



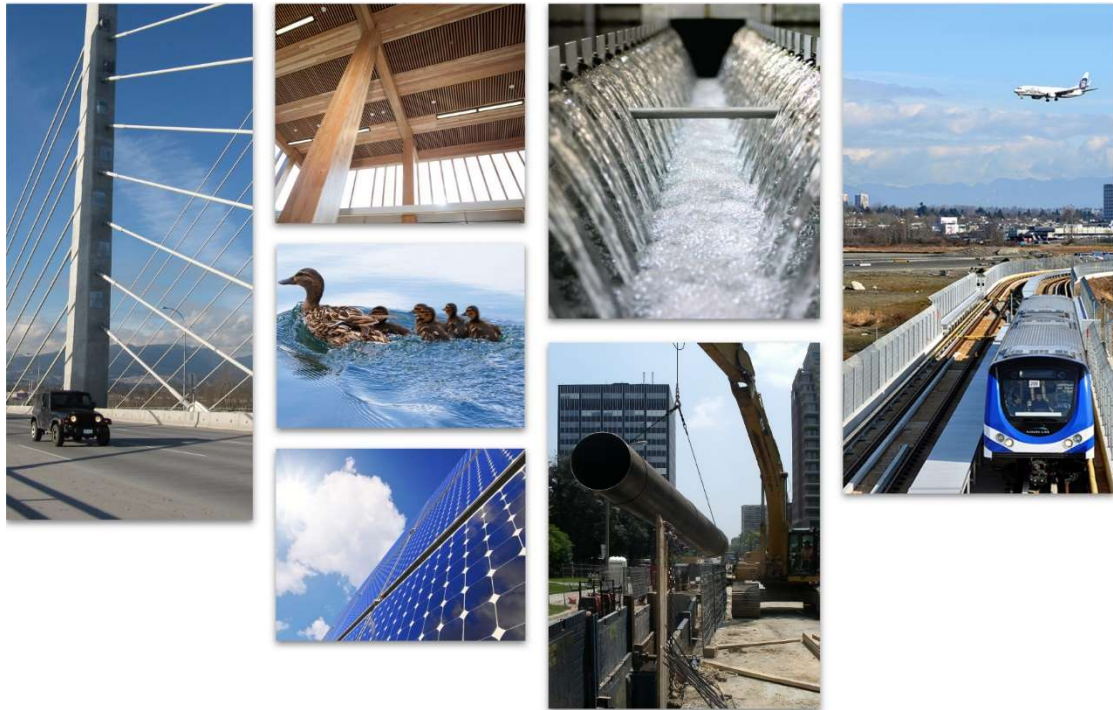
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REPORT

Town of Raymond

Transportation Master Plan



AUGUST 2025



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1 INTRODUCTION

The Town of Raymond (the Town) is working towards enhancing the transportation network for its growing community by completing a Transportation Master Plan (TMP) that establishes a vision for how the community's transportation network will accommodate recent and future growth as well as determine actions the Town can take to achieve this vision.

The TMP is a guide the Town can utilize to prioritize strategic investment that balances the needs of auto commuters to the surrounding region with safe and comfortable pedestrian/bike access to local amenities such as school or groceries for residents of all ages and abilities.

The development of the Town of Raymond TMP followed a four-stage process as illustrated in **Figure 1-1**.

Figure 1-1 TMP Process



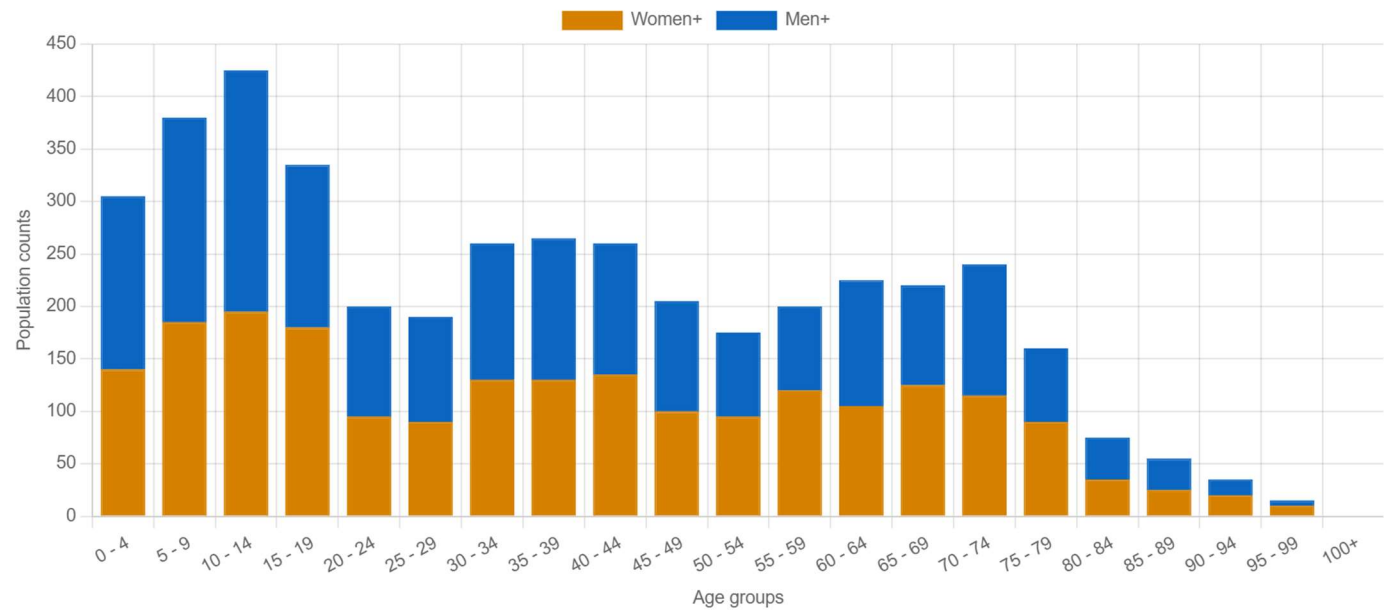
2 CURRENT CONDITIONS

The Town of Raymond is located in southern Alberta, surrounded by the County of Warner No.5. The Town is located approximately 37 km south of Lethbridge at the junction of Highway 52 and Highway 845 and approximately one hour north of the Canada-U.S. border.

2.1 Demographic and Commuting Summary

The City has grown from 3,713 residents in 2016 to 4,199 in 2021, representing a 13.1% increase. **Figure 2-1** shows the population by five-year age groups and gender. The Town has a large demographic group of children and middle-aged working adults with more residents 14 years and younger than there are over 65.

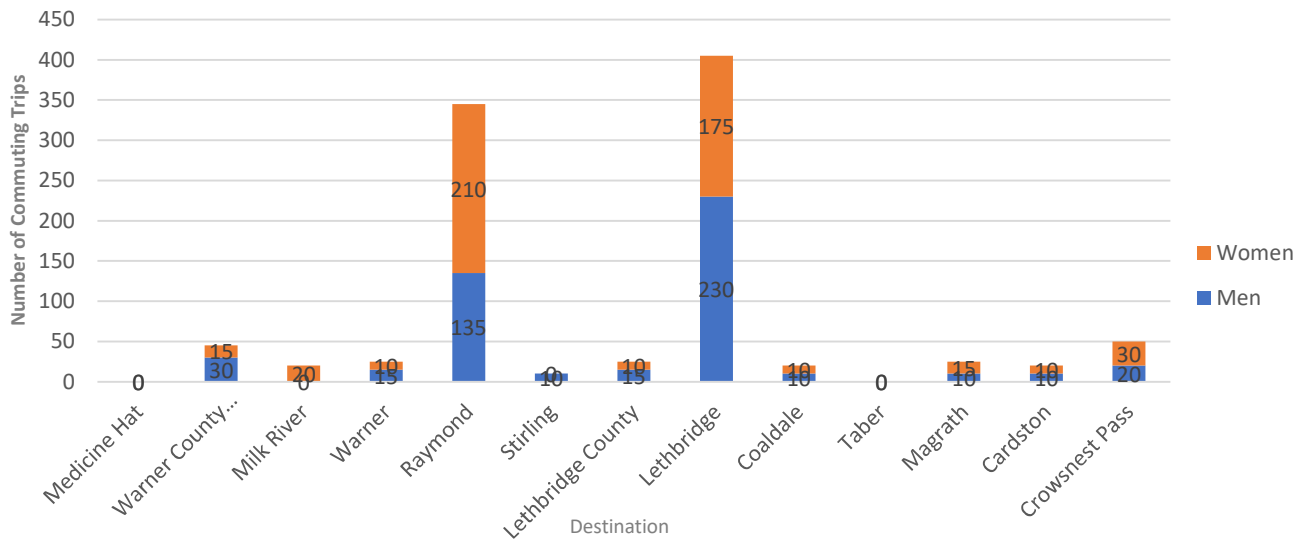
Figure 2-1 Age and Gender of Town Residents



Source: Statistics Canada Focus on Geography Series

The location of Raymond supports both local employment as well as commuter employment to the City of Lethbridge and adjacent counties and communities. This pattern of commuting to Lethbridge is seen in **Figure 2-2**, which shows the number of commuting trips by municipality that are made by Town of Raymond residents. Only 35% of commuting trips are within the town. Lethbridge is the most popular commuting destination with over 400 trips per day, followed by daily trips within Raymond at just under 350 trips per day.

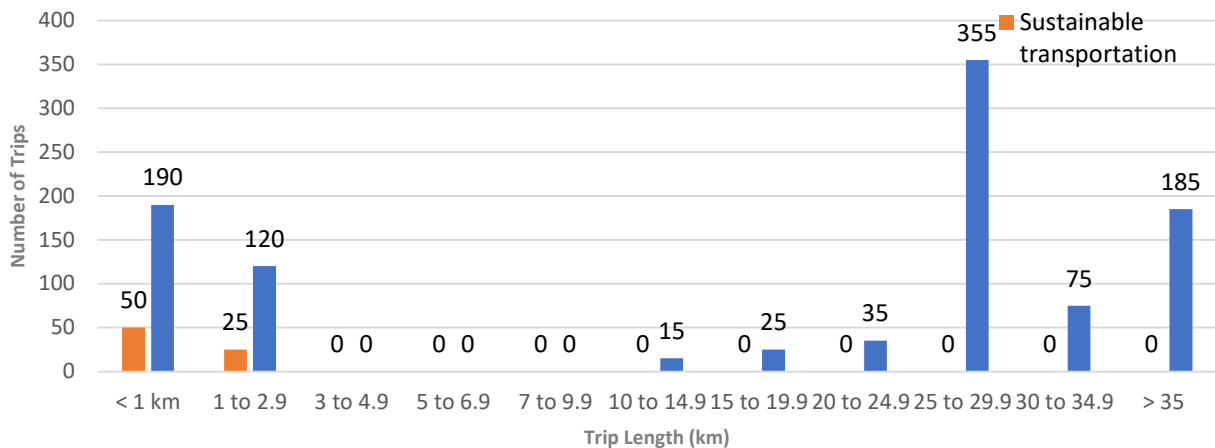
Figure 2-2 Town of Raymond Commute Destination



Source: Statistics Canada Data Table 98-10-0459-0, Commuting flow from geography of residence to geography of work by gender: Census subdivisions

Figure 2-3 shows the breakdown of commuting mode by distance travelled. Despite a short travel distance to work, a significant proportion of residents who travel less than 1 km to work choose to drive (almost 200 trips per day) rather than walk (50 trips per day).

Figure 2-3 Commuting Mode by Distance



Source: Statistics Canada Data Table 98-10-0461-01, Main mode of commuting by commuting duration, distance (straight-line) from home to work and time leaving for work: Canada, provinces and territories, census divisions and census subdivisions

2.2 Traffic Review

A detailed traffic review encompassing a speed review, intersection capacity analysis, collision review, and transportation network and right-of-way review is provided in Appendix A. The main takeaways are the following:

Speed Review: The speed review conducted at 200 St. E and 200 St. N where the speed limit is 50 km/hr indicates that the 85th percentile speeds are below 40 km/h, suggesting that speeding is not a significant issue. The perception of speeding may exist due to low traffic volumes and difficulty in judging speeds from the roadside.

Intersection Capacity Analysis: The capacity analysis for key intersections shows that they are expected to operate at an average delay of 15 to 25 seconds per vehicle (Level of Service C) or better. Performance for both current conditions and the 20-year planning horizon is satisfactory.

Collision Review: Historical collision data from 2008 to 2018 reveals a total of 22 collisions, with no fatalities and five involving injuries. The low frequency of collisions suggests no significant safety risks at this time. Continuous monitoring is recommended to identify any emerging patterns or trends.

Transportation Network and Right-of-Way Review: Key destinations in the town are primarily located primarily along 100 St. N. No dedicated cycling facilities are present, and gaps in the sidewalk network exist primarily for areas located in the periphery. Centre-angled parking within the Town centre may pose safety risks to all road users. The right-of-way for some streets is as large as 30m to 40m which presents unique opportunities for enhancement.

2.3 Infrastructure Condition Assessment

An infrastructure conditions assessment review provided a condition assessment of the Town's road pavement conditions, curb, sidewalks, and wheelchair ramps on a segment by segment basis. The detailed assessment is provided in Appendix B. The main takeaways are the following:

Pavement Condition Assessment: The pavement condition assessment combined defect rankings with smoothness testing results to determine overall condition scores for each roadway segment. The worst-rated segment was 100 St. N between 100 St. W and Broadway St. N. Poor segments identified include:

- 100 St. E between 500 St. N and 400 St. N
- 100 St. E between 300 St. N and 200 St. N
- 200 St. E between 100 St. N and Park Avenue
- 100 St. S between Broadway St S and 100 St. E

Concrete Sidewalk, Curb, and Wheelchair Ramp Condition Assessments: Defects in sidewalks, curbs, and wheelchair ramps were evaluated and ranked similarly to roadway defects. There are many instances of sidewalks below 1.8m and many intersections and crossings without a wheelchair ramp. The worst-rated curb section was along 100 St. N between Broadway St. N and 100 St. E. Sidewalk segments were generally ranked average or good, with one poor segment identified. Several curb ramps were rated as poor, which included:

- NE corner – 200 St. N at 200 St. W
- NE corner – 100 St. N at 200 St. W
- North side mid-block – 100 St. between Broadway St. N and 200 St. W
- SW corner – 100 St. E at 200 St. N
- NW corner – 200 St. E at 200 St. N
- SE corner – 200 St. E at 100 St. S

3 ENGAGEMENT

A public participation survey was conducted from June 15, 2021, to February 5, 2023. Involvement of the Town of Raymond's residents was essential to better understand transportation modes, issues or challenges, and ways to encourage residents to walk and cycle. A total of 49 responses were received. The survey summary response report is available in [Appendix C](#).

The top four most important outcomes of the TMP for residents were the following:

1. Safe walking/cycling routes to schools (2.9 ranking)
2. Improving traffic safety and managing speeds (3.0 ranking)
3. Developing a connected pathway system (4.8 ranking)
4. Improving the pedestrian realm on main streets (4.8 ranking)

The top four transportation facilities needing the most improvement in Raymond are as follows:

1. Neighborhood Streets (2.1 ranking)
2. Major Streets (2.1 ranking)
3. Walking network (2.8 ranking)
4. Cycling Network (4.0 ranking)
5. Parking (4.1 ranking)

Engagement results indicated that most residents usually get around the Town by driving (alone and carpooling) and by walking. The majority of residents that drive alone to get around the Town do so daily. Just under half of the residents that walk to get around the Town do so two to three times per week. A small percentage of residents walk around the town daily.

Residents were asked to select three issues or challenges facing each mode of transportation. [Table 3-1](#) shows the results.

Table 3-1 Public Survey Results - Issues Facing Different Modes

Cycling	Walking	Driving
Bike routes don't go where I need to go (28)	Distances are too far (33)	Traffic control at intersections (36)
Lack of bike routes/gaps in bike routes (22)	Speed and noise of motor traffic (25)	Weather/Road Conditions (25)
Weather impacts mobility (21)	Lack of rest areas (23)	Wayfinding and signage (25)
Lack of bike parking (10)	Weather and its impacts on mobility (18)	Roadway surface conditions (18)
Intersection safety (9)	Lack of sidewalks or pathways (8)	Visibility of vulnerable road users at intersections (12)
Bike routes do not feel safe (8)	Streets are too wide (8)	Lane/road widths (5)

Cycling	Walking	Driving
Speed and noise of motor traffic (7)	Intersection safety (5)	
	Nowhere to walk (4)	
	Sidewalks or pathways are not accessible (3)	
	Condition of sidewalks or pathways (3)	

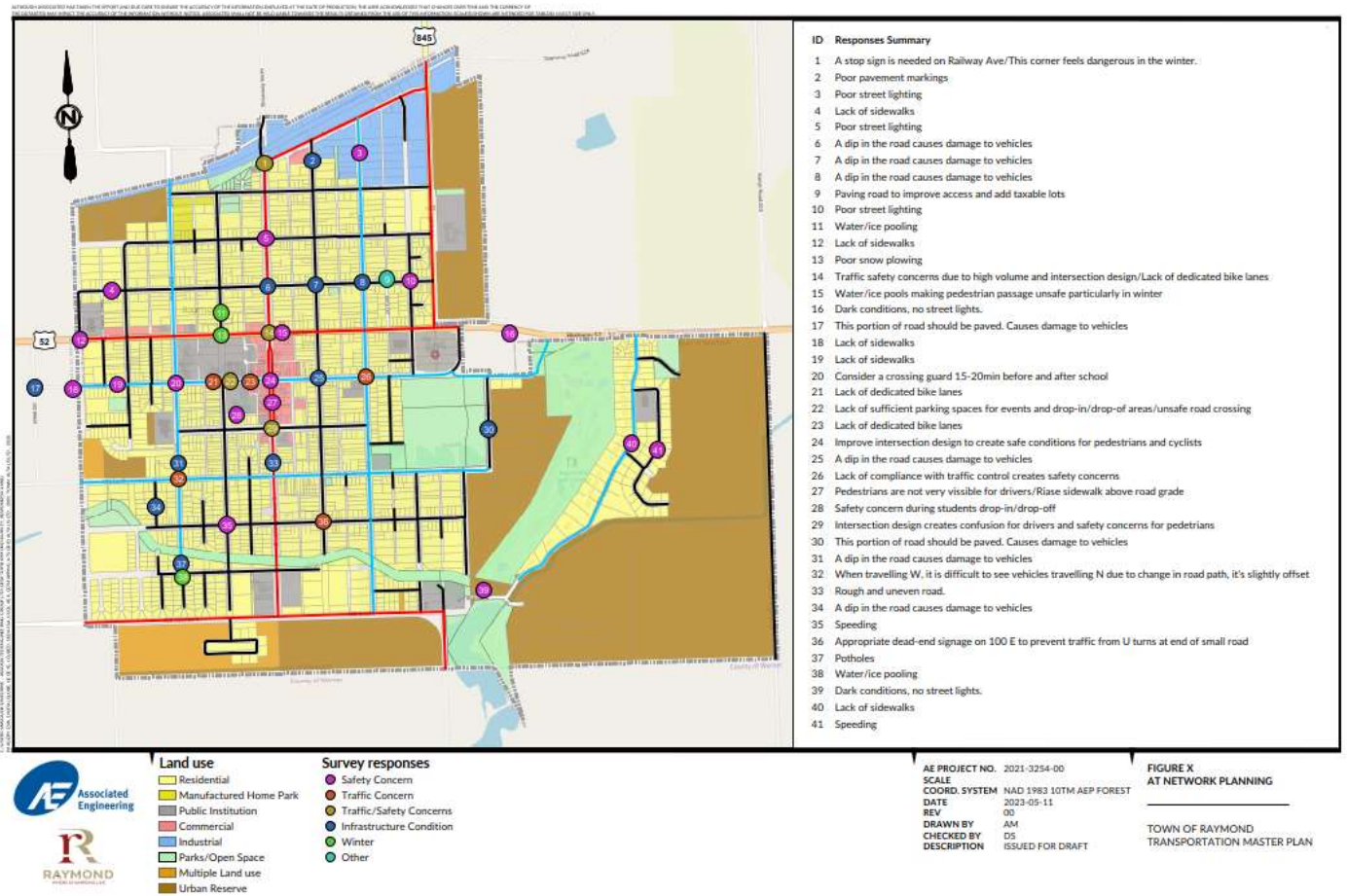
Residents were then asked to select three ways that would encourage them to cycle and walk more in the Town. The results are shown **Table 3-2** and descending from most frequent request at the top, down to least frequent.

Table 3-2 Public Survey Results – Ways to Encourage Active Modes

Cycling	Walking
Ensure bike routes are maintained year-round (19)	Provide more benches and places to sit (29)
Provide more bike parking (18)	Build more sidewalks (29)
Better wayfinding/signage for cycling (13)	Ensure pathways and sidewalks are well lit (24)
Ensure bike routes are well lit (13)	Build more trails and pathways (14)
Routes visually separated from traffic (13)	Improve wayfinding/signage (13)
Build connected routes to destinations (11)	Widen and improve existing sidewalks (8)
Build routes physically separated from traffic (9)	Provide and enhance existing crosswalks (4)

Figure 3-1 shows the spatial distribution of 41 issues the residents identified as part of the survey. Of the 41 issues identified, 17 are safety related, 5 are traffic related, 4 are traffic/safety related, 11 are infrastructure condition related, 3 are winter weather related, and the remaining are other concerns.

Figure 3-1 Survey Responses Summary Map



4 FUTURE ROAD NETWORK

4.1 Issues Identification

The issues identified in the existing conditions review and stakeholder engagement can be summarized into the following:

- Bike routes don't connect residents to key destinations in the Town
- Intersections and cycling routes not feeling safe
- Angled parking in the Town centre may pose safety risks
- Lack of rest areas for pedestrians
- Walking distances for residents seem too far, and some areas of the Town have no sidewalk facilities
- Lack of facilities to support active modes throughout the Town, including areas adjacent to schools
- Accessibility issues for those with limited mobility; this is highlighted by a large number of crossings and intersections without wheelchair ramps
- Improve traffic safety and manage speeds along the local roads in the community
- Roadway pavement defects - The worst section being 100 St. N between 100 St. W and Broadway St. N, with other poor segments identified
- Sidewalk, curb, and wheelchair ramp conditions - The worst-rated curb section was along 100 St. N between Broadway St. N and 100 St. E. Sidewalk segments were generally average or in good condition, with one poor segment condition identified. Several curb ramps are in poor condition
- Weather and its impact on active modes
- Narrow sidewalk widths – see note below

Sidewalk Widths: Many of the Town's sidewalks are narrower than the desired sidewalk width. According to the Transportation Association of Canada, sidewalks should be between 1.8m to 2.0m in width. The lower end of this range accommodates a reasonable width for two pedestrians or wheelchairs to pass and enables wheelchair users to turn around. The higher end of this range also allows a pedestrian to pass another pedestrian accompanied by a child or a pedestrian with a service animal. A clear sidewalk width of at least 1.8m is also advantageous for snow clearing operations and assists in preventing plow damage to street hardware and streetscape elements.

