



# CITY of NOVI CITY COUNCIL

**Agenda Item 5**  
**July 22, 2013**

**SUBJECT:** Policy discussion on the installation of destination/informational guide signs in the public right-of-way for non-motorized transportation use.

**SUBMITTING DEPARTMENT:** Department of Public Services, Engineering Division  
 Community Development Department, Planning Division

**CITY MANAGER APPROVAL:** 

**BACKGROUND INFORMATION:**

The attached memorandum provides information about the installation of guide signs in the public right-of-way, with a particular focus on their use for designating destinations from and routes along non-motorized facilities, such as pathways, sidewalks and bike lanes.

The City's current process for the installation of destination and route guide signs calls for staff to retain a consultant to develop a plan that identifies each recommended sign type and location, and for the City's traffic engineer to ensure the proposed plan meets all requirements of the Michigan Manual of Uniform Traffic Control Devices and that use of existing sign posts is optimized during installation. A similar process is now being followed for the development and implementation of a park guide sign plan.

Components of a guide sign policy could include these steps, plus additional steps that require staff to:

1. Share all guide sign implementation plans with City Council prior to commencement.
2. Provide property owners who abut the City's rights-of-way with written notification of impending sign installations a reasonable amount of time in advance.

If directed to proceed, staff would prepare a guide sign implementation policy based on the outcomes of this policy discussion.

**RECOMMENDED ACTION:** Policy discussion on the installation of destination/informational guide signs in the public right-of-way for non-motorized transportation use.

	1	2	Y	N
<b>Mayor Gatt</b>				
<b>Mayor Pro Tem Staudt</b>				
<b>Council Member Casey</b>				
<b>Council Member Fischer</b>				

	1	2	Y	N
<b>Council Member Margolis</b>				
<b>Council Member Mutch</b>				
<b>Council Member Wrobel</b>				

## MEMORANDUM



**TO:** VICTOR CARDENAS, ASSISTANT CITY MANAGER  
**FROM:** JOHN MCCARTER, MANAGEMENT ANALYST GRAD INTERN <sup>SM</sup>  
**SUBJECT:** DESTINATION/ROUTE GUIDE SIGN INSTALLATION PROCESS  
**DATE:** JULY 18, 2013

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In recent weeks, much discussion has taken place regarding the placement of guide signs in public rights-of-way across the City. The following memo outlines the current process the City uses for installation of guide signs. Guide signs provide navigation information to assist road users in reaching their intended destinations, and are generally green, blue or brown in color depending on the specific function and are different from regulatory signs (such as stop signs, speed limit signs and yield signs). Guide signs include street name signs at an intersection and in advance of an intersection, destination signs, and route signs.

In Novi, destination and route guide signs have been installed at specific locations across the City to direct residents and visitors to specific destinations (i.e. Novi Public Library, Lakeshore Park, Suburban Collection Showplace, etc.) or to label pathways (bike paths, Neighborhood Connector Routes). Guide signs are meant to not only help people navigate the City but also to encourage the use of non-motorized pathways and City-owned parks and facilities. Here are a couple of examples of destination and route guide signs that have recently been installed along a neighborhood connector bike route:



The Michigan Manual of Uniform Traffic Control Devices (MMUTCD) provides specific standards regarding the location, size and placement of guide signs. The MMUTCD is

based on federal requirements to provide consistency in traffic control signage throughout the country to improve safety. Any sign installed in the City of Novi right-of-way is designed or reviewed by the traffic engineer using the MMUTCD standards. Under state law, any signage placed on Oakland County roads (10 Mile Rd., 12 Mile Rd., etc.) must be approved and permitted by Road Commission for Oakland County (RCOC).

With regard to non-motorized facilities (i.e., sidewalks, pathways, bike lanes, etc.), the Non-Motorized Master Plan recognizes that pedestrians and bicyclists are a diverse population and that no one solution will apply to all bicyclists or all pedestrians. Therefore, a variety of opportunities are acknowledged and recommended in the plan, including bike lanes and sidewalks/roadside pathways (which are proposed along all of the primary roads in the City), as well as a network of neighborhood connectors and off-road trails. The intent of the neighborhood connectors is to complement the primary road system, and provide access to key destinations in the City, while minimizing exposure to a large volume of high-speed motor vehicles.

The recommended implementation of the near-term, mid-term and long-term neighborhood connectors is provided in Figure 3.2F of the Non-Motorized Master Plan (attached). The neighborhood connectors provide a finer network of routes than the major corridors routes, and feed non-motorized traffic from the neighborhoods to the major corridor routes. Since the neighborhood connectors are primarily comprised of local roadways, with short connecting off-road pathways, this aspect of the plan is considered an economical way to provide alternate non-motorized routes to those routes provided along the busy primary roads.

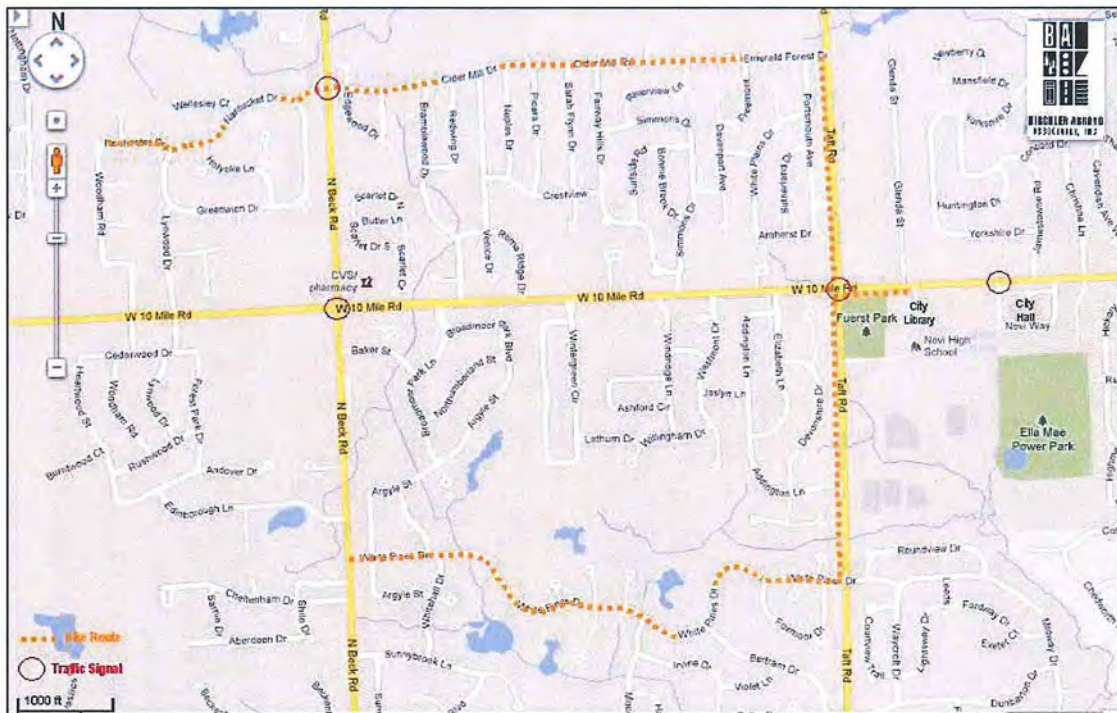
For the first step in implementation of the near-term neighborhood connectors, staff reviewed the Non-Motorized Master Plan and identified two routes that would guide bicyclists from nearby neighborhoods to the library (from Greenwood Oaks/Briarwood/Roma Ridge/Simmons Orchard/Emerald Forest and Autumn Park/Arden Glen/Royal Crown). The attached study was conducted by the City's traffic consultant to identify the best locations for bike route signage. Staff reviewed that study and considered alternatives that reduced the number of signs while still maintaining and safe

and effective bike route system. Efforts were made to balance the promotion of the use of the bike routes, with the safety of bicyclists, pedestrians and vehicles (maps of revised sign placement is also attached, along with table). In an effort to avoid over-use of signage, or sign clutter, City staff maximizes each sign location by putting more than one sign on a post whenever doing so would not send an unclear message, create confusion, or decrease safety for the transportation user.

Please let me know if you need any further information regarding the current process used for the installation of guide signs in the City.

