The City of Winnipeg
RFP No. 383-2018
Appendix B
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APPENDIX B. RAILROAD GRADE CROSSING INFORMATION SHARING TO COMPLY WITH THE NEW CANADIAN GRADE CROSSING REGULATIONS

- Report: Railroad Grade Crossing Information Sharing to Comply with the New Canadian Grade Crossing Regulations, March 7, 2017, Morr Transportation Consulting Ltd.
- Web-based Map



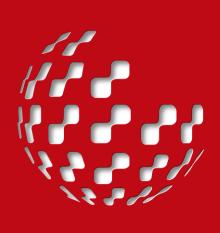
Report for

Railroad Grade Crossings Information Sharing and Prioritization to Comply with the Grade Crossings Regulations

Prepared for

City of Winnipeg







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Railroad Grade Crossing Information Sharing to Comply with the New Canadian Grade Crossings Regulations

Submitted by

MORR Transportation Consulting Ltd.

Winnipeg, Manitoba

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1 INTRODUCTION

MORR Transportation Consulting Ltd. (MORR) was retained by the City of Winnipeg to provide support for data collection, analysis and submittal of grade crossing information to comply with the first deadline of the new Canadian Grade Crossing Regulations (GCR). The first deadline of the Regulations is **November 27th, 2016**, at which point railroads and road authorities need to exchange information related to all public grade crossings. In addition, MORR prioritized all Class I railroad grade crossings to support the City of Winnipeg in ensuring all grade crossings meet the GCR safety requirements by **November 27th**, **2021**.

1.1 Background

In the December 17th, 2014 Canadian Gazette (Vol. 148, No. 26), Transport Canada released the new Canadian Grade Crossings Regulations and Standards (referred to herein as the New Regulations) as part of the Railway Safety Act (RSA) which are enforceable for the first time. As a result of these new regulations, road authorities across Canada must comply with the information sharing requirements within two years of coming into force and ensure that the grade crossings in their jurisdiction meet the New Regulations within seven years of coming into force. The information sharing component of the New Regulations require road authorities to provide a railway company, in writing, with the information concerning a public grade crossing as listed in Table 1.

Table 1: Information Sharing Requirements for Road Authorities as per New Grade Crossing Regulations

- Precise location of crossing
- Number of traffic lanes at the crossing
- Average annual daily traffic
- Road design speed
- Road classification
- Traffic lane width on road approach
- Design vehicle used for designing the crossing

- Stopping sight distance
- Average gradient of the road approach
- Departure time
- Advance activation time
- Pre-emption time
- Presence of sidewalks, paths, trails and if they are designated for persons with assistive devices

Under the New Regulations a road authority, such as the City of Winnipeg, must ensure that the following requirements are met concerning: (1) the design, construction, and maintenance of a road approach, (2) traffic control devices, (3) the design of a crossing surface, and (4) sightlines within the land on which the road is situated and over land in the vicinity of the grade crossing, including the removal of trees and brush that obstruct the sightlines.



1.2 Project Purpose and Objectives

The purpose of this project is to provide the City of Winnipeg with the information and knowledge necessary to fulfil their obligations under the New Regulations for the first deadline (information sharing) of November 27th, 2016 and to provide a guiding document to meet the second deadline of November 27th, 2021 for safety requirements of the New Regulations.

The objectives of this work are to help the City of Winnipeg comply with the New Regulations by:

- 1. Obtaining the necessary information required for the information sharing component of the regulations;
- 2. Analyze data obtained in Objective 1 to complete information sharing component and submit to the Class I railroads by November 27th, 2016;
- 3. Consolidate all information between road and rail data for federally regulated railroads crossings (summary sheet provided in Appendix A);
- 4. Create a visualization tool (interactive map) that provides prioritization of grade crossings to support the City of Winnipeg in future work to meet the November 27th, 2021 deadline;
- 5. Assess crossings with sightline obstructions using photo documentation and develop ongoing maintenance requirements (due to vegetation) or solutions required due to permanent obstructions; and
- 6. Provide ongoing support for Rail Safety Improvement Program applications to meet the August 1st, 2017 deadline to pursue federal funding for ongoing safety improvements (previous RSIP application from December, 2016 provided in Appendix B).

The New Regulations set out what the road authority and railroad are responsible, however, the improvements or work required between 2016 and 2021 should be coordinated between the road authority and railroads so they may work collaboratively toward improved safety. The intended purpose of this report is to ensure the City of Winnipeg can meet the information sharing requirements as well as provide insight into some of the work that will be required in the next five years such as management of sightlines and physical characteristics that must be maintained (or not allowed to degrade). The observations and information in this report are not a replacement for full detailed safety assessments (detailed safety assessments are not a direct requirement of the New Regulations).

1.3 Methodology

The MORR project team developed a series of customized assessment sheets for each grade crossing prior to conducting field visits. These sheets were provided to City of Winnipeg field staff who visited all crossings within the City of Winnipeg to perform measurements and conduct preliminary assessments of sightlines. This information was provided to MORR for review, calculate required variables that cannot be measured, and to aggregate data for submission to the Class I railroads. MORR worked with the City of Winnipeg traffic group to obtain short-term traffic counts to develop average daily traffic and identify where any data was missing. When data was missing, the City of Winnipeg included these locations in there spring traffic count program of 2016.



All data and information gathered by the City of Winnipeg and MORR was summarized by Class I railroad and submitted prior to November 27th, 2016. Following acquisition of the railroad information, MORR developed varying prioritization lists including sightlines, geometric characteristics, and a total priority list. These prioritization lists use weighted values to score each crossing and include information on obstructed sightlines, geometric features that exceed allowable standards, route type (whether the crossing is on a truck route or bus route), and crossings where users with assistive devices are likely to travel.

1.4 Report Organization

The first chapter of this report provides an overview and background of the project, the project purpose and objectives, and general methodology.

Chapter two provides an overview of the location of Class I railroad crossings, definitions for the information collected, and sample templates detailing what information was collected when City of Winnipeg field staff visited each crossing.

Chapter three provides a summary of the grade crossing prioritization based on varying metrics. These include crossings with sightlines obstructed that must be addressed as well as a list of crossings for each geometric characteristic that must be maintained Each subsection provides details on how issues can be resolved and the on-going responsibility of the City of Winnipeg under the New Regulations.

Chapter four is a user walkthrough of the web-based mapping tool that visualizes the findings from chapter three.



2 CITY OF WINNIPEG FEDERAL GRADE CROSSINGS

2.1 Location of Crossings

Information was gathered and summarized for a total of 207 grade crossings belonging to Class I railroads. Figure 1 is a map showing the location of all Canadian Pacific and Canadian National grade crossings included as part of this work plan.

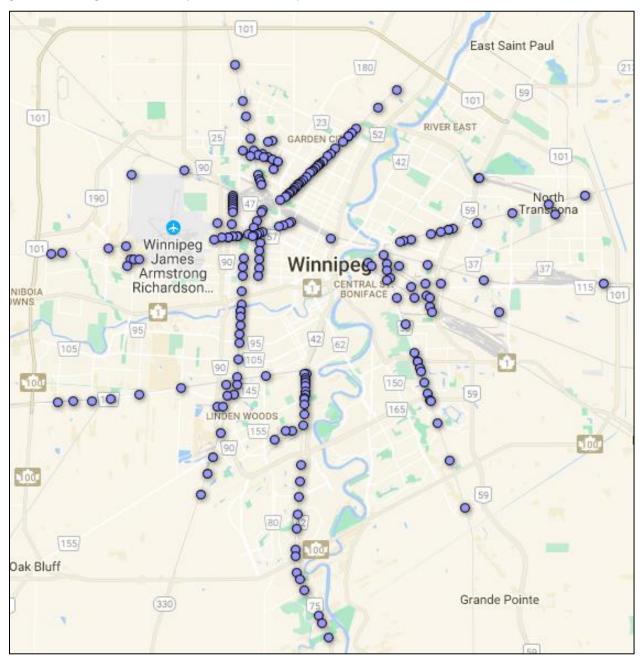


Figure 1: Location of all 207 Class I railroad grade crossings





2.2 Definition of Information Collected

Table 2 provides a definition of the information collected as part of this work. After the table are a series of notes that provide additional details specific to this project for select attributes.

Table 2: Attributes and their descriptions for the Information Sharing requirement
Attribute Description

	Attribute	Description
1	Location (latitude, longitude)	Precise location of the crossing presented as decimal degree coordinates
2	Lanes	Number of traffic lanes travelling through the crossing
3	Average Daily Traffic ¹	Average daily traffic developed from short term traffic counts or
		permanent traffic counts
4	Design Speed (kph)	The design speed for traffic vehicles approaching/travelling through the
		crossing
5	Road Classification	Classification of roadways based on road characteristics as defined by the
		Geometric Design Guide for Canadian Roads
6	Road Width (m)	Width of the road, in metres, and may be broken up by lane width when
	, ,	road is delineated
7	Shoulder Width ²	Width of left and right shoulders when applicable
8	Design Vehicle ³	The design vehicle influences departure time, stopping sight distances,
		sightlines, and clearance distance
9	Stopping Sight Distance	The minimum sight distance along the road approach to allow a road user
	(West/North) (m)	to react to approaching vehicles
10	Stopping Sight Distance	The minimum sight distance along the road approach to allow a road user
	(East/South) (m)	to react to approaching vehicles
11	Gradient within 8m	Gradient of road approach within 8 metres of the crossing, also referred
	(West/North)	to as the stopped gradient
12	Gradient within 8m	Gradient of road approach within 8 metres of the crossing, also referred
	(East/South)	to as the stopped gradient
13	Gradient beyond 10m	Gradient of road approach beyond 10 metres of the crossing, also
	(West/North)	referred to as the SSD gradient
14	Gradient beyond 10m	Gradient of road approach beyond 10 metres of the crossing, also
	(East/South)	referred to as the SSD gradient
15	Crossing Angle	Angle at which the road and railroad intersect
16	Departure Time	The greater of the time required for either the design vehicle or
	(West/North) (seconds)	pedestrians to pass through the clearance distance from a stopped
		position
17	Departure Time	The greater of the time required for either the design vehicle or
	(East/South) (seconds)	pedestrians to pass through the clearance distance from a stopped
		position
18	Prepare to Stop	The time for a vehicle travelling at the road crossing design speed to pass
	Advanced Activation ⁴	a deactivated "Prepare to Stop" flashing light and clear the grade crossing
19	Signal Interconnect	The advanced warning time given by an interconnected signal to clear a
	Advanced Activation	grade crossing prior to railway equipment arriving at the crossing
20	Sidewalk or Path	The presence of a path or sidewalk for active transportation adjacent to
		the road and passing through the grade crossing
21	Date Updated	Date that information was last updated

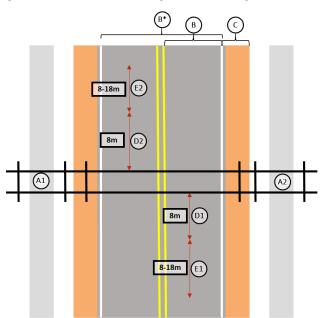


NOTES:

- 1. Average daily traffic was obtained from the City of Winnipeg traffic group and includes a combination of 48-hour and 8-hour traffic counts as provided by the traffic group.
- 2. Most grade crossings reviewed for the City of Winnipeg did not have shoulders.
- 3. The design vehicle used for the City of Winnipeg crossings were based on the route types. Geographic Information System (GIS) files were obtained that provided details on truck routes and bus routes. All crossings on a truck route were designated a design vehicle of WB-20 and all crossings on a bus route were designated a design vehicle of DLF-40 (Winnipeg Bus). The remaining crossings were provided a design vehicle of a heavy single unit (HSU) or pedestrian/cyclist for active transportation routes.
- 4. No crossings under the jurisdiction of the City of Winnipeg have activated prepare to stop signage.

2.3 Reference Site Plans for Data Collection

To maintain consistency in data collection for all crossings, a series of reference schematics were developed prior to conducting field visits and reviewed with City of Winnipeg field staff to ensure instructions and objectives of the sheets were clear. Figure 2 shows the schematic for collecting geometric data at each grade crossing.



A1: Presence of N/W sidewalk
A2: Presence of S/E sidewalk
B: Width of *EACH* traffic lane (when painted)
B*: Width of entire gravel/dirt road
C: Width of *EACH* shoulder
D1: Road approach gradient within 8m of
nearest rail (N/W travel)
D2: Road approach gradient within 8m of
nearest rail (S/E travel)
E1: Road approach gradient between 8m and

18m of nearest rail (N/W travel)
E2: Road approach gradient between 8m and
18m of nearest rail (N/W travel)

F: Angle between rail and road centreline

Figure 2: Measurement and observation locations for road geometry

As part of the New Regulations, sightlines are required to be maintained clear of obstructions. Passive grade crossings (with only crossbucks) require a clear sightline triangle as per both images in Figure 3. Crossings with a stop sign or flashing lights require clear sightline triangles as per the top image in Figure 3.



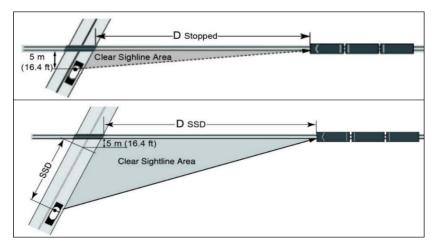


Figure 3: Sightline requirements for grade crossings as per Transport Canada's New Regulations

The stopping sight distance (SSD) for vehicles are calculated based on vehicle type and road approach gradients. The value for D_{SSD} is calculated based on maximum allowable train operating speeds and $D_{Stopped}$ is the distance a train would need to travel before entering the crossing. Both of these distances provide an approaching or stopped design vehicle with the appropriate time to make a decision to stop or proceed through the crossing.

Figure 4 is used to determine initial estimates of obstructed sightlines for crossings with only crossbuck warning signs.

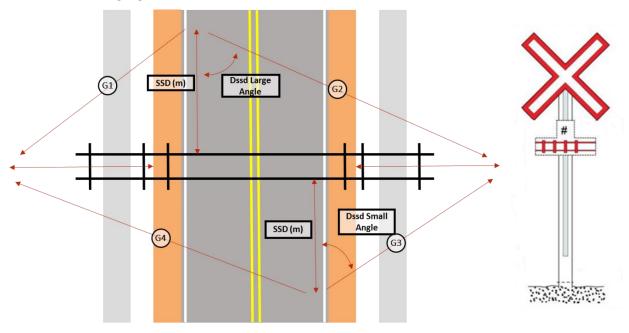


Figure 4: Site plan to estimate obstructed sightlines for grade crossings with crossbucks

Figure 5 is used to determine initial estimates of obstructed sightlines for crossings with crossbucks only, crossbucks equipped with stop signs and crossings with flashing lights.



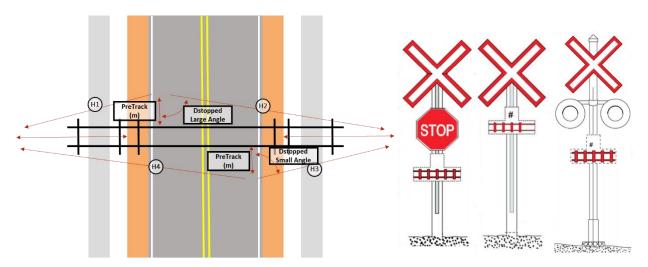


Figure 5: Sightlines from the stopped position for all grade crossings

The reference values (G1 through G4 and H1 through H4) are used for each crossing to indicate which sightlines are obstructed. Figure 4 and Figure 5 should be used for reference for each crossing. For example, if Sightline H1 and/or H2 are noted as being obstructed this will be the sightline for the North or West direction of travel looking left or right. H3 and H4 sightlines would be in reference to the South or East direction of travel looking left or right.



3 GRADE CROSSING PRIORITIZATION

The grade crossing prioritization for the City of Winnipeg includes three parts:

- 1. Sightlines a mandatory criteria of the New Regulations,
- 2. Geometric characteristics approach gradients and crossing angles, and
- 3. Overall conditions includes all key attributes collected to score each crossing.

These prioritization lists can help guide the City of Winnipeg through to November 27th, 2021 to ensure crossings meet the requirements. Each prioritization list provides different insights into the conditions of the crossing and what needs to be done by the City to improve or maintain existing safety levels.

3.1 Sightlines

As per the New Regulations, establishing and maintaining clear sightlines is a mandatory requirement that must be met by the November 27th, 2021 deadline. Information related to the sightlines can be found in Section 19 to 28 of the GCR. Existing grade crossings have different requirements based on the warning system installed at that location. Grade crossings without a warning system (only crossbucks) must maintain clear sightlines as per Figure 6 and Figure 7. Grade crossings with a warning system (flashing lights and bells or a stop sign) must maintain sightlines as per Figure 6, however, if the warning system has gates it is exempt from the sightline requirements. Any new grade crossing would be required to meet the sightlines of both Figure 6 and Figure 7.

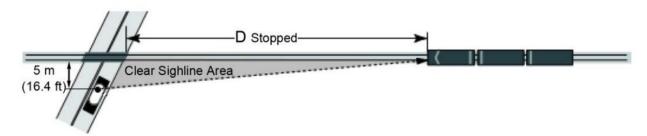


Figure 6: Sightlines for road users stopped at a crossing (Source: Transport Canada GCS)

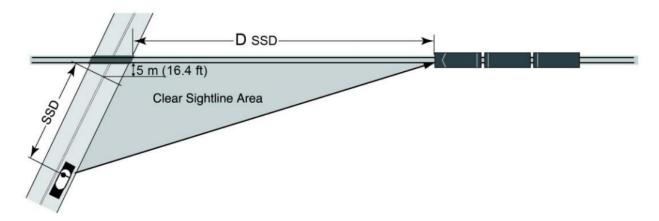


Figure 7: Sightlines for users approaching a grade crossing (Source: Transport Canada GCS)



The sightlines illustrated in previous two figures are applicable to all four quadrants and the City of Winnipeg is responsible for any obstructions outside the rail right-of-way. These obstructions could include vegetation or permanent structures like buildings. Generally, the sightlines shown in Figure 6 do not create an issue for the City of Winnipeg but could be obstructed by vegetation or structures on the rail right-of-way. The sightlines in Figure 7 are specific to passive crossings with only crossbucks and are more commonly obstructed.

Priority List

A priority list of grade crossings with sightlines was created using three metrics: number of sightlines obstructed, crossing exposure (cross-product), and route type. Each metric was scored based on the following:

- 1. Sightlines: 1 through 4 for number of sightlines obstructed
- 2. Crossing Exposure: 0 through 3 based on cross product value
- 3. Route Type: 1 through 3 for standard route, bus route, and truck route, respectively

In total, 57 crossings had some sort of obstruction of sightlines, eight of which had a warning system beyond crossbucks. Table 3 provides a list of the crossings with sightline obstructions, the score of each metric, and a normalized score (out of 10 maximum). The crossings in this list will need to be addressed prior to November 27th, 2021 with any improvements or changes to the warning system /signage done in conjunction with the Class I railroads.

Appendix C provides further details on the sightline obstructions from the prioritization list provided in this section. Photographs of the obstructed sightlines are provided along with details pertaining to the type of obstruction (vegetation or permanent structure). This appendix is intended to provide the City of Winnipeg with an approach to addressing sightlines in conjunction with the Class I railroads. Solutions can include removal or trimming of vegetation, use of higher level warning systems (such as a stop sign or flashing lights), or speed reductions.

The location and information regarding grade crossings with obstructed sightlines are provided in the web-based map tool detailed in Chapter 4. Crossings can be identified and information relating to the crossing viewed from within the map tool.



