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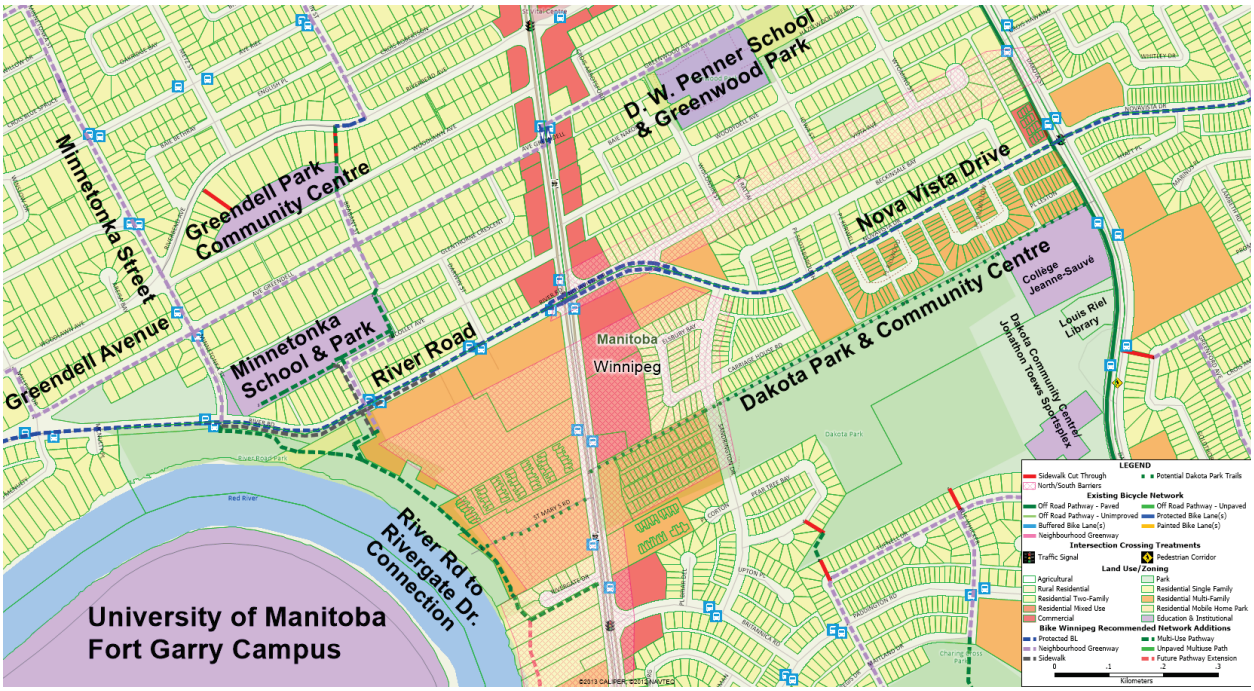
MORE OFTEN

River Road to Rivergate Drive Study Recommendations



Given the poor lack of north/south connectivity between River Road and the Henteleff Park/South St. Vital Trail corridor, a pathway along the Red River connecting the Minnetonka and Normand Park neigbourhoods would be a positive addition to Winnipeg's bicycle network. Ultimately, we feel that this pathway could be extended south to Maple Grove Park.

Of course, any investment in a pathway connection along the Red River will need to maximize connections to the local and regional bicycle network, and to neighbourhood, community, and regional destinations. We feel that the benefits of this project would be greatly increased by improving walking and cycling connections to St. Amant Centre, Minnetonka School and Park, Greendell Park Community Centre, and Darwin School & Park.

Ideally, the planned pathway would also provide a spur giving access across St. Mary's Road into Dakota Park and the River Park South neighbouhood, but given potential rights of way and their distance from existing traffic signals on St. Mary's Road, this may not be achievable. Without a signalized crossing of St. Mary's Road and access through the Okolita Park development into Dakota Park, we feel that the missing connections to St. Amant Cenre, Minnetonka School and Park, and Greendell Park Community Centre should take priority over any connection to St. Mary's Road.

