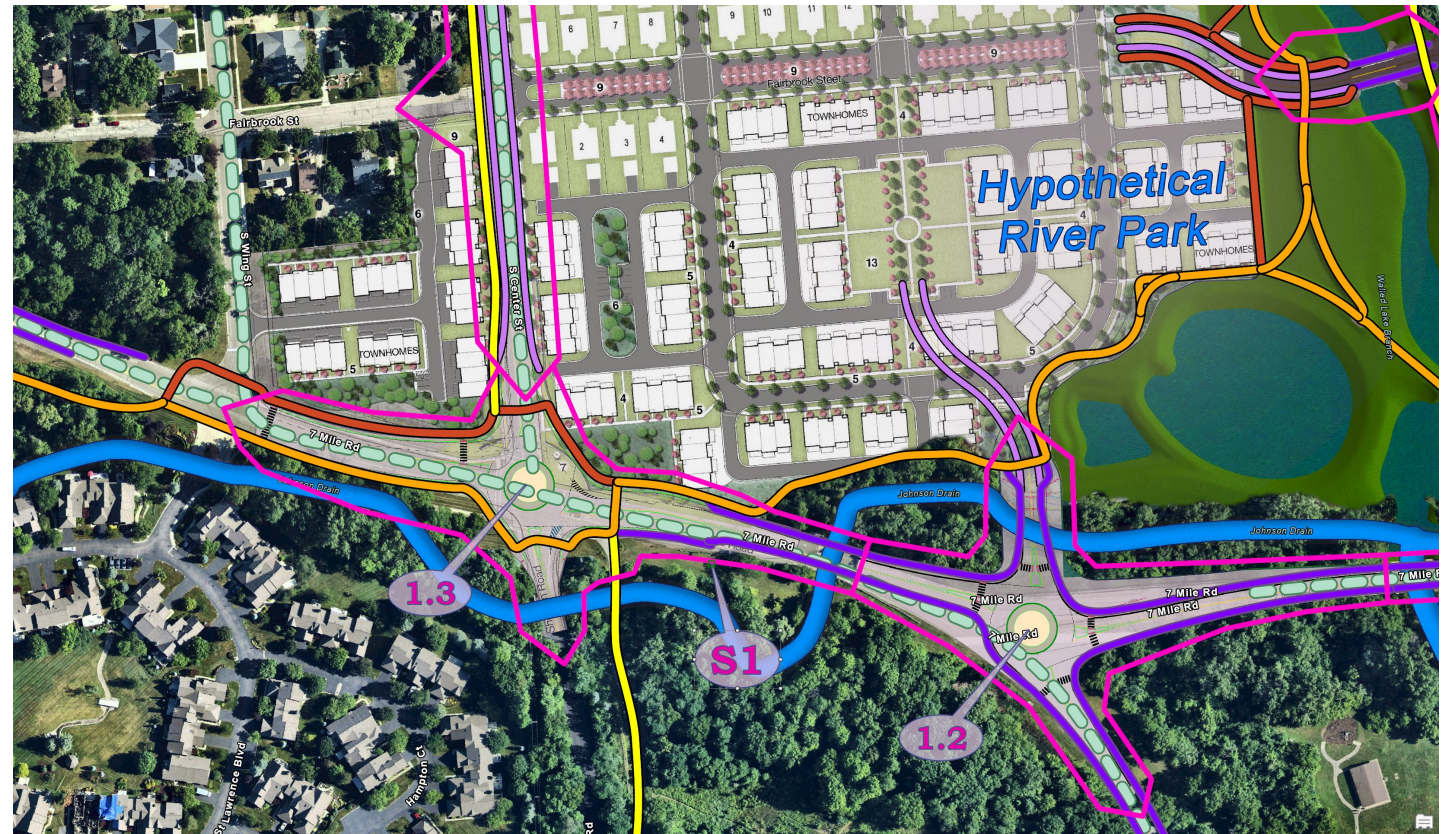
### 1.3 Seven Mile Corridor, Sheldon-Center Intersection

A11

#### Sheldon-Center/Seven

Pose: New all-mode intersection and Gateway

Relieve LoS MULTI-FAIL with new direction & turn capable multi-modal intersection. Participate in downtown and regional dispersion (relieve other LoS FAILS). Investigate, assess, and explain potential for roundabout vs. cruciform type. Ensure sound Shared Sidewalks; Crosswalks; Marks/Signs/Ctrls per intersection type.



## South Center Improvements

### Description & Concerns

#### CURRENT CONDITION:

South Center Street from Seven Mile to Cady is the major 'thoroughfare' into town from the south and east. Prior to Covid and the street closures at Center and Main Streets (see S6 Old Core), daily traffic counts were in the mid-thousands. This included delays into Seven Mile in the AM and going north toward Main in the PM. The worst delays (actual LOS Fails), were drivers trying to join or cross center from Fairbrook, Cady, and Mary Alexander (by analogy to Cady). South Center provides the only bike lanes in town .

#### IMPACT OF NEW DEVELOPMENTS WITH STREET CLOSURES:

The intersections of Cady and Mary Alexander with Center Street are primarily addressed in Action Item S6 (Old Core). The Downs development will add an extended Beal Street connection and vastly impact Fairbrook with new development on both sides of Center. The misalignment of Cady Street at the intersection of Center Street will present additional challenges as traffic increases along Center.

#### CENTER STREET GATEWAY:

Center Street serves as the gateway and south entrance into the City. Sidewalk treatments, lighting, and landscaping will have major impact for city vibrance as well as 'Walkability'. The preservation of the existing bike lanes is desirable to the community at large.

### S5 South Center Improvements

B01	South Center Passageway	Consider Speed Reduction, Lane count/width; Parallel Parking; BikeLane; Curb Buffer. Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights. Consider some stretch of boulevard or turnaround. Ensure ample Street Trees.
B02	Center/Fairbrook-Downs(SW)	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.
B03	Center/NewFairbrook-Downs(East)	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.
B05	Center/NewBeal - Downs (East Only)	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.



NOTE: Photo of existing conditions

## South Center Improvements (cont.)

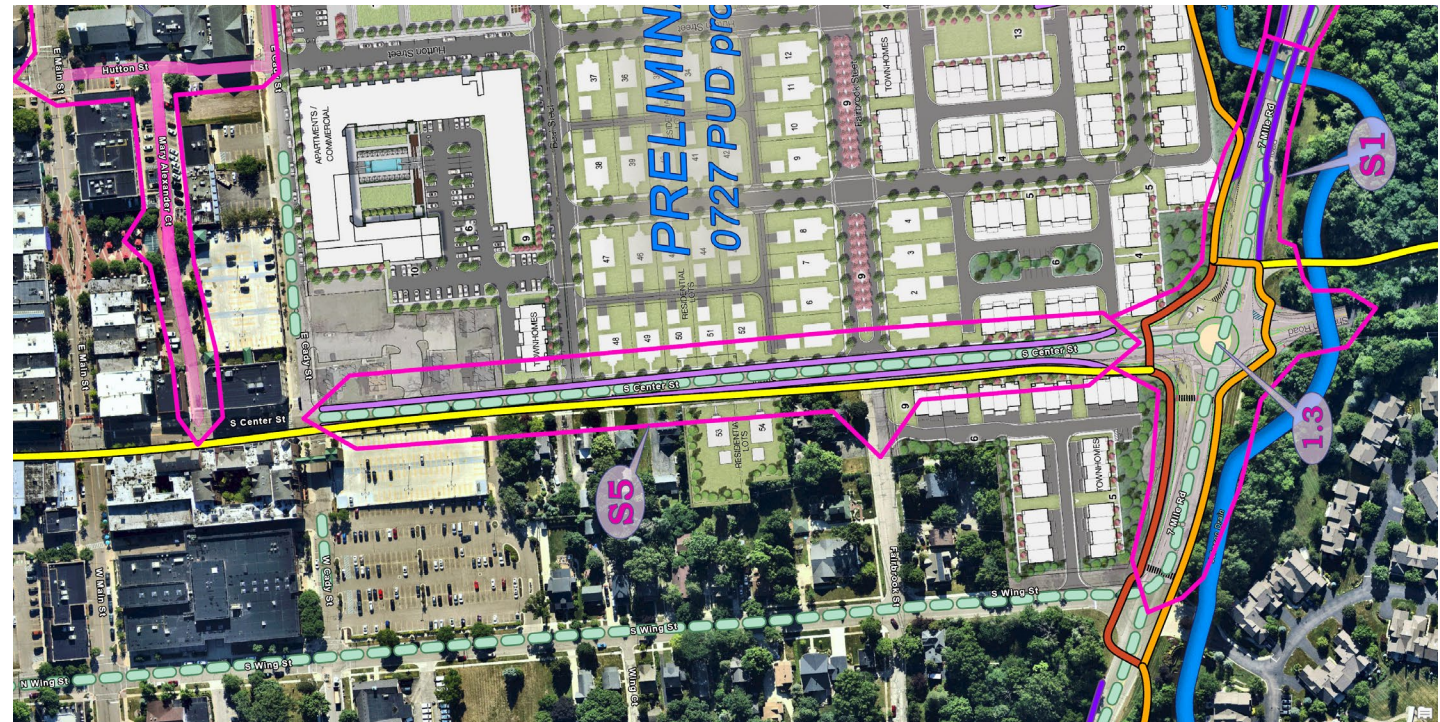
### Opportunities & Objectives

#### WALKABILITY AND TRAFFIC IMPROVEMENTS:

1. Evaluate the inclusion of wider sidewalks, buffers, parallel parking, street trees, lighting, directional signage...and perhaps even a section of boulevard or other way to easily turn around.
2. Design strong crosswalk alternatives for safety. Consider signals and/or refuge islands if speeds and volumes warrant it.
3. Review and establish a safe speed limit below 'thoroughfare' speed and discourage increased volume along Center. Center Street's previous use as a regional cut-through should not occur at the expense of residents' and visitors' neighborhood livability.
4. Include a network of cross-traffic connections to disperse traffic patterns along Center and deter congestion.
5. The allocation of roadway space is under consideration. The developer urgently needs direction if he is to collaborate and if his development plans are affected.
6. Bike markings and signage should be considered depending on the chosen layout. If speeds and volumes are low enough, bike lanes might be given over to better NMT uses.