Table 3: Prioritization list of crossings with sightline obstructions

					Warning	Sightlines		Cross-		Route		Sightline Priority
TCID	Street	Subdivision	Railroad	MP	System	Obstructed	Score	Product	Score	Туре	Score	Score
14006	Dawson Road North	Caragua	CN	0.00	SRCS	4	4	171780	2	Truck	2	9
14906		Sprague		0.09		4			3	Truck	2	
14912	Marion Street Lowson	Sprague	CN	0.33	SRCS	4	4	83584	3	Truck	2	9
35777	Crescent	Rivers	CN	0.17	SRCS	4	4	2002	2	Bus	3	9
14916	Panet Road	Sprague	CN	0.74	SRCS	4	4	128800	3	Truck	2	9
21516	Plinguet Street	Emerson	СР	0.44	SRCS	4	4	9510	2	Truck	2	8
	Chevrier											
49746	Boulevard	Letellier	CN	1.08	SRCS	4	4	20799	2	Truck	2	8
14913	Turenne Street	Sprague	CN	0.46	SRCS	4	4	5720	2	Car	1	7
18452	None	Arborg	CP	1.1	SRCS	4	4	0	0	Bus	3	7
18457	Church Avenue	Arborg	СР	0.11	SRCS	4	4	0	0	Bus	3	7
18458	Church Avenue	Arborg	CP	0.12	SRCS	4	4	0	0	Bus	3	7
20142	Dublin Avenue	La Riviere	СР	0.44	SRCS	4	4	0	0	Bus	3	7
34889	Church Avenue	Arborg	СР	0.46	SRCS	4	4	0	0	Bus	3	7
	Saulteaux											
36726	Crescent	Glenboro	CP	0.35	SRCS	4	4	0	0	Bus	3	7
8769	Hamelin Street	Letellier	CN	0.65	SRCS	4	4	2986	2	Car	1	7
18454	Inkster Boulevard	Arborg	СР	0.49	SRCS	4	4	0	0	Truck	2	6
10454	Hutchings	Albuig	CP	0.49	SNCS	4	4	U	U	TTUCK	2	U
18461	Street	Arborg	СР	0.2	SRCS	4	4	0	0	Truck	2	6
	Mountain	_										
35324	Avenue	Arborg	CP	0.25	SRCS	4	4	0	0	Truck	2	6
18460	Church Avenue	Arborg	СР	0.12	SRCS	3	3	0	0	Bus	3	6
	Saulteaux						_		_		_	6
34894	Crescent	Glenboro	СР	0.1	SRCS	3	3	0	0	Bus	3	6
35323	Church Avenue	Arborg	CP	0.12	SRCS	3	3	0	0	Bus	3	6



					Warning	Sightlines		Cross-		Route		Sightline Priority
TCID	Street	Subdivision	Railroad	MP	System	Obstructed	Score	Product	Score	Type	Score	Score
44404	Notre Dame	Oak Point	011			_		50000			4	C
11431	Avenue	Spur	CN	4.84	FLB	4	4	50283	1	Car	1	6
47539	Pedestrian	Rivers	CN	0.32	SRCS	4	4	0	0	Ped	1	5
10016	Manitoba	Winnipeg	0.0		an aa	_					4	F
48946	Avenue	Beach	СР	0.6	SRCS	4	4	0	0	Ped	1	5
48950	Lansdowne	Winnipeg	СР	1.79	SRCS	4	4	0	0	Dod	1	5
	Avenue	Beach				4	4			Ped		
20135	Higgins Avenue	Carberry	СР	0.36	SRCS	4	4	0	0	Car	1	5
48948	Boyd Avenue	Winnipeg	СР	0.96	SRCS	4	4	0	0	Ped	1	5
48948	McAdam	Beach Winnipeg	CP	0.96	SKCS	4	4	0	0	Peu	1	J
48951	Avenue	Beach	СР	1.93	SRCS	4	4	0	0	Ped	1	5
40331	Plymouth	Beach	Ci	1.55	31103	-	-	•	J	i cu	-	J
18455	Street	Arborg	СР	0.18	SRCS	4	4	0	0	Car	1	5
	St. Matthews	Ü										
20179	Avenue	La Riviere	СР	1.25	SRCS	4	4	0	0	Car	1	5
48919	Spruce Street	La Riviere	СР	1.29	SRCS	4	4	0	0	Car	1	5
48920	Valour Road	La Riviere	СР	1.34	SRCS	4	4	0	0	Car	1	5
		Winnipeg										
48947	Alfred Avenue	Beach	CP	0.75	SRCS	4	4	0	0	Ped	1	5
725040	Trinity Street	La Riviere	СР	0.16	SRCS	4	4	0	0	Car	1	5
725041	Pacific Avenue	La Riviere	СР	0.4	SRCS	4	4	0	0	Car	1	5
18451	Selkirk Avenue	Arborg	СР	0.98	SRCS	4	4	0	0	Car	1	5
34896	Moray Street	Glenboro	СР	0.2	SRCS	3	3	0	0	Truck	2	5
36828	Softley Road	Sprague	CN	0.19	SRCS	4	4	47	0	Car	1	5
725042	Richard Avenue	La Riviere	СР	0.31	SRCS	4	4	0	0	Car	1	5
7 2 3 3 1 2	Rue Notre		<u>. </u>	0.01	01.00	·	•				_	-
14922	Dame	Sprague	CN	2.56	SRCS	3	3	1096	0	Car	1	4
	Saskatchewan											
48923	Avenue	La Riviere	СР	0.03	SRCS	2	2	0	0	Truck	2	4
	Sheppard											
18462	Street	Arborg	CP	0.38	SRCS	3	3	0	0	Car	1	4



TCID	Street	Subdivision	Railroad	MP	Warning System	Sightlines Obstructed	Score	Cross- Product	Score	Route Type	Score	Sightline Priority Score
	Enniskillen	Winnipeg										_
48952	Avenue	Beach	СР	2.11	SRCS	2	2	0	0	Ped	1	3
50061	Pedestrian	Keewatin	СР	123.1	SRCS	2	2	0	0	Ped	1	3
21513	McTavish Street	Emerson	СР	0.55	SRCS	2	2	0	0	Car	1	3
20147	Clifton Street	La Riviere	СР	1.2	SRCS	2	2	0	0	Car	1	3
24205	Midland Street	La Riviere	СР	0.04	SRCS	1	1	0	0	Truck	2	3
34767	Murray Park Road	Glenboro	СР	0.92	SRCS	1	1	0	0	Truck	2	3
48925	Saskatchewan Avenue	La Riviere Winnipeg	СР	0.03	SRCS	1	1	0	0	Truck	2	3
30990	Church Avenue	Beach	СР	1.3	SRCS	2	2	0	0	Car	1	3
	Chevrier											
8768	Boulevard	Letellier	CN	0.4	FLB	1	1	6933	0	Truck	2	3
21520	Messier Street	Emerson	СР	0.96	FLB	1	1	8916	0	Truck	2	3
24204	Notre Dame Avenue	La Riviere	СР	0.88	FLB	1	1	0	0	Truck	2	3
46057	McPhillips Street	La Riviere	СР	0.53	FLB	1	1	0	0	Truck	2	3
48931	Saskatchewan Avenue	La Riviere	СР	0.03	SRCS	1	1	0	0	Car	1	2
14908	Speers Road	Sprague	CN	0.11	FLB	1	1	49220	0	Car	1	2
24212	Wellington Crescent	La Riviere	СР	3.3	FLB	1	1	0	0	Car	1	2
24212	Wellington Crescent	La Riviere	СР	3.3	FLB	1	1	0	0	Car	1	2



3.2 Geometric Characteristics

The geometric characteristics include approach and stopped gradients and crossing angle. The characteristics could potentially be improved but are not a direct requirement of the New Regulations for existing crossings. Road gradients and crossing angles for existing grade crossings are exempt from meeting the GCS pursuant to Section 88 of the GCR. However, if any changes are made to the crossing the gradient or angle must be maintained or improved.

Gradients for road approaches are set out in article 6.3 of the Grade Crossings Standards:

The maximum gradients for road approaches must not exceed the following: (a) ratio of 1:50 (2 per cent) within 8 m of the nearest rail and 1:20 (5 per cent) for 10 m beyond, at public grade crossings for vehicular use; (b) ratio of 1:50 (2 per cent) within 8 m of the nearest rail and 1:10 (10 per cent) for 10 m beyond, at private grade crossings for vehicular use; (c) ratio of 1:50 (2 per cent) within 5 m of the nearest rail at a sidewalk, path or trail; and (d) ratio of 1:100 (1 per cent) within 5 m of the nearest rail at a sidewalk, path or trail designated by the road authority for use by persons using assistive devices.

Crossing angles are set out in article 6.5 of the Grade Crossings Standards:

A grade crossing angle, measured from the tangent of the centreline of the road approach at the crossing surface, to the tangent of the centreline of the line of railway, shall, where the railway design speed is more than 25 km/h (15 mph) be: (a) not less than 70 and not greater than 110 degrees for grade crossings without a warning system; or (b) not less than 30 and not greater than 150 degrees for grade crossings with a warning system.

In total, 105 grade crossings in Winnipeg violate the requirements of the Grade Crossing Standards for either road gradients or crossing angle. The web-based map provides the ability to filter for these crossings to identify their location and visualize prioritization. In addition, the complete list is provided in Appendix D. On-going, the City should be aware of these crossings to ensure changes are not made due to street work that could lower the level of safety.



3.3 All Crossing Characteristics

The last prioritization list developed takes into account multiple crossing characteristics including:

- Obstructed sightlines
- Cross-product
- Gradient
- Low ground
- Crossing angle
- Route type
- Use of assistive devices (vulnerable road users)

The total possible score for a crossing is 17 across all characteristics. This score is normalized to a value out of 10. The complete ranked list of crossings is provided in Appendix D and can be used to determine an order of safety improvements, if desired, after the mandatory requirements of sightlines has been completed.



4 WEB-BASED MAP

A web-based map has been developed to assist the City of Winnipeg in addressing any issues with grade crossings and to quickly identify and locate those crossings. The web-based map has four main visualization categories:

- 1. Obstructed Sightlines provides a color-coded map of all crossings according to their score on sightline obstructions as a means to prioritize crossings. These are crossings that require improvements to meet the new Grade Crossing Regulations.
- 2. Geometric Properties provides a color-coded map of all crossings according to geometric properties to identify any crossings that, if street work is done, must maintain or improve their current values.
- 3. All Crossing Characteristics provides a color-coded map of all crossings according to the attributes listed in Chapter 3.2. This map presents a very general perspective of grade crossings in Winnipeg.
- 4. Grade Crossing Information provides a map of all crossings and all information that was part of the Information Sharing component of the grade crossing regulations.

In addition, each of the categories above can be filtered by railroad (either CN or CP). Figure 8 illustrates the map for obstructed sightlines for all Class I railroad grade crossings. In comparison, Figure 9 shows only those crossings that belong to CN.

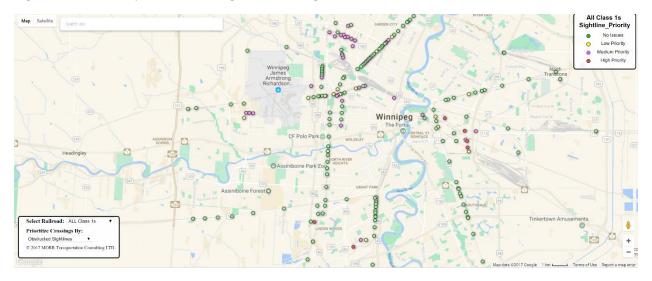


Figure 8: All Class 1 railroad grade crossings prioritized by obstructed sightlines.



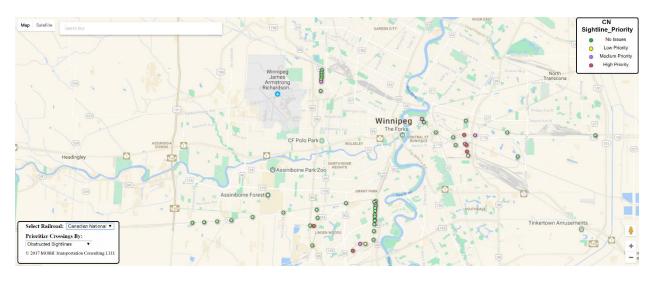


Figure 9: Canadian National grade crossings prioritized by obstructed sightlines.

The bottom left of the map has a query window that enables the user to sort the information according to railroads and attributes. Querying the data will automatically update the legend to reflect what is being shown on the map.

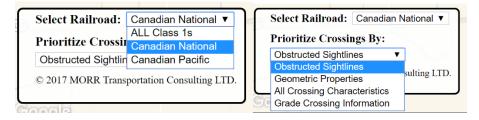


Figure 10: Map query window (left image: query by railroad, right image: query by attributes)

Using the map from Figure 9, the user can zoom into the "red dot" (indicating sightline obstructions) on Panet Road (see Figure 11).

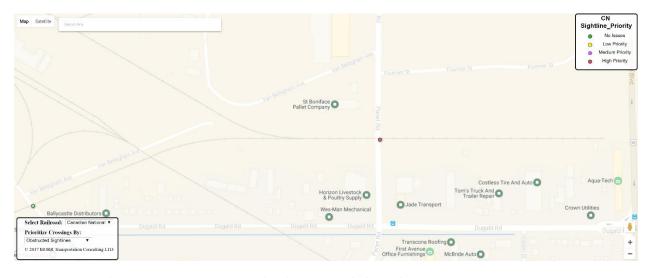


Figure 11: Grade crossing at Panet Road indicating sightline obstructions



Clicking the "red dot" for the grade crossing at Panet Road provides additional information on the crossing (shown in Figure 12).



Figure 12: Example pop-up window

In addition, the user can enter street view the same way as Google Maps by dragging the "yellow person" from the bottom right corner of the map to the crossing location. Figure 13 provides an example of using Google streetview to review obstructed sightlines. In this example, the sightline is obstructed by vegetation.