4.2 Vision

The vision of this TMP is founded on the existing conditions review, public engagement, and issues identification. The Town's wide Right-of-Way's (ROW) provides an amazing opportunity to efficiently and effectively re-imagine the mobility network and streetscape. The vision and action items will enhance the network by taking advantage of the existing wide ROWs and wide roads, relative compactness of key destinations in the Town, and low traffic volumes on local roads.

The vision of the TMP is the following:

"To create a multi-modal transportation network that is safe, efficient, and accessible to foster a more connected community that enhances livability and promotes sustainability for the residents of Raymond."

The Town's vision for the transportation network can be realized through a total of 13 targeted actions linked to specific objectives:

Connectivity: Create a pedestrian and cycling network that connects residents to key destinations in the town in a safe and efficient manner.

Accessibility: Enhance pedestrian experience and comfort when walking throughout the town.

Safety: Reduce speeding and the perception of speeding along local roads.

Future Roadways: Proposed roadways to match the demand from adjacent land uses, accommodate all road users where appropriate, and integrate with the existing road network.

Climate Resiliency: Incorporate road network adaptive measures to effectively manage and mitigate impacts associated with climate change.

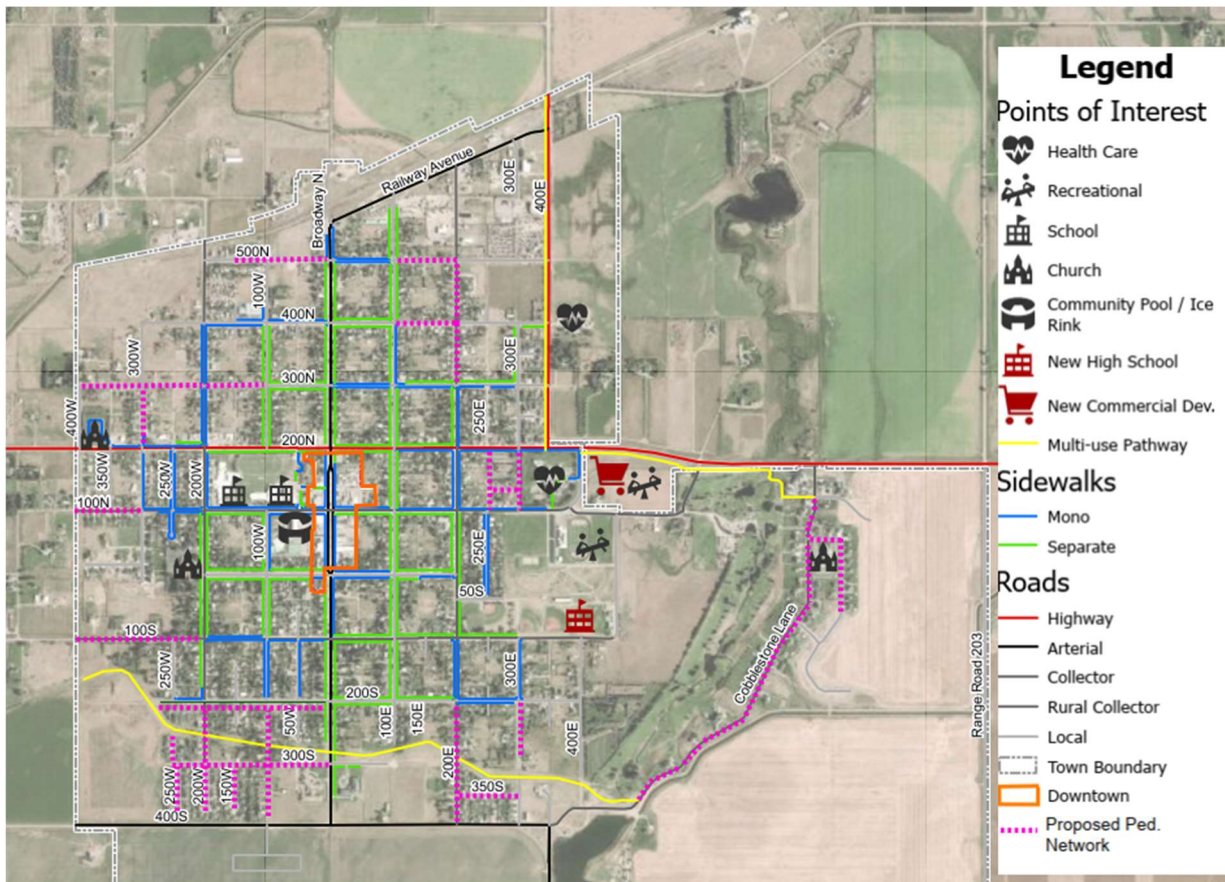
4.3 Connectivity

A pedestrian and cycling network that connects residents to key destinations in the town in a safe and efficient manner can be created through the following actions.

Action 1 - Expand the Pedestrian Network:

The pedestrian network should be expanded to allow walking in the Town without needing to walk on the road with traffic. As such, we recommend that the Town expand the pedestrian network by adding sidewalks where there currently were gaps or missing sidewalk links identified. Proposed new sidewalk connections are shown in **Figure 4-1**.

Figure 4-1 Proposed Pedestrian Network



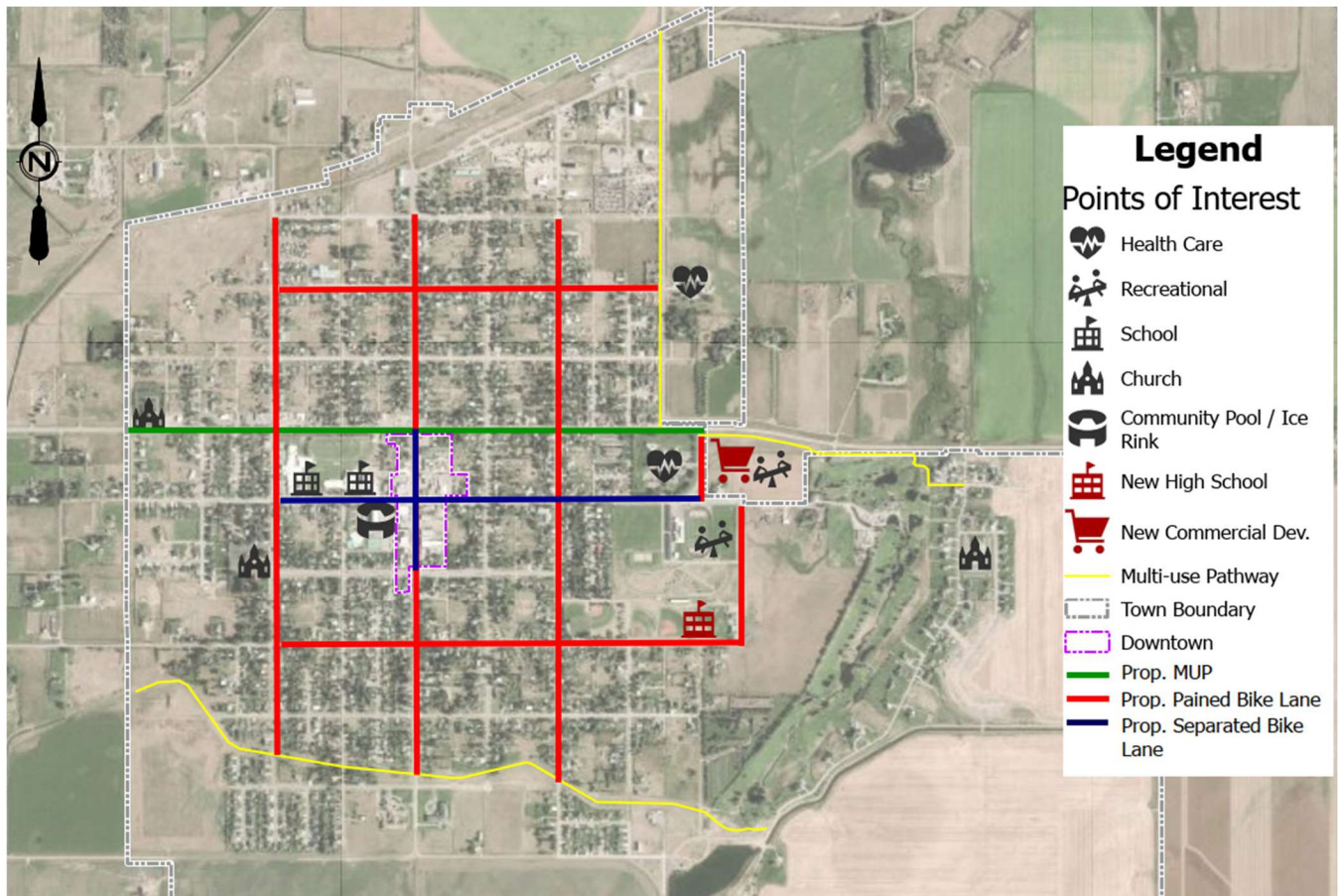
All residents should have access to pedestrian facilities adjacent to their homes and key destinations throughout the Town. At a minimum, a pedestrian facility should be provided on one side of the road in the identified areas. New pedestrian facilities should be a minimum of 1.8m wide. High traffic areas such as in front of schools and commercial areas are desired to have a 2.5m sidewalk width. The Town should evaluate multiple pedestrian facilities and consider their context, cost, and safety. Pedestrian facilities to consider in addition to sidewalks are multi-use pathways and pedestrian lanes.

Within the StoneGate Meadows development, the roadways were developed as rural paved roadways with limited available width to develop sidewalks or pathways adjacent to the roadway. Along these roadways, it may be feasible to narrow the driving lanes to provide a shoulder space that could be marked and protected with delineators, curbs or other means to provide a walkway along one side of the roadway. This method was implemented on a similar development area in Cimarron Estates in Okotoks, AB. Additional traffic calming measures may also be implemented within the StoneGate Meadows area to encourage lower traffic speeds because of sharing the roadway with pedestrians.

Action 2 - Expand the Cycling Network:

Many communities are expanding their roadway corridors to include other active transportation modes, especially cycling. As some of the key issues identified were related to cycling routes and active transportation networks, the Town will consider expanding the cycling network as shown in **Figure 4-2**. This network will connect many residents to key destinations throughout the Town.

Figure 4-2 Proposed Cycling Network



Two ways to modify the travel lanes to incorporate bicycle routes are: a parking protected bike lane or advisory bicycle lanes. A parking protected bike lane is where the bike lane is located between the curb and a parking lane. Two typical conceptual cross sections are shown in **Figure 4-3** and **Figure 4-4** and have been developed for each of the facilities.

Parking protected bike lane: The parking lane acts as a buffer between the travel lane and the cycle lane. The parking protected bike lane is on a roadway with approximately 21m wide pavement would be appropriate for a street like 100 St. N Street fronting the Raymond Junior High School.

Advisory bicycle lanes: (also referred to as advisory shoulders, non-compulsory lanes, or dashed bicycle lanes) are bicycle-priority areas within a shared street environment. Bicycle users have priority within dedicated lanes, but motorists may legally enter the advisory bicycle lanes to pass oncoming motor vehicles.¹ The second is a narrower road width, approximately 18m, which could, for example, fit on a section of Broadway Street. Both new cross sections are low cost in nature as they aim to maintain the existing curb lines while improving safety and accommodating active transportation modes. As the Town starts to implement new cycling facilities, detailed designs of these cross sections or any other alternatives will be needed to determine exact widths and end treatments at intersections.

¹ Ministry of Transportation. British Columbia: Active Transportation Design Guide. 2019 ed., Province of British Columbia, 2019.

Figure 4-3 Parking Protected Bike Lane

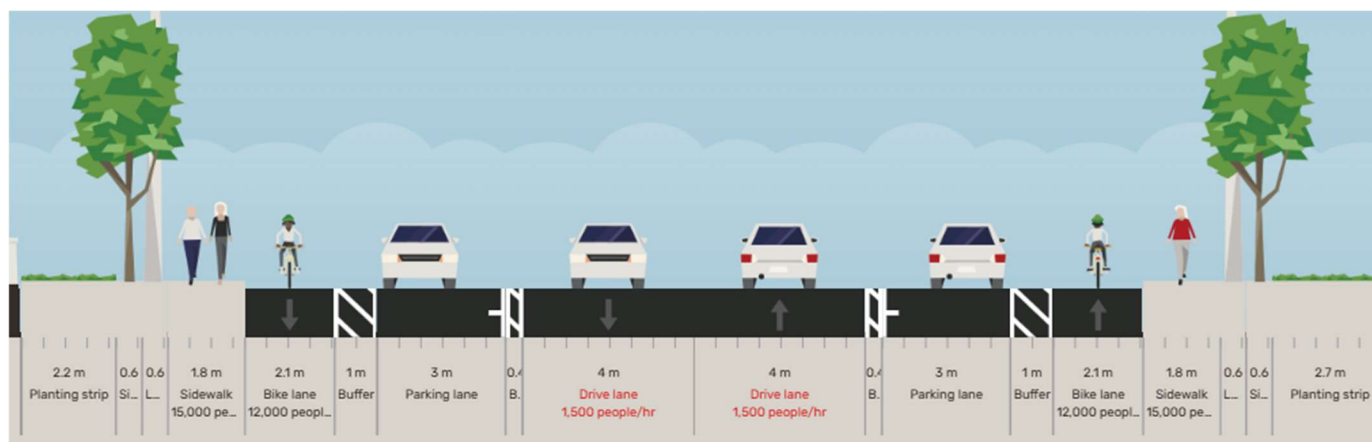
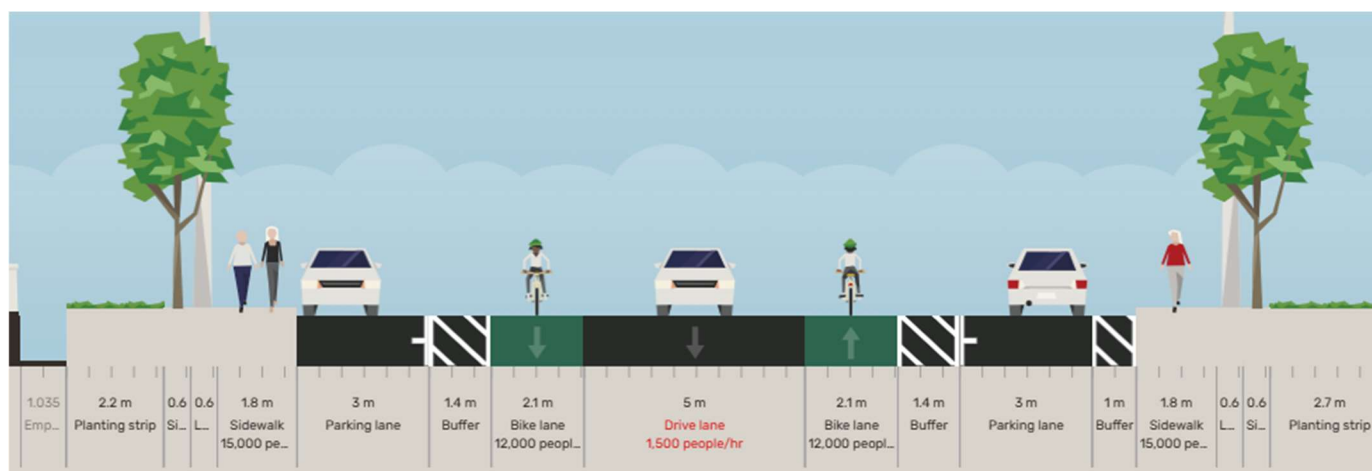


Figure 4-4 Advisory Bike Lane



Action 3 – Create a new development bylaw to require developers to provide a basic level of pedestrian accommodation and connectivity to the network from newly built areas in town:

Growth in the Town may occur in the periphery rather than through in-fill projects only. Private developers play a significant role not only in housing expansion but also in developing and expanding the transportation network. The Town should consider developing new bylaws to establish standards for the provision of sidewalks within developments. The standard should have a hierarchy that requires sidewalks on at least one side of the road for low-volume residential streets and sidewalks on both sides of the road on collector and arterial streets. The bylaw should also consider how private site development at both infill and new sites can support multi-modal transportation options and neighbourhood connectivity, as well as any lighting requirements.

4.4 Accessibility

A mobility system that is accessible to residents and visitors of all ages and abilities during all days of the year can be achieved through the following actions.

Action 4 – Install lighting along key pedestrian corridors:

The public survey indicated that improving lighting is a way to encourage increased walking and cycling in town. Some of the areas identified for additional lighting:

- 200E between Hwy 845 and E 500N
- 400N/Hwy 845 (Broadway N)
- Park Avenue/200E
- Hwy 52 just west of 100N
- Cobblestone Lane between Aspen Arbor and 400S

Action 5 - Provide tree cover, rest areas and benches along pathways and trails:

Providing tree cover, rest areas and benches was indicated in the public survey as another way to encourage walking and cycling in the Town. Vegetation and benches along pathways and trails improve the visual appeal and character of the pathway. They also provide shade and temporary refuge in times of extreme weather events. The Town can consider locations for implementing these measures in consultation with the public in the future.

Action 6 - Provide bicycle parking at key destinations:

Bicycle parking should be provided at key locations within town (downtown, medical facilities, new strip mall, parks). The Town will evaluate providing this parking through capital projects or via amendments to development bylaws in the Town to encourage multi-modal transportation options.

Action 7 - Create a sidewalks and trails maintenance program:

Repairing existing sidewalks is more cost-effective than replacing deteriorated sidewalks. Therefore, it is important to have an improvement program to extend the usual life of the Town's sidewalks. The program to prioritize these projects is identified in **Section 6.2**. Moving forward, the program should re-evaluate the conditions of the City's sidewalks every 5 years and have a mechanism to address resident's issues and complaints to prioritize improvement projects accordingly. The program should also consider year-round maintenance practices for sidewalks and trails ensuring they are cleared of debris.

Action 8 - Create a roads maintenance program that focuses on potholes, drainage and road markings:

The program will focus on proactively maintaining potholes, drainage issues, and deteriorating road markings. This will aid in keeping the Town's roads safe and maintain their longevity. The program to prioritize these projects is identified in **Section 6.1**. Moving forward, the program should include regular inspection of the Town's roads to re-prioritize maintenance projects. The program should also continually identify the most cost-efficient methods to deal with maintenance issues within the Town's allowable budget. Cost-effective measures include patching, crack-filling, and asphalt milling/inlays as the need arises.

4.5 Safety

A mobility system in the Town of Raymond should enhance the safety and well being for residents of all ages and abilities using any mode of travel. The following actions are recommended.

Action 9 - Reduce the speed limit to 30 or 40km/h on local roads:

The speed survey showed that at the study locations, the 85th percentile speed is approximately 35 km/h. Reducing the speed limit along local roads would align with the speed most vehicles are already travelling at. This can be achieved through a new policy or by implementing future pilot projects that may become permanent.

Action 10 - Construct traffic calming measures:

The second most important outcome identified in the public survey was improving traffic safety and managing speeds. Physical infrastructure that creates vertical deflections, horizontal shifts and roadway narrowing are measures intended to reduce speed and enhance the street environment for non-motorists.² Speed display signs can also be used as a traffic calming measure. The Town should consider and evaluate the feasibility of implementing traffic calming measures on roadways based on public input and on an as-needed basis to correct or improve driver behaviors or excessive speeding. Future pilot projects can be implemented with low-cost temporary measures before investing in permanent infrastructure. Some possible locations for consideration, but not limited to, include:

- W 200S / S 100W
- Pebble Creek Cove

Action 11 - Enhance safety infrastructure adjacent to schools:

Improving safe walking and cycling routes to schools was identified as the most important outcome in the public survey. Some countermeasures adjacent to schools that the Town can evaluate and implement to enhance safety are:

- Protected intersections at 200W/W200N and 200W/100N – to provide dedicated, protected cycling lanes through the intersections, providing separation of cyclists from pedestrians and vehicular traffic
- Curb extensions mid block along 200W and 100W adjacent to the existing schools to increase conspicuity of pedestrians at these mid-block crosswalk locations
- Additional speed humps – to encourage lower vehicular speeds through these high pedestrian activity areas
- Road safety audit for newly proposed high school at E Park St and E 100S – to identify potential countermeasures that could be implemented to enhance safety at this new school development area.
- Designated pickup drop-off locations for students – to provide a low-speed, off-street pickup and drop-off location as is being implemented at many schools to enhance student safety, away from congested roadways.

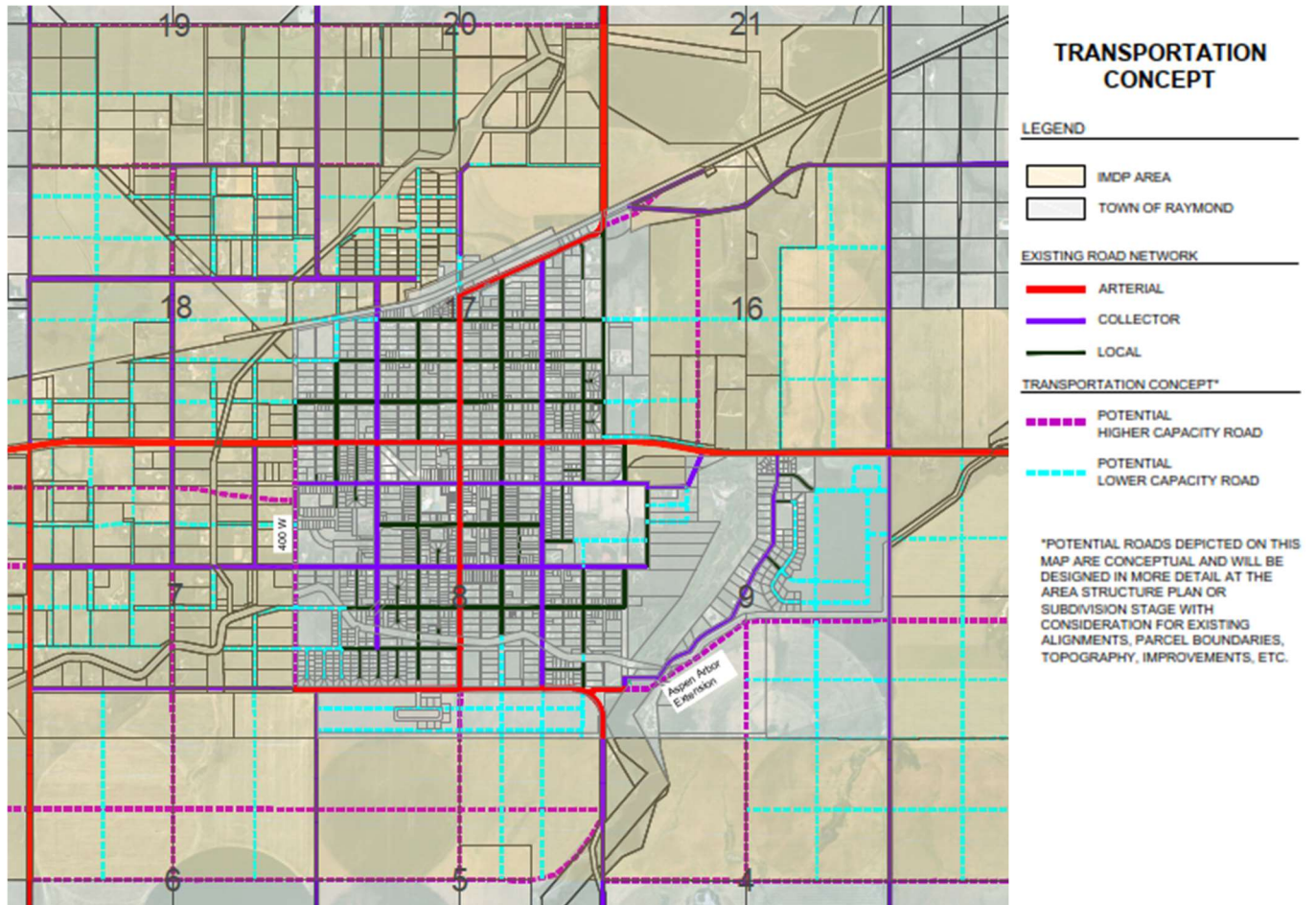
4.6 Future Roadways

The proposed roadways highlighted in the intermunicipal development plan³ (IMDP) should match the demand from adjacent land uses while integrating with the existing road network and accommodate all road users where appropriate. Roadway capacity and on street elements such as parking should appropriately support expected demand. The proposed road network concept is shown in **Figure 4-5**.