Key Recommendations

1. We prefer Option 2 over Option 1 as the more comfortable and attractive option, but with the addition of a connection to the Village Canadien driveway as per Option 1
    a. Any cycling facility built along River Road must be consistent with plans and best practices for the overall River Road/Nova Vista Drive Corridor
        i. Given traffic volumes and speeds, driveway and intersection densities, right of way constraints (including trees and medians), and intersection cross sections along River Road and Nova Vista Drive, protected bike lanes would be the most appropriate facility type for the River Road/Nova Vista Drive corridor.
        ii. The existing all-way stop at the intersection of Minnetonka Street and River Road makes this point the natural choice for a connection.
    b. The proposed pathway should be pushed back towards the river between Minnetonka Street and the point where the Option 1/Option 2 routes split.
        i. A side path along River Road with little buffer between traffic would not be very comfortable or attractive, and would likely conflict with plans for future cycling facilities on River Road/Nova Vista Drive.
    c. A connection to the Village Canadien driveway would provide access to Minnetonka Park and School via Nicollet Avenue at an existing intersection on River Road.
        i. A neighbourhood greenway/mixed use cycling facility on Nicollet Avenue could easily be extended north through Minnetonka Park and Glenthorne Crescent to provide a low stress bicycle connection to Greendell Park Community Centre
        ii. The Nicollet Avenue route is actually a more direct route to Minnetonka School than the River Road/Minnetonka Street Route, and avoids the bus loop and parking lot.
2. We prefer Option 4 over Option 3 to flood proof the pathway as much as possible
3. Viewing points and rest stops/benches should be incorporated into in the plan and cost estimates.
4. Construction of a sidewalk along the south side of River Road between Minnetonka and the easternmost Village Canadien driveway should be included to provide a continuous walking facility along River Road between St. Mary's Road and St. Amant Centre (with together with Action Marguerite – Valade employs roughly 2,000 people).
5. Construction of sidewalk along the west side of Nicolett Avenue between River Road and Minnetonka Park & School should be included in the project.
    a. There is an existing crosswalk at the intersection Nicollet Avenue with River Road, and a clear desire line between Nicollet Avenue and Minnetonka School supporting this addition.
6. Pursue property acquisition or easements along the riverbank that would allow for a future extension of the pathway to Henteleff Park and the Normand Park pathway system, and ultimately all the way to Maple Grove Park.