Figure 13: Example sightline obstruction review using Google Streetview



Appendix A Grade Crossing Information Sharing



		General Inf	ormation						Railroad Information												Roadway Information	1							
	Transport Canada Crossing City of Winnipeg Street I			ngitude Latitude	Warning	Subdivision	Mile	Crossing Location	Crossing Type	Stop Sign	Tracks Annaul Daily Design	Design Whis			Design Speed	Road Road		Road ay Design cat Classificat		verage? ? houlder	esign SSD (m) SSD (m)				age Average ad Back	Crossing Departu		n Sidewalk or Path (Y	ssistive Date
Column	ID	Name	u iviiepost		System					Oli Post:			Laties	real	(kph)	spec 1 Spec 2	ion	ion	(m) Viddi V	Width (m)	micie	(stopped) (SSD)) (stopped)	(SSD) Gradi	ient Gradient	Angle e Time (Activatio	o /N) ue	evices Opuateu
The content of the													Y 1 Y 2	359 1999					1.5 0 7 0	0 AT 0 HSU	108 108		2.8 2.4 0.4 2.2	2.6 1.6	3.2 2.5 1.1 1.9			0 Y N	8759
The content of the	8761 Rockman Street	Letellier	CN 0.55 -97.	.154163 49.8462012	FLB	Letellier	0.55	ROCKMAN STREET	Flashing Lights	No	1 3 20	32.1868	Y 2 Y 2	994 2016	50 Url	ban Local	Not Divide Local	Local	7 0	0 HSU	J 109 108	0.5	1.2 0.6 1.2 1	1.2		87 10.6	0 N/A		
The content will be content with the content will be content wit	8763 Southwood Avenue	Letellier	CN 0.78 -97	.154452 49.8429998	FLB	Letellier	0.78	SOUTHWOOD AVE	Flashing Lights	No	1 3 20	32.1868	Y 2 Y 2	707 2016	50 Url	ban Local	Not Divide Local	Local	7.2 0	0 HSU	108 108	1.1	1.6 1.3 1.3 3.1	1.9	2.1 1.1 1.2 2.5	120 11.7	1 N/A		
The content of the	8765 Waller Avenue	Letellier	CN 1.07 -97.	.154833 49.8387835	FLB	Letellier	1.07	WALLER AVE	Flashing Lights	No	1 3 20	32.1868	Y 2	867 2004	50 Url	ban Collector	Not Divide Collecto	or Collector		0 HSU	J 108 108					117 10.7	'8 N/A		
Column C	8767 Chevrier Boulevard	Letellier	CN 1.65 -97	.155585 49.8304288	FLB	Letellier	1.65	CHEVRIER BLVD	Flashing Lights	No	1 3 20	32.1868	Y 2 Y 2	5945 2000	50 Url	ban Collector	Not Divide Collecto	or Collector		0 WB	-20 108 109	2.1	1.8 1.2 0.6 1			123 13.4	2 N/A	0 Y N	8767
Column C	8769 Hamelin Street 8772 Markham Road	Letellier	CN 0.65 -97.	.166775 49.8281516					Stop Signs	Yes			Y 2 Y 2	4317 2013	50 Url	ban Collector	Not Divide Collecto	or Collector		0 DLF	-40 108 109			1.2	0.95 1 1.1 0.9	89 9.3	9 N/A	0 N N 0 Y N	
Column	8775 Devos Road	Letellier	CN 5.3 -97.	.160367 49.7777431	FLB	Letellier	5.3	DEVOS ROAD		No	1 3 25	40.2335	Y 6 Y 2	47 1999		ban Local	Not Divide Local	Local		0 HSU	J 108 108		0.7 0.4 1.2 3.4			115 10.2	8 N/A		
Column	8778 des Trappistes Rue	Letellier	CN 6.31 -97.	.154746 49.7640831	FLB	Letellier	6.31	TRAPPISTES ROAD	Flashing Lights	No	1 3 25	40.2335	Y 2	1342 2012	50 Url	ban Collector	Not Divide Collecto	or Collector	10 0	0 DLF	-40 109 109	1.1	0.9 1.4	0.4	1 0.9	94 9.5	6 N/A	0 Y N	
State Stat	11426 Dublin Avenue	Oak Point Spur	CN 4.5 -97.	.200151 49.9114709	FLB	Rivers	4.5	DUBLIN AVENUE	Flashing Lights	No	2 3 10	56.3269	N 4	15196 2014	60 Url	ban Arterial	Not Divide Arterial	Arterial		0 HSU	129 128	1	0.7 1.1	2	0.85 1.55	90 9.3	9 N/A 2	0 Y N	
The second column 1	11432 Bannatyne Avenue West	Oak Point Spur	CN 4.94 -97	7.19966 49.9177264	SRCS	Rivers	4.93	BANNATYNE AVENUE	Stop Signs	Yes	2 3 10	56.3269	N 2	598 2016	50 Url	ban Local	Not Divide Local	Local	8 0	0 HSU	108 108	0.1	3 1.2	1.1	1.55 1.15	68 9.4	9 N/A		
The part of the	11434 Elgin Avenue West	Oak Point Spur	CN 5.04 -97	.199522 49.9193892	SRCS	Rivers	5.04	ELGIN AVENUE	Stop Signs	Yes	2 3 10	56.3269	N 2	428 2016	50 Url	ban Local	Not Divide Local	Local	8 0 8 0			1.5	2.5 1.3 1.7 2.3	2.3	2 1.8 1.9 2.4	69 11.9	0 N/A		
The second part Second par	11436 Pacific Avenue West	Oak Point Spur	CN 5.16 -97.	.199388 49.9210896	SRCS	Rivers	5.16	PACIFIC AVENUE	Stop Signs	Yes	2 3 10	56.3269		475 2016	50 Url	ban Local	Not Divide Local	Local	8 0 8 0	0 HSU	108 109			0.1 1.2		67 12.0	14 N/A		
Column C	11438 Logan Avenue 12705 Ravenhurst Street	Oak Point Spur Redditt	CN 5.28 -97 CN 244.07 -96	.968215 49.8874231	FLBG	Redditt	244.07		Flashing Lights Flash. Lights with Auto. Gate	s No	3 16 70	1	N 2	11020 2014	50 Url 70 Url	ban Arterial ban Arterial	Not Divide Arterial Not Divide Arterial	Arterial Arterial	14.8 0 7 2.2	1.4 WB	-20 176 176	1.2	1.1 0.5	0.5 2.1	1.15 0.5 1.2 1.6	67 9.5 94 14.8	0 N/A 4 N/A	0 Y N 0 N N	
The property The	13111 Waverley Street	Rivers	CN 3.89 -97	7.17886 49.8502753	FLBG	Rivers	3.89		Flash. Lights with Auto. Gate:	s No	2 31 35	16.0934	N 4	30018 2013	50 Url	ban Arterial	Not Divide Arterial	Arterial	7 0 13.7 0	0 WB	-20 108 108					79 20.9	1 N/A		13111
The content	13114 Kenaston Boulevard	Rivers	CN 0.31 -97	.209236 49.8381966	FLB	Rivers	0.31	KENASTON BLVD	Flashing Lights	No	2 1 10	56.3269	Y 4	58520 2013	80 Url	ban Arterial	Divided Arterial	Arterial	14.4 0	0 WB	-20 205 205	1.6	0.2 0.6	1.2	0.2 0.45 1.25 1.6	89 13.9	7 N/A	0 N N	13118
Column C	13119 Elmhurst Road	Rivers	CN 7.46 -9	97.258 49.8428634	FLBG	Rivers	7.46	ELMHURST RD	Flash. Lights with Auto. Gates	s No	2 31 35	56.3269		4829 2009	50 Url	ban Collector	Not Divide Collecto	or Collector		0 HSU	J 106 108	5.9	2.7 2.4 1.6 3	2 2.9	4.3 2.2 2.25 2.95	76 12.6	6 N/A	0 N N	13110
Column C	13121 Harstone Road	Rivers	CN 8.8 -97	.287599 49.840339	FLBG	Rivers	8.8	Harstone Road	Flash. Lights with Auto. Gates	s No	0 14 45	0 (0 2	853 2009	50 Url	ban Collector	Not Divide Collecto	or Collector	8 0 8 0	0 HSU	108 108	2.5	1.6 2.9 2.8 2.9	2.6	2.05 2.75 2.9 2.75	85 10.9	8 N/A	0 N N	
The part of the	13124 Charleswood Road		CN 9.78 -97.	.308793 49.8396678				CHARLESWOOD RD	Flash. Lights with Auto. Gate:	s No			N 2 Y 2		50 Url	ban Collector	Not Divide Collecto	or Collector	6.6 0 7.4 3			2.6 0.1	1.9 2.4 0.3 1.6	0.8	2.25 2.3 0.2 1.2				
Column C	14911 Dawson Road North		CN 0.31 -97.	.088248 49.8863267	FLB		0.31	DAWSON ROAD	Flashing Lights	No	1 20 10	48.2802	Y 2 Y 2	11244 2012	60 Url	ban Collector	Not Divide Collecto	or Collector	7 2 11 0	0 WB	-20 129 128					110 13.2	3 N/A	0 N N 0	
Column C	14913 Turenne Street	Sprague	CN 0.46 -97	.078345 49.8827849	SRCS	Sprague	0.46	TUREEN STREET	Stop Signs	Yes	1 20 10	48.2802		286 2016	50 Url	ban Local	Not Divide Local	Local		3.5 HSU	J 109 107		2.6 1.4 0.3 5.5			90 10.8	7 N/A		
Column C	14917 Marion Street	Sprague	CN 0.92 -97	.086076 49.8819261	FLBG	Sprague	0.92	MARION ST	Flash. Lights with Auto. Gates	s No	1 4 10	48.2802		27307 2009	60 Url	ban Arterial	Not Divide Arterial	Arterial	7 3.5 14 0	0 WB	-20 126 128	2.4	2 2.4	1.1	2.2 1.75	34 36.0	7 N/A	0 N N	
Column C	14921 Provencher Boulevard	Sprague	CN 2.42 -97.	.113062 49.8944977	FLBG	Sprague	2.42	PROVENCHER AVE (E-B	Flashing Lights	No	1 4 20	96.5604	Y 7	31992 2014	50 Url	ban Arterial	Divided Arterial	Arterial	23 0	0 WB	-20 108 108		1.9 1.3	2.4		77 18.8	3 N/A 2		14921
Second Column Col	18451 Selkirk Avenue	Arborg	CP 0.98 -97.	.181848 49.9273906	SRCS	ARBORG	0.98	Selkirk Avenue	No	lo Stop Sigi	1 0 10	16.0934 Ye		7987 2002	50 Url	ban Collector	Not Divide Collecto	or Collector	10.6 0	0 HSU	J 109 108	0.5		2.2	0.7 2.05 0.65 0.4	80 10.3	5 N/A	0 Y N	
Column C	18453 Burrows Avenue	Arborg	CP 1.23 -97.	.183398 49.9315123					Flashing lights and bells No	lo Stop Sig	1 0 10	16.0934 Ye		8584 2014	50 Url	ban Collector	Divided Collecto	or Collector	16 0 15.4 0	0 WB	-20 129 129	0.7 1.1	0.4 1 0.9 1.5	0.8	0.55 0.9 1 0.9	53 9.9	0 N/A 3	2 Y N 0 Y N	
Section Control Cont	18456 Church Avenue	Arborg	CP 1.94 -97.	.186553 49.9410355	FLB	ARBORG	1.94	Church Avenue		lo Stop Sig	2 0 10	16.0934 Ye	es 2	4196 2008	50 Url	ban Collector	Not Divide Collecto	or Collector	15 0 8 0	4.81 DLF	-40 109 109	0.1	0.4 0.8	0.3	0.25 0.55	78 11.0	0 N/A	0 N N	18455
The content of the	18458 Church Avenue	Arborg	CP 0.12 -97	.171565 49.9366387	SRCS	O 100 (ARBORG 1.95)	0.12	Church Avenue	No	lo Stop Sig	1 0 10	16.0934 Ye	es 2	5386 2001	50 Url	ban Collector	Not Divide Collecto	or Collector	8 0	0 DLF	-40 109 109	0.6	0.1	0.3	0.35 0.2	102 9.5	9 N/A	0 Y N	
Martine Mart	18461 Hutchings Street	Arborg	CP 0.2 -97.	.183635 49.9394315	SRCS Ge	General Motors Lead (ARBORG	1.95) 0.2	Hutchings Avenue	No	lo Stop Sig	2 0 10	16.0934 Ye	es 2	2144 2001	50 Url	ban Collector	Not Divide Collecto	or Collector	10 0	0 WB	-20 109 109			0.5	0.8 0.7	91 13.9	7 N/A	0 N N	
March Control Contro	18464 Sheppard Street	Arborg	CP 0.62 -97.	.174959 49.9450423	SRCS	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A #N/A #N/A	#N/A #N	N/A 0	12705 2001	50 Url	ban Collector	Not Divide Collecto	or Collector	0 0	0 DLF	-40 #DIV/0! #DIV/0!	0	0 0	0 #DIV	//0! #DIV/0!	91 0.0	0 N/A	0 N N	
Section Process Proc	20105 Ellice Avenue		CP 1.01 -97	.183304 49.8936795					No Flashing lights and bells		1 0 10	16.0934 N		17259 2005	50 Uri 50 Uri				8 0 14.5 0	0 WB	-20 108 108								20105
Section Control Cont	20142 Dublin Avenue	La Riviere	CP 0.44 -97.	.208789 49.9118135	SRCS	Sherwin Lead	0.44	Dublin Stret	No No		5 0 10	16.0934 Ye	es 2	3185 2001		ban Arterial 1	Not Divide Arterial	1 Arterial 1	11.5 0 7.5 0	0 DLF	-40 109 109	0.3	0.2 0.1	0	0.25 0.05	90 21.3	7 N/A	0 N N	20135
Section Sect	20147 Clifton Street	La Riviere	CP 1.2 -97	.184384 49.9075174	SRCS	L LEAD	1.2	CLIFTON STREET	No	lo Stop Sig	1 0 10	16.0934 N	No 2	695 2016	50 Url	ban Local	Not Divide Local	Local	7.3 0	0 HSU	J 109 109	0.3	1.4 0.1	0	0.85 0.05	67 9.5	0 N/A	0 Y N	
Part	20164 St. James Street	La Riviere	CP 0.64 -97.	.199629 49.9065008	FLB	Saskatchewan Avenue Lead	0.64	St. James Street	Flashing lights and bells	lo Stop Sign	1 0 10	16.0934 Ye	es 4	15716 2005	60 Url	ban Arterial 1	Not Divide Arterial	1 Arterial 1	15 0	0 WB	-20 125 128	3.8	2.3	1.6	3.05	79 15.4	0 N/A 1		
Part	20177 Notre Dame Avenue	La Riviere	CP 1.25 -97.	.180674 49.9083349	FLB	L LEAD	1	NORTE DAME AVENUE	Flashing lights and bells	lo Stop Sig	2 0 10	16.0934 N	No 6	37837 2005	60 Url	ban Arterial	Divided Arterial	Arterial	19.9 0	0 WB	-20 128 129	1.5	1 0.9	0.7	1.25 0.8	132 59.6	5 N/A	0 Y N	20179
Propert Name Prop			CP 0.3 -97.	.105562 49.898963			4.74 0.3	BROOKSIDE BOULEVARI Mission Stret	Flashing lights, bells, and gate Flashing lights and bells	slo Stop Sig									6.8 1.3 7 1.5	1.5 WB	-20 128 125	1.7	0.8 1.7 1.2 4.5					0 N N 0 N N	
13.50 Table March Services 1.50 March Services	21519 Plinguet Street	Emerson	CP 0.75 -97.	.103141 49.8928891	FLB	Emerson	0.74	Plinquet Street	Flashing lights and bells	lo Stop Sig	2 6 10	16.0934 Ye	es 2	10163 2012	50 Url	ban Collector	Not Divide Collecto	or Collector	10 0	0 WB	-20 108 108	2	0.8 0.9	2.7	1.4 1.8	90 13.9	7 N/A	0 Y N	
	21521 Marion Street	Emerson	CP 1.55 -97.	.097504 49.8819269	FLBG	Emerson	1.55	Marion Street	Flashing lights, bells, and gate	slo Stop Sig	2 6 25	40.2335 N	No 4	35789	60 Url	ban Arterial	Not Divide Arterial	Arterial	14 0	0 WB	-20 128 126		1.4 2.7	1.9	2.85 1.65 1.6 2.3	70 17.4	0 N/A 2	4 Y N	
Part	21523 Cottonwood Road	Emerson	CP 3.18 -97	7.08607 49.8596314	FLBG	Emerson	3.18	Cottonwood Road	Flashing lights, bells, and gate	slo Stop Sig	1 4 25	40.2335 N	No 3	7348 2014	50 Url	ban Collector	Not Divide Collecto	or Collector		0 DLF	-40 107 108					93 10.3	2 N/A 2		
2.15131 Partie (row broad Emerson C C 2.88 Partie (Partie) Partie	21525 Meadowbrook Road		CP 3.72 -97.	.082158 49.8519875					Flashing lights and bells	lo Stop Sig	1 4 25	40.2335 N	No 2		50 Url	ban Collector	Not Divide Collecto	or Collector	7.6 0 9.8 0		J 108 108	0.6	2 2 1.1 0.7	3.4	1.3 2.7	81 10.1	5 N/A	0 Y N	21526
22277 Supposed Geneboro CP G93 S73,2523.88 693,31202 SSC GLENBORD G. 93 M. S. 05.00 pg 1 0 30 48,200 Ver. For posed Geneboro CP 328 57,7505.78 690,00000 For posed Geneboro CP 328 57,7505.78 690,00000 For posed Control CP CP CP CP CP CP CP C	21529 Creek Bend Road		CP 6.28 -97	.063933 49.8163927 SRC	CS and Stop		6.28	Creek Bend Road	Flashing lights and bells No	lo Stop Sig Yes	1 4 40	64.3736 Ye	es 2	47 1999	50 Url	ban Local	Not Divide Local	Local	7 1	1 HSU	107 106	4.8	2.7 7.1	1.1	3.75 4.1	99 11.6	3 N/A		
22282 Summit Road Glenboro CP 4.87 97.355741 68.9999615 FLB GLENBORD 4.57 5.54	22278 Four Mile Road	Glenboro	CP 0.93 -97.	.262518 49.9312202	SRCS	GLENBORO	0.93	ROAD 63 NORTH	No	lo Stop Sig	1 0 30	48.2802 Ye	es 0	Ped	50 Url	ban Local	Not Divide Local	Local	0 0	0 HSU	#DIV/0! #DIV/0!	0	0 0	0 #DIV	//0! #DIV/0!	88 0.0	0 N/A		
2411 Page Redended Street Reewartin CP 11869 96-979478 89-9308889 FLBG Reewartin 11869 Redended Road Raphing light, pells, and garebis 5005 ptg 2 11 50 80.467 Ves 2 5648 Page	22282 Summit Road	Glenboro	CP 4.57 -97.	.305741 49.8999615	FLB	GLENBORO	4.57	SUMMIT ROAD	Flashing lights and bells	lo Stop Sig	1 0 30	48.2802 Ye	es 2	91 2016	50 Url	ban Local	Not Divide Local	Local	9.8 2.2	2 HSU	J 106 108	5.6	U.4 0.6 3.8 1.7	0.6	4.7 1.15	83 11.6	2 N/A	0 N N	
2414 Gunn Road Reewatin CP 10.2 69.99862] 49.915228 58CS 80.076627 49.915228 58CS 80.076627 49.9152707 59.9	23412 Redonda Street	Keewatin	CP 118.69 -96	.979478 49.9230898	FLBG	Keewatin	118.69	Redonda Road	Flashing lights, bells, and gate	slo Stop Sigi	2 11 50	80.467 Ye	es 2	5648 2011	50 Url	ban Collector	Not Divide Collecto	or Collector		1.5 HSU	J 109 108		0.9 2.1 1.5 1.9		0.75 1.9	75 11.0	8 N/A	0 N N	
24.18 eguis Street Rewartin CP 12.8 97,047279 499,120070 FLBG Reewartin 12.8 Penguis Road Ashing lights, bells, and gatele Stop Sig 2 12 35 563,259 No 2 370,00000 No No No No No No No	23414 Gunn Road	Keewatin	CP 0.32 -96 CP 120.8 -97	.998452 49.9156228 .025182 49.9157072	SRCS	Border Chemical	0.32	Gunn Road	Flashing lights and bells	lo Stop Sig	1 0 10	16.0934 Ye	es 2	4006 2012	50 Url	ban Local	Not Divide Local	Local		2.5 WB	-20 109 109				0.65 0.45	91 13.1	4 N/A		
2421 Murroe Avenue Keewatin CP 123,68 970,69912 49,9084314 FLBG Keewatin 123,71 Manhattan Avenue Flashing lights, bells, and gateley Stop Sig 2 12 25 40,2335 No 2 1500 Delton 106 Collector No. Divide/cloclector 105 No. Divide/	23418 Peguis Street 23420 Callsbeck Avenue	Keewatin	CP 121.8 -97. CP 122.51 -97.	.047279 49.9120907 .062245 49.9096774	FLBG	Keewatin	122.5	Callsbeck Avenue	Flashing lights, bells, and gate Flashing lights, bells, and gate	slo Stop Sigi	2 12 35 2 12 35	56.3269 N	No 2	47 1999	50 Url	ban Local ban Local	Not Divide Local Not Divide Local	Local Local	6.3 1	1 HSU	J 106 108 J 107 108	6.7	3.5 3.2 3.2 1.9	1.9 3.5	5.1 2.55 3.6 2.7	75 12.6 143 14.8	66 N/A 88 N/A	0 N N 0 N N	
23424 Grey Street Keewatin CP 124.02 97.095033 49.9043903 FLBG Keewatin 124.02 Grey Street Flashing lights, and gate los Stop Sig 2 12 25 40.2335 No 2 3570 2011 50 Urban Collector 7.5 0 0 Not Divided Collector 7.5 0 Not Divided Collector 7.5 0 Not Divided Collector 7.5 0 Not	23422 Manhattan Avenue	Keewatin	CP 123.71 -97.	.088343 49.9054458	FLBG	Keewatin	123.71	Manhattan Street	Flashing lights, bells, and gate	slo Stop Sigi	2 12 25	40.2335 N	No 2	1623 2013	50 Url	ban Local	Not Divide Local	Local	8.7 0	0 HSU	J 106 106	6.5	2.8 3.1 5.3 5.6	3.5 3.6		150 18.7	8 N/A	0 Y N	22422
24198 Logan Avenue La Riviere CP 0.33 97.180816 49.9169928 FLB La Riviere 0.33 Logan Avenue Flashing lights, and gate Stop Sig 1 0 10 16.0934 No 4 17423 2002 50 Urban Arterial 14 0 0 WB-20 108 108 2.2 1.7 1.6 2.1 1.95 1.85 106 13.20 N/A 0 V N 0 0 V N 0 0 V N 0 V N 0 V N 0 V N 0 V N 0 V N 0 V N 0 V N 0 V N 0 V N 0 V	23424 Grey Street	Keewatin	CP 124.02 -97	.095093 49.9043903	FLBG	Keewatin	124.02	Grey Street	Flashing lights, bells, and gate	slo Stop Sig	2 12 25	40.2335 N	No 2	3570 2011	50 Url	ban Collector	Not Divide Collecto	or Collector	7.8 0 7.5 0	0 HSU	J 108 108	2.6	2.5 1	3.7	2.55 3.35 2.55 2.35	60 18.0	1 N/A		
24/203 Lincoln Avenue La Riviere CP 0.67 -97.184272 69.9128427 F1B La Riviere 0.67 Lincoln Avenue F1ashing lights and bell's 0.5 top Sig 1 0 15 24.1401 No 2 3885 2016 50 Urban Arterial 1 1.0	24198 Logan Avenue	La Riviere	CP 0.33 -97.	.180816 49.9169928	FLB	La Riviere	0.33	Logan Avenue	Flashing lights, bells, and gate	slo Stop Sigi	1 0 10	16.0934 N	No 4	17423 2002	50 Url	ban Arterial	Not Divide Arterial	Arterial	14 0	0 WB	-20 108 108	2.2	1.7 1.6 1.2 1.6			106 13.2	0 N/A	0 Y N	
24205 Mildland Street La Riviere CP 0.04 97.189862 49.9074806 SRCS Saskatchewan Avenue Lead 0.04 Mildland Street No lostop Sig 1 0 10 16.0934 Yes 2 9348 2001 50 Urban Collector Not Divided Collector I 10 0 0 NWB-20 109 108 0.1 0.2 1.8 0.8 0.15 1.3 60 13.37 N/A 0 N N 1 24207 Ellice Avenue La Riviere CP 1.81 97.193227 49.897838 FLBG La Riviere 2.06 Ellice Avenue Flashing lights, bells, and gate-lostop Sig 2 0 10 16.0934 No 4 19303 2011 50 Urban Arterial 1 Not Divided Arterial 1 Art	24203 Lincoln Avenue 24204 Notre Dame Avenue	La Riviere	CP 0.67 -97.	.184275 49.9128427	FLB	La Riviere	0.67	Lincoln Avenue	Flashing lights and bells	lo Stop Sig	1 0 15	24.1401 N	No 2	3885 2016 38396 2005	50 Url	ban Local	Not Divide Local	Local	7.5 0 19.8 0	0 HSU 0 WB	J 108 108 -20 128 128	2.7	1.2 1.9			87 9.3 89 13.3	9 N/A	0 Y N	
	24206 Sargent Avenue	La Riviere	CP 1.81 -97.	.192827 49.8975838	FLBG	La Riviere	1.81	Sargent Avenue	No Flashing lights, bells, and gate	lo Stop Sig	2 0 10	16.0934 Ye	es 4	15996 2005	50 Url	ban Arterial 1	Not Divide Arterial	1 Arterial 1	14.4 0	0 WB	-20 109 108	0.6	1.2 0.7	2	0.9 1.35	91 29.4	5 N/A	0 Y N	