² Institute of Transportation Engineers. "Traffic Calming Measures." Institute of Transportation Engineers, <https://www.ite.org/technical-resources/traffic-calming/traffic-calming-measures/>.

³ Intermunicipal Development Plan: County of Warner No. 5 and Town of Raymond. Consolidated to Bylaw No. 957-20 and Bylaw No. 1085-20, Mar. 2020.

Figure 4-5 Transportation Concept - IMDP



Source: Intermunicipal Development Plan County of Warner NO. 5 And Town of Raymond Bylaw No. 906-13 and Bylaw No. 1004-13 October 2013 Map 3 with street name label additions.

Many of the proposed potential lower capacity road (typically local roads and collector roads) are expected to be constructed as part of private developments. The IMDP categorizes proposed future roadways as higher capacity and lower capacity roadways. No capacity expansion or change to the classifications of the existing road network is needed to accommodate the proposed roadways highlighted in **Figure 4-5**.

Action 12 – Update the Town’s Street Classification Map and prepare to accommodate active transportation on new roadways identified in the Inter Municipal Development Plan: The Town to revise its street classification and associated facility accommodation to reflect anticipated traffic volumes and appropriate roadway functions and align with the IMDP.

Potential Higher Capacity Roadways

Typically, all the proposed higher-capacity roadways should accommodate no more than one travel lane in each direction due to the low volume of traffic expected in the road network. The 400 St. W extension as a high-capacity road should be classified as a collector road with single-lane traffic in each direction and on-street parking if desired. The cross-section of the roadway should be determined at a future date with input from the public. The “Aspen Arbor Extension” should include a single travel lane in each direction and accommodate pedestrians. The road should be

classified as a future arterial road with a cross section and active transportation accommodation determined via public input at a future date. The proposed north-south higher-capacity roadway intersecting the “Aspen Arbor Extension” should be designated as a collector road.

Potential Lower Capacity Roadways

The lower-capacity roadways highlighted in **Figure 4-5** should be designated as local roads as their main function will be to provide access to developed lots, not for through accommodating a large number of vehicles. The proposed cross-sections should minimize pavement width to keep costs as low as possible. This could include reducing the availability of on-street parking. Pedestrian accommodations along these roads should align with a new development bylaw to require developers to provide a basic level of pedestrian accommodation and connectivity to the network from newly built areas in town. Local road construction adjacent to the new high school on the eastern edge of town should provide separated cycling and pedestrian facilities.

Action 13- Create a Downtown Parking Study: A downtown parking study should be completed to address the following:

- Existing parking utilization and parking turnover rates
- Expected demand requirements from existing and future land use
- Ways to encourage high turnover parking along Broadway Avenue (encourage employees and other long-term parking to use off-street parking or less busy on-street parking)
- Ways to increase surrounding parking supply and how to provide walking connections to downtown
- Safety impacts of centre median angle parking

Engagement will be a key component of the study to gain feedback that will help develop changes to the Town’s downtown parking. Appropriate stakeholders to engage include downtown business owners, emergency services, and the public.

4.7 Climate Resiliency

A high-level climate risk and resilience framework was prepared to guide future and ongoing assessment of climate risk and adaptations as it relates to the transportation infrastructure in the Town.

Action 14 - Incorporate road network adaptive measures to effectively manage and mitigate impacts associated with climate change: Found in **Appendix D** is a table of the key hazard risks and opportunities that can be referenced as a considerations guide for future transportation and infrastructure development throughout the Town. The table was created from a commissioned Climate Risk and Resilience Assessment Report that was completed by Quest in November 2020 and refined through a Stakeholders Workshop. A copy of the Climate Strategies slideshow presented at the Stakeholders Workshop can also be found in **Appendix D**.

5 DOWNTOWN BROADWAY REVITALIZATION CONCEPT

Two downtown Broadway revitalization concepts have been developed as part of the TMP to advance the Town's vision *to create a multi-modal transportation network that is safe, efficient, and accessible to foster a more connected community that enhances livability and promotes sustainability for the residents of Raymond*. Each concept enhances the pedestrian environment and supports multiple modes of transportation, but they differ in their approach to parking, multimodal integration, and streetscape design. Together, they present distinct options for reimagining Raymond's downtown core.

5.1 Concept 1

This concept considers the removal of the existing angled centre parking area and re-allocates the space for other road users. The concept aims to create a vibrant, aesthetically pleasing, safe, and accessible downtown area to give residents a sense of place where the community can gather and host special events by re-imagining the streetscape. This concept aims to improve the pedestrian realm on main streets which creates a more vibrant environment resulting in more pedestrian activity and a sense of place for people to socialize in and enjoy.

The complete streets enhances safety and accessibility to create a downtown with a sense of place and community. The theme that was chosen for this concept was *Transitional*. The elements of the streetscape emphasize the character of the pedestrian realm as a means to provide a consistent design while unifying existing building facades and architecture. This theme includes a blend of paving materials and patterns with a widened sidewalk to accommodate street trees, shrub beds, and furnishings. Site furnishings may be a blend of traditional and contemporary designs. The desired concept described below was developed through several iterations with the assistance and feedback of the Town and stakeholders.

The centre parking will be removed to improve safety and accommodate elements of a "Complete Street". The proposed cross section includes a 4.6 m travel lane, 5.8 m wide angle parking lane, 3.0 m bike lane between the parking lane and curb, and 5.2 m wide pedestrian area to accommodate street trees, planters and street furniture in each direction. The two directions of travel will be separated by a 3.0 m centre median with mixed vegetation, grass and trees. The intersections of Broadway St N at Park Avenue/Church Avenue W and Broadway St N at 100N will have roundabouts with painted aprons to accommodate larger vehicles to maneuver safely. These intersections will have enhanced pedestrian crossings with curb bulges to reduce the crossing distance for users. A new mid-block crossing between 100 N and Park Avenue/Church Avenue W will act as a traffic calming measure and reduce the crossing distance for users. The following **Figures 5-1 to 5-4** are sketches of the proposed concept. **Figure 5-5** shows the proposed cross section.

Figure 5-1 Downtown Concept 1 – Plan View



Figure 5-2 Downtown Concept 1 – Looking South



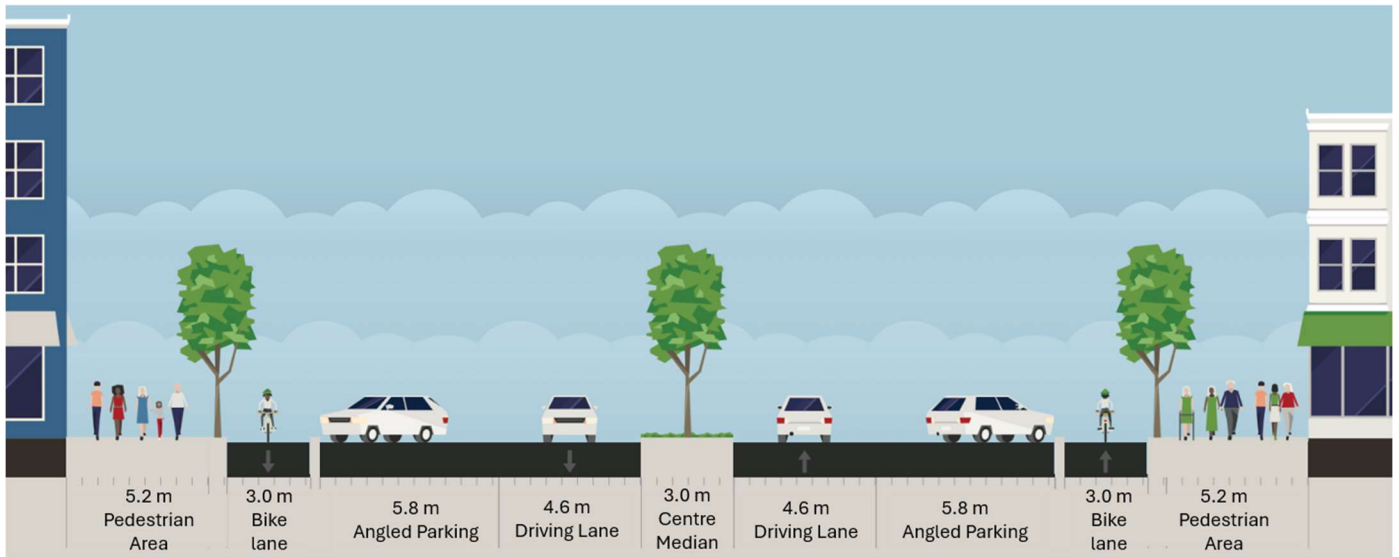
Figure 5-3 Downtown Concept 1 – Mid Block Crossing



Figure 5-4 Downtown Concept 1 – Looking North



Figure 5-5 Concept 1 – Cross Section



Center parking will be removed along Broadway N in the downtown to allocate more road space for all modes of transportation. Side street and off-street parking may need to be enhanced, and pedestrian connections may need to be provided in the case that additional parking supply is needed to be the expected demand. The concept aims to maximize parking while following best practices for road safety and supporting the demand for better active transportation facilities. This will be completed as the re-developed downtown design progresses.

5.2 Concept 2

The concept retains the existing centre angled parking while enhancing the pedestrian realm of downtown through revitalized streetscape. The concept prioritizes vehicle access to the downtown area and pedestrian facilities with enhanced crossing locations. The theme for this concept is *Classic*, as it reflects a slower transition to a new aesthetic and streetscape.

The concept maintains the existing centre angled parking. As with Concept 1 a new 5.2 m wide pedestrian area will be created to accommodate street trees, planters and street furniture in each direction. Angled parking adjacent to the curb will be 6.2 m and the 5.5 m travel lanes will be available for each direction of travel that will be separated by a 6 m centre angled parking median. As with Concept 1, the intersections of Broadway St N at Park Avenue/Church Avenue W and Broadway St N at 100N will have roundabouts with painted aprons to accommodate larger vehicles to maneuver safely. These intersections will have enhanced pedestrian crossings with curb bulges to reduce the crossing distance for users. A new mid-block crossing between 100 N and Park Avenue/Church Avenue W will act as a traffic calming measure and reduce the crossing distance for users. The following **Figures 5-6 to 5-8** are sketches of the proposed concept. **Figure 5-9** shows the proposed cross section.

Figure 5-6 Concept 2 – Plan View



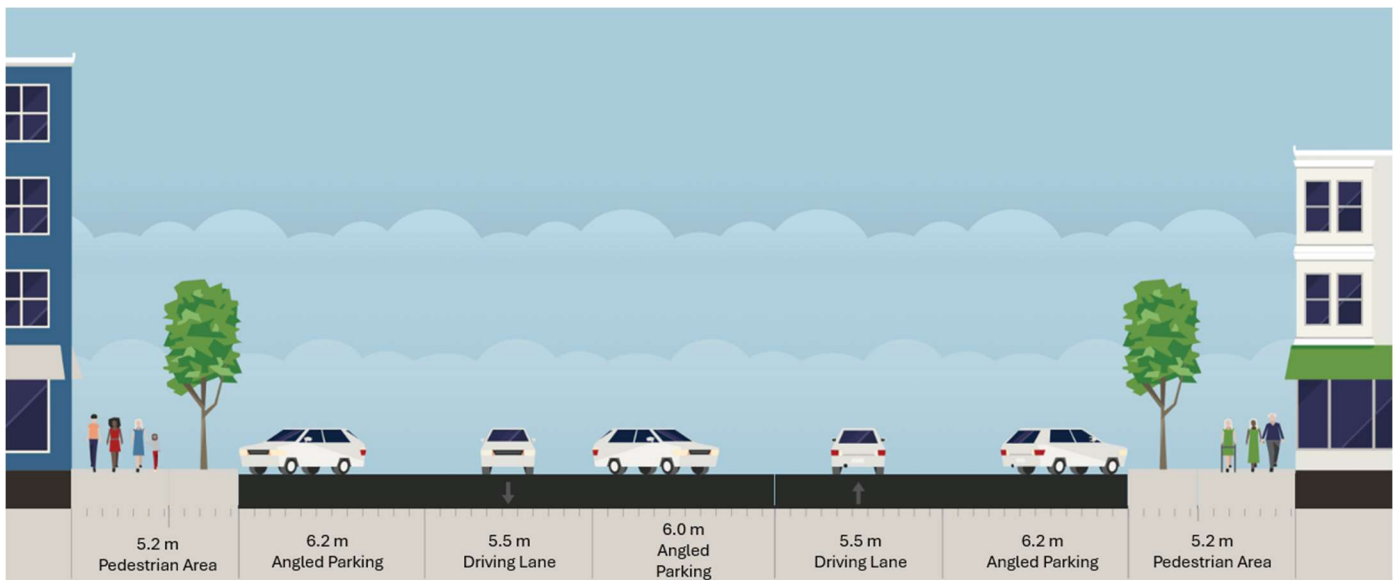
Figure 5-7 Concept 2 – Looking South



Figure 5-8 Concept 2 – Midblock Crossing



Figure 5-9 Concept 2 – Cross Section



5.3 Concept Comparison

A comparison was completed between the two downtown concepts to help the Town identify and select a preferred option. The criteria used to evaluate the concepts are based on objectives that support the vision of the TMP and meet the objectives for downtown revitalization, as outlined in Section 4.2. The comparison criteria includes: Safety, Connectivity, Accessibility, Future Roadways, Climate Resiliency, Downtown Enhancement, and Cost. The scoring for each criterion is summarized in **Table 5-1**, which defines what constitutes a “Good”, “Neutral / Fair”, or “Poor” outcome.

Table 5-1 Concept Evaluation Criteria and Rating Descriptions

Comparison Criteria	Good	Neutral / Fair	Poor
Safety	• Opportunity to enhance safety, increase separation between transportation modes, and reduce incident potential.	• Not expected to affect safety, transportation mode separation or reduce incident potential	• Potential to decrease safety, separation or increase incident potential.
Connectivity	• Enhances and improves the continuity of walking and cycling routes in the Town	• Maintains existing connections but does not expand network coverage	• Creates barriers to walking and cycling in the Town
Accessibility	• Enhances comfort and walkability for pedestrians of all ages and abilities	• No change to comfort and walkability for pedestrians of all ages and abilities	• Reduces comfort and walkability for pedestrians
Future Roadways	• Parking supply efficiently meets current and future demand • Accommodates all road users	• Parking supply exceeds or does not meet future needs • Active road users are underserved	• Parking is excessively over supplied or under supplied relative to demand • No accommodation for active users
Climate Resiliency	• Incorporates many design elements to mitigate climate impacts	• Incorporates some design elements to mitigate climate impacts	• Does not include design elements to mitigate climate impacts
Downtown Enhancement	• Improves livability and aesthetic appeal • Encourages public use and social gathering • Helps drive economic development of downtown businesses	• Minor improvement to streetscape or aesthetics • Limited support for public gathering or community use	• Does not enhance the downtown environment • Deters public use or lacks community value
Cost	• Low capital cost • Minimal construction complexity or disruption	• Moderate cost • Manageable construction impacts	• High capital cost

The comparison of the two concepts, along with descriptions of how each performs relative to the evaluation criteria, is shown in **Table 5-2**. This table provides a side-by-side summary of existing conditions, Concept 1, and Concept 2, highlighting how each aligns with the objectives of the TMP. The assessment draws on qualitative descriptions that reflect the extent to which each concept align with safety, connectivity, accessibility, future roadway integration, and climate resiliency.

Table 5-2 Comparison of Downtown Concepts

Comparison Criteria	Existing Condition	Concept 1	Concept 2
Pedestrian Safety	• Long crossing distances for pedestrians • Parked cars can be close enough to cross walks and block visibility from the driving lane • Vehicles overhang onto existing sidewalks	• 5.2 m pedestrian way with planters provides more space for pedestrians and limits impact of overhang from parked vehicles • Enhanced mid-block pedestrian crossing improves sight lines and reduces crossing distances	• 5.2 m pedestrian way with planters provides more space for pedestrians and limits impact of overhang from parked vehicles • Enhanced mid-block pedestrian crossing improves sight lines and reduces crossing distances
Cyclist Safety	• No separation between cyclists and other modes	• 3.0 m dedicated bike lane separates cyclists from pedestrians and vehicles	• No separation between cyclists and other modes
Vehicle Occupant Safety	• Occupants of vehicles that park in the centre median have to weave between cars and walk across a lane of traffic to reach a sidewalk. • Vehicles traveling in either direction to enter the same center parking stall creates a risk for head on collision. • Angle parking has a higher collision rate than parallel parking. • Centre median parking is not typical of a public street.	• Angle parking adjacent to curb has some but not all of the safety concerns as the base case	• Same as base case
Connectivity	• Pedestrians are connected to the rest of the network with sidewalks on both sides of the road • No cycling connectivity as there are currently no on-street facilities in the Town	• Maintains existing connectivity for pedestrians • Creates new connectivity for cyclists in the Town	• Maintains existing connectivity for pedestrians
Accessibility	• Existing planters limit functional area of sidewalk limiting space for those with mobility issues	• Wide sidewalks provides increased comfort for pedestrians of all ages and abilities • Wide and separated facilities for cyclists accommodate those for all ages and skill levels	• Wider sidewalks provide increased comfort for pedestrians of all ages and abilities • Cyclist have to share the roadway with vehicles requiring more confident riding
Future Roadways	• Maximum parking supply exceeds what is typically provided on a public street • Does not integrate with future cycling network plan	• Parking supply may accommodate high turnover parking but not long term parking • Integrates with future cyclist network plan	• Parking supply in excess of what is typically provided by a municipality • Does not integrate with future cycling network plan

Comparison Criteria	Existing Condition	Concept 1	Concept 2
Climate Resiliency	Provides opportunities for shade for pedestrians	- Provides additional opportunities for shade for pedestrians - Provides additional opportunities for shade through foliage in the centre median area	Provides additional opportunities for shade for pedestrians
Downtown enhancement	- Maximum amount of parking supports maximum customer access to business if the parking is restricted to high turnover utilization - Enhanced landscaping is more attractive and portrays an image of a thriving community	Enhanced landscaping is more attractive and portrays an image of a thriving community	Maximum amount of parking supports maximum customer access to business if the parking is restricted to high turnover utilization
Cost	Existing layout is maintained with pavement markings	Significant cost to construct a centre median with trees	Low cost to continue to paint the centre median.

Concept 1 scores “Good” or “Neutral/Fair” across all evaluation criteria which shows its alignment with the TMP objectives and the downtown enhancement. This option creates the most change and may be challenged within the community due to negative perceptions about a reduction in the amount of parking. A way to mitigate this would be to use the principles of a “Quick Build for Better Streets” by implementing the concept with paint and delineators for the centre median as a pilot project. It’s also critical to have a parking management strategy in place to support high-turnover parking on Broadway and redirect long-term parking further away from businesses that rely on customer turnover.

Concept 2 does not score as strongly due to the absence of a dedicated cycling facility and safety concerns with the retention of the existing centre parking median. The one safety concern that can be mitigated while maintaining the angle parking is that the painted median allows entry on individual parking stalls from opposing directions, which is a risk for head on collisions. A way to address this would be to add barriers at the end of each parking stall so that only one-way entry is provided.

6 CAPITAL PLAN - PROPOSED PROJECTS AND PRIORITIZATION

A list of potential projects has been developed as a result of the current conditions assessment of roadways, curbs and sidewalks. The recommended improvements within the transportation network were prioritized based on the assessment of existing conditions, presented in [Section 2.3](#), with associated capital cost estimates. This helped plan for short, medium, and long term upgrades.

6.1 Roadway Rehabilitation Program

The roadway conditions assessment described in [Section 2.3](#) of this TMP helped prioritize roadways projects to be considered for improvement as part of the Town’s capital plan.

Existing roadway upgrades are assumed to include full replacement of existing pavement structures, including both asphalt and granular materials. Existing paved roads with the poorest conditions are prioritized first. Existing paved roads require ongoing maintenance to preserve pavement life and to provide a reasonable level of service. The

objective of the 10-year Capital Improvement Program for Paved Roads is to address and rehabilitate all roads that have a total condition score higher than 1.30, or those currently ranked as Poor, Fair and most of the Average roads over the next 10 years. This is about 7 to 8 roadway segments to be rehabilitated each year or as maintenance funding permits.