#### S5 South Center Improvements

B01	South Center Passageway	Consider Speed Reduction, Lane count/width; Parallel Parking; BikeLane; Curb Buffer. Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights. Consider some stretch of boulevard or turnaround. Ensure ample Street Trees.
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B03	Center/NewFairbrook-Downs(East)	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.
B05	Center/NewBeal - Downs (East Only)	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.



## Old Core Improvements

### Description and Concerns

The Old Core area, has evolved over time and hosts both historic charm and modern challenges relating to street alignments, traffic flow, disability access, and walkability. The streets surrounding the Presbyterian Church in the center of the business district are ground zero for traffic distribution choke points. The current street closures add to the traffic flow on Hutton, Church, and Cady as motorists try to detour around the closures.

**Center/ Cady St Intersection:** The intersection does not align resulting in confusion for turning traffic and unsafe cross walks.

**Mary Alexander/Hutton to Center:** A one way street exiting traffic onto Center St. contributes to congestion. The direction of flow needs to be evaluated.

**Hutton/Cady to Main:** The width and alignment of the street does not accommodate the current use of the street as a drop off zone for the Church's pre-school, two-way traffic, and parking. Consider making this a one-way street.

**Church Street/Main to Cady:** The alignment has an offset that has one-way traffic facing T-intersection traffic. Angled parking with oversized vehicles often encroaches into driving lane.

**Cady and S. Main Intersection:** Cady street, with its fishhook curve, bisects the car wash property before it intersects with S. Main. Cross traffic from the car wash and limited sight lines from the curve make this a dangerous intersection. Consider re-positioning the Cady/S. Main intersection.



**NOTE:** Existing conditions shown. The table of detailed elements of this site appears on overleaf...

## Old Core Improvements (cont.)

### Table of Detail Elements

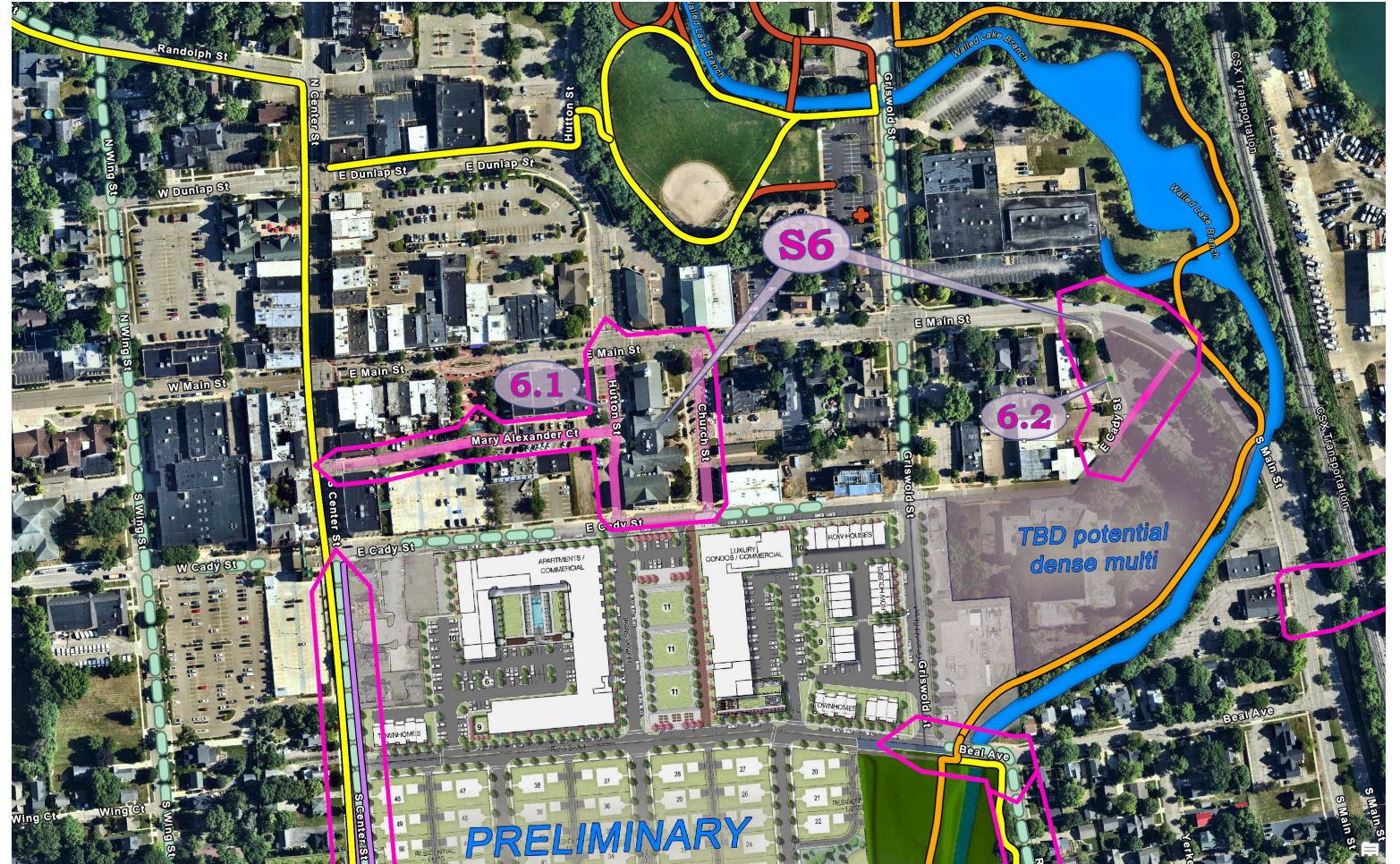
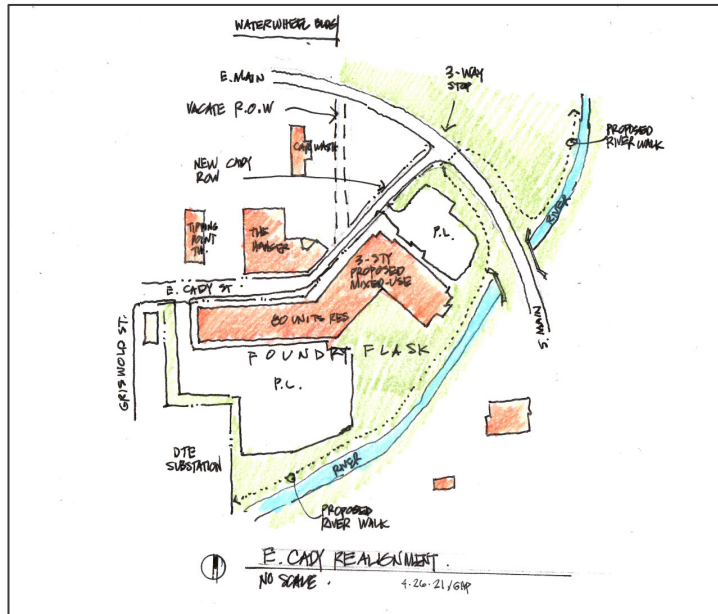
S6 Old Core Improvements			
	C02	Center/Cady (East Side)	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Evaluate 4-Way Stop. Strengthen Crosswalks (misalignment impedes driver attention). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.
	C03	Center/Cady (West Side)	Address prior Traffic LoS FAIL due to wait time and awkward Parking Lot pathway at top. Evaluate 4-Way Stop. Strengthen Crosswalks (misalignment impedes driver attention). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.
	C20	Wing Bypass CadyLot-to-Main-to-Dunlap-to-Center	Consider partial or full Center St. re-opening, providing street parking & truck access. Coordinate with Old Core traffic directions and flows (see C40-42, 46, 50, 55, 58 below). Ensure strong crosswalks/signs, reduce aggressive ROLLS (here and in general).
	C50	Griswold/E.Main (from north)	Relieve LoS FAIL from north, integrating flows and timings through Old Core. Adjust and emphasize ALL crosswalks with Marks/Signs/Ctrls (consider truck hashing NB).
	C55	Cady-from-S.Main-to-Center	Consider DeKink at east segment. Integrate flows/directions, sidewalks, strong crosswalks. Consider dedicated Bike Lane or other marking. Ensure ample street trees. Complete Marks/Signs/Ctrls per chosen configuration, coordinating with Downs on South.
6.1	C46	Church Cady-to-Main	Evaluate One-Lane One-Way with busy parking both sides for capacity and safety. Consider encouraging more flow toward Griswold. Consider/adjust 'Walkable' connectivity, especially potential New Downs Promenade.
	C40	Hutton/Main (north and south)	Relieve LoS FAIL from north, integrating flows and timings through Old Core. Consider One-Lane One-Way from South to relieve stubby 2-side parking. Adjust and emphasize Main St. sidewalk/crosswalk with Marks/Signs/Ctrls.
	C41	MaryAlexander Hutton-to-Center	Integrate flow & direction with Hutton, Church, Cady, and Main. Enhance ambience and 'Walkable' connectivity (esp. Town Square->New Downs).
	C42	Hutton St. Cady-to-Main	SAFELY participate in Dispersion, preserving Church drop-off. Consider One-Lane One-Way in concert with surroundings. Enhance ambience and 'Walkable' connectivity (esp. Town Square->New Downs).
6.2	C58	Cady/S.Main Intersection	Consider DeKink of Cady. Comprehend strong curve and busy multi-driveways. Consider reduced travel lanes, dedicated turn lane, crosswalk refuge, active signal. Expect Shared Riverwalk with well-used, all-mobility SAFE crossing.