	General In	formation						Railroad Information										Roadway Informatio	in				
	Generariii	lormation						Namoad information									Average?	toauway iiiioiiiiatic			Prenare	Signal	
Transport Canada Cin of Windows	Subdivision	Railroa Rail	road	Warning				Ston Sign	Annaul Daily Design	y Railway Design	# Traffic	AADT AADT	Design Road	Road Road	Highway Road	Average?	Shoulder ? Decign		Ahead Ahead Back	Back Average Average	Crossing Departur	Interconn ect Sidewalk	Assistiva Data
Crossing City of Winnipeg Street Name	Name	d Mile	Longitude Latitude	Warning System	Subdivision	Mile	Crossing Location	Crossing Type Stop Sign on Post?		Speed	Whistling Lanes		Speed Spec 1	Spec 2 Spec 3	Classificat Classificat	? Lane S Width	Width Shoulder Vehicle	SSD (m) SSD (m)	Gradient Gradient Gradient	t Gradient Ahead Back (SSD) Gradient Gradient	Angle e Time (s)	Advance or Path (Y	devices Updated
ID									Movements (mph)	(kph)			(крп)		ion	(m)	(m)		(stopped) (SSD) (stopped	i) (SSD) Gradient Gradient	n Time (s)	Activatio / N)	
24212 Wellington Crescent	La Riviere	CP 3	.3 -97.19451 49.87652	86 FLB	La Riviere	3.3	Wellington Crescent	Flashing lights and bells lo Stop Sig	1 0 10	16.0934	No 3	3 8368 2011	50 Urban	Collector Not Divid	le Collector Collector	12.1	0 0 HSU	109 10	8 0.8 0.3 0.	7 1.4 0.55 1.05	104 9.43 N/A	n Time (s)	N
24212 Wellington Crescent	La Riviere		.3 -97.19451 49.87653		La Riviere	3.3	Wellington Crescent	Flashing lights and bells to Stop Sign	1 0 10	16.0934	No 3	3 8368 2011			le Collector Collector		0 0 HSU	109 10				0 N O	N
24213 Academy Road 24214 Kingsway	La Riviere La Riviere		.43 -97.194696 49.87419 .65 -97.194974 49.87069		La Riviere La Riviere	3.43	Academy Road Kingsway Avenue	Flashing lights and bells lo Stop Sig Flashing lights, bells, and gates o Stop Sig		16.0934 16.0934	No 4	4 22349 2012 2 2163 2013			le Arterial 1 Arterial 1 le Collector Collector	7.5	0 0 WB-20 0 0 HSU	108 109 108 109		2 0.8 1.55 1	90 13.14 N/A 90 29.45 N/A	Y Y 0	N N
24215 Grosvenor Avenue	La Riviere		89 -97.195247 49.86725		La Riviere	3.89	Grosvenor Avenue	Flashing lights, bells, and gatesto Stop Sign			No 2	2 2310 2011			le Collector Collector	6.6	1.7 1.8 DLF-40	108 108		5 0.8 2.05 1.15		Y 0	N
24216 Corydon Avenue	La Riviere		12 -97.195526 49.86383		La Riviere	4.15	Croydon Avenue	Flashing lights, bells, and gatesio Stop Sign			No 4	4 14783 2013	50 Urban		Arterial Arterial	15.5	2.9 2.9 WB-20	108 10	3.3 1.9 2.	4 1.4 2.6 1.9	91 29.45 N/A	0 Y N	N
24217 Grant Avenue 24218 Taylor Avenue	La Riviere La Riviere		.6 -97.196075 49.85691 11 -97.196618 49.84999		La Riviere La Riviere	4.6 5.11	Grant Avenue Taylor Avenue	Flashing lights, bells, and gates o Stop Sig Flashing lights and bells to Stop Sig	2 0 10 1 0 25	16.0934 40.2335	No 4	4 29051 2012 4 14657 2014	50 Urban 60 Urban	Arterial Divided Arterial 1 Divided		15.7	3.1 2.6 WB-20 0 0 WB-20	108 10	8 2.2 1.4 2.0 5 2 1.5 2.1	6 1.7 1.8 2.15 7 1.4 1.75 2.05	89 29.45 N/A 90 15.37 N/A	Y Y 0	N
24219 Wilkes Avenue	La Riviere	CP 5.	32 -97.197 49.84686	26 FLB	La Riviere	5.32	Wilkes Avenue	Flashing lights and bells to Stop Sign		40.2335	No 2	2 2408 2011	70 Urban	Local Not Divid	le Local Local	7.4	2.7 2.7 DLF-40	178 178			104 9.60 N/A	0 N	N
24220 Kenaston Boulevard 24221 McGillivray Boulevard	Rivers La Riviere		.58 -97.207364 49.82739 .45 -97.211947 49.81759		#N/A La Riviere	#N/A 7.45	#N/A McGillivary Road	#N/A #N/A Flashing lights and bells Io Stop Sign	1 1 10	#N/A 40.2335	#N/A (6 58520 2013 2 13396 2013		Arterial Divided Arterial Not Divided	Arterial Arterial	22.8	2.4 2.6 WB-20 2.9 2.9 WB-20	207 209 178 179		0.0 1.4	42.50 14/71	0 N O	A N
24221 Ricdilivial Bodievard	La Riviere		.57 -97.2196 49.8024		La Riviere	8.57	Brady Road	No lo Stop Sig			Yes	2 91 2009		Local Not Divid		7.6	0 0 HSU	176 176		1 2.1 1.4 1.55		0 N O	N
30981 McPhillips Street			32 -97.169651 49.92120		WINNIPEG BEACH		McPhillips Avenue	Flashing lights, bells, and gatesio Stop Sig	1 0 10	16.0934	Yes (6 44718 2014	60 Urban	Arterial Divided	Arterial Arterial	21.2	0 0 WB-20	128 129				0 Y	N
30982 Selkirk Avenue 30983 Pritchard Avenue			.5 -97.16666 49.92260 .56 -97.165517 49.92315		WINNIPEG BEACH OP WINNIPEG BEACH	0.5	Selkirk Avenue Pritchard Avenue	Flashing lights and bells to Stop Sign	1 0 10 1 0 10		No 4	4 9140 2001 2 443 2013		Arterial 1 Not Divid	le Arterial 1 Arterial 1	12.6	0 0 WB-20 0 0 HSU	106 10°		6 4 4.05 3.3	117 21.24 N/A 117 10.31 N/A	1 Y 0	N N
30984 Magnus Avenue			68 -97.163532 49.92432		op WINNIPEG BEACH	0.68	Magnus Avenue	No No	1 0 10		No 2	2 558 1998			le Local Local	8	0 0 HSU	108 10		2 2 2.35 2.6	110 10.31 N/A	0 Y	N
30985 Burrows Avenue			73 -97.162654 49.92487		WINNIPEG BEACH	0.73	Burrows Avenue	Flashing lights and bells Io Stop Sign			No 4	4 7304 2001			Collector Collector	13	0 0 HSU	107 10	7 4.1 3 2.0	6 4 3.55 3.3	109 10.21 N/A	0 Y 0	N
30986 Aberdeen Avenue 30987 Redwood Avenue			.84 -97.160926 49.92595 .91 -97.15985 49.92661		WINNIPEG BEACH WINNIPEG BEACH	0.84	Aberdeen Avenue Redwood Avenue	Flashing lights and bells to Stop Signer Flashing lights and bells to Stop Sig			Yes 2	2 669 2009 2 3626 2000		Local Not Divid		7.4	0 0 DLF-40 0 0 HSU	108 108 108 108		2 2.7 2.35 2.95 8 1.8 1.6 1.8	108 10.39 N/A 108 9.46 N/A	Y Y 0	N N
30988 College Avenue			02 -97.158124 49.92769		op WINNIPEG BEACH	1.02	College Avenue	No No	1 0 10	16.0934	No 2	2 668 2010		Local Not Divid		7	0 0 HSU	108 10	B 2 2 1.	7 1.9 2 1.8	108 9.40 N/A 108 10.20 N/A	Y 0	N
30989 Mountain Avenue	Winnipeg Beach	CP 1.	.09 -97.156912 49.92844	86 FLB	WINNIPEG BEACH	1.09	Mountain Avenue	Flashing lights and bells Io Stop Sign			No 4	4 11866 2005	50 Urban	Arterial 1 Not Divid	le Arterial 1 Arterial 1	14.4	0 0 WB-20	108 108		8 3.1 1.5 2.95	110 15.48 N/A	1 Y 0	N
30990 Church Avenue 30991 Cathedral Avenue			.3 -97.153494 49.93056 45 -97.151142 49.93201		WINNIPEG BEACH OD WINNIPEG BEACH	1.3	Church Avenue Cathedral Avenue	No lo Stop Sig No Yes	1 0 10 1 0 10	16.0934	No 2	2 1965 2009 2 533 2010			le Collector Collector	8	0 0 HSU 0 0 DLF-40	108 108 109 108		5 1.6 2.1 1.55 8 2.3 0.8 2.05	110 10.22 N/A 110 10.41 N/A	1 Y 0	N N
30992 Bannerman Avenue	Winnipeg Beach	CP 1	.52 -97.150021 49.93271	82 FLB	WINNIPEG BEACH WINNIPEG BEACH		Bannerman Avenue	Flashing lights and bells to Stop Sig			No 2	2 486 2010			le Collector Collector	7.2	0 0 HSU	109 100		2 2.2 2.05 2.1	110 10.41 N/A 111 10.23 N/A	V V	N
30993 Atlantic Avenue	Winnipeg Beach	CP 1.	.58 -97.149053 49.93331	71 SRCS	WINNIPEG BEACH	1.58	Atlantic Avenue	No Yes	1 0 10		Yes 2	2 1554 1998		Local Not Divid		8	0 0 DLF-40	108 10		1 3.4 1.3 3.25	108 10.39 N/A	0 Y 0	N
30994 Polson Avenue 30995 Inkster Boulevard			63 -97.148273 49.93379 72 -97.14664 49.93480		WINNIPEG BEACH WINNIPEG BEACH	1.63	Polson Avenue Inkster Boulevard	No Yes Flashing lights and bells Io Stop Sign	1 0 10 1 0 10		No 2	2 523 2006 4 20755 2002		Local Not Divided Arterial Divided		7.4	0 0 HSU 0 0 DLF-40	108 100 107 100		2 2 1.25 2 1 4.6 3.25 4.35	110 10.22 N/A 110 11.94 N/A	0 Y N	N N
30996 Carruthers Avenue	Winnipeg Beach	CP 1.	.83 -97.145094 49.93576	19 SRCS and Sto	op WINNIPEG BEACH	1.83	Carruthers Avenue	No Yes	1 0 10		Yes	2 572 2000		Local Not Divided		5	0 0 HSU	108 108		8 2.8 2.35 2.8	110 11.54 N/A 110 10.22 N/A	0 N	N
30997 Jefferson Avenue			23 -97.138555 49.93981		WINNIPEG BEACH	2.22	Jefferson Avenue	Flashing lights and bells to Stop Sign	1 0 10	16.0934	Yes 2	2 8150 2008		Collector Not Divid		10	0 0 DLF-40	108 100	8 0.7 1.7 1.5	9 1.9 1.2 1.9	110 11.83 N/A	0 Y	30997
30998 Hartford Avenue 30999 Kingsbury Avenue	Winnipeg Beach Winnipeg Beach		.42 -97.135437 49.94174 .7 -97.131034 49.94448		WINNIPEG BEACH WINNIPEG BEACH	2.42	Hartford Avenue Kingsbury Avenue	Flashing lights and bells to Stop Sign Flashing lights and bells to Stop Sign		16.0934 16.0934	Yes 2	2 1612 2000 2 2691 2006	50 Urban 50 Urban	Local Not Divid		10	0 0 HSU	108 100 109 100	8 1 1 2	7 2.5 2 2.6 2 1.7 1 1.95	111 11.90 N/A 110 9.47 N/A	0 Y	30998 N
31000 Partridge Avenue	Winnipeg Beach		92 -97.127607 49.94660		WINNIPEG BEACH	2.92	Partridge Avenue	Flashing lights and bells to Stop Sig			Yes	2 14579 2000	60 Urban	Arterial Not Divid	le Arterial Arterial	8.2	0 0 WB-20	128 #DIV/0!		0 0 1.15 #DIV/0!	90 13.14 N/A	0 Y	31000
31001 Leila Avenue	Winnipeg Beach	CP 2.	93 -97.127201 49.94683		WINNIPEG BEACH	2.93	Leila Avenue	Flashing lights and bells Io Stop Sign	1 0 10		Yes 2	2 14220 2005		Arterial Not Divid		8.2	0 0 WB-20	#DIV/0! 12			102 13.17 N/A	0 Y	31001
31002 Templeton Avenue 31004 Murray Avenue	Winnipeg Beach		.23 -97.122258 49.94991 .08 -97.108563 49.95841		WINNIPEG BEACH WINNIPEG BEACH	3.23 4.08	Templeton Avenue Murray Avenue	Flashing lights and bells to Stop Sign Flashing lights and bells to Stop Sign		16.0934 16.0934	Yes 2	2 8542 2013 2 2980 2013	50 Urban 50 Urban		le Collector Collector	9.6	0 0 DLF-40 0 0 HSU	108 108 109 108		4 2.9 1.85 2.15 2 1.7 0.2 1.95	107 10.38 N/A 101 9.41 N/A	O N N	N N
31005 Fernbank Avenue	Winnipeg Beach	CP 4.	.78 -97.097183 49.96545	58 SRCS	#N/A	#N/A	#N/A	#N/A #N/A	#N/A #N/A #N/A	#N/A	#N/A	0 Ped N	I/A Urban	Pathway	Pathway Pathway	0.4	0 0 AT	#VALUE! #VALUE!		0 0 #DIV/0! #DIV/0!	101 9.41 N/A 101 0.00 N/A	0 N	N
34049 Perreault Avenue	Letellier	4	34 -97.143797 49.75081		op Letellier		PERREAUX AVENUE	Stop Signs Yes		40.2335	Y	2 47 1999		Local Not Divid		6.8	0 0 HSU	107 109			93 10.13 N/A	0 N O	N agric
34310 Beaverhill Boulevard 34388 Chancellor Drive	Emerson Letellier		.35 -97.077779 49.8434 .73 -97.157014 49.81471		Emerson Letellier	4.35 2.73	Beaverhill Boulevard CHANCELLOR DRIVE	Flashing lights and bells to Stop Signer Flashing Lights No		40.2335 40.2335	No 2	2 2522 2015	50 Urban 50 Urban		le Collector Collector	10	0 0 DLF-40	108 100 109 100	8 1.7 1.1 1.1 8 0.5 0.9 1	8 1.5 1.4 1.65 7 1.7 0.7 1.7	89 11.24 N/A 119 12.56 N/A	0 Y	34310 34388
34767 Murray Park Road	Glenboro		92 -97.265274 49.89463		MURRAY PARK INDUSTRIAL LEAD	0.92	MURRAY PARK ROAD	No lo Stop Sign		16.0934	Yes	4 6481 2014			Collector Collector	14.8	0 0 WB-20	129 12	B 1.6 0.3 1.	5 0.8 0.95 1.15		0 N	N 34366
34768 Saskatchewan Avenue	Glenboro		.4 -97.265831 49.90245		MURRAY PARK INDUSTRIAL LEAD	0.4	SKATCHEWAN AVENU	J No lo Stop Sig			Yes 2	2 4360 2001			le Collector Collector	7.5	0 0 HSU	129 129				0 N 0	N
34889 Church Avenue 34894 Saulteaux Crescent	Arborg	CP 0	.46 -97.193295 49.94106 1.1 -97.263615 49.89735		Chrysler Lead (ARBORG 1.84) MACDON LEAD	0.46	Church Street TEAUX CRESCENT WE	No lo Stop Sig			Yes 2	2 4196 2008 2 675 2016	50 Urban 50 Urban		le Collector Collector	10.6	0 4.81 DLF-40 0 0 DLF-40	109 109 108 109		3 0.8 0.75 0.55 1 1.2 1.8 0.65		1 N 0	N N
34896 Moray Street	Glenboro	CP C			MACDON LEAD	0.1	MORAY STREET	No lo Stop Sig			Yes	2 9927 2009		Collector Divided		9.8	0 0 WB-20	128 129				0 N O	N
34916 Kirkbridge Drive	Letellier		.55 -97.159371 49.78867		Letellier		IRKBRIDGE DR., WPG		1 3 25		Υ 4	4 5848 2006	50 Urban		Collector Collector	14.8	0 0 DLF-40	109 109		6 0.4 0.95 1	127 13.57 N/A	0 Y	34916
34938 Panet Road 35007 Grandmont Boulevard	Redditt Letellier		9.04 -97.077612 49.89526 .75 -97.15982 49.77112		Redditt Letellier	249.04 5.75	PANET RD GRANDMONT BLVD	Flash. Lights with Auto. Gates No Flashing Lights No		64.3736 40.2335	N 2	2 8465 2012 2 4671 1999	50 Urban 50 Urban		le Collector Collector	9.8	2.2 4 WB-20 0 0 DI F-40	109 100 108 100			57 14.23 N/A 98 10.33 N/A	1 N 0	N N
35050 Bournais Drive	Redditt		7.42 -97.04259 49.88899		Redditt	247.42	BOURNAIS DR	Flash. Lights with Auto. Gates No	2 16 50		N .	2 14212 2013	50 Urban		le Collector Collector	7.2	0 0 DLF-40	108 109				0 Y 0	N
35213 Bishop Grandin Boulevard 35323 Church Avenue	Emerson		.54 -97.076441 49.84080 .12 -97.177717 49.93861		Emerson Reimer (ARBORG 1.95)		Bishop Grandin Boul.	Flashing lights, bells, and gatesio Stop Sig		40.2335 16.0934	No 4	4 42346 2014		Arterial Divided		15.6	3.5 3.1 WB-20	178 178				0 N N	N
35324 Mountain Avenue	Arborg Arborg		.12 -97.177717 49.93861 .25 -97.173739 49.93359		O 101 (ARBORG 1.95)	0.12	Church Avenue Mountain Avenue	No lo Stop Sig			Yes 2	2 6311 2016	50 Urban 50 Urban		le Collector Collector	10	0 4.81 DLF-40 0 0 WB-20	109 109 108 109				0 N O	N 35324
35464 Bairdmore Boulevard	Letellier	CN 5.	12 -97.160122 49.78043	19 FLB	Letellier	5.12	IRDMORE BLVD.SOUT	Flashing Lights No	1 3 25	40.2335	Y	2 4286 2013			le Collector Collector	9.8	0 0 HSU	108 109		7 0.2 1.1 0.45	120 9.59 N/A	Y 0	N
35534 Panet Road 35777 Lowson Crescent	Keewatin Rivers		2.6 -97.064626 49.90928 17 -97.205958 49.83807		Keewatin Rivers	122.6 0.17	Panet Road LOWSON CRESENT	Flashing lights, bells, and gates o Stop Sign Stop Signs Yes		56.3269 56.3269	No 4	4 14968 2004 2 2002 2000		Collector Divided Local 1 Not Divided	Collector Collector	14	2 2 DLF-40 0 0 DLF-40	108 10				0 N 0	N N
36100 Minerva Avenue	Letellier		'.8 -97.139667 49.74476		op Letellier	7.8	MINERVA AVENUE	Stop Signs Yes Stop Signs No		40.2335	Y	2 47 1999	50 Urban		le Local Local	9.2	0 0 HSU	108 109 108 109		2 0.4 1.25 0.3 5 0.7 2 1.1		1 NO	N
	ad Emerson		.62 -97.082955 49.85355		Emerson	3.62	Pedestrian walkway	Flashing lights and bells lo Stop Sign		40.2335	No 2	2 Ped N	I/A Urban		le Pathway Pathway	3	0 0 AT	#VALUE! #VALUE!	2.1 1 1.	3 1.9 1.55 1.6	99 7.44 N/A	0 N	N
36461 Jefferson Avenue 36726 Saulteaux Crescent	Arborg Glenboro		.4 -97.193081 49.96074 .35 -97.257777 49.89713		ARBORG MACDON LEAD	3.4 0.35 A	Jefferson Avenue LTEAUX CRESCENT EA	No Yes S No Io Stop Sig	1 0 10 1 0 10		Yes 2	2 1956 2007 2 588 2016	60 Urban 50 Urban		le Collector Collector le Local 1 Local 1	10	0 0 HSU 0 0 DLF-40	129 129 109 100	9 0.1 0.5 0.1 B 0.5 0.9 1.1	5 0.7 0.3 0.6 5 0.7 0.7 1.1	79 9.41 N/A 90 9.56 N/A	1 Y 0	N N
36828 Softley Road	Sprague		19 -97.069674 49.88742		Sprague	0.18	SOFETLY STREET	Stop Signs Yes		48.2802	Y	2 47 1999		Local Not Divid		10	0 0 HSU	109 109				0 N	N
42350 Fleetwood Road	La Riviere		96 -97.215382 49.81087		La Riviere	7.96	Fleetwood Road	Flashing lights, bells, and gates o Stop Sig	1 0 25		No 2	2 1320 2000		Local Not Divid		8	0 1.7 HSU	108 10		2 0.4 1.5 2.3	89 10.13 N/A	0 Y 0	N
46026 Border Street 46027 Century Street	La Riviere La Riviere		75 -97.202076 49.90633 76 -97.202406 49.90629		Saskatchewan Avenue Lead Saskatchewan Avenue Lead	0.75	Border Street Century Street	Flashing lights and bells to Stop Sig Flashing lights and bells to Stop Sig	1 0 10 1 0 10		Yes :	1 8601 2014 2 14670 2014		Collector Not Divid		5.5	0 0 HSU 0 0 WB-20	128 #DIV/0! 178 #DIV/0!		0 0 1.7 #DIV/0! 0 0 1 #DIV/0!	61 9.58 N/A 112 13.25 N/A	N V	N N
46057 McPhillips Street	La Riviere	CP 0	.53 -97.170812 49.91050	86 FLB	L LEAD	0.53	MCPHILLIPS STREET	Flashing lights and bells to Stop Sign	1 0 10	16.0934	No (6 44718 2014	60 Urban	Arterial Divided	Arterial Arterial	20.8	0 0 WB-20	129 12	B 0.9 1.1	1 1.4 1 1.2	68 13.25 N/A	٠, .	N
47539 Pedestrian 48121 Pedestrian	Letellier Keewatin		32 -97.153934 49.84961		Letellier #N/A	0.32 #N/A	PEDESTRIAN XNG #N/A	Stop Signs Yes #N/A #N/A	2 3 20	32.1868 56.3269	Y :	1 0 2016 2 14968 2004 N	0 Urban I/A Urban	Pathway Not Divid	le Pathway Pathway	1.7	0 0 AT 0 0 AT	#VALUE! #VALUE!	4.4 0.8 6.1 0.3 1.9 1.1	9 6.3 2.6 6.6 6 3.5 1.1 2.55		0 N O	47539
48121 Pedestrian 48132 Camiel Sys St	Sprague	Ci II.	93 -97.064678 49.90928 93 -97.0336 49.8759	15	#N/A op Sprague	#N/A 0.96	#N/A CAMIEL SYS	#N/A #N/A Stop Signs Yes	2 0 35 1 1 10		#IV/A	2 14968 2004 N 2 1765 2001	9	Local Not Divid	,	10	0 0 AT 1 1 DLF-40	#VALUE! #VALUE!	B 1 1.4 2.6	6 3.5 1.1 2.55 4 1.3 1.2 1.85	20	V V	N
48374 Sterling Lyon Parkway	Rivers	CN 0.	49 -97.202798 49.84244	51 FLBG	Rivers	0.49		Flash. Lights with Auto. Gates No	2 1 10	56.3269	Υ 4	4 14437 2012		Arterial Divided		16	0 0 WB-20	207 20		3 0.1 0.5 0.7	106 13.20 N/A	0 Y 0	N
725036 Sterling Lyon Parkway 48919 Spruce Street	La Riviere La Riviere		.62 -97.199046 49.84273 .29 -97.186162 49.90702		La Riviere L LEAD	5.63 1.34	Sterling Lyon Parkway VALOUR ROAD	Flashing lights, bells, and gates o Stop Sig No lo Stop Sig		40.2335 16.0934		4 17341 2013 2 689 2005		Arterial Divided Local Not Divided		16	0 0 WB-20 0 0 HSU	205 20° 109 10°				1 Y 0	N N
48919 Spruce Street 48920 Valour Road	La Riviere		34 -97.18729 49.90653		L LEAD	1.34	Valour Road	No lo Stop Sig		16.0934		2 148 2013		Local Not Divid		9.4	0 0 HSU	109 109				0 N N	N
48923 Saskatchewan Avenue	La Riviere	CP 0.	.03 -97.196317 49.90663	26 SRCS	M48 Lead		askatchewan Avenue	No lo Stop Sigi	1 0 10	16.0934	Yes 2	2 3054 2002	50 Urban	Collector Not Divid	le Collector Collector		0 0 WB-20	109 109	9 1.1 0.1 0.	5 0.2 0.6 0.35	154 15.14 N/A	0 N	N
48925 Saskatchewan Avenue 48931 Saskatchewan Avenue	La Riviere		.03 -97.196993 49.90658 .03 -97.211213 49.90542		M Lead Richards Packaging		Saskatchewan Avenue Saskatchewan Avenue	No lo Stop Sig		16.0934 16.0934		2 3054 2002 2 3534 2006			le Collector Collector le Collector Collector		0 0 WB-20 0 0 HSU	109 109 109 109					N N
48938 Pritchard Avenue	Arborg	CP 1	.04 -97.182391 49.92850	13 SRCS	ARBORG		Pedestrian crossing	No lo Stop Sig	1 0 10	16.0934	Yes	1 Ped	50 Urban	Pathway Not Divid	le Pathway Pathway	1.5	0 0 AT	108 109		1 1 1.3 1	50 9.80 N/A	0 N N	
48946 Manitoba Avenue	Winnipeg Beach	CP C	.6 -97.164392 49.92379	46 SRCS	WINNIPEG BEACH	0.59	Pedestrian crossing	No lo Stop Sig	1 0 10	16.0934	No 2		I/A Urban	Pathway Not Divid	le Pathway Pathway	3	0 0 AT	#VALUE! #VALUE!		3 3 2.5 3	113 8.75 N/A	0 Y 0	N
48947 Alfred Avenue 48948 Boyd Avenue	Winnipeg Beach	CP 0.	75 -97.161868 49.92535 96 -97.158905 49.92720	SRCS SRCS	WINNIPEG BEACH WINNIPEG BEACH		Pedestrian crossing Pedestrian crossing	No lo Stop Sig		16.0934 16.0934					le Pathway Pathway		0 0 AT 0 0 AT	#VALUE! #VALUE!		1 1.5 2 1.8 6 2.6 3.3 2.6		0 7	N N
48949 Penninghame Street	Winnipeg Beach	CP 1	2 -97.155517 49.92931	16 SRCS	WINNIPEG BEACH	1.2	Pedestrian crossing	No lo Stop Sig	1 0 10	16.0934	No 2		I/A Urban	Pathway Not Divid	le Pathway Pathway	3	0 0 AT	#VALUE! #VALUE!	3 2.5 3.	2 2.75 2.6		0 Y	N
48950 Lansdowne Avenue	Winnipeg Beach	CP 1	79 -97.145674 49.93540 93 -97.14341 49.93680	27 SRCS	WINNIPEG BEACH		Pedestrian crossing	No lo Stop Sig	1 0 10	16.0934					le Pathway Pathway		0 0 AT	#VALUE! #VALUE!		4 6 1.85 5.2	110 8.60 N/A	0 Y N	N
48951 McAdam Avenue 48952 Enniskillen Avenue	Winnipeg Beach	CP 1	.93 -97.14341 49.93680 .11 -97.140302 49.93873	SRCS SRCS	WINNIPEG BEACH WINNIPEG BEACH		Pedestrian crossing Pedestrian crossing	No lo Stop Sig		16.0934 16.0934					le Pathway Pathway le Pathway Pathway		0 0 AT 0 0 AT	#VALUE! #VALUE!		3 2.3 3.8 2.65 7 1.6 3.4 3.65	110 8.60 N/A 115 12.19 N/A	0 7	N 48952
725035 Adsum Road	Arborg	CP 2.	94 -97.191077 49.95470	31 FLB	ARBORG	2.94	Adsum Drive	Flashing lights and bells to Stop Sig	1 0 10	16.0934	Yes 2	2 6951 2014	50 Urban	Pathway Not Divid	le Pathway Pathway	10	0 0 AT	109 109	9 0.9 0.7 0.8	8 0.5 0.8 0.65	76 8.38 N/A	0 Y	N
49746 Chevrier Boulevard	Letellier	CN 1.	.08 -97.17311 49.82453	65 SRCS	Letellier	1.08	CHEVRIER BLVD	SRCS No	1 3 20	32.1868	Y	2 6933 2003			le Collector Collector		0 0 WB-20	109 109	9 0.4 0.4 0.3	8 0.9 0.4 0.85	95 13.14 N/A	0 N O	A N
50061 Pedestrian 405112 Pedestrian			3.1 -97.075697 49.90749 56 -97.076127 49.84019		Keewatin Emerson	123.1 #N/A	Pedestrian crossing #N/A	No lo Stop Sigl #N/A #N/A		56.3269 40.2335		2 Ped N 2 42346 2014 N			le Pathway Pathway le Pathway Pathway		0 0 AT 0 0 AT	#VALUE! #VALUE!		5 3.1 9.2 4.05 2 1.5 3.05 0.85		N 0	N N
405113 Pedestrian	Emerson	CP 3.	42 -97.084364 49.85626	51 FLB	Emerson	#N/A	#N/A	#N/A #N/A	1 4 25	40.2335	#N/A				le Pathway Pathway		0 0 AT	#VALUE! #VALUE!		4 1.7 4.05 1.55	73 7.65 N/A	0 N	N
405122 Bairdmore Boulevard	Letellier	CN 4.	.13 -97.158849 49.79455	72 FLB	Letellier		BAIRDMORE BLVD	Flashing Lights No	1 3 25	40.2335	Υ 4	4 6211 2013	50 Urban	Collector Divided	Collector Collector	15.2	0 0 DLF-40	108 10	0.8 1.3	1 1 1.05 1	122 9.80 N/A	0 Y 0	N
405125 McGregor Street 405157 Lagimodiere Boulevard	Winnipeg Beach Keewatin	CP 3.	.05 -97.125319 49.94800 .47 -97.045514 49.92992	88 FLB 26 FLB	WINNIPEG BEACH Transcona Spur	3.05 0.82	McGregor Street agimodiere Boulevard	Flashing lights and bells to Stop Sign No. To Stop Sign N		16.0934 16.0934	Yes 2	2 3809 2013 5 48650			le Collector Collector Arterial Arterial	8.2	0 0 HSU 1.5 1.5 WB-20	109 109 205 209		2 0.1 0.55 0.15 8 0.7 1.05 1.25		0 Y	405125 N
405158 Wellington Avenue			54 -97.182768 49.90072		GREAT WAY DEVELOPMENT	0.00	VELLINGTON AVENUE			16.0934		4 5824 2009			le Collector Collector	14.2	0 0 DLF-40	108 109				0 Y	405158
405169 Pedestrian	Letellier	CN 0.	93 -97.154638 49.84089	76 FLB	Letellier	0.93	PEDESTRIAN	Flashing Lights No	1 3 20	32.1868	Y	1 0 2016			le Pathway Pathway		0 0 AT	#VALUE! #VALUE!	3.8 2.9 3.9	9 3.9 3.35 3.9		0 N 0	N
725016 Sargent Avenue 725040 Trinity Street	La Riviere La Riviere		.77 -97.183029 49.89727 16 -97.163099 49.91219		GREAT WAY DEVELOPMENT L LEAD	0.77	SARGENT AVENUE TRINITY STREET	Flashing lights and bells lo Stop Sig No lo Stop Sig		16.0934 16.0934		4 13762 2009 2 217 2016		Arterial 1 Not Divid	le Arterial 1 Arterial 1	14.5	0 0 WB-20 1 1 HSU	108 100 109 100		1 1.4 1.05 1.75 5 0.9 0.85 1.2		0 Y	725016 N
725040 Pacific Avenue	La Riviere La Riviere		.16 -97.163099 49.91219 1.4 -97.168156 49.91109		L LEAD	0.16		No lo Stop Sig		16.0934		2 1096 1999		Local Not Divid		7	0 0 HSU	109 10				1 N O	N
725042 Richard Avenue	La Riviere	CP 0.	.31 -97.182492 49.90396	38 SRCS			RICHARD AVENUE	No lo Stop Sig	1 0 10	16.0934	No 2	2 1430 2006	50 Urban	Local Not Divid	le Local Local	7.9	0 0 HSU	109 109	9 0.8 1 0.	7 0.7 0.9 0.7	90 9.39 N/A	0 N N	N
PED1 Riddle Avenue Pedestrian	Emerson La Riviere		.55 -97.10361 49.8953 .65 -97.19392 49.8845				AcTavish Street iddle Avenue Pedestr	No No Stop Si; i No No Stop Si;		16.0934		2 148 2013 0 2016		Local Not Divid	le Local Local le Pathway Pathway	7	0 0 HSU 0 0 AT	108 10		9 2.27 1.705 2.53 7 12.46 0.53 8.415		1 N O	N N
	La Riviere		.05 -97.19431 49.8792				Vaverly Street Pedesti			10 16.0934		1 0 2016			le Pathway Pathway	4	0 0 AT	0		6 14.14 10.2 12.9		N 0	N
,		1 1 7	1 - 1	1	. 1			•				1 1 1 1 1 1 1 1	1			1 1						F	

Appendix B RSIP Application December, 2016



Application Form for Safety-Related Research or Studies

APPLICANT IDENTIFICATION

Applicant Organization: City of Winnipeg

Name of the Applicant: Colleen Flather, P.Eng., M.Sc.