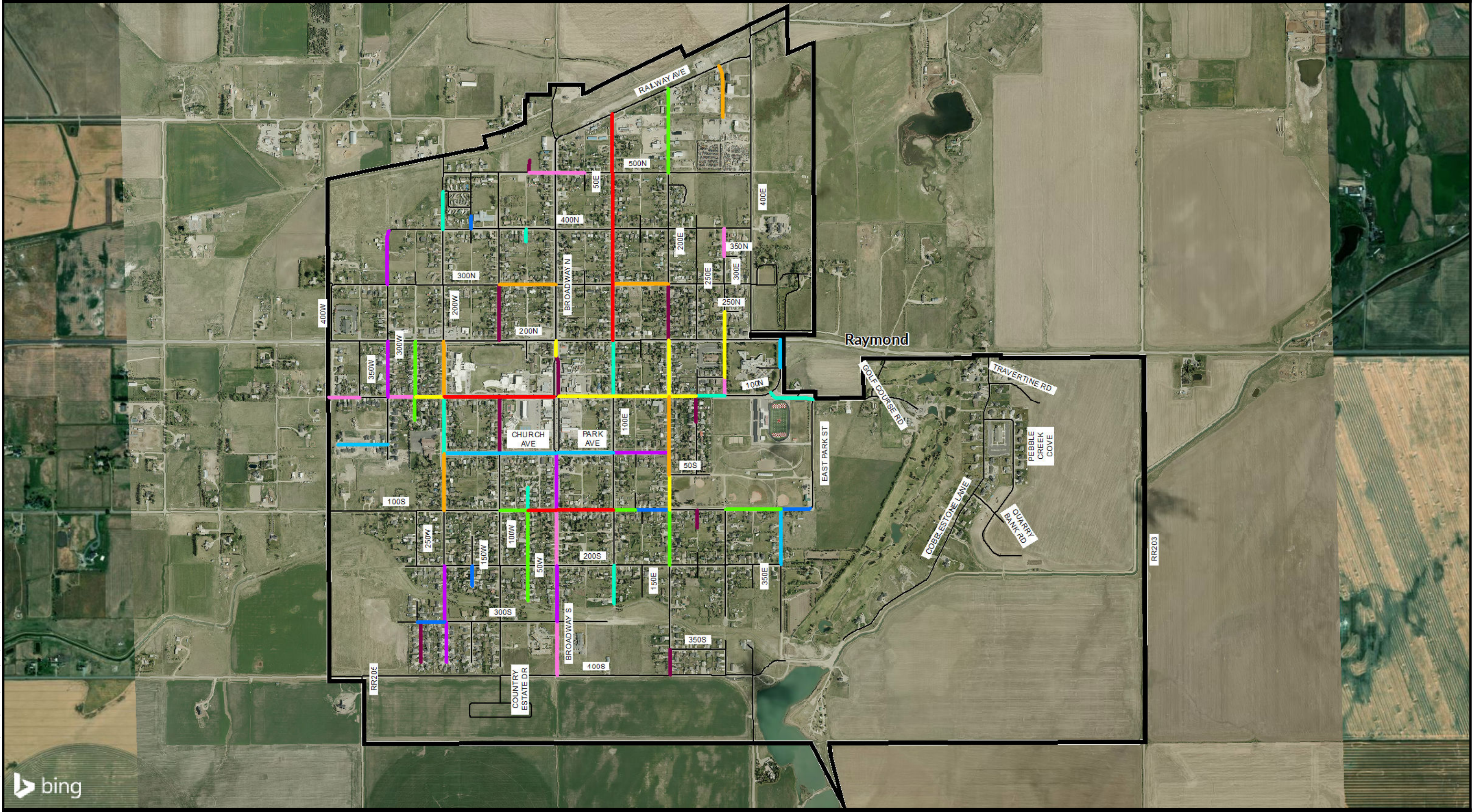
Pavement preservation and maintenance strategies such as patching, crack-filling, and asphalt milling/inlays are encouraged as the need arises. Preserving the existing roadway integrity will avoid having to plan for more costly replacement of full roadway structures that occurs when roadways have degraded.

The proposed 10-year Capital Roadway Rehabilitation Program is summarized in **Table 6-1** and shown graphically in **Figure 6-1**. The detailed breakdown of the Roadway's Capital Improvements Program is found in **Appendix E**.

Table 6-1 Rehabilitation Program - Roadways

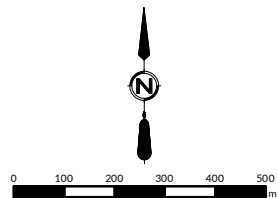
Year	# of Segments Planned for Improvement	Annual Program Cost
2026	8	\$ 402,000
2027	7	\$ 367,200
2028	9	\$ 324,000
2029	9	\$ 434,400
2030	8	\$ 297,900
2031	8	\$ 316,200
2032	7	\$ 276,600
2033	8	\$ 316,500
2034	9	\$ 328,500
2035	10	\$ 330,600

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LEGEND

— Road Segment	Construction Year	2030	2035
▬ Municipal Boundary	2026	2031	
	2027	2032	
	2028	2033	
	2029	2034	



AE PROJECT NO.	2021-3254-00
SCALE	1:15000
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FIGURE 6-1
PAVED ROAD
10 YEAR CAPITAL PROJECTS

TOWN OF RAYMOND
TRANSPORTATION MASTER PLAN

6.2 Concrete Rehabilitation Program – Sidewalks, Curbs and Wheelchair Ramps

Existing sidewalks, curbs and wheelchair ramps through the Town require ongoing maintenance to replace cracked or broken segments, address differential settlement or other conditions that could cause trip hazards and other safety concerns for residents. Maintenance of existing sidewalks, curbs and wheelchair ramps are prioritized based on the condition assessments that were completed. Those segments with the poorest conditions are ranked as higher priority. The objective of the 10-year Capital Improvement Program for concrete works is to address and replace all sidewalks that have higher (worse condition) scores or all those currently ranked as Poor, Fair or Average condition over the next 10 years. The proposed 10-year Capital Concrete Program is summarized in **Table 6-2**, **Table 6-3**, and **Table 6-4** for sidewalks, curbs and wheelchair ramps, these are shown graphically in **Figure 6-2**. The detailed breakdown of the concrete Capital Improvements Program is found in **Appendix E**.

Sidewalk Rehab

It is preferable to complete sidewalk repairs on entire segments or block lengths of sidewalks to provide a better economy of scale and to maximize the number of sidewalks that can be replaced each year. This may not always be viable, and the Town may need to address more localized sidewalk repairs or replacements to address sidewalk issues that pose a safety risk to the public. Generally, longer segments of curbs can be replaced at a lower unit rate cost compared to smaller, localized replacement sections. Prior to each year's proposed concrete improvements, visual inspections will be completed to determine the appropriate extents of concrete replacement or repair sections to address the degrading conditions and to provide the maximum benefit for tying to existing infrastructure. When possible, curb repairs will be coordinated with roadway resurfacing improvements to avoid asphalt patching in the roadways at curb replacement sections and so that uniform asphalt surfacing can be completed across the roadway.

Sidewalk preservation will continually be employed and maintenance strategies such as grinding of trip hazards, mudjacking to correct settlement issues, and/or replacing segments will be completed as the need arises.

Table 6-2 Rehabilitation Program - Sidewalks

Year	# of Segments Planned for Improvement	Annual Program Cost
2026	6	\$ 260,400
2027	6	\$ 197,600
2028	6	\$ 219,700
2029	6	\$ 253,000
2030	6	\$ 220,500
2031	6	\$ 256,000
2032	6	\$ 261,600
2033	6	\$ 221,400
2034	6	\$ 230,000
2035	6	\$ 278,600

Curb Replacement:

Table 6-3 Rehabilitation Program - Curbs

Year	# of Segments Planned for Improvement	Annual Program Cost
2026	5	\$ 260,400
2027	5	\$ 197,600
2028	5	\$ 219,700
2029	5	\$ 253,000
2030	5	\$ 220,500
2031	5	\$ 256,000
2032	5	\$ 261,600
2033	6	\$ 221,400
2034	6	\$ 230,000

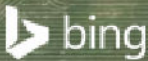
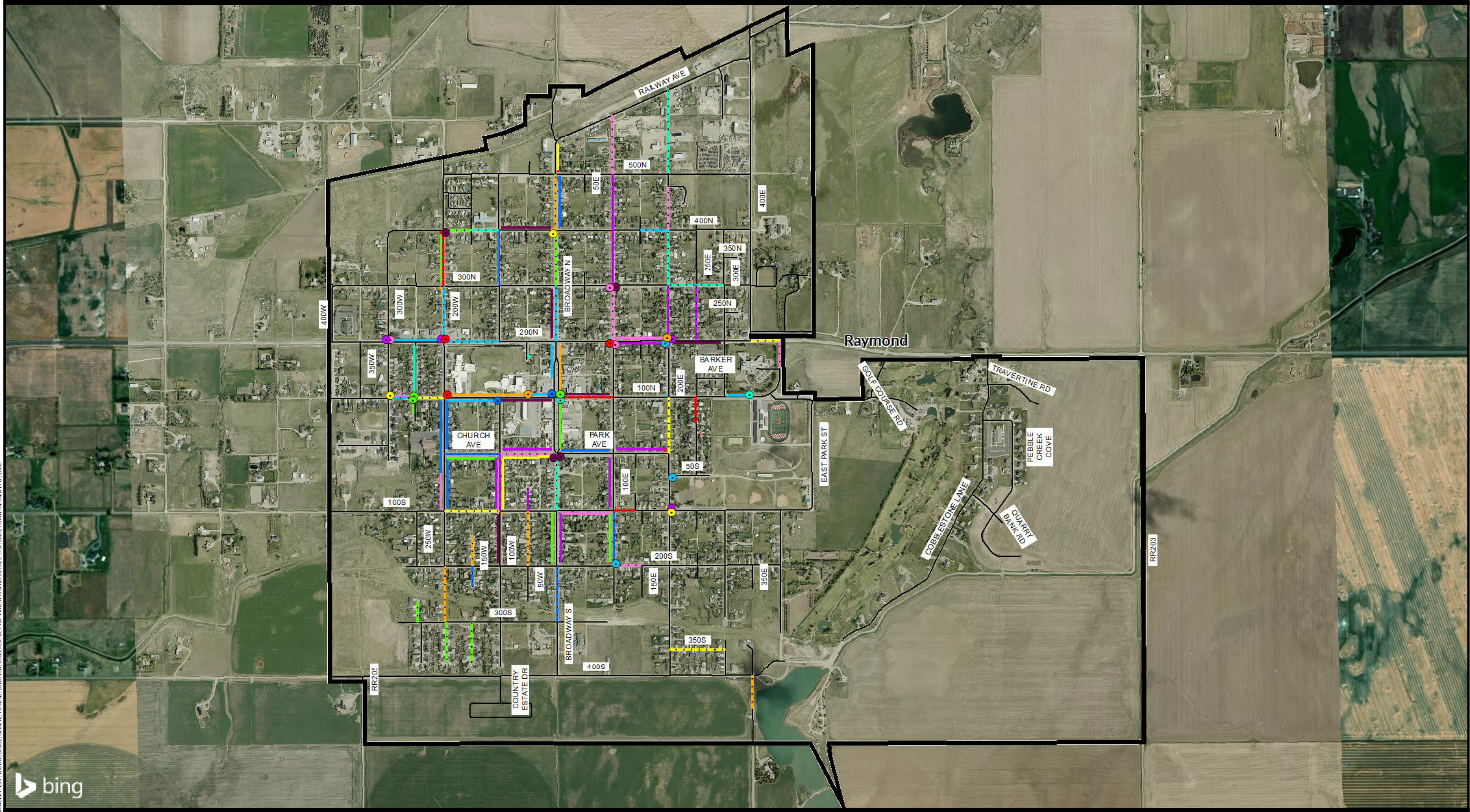
Wheelchair Ramp Replacement

Wheelchair ramp maintenance includes the replacement of sub-standard ramps, along with installing new wheelchair ramps at locations where they don't currently exist. New wheelchair ramps will meet the latest design guidance as suggested by the American Disabilities Association, and the principles of Universal Design. New wheelchair ramp design standards include slopes between 5% and 8%, directional guidance through the use of tooled grooves in the surface of the concrete, and the installation of tactile detectable warning surfaces near the lower area of the ramp. Dimensions of these ramps will also meet design guidelines.

Table 6-4 Rehabilitation Program - Wheelchair Ramps

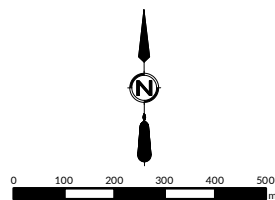
Year	# of Segments Planned for Improvement	Annual Program Cost
2026	3	\$ 14,700
2027	3	\$ 15,300
2028	3	\$ 14,100
2029	3	\$ 15,300
2030	3	\$ 14,700
2031	3	\$ 14,100
2032	3	\$ 14,100
2033	4	\$ 19,400
2034	4	\$ 18,800
2035	4	\$ 18,800

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LEGEND

	Wheelchair Ramp	Construction Year		2030		2035
	Curb		2026		2031	
	Sidewalk		2027		2032	
	Municipal Boundary		2028		2033	
			2029		2034	



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DATE	2025-02-12
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DESCRIPTION	ISSUED FOR DRAFT

FIGURE 6-2
CURBS, SIDEWALK, AND
WHEELCHAIR RAMPS
10 YEAR CAPITAL PROJECTS

TOWN OF RAYMOND
TRANSPORTATION MASTER PLAN

7 SUMMARY AND RECOMMENDATIONS

The TMP has provided a review of the existing conditions of the road network, summary of engagement, and recommendations for actions and capital plan projects and prioritization.

Current Conditions

- No significant safety, speeding, or intersection capacity issues exist within the Town.
- Gaps in the sidewalk network with no sidewalk
- Angled centre parking in the Town centre does have some safety concerns, although there is no evidence of a history of collisions related to this concern.
- Pavement Condition Assessment - 100 St. N between 100 St. W and Broadway St. N. has very poor pavement and there are other poor pavement condition locations within the town
- Concrete Sidewalk, Curb, and Wheelchair Ramp Condition Assessments:
 - The town has many instances of sidewalks below 1.8m and many intersections and crossings without a wheelchair ramp.
 - Very poor curb condition along 100 St. N between Broadway St. N and 100 St. E. and other poor condition segments identified
 - Sidewalk segments were generally ranked average or good, with one poor segment identified
 - Several curb ramps are in poor condition:

Priorities That Were Identified During Public Engagement

- Bike routes don't connect residents to key destinations in the Town
- Walking distances for residents seem too far, and some areas of the Town have no sidewalk facilities
- Lack of facilities to support active modes throughout the Town, including areas adjacent to schools
- Accessibility issues for those with limited mobility
- Improve traffic safety and manage speeds along the local roads in the community
- Roadway defects, including smoothness and deterioration
- Sidewalk, curb, and wheelchair ramp conditions
- Weather and its impact on active modes
- Narrow sidewalk widths

Future Road Network

The vision to create a multi-modal transportation network that is safe, efficient, and accessible to foster a more connected community that enhances livability and promotes sustainability for the residents of Raymond will be achieved through five objectives and a total of 14 targeted actions. They are the following:

- **Connectivity:**
 - **Action 1 - Expand the pedestrian network:** Pedestrian connectivity will be enhanced by filling gaps in the sidewalk network, allowing all residents to have access to safe and efficient pedestrian facilities. This includes adding sidewalks, multi-use pathways, and pedestrian lanes, with specific considerations for high traffic areas and developments like StoneGate Meadows.
 - **Action 2 - Expand the cycling network:** The cycling network will be enhanced by expanding the cycling network with painted lanes and separated facilities along major roads to connect residents to

key destinations. Possible cross cost-effective cross sections that maintain existing curb lines include protected bike lanes and advisory bicycle lanes

- **Action 3 – Create a new development bylaw to require developers to provide a basic level of pedestrian accommodation and connectivity to the network from newly built areas in town:**

Establish standards for the provision of sidewalks within developments. The standard should have a hierarchy that requires sidewalks on at least one side of the road for low-volume residential streets and sidewalks on both sides of the road on collector and arterial streets.

- **Accessibility:**

- **Action 4 - Install lighting along key pedestrian corridors:** Lighting to be installed in higher pedestrian areas and locations identified through the public survey.
- **Action 5 - Provide tree cover, rest areas and benches along pathways and trails:** The town will consider locations to install tree cover, rest areas, and benches to encourage walking and cycling in the town and mitigate the impacts of extreme heat.
- **Action 6 - Provide parking at key destinations:** Bike parking to be provided downtown, at medical facilities, new strip mall, and at parks.
- **Action 7 - Create a sidewalks and trails maintenance program:** The program should re-evaluate the conditions of the City's sidewalks every 5 years and have a mechanism to address resident's issues and complaints to prioritize improvement projects accordingly while first prioritizing projects identified in Section 7.2 of this TMP.
- **Action 8 - Create a roads maintenance program that focuses on potholes, drainage and road markings:** The program includes include regular inspection of the Town's roads and ways to prioritize road maintenance projects using cost effective methods. The program to first consider projects identified in Section 7.1 of this TMP.

- **Safety:**

- **Action 9 - Reduce the speed limit to 30 or 40km/h on local roads:** Implement a new speed policy or implement future pilot projects that may become permanent in reducing speed limits.
- **Action 10 - Construct traffic calming measures:** Consider installing infrastructure that creates horizontal shifts, vertical deflections, and narrowing of roadways based on public input or on an add-needed basis.
- **Action 11 - Enhance safety infrastructure adjacent to schools:** Countermeasure that can be taken by the Town include protected intersections, midblock curb extensions, additional speed humps, road safety audit, and designated pickup drop off locations.

- **Future Roadways:**

- **Action 12 – Update the Town's Street Classification Map and prepare to accommodate active transportation on new roadways identified in the Inter Municipal Development Plan:** The Town to revise its street classification and prepare for active transportation facilities at new higher and lower capacity roadways identified in the IMDP.
- **Action 13 – Conduct a Downtown Parking Study:** A survey of existing parking utilization and parking turnover rates would indicate how well existing parking me meetings parking demand requirements. Policies are needed to encourage long-term parking to not use the parking stalls needs for customer parking. to support downtown business needs while meeting the objectives of the transportation master plan.

- **Climate Resilience:**
 - **Action 14 - Incorporate road network adaptive measures to effectively manage and mitigate impacts associated with climate change:** Future transportation and infrastructure development in the Town should consider climate change hazards, mitigation goals, and potential actions.
- **Downtown Broadway Concepts:**
 - **Action 15 – Selection of the preferred concept should consider the evaluation criteria provided in Section 5.3.**
 - **Concept 1** more closely meets the objectives of the TMP by enhanced pedestrian connections to the area, improving safety for pedestrians, cyclists, and vehicle occupants travelling to and from their vehicles. The concept maximizes public realm by providing a vibrant and aesthetic space for users of all ages and abilities. The elimination of centre median parking may receive some opposition and ways to mitigate that are to develop a downtown parking strategy and to use Quick Build concepts as a pilot project.
 - **Concept 2** offers the same pedestrian enhancements as Concept 1 while retaining the existing centre angled parking configuration. Centre median parking is a safety concern for vehicle occupants who need to manoeuvre around vehicles and they need to cross an active lane of traffic to access the sidewalk. The two-way access to these stalls is also a safety concern and could be mitigated with parking headers that define one-way access.
- **Capital Plan**
 - A 10-year Capital Plan addresses the infrastructure conditions for replacement or rehabilitation of deteriorating paved roadways, sidewalks, curbs and wheelchair ramps. The Town will budget and implement this plan to improve the condition of identified infrastructure. As these roadways and sidewalks are improved, consideration will be given to incorporating wider sidewalks, on-street cycling lanes, traffic calming measures or other improvements as outlined within the TMP.

8 CLOSURE

This Transportation Master Plan was prepared for the Town of Raymond and considered the existing conditions, public input, and best practice to create a vision of the Town's future road network. Action items and a Capital Plan were developed to guide the Town's future investments.

The services provided by Associated Engineering Alberta Ltd. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,

Associated Engineering Alberta Ltd.



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Project Manager

PERMIT TO PRACTICE ASSOCIATED ENGINEERING ALBERTA LTD. RM Signature  Ben Leusink ID 236711 2025 Aug 19 PERMIT NUMBER: P 03979 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

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APPENDIX A – TRAFFIC REVIEW



Issue Date:	April 15, 2025	Reference/Project No.:	2021-3254
To:		Previous Issue Date:	
From:	Associated Engineering		
Client:	Town of Raymond		
Project Name:	Town of Raymond Transportation Master Plan		
Subject:	Traffic Review		

1 INTRODUCTION

The purpose of this technical memorandum is to summarize the current and future traffic conditions in the Town of Raymond (the Town). The traffic review includes a review of speed data, intersection capacity analysis, historic collision review, and the existing transportation network and right-of-way review. This memorandum is a part of the Town of Raymond's Transportation Master Plan (TMP) to help identify issues that the TMP will address.

2 SPEED REVIEW

The Town values safety and wants to encourage safe speeds. A speed review was conducted at 200 St. E and 200 St. N on August 24 & 25, 2022. **Figure 2-1** and **Figure 2-2** show the spot speed data collection locations. The results of the speed review are shown in **Table 2-1**. The review found that the 85th percentile speeds for 200 St. E and 200 St. N are below 40 km/h. The reason the 85th percentile speed is used for comparison is to check whether the majority of drivers are travelling within the speed limit which can be an indicator of perception of safety and whether traffic enforcement is needed. The collected data does not indicate speeding is a problem at the location that was studied.

Table 2-1 Speed Review Summary Statistics

Parameter	200 St. N	200 St. E
Data Point Count	893	2,240
Median	27.5	32.5 km/h
Mean	28.7 km/h	29.7 km/h
Standard Deviation	6.2 km/h	8.1 km/h
85 th percentile	37.5 km/h	35.7 km/h
Speed Limit	50 km/h	50 km/h

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Memo: Town of Raymond

April 15, 2025

Page 2

Figure 2-1 Cumulative Speeds at 200 St E

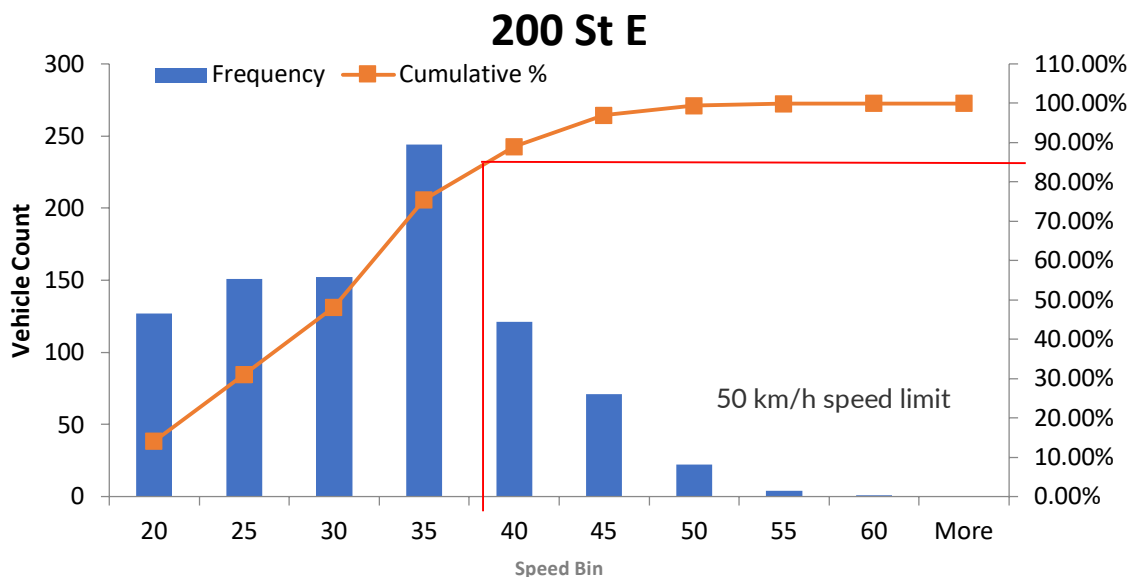
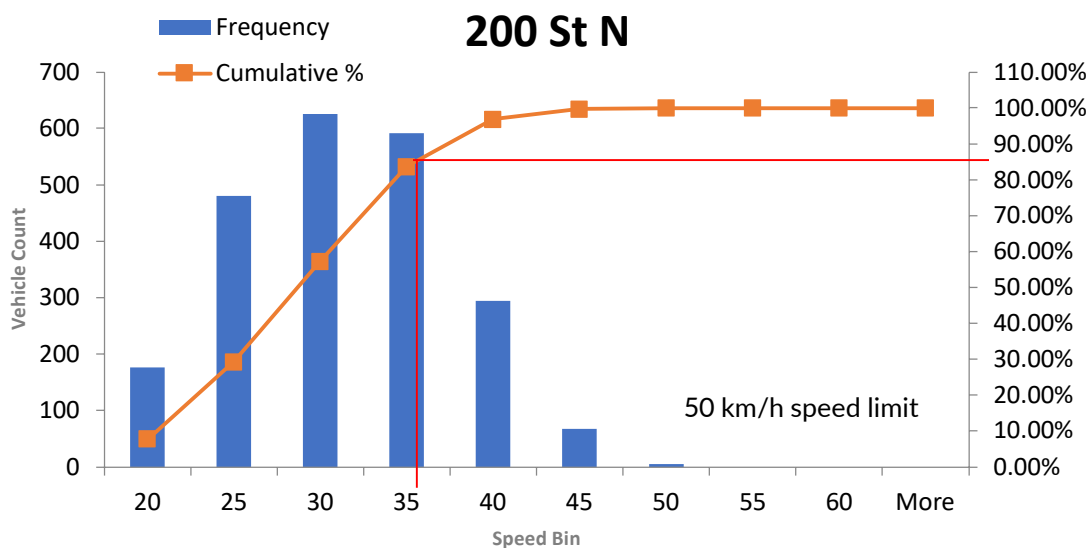


Figure 2-2 Cumulative Speeds at 200 St N



Memo: Town of Raymond
April 15, 2025
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3 INTERSECTION CAPACITY ANALYSIS

Traffic counts were collected from Alberta Transportation and Economic Corridors (ATEC) Traffic Count Database, at the following locations:

- Highway 845 and Railway Avenue N
- Broadway Street and Highway 52 (200 St N)
- Highway 845 and Highway 52

Traffic counts were completed at the following locations, August 24-25, 2022:

- Manual Traffic counts at 100 St N and Broadway Street
- Tube counts at 200 St N, east of N200W
- Tube counts at Broadway Street, south of E300N
- Tube counts at S200E north of Park Avenue.