# Old Core Improvements (cont.)

## Opportunities & Objectives

**CENTER AND MAIN STREET CLOSURES:** Current street closures place increased demand on Church Street, Griswold and western Wing bypasses. The Wing bypass is comprised of neighborhood streets not intended for heavy traffic flow or commercial vehicles. Routine delivery truck access/egress is everyday trouble at several pinch points.

**IN PROGRESS:** The success of the street closures warrants a comprehensive evaluation on continued closure impacts with recommendations for modification of parking etc. on streets being used for detour routes.



**Cady Street/Center to S. Main:** With the proposed Downs and Foundry Flask developments, Cady will become a major thoroughfare. The alignment of the overall street needs to be evaluated. A study to straighten out Cady at S. Main is warranted.

## River St. Neighborhood Parkway

### Description & Concerns

**CURRENT CONDITIONS:** River Street is a 50-foot-wide ROW that is contiguous to both the Bealtown neighborhood and the Northville Downs Racetrack. Traffic flows two-way; however, the paved driving surface is only a lane-and-half wide. It is not curbed and guttered (the rest of the Bealtown neighborhood has them). Drainage sheets flow across the surface and grading is uneven, so water ponds at the intersection of Seven Mile.

River Street also serves as an access route for both pedestrians and cyclists traveling to Hines Park. The proposed Downs and Foundry Flask developments will make this route even more popular.

There is no on-street parking on River St. Residents frequently use the grassy side of the road to park their personal vehicles.

**FUTURE IMPROVEMENTS NEEDED:** With the development of the Downs site and the creation of the adjacent River Park, River Street will experience increased activity and require improvements.

**JOGGLE SECTION:** Traffic must navigate a 'Double T' joggle from Griswold across the Beal Street Bridge to River Street. Depending on traffic flow, it may be a pinch point that should be evaluated.



**NOTE:** Photo of existing conditions



Looking south from just below Beal Street, with Downs to the right of River St.



## River St. Neighborhood Parkway (cont.)

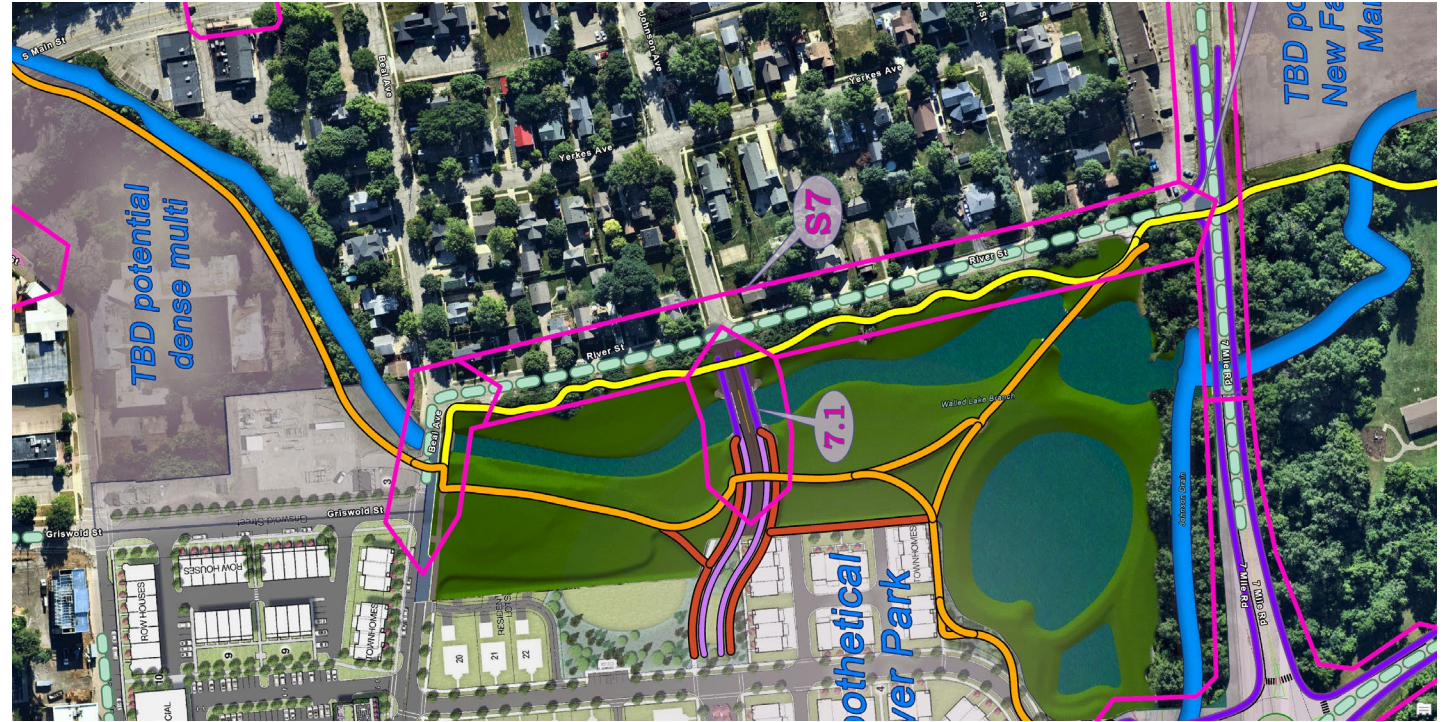
### Opportunities & Objectives

**CREATE A NEIGHBORHOOD PARKWAY:** In order to serve the community, residents along River Street, and residents of the proposed Downs development, improvements to River Street are needed that provide for future traffic and safe non-motorized routes.

### ACTIONS TO CONSIDER:

- Create two lanes to accommodate two-way traffic.
- Create positive drainage for the road and storm water management.
- Create walkways on both sides of road.
- Evaluate parking options along length of road to accommodate residents and park users.
- Evaluate ways to provide a route to Hines Park for pedestrians and cyclists along the roadway or interior to the new River Park.

S7 River St. Neighborhood Parkway			
7	E01	River Street Passageway	Attempt to preserve/enhance street trees; consider shared park walk west of tree buffer. Consider 10 ft. lanes and parallel and/or partial angled parking on west side. Complete Marks/Signs/Ctrls per configuration, coordinating with Hines Trail & Seven.
7	E03	Griswold-River/Beal Bridge Joggle	Evaluate the 'Double-T' joggle from Griswold across Beal Bridge to River Street. Is flow sufficient to be a restriction problem, or low enough to be a useful traffic calmer? Consider effect of E10 RiverSt/NewFairbrook connection to more evenly disperse flows.
7.1	E10	River St/Fairbrook Connection Pose: New All-Mode or NMT Connection	Assist motor dispersion for New Downs to alleviate other Pinch Points and LoS FAILS. If motor rejected, burden on A10 Hines/Seven and E03 Beal Joggle greatly increased. Non-motorized connection is essential to Placemaking and fosters "neighbor" culture



## River Street/ Fairbrook Connection

### Description & Concerns

**CONNECTION BARRIERS:** Currently, fencing along River Street prevents Bealtown neighborhood access to the Downs site. After build-out of the Down's development and incorporating daylighting the river in a newly built River Park, public access will be important to the community. Equitable dispersion of motor traffic will also be important.