Position in the Organization: Community Traffic Engineer

Address: 1155 Pacific Avenue, Winnipeg, MB, R3E 3PI

Phone number: 204-986-5295

Email address: cflather@winnipeg.ca

Federal riding: City of Winnipeg includes 8 federal ridings: Kildonan-St. Paul, Winnipeg North, Elmwood-Transcona, Winnipeg Centre, Charleswood-St. James-Assiniboia-Headingley, Winnipeg South Centre, Saint Bonifice – Saint Vital, and Winnipeg South

Project Description

Title of the Project:

Evaluation and Prioritization of Grade Crossings for Safety Improvements to Meet the Needs of Vulnerable Road Users Requiring Assistive Devices

Project abstract (limit of 500 words)

The City of Winnipeg has over 200 grade crossings, each with their own specific set of challenges. Following the Information Sharing requirements of the new Canadian Grade Crossings Regulations (completed November, 2016), the City of Winnipeg identified 27 grade crossings designated for users with assistive devices. These crossings were identified by selecting crossings within a 400 metre buffer around senior living centres, as recommended in the Winnipeg Transit design manual "Designing for Sustainable Transportation and Transit in Winnipeg" for the maximum distance a user should be required to walk to a transit stop.

Users with assistive devices are part of a larger set of vulnerable road users (VRUs) which include all types of non-motorized users. For this study, we are particularly concerned with VRUs in wheelchairs or scooters, pedestrians with assistive devices and limited mobility, and users with sight and hearing impairments that can face challenges navigating level crossings. These users can have limited accessibility when crossings have uneven surfaces, limited maneuvering space, insufficient warning times to complete a crossing and a lack of visual and aural warnings. Inadequate design and maintenance of level crossings can create safety concerns for VRUs by increasing the required travel time to clear the conflict zone (the area of increased risk of being struck by a train) and obstruction hazards within the conflict zone can



trap or delay VRUs. These challenges can limit mobility, deter users from taking certain transportation routes or modes, and increase travel time to desired destinations.

The Canadian Grade Crossings Standards (GCS) identifies the following characteristics that have specific requirements for persons using assistive devices: (1) flangeway, (2) field side gap, (3) elevation of the top of the rail with respect to the crossing surface, (4) maximum gradient for pathway approaches, and (5) departure time. Additional factors that can impede VRUs not directly cited in the Standards include cross slope, condition of pathway surfaces, angle of crossing, design consistency, and seasonal maintenance practices. Due to the complexity of grade crossings with multiple road users, objectives like VRU accessibility are often not explicitly addressed.

With an initial 27 grade crossings identified as accommodating VRUs with assistive devices, the City of Winnipeg proposes the following tasks for this study to improve safety at grade crossings:

- 1. Conduct site visits of 27 crossings to identify deficiencies in operational and physical characteristics that are safety challenges for VRUs following best practices from the Winnipeg Accessibility Design Standards and the GCS,
- 2. Evaluate land use patterns around the remaining Winnipeg grade crossings with sidewalks/paths for consideration to be designated for VRUs with assistive devices and repeat task 1 for the updated list, as required,
- 3. Develop a comprehensive set of required infrastructure improvements to accommodate and improve accessibility for VRUs with assistive devices complete with a work plan and cost estimate to implement improvements, and
- 4. Communicate to the railroads where issues fall under their responsibility, such as crossing surface, sightlines on rail right-of-way, signs, or signals.

Describe how your project will contribute to enhancing the safety of rail lines (limit of 250 words)

This study will contribute to enhancing the safety of rail lines in Winnipeg by focusing on a specific subset of crossing users that have a unique set of mobility challenges. VRUs, particularly those users with mobility impairments, require special considerations in level crossing design and maintenance. The study will assist the City of Winnipeg in allocating resources towards grade crossing safety improvements over the next five years and set out a series of safety objectives that consider all types of crossing users. The safety benefits of this study include:

1. Increased awareness for the road authority and railroads of grade crossing design and maintenance considerations for VRUs,



- 2. Clarify safety and accessibility issues common to grade crossings accommodating VRUs with assistive devices within Winnipeg,
- 3. Accelerate the City of Winnipeg's progress towards meeting the Grade Crossings Regulations (GCR) requirements by identifying current safety deficiencies and creating a prioritized list of required safety improvements, and
- 4. Provide the City and railroads with a list of physical and operating characteristics that create issues and solutions to these accessibility and safety issues for VRUs with assistive devices for current and future grade crossings including ongoing maintenance requirements.

Describe the project team and their experience working on similar projects (limit 250 words)

The City of Winnipeg will provide direct oversight of the study but proposes to procure the services of MORR Transportation Consulting. MORR is a Winnipeg-based company with expertise in grade crossing safety and the planning and evaluation of infrastructure for the safe and equitable accommodation of pedestrians and cyclists. Below are the proposed study team members:

Colleen Flather, P.Eng., M.Sc. (City of Winnipeg)

Colleen will be the City of Winnipeg representative and project manager for the proposed study. Colleen successfully oversaw the completion of the Information Sharing requirement of the Grade Crossings Regulations to ensure the November 27th, 2016 deadline was met. Colleen has worked on multiple projects with Canadian National and Canadian Pacific during her time with the City.

Jeannette Montufar, Ph.D., P.Eng., PTOE, FITE, FCAE (MORR Transportation Consulting)

Dr. Montufar is the founding partner and CEO of MORR and will provide technical oversight of the study on accommodating VRUs. Her expertise on pedestrian accommodation has earned her special invitations by professional organizations across North and Central America to design, develop, and deliver courses and workshops for industry and government.

Mark Reimer, M.Sc., EIT (MORR Transportation Consulting)

Mark specializes in freight transportation systems with expertise in railway engineering and grade crossing safety. Prior to joining MORR, he conducted research at the University of Manitoba on evaluating VRU accessibility and safety at grade crossings. The research resulted in multiple papers and has been presented at conferences across North America. Recently, Mark has provided technical support to road authorities across Manitoba to meet the Information Sharing requirements of the new Regulations for over 300 grade crossings.

Proposed project budget:

The proposed project budget is shown below. The City proposes to primarily use Professional Consulting Services to complete the project with oversight and management by the City of Winnipeg.

ltem	Cost



Staff Salaries and Benefits (City of Winnipea)

Professional Services (MORR Consulting) \$54,000

Total

Requested federal funding amount:

The City is requesting that Transport Canada provides 80% of the funding to complete this study in a timely manner. The total requested funding would be \$XX,XXX

If applicable, indicate and describe any other source(s) of funding

Project Schedule:

The City of Winnipeg would like to complete this project on an expedited schedule once the snow clears to allocate future resources for grade crossing improvements.

Expected start date: May 1st, 2017
 Expected end date: June 30th, 2017

Proposed cashflow (for multi-year project)

Contributors	2016/2017	2017/2018	2018/19
Canada	\$XX,XXX (TC funding)		
Other Contributors	\$XX,XXX (City funding)		
Total	\$XX,XXX		

Describe how the federal funding be used (limit 250 words)

Funding will be used to procure professional consulting services to complete the study and support human resources for the City of Winnipeg management staff.

It's expected that assessment and recommendations for each grade crossing designated for VRUs with assistive devices will cost approximately \$2,000 in professional consulting services.

Describe the risk of not receiving federal funding

Without federal funding this study risks being delayed or not completed at all. The safety objectives in this study expand on the GCS and GCR requirements while also expediting the City of Winnipeg's ability to meet the GCR requirements prior to the 2021 deadline. Identifying and addressing safety deficiencies before the deadline is in line with Transport Canada's objectives of reducing injuries and fatalities and increasing public confidence in Canada's rail system.



Appendix C Sightline Obstructions



Reason for Stop Obstruction

					Marning	Sightlines		Reason for S	SD obstruction			Reason for	Stop Obstruction	
TCID	Street	Subdivision Ra	ailroad	MP	Warning System	Obstructed	Sightline 1	Sightline 2	Sightline 3	Sightline 4	Sightline 1	Sightline 2	Sightline 3	Sightline 4
48947 Alfre		Winnipeg Beach	СР	0.75	SRCS	4	-	-	House/Vegetation	-	-	-	-	-
	iibald Street	Sprague	CN	1.83	FLBG	2	-	-	-	-	-	-	-	-
48948 Boyo			CP	0.96	SRCS	4	Vegetation	-	-	Vegetation	-	-	-	-
	kside Boulevard	Carberry	CP	4.74	FLBG	2	-	-	-	-	-	-	-	-
49746 Chev	vrier Boulevard	Letellier	CN	1.08	SRCS	4	Building	Industrial Yard	Large Equipment	Building/Vegetation	-	-	-	-
8768 Chev	vrier Boulevard	Letellier	CN	0.4	FLB	1	-	-	-	-	-	Building/Vegetation	r-	-
18457 Chur	rch Avenue	Arborg	CP	0.11	SRCS	4	Building	Building	Building	Electrical Station	-	-	-	-
18458 Chur	rch Avenue	Arborg	CP	0.12	SRCS	4	Building	Building	Building	Storage Containers	-	-	-	-
34889 Chur	rch Avenue	Arborg	CP	0.46	SRCS	4	Building	Building	Building	Building	-	-	-	-
18460 Chur	rch Avenue	Arborg	CP	0.12	SRCS	3	Building	Building	Building	Building	-	Equipment	-	-
35323 Chur	rch Avenue	Arborg	CP	0.12	SRCS	3	-	Building	Building	Building	-	-	-	Building/vegetat
30990 Chur	rch Avenue	Winnipeg Beach	CP	1.3	SRCS	2	Vegetation/house	Vegetation/house	Vegetation/house	Vegetation	-	-	-	-
20147 Clifto	on Street	La Riviere	CP	1.2	SRCS	2	Building	Heavy Equipment	-	-	-	-	-	-
14906 Daw	son Road North	Sprague	CN	0.09	SRCS	4	Storage containers	Vegetation	Vegetation	Storage Containers	-	-	Vegetation	-
20142 Dubl	lin Avenue	La Riviere	CP	0.44	SRCS	4	Building	Building	Building	Bridge	-	-	Building	-
48952 Ennis	skillen Avenue	Winnipeg Beach	CP	2.11	SRCS	2	-	-	-	Vegetation/house	-	-	-	-
8769 Ham	elin Street	Letellier	CN	0.65	SRCS	4	Building	Building	Heavy Equipment	Building	-	-	Heavy Equipmen	t-
20135 Higgi	ins Avenue	Carberry	CP	0.36	SRCS	4	Building	Building	Building	Building	-	Building	- ,	Building
	chings Street	Arborg	СР	0.2	SRCS	4	Building	Building	Building	Building	-	-	-	-
	ter Boulevard	Arborg	CP	0.49	SRCS	4	-	-	-	-		-	-	-
	downe Avenue		CP	1.79	SRCS	4	Vegetation	-	-	-	_	-	_	-
	son Crescent	Rivers	CN	0.17	SRCS	4	Building	Vegetation	Building	Storage Containers	_	_	_	_
	itoba Avenue		CP	0.6	SRCS	4	Vegetation	-	Vegetation	-	_	_	-	-
14912 Mari		Sprague	CN	0.33	SRCS	4	Building	Vegetation	Building	Buildings	_	<u>-</u>	-	_
	dam Avenue		CP	1.93	SRCS	4	Dullullig	vegetation	Vegetation	- Dullulligs				
	hillips Street	La Riviere	CP	0.53	FLB	1	-		vegetation	-	-	-	-	-
21513 McT		Emerson	CP	0.55	SRCS	2	-	Building	Building	-	-	-	Equipment	-
				0.96		1	-	bullullig	bullullig	-	-	-	Equipment	- Duilding
21520 Mess		Emerson	CP		FLB		-	-	-	D. Halton	-	-	-	Building
24205 Midl		La Riviere	CP	0.04	SRCS	1	Postlette e	Postlette e	Pudlelin -	Building	-	-	-	-
34896 Mora		Glenboro	CP	0.2	SRCS	3	Building	Building	Building	-	-	-	-	-
	ıntain Avenue	Arborg	СР	0.25	SRCS	4	Building/vegetation	rBuilding	Building	Building	-	-	-	-
	ray Park Road	Glenboro	CP	0.92	SRCS	2	Vegetation	-	-	Building	-	-	-	-
18452 None		Arborg	CP	1.1	SRCS	4	Houses	Houses	Vegetation/house	s Building/houses	-	-	-	-
		Oak Point Spur	CN	4.84	FLB	4	-	-	-	-	-	-	-	-
	re Dame Avenue	La Riviere	CP	0.88	FLB	1	-	-	-	-	-	-	-	-
'25041 Pacif		La Riviere	CP	0.4	SRCS	4	Building	Vegetation	Equipment	Building	-	-	-	-
14916 Pane		Sprague	CN	0.74	SRCS	4	Building	Building	Storage containers	9	-	-	-	-
47539 Pede	estrian	Rivers	CN	0.32	SRCS	4	Vegetation	Vegetation	N/A	N/A	-	-	-	-
50061 Pede	estrian	Keewatin	CP	123.1	SRCS	2	-	-	Building/vegetatio	r Building/vegetation	-	-	-	-
21516 Pling	guet Street	Emerson	CP	0.44	SRCS	4	Building	Vegetation/equipmen	nt Vegetation	Building	Building	-	-	Building
18455 Plym	nouth Street	Arborg	CP	0.18	SRCS	4	Building	Vegetation/building	-	-	-	-	-	-
14921 Prov	encher Boulevard	Sprague	CN	2.42	FLBG	1	-	-	-	=	Vegetation	ı -	-	-
725042 Richa	ard Avenue	La Riviere	CP	0.31	SRCS	4	Building	Building	Building	-	-	-	-	-
14922 Rue	Notre Dame	Sprague	CN	2.56	SRCS	3	Vegetation	-	Vegetation	Vegetation	-	-	-	-
48923 Sask	atchewan Avenue	La Riviere	CP	0.03	SRCS	2	-	Building	Building	-	-	-	-	-
48925 Sask	atchewan Avenue	La Riviere	CP	0.03	SRCS	1	-	Building	-	-	-	-	-	-
48931 Sask	atchewan Avenue	La Riviere	СР	0.03	SRCS	1	-	-	Building	-	-	-	=	-
	teaux Crescent	Glenboro	CP	0.35	SRCS	4	-	Building	Building	Building	-	-	-	-
	teaux Crescent	Glenboro	CP	0.1	SRCS	3	Building	Building	Building	Vegetation	-	Vegetation	-	-
18451 Selki		Arborg	CP	0.98	SRCS	4	Building	Vegetation/container	0	Houses/vegetation	_	-	_	-
		Arborg	CP	0.38	SRCS	3	Building	-	Building	Building	_	_	_	_
18462 Shen		~ b	٠.	0.50					•	-				
	lev Road	Snrague	CN	0.19	SRCS	4	Hill/vegetation	Vegetation/huilding	Vegetation/hill	Vegetation/equipmen	1-	_	-	-
18462 Shep 36828 Softl 14908 Spee		Sprague Sprague	CN CN	0.19 0.11	SRCS FLB	4 1	Hill/vegetation Building	Vegetation/building Building	Vegetation/hill Equipment	Vegetation/equipmen Building	1-	-	- Vegetation	Vegetation

Reason for SSD obstruction

Reason for Stop Obstruction

							Reason for SSD obstruction					Reason to	or Stop Obstructio	al .
					Warning	Sightlines								
TCID	Street	Subdivision	Railroad	MP	System	Obstructed	Sightline 1	Sightline 2	Sightline 3	Sightline 4	Sightline 1	Sightline 2	Sightline 3	Sightline 4
20179 St.	Matthews Avenue	La Riviere	СР	1.25	SRCS	4	Building	Building	Building	Building	-	-	-	-
24209 St.	Matthews Avenue	La Riviere	CP	2.3	FLBG	1	-	-	-	-	Vegetation	١-	-	-
725040 Tri	nity Street	La Riviere	CP	0.16	SRCS	4	Equipment	Building	Building	Equipment	-	-	-	-
14913 Tu	renne Street	Sprague	CN	0.46	SRCS	4	Building	Building/equipment	Vegetation	Building	-	Equipment	-	-
48920 Va	lour Road	La Riviere	CP	1.34	SRCS	4	Vegetation	Building	Building	Building	-	-	Vegetation	-
24212 W	ellington Crescent	La Riviere	CP	3.3	FLB	1	-	-	-	-	-	-	-	-
24212 We	ellington Crescent	La Riviere	CP	3.3	FLB	1	Repeated?							

Crossing 001

TCID: 34767 Railroad CP Milepost: 0.92

Street Name: Murray Park Road

Stopping Site Distance Obstructions



2

Not Applicable

3

Not Applicable



- 1. Eastbound, looking left, vegetation
- 2. N/A
- 3. N/A
- 4. Westbound, looking right, building



TCID: 34894 Railroad CP Milepost: 0.1

Street Name: Saulteaux Crescent









- 1. Northbound, looking left, building
- 2. Northbound, looking right, building
- 3. Southbound, looking left, building
- 4. Southbound, looking right, vegetation



Stopped Site Line Obstructions

1	Not Applicable	
3	Not Applicable	4 Not Applicable

- 1. N/A
- 2. Northbound, looking right, vegetation
- 3. N/A
- 4. N/A



TCID: 36726 Railroad CP Milepost: 0.35

Street Name: Saulteaux Crescent

Stopping Site Distance Obstructions

1

Not Applicable







- 1. N/A
- 2. Northbound, looking right, building
- 3. Southbound, looking left, building
- 4. Southbound, looking right, building



TCID: 34896 Railroad CP Milepost: 0.2

Street Name: Moray Street

Stopping Site Distance Obstructions







4

Not Applicable

- 1. Northbound, looking left, building
- 2. Northbound, looking right, building
- 3. Southbound, looking left, building
- 4. N/A



TCID: 35777 Railroad CN Milepost: 0.17

Street Name: Lowson Crescent









- 1. Northbound, looking left, building
- 2. Northbound, looking right, vegetation
- 3. Southbound, looking left, building
- 4. Southbound, looking right, containers



TCID: 49746 Railroad CN Milepost: 1.08

Street Name: Chevrier Boulevard









- 1. Northbound, looking left, building
- 2. Northbound, looking right, industrial yard
- 3. Southbound, looking left, large equipment
- 4. Southbound, looking right, building/vegetation



TCID: 8768 Railroad CN Milepost: 0.4

Street Name: Chevrier Boulevard

Stopped Site Line Obstructions

1 Not Applicable	
Not Applicable	4 Not Applicable

- 1. N/A
- 2. Eastbound direction, looking right, building/vegetation
- 3. N/A
- 4. N/A



TCID: 8769 Railroad CN Milepost: 0.65

Street Name: Hamelin Street









- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, heavy equipment
- 4. Southbound direction, looking right, building



Stopped Site Line Obstructions

Not Applicable

Not Applicable

A

Not Applicable

Not Applicable

- 1. N/A
- 2. N/A
- 3. Heavy equipment
- 4. N/A



TCID: 47539 Railroad CN Milepost: 0.32

Street Name: Pedestrian

Pedestrian Site Distance Obstructions



- 1. Northbound direction, looking left, vegetation
- 2. Northbound direction, looking right, vegetation
- 3. Southbound direction, looking left, vegetation
- 4. Southbound direction, looking right, vegetation



TCID: 24212 Railroad CP Milepost: 3.3

Street Name: Wellington Crescent

Flashing Lights and Bell at this Crossing



TCID: 24209 Railroad CP Milepost: 2.3

Street Name: St. Matthews Avenue

Stopped Sight Line Obstructions

	Not Applicable
3 Not Applicable	4 Not Applicable

- 1. Eastbound direction, looking left, vegetation
- 2. N/A
- 3. N/A
- 4. N/A



TCID: 20179 Railroad CP Milepost: 1.25

Street Name: St. Matthews Avenue









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, building



TCID: 48931 Railroad CP Milepost: 0.03

Street Name: Saskatchewan Avenue

1	2
Not Applicable	Not Applicable
3	4 Not Applicable

- 1. N/A
- 2. N/A
- 3. Westbound direction, looking left, building
- 4. N/A



TCID: 20142 Railroad CP Milepost: 0.44

Street Name: Dublin Avenue









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, bridge



Stopped Sight Line Obstructions

Not Applicable

Not Applicable

A

Not Applicable

Not Applicable

- 1. N/A
- 2. N/A
- 3. Westbound direction, looking left, building
- 4. N/A



TCID: 11431 Railroad CN Milepost: 4.84

Street Name: Notre Dame Avenue

Flashing Lights and Bell at this Crossing



TCID: 48925 Railroad CP Milepost: 0.03

Street Name: Saskatchewan Avenue

1 Not Applicable	
3 Not Applicable	4 Not Applicable

- 1. N/A
- 2. Eastbound direction, looking right, building
- 3. N/A
- 4. N/A



TCID: 48923 Railroad CP Milepost: 0.03

Street Name: Saskatchewan Avenue

Stopping Site Distance Obstructions

1

Not Applicable



4

Not Applicable

- 1. N/A
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. N/A



TCID: 48923 Railroad CP Milepost: 0.04

Street Name: Midland Street

1		2
	Not Applicable	Not Applicable
3	Not Applicable	4

- 1. N/A
- 2. N/A
- 3. N/A
- 4. Southbound direction, looking right, building



TCID: 24204 Railroad CP Milepost: 0.88

Street Name: Notre Dame Avenue

Flashing Lights and Bell at this Crossing



TCID: 48920 Railroad CP Milepost: 1.34

Street Name: Valour Road









- 1. Northbound direction, looking left, vegetation
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, building
- 4. Southbound direction, looking right, building