Birchler Arroyo  
Report/Study

GUIDELINES FOR NOVI BIKE PATH SIGNING  
AND THEIR APPLICATION ALONG TWO  
ROUTES TO CITY LIBRARY



Prepared for  
CITY OF NOVI, MI

By  
BIRCHLER ARROYO ASSOCIATES, INC.  
Lathrup Village, MI

November 2011

## INTRODUCTION

The City of Novi *Non-Motorized Master Plan* lays out a network of new infrastructure improvements intended to enhance mobility via walking and bicycle. The Walkable Novi Committee has decided that the plan's implementation effort should begin with the signing of two bike routes in the west-central portion of the city. Both routes will follow local streets beginning at or west of Beck Road, and upon reaching Taft Road, divert onto roadside safety paths to reach the City Library on 10 Mile Road east of Taft (Figure 1).

This report presents general guidelines for bike route signing, and then demonstrates their application by recommending the specific signs needed to fully implement the City's first two formal bike routes. A brief explanation of the study's methodology and product appears below.

## SIGN DESIGN

It has long been recognized nationally that traffic signs should be as uniformly designed and installed as possible, so as to provide needed conspicuity, recognition, legibility, message clarity and effectiveness, compliance, and affordability. To achieve these objectives, a Federal *Manual on Uniform Traffic Control Devices (MUTCD)* is published from time to time, which the States have to adopt (with minimal revisions) in order to qualify for the Federal funding of highway and other transportation-related improvements (such as roadside bike paths).

The current Federal *MUTCD* was published in 2009 and the current Michigan *MUTCD* was published in 2005. The State of Michigan must adopt the 2009 Federal manual as the basis for its current manual within two years of the Federal publication date, or by January 15, 2012. Accordingly, this study applies the applicable standards and guidelines found in the 2009 Federal manual (see Appendix A, attached).

Figure 2 presents the various *MUTCD*-standard guide sign types needed for the planned Novi bike routes, along with a further modified version of the special guide sign (W1-8a modified) preferred by the Walkable Novi Committee. As discussed in the Table 1 selection guidelines, the Committee's sign differs from the nearest *MUTCD* standard sign by virtue of its dimensions; use of green as opposed to white outside the oval; use of the words "Bike Route" in lieu of a specific route name, and use of a combination of upper- and lower-case letters for non-place-name words. To reduce these disparities, Birchler Arroyo recommends using the sign with adjusted dimensions and all capital letters appearing in Figure 2. Due to the remaining non-standard features, it is further recommended that this sign be used sparingly; that is, only at bike route junctions with main roads, where less familiar users may benefit from the City "branding."

## SIGN PLACEMENT

A conceptual plan for bike route signing was developed by considering the (1) guidance needs of users either unfamiliar or only generally familiar with area streets, area sidewalks, and/or the location of the City Library (such as children and new residents); (2) most appropriate sign types providing that guidance (selected from Table 1); and (3) best approximate sign locations, based on aerial photos (Figures 3-7) and various considerations related to sign visibility (Table 2).

A field reconnaissance was then conducted to check the feasibility and appropriateness of the sign locations preliminarily selected. Attached (in Appendix B) are photos confirming the final sign locations, along with notes providing more detailed installation guidance.

## OTHER CONSIDERATIONS

The bike route to be signed between Cider Mill and Emerald Forest has several less-than-desirable features the City should consider mitigating:

- ❑ The existing 5-ft-wide concrete sidewalk is not only narrow, it has a couple of very low-speed bends, with trees and relatively steep slopes immediately adjacent. Also, at the time of Birchler Arroyo's reconnaissance, the walk was largely covered with wet leaves. Serious consideration should be given to placing a customized regulatory sign at each end of this connection, reading "WALK YOUR BIKE". See Figures 4c and 4d for the recommended sign locations.
- ❑ Accessing the off-road portion of the route from Cider Mill will be somewhat awkward. Although the recommended signage is located to encourage eastbound bicyclists to mount the sidewalk at Riverview, some (if not most) riders will likely wait until they reach the private driveway east of Riverview. Most (if not all) westbound riders are also likely to use that driveway. To minimize bicyclist use of the private driveway, the City should consider constructing an 8-ft-wide concrete ramp to the sidewalk, angled to the southeast immediately west of the guardrail at the end of Cider Mill. See Figure 4c.
- ❑ Entering and exiting the off-road route at Emerald Forest will be similarly awkward, tempting bicyclists to use the adjacent private driveway (west as well as east of the perimeter sidewalk). The City should consider constructing a 5-ft-wide concrete ramp between the curb and the east end of the existing pathway to Cider Mill, directly aligned with that pathway. See Figure 4d.
- ❑ Options for a future widening of the path between Cider Mill and Emerald Forest (if any) should be explored. If this path is widened, its alignment should also be improved, with the objective of providing for a 10-15 mph bicycle design speed.

To enhance bicycle safety at Taft and 10 Mile – and further highlight the City's provision of designated bike routes – consideration should be given to re-stripping the intersection's west and south crosswalks with zebra bars (2-ft-wide white bars, placed 4 ft on-center).

Lastly, the field reconnaissance for this study found two existing traffic sign problems in need of attention:

- ❑ On the Rochester approach to Nantucket, the YIELD sign obscures the street-name sign for Nantucket. Ideally, all three signs should be remounted on a single post.
- ❑ Entering Cider Mill from Beck, the speed limit sign on the south side of the street is badly worn (cracked and unreflective surface), and twisted slightly to the south.