A capacity analysis was conducted at the following intersections:

- E 200 St N (Highway 52) & 400 St E (Highway 845)
- Broadway N & E 200 St N (Highway 52)
- Broadway N & 100 N

Data was collected in 2022 and forecasted to 2042 for a 20-year planning horizon. A 1.2% linear growth rate factor was used based on Annual Average Daily Traffic Counts on Highway 52 east of the town on data from 2012 to 2021. The 2022 and 2042 traffic volumes used for the analysis are available in [Appendix A](#).

Traffic performance at the four intersections was evaluated using the Two-Way-Stop Control methodology as outlined in the Highway Capacity Manual (HCM) 6th edition, using Synchro 11. [Table 3-1](#) summarizes the criteria for determining the Level of Service (LOS) for stop-controlled intersections based on the average delay per vehicle.

Table 3-1 Stop-Controlled Intersections Level of Service Thresholds

Level of Service	Average Unsignalized Control Delay per Vehicle (s/veh)
A	Less than 10
B	10-15
C	15-25
D	25-35
E	35-50
F	Greater than 50

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The modelling results are summarized in **Table 3-2**. The results show that the intersections will be operating at LOS C or better for all planning horizons with a maximum intersection delay of around 11 seconds. Based on these results, these analyzed intersections are expected to operate at a satisfactory level of service for both the existing conditions and through to the 20-year planning horizon

Table 3-2 Intersections Traffic Performance Summary

Scenario	Lane Group / Movement	Intersection Delay (s)	Overall Approach Delay (s)	Overall Approach LOS	V/C Ratio	Lane Group Delay	Lane Group LOS
2022 AM							
E 200 St N (Hwy 52) & 400 St E (Hwy 845)	SB Left/Thru/Right	3.6	10.4	B	0.097	10	B
	EB Left		2.8	-	0.04	7.8	A
Broadway N & E 200 St N (Hwy 52)	NB Left	8.1	1	-	0.013	7.5	A
	SB Left		0.5	-	0.007	7.5	A
	EB Left/Thru/Right		13.7	B	0.367	13.7	B
	WB Left/Thru/Right		13.8	A	0.25	13.8	B
Broadway N & 100 N	NB Left	2.9	0.6	-	0.004	7.3	A
	SB Left		1.6	-	0.011	7.4	A
	EB Left/Thru/Right		9.3	B	0.014	9.3	A
	WB Left/Thru/Right		9.6	A	0.031	9.6	A
2022 PM							
E 200 St N (Hwy 52) & 400 St E (Hwy 845)	SB Left/Thru/Right	3.5	9.6	A	0.113	9.6	A
	EB Left		1.8	-	0.018	7.7	A
Broadway N & E 200 St N (Hwy 52)	NB Left	8.7	3.7	-	0.051	7.6	A
	SB Left		0.4	-	0.005	7.4	A
	EB Left/Thru/Right		13.4	B	0.336	13.4	B
	WB Left/Thru/Right		14.9	B	0.294	14.9	B
Broadway N & 100 N	NB Left	4.1	1.3	-	0.023	7.6	A
	SB Left		1.1	-	0.018	7.6	A
	EB Left/Thru/Right		10.6	B	0.053	10.6	B
	WB Left/Thru/Right		11.6	B	0.141	11.6	B
2042 AM							
E 200 St N (Hwy 52) & 400 St E (Hwy 845)	SB Left/Thru/Right	3.8	11.2	B	0.135	11.2	B
	EB Left		2.9	-	0.052	8	A
Broadway N & E 200 St N (Hwy 52)	NB Left	10.3	0.7	-	0.017	7.6	A
	SB Left		0.5	-	0.009	7.5	A
	EB Left/Thru/Right		17.6	C	0.517	17.6	C
	WB Left/Thru/Right		17.9	C	0.385	17.9	C
Broadway N & 100 N	NB Left	3.2	1	-	0.006	7.4	A
	SB Left		1.6	-	0.014	7.4	A
	EB Left/Thru/Right		9.6	A	0.02	9.6	A
	WB Left/Thru/Right		9.8	A	0.042	9.8	A
2042 PM							
E 200 St N (Hwy 52) & 400 St E (Hwy 845)	SB Left/Thru/Right	3.9	11	B	0.175	11	B
	EB Left		1.8	-	0.023	7.8	A
Broadway N &	NB Left	11.1	3.7	-	0.066	7.8	A

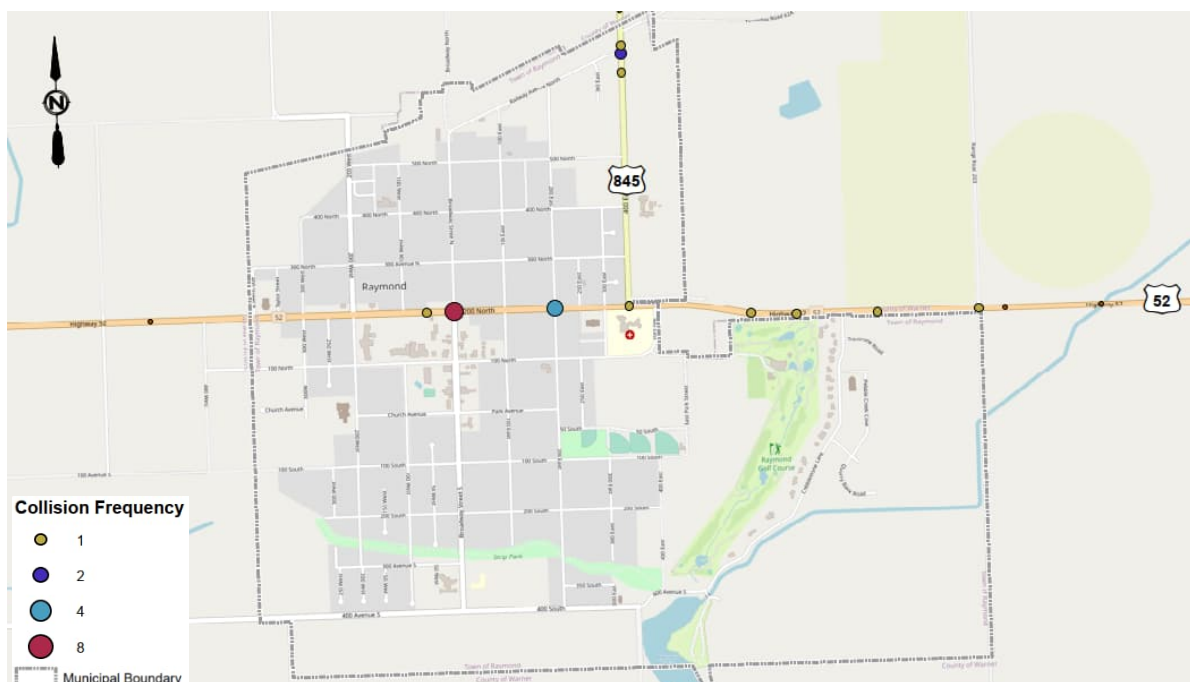
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Scenario	Lane Group / Movement	Intersection Delay (s)	Overall Approach Delay (s)	Overall Approach LOS	V/C Ratio	Lane Group Delay	Lane Group LOS
E 200 St N (Hwy 52)	SB Left		0.4	-	0.007	7.4	A
	EB Left/Thru/Right		17.4	C	0.488	17.4	C
	WB Left/Thru/Right		20.2	C	0.449	20.2	C
Broadway N & 100 N	NB Left	4.5	1.3	-	0.03	7.7	A
	SB Left		1.1	-	0.023	7.7	A
	EB Left/Thru/Right		11.5	B	0.076	11.5	B
	WB Left/Thru/Right		13.1	C	0.207	13.1	B

4 COLLISION REVIEW

Ten years of historical collision data on Highway 845 and Highway 52 were obtained from Alberta Transportation and Economic Corridors for the period between 2008 and 2018. A total of 22 collisions were recorded in this period in the Town, 18 of which were recorded on Highway 52 and four on Highway 845. Five of the collisions involved injury, while the remaining were property damage only (PDO). No fatalities were recorded. Eight of the collisions were mainly due to failure to comply with traffic control devices, which could be attributed to the spacious geometry of the intersections that create confusion for drivers. **Figure 4-1** shows the location of the recorded collisions. Given the relatively low collision frequency per year in the study area (approximately 2 per year, including PDO collisions), no significant safety risks are identified at this time. Continual monitoring of collision data and public concerns is recommended to determine if any patterns or changes in trends emerge.

Figure 4-1 Collision Map



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5 TRANSPORTATION NETWORK AND RIGHT-OF-WAY REVIEW

Existing Transportation Network

Existing GIS data was used to visualize the Town's current transportation network, future growth areas, future developments, and key destinations for residents. The relationship between these elements is shown in **Figure 5-1**. Key destinations include schools, shops in the downtown area, churches, and healthcare facilities. Many of these key destinations are located adjacent to 100 St. N, which runs east-west. There are a mix of monolithic (no separation between road curb and gutter and sidewalk) and separated sidewalks distributed in the Town. Generally, there are no sidewalk facilities present in the periphery of the town. Three multi-use paths are located at the north-east, east, and south limits of the town with minimal connections to the existing sidewalks. There are no dedicated cycling facilities in the town. A new high school is proposed adjacent to the 400 St. E at 100 St. S intersection, which is currently unserved by sidewalks.

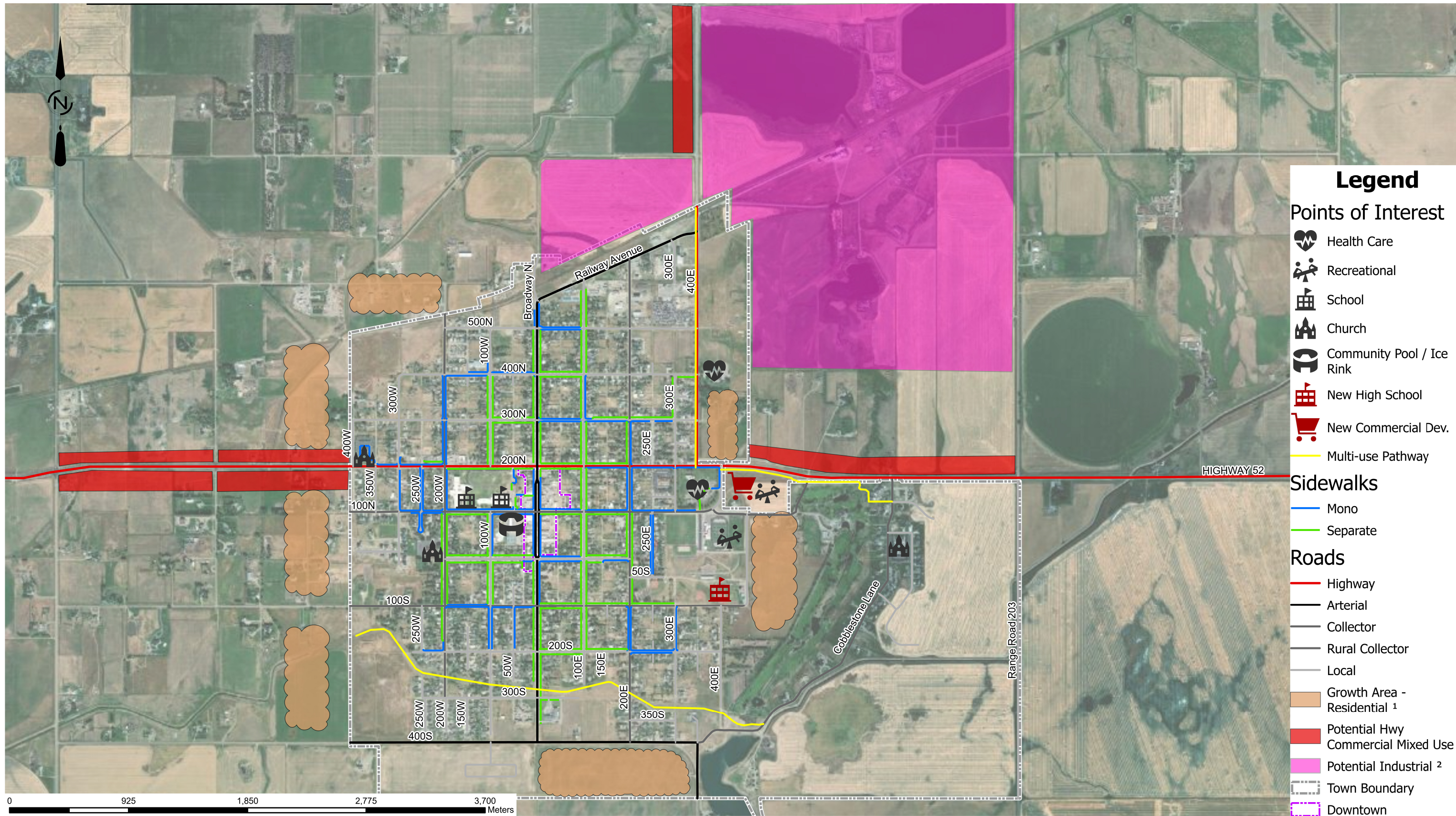
Centre-angled parking exists along Broadway Street from 200 St. N to Church Ave W. There is angled parking that may lead to visibility issues of other vehicles and cyclists, resulting in an increased risk of collisions.

Existing Right-of-Way Widths

The Town has wide right of ways (ROWs) and wide roadway widths on many of the roads within the community. The largest ROWs are along Broadway N and Church Avenue W at approximately 40m. The typical ROW width on most streets is 30m. A newer developed area in the southeast of the town has smaller ROWs at 24m (Granite Road) and 20m (Cobblestone Lane).

In comparison, most communities in Southern Alberta have local roads with ROW widths less than 20m in width. Collectors are often around 20-26m in width, and Arterial Roads often have widths between 30-45m, and are usually developed as multi-lane roadways with separated pathways, sidewalks and serve as major utility corridors.

This condition within the Town of Raymond, with extra-wide right-of-way widths on many roadways, presents unique opportunities for the Town to enhance these roads.



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FIGURE 5-1
TOWN OF RAYMOND TMP UPDATE

EXISTING TRANSPORTATION NETWORK
AND GROWTH AREAS

DRAFT

Sources:
1. Town of Raymond - Municipal Development Plan, July 2009, raymond.ca/wp-content/uploads/2019/04/Municipal-Development-Plan.pdf
2. Inter Municipal Development Plan - County of No.5 and Town of Raymond, October 2013. (Polygons approximated from Map 4)

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6 CONCLUSION

Speed Review: The speed review conducted at 200 St. E and 200 St. N indicates that the 85th percentile speeds are below 40 km/h, suggesting that speeding is not a significant issue. However, the perception of speeding may exist due to low traffic volumes and difficulty in judging speeds from the roadside.

Intersection Capacity Analysis: The capacity analysis for key intersections shows that they are expected to operate at Level of Service C or better. Performance for both current conditions and the 20-year planning horizon is satisfactory.

Collision Review: Historical collision data from 2008 to 2018 reveals a total of 22 collisions, with no fatalities and five involving injuries. The low frequency of collisions suggests no significant safety risks at this time. Continuous monitoring is recommended to identify any emerging patterns or trends.

Transportation Network and Right-of-Way Review: Key destinations in the town are primarily located primarily along 100 St. N. No dedicated cycling facilities are present, and gaps in the sidewalk network exist primarily for areas located in the periphery. Centre-angled parking within the Town centre may pose safety risks to all road users. The right-of-way for some streets is as large as 30m to 40m, which presents unique opportunities for enhancement.

Prepared by:



Andrei Radu, EIT

Reviewed by:



Darryl Schalk, P.Eng

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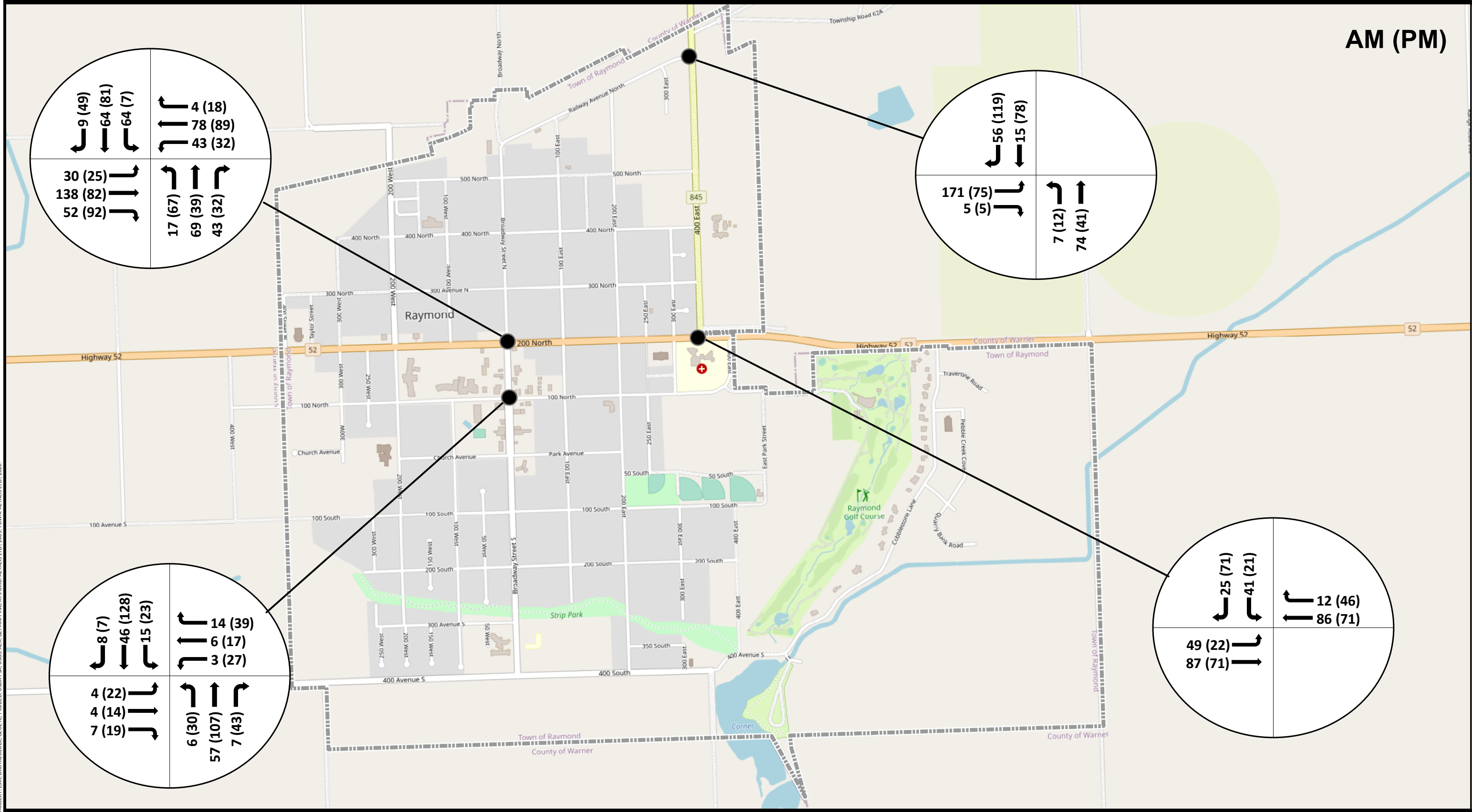
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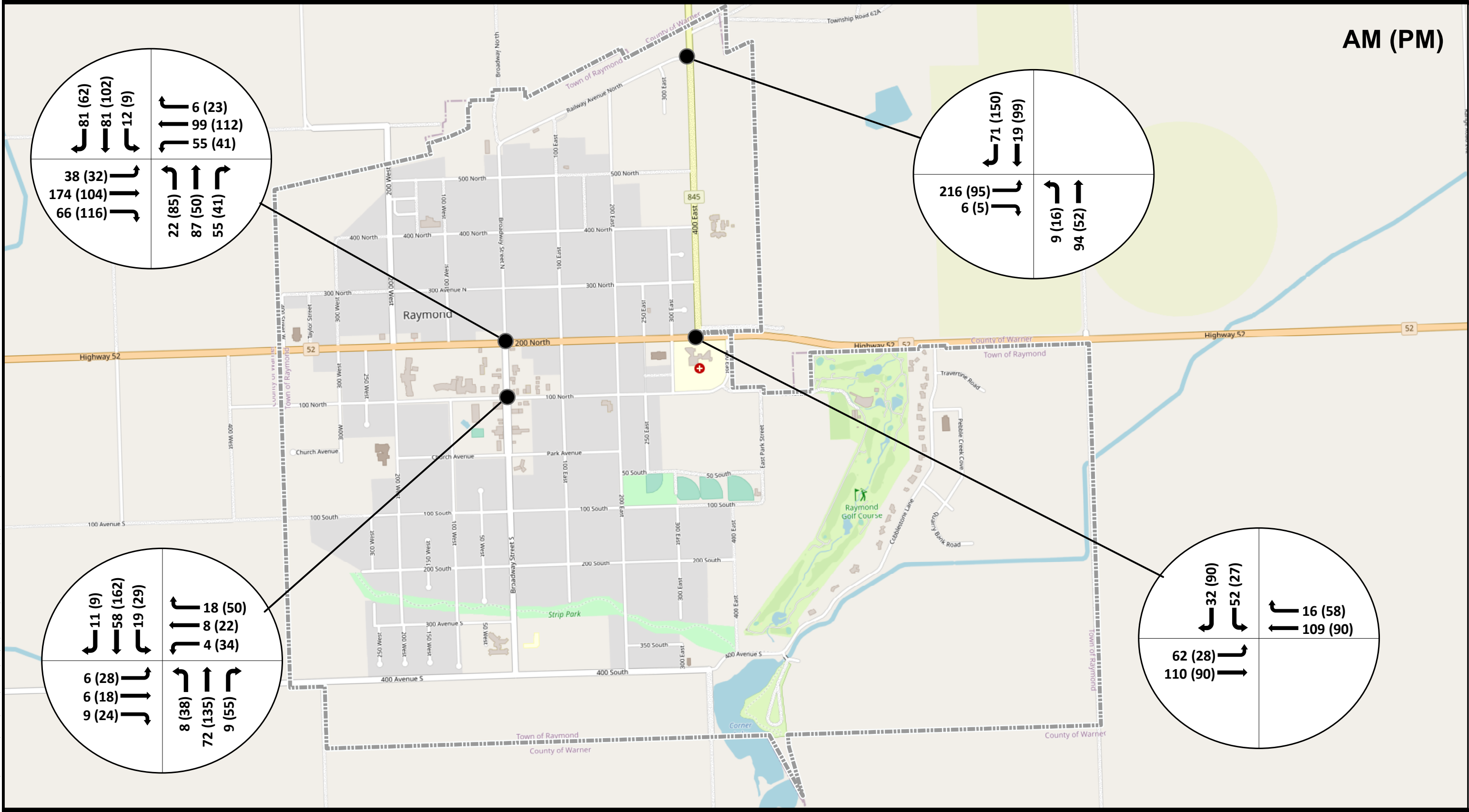
APPENDIX A - TURNING MOVEMENT COUNTS



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FIGURE XX
2022 TRAFFIC VOLUMES - AM (PM)

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FIGURE XX
2042 TRAFFIC VOLUMES - AM (PM)

TOWN OF RAYMOND
TRANSPORTATION MASTER PLAN

APPENDIX B - INFRASTRUCTURE CONDITION ASSESSMENT



Issue Date: April 15, 2025

Reference/Project No.: 2021-3254

To:

Previous Issue Date:

From: Darryl Schalk

Client: the Town of Raymond

Project Name: the Town of Raymond TMP

Subject: Infrastructure Condition Assessment

1 INTRODUCTION

The purpose of this technical memorandum is to summarize the findings of an infrastructure condition assessment completed as part of the TMP to help guide capital improvement prioritization. A Condition Assessment Manual was developed by the Town of Raymond's (the Town) subconsultant, Associated Engineering (AE), utilizing standardized inspection criteria to evaluate the pavement surface defects. The inspection report, along with the inspection forms, was then 'digitized' to be used in ArcGIS to collect all the field data and assessment reports digitally and to automatically upload them to the Town's GIS database. The GIS database can be used by Town staff to continually update the Town's GIS system as work is undertaken and the existing defects are remedied, or roadway segments are improved. Field condition assessments of existing pavement conditions were collected in June 2022 using tablets pre-loaded with the Town's GIS database and digitized inspection forms, so all the pavement defects could be collected along with site photos for future reference.