**ACCESSIBILITY AND CONNECTIONS:** How best to connect the new development to the surrounding community by vehicle, pedestrians, and bikes needs to be evaluated:

- 1) What are the pros and cons of connecting the proposed Downs development by a vehicular multi-use bridge eastward to River Street?
- 2) Would a vehicular multi-use bridge help evenly distribute traffic?
- 3) What environmental concerns might a vehicular multi-use bridge present for the newly daylighted river?
- 4) If there is a determination not to pursue a motor connection to River Street, this impact needs to be considered in the traffic solutions being proposed at the Action Site #1.2, the Hines/ Seven Mile connection.
- 5) What are the pros and cons of connecting Bealtown with a pedestrian/bikeway bridge from the Downs development over the river to River Street?

### **S7** River St. Neighborhood Parkway, Fairbrook Connection

**7.1** **E10**

River St/Fairbrook Connection  
Pose: New All-Mode or NMT Connection

Assist motor dispersion for New Downs to alleviate other Pinch Points and LoS FAILS.  
If motor rejected, burden on A10 Hines/Seven and E03 Beal Joggle greatly increased.  
Non-motorized connection is essential to Placemaking and fosters "neighbor" culture



**NOTE:** Photo of existing conditions

## River St / Fairbrook Connection (cont.)

### Opportunities & Objectives

**NEW FAIRBROOK ST:** Treating the more difficult motor connection first, we seek evaluation of completing New Fairbrook to River Street for favorable vehicle dispersion and relief of other points of City congestion (as described in Action Items #5, #6 and #7).

**NMT PROTECTION:** Competent connection must include fully safe and capable NMT spaces and markings appropriate to neighborhood speeds and volumes. NMT protections like marking, signage, and motor calming would need to be a consideration for an extension into Bealtown.

**DRAINAGE MANAGEMENT AND POLLUTION PREVENTION** must be addressed thoroughly if motor traffic is to proceed. This may be judged too difficult and risky, killing the opportunity for motor at the outset.

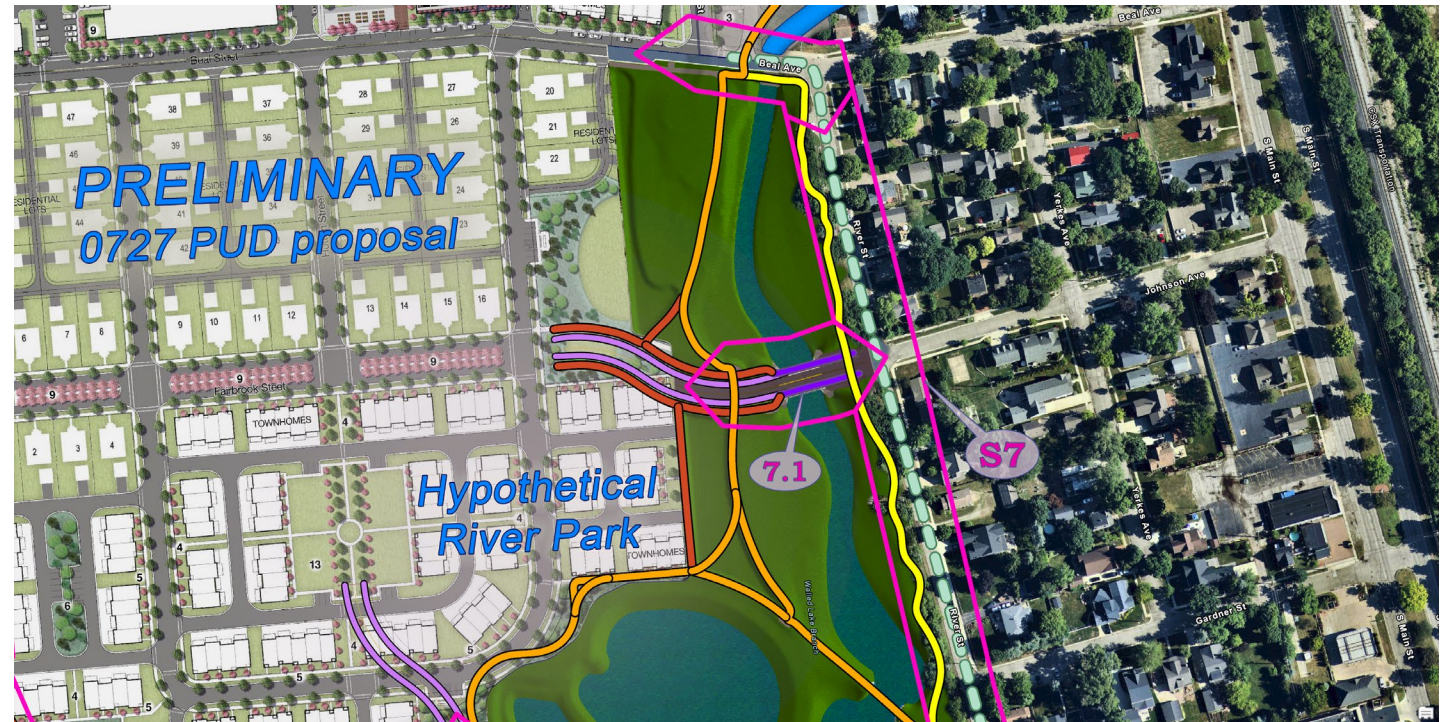
**IF NO MOTOR:** Full NMT capability must remain to knit our neighborhoods together and fully realize the city's expression of a first-class 'Walkable Community'. Notably, the traffic burden to be shouldered by the #1.2 Hines/Seven connection becomes more critical yet.

### S7 River St. Neighborhood Parkway, Fairbrook Connection

7.1 E10

River St/Fairbrook Connection  
Pose: New All-Mode or NMT Connection

Assist motor dispersion for New Downs to alleviate other Pinch Points and LoS FAILS.  
If motor rejected, burden on A10 Hines/Seven and E03 Beal Joggle greatly increased.  
Non-motorized connection is essential to Placemaking and fosters "neighbor" culture



# Doheny Safe School Passageway

## Description & Concerns

### Description & Concerns:

Children in the Bealtown and upcoming New Downs neighborhoods cannot walk or bike to Silver Springs Elementary School because:

- No safe place to cross S. Main Street.
- No sidewalk or NMT lane under the Doheny railroad bridge.
- No sidewalks along Doheny Drive (except for short stub).

Motor traffic is also extremely challenged by the low, narrow underpass (below).

S9 Doheny Safe School Passageway		
D10	Doheny Passageway NMT Content	Bealtown and New Downs kids to attend Silver Spring Elementary. No NMT passage exists under RR. Ensure safe pathway and strong crosswalks from S. Main under RR and on to school. Complete Marks/Signs/Ctrls, especially child, bike & pedestrian priority rights.
D11	Main/Doheny Intersection Safety	No Main St. crosswalks designated anywhere nearby. Complicated by boulevard blend out and speed limit change. Ensure strong crosswalks. Consider active signal and/or refuge island, perhaps coordinated with boulevard. Complete Marks/Signs/Ctrls as configured.
D12	Doheny RR Underpass NMT Provision	This is separate Mobility Network Task outside engineering scope of work. Underpass is restrictive for two car lanes and has no margin for non-motorized users. Engage CSX and County toward robust NMT pathway by best practical means.