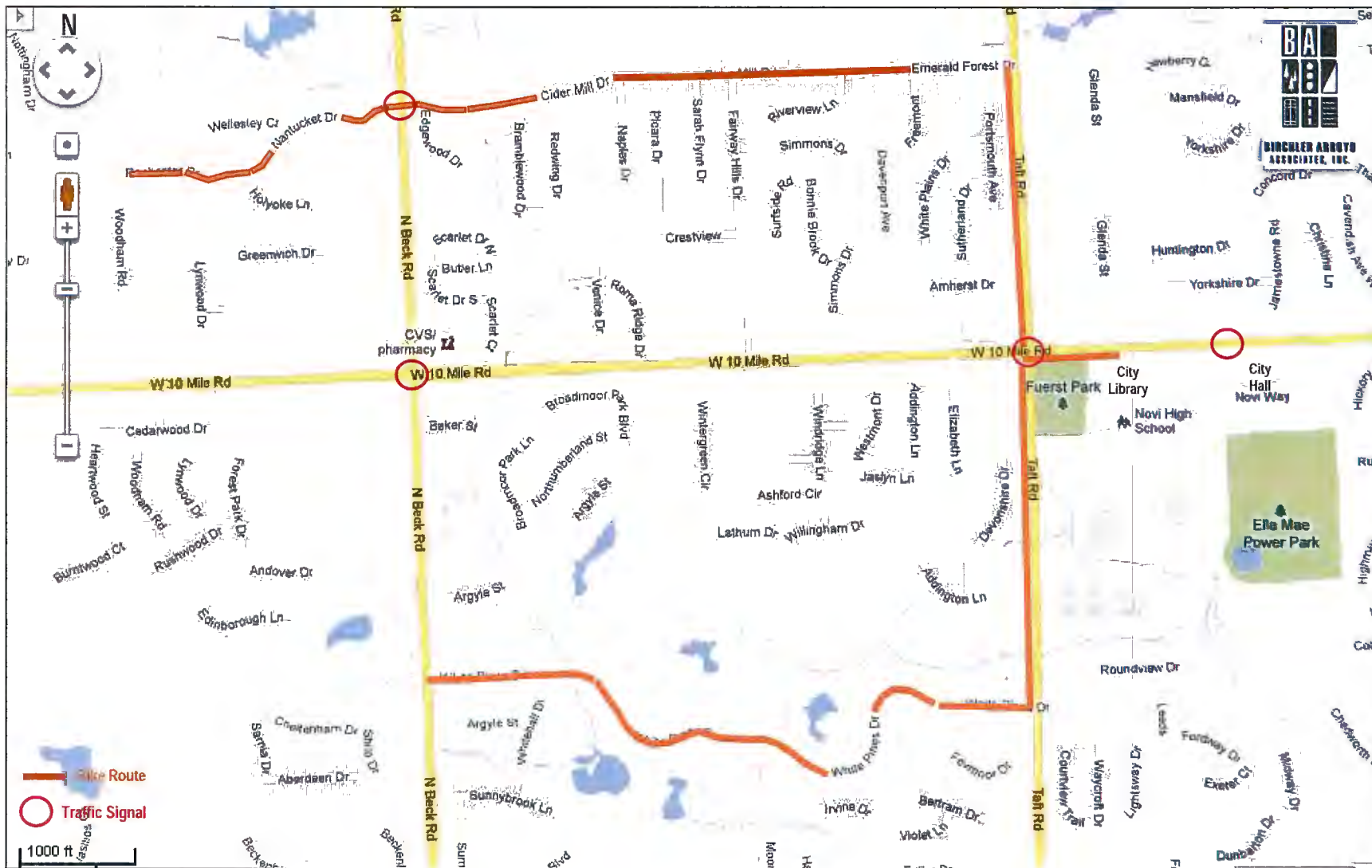


Figure 1. Overall Map of Novi Bike Routes

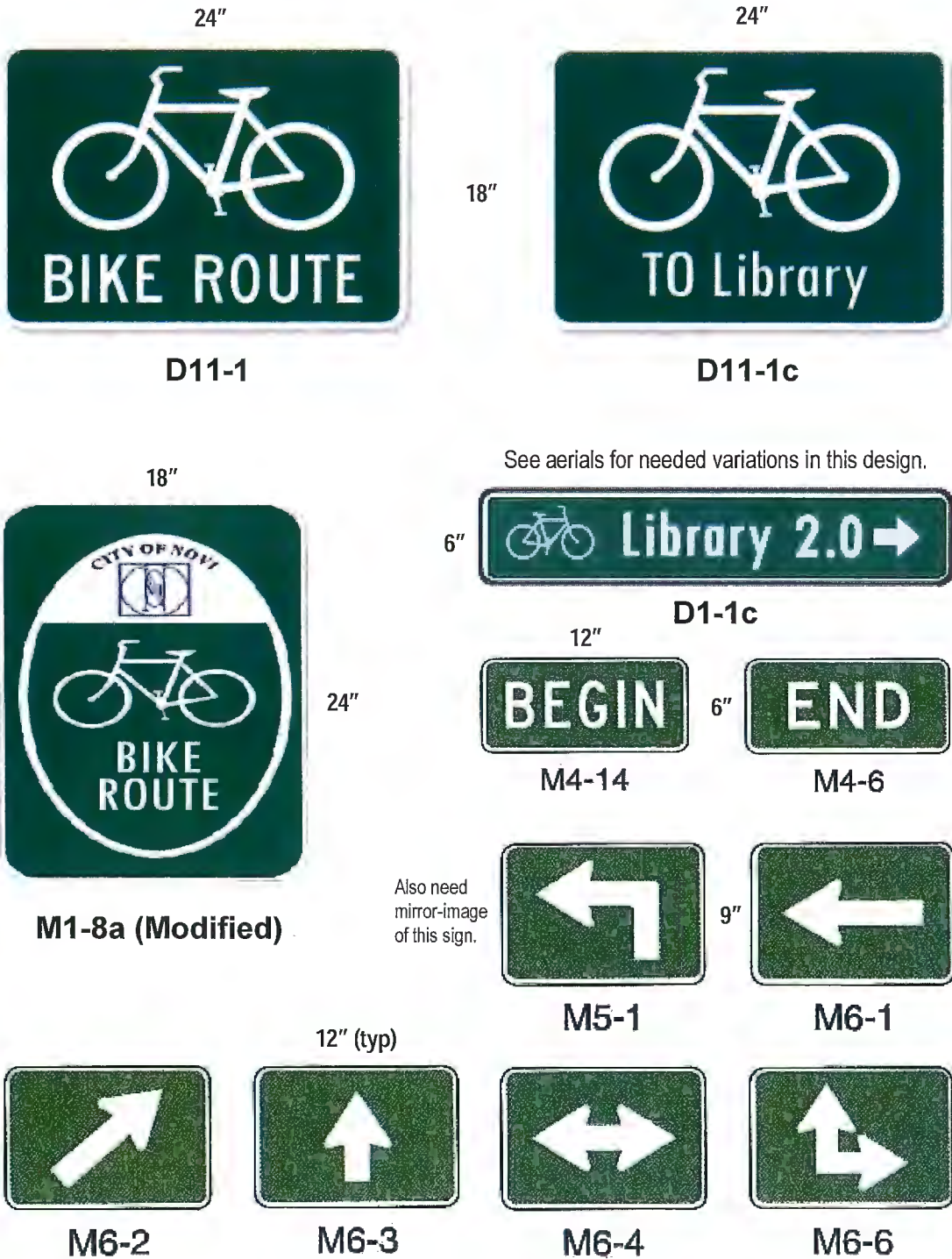


Figure 2. Directional Signs Needed for Novi Bike Routes<sup>1</sup>

<sup>1</sup> ID #s are MMUTCD sign codes; all signs standard "highway green")

**Table 1. Considerations Regarding Sign Design and Selection**

1. Standard signs described in the 2009 Federal *Manual on Uniform Traffic Control Devices* (MUTCD) should be used wherever applicable, so as to meet the expectations of users, enhance sign recognition and respect, ensure eligibility for possible funding assistance, and minimize sign fabrication cost. (This Federal manual must be incorporated into a new State manual no later than 1-15-12, replacing the 2005 Michigan MUTCD.)
2. The above edition of the MUTCD offers three general classes of bicycle-related directional signs: (a) Bike Route Guide signs, which declare a bike route and optionally, a destination reached by that bike route (D11-1 and D11-1c); (b) Bicycle Destination signs, which indicate the direction to one or more destinations and typically the associated distance(s) (e.g., D1-1c); and (c) Bicycle Route (identification) signs, which “shall contain a route designation” and may include a “pictograph or words” associated with the route or agency having jurisdiction over the route (M1-8 and M1-8a, as shown on page 800 of the MUTCD; manual excerpt on bicycle-related signs attached to this report).
3. The example “Bike Route Identification” sign shown in the *City of Novi Non-Motorized Master Plan* (NMMP) generally resembles the M1-8a sign portrayed in the MUTCD. The illustrated addition of “NORTH” at the top of the panel is an acceptable variation on the MUTCD standard sign, since the manual permits a cardinal direction on a separate (supplemental) plate. However, the use of a green background outside the oval – rather than a white background – creates a new sign not in reasonable conformance to the MUTCD standard sign.
4. The Walkable Novi Committee has suggested that the NMMP’s example “Bike Route Identification” sign be further modified to substitute the words “Bike Route” for a specific route identification; the resulting sign, with a two additional modifications recommended by Birchler Arroyo Associates, is presented in Figure 2 of this report. The first recommended modification is to adjust the sign dimensions to those of the MUTCD-standard sign: 18” x 24”. The second modification is to present the words “BIKE PATH” in all capital letters. For guide signs generally, the MUTCD permits the use of all capital letters or a combination of upper and lower-case letters for a destination or route name; for example, the NMMP’s example citing “Crosstown Trail” meets the latter standard. However, the proposed substitution of the generic “Bike Route” (in initial caps only) for “Crosstown Trail” does not comply with the MUTCD, which states that “All other word legends on conventional guide signs shall be in capital letters.” To reduce the proposed sign’s differences relative to the MUTCD standard sign, the words “BIKE ROUTE” should appear in all caps. Despite the preceding design adjustments, the resulting sign is still not fully MUTCD-compliant and should be used sparingly. In this recommended signing plan, its use is limited to intersections between a bike route and a major road (i.e., Beck, Taft, and Ten Mile); in this application, it will serve to “brand” the route for the less familiar motorists using those major roads (in contrast, City identification within a subdivision should be considered less important).
5. In developing this plan, an effort was made to include Bicycle Destination signs at all locations chosen by the Walkable Novi Committee; however, signs indicating 0.2 mile – at Taft and 10 Mile and within easy viewing distance of the Library – were excluded due to their proximity to the destination and the density of signs in that area (new plus existing). More generally, consideration should be given to deleting signs indicating distances less than one mile. The use of signs indicating shorter distances (e.g., 0.7-0.8 mile) is of questionable benefit and should be reconsidered relative to the precedent set and the associated long-term cost implications.
6. Per the MUTCD, Bicycle Destination signs should display the bicycle symbol to the left of the destination legend, and the front of the bike (as opposed to the back) should be nearer the arrow (contrary to the example signs appearing in the NMMP).
7. The specific bike routes addressed in this plan should not require any new regulatory or warning signs. Major roads will be crossed only at signalized intersections (Beck/Cider Mill and Taft/Ten Mile), and most of the off-road paths to be used are relatively straight and flat (the only notable exceptions being the short section of conventional sidewalk connecting Cider Mill and Emerald Forest, and the short sections of gently curved safety path along the south side of Ten Mile near Taft).