2 ROADWAY SMOOTHNESS TESTING

All roadways were assessed by evaluating the severity of defects including:

- Distortion
- Rutting or Shoving
- Rippling
- Raveling/Aggregate Loss
- Alligator Cracking
- Cracking (both transverse and longitudinal)
- Manhole and Valve Displacement

Each defect was ranked on a scale of 1 (best condition) to 5 (worst condition) and factored over the length of each roadway segment to determine an overall grade or condition of each roadway segment.

The ride quality (smoothness) was assessed as part of the condition assessment. Ride quality measurements followed the International Roughness Index (IRI) which is a standardized measurement of the dips, bumps and deflections in the pavement surface affecting the overall smoothness of the roadway. Pavement smoothness is generally measured in each lane of a roadway and excludes intersections.

A smart phone-based application called TotalPave was used to measure the smoothness of all of the roads within the Town's roadway network. TotalPave uses the standardized ASTM E1926 procedure to measure and calculate the IRI values. The system also links with the Town's GIS database to collect data unique to each roadway segment and then attributes this data to each section of the road.

\\ae.ca\data\working\let\2021-3254-00\civil\analysis\final_report\Appendix_B-mem_infrastructure_conditions_review\mem_raymond_TMP_infrastructure_condition_assessment.docx



Memo To: , the Town of Raymond

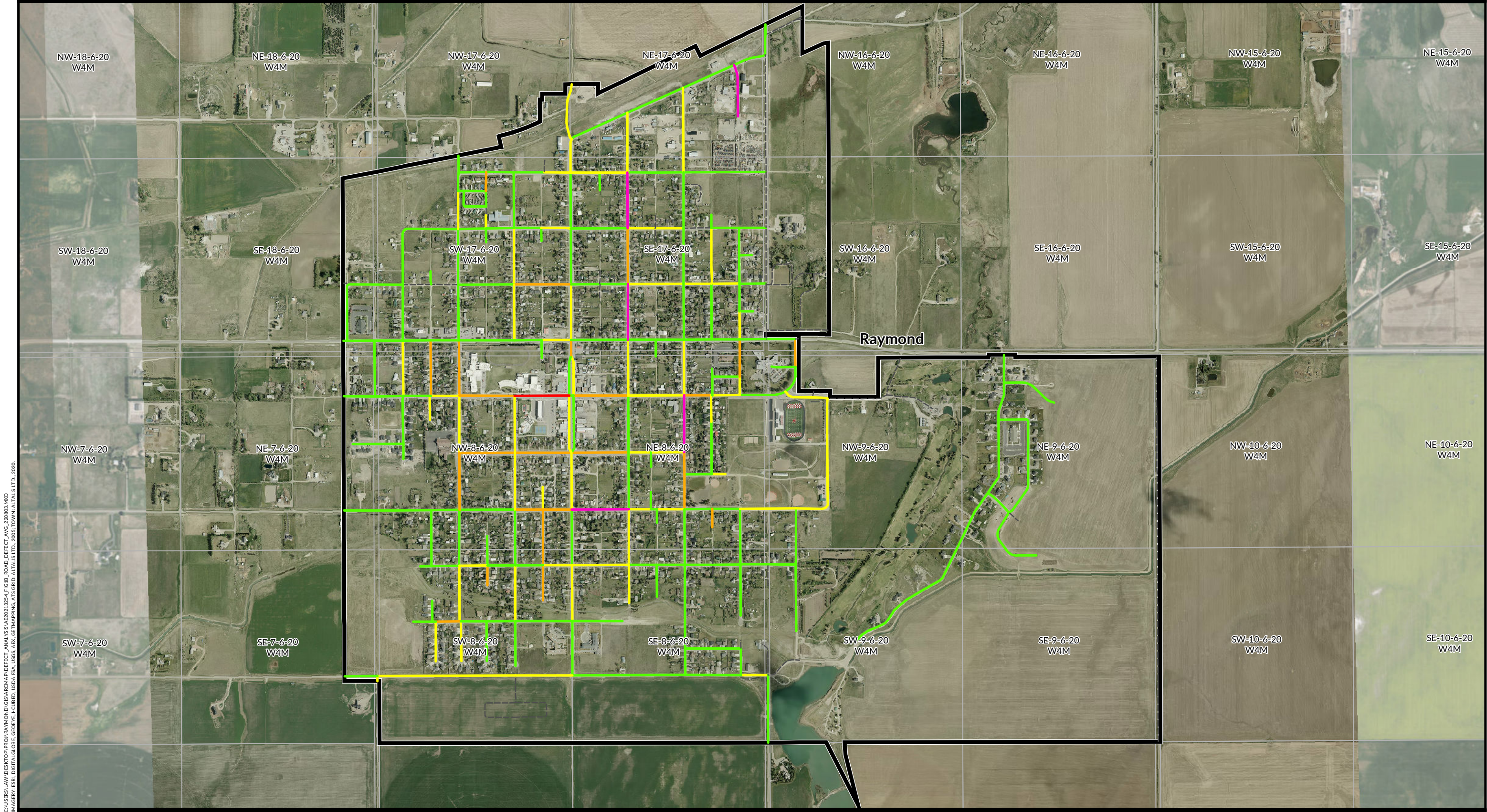
April 15, 2025

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The pavement condition assessment and scoring results, were combined with the roadway smoothness testing, and factored with a weighted average scale to determine the overall condition score for each roadway segment. The detailed summary of the roadway condition survey and defect ranking is presented in **Appendix A**. A map of the roadway condition assessment is presented in the following **Figure 2-1**.

The roadway segment with a very poor rating average weighting score (>2.5) is along 100 St. N between 100 St. W and Broadway St. N. Poor roadway weighted ranked segments ($>2.0 - 2.5$) are:

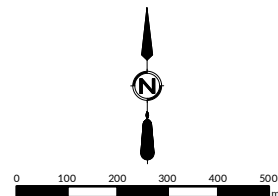
- 100 St. E between 500 St. N and 400 St. N
- 100 St. E between 300 St. N and 200 St. N
- 200 St. E between 100 St. N and Park Avenue
- 100 St. S between Broadway St S and 100 St. E



C:\USERS\LAU\DESKTOP\PROJECTS\RAYMOND\GIS\RAYMOND\DETECT_ANALYSIS\AE20213254\FIG1B.ROAD_DEFECT_AVG_220803.MXD
IMAGERY: ESRI, DIGITALGLOBE, GEOEYE, USDA, USGS, AIB, GETMAPPING, ATIS GRID, ALTALIS LTD., 2005; TOWN, ALTALIS LTD., 2020



- LEGEND**
- Weighted Average
- No Defect/Newly Paved
 - Good <=1.0
 - Average >1.0 - 1.5
 - Fair >1.5 - 2.0
 - Poor >2.0 - 2.5
 - Very Poor >2.5
 - Municipal Boundary



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FIGURE 2-1
ROAD DEFECTS
(AVERAGE WEIGHTED SCALE)

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TRANSPORTATION MASTER PLAN

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April 15, 2025
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3 CONCRETE SIDEWALK, CURB AND WHEELCHAIR RAMP CONDITION ASSESSMENTS

All concrete sidewalks, curbs and wheelchair ramps within the Town were assessed by evaluating the severity of defects including:

- Distortion
- Trip edge
- Catch Basin Displacement
- Cracking
- Crumbling

Each defect was ranked on a scale of 1 (best condition) to 5 (worst condition) and factored over the length of each sidewalk segment to determine an overall grade or condition of each sidewalk segment.

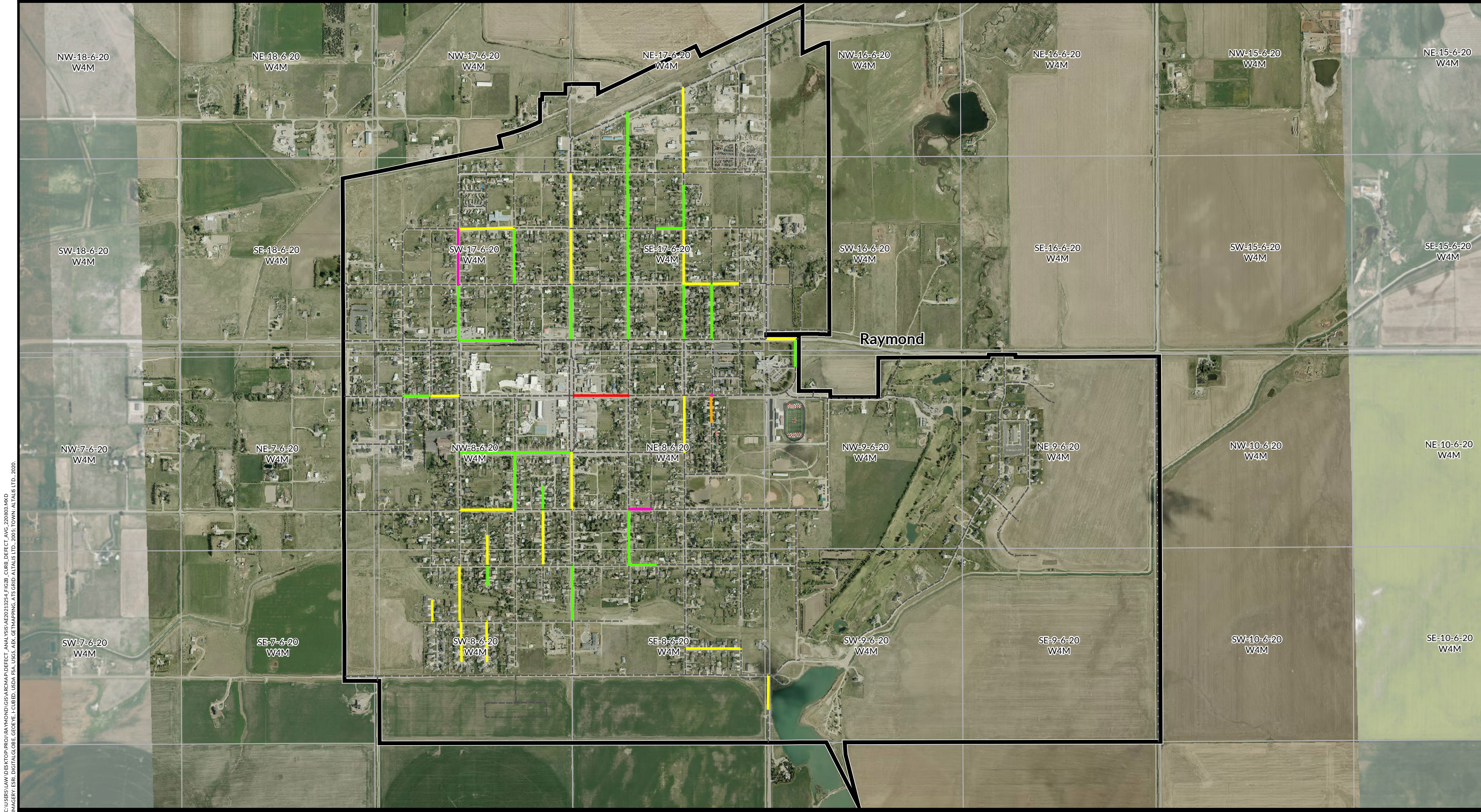
The overall condition of each section was assessed using a weighted average scale based on the concrete condition evaluation, which included all defects. The detailed summary of the concrete condition surveys and defect ranking is presented in **Appendix A**. Maps of the sidewalks, curbs and wheelchair ramp defects collected is presented in **Figure 3-1, Figure 3-2, and Figure 3-3**.

Curbs: The worst-rated curb section (Very poor (>2.5)) is located along 100 St. N between Broadway St. N and 100 St. E.

Sidewalks: Segments are generally ranked average or good. One segment is rated as poor on the NE corner of Broadway St. N and 500 St. N. During the sidewalk assessment, it was observed that many sidewalks are narrower than the desired sidewalk width of 1.8m.

Wheelchair ramps: There are many pedestrian crossing locations without wheelchair ramps; in some locations, all four corners of the intersection are without ramps. At locations with ramps, the condition varies. Ramps rated as poor are:

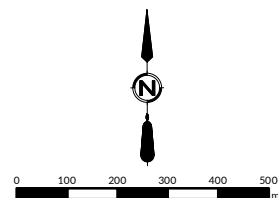
- NE corner – 200 St. N at 200 St. W
- NE corner – 100 St. N at 200 St. W
- North side mid-block – 100 St. between Broadway St. N and 200 St. W
- SW corner – 100 St. E at 200 St. N
- NW corner – 200 St. E at 200 St. N
- SE corner – 200 St. E at 100 St. S



C:\USERS\JAW\DESKTOP\PROJECTS\RAYMOND\GIS\RAYMOND\DETECT_ANALYSIS\AE20213254\FIG2B_CURB_DEFECT_AVG_220803.MXD
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- LEGEND**
- Weighted Average
- No Defect/No Curb
 - Good <=1.0
 - Average >1.0 - 1.5
 - Fair >1.5 - 2.0
 - Poor >2.0 - 2.5
 - Very Poor >2.5
 - Municipal Boundary

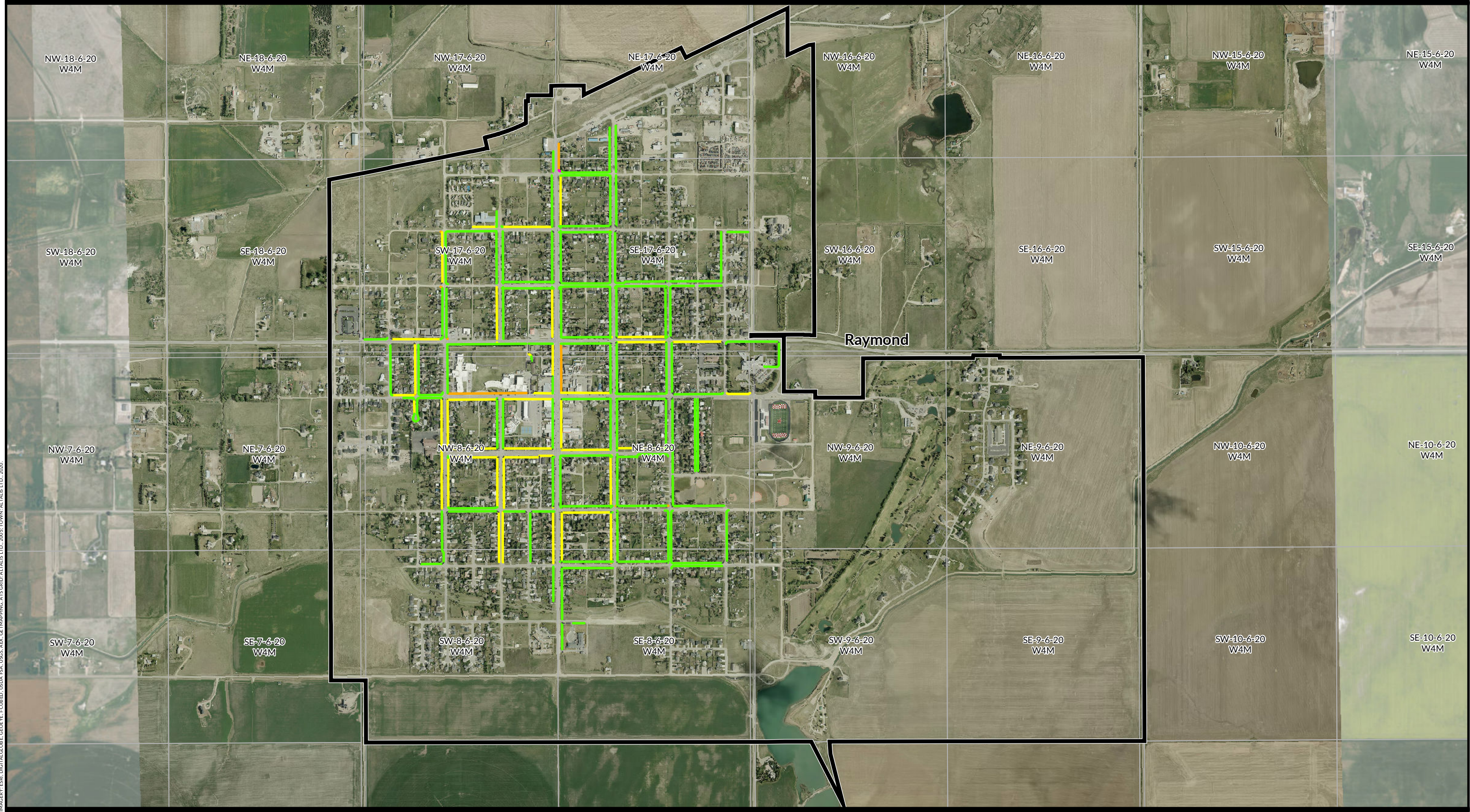


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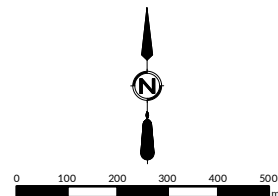
FIGURE 3-1
CURB DEFECTS
(AVERAGE WEIGHTED SCALE)

TOWN OF RAYMOND
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C:\USERS\LAU\DESKTOP\PROJECTS\RAYMOND\GIS\RAYMOND\DETECT_ANALYSIS\AE20213254\FIG3B_SIDEWALKDETECT_AVG_20803.MXD
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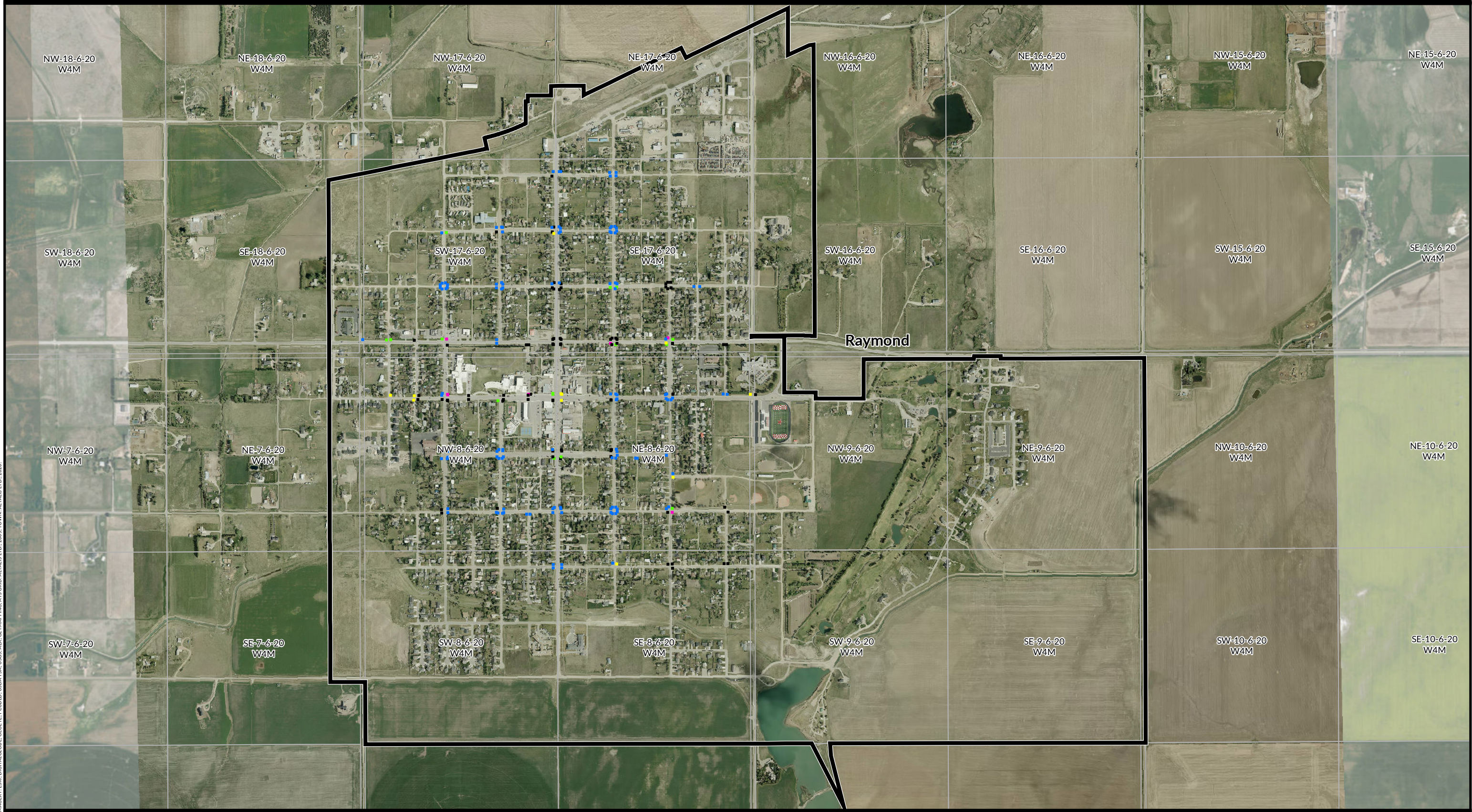
- LEGEND**
- Weighted Average
- No Defect
 - Good <=1.0
 - Average >1.0 - 1.5
 - Fair >1.5 - 2.0
 - Poor >2.0 - 2.5
 - Municipal Boundary



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FIGURE 3-2
SIDEWALK DEFECTS
(AVERAGE WEIGHTED SCALE)

TOWN OF RAYMOND
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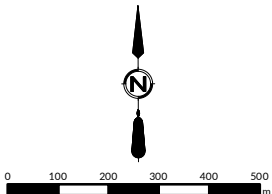


LEGEND

Weight Average

- No Defect
- Good <=1.0
- Average >1.0 - 1.5
- Poor >2.0 - 2.5

- Wheelchair Ramp Missing/Not Available
- Municipal Boundary



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FIGURE 3-3
WHEELCHAIR RAMP DEFECTS
(AVERAGE WEIGHTED SCALE)

TOWN OF RAYMOND
TRANSPORTATION MASTER PLAN



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4 CONCLUSIONS

Pavement Condition Assessment: The pavement condition assessment combined defect rankings with smoothness testing results to determine overall condition scores for each roadway segment. The worst-rated segment was 100 St. N between 100 St. W and Broadway St. N, with other poor segments identified.