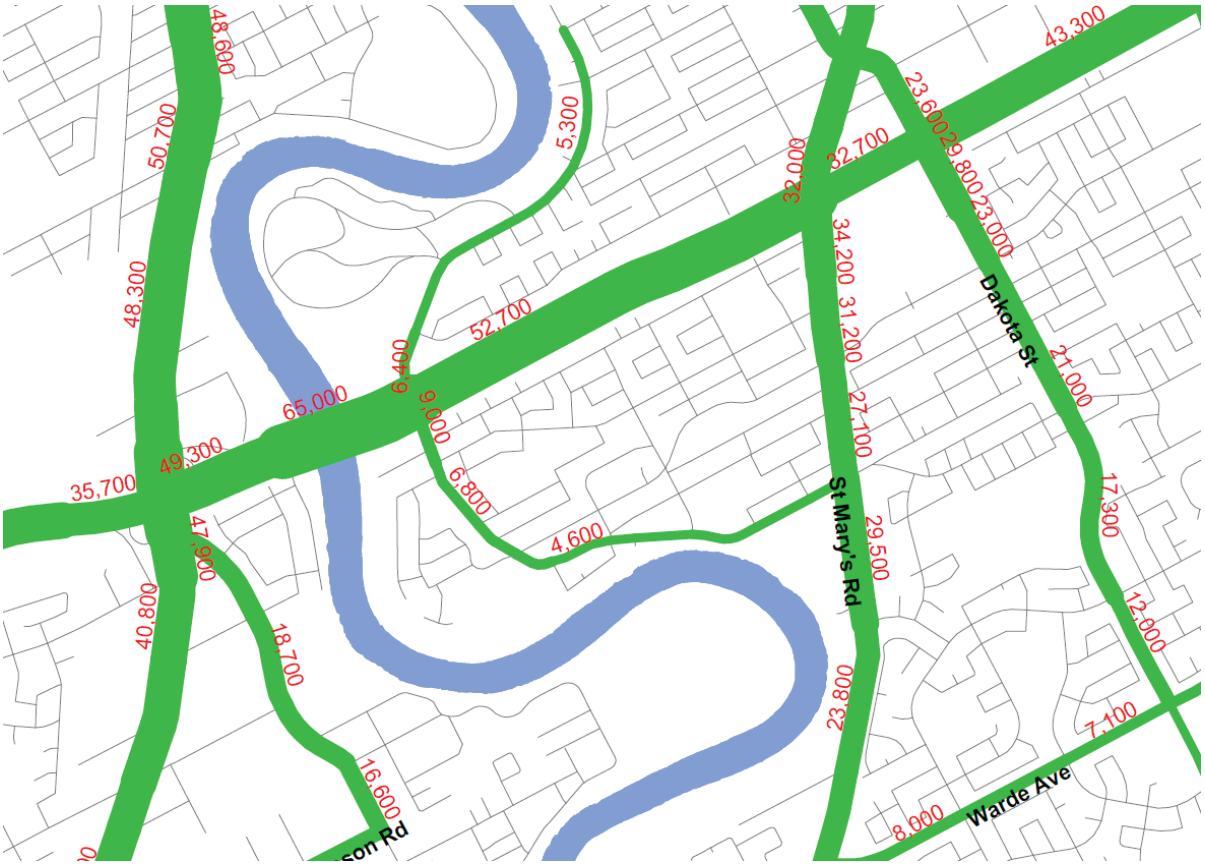
a. Riverbank properties south of Rivergate Drive should be flagged as necessary for a future pathway extension so that property acquisition or easements can be negotiated as part of any rezoning agreements for properties abutting this future pathway.
b. Extension of the pathway to Maple Grove Park should be considered as part of the South Perimeter Highway/St. Norbert By-Pass study recently awarded to WSP.

7. Without a connection across St. Mary's Road and into Dakota Park, the Rivergate spur seems unnecessary – save the land, but unless it can be combined with a crossing of St. Mary's Road and pathway into Dakota Park, there is little need for this spur and the money would be better spent on extensions to the north that would provide connections to Minnetonka School, Greendell Park Community Centre, Darwin School and the Mercy Tunnel connecting Avalon Avenue to the Bishop Grandin Greenway.

Ensure Consistency with Future Plans for River Road/Nova Vista Drive

We are concerned that plans for the River Road to Rivergate Drive Connection are being created in isolation, and that the type of facility being proposed on River Road as part of this study may not be consistent with the facility type that will be selected for the rest of the River Road/Nova Vista Corridor. The bicycle facility type chosen for this section of River Road needs to be consistent with the facility that will be selected for the full length of the corridor and the selected facility type needs to be in line with the role that the River Road/Nova Vista Drive bikeway will play in the overall cycling network.

While this study is proposing a multi-use pathway along River Road between the Village Canadien driveway and Minnetonka Street, the Pedestrian and Cycling Strategies propose painted bike lanes on River Road and Nova Vista between Bishop Grandin and St. Anne's Road.