**Table 2. Signing Implementation Guidelines**

1. The longitudinal placement of a roadside sign should attempt to maximize the sign's advance viewing distance as it is influenced by other roadside objects (e.g., trees, utility poles, and other signs), subject to circumstances requiring a specific location (such as placing a STOP sign near the desired stopping location; this consideration is generally not applicable to bike route signing).
  - a. Especially problematic are a series of street trees with low-hanging limbs. Between two consecutive trees, a sign should be placed near the "upstream" drip line of the "downstream" tree, as far as possible from the next upstream tree.
  - b. Also, upon entering a subdivision, bicycle-related signage should not be placed too close to the speed limit sign typically placed in that general location. Given that bicycles generally travel slower than motor vehicles, bike signs should generally be placed closer to the entrance (or main road); e.g., 50 ft versus the 100-200 ft typically used for speed limit signs. Where longitudinal spacing between signs on a low-speed street is less than 75 ft, different lateral offsets should be used to minimize problems with the upstream sign limiting a good view of the downstream sign.
2. The lateral placement of a roadside sign should anticipate where most bicyclists will ride. Along local streets, most bicyclists can be expected to use the street as opposed to the sidewalk, and signs in these cases should generally be offset from the street the minimum distance prescribed by the MUTCD – 2 ft behind the face of curb – so as to minimize the extent to which sign visibility is impaired by street trees. Similarly, where a bike route utilizes a path paralleling a major road (e.g., Taft), bike route signing should generally be offset from the path the minimum distance prescribed by another section of the MUTCD – 2 ft – for the same reason. (Offset in both situations is referenced to the near edge of the sign panel, not the post.)
3. Where a bike route approaches on the stem of a tee intersection, the location of the Bike Route sign with supplemental directional arrow should be depend on the width of – and amount of traffic on – the street at the top of the tee. If that street is a subdivision street, the bike sign assembly should be located off the top of the tee directly across from the stem. If the street at the top of the tee is wider and/or carries significant traffic, the bike sign assembly should be located on the minor street at least 75 ft in advance of the STOP sign.
4. Bike Route signs should generally be installed along continuous routes (e.g., Cider Mill, White Pines) at intervals not exceeding about ½ mile, so as to reassure riders that they remain on the intended route. This provides confirmation every three minutes for a bicyclist traveling at a typical 10 mph. Consideration should also be given to the possible need to guide bicyclists joining a route at specific intermediate points, such as from a spur (signed or not) connecting to a nearby school or park.
5. Where a bike route crosses a major road (e.g., Beck), bike route signing should face both directions of traffic on that road. This accomplishes the dual purpose of (a) warning motorists of crossing bicycles and (b) advising people bicycling along that road that this is a point at which they can join a signed route through a neighborhood. As discussed in Table 1, a "City of Novi" (M1-8a modified) sign is recommended in this type of location, so as to "brand" the bike route for the less familiar drivers and riders using the major road.
6. Per the MUTCD, the mounting height used for a primary bike-route-related sign – e.g., Bike Route Guide (D11-1 or D11-1c), Bicycle Destination (D1-1c), or Bike Route (identification) (M1-8a Modified) – should not be less than 7 ft where pedestrians might walk beneath the sign or vehicles might park nearby (referenced to the ground directly below the sign). Where the above conditions do not exist, the bottom edge of the primary sign panel may be reduced to 5 ft (referenced in this case, however, to the near edge of pavement or near edge of bike path, as applicable). A secondary sign mounted below the primary sign – e.g., a plate displaying BEGIN, END, or an arrow – may be as much as 1 ft lower than the primary sign (although an abutting sign in this case would be 6-9 inches lower).