Stopped Sight Line Obstructions

Not Applicable

Not Applicable

A

Not Applicable

Not Applicable

- 1. N/A
- 2. N/A
- 3. Southbound direction, looking left, vegetation
- 4. N/A



TCID: 48919 Railroad CP Milepost: 1.29

Street Name: Spruce Street







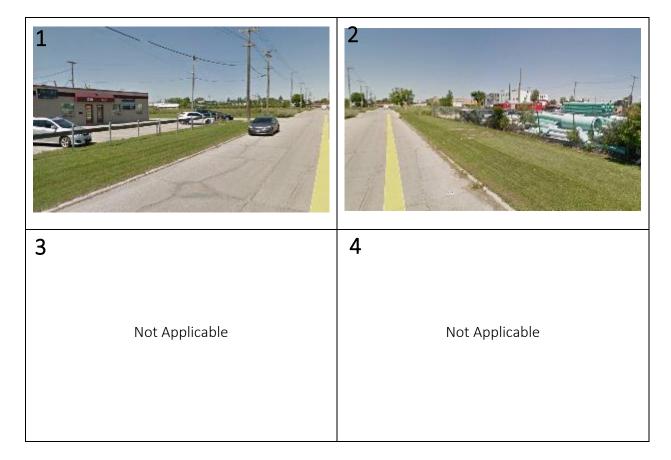


- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, building
- 4. Southbound direction, looking right, building



TCID: 20147 Railroad CP Milepost: 1.2

Street Name: Clifton Street



- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, heavy equipment
- 3. N/A
- 4. N/A



TCID: 725042 Railroad CP Milepost: 0.31

Street Name: Richard Avenue

Stopping Site Distance Obstructions







4

Not Applicable

- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. N/A



TCID: 46057 Railroad CP Milepost: 0.53

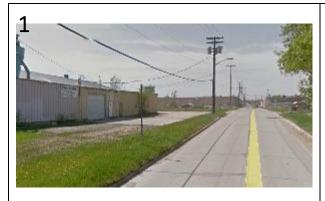
Street Name: McPhillips Street

Flashing Lights and Bell at this Crossing



TCID: 725041 Railroad CP Milepost: 0.4

Street Name: Pacific Avenue









- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, vegetation
- 3. Southbound direction, looking left, equipment
- 4. Southbound direction, looking right, building



TCID: 725040 Railroad CP Milepost: 0.16

Street Name: Trinity Street







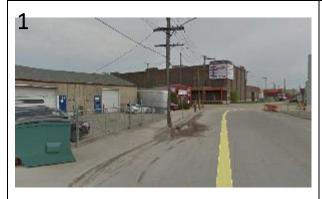


- 1. Northbound direction, looking left, equipment
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, building
- 4. Southbound direction, looking right, equipment



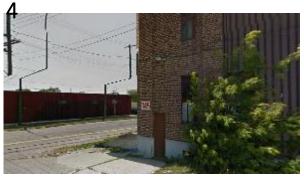
TCID: 20135 Railroad CP Milepost: 0.36

Street Name: Higgins Avenue









- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, building
- 4. Southbound direction, looking right, building



Stopped Sight Line Obstructions

1

Not Applicable



3

Not Applicable



- 1. N/A
- 2. Northbound direction, looking right, building
- 3. N/A
- 4. Southbound direction, looking right, building



TCID: 20192 Railroad CP Milepost: 4.74

Street Name: Brookside Boulevard

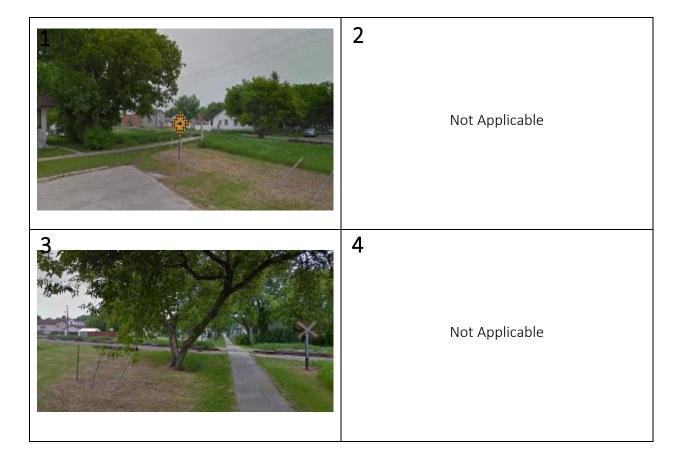
Flashing Lights, Bell and Gates at this Crossing



TCID: 48946 Railroad CP Milepost: 0.6

Street Name: Manitoba Avenue

Pedestrian Site Distance Obstructions



- 1. Eastbound direction, looking left, vegetation
- 2. N/A
- 3. Westbound direction, looking left, vegetation
- 4. N/A



TCID: 48947 Railroad CP Milepost: 0.75

Street Name: Alfred Avenue

Pedestrian Site Distance Obstructions

1	2
Not Applicable	Not Applicable
	4 Not Applicable

- 1. N/A
- 2. N/A
- 3. Westbound direction, looking left, house/vegetation
- 4. N/A



TCID: 48948 Railroad CP Milepost: 0.96

Street Name: Boyd Avenue

Pedestrian Site Distance Obstructions

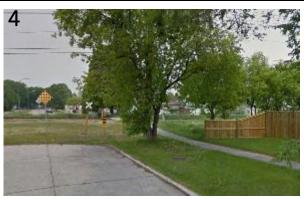


2

Not Applicable

3

Not Applicable



- 1. Eastbound direction, looking left, vegetation
- 2. N/A
- 3. N/A
- 4. Westbound direction, looking right, vegetation



TCID: 30990 Railroad CP Milepost: 1.3

Street Name: Church Avenue



- 1. Eastbound direction, looking left, vegetation/house
- 2. Eastbound direction, looking right, vegetation/house
- 3. Westbound direction, looking left, vegetation/house
- 4. Westbound direction, looking right, vegetation



TCID: 48950 Railroad CP Milepost: 1.79

Street Name: Landsdowne Avenue

Pedestrian Site Distance Obstructions

	Not Applicable
3 Not Applicable	4 Not Applicable

- 1. Eastbound direction, looking left, vegetation
- 2. N/A
- 3. N/A
- 4. N/A



TCID: 48951 Railroad CP Milepost: 1.93

Street Name: McAdam Avenue

Pedestrian Site Distance Obstructions

1	2
Not Applicable	Not Applicable
3	4 Not Applicable

- 1. N/A
- 2. N/A
- 3. Westbound direction, looking left, vegetation
- 4. N/A



TCID: 48952 Railroad CP Milepost: 2.11

Street Name: Enniskillen Avenue

Pedestrian Site Distance Obstructions

1		2
	Not Applicable	Not Applicable
3	Not Applicable	4

- 1. N/A
- 2. N/A
- 3. N/A
- 4. Westbound direction, looking right, vegetation/house



TCID: 18451 Railroad CP Milepost: 0.98

Street Name: Selkirk Avenue









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, vegetation/containers
- 3. Westbound direction, looking left, houses
- 4. Westbound direction, looking right, vegetation/houses



TCID: 18452 Railroad CP Milepost: 1.1

Street Name: Manitoba Avenue









- 1. Eastbound direction, looking left, houses
- 2. Eastbound direction, looking right, houses
- 3. Westbound direction, looking left, vegetation/houses
- 4. Westbound direction, looking right, building/houses



TCID: 34889 Railroad CP Milepost: 0.46

Street Name: Manitoba Avenue









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, building



TCID: 18455 Railroad CP Milepost: 0.18

Street Name: Plymouth Street









- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, vegetation/building
- 3. Southbound direction, looking left, building
- 4. Southbound direction, looking right, building



Not Applicable

Not Applicable

4

Not Applicable

- 1. N/A
- 2. N/A
- 3. Southbound direction, looking left, building
- 4. N/A



TCID: 18461 Railroad CP Milepost: 0.2

Street Name: Hutchings Street









- 1. Southbound direction, looking left, building
- 2. Southbound direction, looking right, building
- 3. Eastbound direction, looking left, building
- 4. Eastbound direction, looking right, building



TCID: 18457 Railroad CP Milepost: 0.11

Street Name: Church Avenue









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, electric station



TCID: 18462 Railroad CP Milepost: 0.38

Street Name: Sheppard Street

Stopping Site Distance Obstructions



2

Not Applicable





- 1. Northbound direction, looking left, building
- 2. N/A
- 3. Southbound direction, looking left, building
- 4. Southbound direction, looking right, electric station



TCID: 35323 Railroad CP Milepost: 0.12

Street Name: Churchill Avenue

Stopping Site Distance Obstructions

1

Not Applicable







- 1. N/A
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, building



Not Applicable

Not Applicable

Not Applicable

- 1. N/A
- 2. N/A
- 3. N/A
- 4. Westbound direction, looking right, building/vegetation



TCID: 18460 Railroad CP Milepost: 0.12

Street Name: Churchill Avenue









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, building



1	Not Applicable	2	
3	Not Applicable	4	Not Applicable

- 1. N/A
- 2. Eastbound direction, looking right, equipment
- 3. N/A
- 4. N/A



TCID: 18458 Railroad CP Milepost: 0.12

Street Name: Churchill Avenue









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, storage containers



TCID: 35324 Railroad CP Milepost: 0.25

Street Name: Mountain Avenue









- 1. Eastbound direction, looking left, building/vegetation
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, building



TCID: 18454 Railroad CP Milepost: 0.49

Street Name: Inkster Boulevard

Crossing No Longer Exists



TCID: 14922 Railroad CN Milepost: 2.56

Street Name: Rue Notre Dame

Stopping Site Distance Obstructions



2

Not Applicable





- 1. Eastbound direction, looking left, vegetation
- 2. N/A
- 3. Westbound direction, looking left, vegetation
- 4. Westbound direction, looking right, vegetation



TCID: 14921 Railroad CN Milepost: 2.42

Street Name: Provencher Boulevard

Stopped Site Line Obstructions

	Not Applicable
3 Not Applicable	4 Not Applicable

- 1. Eastbound direction, looking left, vegetation
- 2. N/A
- 3. N/A
- 4. N/A



TCID: 21513 Railroad CP Milepost: 0.55

Street Name: Mctavish Street

Stopping Site Distance Obstructions

1

Not Applicable





4

Not Applicable

- 1. N/A
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, building
- 4. N/A



Not Applicable

Not Applicable

A Not Applicable

- 1. N/A
- 2. N/A
- 3. Southbound direction, looking left, equipment
- 4. N/A

TCID: 14920 Railroad CN Milepost: 1.83

Street Name: Archibald Street

Flashing Lights, Bell and Gates at this Crossing



TCID: 21520 Railroad CP Milepost: 0.96

Street Name: Messier Street

Stopped Site Line Obstructions

1 Not Applicable	Not Applicable
3 Not Applicable	4

- 1. N/A
- 2. N/A
- 3. N/A
- 4. Westbound direction, looking right, building



TCID: 21516 Railroad CP Milepost: 0.44

Street Name: Plinguet Street









- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, vegetation/equipment
- 3. Westbound direction, looking left, vegetation
- 4. Westbound direction, looking right, building





2

Not Applicable

3

Not Applicable



- 1. Eastbound direction, looking left, building
- 2. N/A
- 3. N/A
- 4. Westbound direction, looking right, building

TCID: 50061 Railroad CP Milepost: 123.1

Street Name: Pedestrian

Pedestrian Site Distance Obstructions

1 2

Not Applicable

Not Applicable





- 1. N/A
- 2. N/A
- 3. Westbound direction, looking left, vegetation/house
- 4. Westbound direction, looking right, vegetation/house



TCID: 14916 Railroad CN Milepost: 0.74

Street Name: Panet Road









- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, storage containers
- 4. Southbound direction, looking right, building



TCID: 36828 Railroad CN Milepost: 0.19

Street Name: Softley Road



- 1. Northbound direction, looking left, hill/vegetation
- 2. Northbound direction, looking right, vegetation/building
- 3. Southbound direction, looking left, vegetation/hill
- 4. Southbound direction, looking right, vegetation/equipment



TCID: 14913 Railroad CN Milepost: 0.46

Street Name: Turenne Street









- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, building/equipment
- 3. Southbound direction, looking left, vegetation
- 4. Southbound direction, looking right, building



1	Not Applicable	2
3	Not Applicable	4 Not Applicable

- 1. N/A
- 2. Northbound direction, looking right, equipment
- 3. N/A
- 4. N/A



TCID: 14912 Railroad CN Milepost: 0.33

Street Name: Marion Street







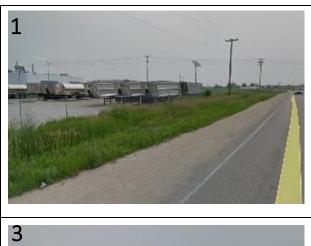


- 1. Eastbound direction, looking left, building
- 2. Eastbound direction, looking right, building
- 3. Westbound direction, looking left, building
- 4. Westbound direction, looking right, buildings

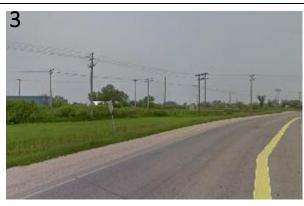


TCID: 14906 Railroad CN Milepost: 0.09

Street Name: Dawson Road North









- 1. Eastbound direction, looking left, storage containers
- 2. Eastbound direction, looking right, vegetation
- 3. Westbound direction, looking left, vegetation
- 4. Westbound direction, looking right, storage containers



Not Applicable

Not Applicable

A

Not Applicable

- 1. N/A
- 2. N/A
- 3. Westbound direction, looking left, vegetation
- 4. N/A



TCID: 14908 Railroad CN Milepost: 0.11

Street Name: Speers Road









- 1. Northbound direction, looking left, building
- 2. Northbound direction, looking right, building
- 3. Southbound direction, looking left, equipment
- 4. Southbound direction, looking right, building



1

2

Not Applicable

Not Applicable





- 1. N/A
- 2. N/A
- 3. Southbound direction, looking left, vegetation
- 4. Southbound direction, looking right, vegetation

Appendix D Grade Crossing Prioritization Lists



TCID	Street	Subdivision	Railroad	MP	Warning System	Stopped Gradient	Score	Approach Gradient	Score	Total Gradient Score	Crossing Angle	Score	Geometric Score
14922 Ru	ue Notre Dame	Sprague	CN	2.56	SRCS	2	2	1	1	3	72	0	6
47539 Pe	edestrian	Rivers	CN	0.32	SRCS	2	2	1	0	2	120	1	6
48946 M	anitoba Avenue	Winnipeg Bead	h CP	0.6	SRCS	2	2	0	0	2	113	1	6
23422 M	anhattan Avenue	Keewatin	CP	123.71	FLBG	2	2	1	1	3	150	0	6
48952 Er	nniskillen Avenue	Winnipeg Bead	h CP	2.11	SRCS	2	2	0	0	2	115	1	6
50061 Pe	edestrian	Keewatin	CP	123.1	SRCS	2	2	1	0	2	137	1	6
11435 Ro	oss Avenue West	Oak Point Spur	CN	5.1	SRCS	2	2	0	0	2	67	1	6
30983 Pr	itchard Avenue	Winnipeg Bead	h CP	0.56	RCS and Sto	2	2	0	0	2	117	1	6
48949 Pe	enninghame Street	Winnipeg Bead	ch CP	1.2	SRCS	2	2	0	0	2	44	1	6
48950 La	insdowne Avenue	Winnipeg Bead	ch CP	1.79	SRCS	2	2	1	0	2	110	0	4
48948 Bo	oyd Avenue	Winnipeg Bead	ch CP	0.96	SRCS	2	2	0	0	2	108	0	4
48951 M	cAdam Avenue	Winnipeg Bead	ch CP	1.93	SRCS	2	2	0	0	2	110	0	4
23423 Ta	albot Avenue	Keewatin	CP	123.92	FLBG	1	1	0	0	1	151	1	4
30982 Se	elkirk Avenue	Winnipeg Bead	h CP	0.5	FLB	2	2	0	0	2	117	0	4
21513 M	cTavish Street	Emerson	CP	0.55	SRCS	1	1	0	0	1	30	1	4
30995 In	kster Boulevard	Winnipeg Bead	h CP	1.72	FLB	2	2	0	0	2	110	0	4
21522 El	izabeth Road	Emerson	CP	2.34	FLBG	2	2	0	0	2	73	0	4
23421 M	unroe Avenue	Keewatin	CP	122.86	FLBG	2	2	0	0	2	138	0	4
21529 Cr	reek Bend Road	Emerson	CP	6.28	RCS and Sto	2	2	0	0	2	99	0	4
13119 El	mhurst Road	Rivers	CN	7.46	FLBG	2	2	0	0	2	76	0	4
23418 Pe	eguis Street	Keewatin	CP	121.8	FLBG	2	2	0	0	2	75	0	4
30989 M	ountain Avenue	Winnipeg Bead	ch CP	1.09	FLB	2	2	0	0	2	110	0	4
14917 M	arion Street	Sprague	CN	0.92	FLBG	2	2	0	0	2	34	0	4
24216 Cd	orydon Avenue	La Riviere	CP	4.12	FLBG	2	2	0	0	2	91	0	4
24217 Gr	rant Avenue	La Riviere	CP	4.6	FLBG	2	2	0	0	2	89	0	4
PED2 W	averley Street Pedestrian	La Riviere	CP	3.05	SRCS	2	2	2	0	2	90	0	4
22283 Hi	ighwood Street	Glenboro	CP	4.88	SRCS	2	2	0	0	2	88	0	4
30984 M	agnus Avenue	Winnipeg Bead	h CP	0.68	RCS and Sto	2	2	0	0	2	110	0	4
30996 Ca	arruthers Avenue	Winnipeg Bead	ch CP	1.83	RCS and Sto	2	2	0	0	2	110	0	4
8758 Pa	arker Avenue	Letellier	CN	0.18	FLB	2	2	0	0	2	122	0	4
13105 Pa	arker Avenue	Rivers	CN	0.14	FLB	2	2	0	0	2	70	0	4
21528 Jo	hn Bruce Pedestrian	Emerson	CP	5.2	FLB	2	2	0	0	2	81	0	4
30985 Bu	urrows Avenue	Winnipeg Bead	h CP	0.73	FLB	2	2	0	0	2	109	0	4
405169 Pe	edestrian	Letellier	CN	0.93	FLB	2	2	0	0	2	122	0	4
13120 Fa	airmont Road	Rivers	CN	8.26	FLBG	2	2	0	0	2	88	0	4
13121 Ha	arstone Road	Rivers	CN	8.8	FLBG	2	2	0	0	2	85	0	4
13122 Cd	ommunity Row	Rivers	CN	9.31	FLBG	2	2	0	0	2	85	0	4
13124 Ch	narleswood Road	Rivers	CN	9.78	FLBG	2	2	0	0	2	86	0	4
14906 Da	awson Road North	Sprague	CN	0.09	SRCS	0	0	0	0	0	47	1	2
14912 M	arion Street	Sprague	CN	0.33	SRCS	1	1	0	0	1	92	0	2
14913 Tu	urenne Street	Sprague	CN	0.46	SRCS	1	1	0	0	1	90	0	2
21516 PI	inguet Street	Emerson	CP	0.44	SRCS	1	1	0	0	1	90	0	2