2015 City of Winnipeg Traffic Flow Map

Contextual Guidance for Selecting All Ages & Abilities Bikeways				
Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		*Any*	*Any of the following:* high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts‡	**Protected Bicycle Lane**
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	**Shared Street**
≤ 20 mph	≤ 1,000–2,000		< 50 motor vehicles per hour in the peak direction at peak hour	**Bicycle Boulevard**
≤ 25 mph	≤ 500–1,500			
	≤ 1,500 – 3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	**Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane**
	≤ 3,000 – 6,000			**Buffered or Protected Bicycle Lane**
	Greater than 6,000			**Protected Bicycle Lane**
	Any	Multiple lanes per direction		
Greater than 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	**Protected Bicycle Lane, or Reduce Speed**
		Multiple lanes per direction		**Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed**
	Greater than 6,000	*Any*	*Any*	**Protected Bicycle Lane, or Bicycle Path**
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		*Any*	High pedestrian volume	**Bike Path with Separate Walkway or Protected Bicycle Lane**
			Low pedestrian volume	**Shared-Use Path or Protected Bicycle Lane**

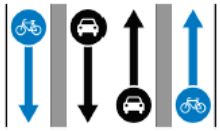
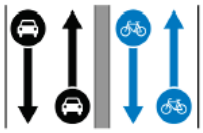
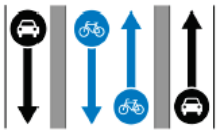
NACTO Designing an All Ages & Abilities, pg. 4

Certainly traffic speeds and volumes along River Road warrant the separation of people on bikes from motorized traffic on River Road, but we also feel that pedestrian and cycling volumes also warrant that people on foot should be separated from people on bikes along River Road. Given that River Road is a bus route and that it provides access to Minnetonka School, St. Amant Centre, the Fort Garry Bridge, and St. Vital Park, a moderate to high level of people walking and biking along River Road should be expected.

As such, we strongly recommend that the study abandon the idea of a shared-use pathway on River Road in favour of a new sidewalk on the south side of River Road for those on foot, combined with protected bike lanes on River Road for people on their bikes.

We recommend further study and consultation as to whether a two-way protected bike lane or two one way protected bike lanes should be selected along River Road/Nova Vista Drive. Guidance on this decision should be taken from design guides such as the FHWA Separated Bike Lane Planning and Design Guide, the MassDOT Separated Bike Lane Planning & Design Guide, NACTO Designing for All Ages & Abilities, NACTO Urban Bikeway Design Guide, and the CROW Design Manual for Bicycle Traffic.

EXHIBIT 2D: EXAMPLE SEPARATED BIKE LANE CONFIGURATIONS ON A TWO-WAY STREET

Corridor-level Planning Considerations	One-way SBL Pair	Two-way SBL	Median Two-way SBL
			
Access to Destinations	Full access to both sides of street	Limited access to other side of street	Limited access to both sides of street
Network Connectivity	Accommodates two-way bicycle travel	Accommodates two-way bicycle travel	Accommodates two-way bicycle travel
Conflict Points (see Chapter 4)	Fewer because pedestrians and turning drivers expect concurrent bicycle traffic	Pedestrians and turning drivers may not expect contra-flow bicycle traffic	Pedestrians and turning drivers may not expect contra-flow bicycle traffic, but median location may improve visibility and create opportunities to separate conflicts
Intersection Operations (see Chapter 6)	May use existing signal phases; bike phase may be required depending on volumes	Typically requires additional signal equipment; bike phase may be required depending on volumes	Typically requires additional signal equipment; bike phase may be required depending on volumes

MassDOT Separated Bike Lane Planning & Design Guide, pg. 17

River Road just east of Minnetonka Street - both boulevards have space for sidewalks and/or protected bike lanes.

Nova Vista Drive near Rillwillow Pl. - a wide roadway with parking on both sides, narrow boulevards with trees and utilities.

Nova Vista Drive approaching St. Mary's – a median , very narrow boulevards, and left turn lane leave little space for a pathway.

Nova Vista Drive approaching Beckinsale Bay – a wide roadway with trees quite near to the curb leave little room for a pathway.