Figure 3. Greenwood Oaks Subdivision



Figure 3a. West End of Cider Mill Bike Route



Figure 3b. Turn Between Rochester and Nantucket



Figure 3c. Turn Between Nantucket and Cider Mill



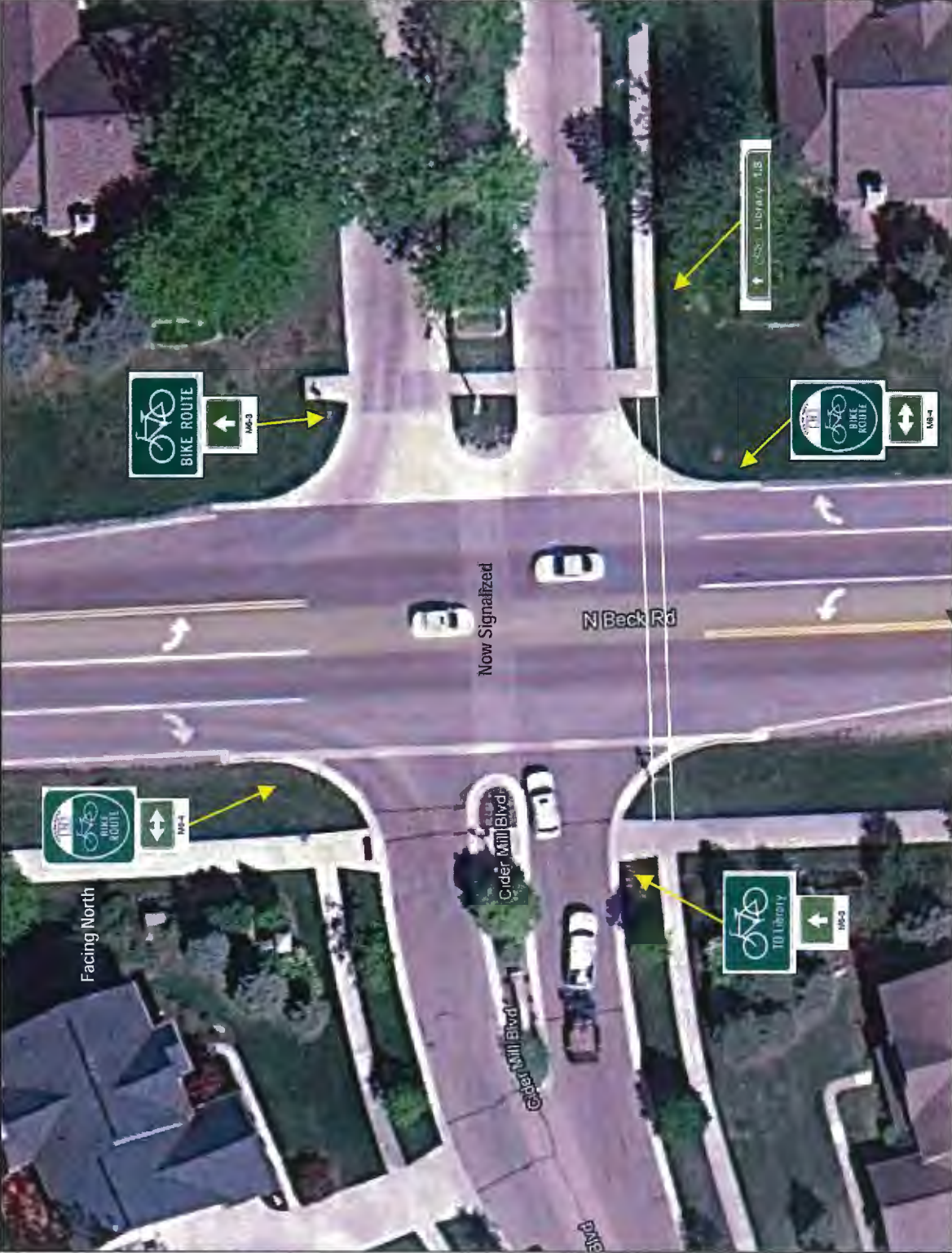


Figure 3d. Cider Mill and Beck

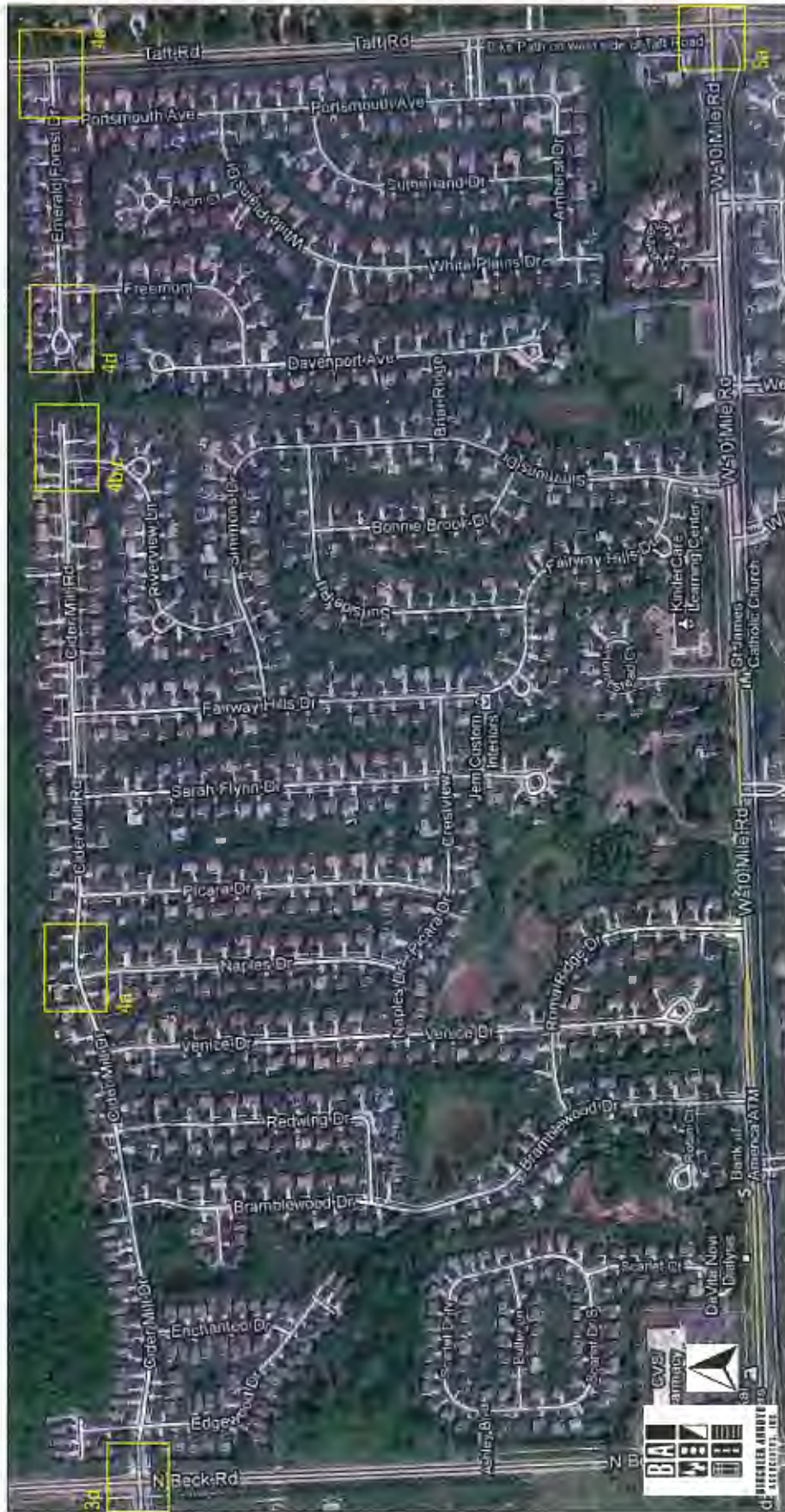


Figure 4. Cider Mill and Emerald Forest Between Beck and Taft



Figure 4a. Confirmatory Signing on Cider Mill at Naples



Figure 4b. Connection Between Cider Mill and Emerald Forest, Looking East



Figure 4c. East End of Cider Mill



Consider constructing sidewalk stub to curb of very round "bulb," aligned with pathway from Cider Mill, in which case the new sign post should be shifted to a point just north of the stub.

Also consider placing an east-facing, black-on-white "WALK YOUR BIKE" sign below this sign.