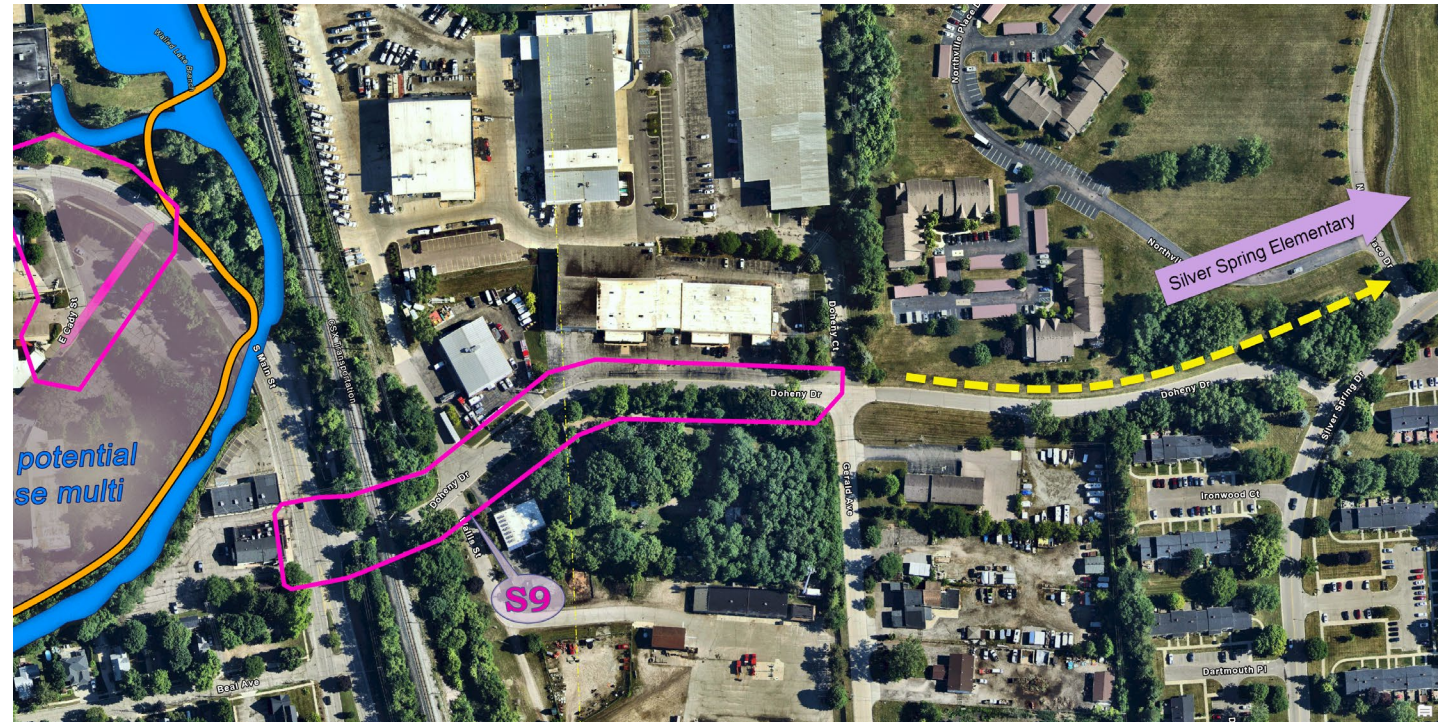
NOTE: Photos of existing conditions

# Doheny Safe School Passageway (cont.)

## Opportunities & Objectives

- Evaluate preferred route of pathway along Doheny Drive from Highland Lakes to Main Street.
- Provide a dedicated pedestrian and bike pathway under the railroad track (overleaf).
- Provide strong, safe crosswalk(s) across S. Main Street.
- Consider active crosswalk signal and refuge island (perhaps integrated with boulevard transition).
- Investigate 'Safe Routes to School' Funding.

S9 Doheny Safe School Passageway		
D10	Doheny Passageway NMT Content	Bealtown and New Downs kids to attend Silver Spring Elementary. No NMT passage exists under RR. Ensure safe pathway and strong crosswalks from S. Main under RR and on to school. Complete Marks/Signs/Ctrls, especially child, bike & pedestrian priority rights.
D11	Main/Doheny Intersection Safety	No Main St. crosswalks designated anywhere nearby. Complicated by boulevard blend out and speed limit change. Ensure strong crosswalks. Consider active signal and/or refuge island, perhaps coordinated with boulevard. Complete Marks/Signs/Ctrls as configured.
D12	Doheny RR Underpass NMT Provision	This is separate Mobility Network Task outside engineering scope of work. Underpass is restrictive for two car lanes and has no margin for non-motorized users. Engage CSX and County toward robust NMT pathway by best practical means.



## Doheny Safe School Passageway (cont.) Doheny Drive Railroad Underpass

### Description & Concerns:

- The opening under the railroad is narrow and low, not providing adequate width to handle two-way traffic.
- There is no accommodation at all for pedestrians or cyclists.
- Sight lines are extremely limited.

### Opportunities & Objectives:

- Provide a dedicated pedestrian and bike pathway under the railroad track.
- Consider box culvert separated from existing bridge.
- Complete integration of this passageway with adjacent sidewalks and NMT lanes.

**NOTE:** Photos of existing conditions

S9 Doheny Safe School Passageway		
D12	Doheny RR Underpass NMT Provision	This is separate Mobility Network Task outside engineering scope of work. Underpass is restrictive for two car lanes and has no margin for non-motorized users. Engage CSX and County toward robust NMT pathway by best practical means.



# Beck Road Corridor Improvement

Cooperate with *“Beck to the Future”* Task Force

## Current Conditions and Concerns

Beck Road is a principal arterial north-south connector between M-14 and I-96 serving Oakland and Wayne Counties. The roadway varies in width from two to four lanes and carries an average 25,000 vehicles per day. Crash frequency is ten times the regional average. A coalition of communities and Road Authorities along the corridor have come together with the goal to improve traffic flow and safety.

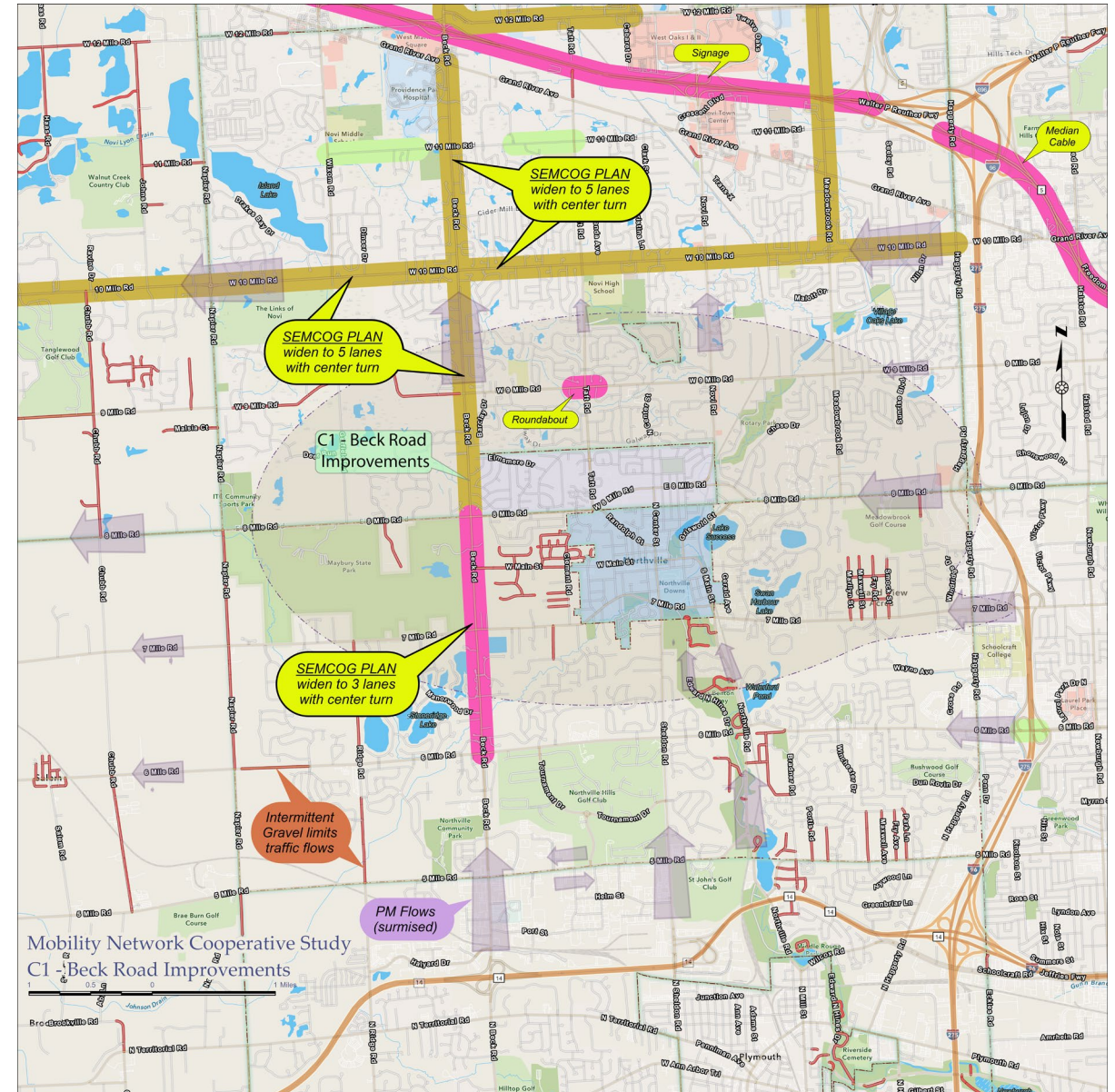
The partners in this regional planning effort include Commerce Township, City of Wixom, City of Novi, City of Northville, Northville Township, Oakland County Road Commission, and Wayne County Road Division. The Michigan Department of Transportation (MDOT) and Southeast Michigan Council of Governments (SEMCOG) are also collaborating with the planning effort. These agencies are in the process of holding public meetings and identifying funding sources. Improvement to traffic flow on Beck Road is expected to reduce cut-through traffic on Sheldon Road and Center Street in Northville.

## Opportunities and Objectives:

Currently, the plan is to widen Beck Road from Six Mile Road northward to I-96. The Six Mile to Eight Mile segment is going from two to three lanes (with center turn lane). North of Eight Mile (including the City of Northville run) is planned to go from two to five lanes (with center turn lane).

Boulevards and parallel multi-use trails are proposed where the right-of-way can accommodate them. The inclusion of a non-vehicular multi-use trail along the entire length of the roadway is warranted. Landscape treatments and storm water infrastructure are also important components of the project scope.

Given the amount of new construction and population growth in communities west of Beck Road, we will suggest this multi-community team explore additional north-south connectors to equitably distribute traffic west of Beck Road.