TCID	Street	Subdivision	Railroad	MP	Warning System	Stopped Gradient	Score	Approach Gradient	Score	Total Gradient Score	Crossing Angle	Score	Geometric Score
20135 Higgins	s Avenue	Carberry	СР	0.36	SRCS	0	0	0	0	0	31	1	2
18455 Plymo	uth Street	Arborg	CP	0.18	SRCS	0	0	0	0	0	115	1	2
48919 Spruce	Street	La Riviere	СР	1.29	SRCS	0	0	0	0	0	128	1	2
48920 Valour	Road	La Riviere	CP	1.34	SRCS	0	0	0	0	0	130	1	2
48947 Alfred	Avenue	Winnipeg Beach	СР	0.75	SRCS	1	1	0	0	1	107	0	2
725040 Trinity	Street	La Riviere	CP	0.16	SRCS	0	0	0	0	0	45	1	2
725041 Pacific	Avenue	La Riviere	СР	0.4	SRCS	0	0	0	0	0	137	1	2
11437 Alexan	nder Avenue	Oak Point Spur	CN	5.23	RCS and Sto	0	0	0	0	0	66	1	2
21523 Cotton	nwood Road	Emerson	СР	3.18	FLBG	1	1	0	0	1	93	0	2
48923 Saskat	chewan Avenue	La Riviere	CP	0.03	SRCS	0	0	0	0	0	154	1	2
11433 Willian	n Avenue West	Oak Point Spur	CN	4.98	SRCS	0	0	0	0	0	67	1	2
20147 Clifton	Street	La Riviere	СР	1.2	SRCS	0	0	0	0	0	67	1	2
24205 Midlar	nd Street	La Riviere	СР	0.04	SRCS	0	0	0	0	0	60	1	2
34767 Murra	y Park Road	Glenboro	СР	0.92	SRCS	0	0	0	0	0	67	1	2
48925 Saskat	chewan Avenue	La Riviere	СР	0.03	SRCS	0	0	0	0	0	137	1	2
48132 Camie	l Sys St	Sprague	CN	0.93	RCS and Sto	1	1	0	0	1	90	0	2
30993 Atlanti	ic Avenue	Winnipeg Beach	СР	1.58	SRCS	1	1	0	0	1	108	0	2
8777 Ducha	rme Avenue	Letellier	CN	5.98	FLB	1	1	0	0	1	94	0	2
30986 Aberde	een Avenue	Winnipeg Beach	СР	0.84	FLB	1	1	0	0	1	108	0	2
35007 Grandı	mont Boulevard	Letellier	CN	5.75	FLB	1	1	0	0	1	98	0	2
35050 Bourna	ais Drive	Redditt	CN	247.42	FLBG	1	1	0	0	1	91	0	2
35534 Panet	Road	Keewatin	СР	122.6	FLBG	1	1	0	0	1	53	0	2
14921 Prover	ncher Boulevard	Sprague	CN	2.42	FLBG	1	1	0	0	1	77	0	2
8767 Chevri	er Boulevard	Letellier	CN	1.65	FLB	1	1	0	0	1	123	0	2
725016 Sargen	nt Avenue	La Riviere	СР	0.77	FLB	1	1	0	0	1	90	0	2
405113 Pedest	trian	Emerson	СР	3.42	FLB	1	1	0	0	1	73	0	2
405112 Pedest	trian	Emerson	СР	4.56	FLB	1	1	0	0	1	83	0	2
34049 Perrea	ult Avenue	Letellier	CN	7.34	RCS and Sto	1	1	0	0	1	93	0	2
22282 Summ	it Road	Glenboro	СР	4.57	FLB	1	1	0	0	1	83	0	2
48931 Saskat	chewan Avenue	La Riviere	СР	0.03	SRCS	0	0	0	0	0	156	1	2
20143 Logan	Avenue	La Riviere	СР	0.24	FLB	1	1	0	0	1	135	0	2
20164 St. Jam	nes Street	La Riviere	СР	0.64	FLB	1	1	0	0	1	79	0	2
21512 Missio	n Street	Emerson	СР	0.3	FLB	1	1	0	0	1	82	0	2
24198 Logan	Avenue	La Riviere	СР	0.33	FLB	1	1	0	0	1	106	0	2
24218 Taylor	Avenue	La Riviere	СР	5.11	FLB	1	1	0	0	1	90	0	2
21521 Marion	n Street	Emerson	СР	1.55	FLBG	1	1	0	0	1	70	0	2
24207 Ellice A	Avenue	La Riviere	СР	2.1	FLBG	1	1	0	0	1	91	0	2
11434 Elgin A	Avenue West	Oak Point Spur	CN	5.04	SRCS	0	0	0	0	0	69	1	2
11436 Pacific	Avenue West	Oak Point Spur	CN	5.16	SRCS	0	0	0	0	0	67	1	2
8759 Byng P	Place	Letellier	CN	0.38	FLB	1	1	0	0	1	120	0	2
30998 Hartfo		Winnipeg Beach	СР	2.42	FLB	1	1	0	0	1	111	0	2
23424 Grey S	treet	Keewatin	СР	124.02	FLBG	1	1	0	0	1	60	0	2

					Warning	Stopped		Approach		Total Gradient	Crossing		
TCID	Street	Subdivision	Railroad	MP	System	Gradient	Score	Gradient	Score	Score	Angle	Score	Geometric Score
PED1	Riddle Avenue Pedestrian	La Riviere	СР	2.65	SRCS	1	1	1	0	1	90	0	2
11432	Bannatyne Avenue West	Oak Point Spur	CN	4.94	SRCS	0	0	0	0	0	68	1	2
8779	Father Labont Avenue	Letellier	CN	7.12	CS and Stc	1	1	0	0	1	94	0	2
24225	Brady Road	La Riviere	СР	8.57	SRCS	0	0	0	0	0	65	1	2
34768	Saskatchewan Avenue	Glenboro	СР	0.4	SRCS	0	0	0	0	0	35	1	2
36100	Minerva Avenue	Letellier	CN	7.8	CS and Stc	1	1	0	0	1	94	0	2
48938	Pritchard Avenue	Arborg	СР	1.04	SRCS	0	0	0	0	0	50	1	2
8762	Waterford Avenue	Letellier	CN	0.69	FLB	1	1	0	0	1	119	0	2
8763	Southwood Avenue	Letellier	CN	0.78	FLB	1	1	0	0	1	120	0	2
8775	Devos Road	Letellier	CN	5.3	FLB	1	1	0	0	1	115	0	2
23679	Molson Street	Keewatin	СР	2.49	FLB	1	1	0	0	1	75	0	2
24203	Lincoln Avenue	La Riviere	СР	0.67	FLB	1	1	0	0	1	87	0	2
30992	Bannerman Avenue	Winnipeg Beach	СР	1.52	FLB	1	1	0	0	1	111	0	2
30999	Kingsbury Avenue	Winnipeg Beach	СР	2.7	FLB	1	1	0	0	1	110	0	2
31004	Murray Avenue	Winnipeg Beach	СР	4.08	FLB	1	1	0	0	1	101	0	2
36348	North-South Royal Salinger Road	Emerson	СР	3.62	FLB	1	1	0	0	1	99	0	2
23412	Redonda Street	Keewatin	СР	118.69	FLBG	1	1	0	0	1	75	0	2
23420	Callsbeck Avenue	Keewatin	СР	122.51	FLBG	1	1	0	0	1	143	0	2
24214	Kingsway	La Riviere	СР	3.65	FLBG	1	1	0	0	1	90	0	2
42350	Fleetwood Road	La Riviere	СР	7.96	FLBG	1	1	0	0	1	89	0	2

TOO						Warning	Sightlines		Cross-		Stopped		Approach		Gradient	Low		Crossing		Route		Assistive		
1422 Month Start			Subdivision				Obstructed	Score			Gradient	Score	Gradient	Score	Score	Ground	Score		Score			Device	Score	Priority
1922 Performent Performen			Sprague				4	4		3	0	0	0	0	0	0	0	47	1	Truck	2	0	0	6
9.49 Persentante Nemes (M. 9.2 SIGS) 4 9 4 0 9 2 2 1 0 0 10 1 0 1 1 Ped 1 0 0 10 1 1 Ped 1 0 0 10 1 1 Ped 1 0 0 10 0 0 1 Ped 1 0 0 0 1 Ped 1 0 0 1 Ped 1 0 0 1 Ped 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14912 Marion	Street	Sprague	CN	0.33	SRCS	4	4	83584	3	1	1	0	0	1	0	0	92	0	Truck	2	0	0	6
4844 Membros American Memory and													1			2						-	0	5
14931 Funny Storet									-					-			-		1		1	0	0	5
21.55 Figure Singer Firewison CP 19.45 19.55 2 1 1 0 0 0 0 0 0 0 0																0	0					-	0	5
1916 Foreine food																_							0	5
3777 (Any Charles) Revented (Charles) (Any Charles) (Any C	_															-						-	0	5
4244 Chrown soulmount																-	-		-			-	0	5
2422 Ministratur Arenue Seewart P																						-	0	5
4892 Final plane Nerveuse Winning Beach CP 1211 SMCS 2 2 0 0 2 2 1 0 0 137 15 16 Ped 1 1 0 48920 Lanchorne Nerveuse Winning Beach CP 1213 SMCS 4 0 0 0 2 2 1 0 0 137 16 Ped 1 0 48920 Lanchorne Nerveuse Winning Beach CP 1213 SMCS 4 0 0 0 2 2 2 0 0 0 0 131 0 0 Ped 1 0 0 48920 Lanchorne Nerveuse Winning Beach CP 1213 SMCS 4 0 0 0 2 2 2 0 0 0 0 131 0 0 Ped 1 0 0 4 0 0 0 2 2 0 0 0 0 131 0 0 Ped 1 0 0 4 0 0 0 2 2 0 0 0 0 131 0 0 Ped 1 1 0 0 4 0 0 0 0 0 0 1 10 0 0 Ped 1 1 0 0 4 0 0 0 0 0 0 0 0 1 10 0 0 Ped 1 1 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 Ped 1 1 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							•					-	-		-	-	-		-			0	0	5
																						0	0	4
4895 Individement Winnings Beacht, P. 179 SRS 4 4 0 0 2 2 2 1 0 0 2 0 110 0 Ped 1 0 48848 Bey Afferment Winnings Beacht, P. 129 SRS 4 4 0 0 0 2 2 0 0 0 100 0 Ped 1 0 0 48848 Bey Afferment Winnings Beacht, P. 129 SRS 4 4 0 0 0 2 2 0 0 0 0 100 0 Ped 1 0 0 48848 Bey Afferment Winnings Beacht, P. 129 SRS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0										-							-					_	1	4
48484 Boyle Assente Winning Batch-CP 19.66 SRCs 4 4 0 0 2 2 0 0 0 108 0 Prec 1 0 0 0 0 0 0 0 0 0																						-	0	4
48951 Modelen Memme Winnings Beach (P 1.94 9 MCS 4 4 0 0 2 2 0 0 2 0 0 110 0 Ped 1 0 2013 Highligh Avenue Carberry (P 0.36 9 MCS 4 4 0 0 0 0 0 0 0 0										-						-	-		-			-	0	4
22437 Tighot Annume																-			-			-	0	4
2013 Highligh Avenue															2							0	0	4
18455 Pymounts Street 4															1							1	1	4
48919 Syloure Street 48909 Valuer Road 48909 Alburn Road 4890 Alburn Road 48909 Albur																0	-						1	4
48293 Valled Avenue Valled Peace P. 1.34 SRCS 4 4 0 0 0 0 0 0 0 0			_													0						-	0	4
4897 Alfred Avenue Winninge Beach CP 0.75 SICS 4 4 0 0 1 1 0 0 1 0 0 0							•		-	-		-	-	-	-	-	-		_			-	0	4
12-2501 Facing Street 18 Nover P																-						-	0	4
125-041 Papelife Memme																						-	0	
1876 1876																-			_			-	0	4
1441 Note Dame Avenue										-		-		-	-		-					-		4
14457 None															-	-	-				_	·	0	4
14915 Putrch Avenue Arborg CP 0.12 SRCS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Jame Avenue										-			-	0	-		-			0	-	
3495 Church Avenue Aborg CP		A.,	_													0						0	0	4
20142 Dublin Avenue La Riviere CP 0.44 SRCS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 88 3 0 88 3 0 0 36 36 38 58 59 14 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 88 3 0 88 3 0 0 36 36 36 59 59 59 59 59 59 59 59 59 59 59 59 59			_							-					-		-					-		4
3489 Church Avenue Arborg CP 0.46 SRCS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 88 0 88			_																				0	4
36776 Southeaux Crescent 36786 Southeaux Crescent 36896 Subtraan Avenue 36786 Abouth Avenue 37886 Abouth										-				-	-		-		-			-	0	4
18454 Hutching Street								•				-			-	•	-		-			-	0	4
13464 Hutchings Street										-	-		-	-	-		-					-	0	4
38324 Mountain Avenue Arborg CP 0.25 SRCS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 88 0 Truck 2 0 14480 Church Avenue Arborg CP 0.12 SRCS 3 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0										-					-		-					-	0	4
18460 Church Avenue Arborg CP 0.12 SRCS 3 3 0 0 0 0 0 0 0 0		-														0	-		-			0	0	4
34894 Saulteaux Crescent Glenboro CP 0.1 SRCS 3 3 0 0 0 0 0 0 0 0			_													0	-		-			0	0	4
35322 Church Avenue										-	•	-	-	-	-		-		-			-	0	4
20179 St. Matthews Avenue La Riviere CP 1.25 SRCS 4 4 0 0 0 0 0 0 0 0													-		~	-	-		-			·	0	4
11413 Ross Avenue West																							1	4
30982 Selkirk Avenue Minnipeg Beach CP 0.5 FLB 0 0 0 0 0 2 2 0 0 0								0								0	0		1			1	1	3
15131 McTavish Street										-						-	1					_	0	3
3095 Inkster Boulevard Winnipeg Beach CP 1.72 FLB 0 0 0 0 0 0 2 2 2 0 0 0 2 0 0 110 0 Bus 3 0 12152 Elizabeth Road Emerson CP 122.86 FLBG 0 0 138000 0 2 2 2 0 0 0 2 0 0 138 0 Bus 3 0 2421 Munroe Avenue Keewatin CP 122.86 FLBG 0 0 138000 0 2 2 2 0 0 0 2 0 0 138 0 Bus 3 0 11437 Alexander Avenue Oak Point Spur CN 5.23 CS and Stc 0 0 2832 2 0 0 0 0 0 0 0 0 0 0 66 1 Car 1 1 1 1 1 93 0 Bus 3 0 0 12522 Elizabeth Road Emerson CP 3.18 FLBG 0 0 0 2832 2 0 0 0 0 0 0 0 0 0 0 66 1 Car 1 1 1 1 1 93 0 Bus 3 0 0 14895 Sacksatchewan Avenue La Riviere CP 0.18 FLBG 0 0 0 29392 0 1 1 1 0 0 0 1 1 1 1 1 93 0 Bus 3 0 0 14895 Sacksatchewan Avenue La Riviere CP 0.03 SRCS 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 154 1 Truck 2 0 0 14851 Selkirk Avenue Arborg CP 0.98 SRCS 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0													-		_	_	0					0	0	3
21522 Elizabeth Road				chCP			0	0		0		2	0	0	2	0	0		0		3	0	0	3
23421 Munroe Avenue								0	62004	0			0	0	2	0	0		0			0	0	3
11437 Alexander Avenue							0	0		0	2	2	0	0	2	0	0		0		3	0	0	3
48923 Saskatchewan Avenue La Riviere CP 0.03 SRCS 2 2 2 0 0 0 0 0 0 0 0 0 0 0 154 1 Truck 2 0 18451 Selkirk Avenue Arborg CP 0.98 SRCS 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					5.23	RCS and St	:c 0	0	2832	2	0	0	0	0	0	0	0	66	1		1	1	1	3
48923 Saskatchewan Avenue La Riviere CP 0.03 SRCS 2 2 2 0 0 0 0 0 0 0 0 0 0 0 154 1 Truck 2 0 18451 Selkirk Avenue Arborg CP 0.98 SRCS 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								0		0		1	0	0	1	1	1		0		3	0	0	3
18451 Selkirk Avenue Arborg CP 0.98 SRCS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							2	2		0	0	0	0	0	0	0	0		1		2	0	0	3
34896 Moray Street Glenboro CP 0.2 SRCS 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				CP		SRCS	4	4	0	0	0	0	0	0	0	0	0		0		1	0	0	3
725042 Richard Avenue La Riviere CP 0.31 SRCS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	34896 Moray 9	Street		CP	0.2	SRCS	3	3	0	0	0	0	0	0	0	0	0	90	0	Truck	2	0	0	3
725042 Richard Avenue La Riviere CP 0.31 SRCS 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36828 Softley I	Road	Sprague	CN	0.19	SRCS	4	4	47	0	0	0	0	0	0	0	0	92	0	Car	1	0	0	3
30983 Pritchard Avenue Winnipeg Beach CP	-			СР	0.31	SRCS	4	4	0	0	0	0	0	0	0	0	0	90	0	Car	1	0	0	3
48949 Penninghame Street Winnipeg Beach CP 1.2 SRCS 0 0 0 0 2 0 0 0 44 1 Ped 1 0 21529 Creek Bend Road Emerson CP 6.28*CS and Stc 0 0 188 0 2 2 0 0 0 2 1 1 999 0 Car 1 0 13119 Elmhurst Road Rivers CN 7.4 FLBG 0 0 349849 0 2 2 0 0 0 2 1 1 76 0 Car 1 0 24318 Peguis Street Keewatin CP 121.8 FLBG 0 0 349849 0 2 2 0 0 0 2 1 1 76 0 Car 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30983 Pritchar	rd Avenue	Winnipeg Bea	chCP	0.56	RCS and St	c 0	0	0	0	2	2	0	0	2	0	0	117	1	Car	1	0	0	2
21529 Creek Bend Road								0	0	0	2	2	0	0	2	0	0	44	1		1	0	0	2
13119 Elmhurst Road Rivers CN 7.46 FLBG 0 0 149699 0 2 2 0 0 0 2 1 1 1 76 0 Car 1 0 23418 Peguis Street Keewatin CP 121.8 FLBG 0 0 3840 0 2 2 0 0 0 2 1 1 75 0 Car 1 0 30989 Mountain Avenue Winnipeg Beach CP 1.09 FLB 0 0 109228 0 2 2 0 0 0 2 1 1 75 0 0 Truck 2 0 14917 Marion Street Sprague CN 0.92 FLBG 0 0 109228 0 2 2 0 0 0 2 0 0 34 0 Truck 2 0 24216 Corydon Avenue La Riviere CP 4.12 FLBG 0 0 0 0 0 2 0 0 2 0 0 91 0 Truck 2 0 24217 Grant Avenue La Riviere CP 4.6 FLBG 0 0 0 0 0 0 2 0 0 2 0 0 89 0 Truck 2 0 24217 Grant Avenue La Riviere CP 3.05 SRCS 0 0 0 0 0 0 2 2 0 0 0 89 0 Truck 2 0 22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 0 0 2 2 0 0 0 88 0 Car 1 0 0 22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 0 0 2 2 0 0 0 88 0 Car 1 0 0 22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 0 0 2 2 0 0 0 0 88 0 Car 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		-					c O	0	188	0		2	0	0	2	1	1	99	0		1	0	0	2
30989 Mountain Avenue Winnipeg Beach CP 1.09 FLB 0 0 0 0 2 2 2 0 0 2 2 0 0 110 0 Truck 2 0 14917 Marion Street Sprague CN 0.92 FLBG 0 0 109228 0 2 2 0 0 0 2 0 0 34 0 Truck 2 0 24216 Corydon Avenue La Riviere CP 4.12 FLBG 0 0 0 0 2 2 0 0 0 2 0 0 91 0 Truck 2 0 24217 Grant Avenue La Riviere CP 4.6 FLBG 0 0 0 0 2 2 0 0 0 2 0 0 91 0 Truck 2 0 24217 Grant Avenue La Riviere CP 3.05 SRCS 0 0 0 0 2 2 2 0 0 0 2 0 9 0 0 Ped 1 0 22283 Highwood Street Pedestrian La Riviere CP 4.88 SRCS 0 0 0 0 0 2 2 0 0 0 2 0 0 88 0 Car 1 0 0	13119 Elmhurs	st Road		CN	7.46	FLBG	0	0	149699	0	2	2	0	0	2	1	1	76	0	Car	1	0	0	2
14917 Marion Street Sprague CN 0.92 FLBG 0 0 109228 0 2 2 0 0 2 0 0 34 0 Truck 2 0 24216 Corydon Avenue La Riviere CP 4.12 FLBG 0 0 0 2 2 0 0 2 0 91 0 Truck 2 0 24217 Grant Avenue La Riviere CP 4.6 FLBG 0 0 0 0 2 2 0 0 2 0 0 89 0 Truck 2 0 PED2 Waverley Street Pedestrian La Riviere CP 4.88 SRCS 0 0 0 2 2 0 0 2 0 0 90 0 Ped 1 0 22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 2 2 0 0 0 88 0 Car 1 0	23418 Peguis S	Street	Keewatin	CP	121.8	FLBG	0	0		0	2	2	0	0	2	1	1	75	0	Car	1	0	0	2
14917 Marion Street Sprague CN 0.92 FLBG 0 0 109228 0 2 2 0 0 2 0 0 34 0 Truck 2 0 24216 Corydon Avenue La Riviere CP 4.12 FLBG 0 0 0 0 2 2 0 0 2 0 91 0 Truck 2 0 24217 Grant Avenue La Riviere CP 4.6 FLBG 0 0 0 0 2 2 0 0 2 0 0 89 0 Truck 2 0 PED2 Waverley Street Pedestrian La Riviere CP 4.88 SRCS 0 0 0 2 2 0 0 2 0 90 0 Ped 1 0 22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 2 2 0 0 2 0 0 88 0 Car 1 0	30989 Mounta	ain Avenue	Winnipeg Bea	chCP	1.09	FLB	0	0	0	0	2	2	0	0	2	0	0	110	0	Truck	2	0	0	2
24216 Corydon Avenue La Riviere CP 4.12 FLBG 0 0 0 2 2 0 0 2 0 0 91 0 Truck 2 0 24217 Grant Avenue La Riviere CP 4.6 FLBG 0 0 0 2 2 0 0 2 0 0 89 0 Truck 2 0 PED2 Waverley Street Pedestrian La Riviere CP 3.05 SRCS 0 0 0 2 2 2 0 2 2 0 0 Ped 1 0 22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 2 2 0 0 2 0 0 88 0 Car 1 0	14917 Marion	Street			0.92	FLBG	0	0	109228	0	2	2	0	0	2	0	0	34	0	Truck	2	0	0	2
PED2 Waverley Street Pedestrian La Riviere CP 3.05 SRCS 0 0 0 0 2 2 0 0 2 2 0 90 0 Ped 1 0 22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 2 2 0 0 88 0 Car 1 0							0	0		0	2	2	0	0	2	0	0	91	0		2	0	0	2
22283 Highwood Street Glenboro CP 4.88 SRCS 0 0 0 0 2 2 0 0 2 0 0 88 0 Car 1 0	24217 Grant A	Avenue	La Riviere	CP	4.6	FLBG	0	0	0	0	2	2	0	0	2	0	0	89	0	Truck	2	0	0	2
	PED2 Waverle	ey Street Pedestrian	La Riviere	CP	3.05	SRCS	0	0	0	0	2	2	2	0	2	2	0	90	0	Ped	1	0	0	2
30984 Magnus Avenue Winnipeg Beach CP	22283 Highwo	ood Street	Glenboro	CP	4.88	SRCS	0	0	0	0	2	2	0	0	2	0	0	88	0	Car	1	0	0	2
	30984 Magnus	s Avenue	Winnipeg Bea	chCP	0.68	RCS and St	c 0	0	0	0	2	2	0	0	2	0	0	110	0	Car	1	0	0	2