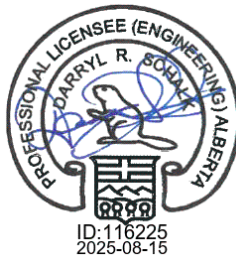
Concrete Sidewalk, Curb, and Wheelchair Ramp Condition Assessments: Defects in sidewalks, curbs, and wheelchair ramps were evaluated and ranked similarly to roadway defects. There are many instances of sidewalks below 1.8m and many intersections and crossings without a wheelchair ramp. The worst-rated curb section was along 100 St. N between Broadway St. N and 100 St. E. Sidewalk segments were generally ranked average or good, with one poor segment identified. Several curb ramps were rated as poor, which included:

- NE corner – 200 St. N at 200 St. W
- NE corner – 100 St. N at 200 St. W
- North side mid-block – 100 St. between Broadway St. N and 200 St. W
- SW corner – 100 St. E at 200 St. N
- NW corner – 200 St. E at 200 St. N
- SE corner – 200 St. E at 100 St. S

Prepared by:

Andrei Radu, EIT

Reviewed by:



Darryl Schalk, P.Eng

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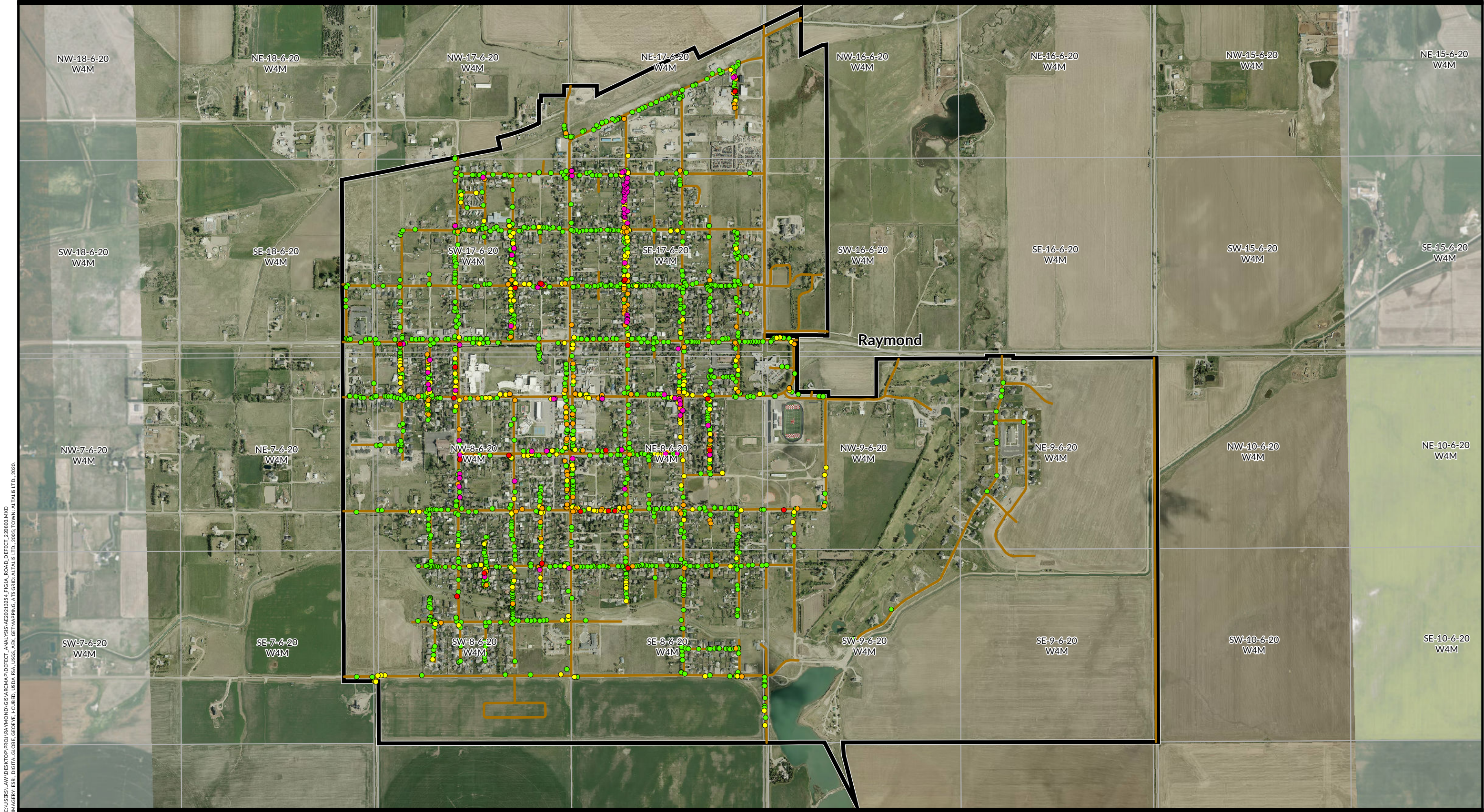
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April 15, 2025

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APPENDIX A – DETAILED ASSESSMENT MAPS



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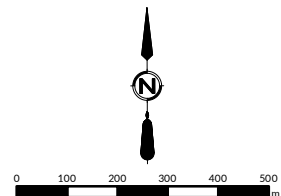
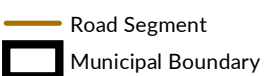


LEGEND

Defect Score

- Good <=1.0
- Average >1.0 - 1.5
- Fair >1.5 - 2.0
- Poor >2.0 - 2.5

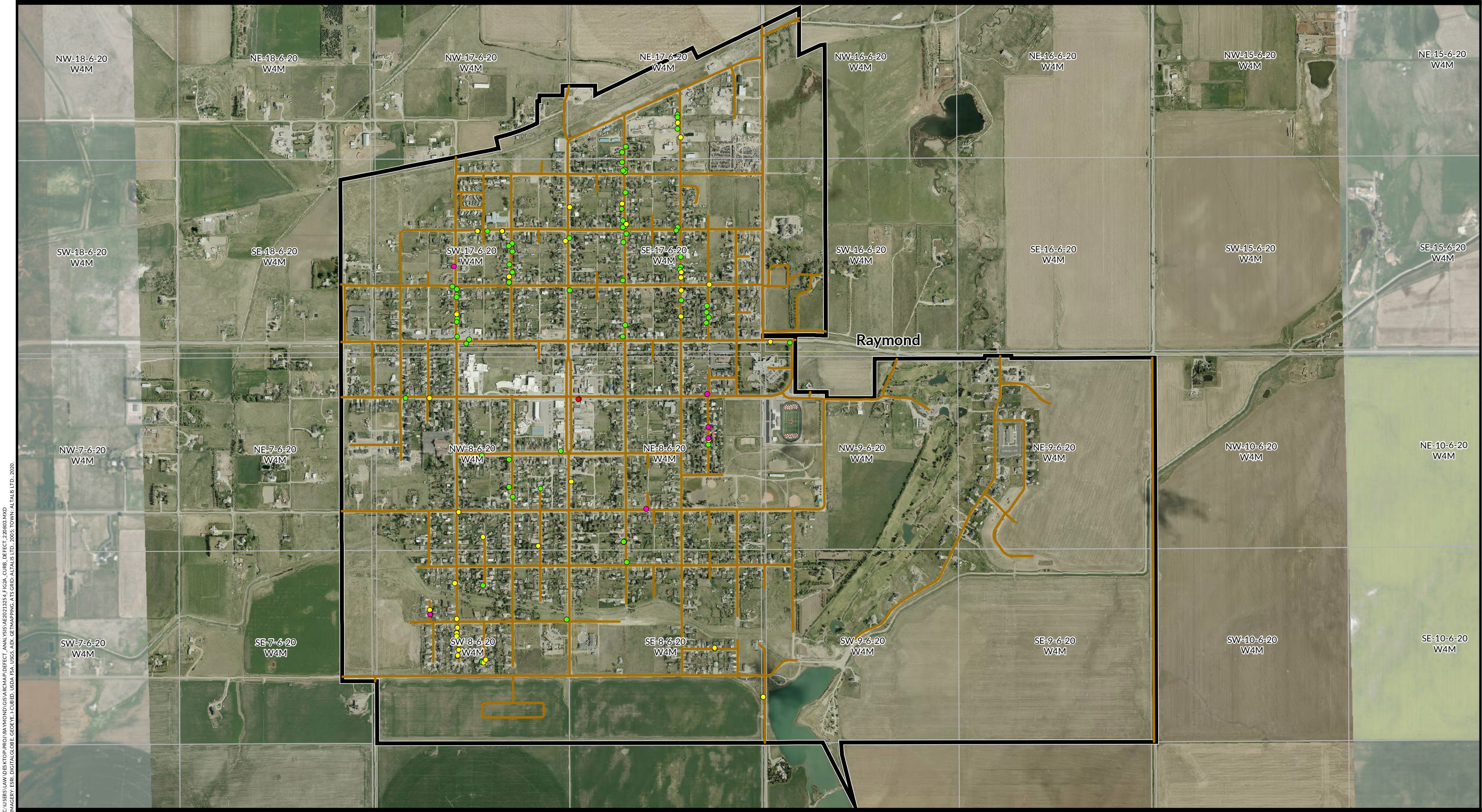
Very Poor >2.5



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**FIGURE 1A
ROAD DEFECTS**

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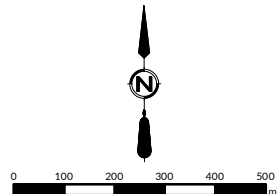
LEGEND

Defect Score

- Good <=1.0
- Average >1.0 - 1.5
- Poor >2.0 - 2.5
- Very Poor >2.5

Road Segment

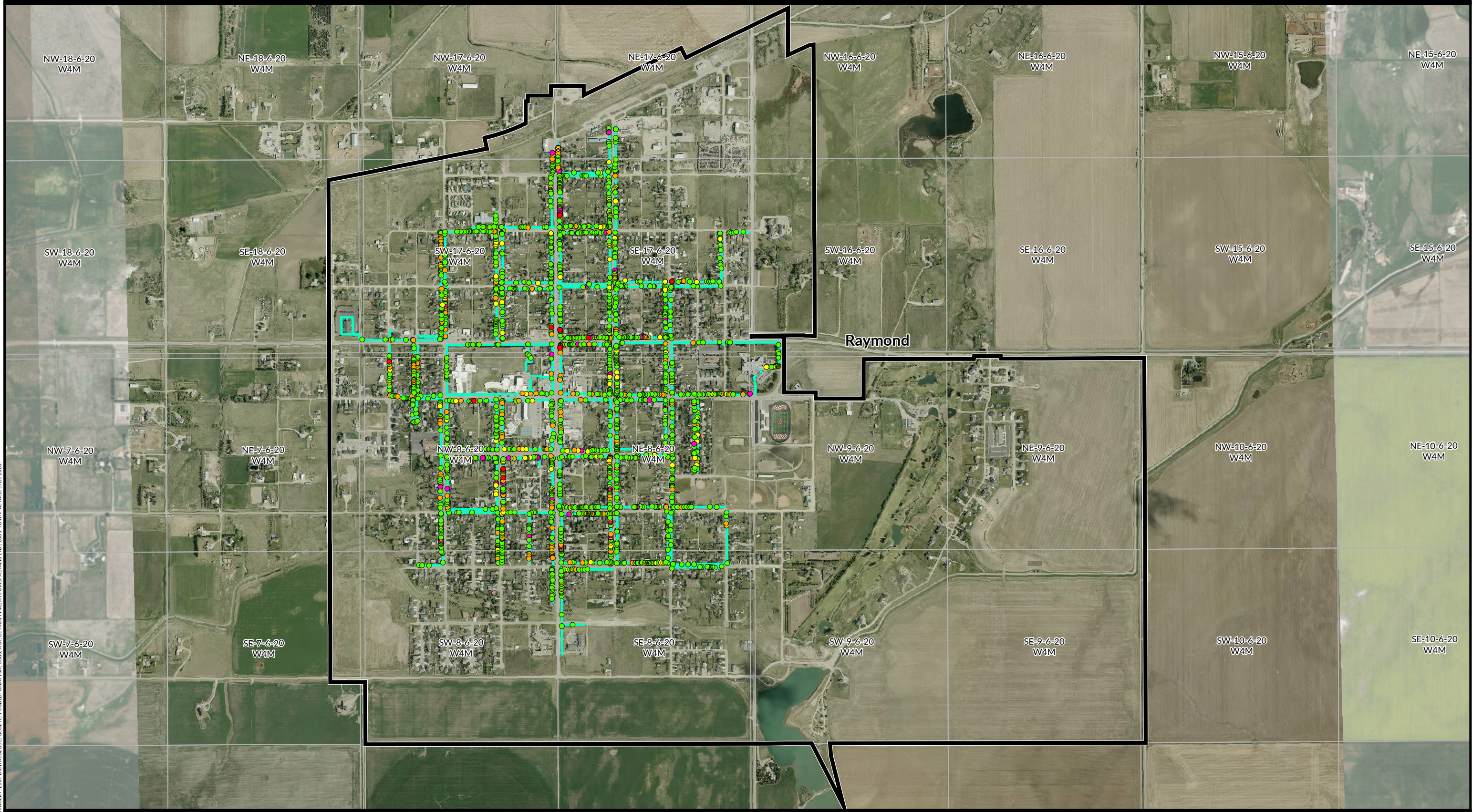
Municipal Boundary



AE PROJECT NO. 2021-3254-00
SCALE 1:15000
COORD. SYSTEM NAD 1983 3TM 114
DATE 2022-08-04
REV 00
DRAWN BY WL
CHECKED BY DS
DESCRIPTION ISSUED FOR DRAFT

FIGURE 2A CURB DEFECTS

TOWN OF RAYMOND
TRANSPORTATION MASTER PLAN



C:\USERS\JAW\DESKTOP\PROJECTS\RAYMOND\GIS\RAYMOND\DEFECT_ANALYSIS\AE20213254_FIG3A_SIDEWALKDEFECT_220803.MXD
IMAGERY: ESRI, DIGITALGLOBE, GEOEYE, USDA, USGS, AIB, GETMAPPING, ATIS, GRID, ALTALIS LTD., 2005; TOWN, ALTALIS LTD., 2020



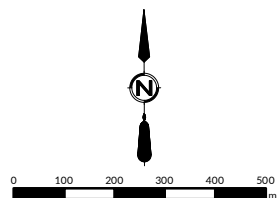
LEGEND

Defect Score

- Good <=1.0
- Average >1.0 - 1.5
- Fair >1.5 - 2.0
- Poor >2.0 - 2.5

Very Poor >2.5

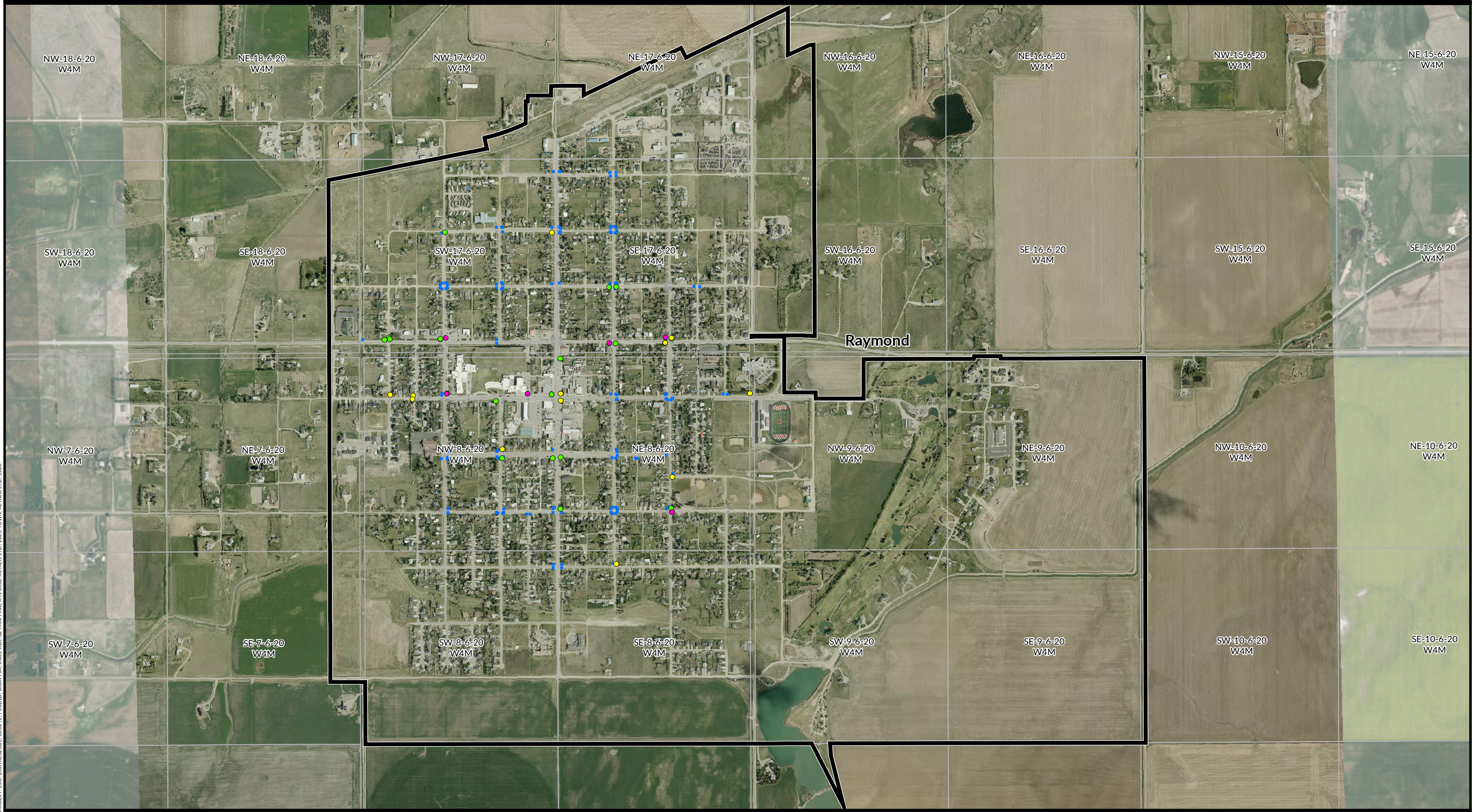
- Sidewalk Segment
- Municipal Boundary



AE PROJECT NO. 2021-3254-00
SCALE 1:15000
COORD. SYSTEM NAD 1983 3TM 114
DATE 2022-08-04
REV 00
DRAWN BY WL
CHECKED BY DS
DESCRIPTION ISSUED FOR DRAFT

FIGURE 3A
SIDEWALK DEFECTS

TOWN OF RAYMOND
TRANSPORTATION MASTER PLAN



C:\USERS\JAW\DESKTOP\PROJECTS\RAYMOND\GIS\RAYMOND\DEFECT_ANALYSIS\REV\AE\2023\23254_FIG4A_WCL_DEFECT_220803.MXD
IMAGERY: ESRI, DIGITALGLOBE, GEOEYE, USDA, USGS, AIB, GETMAPPING, ATIS GRID/ALTALIS LTD., 2005; TOWN, ALTALIS LTD., 2020

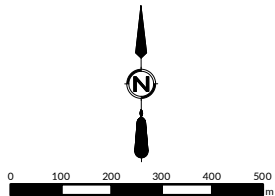


LEGEND

Defect Score

- Good <=1.0
- Average >1.0 - 1.5
- Poor >2.0 - 2.5
- Wheelchair Ramp

- Wheelchair Ramp Missing/Not Available
- ▭ Municipal Boundary



AE PROJECT NO. 2021-3254-00
SCALE 1:15000
COORD. SYSTEM NAD 1983 3TM 114
DATE 2022-08-04
REV 00
DRAWN BY WL
CHECKED BY DS
DESCRIPTION ISSUED FOR DRAFT

**FIGURE 4A
WHEELCHAIR RAMP DEFECTS**

TOWN OF RAYMOND
TRANSPORTATION MASTER PLAN

APPENDIX C - TRANSPORTATION MASTER PLAN SURVEY RESPONSE SUMMARY REPORT

Transportation Master Plan Survey

SURVEY RESPONSE REPORT

15 June 2021 - 05 February 2023

PROJECT NAME:

Transportation Master Plan



SURVEY QUESTIONS

Q1 Which of the following outcomes are most important to you? Please rank these topics in order of most important (1) to least...