		Driveways		Intersections	
Road Segment	Segment Length	North Side	South/West Side	North Side	South Side
Bishop Grandin to Woodlawn	755	22	25	5	3
Woodlawn to Minnetonka	755	14	1	2	4
Minnetonka to St. Mary's	700	28	6	3	1
St. Mary's to Dakota	995	3	5	11	7
Dakota to Ashworth	690	2	0	4	4
Ashworth to St. Anne's	555	1	1	3	5
	4,450	70	38	28	24

Driveway and Intersection frequency along the River Road/Nova Vista Corridor

Connections across St. Mary's Road to Dakota Park

Ideally, the planned pathway would also provide a spur giving access across St. Mary's Road into Dakota Park and the River Park South neighbourhood. However, given potential rights of way and their distance from existing traffic signals on St. Mary's Road, we are concerned that this may not be achievable.

St. Mary's Road Traffic Control Distance Chart (estimated in metres)

	Bishop Grandin	Meadowood	Greenwood	Greendell	River Road	Rivergate	Britannica	Grimsby Park Cut-Through	Henteleff Park Cut-Through	South St. Vital Trail	Warde
Bishop Grandin	x	650	830	865	1,135	1,660	1,750	1,955	2,270	2,480	2,745
Meadowood	650	x	185	220	495	1,010	1,105	1,310	1,620	1,835	2,095
Greenwood	830	185	x	35	310	830	930	1,135	1,450	1,655	1,920
Greendell	865	220	35	x	275	800	890	1,080	1,410	1,615	1,875
River Road	1,135	495	310	275	x	510	605	800	1,115	1,325	1,585
Rivergate	1,660	1,010	830	890	800	x	95	300	615	820	1,085
Britannica	1,750	1,105	930	890	605	95	x	200	515	725	985
Grimsby Park Cut-Through	1,955	1,310	1,135	1,080	800	300	205	x	315	525	785
Henteleff Park Cut-Through	2,270	1,620	1,450	1,410	1,115	615	515	315	x	210	470
South St. Vital Trail	2,480	1,835	1,655	1,615	1,325	820	725	525	210	x	265
Warde	2,745	2,095	1,920	1,875	1,585	1,085	985	785	470	265	x

Distance between existing and potential traffic signals along St. Mary's Road – 200m is generally considered the minimum distance between signalized intersections by traffic engineers.

Without a connection across St. Mary's Road and into Dakota Park, there is little utility for a pathway connecting St. Mary's Road to the River Road Park pathway.

Without a signalized crossing of St. Mary's Road combined with a bike route through the Okolita Park development into Dakota Park, we feel that the missing connections to St. Amant Cenre, Minnetonka School and Park, and Greendell Park Community Centre should take priority over any pathway connection to St. Mary's Road.

Prioritize Connections to Local Destinations

The U.S. Department of Transportation's Federal Highways Administration has adopted six principles adapted from the Dutch CROW (Centre for Research and Contract Standardization in Civil and Traffic Engineering) manual that provide a useful method and definition for assessing how well a pedestrian and bicycle network meets its intended purpose:

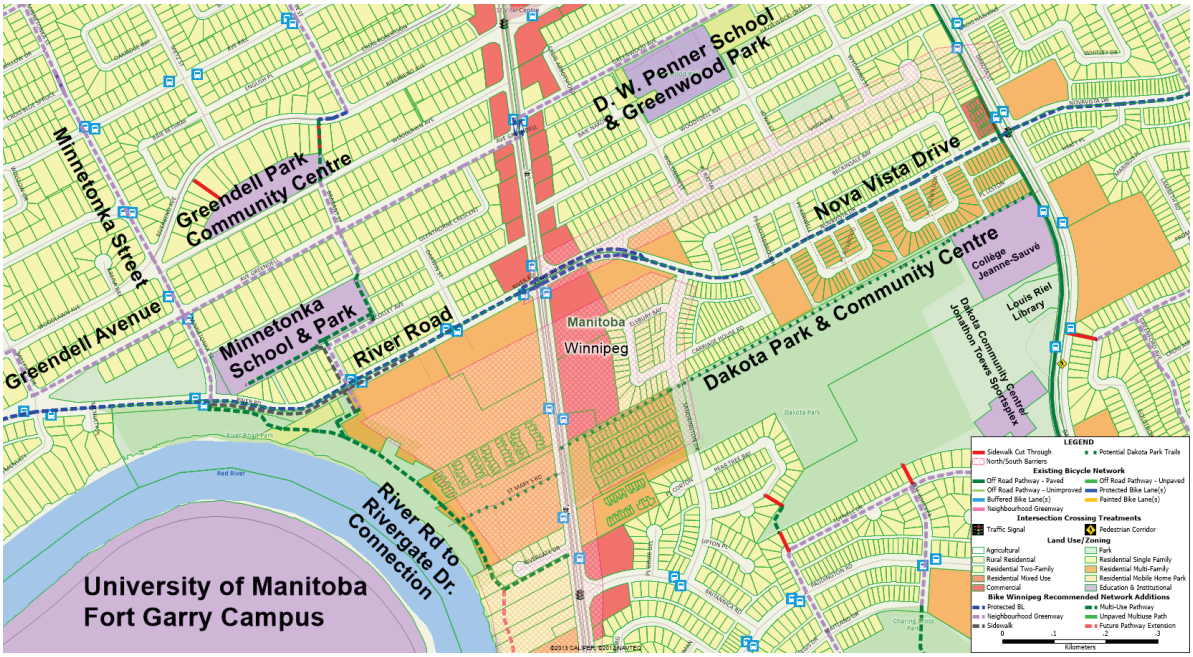
- **Cohesion**: A connected, cohesive network provides continuous bicycle and pedestrian facilities between destinations
- **Directness**: A complete network minimizes the distance that pedestrians and bicyclists need to travel to reach destinations
- **Accessibility**: A complete network accommodates travel for all users, regardless of age or ability
- **Alternatives**: A complete network provides route choices
- **Safety and Security**: Policies that promote safety and security are important to minimize the risk of injury, danger, and crime
- **Comfort**: A complete network appeals to a broad range of age and ability levels with consideration given to user amenities

Source: Noteworthy Local Policies That Support Safe and Complete Pedestrian and Bicycle Networks . FHWA. November 2016. Pg. 4

With that in mind, the walking and cycling facilities proposed as part of this study need to be integrated into the local and regional bicycle network to provide people on foot or bikes with safe, comfortable, and direct access to neighbourhood, community, and regional destinations. Critical destinations and network connections that need to be connected include:

- Regional Destinations
    - St. Vital Centre (Regional Mixed-Use Centre)
    - St. Vital Park (Regional Park)
    - Dakota Park & Community Centre (Library, High School, Multiplex)
- Local Destinations
    - St. Amant Centre & Action Marguerite – Valade (roughly 2,000 employees)
    - Greendell Park Community Centre
    - Minnetonka School & Park
    - Darwin School & Park
    - Dr. D. W. Penner School
    - Saint Germain Park
    - Riel House National Historic Site
- Connections
    - Bishop Grandin Greenway (Network Spine)
    - Fort Garry Bridge
    - Mercy Tunnel
    - Henteleff Park & Future U of M Pedestrian/Bicycle Bridge
    - Normand Park Trails
    - South St. Vital Trail

A neighbourhood greenway along Nicollet Avenue, Glenthrorne Crescent, Darwin Street could provide a more direct and comfortable route to important local destinations suh as Minnetonka School & Park, Greendell Park Community Centre, Darwin School & Park, and the Mercy Tunnel connecting to the Bishop Grandin Greenway.