BIKE ROUTE  
↑  
10 to 101

BIKE ROUTE  
↑  
10 Library

Back-to-Back  
on Same Post

Facing East

10 to 101  
Emerald Forest Dr

Emerald Forest Dr  
42500

Freemont

Map  
Traffic

Figure 4d. West End of Emerald Forest



Figure 4e. Emerald Forest and Taft

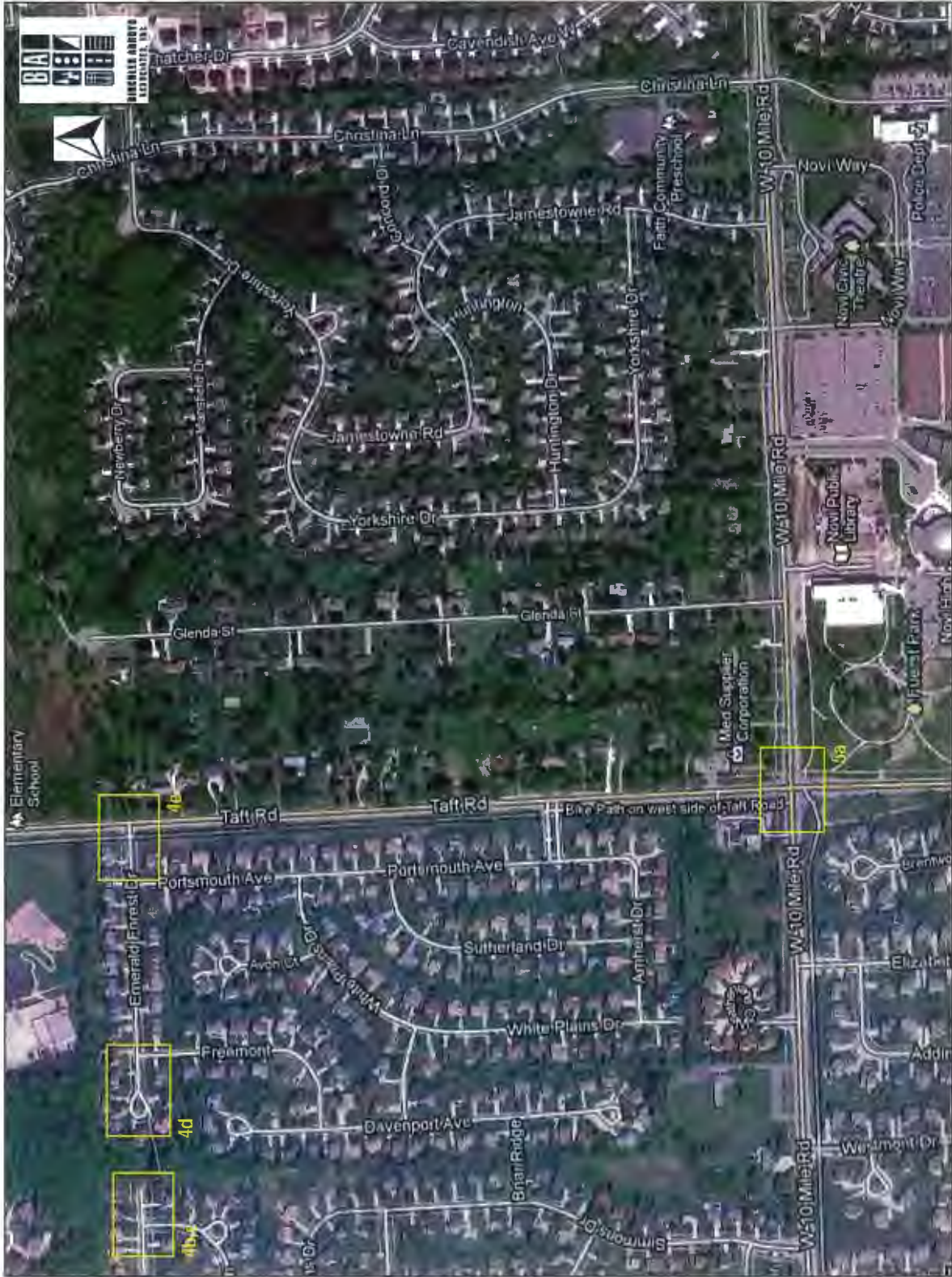


Figure 5. Emerald Forest to Civic Center





Figure 5a. Taft and Ten Mile

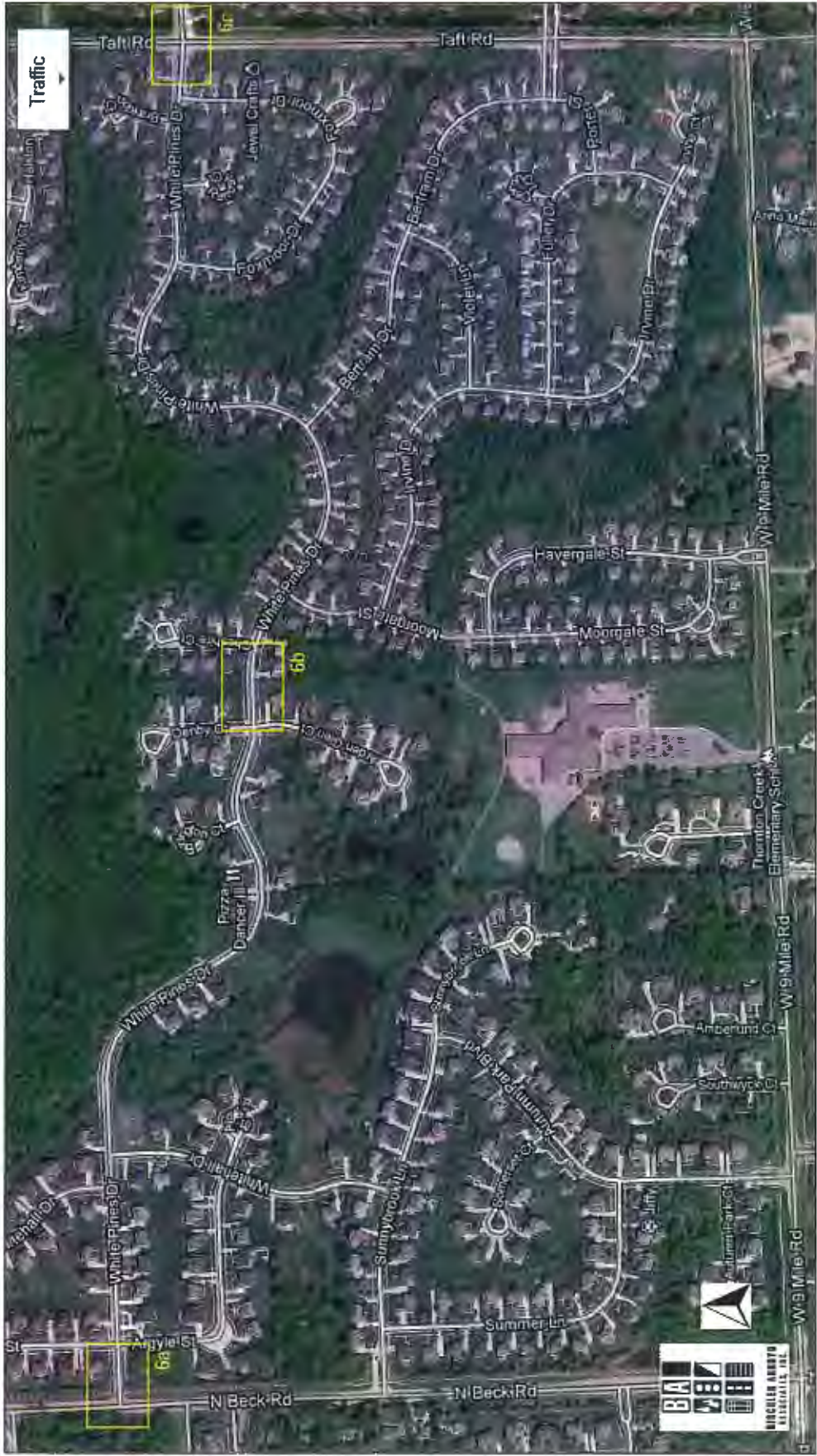


Figure 6. White Pines Between Beck and Taft



Figure 6a. White Pines and Beck



Figure 6b. Confirmatory Signing at Midpoint Along White Pines



Figure 6c. White Pines and Taft

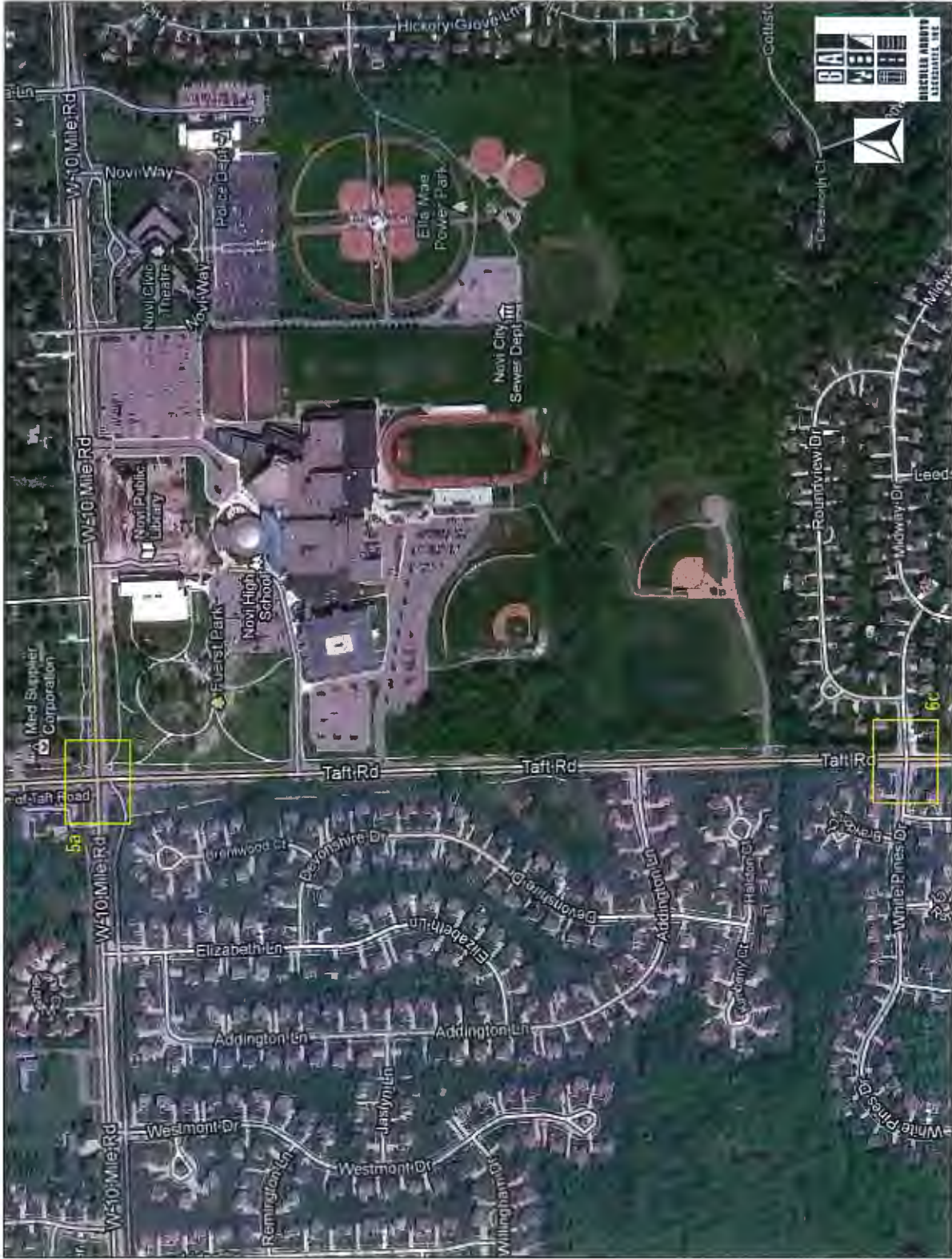


Figure 7. White Pines to Civic Center

# Revised Sign Location Table and Maps

# Novi Bike Path to Library Sign Quantities

Primary Sign	Secondary Sign
D11-1	M4-6
D11-1	M6-1 (Pointing Right)
D11-1	M6-1 (pointing Right)
D11-1	M6-4
D11-1	M6-3
D11-1	M6-4
D11-1	M6-6 (Pointing Up and Right)
D11-1	M6-6 (Pointing Down and Left)
D11-1	M6-3
D11-1	M6-6 (Pointing Up and Right)
D11-1	M6-3
D11-1	M6-3
D11-1	M6-1
D11-1	M4-6
D11-1	M6-1
D11-1	M6-1 (Pointing Right)
D11-1	M6-3
D11-1	M6-1 (Pointing Right)
D11-1	M6-6 (Pointing Up and Left)
D11-1c	M4-14
D11-1c	M6-1
D11-1c	M6-1
D11-1c	M6-3
D11-1c	M5-1 (Pointing Right)
D11-1c	M6-3
D11-1c	M6-1
D11-1c	M6-1 (Pointing Right)
D11-1c	M6-3
D11-1c	M5-1
D1-1c	1.8
D1-1c	0.7
D1-1c	2
D1-1c	0.8

Sign Totals	
D1-1c:	4
D11-1c:	10
D11-1:	19
<b>Total:</b>	<b>33</b>

M4-6	2
M4-14	1
M5-1	1
M5-1 (Pointing Right)	1
M6-1	5
M6-1 (Pointing Right)	5
M6-3	8
M6-4	2
M6-6 (Pointing Up and Right)	2
M6-6 (Pointing Down and Left)	1
M6-6 (Pointing Up and Left)	1
<b>Total:</b>	<b>29</b>

Sign Sizes		
Sign Type	Width (in)	Height (in)
D11-1	24	18
D11-1c	2	18
D1-1c	Varies	6
M4-14	12	6
M4-6	12	6
M5-1	12	9
M6-1	12	9
M6-2	12	9
M6-3	12	9
M6-4	12	9
M6-6	12	9

Created by: A. Wayne 5/11/2012



# Novi Bike Path To Library Signage

Cider Mill Rd & Beck Rd



## Map Legend

### Signs

- D11-1
- D11-1c
- D1-1c
- 📖 Library
- 🏫 School
- ▬▬▬▬ Bike Route

Feet



1 inch = 150 feet



## City of Novi

Engineering Division  
 Department of Public Services  
 26300 Delwal Drive  
 Novi, MI 48375  
[cityofnovi.org](http://cityofnovi.org)

Map Author: A. Wayne  
 Date: July 1, 2013  
 Project: Novi Bike Path Signing  
 Version #:

Amended By:  
 Date:  
 Department:

### MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

# Novi Bike Path To Library Signage

Emerald Forest Dr. & Taft Rd.