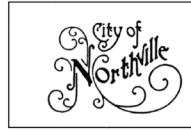
- ❑ City to hire qualified consultant(s).
- ❑ Analyze and make recommendations for the five “Action Sites”.
- ❑ Meet with the Wayne County to secure support for the proposed improvements.
- ❑ Create funding strategy in partnership with Wayne County, SEMCOG, and private developers.
- ❑ Encourage the Beck to the Future Task Force to look at dispersion of traffic at a regional level west of Beck Road.





Thank you!  
Q & A

# Appendix



## SAMPLE

CITY OF NORTHVILLE  
REQUEST FOR PROPOSAL

MOBILITY NETWORK EVALUATION AND DESIGN  
CONSULTANT SERVICES

This Request for Proposals (RFP) is for: Mobility Network Evaluation and Design  
Due Date: December XXX, 2021

The City of Northville is soliciting proposals from qualified consultants with experience in developing traffic solutions that integrate walkability standards and practices to five "Action Sites," identified in the attached Northville Mobility Network Study.

### SCOPE OF WORK:

The City of Northville is experiencing exponential new growth. The redevelopment of the Northville Downs Harness Racetrack and the Foundry Flask sites offers a rare opportunity for the City to daylight the river, create new open space and construct a river walk along the Middle branch of the Rouge River and the Johnson Creek. Meeting these challenges, the City of Northville faces with pending new developments, social districts closing streets, a desire to build an extensive Riverwalk and changing traffic patterns will require thoughtful consideration of how to balance a desire for a walkable town and flowing traffic.

A list of prioritized "Action Sites," was identified and data assembled for a professional Mobility Network Consultant to analyze and make recommendations for design solutions to these intersections of concern. This list of sites was identified through a joint effort by two City Task Forces, the Sustainability Committee, and the Northville River Restoration Task Force. A list of five sites along with a summary of concerns and objectives has been assembled in the attached Northville Mobility Network Study.

The following information is also available for reference:

- The Foundry Flask Traffic Impact Study dated October 12, 2021
- Northville Downs Traffic Impact Study dated June 20, 2018 Revised November 26, 2018
- Northville Downs Trip Generator Memo dated October 25 2021
- SEMCOG Crash Data and Traffic Volume data

**The selected firm will be responsible for:**

- 1 Analyzing all of the five "Action Sites," and making recommendation for improving pedestrian safety, bikeway integration and traffic flow.
2. Providing planning services for the project including but not limited to any necessary research, preparation of options and schematics.

- 1 -

3. Participating in at least three meeting with the City and designated members of the Mobility Network Team and one meeting with the County of Wayne who has jurisdiction over some of the identified "Action Sites."

4. Preparations of a final report, including but not limited to design schematics and cost estimates for the "Action Sites".

### SUBMISSION OF QUALIFICATIONS:

The following qualifications should be submitted to the City of Northville, 215 W. Main St. Northville, MI 48167, no later than 3:00 P.M. on December XXX, 2021. Please provide three hard (3) copies and at least one electronic copy to Patrick Sullivan City Manager, (248) 349-1300. Information provided on a firm's qualifications should include:

1. A letter of transmittal containing the following information:
  - A. A brief discussion outlining the firm's understanding of the requested services.
  - B. Office locations and the name, title, address, telephone and email address of the person authorized to represent the firm.
2. The firm's profile, including:
  - B. Prior experience particularly related to Mobility Network Planning and development of traffic solutions and multi-modal integrations.
  - D. Identify the person directly responsible for managing and supervising the project and relationship with the City of Northville.
  - E. Submit client references including a contact name and phone number and the related project.
  - F. Submit a sample contract for the services discussed in this proposal, with a timeframe of project activities.
  - H. Provide a cost proposal with estimates of hours committed to the project and a corresponding hourly rate schedule by classification in a separate sealed envelope marked "Rate Schedule".
  - I. Provide any other information considered important, not discussed in this Request for Proposal, limited to one (1) page, which may help the City of Northville better understand the firm.

### SELECTION:

The City of Northville reserves the right to accept or reject all or any proposals and to make the selection in any manner deemed to be in the best interest of the community. Selection will be based on: Experience, Responsiveness, Professionalism, Teamwork, References, Accessibility, and Cost. This is not a bidding process.

### QUESTIONS:

Questions or requests for additional information should be directed to Patrick Sullivan, City Manager at (248) 349-1300.

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# Sample RFP

## City of Northville Mobility Network Content

Places and features of interest, pg. 1 of 5

KEY TAG	Highlight => Major Roadway/Bridge RED => FV18 Study FAIL or CONCERN Key Intersections & Passageways (psgw)	Closed Blocks	Intervention Intention (size loosely tagged to urgency)							Stnbly Plus List Stuff	Notes on Issues and Interventions <i>Merged with 11/21 RFQ Long-form purpose and all other inputs</i>		
			Motor Decongest	Motor Disperse	Calm & Control	Parking (roadsurf)	BikeWay (roadsurf)	City Walk	SideWalk & ShrPath			Shared Shoulder	
00													
A	A0	Seven Mile Subnet											
C2	A01	SouthMain/Seven East (coord Twp) Pose: NMT Legacy Park Route Connect/Signs			+		+	?	?	*	Ensure Crosswalk & Bike marking continuity. With Township, connect to Legacy Park.		
1.0	A02	Seven Mile RR Grade Crossing Relief Pose: Widen crossing; Consider signs/marks.			+		+	?	?	*	Separate Mobility Network Task outside engineering scope of work Crossing and barrier width has no margin beyond car lanes. Engage CSX, County, and Twp toward robust NMT pathway by widening or other means.		
1.1	A04	Main/Seven West Side (coord=>D15) Pose: Signal(turn), NMT Marks/Signs, Crosswalk	D	+	?	?	+		+	*	Relieve NB Main-to-Seven LoS Pinch Point: consider left turn lane & signal. Improve Pedestrian and Bike Marks/Signs/Ctrls. Integrate non-motorized pathways with Township in time.		
1.1	A05	Seven Mile 500 Block (Main->River) Pose: Water runoff control; NMT shoulder/SW					+		?	+	*	Shape terrain and pavement to control flooding. Ensure at least good shared shoulder; Consider Shared Sidewalk. Comprehend entry/exit to potential Farmer's Market.	
1.1	A06	RiverSt/Seven Intsctn NMT Safety Meas. Pose: Visibility; Crosswalks; River Park Gate	D	?	+	+	+			+	*	Fix sightlines (cut back growth); consider River St. sunken approach. Strengthen Seven Mile Crosswalk (consider active signal and/or refuge island). Complete intersection Marks/Signs/Ctrls and wayfinding/pathway signage.	
1.2	A10	Hines-NewDowns/Seven Pose: New all-mode intersection (coord E15)	D	+	+	+	+			+	*	Relieve LoS FAIL with new balanced-direction, multi-modal intersection. Incorporate essential dispersion pathway for New Downs (relieve other LoS FAILS). Investigate, assess, and explain potential for roundabout vs. cruciform type. Ensure Shared Shoulders; Crosswalks; Marks/Signs/Ctrls per intersection type.	
1.3	A11	Sheldon-Center/Seven Pose: New all-mode intersection; Gateway	D	+	?	+	+		?	+	+	*	Relieve LoS MULTI-FAIL with new direction & turn capable multi-modal intersection. Participate in downtown and regional dispersion (relieve other LoS FAILS). Investigate, assess, and explain potential for roundabout vs. cruciform type. Ensure sound Shared Sidewalks; Crosswalks; Marks/Signs/Ctrls per intersection type.
	A12	Memo: Seven NMT...Main->Wing (in A11) Pose: Wide Sidewalk; strong crosswalks & signs				+	+		?	+	+	*	Include accessible Riverwalk Shared Path and connection to Sheldon Path (Walkers+Bikes)
C3	A20	Seven NMT...Wing->Westward (psgw) Pose: wide shoulder; TBD Riverwalk Pathway				+	+		+	+	*	TBD: Parks&Rec Priority? Continuous shoulders? True Shared Path to Maybury?	
	A21	Fairbrook Wing-to-1st-into-Seven (psgw) TBD: Flows, Pose: Signage; Crosswalks		?	+	+	?		?	?	*	Anticipate new dev't with motor dispersion. Improve NMT shoulders & marking	
	A22	1st/Fairbrook-Seven Motor&NMT Provision TBD: Flows, Pose: Signage; Crosswalks		?	+	+	?		?	?	*	NMT safety correction/enhancement. Complete shoulders'; add strong Crosswalks	
	A24	Rogers/Seven Motor & NMT Provision TBD: 3-Way OK? Pose: Signage; Crosswalks	D	+	+	+	?		?	?	*	NMT safety correction/enhancement. Cmplt some shoulders'; strong Crosswalks & Signs	
	A99												
B	B0	Gateway & Westward Subnet											
5	B01	Center-from-Seven-to-Main (psgw) TBD: Lanes; Walks; Bikes; Parking; Crosswalks	*	+	+	+	?	?	+	+	*	Consider Speed Reduction, Lane count/width; Parallel Parking; BikeLane; Curb Buffer. Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights. Consider some stretch of boulevard or turnaround. Ensure ample Street Trees.	
5	B02	Center/Fairbrook-Downs(SW) TBD: Flows; Lanes; Ctrls; Signs; Bikes; C'walks	D	+	+	+	?		+	+	*	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.	