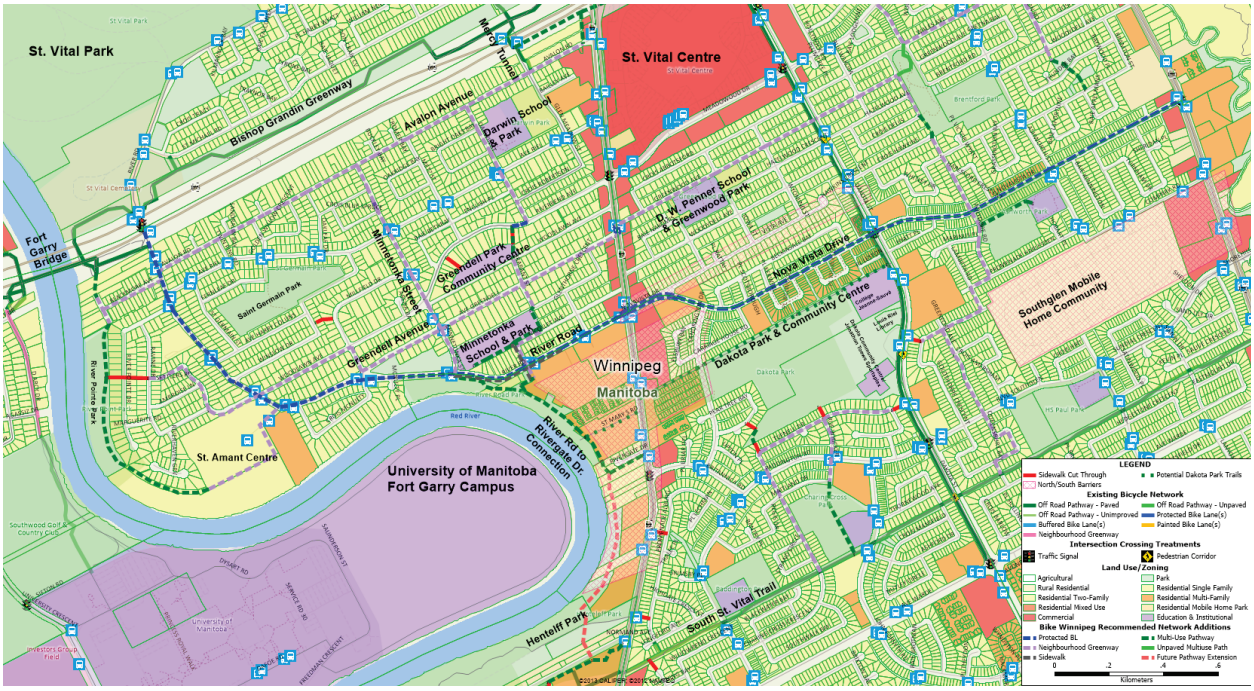
A north/south neighbourhood greenway connecting River Road from its intersection with Minnetonka Street to the Mercy Tunnel (on the Glen Meadows roadway alignment) off of Avalon Road has been identified as part of the City of Winnipeg's Pedestrian and Cycling Strategies. The recommended route for this neighbourhood greenway is Minnetonka Street to Woodlawn/Riverbend Avenue, Riverbend Avenue to Darwin Street, and finally Darwin Street to Robertson Crescent/Glen Meadows. It's not the most direct route to begin with, but it also fails to connect with either the Greendell Park Community Centre or with Darwin School. There are two more direct routes (fewer stops) that should be considered as alternatives to the identified north/south route to the Mercy Tunnel. The first option would be to provide a neighbourhood greenway treatment for the full length of Minnetonka Street, which would provide a connection from River Road to Avalon Road. This option would have 5 ½ stops, which could likely be reduced to 4 stops via traffic calming.