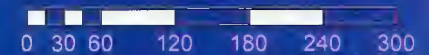


## Map Legend

### Signs

- D11-1
- D11-1c
- D1-1c
- Library
- School
- - - - - Bike Route

Feet



1 inch = 150 feet



## City of Novi

Engineering Division  
 Department of Public Services  
 26300 Delwal Drive  
 Novi, MI 48375  
[cityofnovi.org](http://cityofnovi.org)

Map Author: A. Wayne  
 Date: June 18, 2013  
 Project: Novi Bike Path Signing  
 Version #:

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 Department:

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# Novi Bike Path To Library Signage

Ten Mile Rd. & Taft Rd.



## Map Legend

### Signs

- D11-1
- D11-1c
- D1-1c
- Library
- School

- - - - - Bike Route

Feet



1 inch = 150 feet



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# Novi Bike Path To Library Signage

White Pines Dr. & Taft Rd.

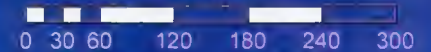


## Map Legend

### Signs

-  D11-1
-  D11-1c
-  D1-1c
-  Library
-  School
-  Bike Route

Feet



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 Version #:

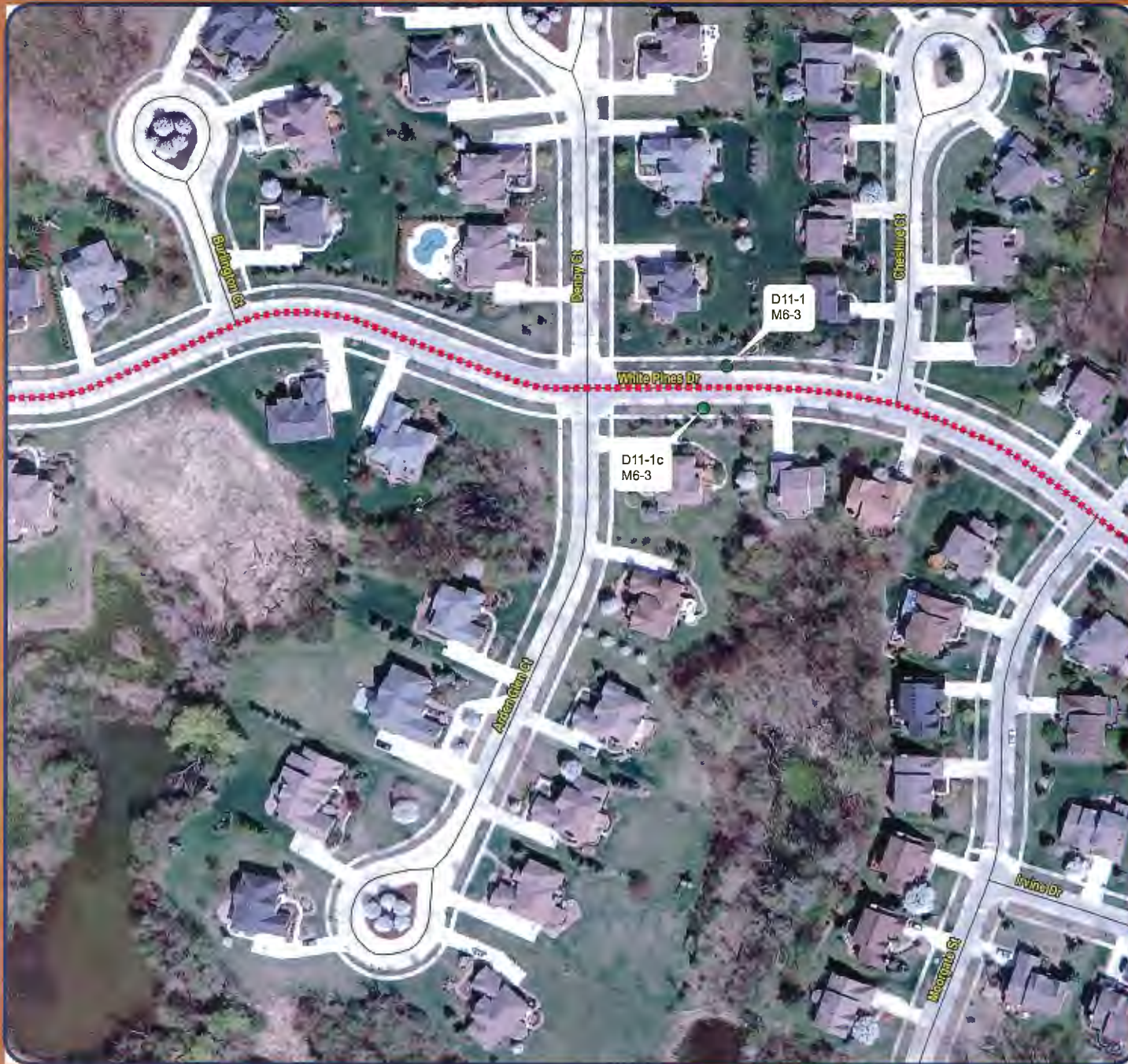
Amended By:  
 Date:  
 Department:

### MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.







# Novi Bike Path To Library Signage

White Pines Dr. & Denby Ct.



## Map Legend

### Signs

-  D11-1
-  D11-1c
-  D1-1c
-  Library
-  School
-  Bike Route

Feet



1 inch = 150 feet



## City of Novi

Engineering Division  
 Department of Public Services  
 26300 Delwal Drive  
 Novi, MI 48375  
[cityofnovi.org](http://cityofnovi.org)

Map Author: A. Wayne  
 Date: June 18, 2013  
 Project: Novi Bike Path Signing  
 Version #:

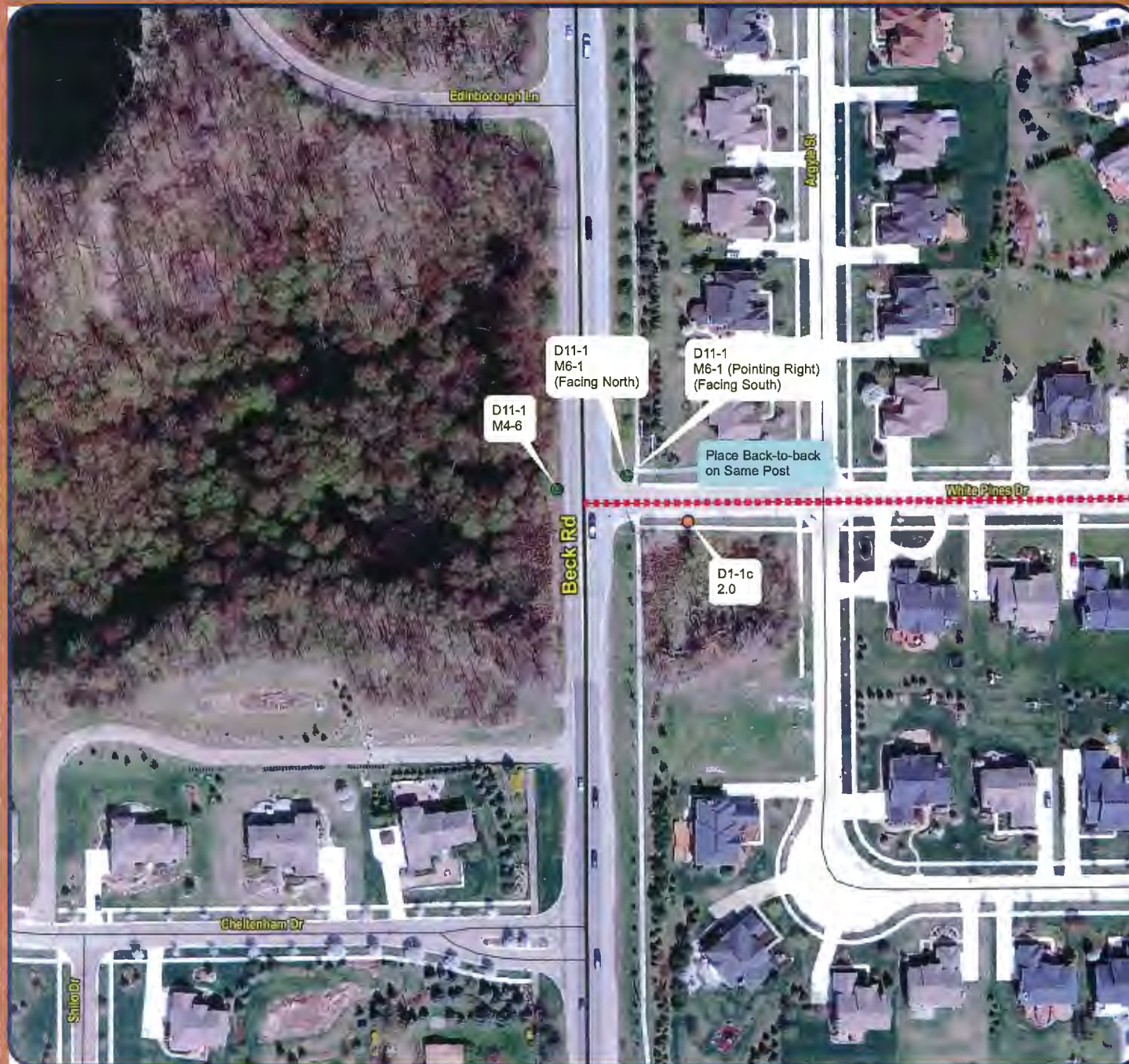
Amended By:  
 Date:  
 Department:

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# Novi Bike Path To Library Signage

White Pines Dr. & Beck Rd.



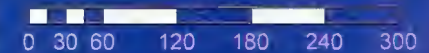
## Map Legend

### Signs

- D11-1
- D11-1c
- D1-1c
- Library
- School

- - - - - Bike Route

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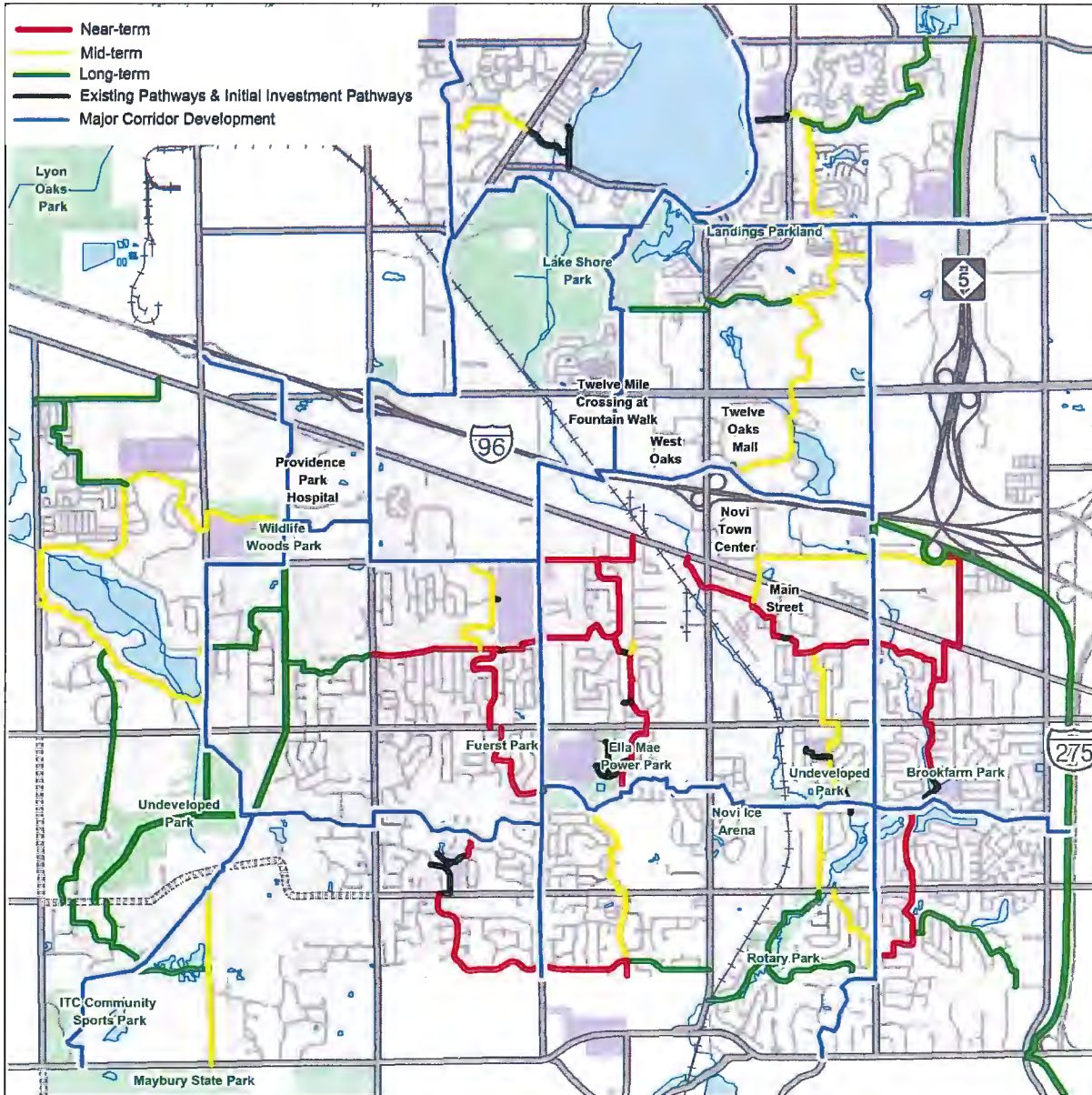
Amended By:  
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Excerpt from *Master Plan*  
for Land Use

**Fig. 3.2F. Neighborhood Connectors**





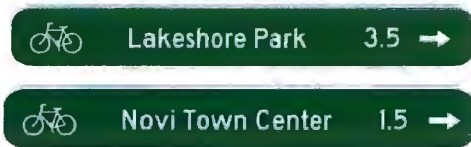
## 5.9 Bike Route Signs and Wayfinding

### Route Characteristics

Routes signed as a Bike Route should be roads that have a relatively high Quality/Level of Service for bicyclists. The route should not have any known hazards to bicyclists and should be maintained in a manner that is appropriate for bicycle use. While many local roads may meet these criteria, **the key is that the road is part of a specific route to a particular place.** Obvious routes need not be marked. **Bike Routes should be used judiciously to identify obscure routes to key destinations that avoid travel along major roadways.**

Where a bicycle route on a local road intersects a busy multi-lane primary road and continues on the other side of the road, a traffic signal or appropriately designed mid-block crossing should be provided.

Bike Routes generally do not include specific bicycle improvements such as Bike Lanes. Bike Lane pavement markings and signs already indicate that a road segment is designed to specifically accommodate bicycles. Bike Route signs are to be used where no obvious bicycle facility exists yet the route is advantageous to bicyclists. Thus road segments with Bike Lanes should generally not be marked as a Bike Route, except where the bike route uses these facilities as short connectors to continue the route.



D1-1c  
MUTCD 2009

### Bike Route Guide Signs

The most basic bike route signs are Bike Route Guide Signs (shown to the left). These are used on designated bike routes to inform bicyclist of changes in direction and the distance to the next destination. Bike Route Guide Signs are placed at changes in direction of designated bike routes. Not every bicycle facility will necessarily be designated a bike route. Bike routes should be used where the signage would help direct a bicyclist to a key destination that may not be obvious.

### Bike Route Identification Signs

Some bike routes are significant enough to warrant a name or numerical designation. Typically these are key connectors between off-road trails or used to help delineate a trail that incorporates many different facility types. Bike Route Identification Signs (shown to the right) establish a unique identification for a bike route. These signs are typically used with auxiliary plaques that indicate the direction of travel and any changes in direction of the route.



M1-8a  
MUTCD 2009