TCID	Street	Subdivision	Railroad	MP	Warning System	Sightlines Obstructed	Score	Cross- Product	Score	Stopped Gradient	Score	Approach Gradient	Score	Gradient Score	Low Ground	Score	Crossing Angle	Score	Route Type	Score	Assistive Device	Score	Priority
30996 Carruth		Winnipeg Bead			CS and Sto	0	0	0	0	2	2	0	0	2	0	0	110	0	Car	1	0	0	2
8758 Parker	Avenue	Letellier	CN	0.18	FLB	0	0	0	0	2	2	0	0	2	0	0	122	0	Ped	1	0	0	2
13105 Parker	Avenue	Rivers	CN	0.14	FLB	0	0	141	0	2	2	0	0	2	0	0	70	0	Car	1	0	0	2
21528 John Bi	ruce Pedestrian	Emerson	CP	5.2	FLB	0	0	0	0	2	2	0	0	2	0	0	81	0	Ped	1	0	0	2
30985 Burrow	ws Avenue	Winnipeg Bead	chCP	0.73	FLB	0	0	0	0	2	2	0	0	2	0	0	109	0	Car	1	0	0	2
405169 Pedest	trian	Letellier	CN	0.93	FLB	0	0	0	0	2	2	0	0	2	0	0	122	0	Ped	1	0	0	2
13120 Fairmo	ont Road	Rivers	CN	8.26	FLBG	0	0	42222	0	2	2	0	0	2	0	0	88	0	Car	1	0	0	2
13121 Harsto		Rivers	CN	8.8	FLBG	0	0	11942	0	2	2	0	0	2	0	0	85	0	Car	1	0	0	2
13122 Commi		Rivers	CN	9.31	FLBG	0	0	32426	0	2	2	0	0	2	0	0	85	0	Car	1	0	0	2
13124 Charles		Rivers	CN	9.78	FLBG	0	0	55180	0	2	2	0	0	2	0	0	86	0	Car	1	0	0	2
	n Avenue West	Oak Point Spur		4.98	SRCS	0	0	2520	2	0	0	0	0	0	0	0	67	1	Car	1	0	0	2
20147 Clifton		La Riviere	CP	1.2	SRCS	2	2	0	0	0	0	0	0	0	0	0	67	1	Car	1	0	0	2
24205 Midlan		La Riviere	CP	0.04	SRCS	1	1	0	0	0	0	0	0	0	0	0	60	1	Truck	2	0	0	2
34767 Murray	•	Glenboro	CP	0.92	SRCS	1	1	0	0	0	0	0	0	0	0	0	67	1	Truck	2	0	0	2
	chewan Avenue	La Riviere	CP	0.03	SRCS	1	1	0	0	0	0	0	0	0	0	0	137	1	Truck	2	0	0	2
48132 Camiel		Sprague	CN		CS and Sto		0	1765	0	1	1	0	0	1	0	0	90	0	Bus	3	0	0	2
30993 Atlanti		Winnipeg Bead		1.58	SRCS	0	0	0	0	1	1	0	0	1	0	0	108	0	Bus	3	0	0	2
8777 Duchar		Letellier	CN	5.98	FLB	0	0	11166	0	1	1	0	0	1	0	0	94	0	Bus	3	0	0	2
30986 Aberde		Winnipeg Bead		0.84	FLB	0	0	0	0	1	1	0	0	1	0	0	108	0	Bus	3	0	0	2
	mont Boulevard	Letellier	CN	5.75	FLB	0	0	14013	0	1	1	0	0	1	0	0	98	0	Bus	3	0	0	2
35050 Bourna		Redditt	CN CP	247.42	FLBG	0	0	227392	0	1	1	0	0	1	0	0	91	0	Bus	3	0	0	2
35534 Panet I		Keewatin		122.6	FLBG FLBG	1	0	179616	0	1		0	0	1	0	0	53 77	0	Bus	2	1	1	2
	ncher Boulevard	Sprague	CN CN	2.42 1.65	FLBG	0	0	127968 17835	0	1	1	0	0	1	0	0	123	0	Truck Truck	2	1	1	2
8767 Chevrie 725016 Sargen		Letellier La Riviere	CP	0.77	FLB	0	0	0	0	1	1	0	0	1	0	0	90	0		2	1	1	2
_			CP		FLB	0	0	131336	1	1		0	0	1	1	0	73	0	Truck	1	0	0	2
405113 Pedest		Emerson	CP	3.42	FLB	0	0		1	1	1	0	0	1	0	0	83	0	Ped	1	0	0	2
405112 Pedest 34049 Perrea		Emerson Letellier	CN	4.56	CS and Sto		0	169384 141	0	1	1	0	0	1	1	1	93	0	Ped Car	1	0	0	2
22282 Summi		Glenboro	CP	4.57	FLB	0	0	0	0	1	1	0	0	1	1	1	83	0	Car	1	0	0	2
	chewan Avenue	La Riviere	CP	0.03	SRCS	1	1	0	0	0	0	0	0	0	0	0	156	1	Car	1	0	0	2
20143 Logan		La Riviere	CP	0.03	FLB	0	0	0	0	1	1	0	0	1	0	0	135	0	Truck	2	0	0	2
20143 Eogan 7		La Riviere	CP	0.64	FLB	0	0	0	0	1	1	0	0	1	0	0	79	0	Truck	2	0	0	2
21512 Mission		Emerson	CP	0.3	FLB	0	0	33174	0	1	1	0	0	1	0	0	82	0	Truck	2	0	0	2
24198 Logan		La Riviere	CP	0.33	FLB	0	0	0	0	1	1	0	0	1	0	0	106	0	Truck	2	0	0	2
24218 Taylor		La Riviere	CP	5.11	FLB	0	0	0	0	1	1	0	0	1	0	0	90	0	Truck	2	0	0	2
21521 Marior		Emerson	CP	1.55	FLBG	0	0	214734	0	1	1	0	0	1	0	0	70	0	Truck	2	0	0	2
24207 Ellice A		La Riviere	CP	2.1	FLBG	0	0	0	0	1	1	0	0	1	0	0	91	0	Truck	2	0	0	2
11434 Elgin A		Oak Point Spur		5.04	SRCS	0	0	1284	0	0	0	0	0	0	0	0	69	1	Car	1	1	1	2
11436 Pacific		Oak Point Spur		5.16	SRCS	0	0	1425	0	0	0	0	0	0	0	0	67	1	Car	1	1	1	2
8759 Byng P		Letellier	CN	0.38	FLB	0	0	1077	0	1	1	0	0	1	0	0	120	0	Car	1	1	1	2
30998 Hartfor	rd Avenue	Winnipeg Bead	chCP	2.42	FLB	0	0	0	0	1	1	0	0	1	0	0	111	0	Car	1	1	1	2
23424 Grey St	treet	Keewatin	CP	124.02	FLBG	0	0	42840	0	1	1	0	0	1	0	0	60	0	Car	1	1	1	2
18462 Sheppa	ard Street	Arborg	CP	0.38	SRCS	3	3	0	0	0	0	0	0	0	0	0	87	0	Car	1	0	0	2
8760 Winde	rmere Avenue	Letellier	CN	0.45	FLB	0	0	9738	0	0	0	0	0	0	0	0	123	0	Bus	3	1	1	2
21526 Willow	vlake Crescent	Emerson	CP	4.05	FLB	0	0	11504	0	0	0	0	0	0	0	0	91	0	Bus	3	1	1	2
30997 Jeffers	on Avenue	Winnipeg Bead	chCP	2.23	FLB	0	0	0	0	0	0	0	0	0	0	0	110	0	Bus	3	1	1	2
34310 Beaver	rhill Boulevard	Emerson	CP	4.35	FLB	0	0	10088	0	0	0	0	0	0	0	0	89	0	Bus	3	1	1	2
34388 Chance	ellor Drive	Letellier	CN	2.73	FLB	0	0	20940	0	0	0	0	0	0	0	0	119	0	Bus	3	1	1	2
34916 Kirkbri	-	Letellier	CN	4.55	FLB	0	0	17544	0	0	0	0	0	0	0	0	127	0	Bus	3	1	1	2
405158 Welling	gton Avenue	La Riviere	CP	0.54	FLB	0	0	0	0	0	0	0	0	0	0	0	91	0	Bus	3	1	1	2
8773 Bison D	Drive	Letellier	CN	3.66	FLB	0	0	69402	1	0	0	0	0	0	0	0	90	0	Truck	2	0	0	2
13114 Kenast		Rivers	CN	0.31	FLB	0	0	58520	1	0	0	0	0	0	0	0	89	0	Truck	2	0	0	2
14911 Dawso		Sprague	CN	0.31	FLB	0	0	224880	1	0	0	0	0	0	0	0	110	0	Truck	2	0	0	2
21519 Plingue		Emerson	CP	0.75	FLB	0	0	60978	1	0	0	0	0	0	0	0	90	0	Truck	2	0	0	2
21524 Fermon		Emerson	CP	3.44	FLB	0	0	131336	1	0	0	0	0	0	0	0	73	0	Truck	2	0	0	2
	Grandin Boulevard	Emerson	CP	4.54	FLB	0	0	169384	1	0	0	0	0	0	0	0	72	0	Truck	2	0	0	2
30990 Church		Winnipeg Bead		1.3	SRCS	2	2	0	0	0	0	0	0	0	0	0	110	0	Car	1	0	0	2
8768 Chevrie		Letellier	CN	0.4	FLB	1	1	6933	0	0	0	0	0	0	0	0	89	0	Truck	2	0	0	2
21520 Messie		Emerson	CP	0.96	FLB	1	1	8916	0	0	0	0	0	0	0	0	91	0	Truck	2	0	0	2
24204 Notre I		La Riviere	CP	0.88	FLB	1	1	0	0	0	0	0	0	0	0	0	89	0	Truck	2	0	0	2
46057 McPhil		La Riviere	CP	0.53	FLB	1	1	0	0	0	0	0	0	0	0	0	68	0	Truck	2	0	0	2
18464 Sheppa		Arborg	CP	0.62	SRCS	0	0	0	0	0	0	0	0	0	0	0	91	0	Bus	3	0	0	2
30991 Cathed		Winnipeg Bead		1.453	CS and Sto	0	0	0	0	0	0	0	0	0	0	0	110	0	Bus	3	0	0	2
8766 Claren	ce Avenue	Letellier	CN	1.33	FLB	0	0	10683	0	0	0	0	0	0	0	0	119	0	Bus	3	0	0	2

TCID Street	Subdivision	Railroad		Warning System	Sightlines Obstructed	Score	Cross- Product	Score	Stopped Gradient	Score	Approach Gradient	Score	Gradient Score	Low Ground	Score	Crossing Angle	Score	Route Type	Score	Assistive Device	Score	Priority
8772 Markham Road	Letellier	CN	3.22	FLB	0	0	12951	0	0	0	0	0	0	0	0	120	0	Bus	3	0	0	2
8778 des Trappistes Rue	Letellier	CN	6.31	FLB	0	0	4026	0	0	0	0	0	0	0	0	94	0	Bus	3	0	0	2
18453 Burrows Avenue	Arborg	CP	1.23	FLB	0	0	0	0	0	0	0	0	0	0	0	53	0	Bus	3	0	0	2
18456 Church Avenue	Arborg	CP	1.94	FLB	0	0	0	0	0	0	0	0	0	0	0	78	0	Bus	3	0	0	2
24219 Wilkes Avenue	La Riviere	CP	5.32	FLB	0	0	0	0	0	0	0	0	0	0	0	104	0	Bus	3	0	0	2
31002 Templeton Avenue	Winnipeg Bea	chCP	3.23	FLB	0	0	0	0	0	0	0	0	0	0	0	107	0	Bus	3	0	0	2
405122 Bairdmore Boulevard	Letellier	CN	4.13	FLB	0	0	18633	0	0	0	0	0	0	0	0	122	0	Bus	3	0	0	2
24215 Grosvenor Avenue	La Riviere	CP	3.89	FLBG	0	0	0	0	0	0	0	0	0	0	0	89	0	Bus	3	0	0	2
20105 Ellice Avenue	La Riviere	CP	1.01	FLB	0	0	0	0	0	0	0	0	0	0	0	90	0	Truck	2	1	1	2
31000 Partridge Avenue	Winnipeg Bea	chCP	2.92	FLB	0	0	0	0	0	0	0	0	0	0	0	90	0	Truck	2	1	1	2
31001 Leila Avenue	Winnipeg Bea	chCP	2.93	FLB	0	0	0	0	0	0	0	0	0	0	0	102	0	Truck	2	1	1	2
13111 Waverley Street	Rivers	CN	3.89	FLBG	0	0	930558	0	0	0	0	0	0	0	0	79	0	Truck	2	1	1	2
13118 Shaftesbury Boulevard	Rivers	CN	6.27	FLBG	0	0	340225	0	0	0	0	0	0	0	0	80	0	Truck	2	1	1	2
PED1 Riddle Avenue Pedestrian	La Riviere	CP	2.65	SRCS	0	0	0	0	1	1	1	0	1	0	0	90	0	Ped	1	0	0	1
11432 Bannatyne Avenue West	Oak Point Spu	r CN	4.94	SRCS	0	0	1794	0	0	0	0	0	0	0	0	68	1	Car	1	0	0	1
8779 Father Labont Avenue	Letellier	CN	7.123	CS and Sto	. 0	0	141	0	1	1	0	0	1	0	0	94	0	Car	1	0	0	1
24225 Brady Road	La Riviere	CP	8.57	SRCS	0	0	0	0	0	0	0	0	0	0	0	65	1	Car	1	0	0	1
34768 Saskatchewan Avenue	Glenboro	CP	0.4	SRCS	0	0	0	0	0	0	0	0	0	0	0	35	1	Car	1	0	0	1
36100 Minerva Avenue	Letellier	CN	7.830	CS and Sto	. 0	0	141	0	1	1	0	0	1	0	0	94	0	Car	1	0	0	1
48938 Pritchard Avenue	Arborg	CP	1.04	SRCS	0	0	0	0	0	0	0	0	0	0	0	50	1	Ped	1	0	0	1
8762 Waterford Avenue	Letellier	CN	0.69	FLB	0	0	1209	0	1	1	0	0	1	0	0	119	0	Car	1	0	0	1
8763 Southwood Avenue	Letellier	CN	0.78	FLB	0	0	2121	0	1	1	0	0	1	0	0	120	0	Car	1	0	0	1
8775 Devos Road	Letellier	CN	5.3	FLB	0	0	141	0	1	1	0	0	1	0	0	115	0	Car	1	0	0	1
23679 Molson Street	Keewatin	CP	2.49	FLB	0	0	0	0	1	1	0	0	1	0	0	75	0	Car	1	0	0	1
24203 Lincoln Avenue	La Riviere	CP	0.67	FLB	0	0	0	0	1	1	0	0	1	0	0	87	0	Car	1	0	0	1
30992 Bannerman Avenue	Winnipeg Bea	chCP	1.52	FLB	0	0	0	0	1	1	0	0	1	0	0	111	0	Car	1	0	0	1
30999 Kingsbury Avenue	Winnipeg Bea		2.7	FLB	0	0	0	0	1	1	0	0	1	0	0	110	0	Car	1	0	0	1
31004 Murray Avenue	Winnipeg Bea	chCP	4.08	FLB	0	0	0	0	1	1	0	0	1	0	0	101	0	Car	1	0	0	1
36348 North-South Royal Salinger	Roac Emerson	CP	3.62	FLB	0	0	0	0	1	1	0	0	1	0	0	99	0	Ped	1	0	0	1
23412 Redonda Street	Keewatin	CP	118.69	FLBG	0	0	62128	0	1	1	0	0	1	0	0	75	0	Car	1	0	0	1
23420 Callsbeck Avenue	Keewatin	CP	122.51	FLBG	0	0	564	0	1	1	0	0	1	0	0	143	0	Car	1	0	0	1
24214 Kingsway	La Riviere	CP	3.65	FLBG	0	0	0	0	1	1	0	0	1	0	0	90	0	Car	1	0	0	1
42350 Fleetwood Road	La Riviere	CP	7.96	FLBG	0	0	0	0	1	1	0	0	1	0	0	89	0	Car	1	0	0	1
14908 Speers Road	Sprague	CN	0.11	FLB	1	1	49220	0	0	0	0	0	0	0	0	91	0	Car	1	0	0	1
24212 Wellington Crescent	La Riviere	CP	3.3	FLB	1	1	0	0	0	0	0	0	0	0	0	104	0	Car	1	0	0	1
24212 Wellington Crescent	La Riviere	CP	3.3	FLB	1	1	0	0	0	0	0	0	0	0	0	104	0	Car	1	0	0	1
14920 Archibald Street	Sprague	CN	1.83	FLBG	2	0	57200	0	0	0	0	0	0	0	0	102	0	Truck	2	0	0	1
23414 Gunn Road	Keewatin	CP	0.32	SRCS	0	0	0	0	0	0	0	0	0	0	0	91	0	Truck	2	0	0	1
18465 Inkster Boulevard	Arborg	CP	2.27	FLB	0	0	0	0	0	0	0	0	0	0	0	78	0	Truck	2	0	0	1
20156 Erin Street	La Riviere	CP	1.15	FLB	0	0	0	0	0	0	0	0	0	0	0	70	0	Truck	2	0	0	1
20174 King Edward Street	La Riviere	CP	0.95	FLB	0	0	0	0	0	0	0	0	0	0	0	80	0	Truck	2	0	0	1
20177 Notre Dame Avenue	La Riviere	CP	1.25	FLB	0	0	0	0	0	0	0	0	0	0	0	132	0	Truck	2	0	0	1
22279 Sturgeon Road	Glenboro	CP	3.28	FLB	0	0	0	0	0	0	0	0	0	0	0	81	0	Truck	2	0	0	1
24213 Academy Road	La Riviere	CP	3.43	FLB	0	0	0	0	0	0	0	0	0	0	0	90	0	Truck	2	0	0	1
24221 McGillivray Boulevard	La Riviere	CP	7.45	FLB	0	0	0	0	0	0	0	0	0	0	0	136	0	Truck	2	0	0	1
46027 Century Street	La Riviere	CP	0.76	FLB	0	0	0	0	0	0	0	0	0	0	0	112	0	Truck	2	0	0	1
405157 Lagimodiere Boulevard	Keewatin	CP	2.47	FLB	0	0	0	0	0	0	0	0	0	0	0	75	0	Truck	2	0	0	1
8764 McGillivray Boulevard	Letellier	CN	0.89	FLBG	0	0	73554	0	0	0	0	0	0	0	0	108	0	Truck	2	0	0	1
12705 Ravenhurst Street	Redditt	CN	244.07	FLBG	0	0	176320	0	0	0	0	0	0	0	0	94	0	Truck	2	0	0	1
24206 Sargent Avenue	La Riviere	CP	1.81	FLBG	0	0	0	0	0	0	0	0	0	0	0	91	0	Truck	2	0	0	1
24220 Kenaston Boulevard	Rivers	CN	1.58	FLBG	0	0	58520	0	0	0	0	0	0	0	0	60	0	Truck	2	0	0	1
30981 McPhillips Street	Winnipeg Bea		0.32	FLBG	0	0	0	0	0	0	0	0	0	0	0	50	0	Truck	2	0	0	1
34938 Panet Road	Redditt	CN	249.04	FLBG	0	0	135440	0	0	0	0	0	0	0	0	57	0	Truck	2	0	0	1
48374 Sterling Lyon Parkway	Rivers	CN	0.49	FLBG	0	0	14437	0	0	0	0	0	0	0	0	106	0	Truck	2	0	0	1
725036 Sterling Lyon Parkway	La Riviere	CP	5.62	FLBG	0	0	0	0	0	0	0	0	0	0	0	107	0	Truck	2	0	0	1
405125 McGregor Street	Winnipeg Bea	chCP	3.05	FLB	0	0	0	0	0	0	0	0	0	0	0	33	0	Car	1	1	1	1
20192 Brookside Boulevard	Carberry	CP	4.74	FLBG	2	0	29220	0	0	0	0	0	0	0	0	112	0	Car	1	0	0	1
24209 St. Matthews Avenue	La Riviere	CP	2.3	FLBG	1	0	0	0	0	0	0	0	0	0	0	90	0	Car	1	0	0	1
18469 Mollard Road	Arborg	CP	4.37	SRCS	0	0	0	0	0	0	0	0	0	0	0	76	0	Car	1	0	0	1
22278 Four Mile Road	Glenboro	CP	0.93	SRCS	0	0	0	0	0	0	0	0	0	0	0	88	0	Car	1	0	0	1
30988 College Avenue	Winnipeg Bea			CS and Sto	. 0	0	0	0	0	0	0	0	0	0	0	108	0	Car	1	0	0	1
30994 Polson Avenue	Winnipeg Bea	chCP	1.63	SRCS	0	0	0	0	0	0	0	0	0	0	0	110	0	Car	1	0	0	1
31005 Fernbank Avenue	Winnipeg Bea	chCP	4.78	SRCS	0	0	0	0	0	0	0	0	0	0	0	101	0	Ped	1	0	0	1
36461 Jefferson Avenue	Arborg	CP	3.4	SRCS	0	0	0	0	0	0	0	0	0	0	0	79	0	Car	1	0	0	1

					Warning	Sightlines		Cross-		Stopped		Approach		Gradient	Low		Crossing		Route		Assistive		
TCID	Street	Subdivision	Railroad	MP	System	Obstructed	Score	Product	Score	Gradient	Score	Gradient	Score	Score	Ground	Score	Angle	Score	Type	Score	Device	Score	Priority
8761 Rockman	n Street	Letellier	CN	0.55	FLB	0	0	2982	0	0	0	0	0	0	0	0	87	0	Car	1	0	0	1
8765 Waller A	venue	Letellier	CN	1.07	FLB	0	0	2601	0	0	0	0	0	0	0	0	117	0	Car	1	0	0	1
11426 Dublin A	venue	Oak Point Spur	CN	4.5	FLB	0	0	45588	0	0	0	0	0	0	0	0	90	0	Car	1	0	0	1
11438 Logan Av	venue	Oak Point Spur	CN	5.28	FLB	0	0	36888	0	0	0	0	0	0	0	0	67	0	Car	1	0	0	1
13113 Wilkes A	venue	Rivers	CN	0.18	FLB	0	0	228	0	0	0	0	0	0	0	0	99	0	Car	1	0	0	1
21525 Meadow	vbrook Road	Emerson	CP	3.72	FLB	0	0	4452	0	0	0	0	0	0	0	0	81	0	Car	1	0	0	1
21531 Prairie G	Frove Road	Emerson	CP	7.67	FLB	0	0	4356	0	0	0	0	0	0	0	0	81	0	Car	1	0	0	1
24199 Alexande	er Avenue	La Riviere	CP	0.39	FLB	0	0	0	0	0	0	0	0	0	0	0	97	0	Car	1	0	0	1
30987 Redwood	d Avenue	Winnipeg Beacl	hCP	0.91	FLB	0	0	0	0	0	0	0	0	0	0	0	108	0	Car	1	0	0	1
35464 Bairdmo	re Boulevard	Letellier	CN	5.12	FLB	0	0	12858	0	0	0	0	0	0	0	0	120	0	Car	1	0	0	1
46026 Border S	Street	La Riviere	CP	0.75	FLB	0	0	0	0	0	0	0	0	0	0	0	61	0	Car	1	0	0	1
48121 Pedestria	an	Keewatin	CP	122.62	FLB	0	0	0	0	0	0	0	0	0	0	0	53	0	Ped	1	0	0	1
725035 Adsum R	Road	Arborg	CP	2.94	FLB	0	0	0	0	0	0	0	0	0	0	0	76	0	Ped	1	0	0	1
23415 Day Stre	et	Keewatin	CP	119.74	FLBG	0	0	62136	0	0	0	0	0	0	0	0	72	0	Car	1	0	0	1
23417 Plessis R	load	Keewatin	CP	120.8	FLBG	0	0	147144	0	0	0	0	0	0	0	0	77	0	Car	1	0	0	1