The second option would be to develop a neighbourhood greenway along Nicollet Avenue, passing through Minnetonka Park to Glenthorne Crescent, and from there passing through the Greendell Park Community Centre site to Riverbend before completing the connection to Avalon Road via Darwin Street. If a two-way protected bike lane was constructed on the south side of Riverbend Avenue between the Greendell Park Community Centre and Darwin Street (about 60m in length), this route could provide a direct, low stress connection between the Village Canadien Coop and the proposed Riverbank pathway and the Mercy tunnel. The route would have 6 ½ stops (averaged in both directions), but this could probably be dropped to 3 ½ stops through traffic calming.

School Travel planning for Minnetonka, Darwin and D.W. Penner Schools should be considered as a way to help clarify north/south and east/west walking and cycling network needs in the Minnetonka neighbourhood.

Discussion of the wider Bicycle Network in the Study Area

If we extend the discussion around the bicycle network into a wider area taking into account the needs of the Minnetonka, Vista, Meadowood and River Park South, and Dakota Crossing neighbourhoods, the need for a few more east/west connections and north/south become apparent. As do possible candidates for these routes.



As the cross-hatched areas in the map shown above highlight, the road network and residential developments in these neighbourhoods provide few opportunities for low-stress north/south connections to be developed in the bicycle network. The only existing north/south connection is on Dakota Street. Without these north/south connections, east/west connections become more critical, and may need to be located closer together to provide people with east/west access across this wider study area.

We think that in addition to the planned River Road/Nova Vista Drive bikeway, the bicycle network needs to include east/west bikeways along the following corridors:

- Avalon Road/Bishop Grandin (south side)/Sterling Avenue
    - Would provide access to the Mercy tunnel and a more direct Route to St. Vital Centre
- Settler's Road/Woodlawn Avenue/Greendell Avenue/Greenwood Avenue/…/John Bruce Road
    - Would provide an east/west access between Bishop Grandin and Nova Vista Drive
    - A signalized crossing at St. Mary's may be possible if combined with short protected bike lane segments along St. Mary's Road

- A signalized crossing at Dakota Street should be possible, either by moving the existing Pedestrian Corridor at Hazelwood north, or by detouring south to Hazelwood and maintaining the location of the existing Pedestrian Corridor.
- Several routes between Brentford Park and John Bruce Road are possible (protected bike lanes on Meadowood Avenue might be the best option).

Distances between Existing and Potential East/West bikeways (all distances estimated in meters)

	Bishop Grandin Greenway	Avalon	Sterling	Woodlawn	Wales	Greendell/Greenwood	River Road/Nova Vista	Dakota Park Trail (northern border)	Dakota Park Trail (southern border)	South St. Vital Trail	Burland Park Trail
Bishop Grandin Greenway	0	255	160-270	840	770-835	865	1,230	1,445	1,590	2,350	3,285
Avalon	255	0	x	575	x	675	690-945	1,250	1,370	2,110	2,890
Sterling	160-270	x	0	x	560	x	1,220	x	1,550	2,120	3,075
Woodlawn	840	575	x	0	x	100	100-365	670	785	1,530	2,365
Wales	770-835	x	560	x	0	85	570-660	x	990	1,560	2,510
Greendell/Greenwood	865	675	650	100	90	0	475-570	610	735	1,480	2,345-2,395
River Road/Nova Vista	1,230	690-945	1,220	100-360	660	570	0	125-305	430	1,005-1,170	1,890-2,070
Dakota Park Trail (northern border)	1,445	1,250	x	670	x	590	125-305	0	130-310	875	1,775-1,810
Dakota Park Trail (southern border)	1,590	1,385	1,545	785	x	740	235-420	135	0	575-760	1,510-1,625
South St. Vital Trail	2,350	2,110	2,120	1,530	1,560	1,480	1,005-1,170	870	575	0	820-925
Burland Park Trail	3,285	2,925	3,115	2,340	2,525	2,415	1,935-1,985	1,810	1,410	1,425-1,655	0