# Appendix

## City of Northville Mobility Network Content

Places and features of interest, pg. 2 of 5

KEY TAG	Highlight => Major Roadway/Bridge RED => FV18 Study FAIL or CONCERN Key Intersections & Passageways (psgw)	Closed Blocks	Intervention Intention (size loosely tagged to urgency)							Stnbly Plus List Stuff	Notes on Issues and Interventions <i>Merged with 11/21 RFQ Long-form purpose and all other inputs</i>
			Motor Decongest	Motor Disperse	Calm & Control	Parking (roadsurf)	BikeWay (roadsurf)	City Walk	SideWalk & ShrPath		
5	B03 <b>Center/NewFairbrook-Downs(East)</b> TBD: Flows; Lanes; Ctrl; Signs; Bikes; C'walks	D	+	+	+	?		+	+	*	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrl; as configured, especially bike & pedestrian priority rights.
5	B05 <b>Center/NewBeal (East ND, FF)</b> TBD: Flows; Lanes; Ctrl; Signs; Bikes; C'walks	*	+	+	+	+	?	+	+	*	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Ensure strong Crosswalks (consider active signal and/or refuge island). Complete Marks/Signs/Ctrl; as configured, especially bike & pedestrian priority rights.
	B10 <b>Main-westbound (OV &amp; OLV Schools)</b> TBD: Flows; Signs; Crosswalks, Driveways	*	S	?	?	lot	?		S	*	<i>unconsidered at present - deferred</i>
	B20 <b>Center-from-Randolph-to-Eight (psgw)</b> TBD: Sidewalks, Crosswalks, Driveways, Signs	*	+	+	+	+	?	+	+	*	Bikes <b>MUST</b> take lane...SIGNAGE? Disperse/gap-time for Driveway egress?
	B21 <b>Randolph-to-Taft/Eight (psgw)</b> Pose: Bikeway signage; Parking lines	D	+	+	+	?	?			*	Bike Network Continuity - <b>Bike Takes Lane</b> Parking lane(s) unclear...cars weave
	B22 <b>Center/Hillside-Eight</b> TBD: Flows, Lanes, Signage; Crosswalks		S	?	?	lot	?		S	*	<i>unconsidered at present - deferred</i>
	B23 <b>Center/Eight-Amerman</b> TBD: Flows, Lanes, Signage; Crosswalks		S		?	lot	?		S	*	<i>unconsidered at present - deferred</i>
C1	B30 <b>Beck Road Regional Passageway</b> TBD: Flows, Lanes, Signage; Crosswalks	D	+	?	+		?	?	?	*	Coordination with and recommendations regarding existing Beck Road Task Force
	B99										
C	C0 <b>Old Core Subnet</b>										
	C01 <b>Center-from-Cady-to-Main (psgw)</b> TBD: ClsBlocks, Flows, Signage, Signals	*	?	?	?		?			*	Recent sidewalks, curbed turns; C'walk marks <b>Broad FLOW/DISPERSION issue</b> if opened.
6	C02 <b>Center/Cady (East Side)</b> TBD: ClsBlocks; Align; Ctrl; Bikes; C'walks	*	+	+	+	+	?	+		*	Traffic LoS FAIL strongly in need of unloading via dispersion (as with A10, C58 & E10). Evaluate 4-Way Stop. Strengthen Crosswalks (misalignment impedes driver attention). Complete Marks/Signs/Ctrl; as configured, especially bike & pedestrian priority rights.
6	C03 <b>Center/Cady (West Side)</b> TBD: ClsBlocks; Align; Ctrl; Bikes; C'walks	*	+	+	+		?	+	+	*	Address prior Traffic LoS FAIL due to wait time and awkward Parking Lot pathway at top. Evaluate 4-Way Stop. Strengthen Crosswalks (misalignment impedes driver attention). Complete Marks/Signs/Ctrl; as configured, especially bike & pedestrian priority rights.
	C04 <b>Center/MaryAlexander</b> TBD: ClsBlocks, Flows, Signage, Signals	*	+	+	+		?	?		*	Integrate flow with Hutton, Cady, and Main. Enhance 'Walkable' connectivity
	C05 <b>Center/Main (East Side)</b> TBD: ClsBlocks, Signage, Signals, Protections	*	?	?	+			+		*	Currently closed
	C06 <b>Center/Main (West Side)</b> TBD: ClsBlocks, Signage, Signals, Protections	*	?	?	+			+		*	Integrate flow with Hutton, Cady, MaryAlex. Enhance 'Walkable' connectivity
	C10 <b>Center-from-Main-to-Dunlap (psgw)</b> TBD: ClsBlocks, Signage, Signals, Protections	*	?	?	+			+		*	Currently closed
	C11 <b>Center/Dunlap (east &amp; west)</b> TBD: ClsBlocks, Signage, Signals, Crosswalks	*	?	?	+			+		*	Three-way stop is serious pedestrian and lesser motor problem (see C20 & 24).
	C15 <b>Center-from-Dunlap-to-Randolph (psgw)</b> TBD: Sidewalks, Crosswalks, Driveways, Signs	*	?	?	+			+		*	Sidewalk Quality, Bikes take lane, #Curbcuts - possible 'look for ped' warning signs.

# Worksheet

# Appendix

## City of Northville Mobility Network Content

Places and features of interest, pg. 3 of 5

KEY TAG	Highlight => Major Roadway/Bridge RED => FV18 Study FAIL or CONCERN Key Intersections & Passageways (psgw)	Closed Blocks	Intervention Intention (size loosely tagged to urgency)							Stnbly Plus List Stuff	Notes on Issues and Interventions <i>Merged with 11/21 RFQ Long-form purpose and all other inputs</i>
			Motor Decongest	Motor Disperse	Calm & Control	Parking (roadsurf)	BikeWay (roadsurf)	City Walk	SideWalk & ShrPath		
	C16 Center/Northeast-Parking (east 'T') TBD: Sidewalks, Crosswalks, Driveways, Signs	*	?		+		?	?		*	NMT safety/comfort, Strong Crosswalk; Signage?
	C17 Center/Randolph (west 'T') TBD: Sidewalks, Crosswalks, Driveways, Signs	*	?	?	+		?	?		*	NMT safety/comfort, Strong Crosswalk; Signage?
6	C20 Wing Ring: CadyLot-to-Dunlap-to-Center TBD: ClsBlocks, Signage, Protections	*	?	?	+		?			+	* * Consider partial or full Center St. re-opening, providing street parking & truck access. Coordinate with Old Core traffic directions and flows (see C40-42, 46, 50, 55, 58 below). Ensure strong crosswalks/signs, reduce aggressive ROLLS (here and in general).
	C24 Wing/Cady (west) and Cady Lot (east) TBD: ClsBlocks, Signage, Signals, Crosswalks	*	?		+		?			+	* * Ensure strong Crosswalks (consider active signal and/or refuge island).
	C25 Wing/Main (both ways) TBD: ClsBlocks, Signage, Signals, Crosswalks	*	?		+					+	* * Complete Marks/Signs/Ctrls as configured, especially bike & pedestrian priority rights.
	C26 Wing/Dunlap (heavy east leg) TBD: ClsBlocks, Signage, Signals, Crosswalks	*	?		+					+	* * Tight - Bikes take lane; avoid car doors
	C27 Wing/Randolph (ring residue flows) TBD: ClsBlocks, Signage, Signals, Crosswalks	*	?	?	+					+	* * Tight - Bikes take lane; avoid car doors
	C30 W.Main-from-Center-to-Wing (psgw) TBD: ClsBlocks, Signage, Signals, Protections	*	?	+	+						* Consider role in future flows with closed or open central blocks.
6.1	C40 Hutton/Main (from north) TBD: Flows, Lanes, Controls; Crosswalks	*	+	+	+	+	?	+			* Relieve LoS FAIL from north, integrating flows and timings through Old Core. Consider One-Lane One-Way from South to relieve stubby 2-side parking. Adjust and emphasize Main St. sidewalk/crosswalk with Marks/Signs/Ctrls.
6.1	C41 MaryAlexander Hutton-to-Center (psgw) TBD: Flows, Lanes, Controls; Crosswalks	*	?	+	+	+	?	?			* * Integrate flow & direction with Hutton, Church, Cady, and Main. Enhance ambience and 'Walkable' connectivity (esp. Town Square->New Downs).
6.1	C42 Hutton St. Cady-to-Main (psgw) TBD: Flows, Lanes, Controls; Crosswalks	*	?	+	+	+	?	+			* SAFELY participate in Dispersion, preserving Church drop-off. Consider One-Lane One-Way in concert with surroundings. Enhance ambience and 'Walkable' connectivity (esp. Town Square->New Downs).
	C45 Cady-Presbytn Church Drop-off PUD: Evaluate & Enhance	*	S	?	?	lot? lane?	?	S			* Parking lot best? Protected Lane? Aided by single lane Hutton?
6.1	C46 Church Cady-to-Main (psgw) TBD: Flows, Lanes, Controls; Crosswalks	*		+	+	+	?	+			* Evaluate One-Lane One-Way with busy parking both sides for capacity and safety. Consider encouraging more flow toward Griswold. Consider/adjust 'Walkable' connectivity, especially potential New Downs Promenade.
	C47 Church/Main (with dev't) TBD: Flows, Lanes, Controls; Crosswalks	*		+	+	+	?	+			* One way: single lane, short and slow. Acts like an extended parking lot. OK?
	C48 Church/Cady (with dev't) TBD: Flows, Lanes, Controls; Crosswalks	*		+	+	+	?	+			* One way: single lane, short and slow. Acts like an extended parking lot. OK?
6	C50 Griswold/E.Main (with dev't) TBD: Flows, Lanes, Controls; Signs; C'walks	D	+	+	+		+	+	+		* Relieve LoS FAIL from north, integrating flows and timings through Old Core. Adjust and emphasize ALL crosswalks with Marks/Signs/Ctrls (consider truck hashing NB).
	C51 E.Main-from-Cady-to-Griswold (psgw) TBD: Flows, DeKink, Controls; Signs; C'walks	*	?	+	+	?	?		+	?	* Speed (curve radius); # of Lanes; Lane use; Sidewalk Quality, Crosswalk Vis&Len, NMT signs
	C52 E.Main-from-Griswold-to-Hutton (psgw) Pose: NMT Signs (bikes, yield at curb cuts)	*	?	?	?	?	?	+			* * Sidewalk Quality, Bikes take lane, #Curbcuts - possible 'look for ped' warning signs.

# Worksheet

## City of Northville Mobility Network Content

Places and features of interest, pg. 4 of 5

KEY TAG	Highlight => Major Roadway/Bridge RED => FV18 Study FAIL or CONCERN Key Intersections & Passageways (psgw)	Closed Blocks	Intervention Intention (size loosely tagged to urgency)							Stnblty Plus List Stuff	Notes on Issues and Interventions Merged with 11/21 RFQ Long-form purpose and all other inputs
			Motor Decongest	Motor Disperse	Calm & Control	Parking (roadsurf)	BikeWay (roadsurf)	City Walk	SideWalk & ShrPath		
	C53 E.Main-from-Hutton-to-Center (psgw) TBD: ClsBlocks, Signage, Signals, Protections	*	?	?	?					*	Currently closed
6	C55 Cady-from-S.Main-to-Center (psgw) TBD: Flows, DeKink, Controls; Crosswalks	*		+	+	+	?	+	?	*	Consider DeKink at east segment. Integrate flows/directions, sidewalks, strong crosswalks. Consider dedicated Bike Lane or other marking. Ensure ample street trees. Complete Marks/Signs/Ctrlrs per chosen configuration, coordinating with Downs on South.
6.2	C58 Cady/S.Main (with dev't) Pose: DeKink; Lane Redux (turn); Crosswalk	D	+	+	+		+	+	+	*	Consider DeKink of Cady. Comprehend strong curve and busy multi-driveways. Consider reduced travel lanes, dedicated turn lane, crosswalk refuge, active signal. Expect Shared Riverwalk with well-used, all-mobility SAFE crossing.
	C99										
D	D0 East Core SubNet										
	D01 Cady/Main East Side (follow=> C51) Pose: Lane Redux; Bike Lane; Crosswalks	D	+	+	+		+	?	+	*	Riverwalk MAY want 2nd Crosswalk connected to Well Parklet/HistoryPoint
	D05 South Main NMT Enhancement (psgw) Pose: Lane Redux; Bike Lane; ParaPark			+	+	+	+	?		*	Treat as Multiblock Passage. Ensure Bikeway continuity with Twp. Foster motor use.
9	D10 Doheny Passageway NMT Enhancement Pose: TBD Motor & NMT Cooperation in time			+	+		?		+	*	Bealtown and New Downs kids to attend Silver Spring Elementary. No NMT passage exists under RR. Ensure safe pathway and strong crosswalks from S. Main under RR and on to school. Complete Marks/Signs/Ctrlrs, especially child, bike & pedestrian priority rights.
9	D11 SouthMain/Doheny (eastward 'T') Pose: Motor Sign/Sig, NMT Signs, Crosswalk		?	+	+		?		+	*	No Main St.crosswalks designated anywhere nearby. Complicated by boulevard blend out and speed limit change. Ensure strong crosswalks. Consider active signal and/or refuge island, perhaps coordinated with boulevard. Complete Marks/Signs/Ctrlrs as configured.
9	D12 Doheny RR Underpass Improvement Pose: Appeal to CSX; Mark & Slow		+	+	+		?		+	*	This is separate Mobility Network Task outside engineering scope of work. Underpass is restrictive for two car lanes and has no margin for non-motorized users. Engage CSX and County toward robust NMT pathway by best practical means.
9	D13 Railroad St.-Wallis/Doheny (WB to D12) Pose: Motor Sign/Sig, NMT Signs, other?		?	+	+		?		+	*	Added per Mike Domine, Mtg #3 ...long standing concern, broad support
	D15 SouthMain/Seven West (follow=> A04) Pose: Motor Sign/Sig, NMT Signs, Crosswalk		+	?	+		+		+	*	Ensure Crosswalk & Bike Continuity Encourage motor toward Main/Gris
	D99										
E	E0 New Downs SubNet										
7	E01 River Street Neighborhood Parkway (psgw) Pose: Trees, WestWalk, ParaPark, Crosswalks	D		+	+	+			+	*	Attempt to preserve/enhance street trees; consider shared park walk west of tree buffer. Consider 10 ft. lanes and parallel and/or partial angled parking on west side. Complete Marks/Signs/Ctrlrs per configuration, coordinating with Hines Trail & Seven.
7	E03 Griswold-River/Beal (bridge joggle) TBD: Flows, Pathway, Controls; Crosswalks	*	?	+	+	?	?	+	+	*	Evaluate the 'Double-T' joggle from Griswold across Beal Bridge to River Street. Is flow sufficient to be a restriction problem, or low enough to be a useful traffic calmer? Consider effect of E10 RiverSt/NewFairbrook connection to more evenly disperse flows.
7.1	E10 RiverSt/NewFairbrook - Downs Side Pose: New All-Mode or NMT Connection	D	+	+	+		+		+	*	Assist motor dispersion for New Downs to alleviate other Pinch Points and LoS FAILS. If motor rejected, burden on A10 Hines/Seven and E03 Beal Joggle greatly increased. Non-motorized connection is essential to Placemaking and fosters "neighbor" culture
	E11 anticipate: Downs-along-Cady TBD: Flows; Lanes; Ctrlrs; Signs; Bikes; C'walks	*	+	+	+	+	?	+	+	*	Service FAIL, 2018 and to come. STRONGLY in need of unloading with Dev't
	E11 anticipate: NewFairbrook Park Bridge TBD: Motor/NMT; Bikes; C'walks, Riverwalk	D	+	+	+		+		+	*	Motor encourages max dispersion and relief of other issues. NMT is most essential need.

# Appendix

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Places and features of interest, pg. 5 of 5

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			Motor Decongest	Motor Disperse	Calm & Control	Parking (roadsurf)	BikeWay (roadsurf)	City Walk	SideWalk & ShrPath			Shared Shoulder
E12	RiverSt/NewFairbrook - Bealtown Side Pose: Signs; Crosswalks; Calming	D		+	+						*	Traffic calming needed if motor cnxn... ...discourage short circuit toward S. Main
E12	<b>anticipate: Downs-along-NewBeal</b> TBD: Flows; Lanes; Ctrl; Signs; Bikes; C'walks	*	+	+	+	+	?	+	+		*	<b>Service FAIL</b> , 2018 and to come. STRONGLY in need of unloading with Dev't
E13	<b>anticipate: Downs-along-NewFairbrook</b> TBD: Flows; Lanes; Ctrl; Signs; Bikes; C'walks	D	+	+	+	+	?		+		*	<b>Service FAIL</b> , 2018 and to come. STRONGLY in need of unloading with Dev't
E20	<b>anticipate: NewDowns-Hines/Seven</b> Pose: NewDowns Impacts & Bridge (see A10)	D	+	+	+		+		+	+	*	<b>NewDowns</b> is north-south connector from Dev't to Hines/Seven. Essential to dispersion.
E99												
F	F0 Northeast Extent Subnet											
F01	Baseline-OldNovi Byway (psgw) <i>Popular recreation access with poor NMT</i>				+		?		?	?	*	RAM suggestion Mtg#3 ...defer until post Action Item Crunch
F99												
G	G0 Periphery - Out of Scope											
G01	Novi/Eight											
G02	Griswold/Eight											
G03	Randolph-Taft/Eight											
G04	Beck/Eight											
G05	Beck/Seven											
G99												

# Worksheet