OPTIONS	AVG. RANK
Creating safe walking/cycling routes to schools	2.94
Improving traffic safety and managing speeds	3.02
Developing a connected pathway system	4.84
Improving the pedestrian realm on main streets	4.84
Removing physical barriers for people using mobility devices	5.12
Reducing travel times and congestion	5.65
Managing parking demand downtown	6.02
Improving public health	7.18
Providing more transportation choices	7.31
Improving environmental outcomes	8.08

Mandatory Question (49 response(s))

Question type: Ranking Question

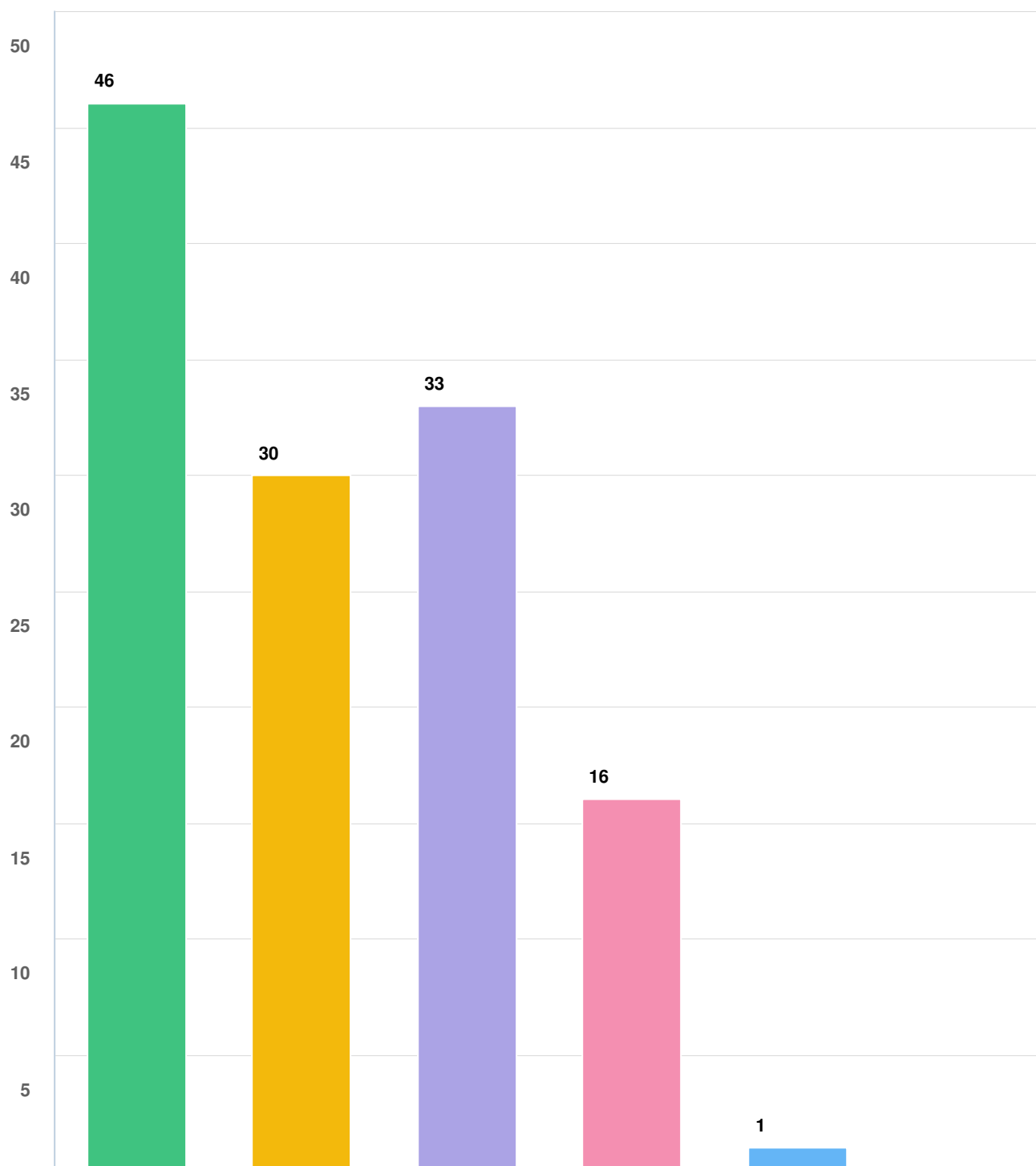
Q2 | What transportation facilities need the most improvement in Raymond today? Please rank these topics in order of most important (1) to least important (5)

OPTIONS	AVG. RANK
Neighborhood Streets	2.06
Major Streets	2.12
Walking Network	2.78
Cycling Network	3.98
Parking	4.06

Mandatory Question (49 response(s))

Question type: Ranking Question

Q3 How do you normally get around Town (select multiple, if applicable)?



Question options

● Drive alone ● Drive with others (carpool) ● Walk ● Bike ● Other (please specify) ● N/A

Mandatory Question (49 response(s))

Question type: Checkbox Question

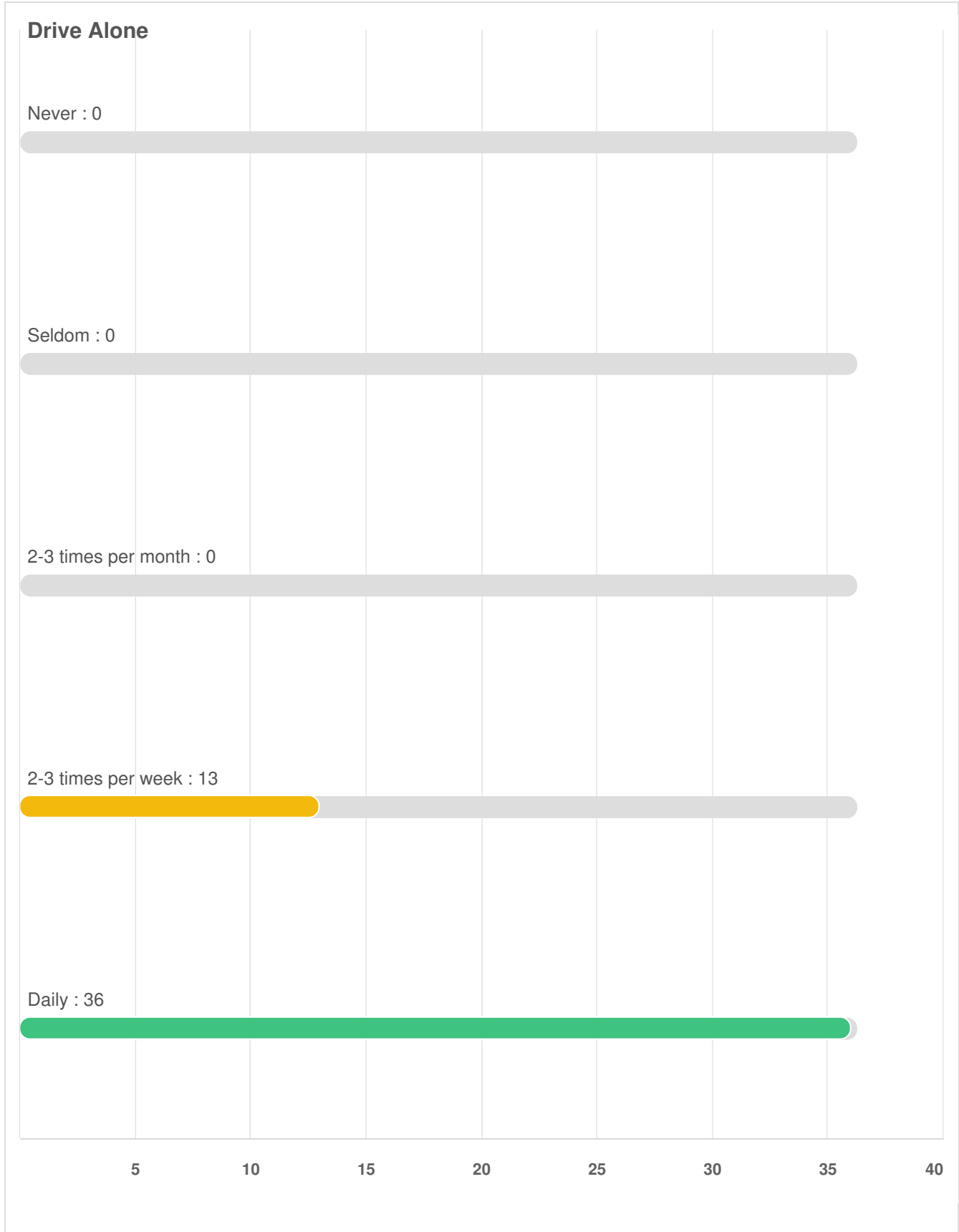
Q4 How often do you walk, bike, drive, or carpool for transportation purposes?

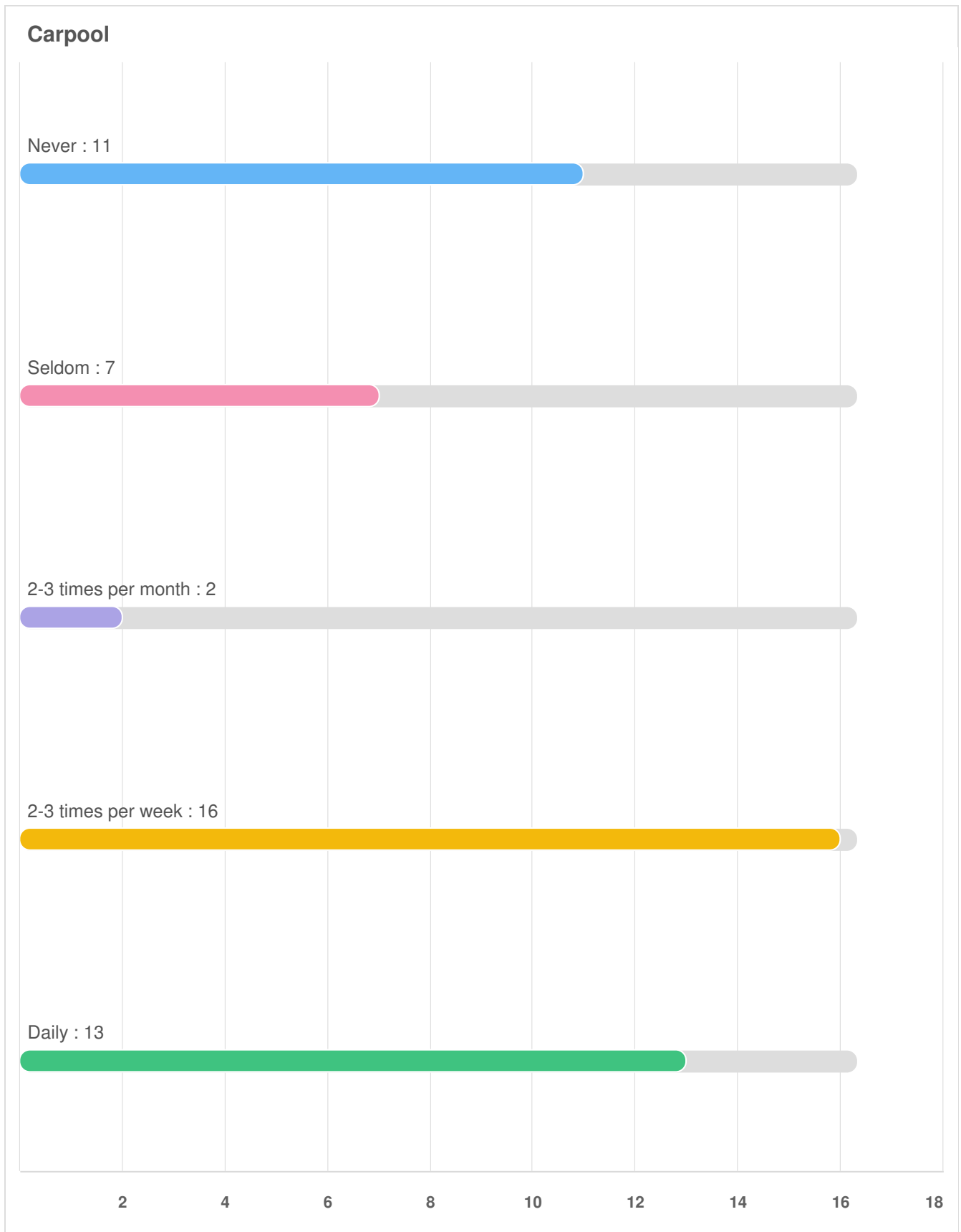


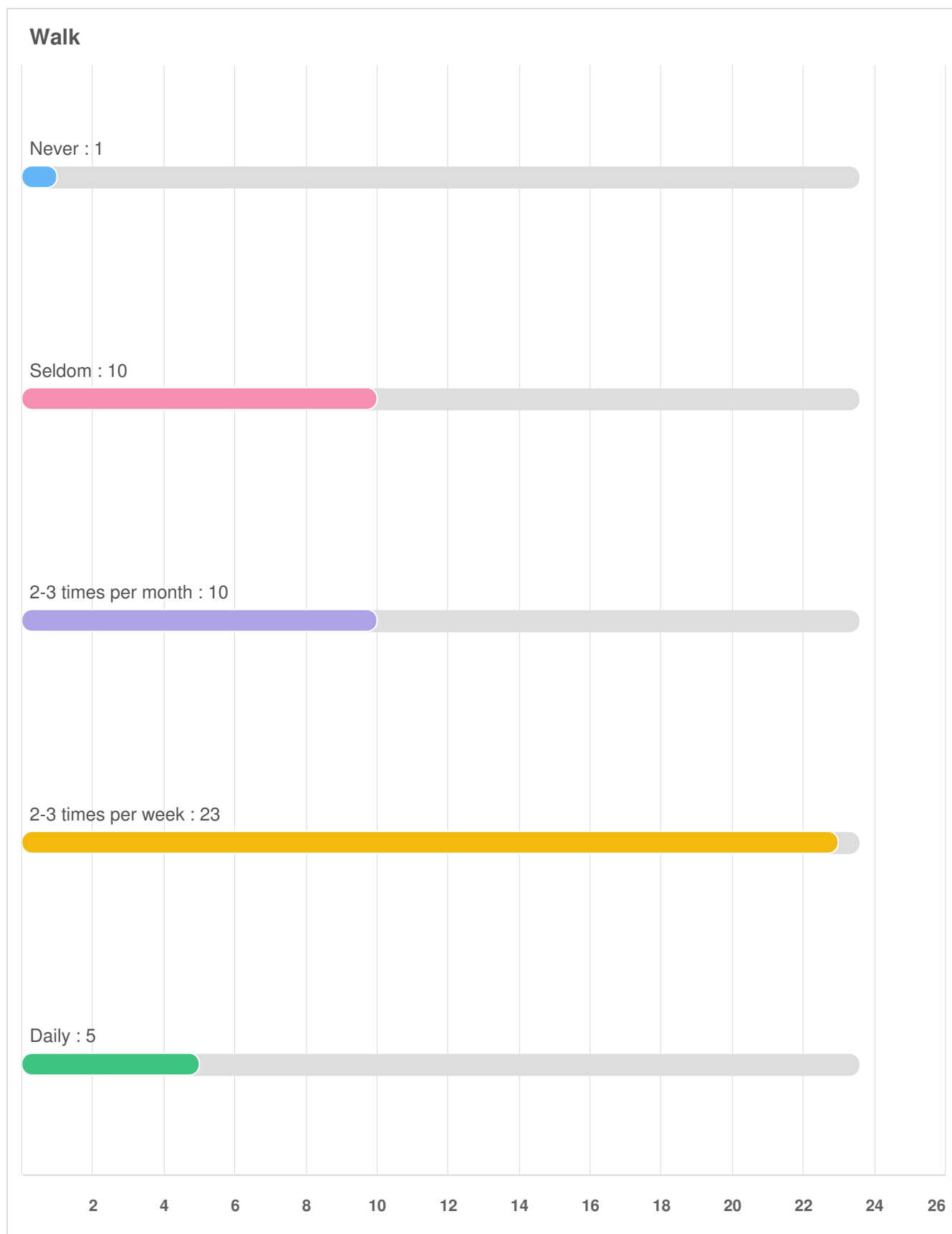
Mandatory Question (49 response(s))

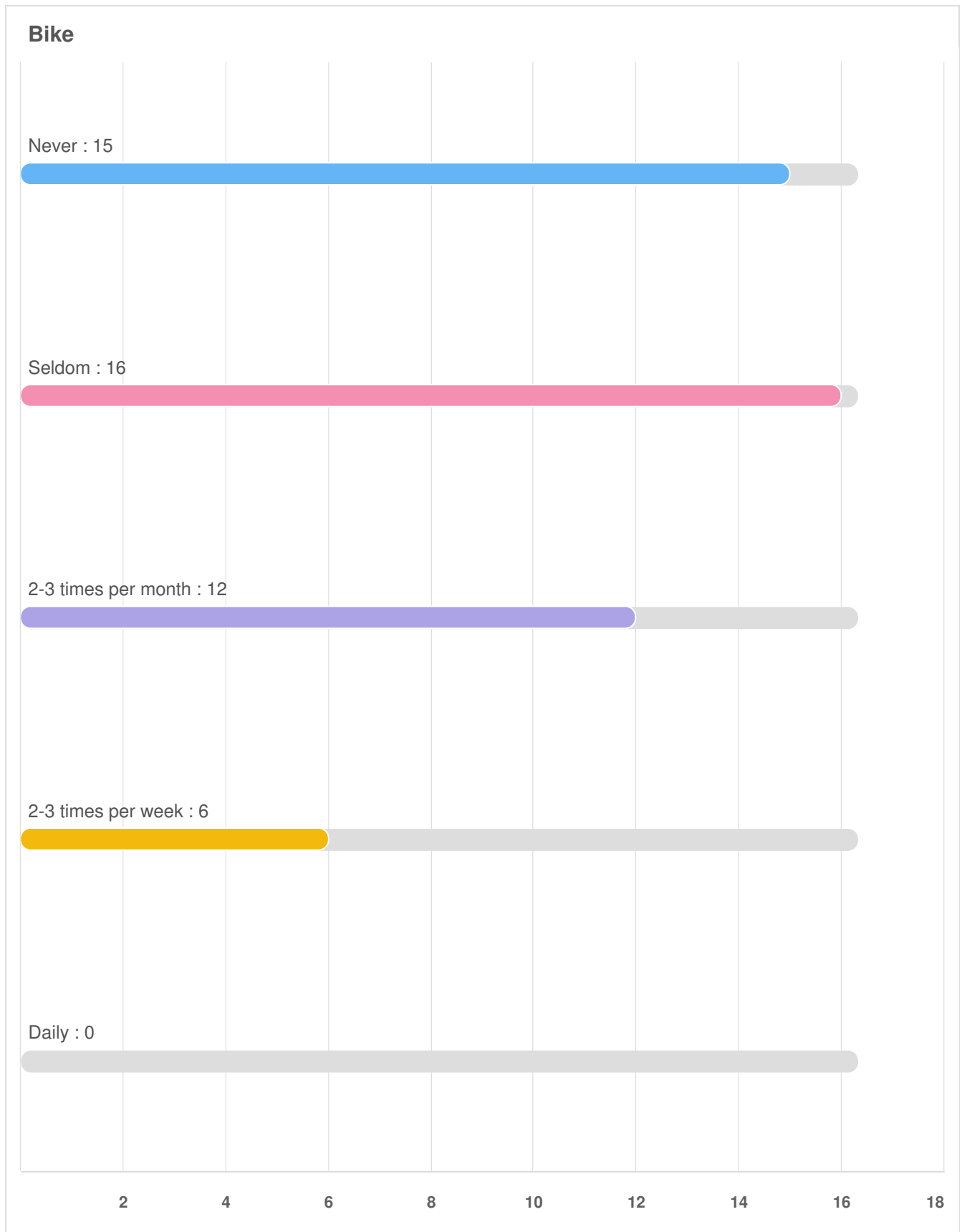
Question type: Likert Question

Q4 | How often do you walk, bike, drive, or carpool for transportation purposes?









Q5 How often do you walk, bike, drive, or carpool for recreation or exercise purposes?

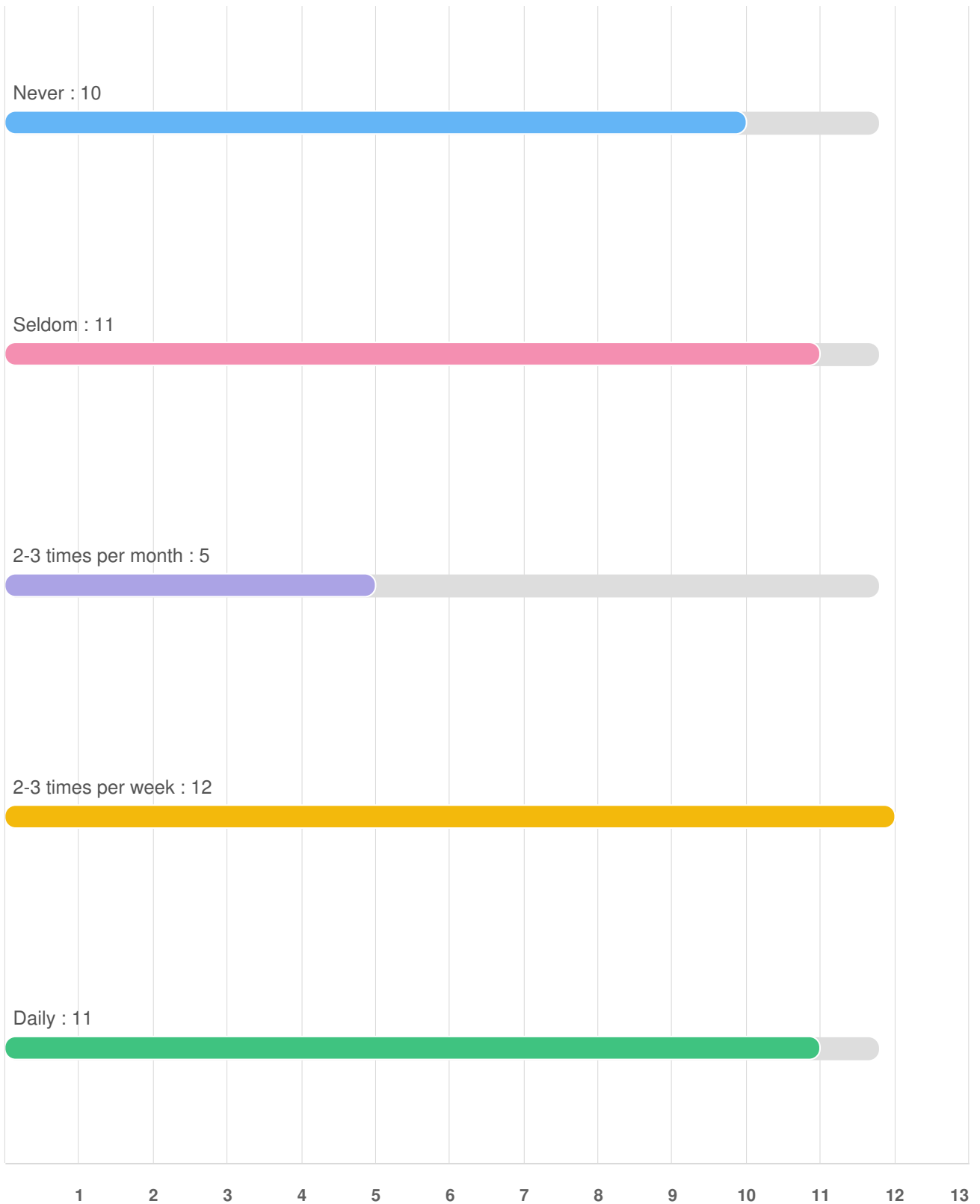


Mandatory Question (49 response(s))

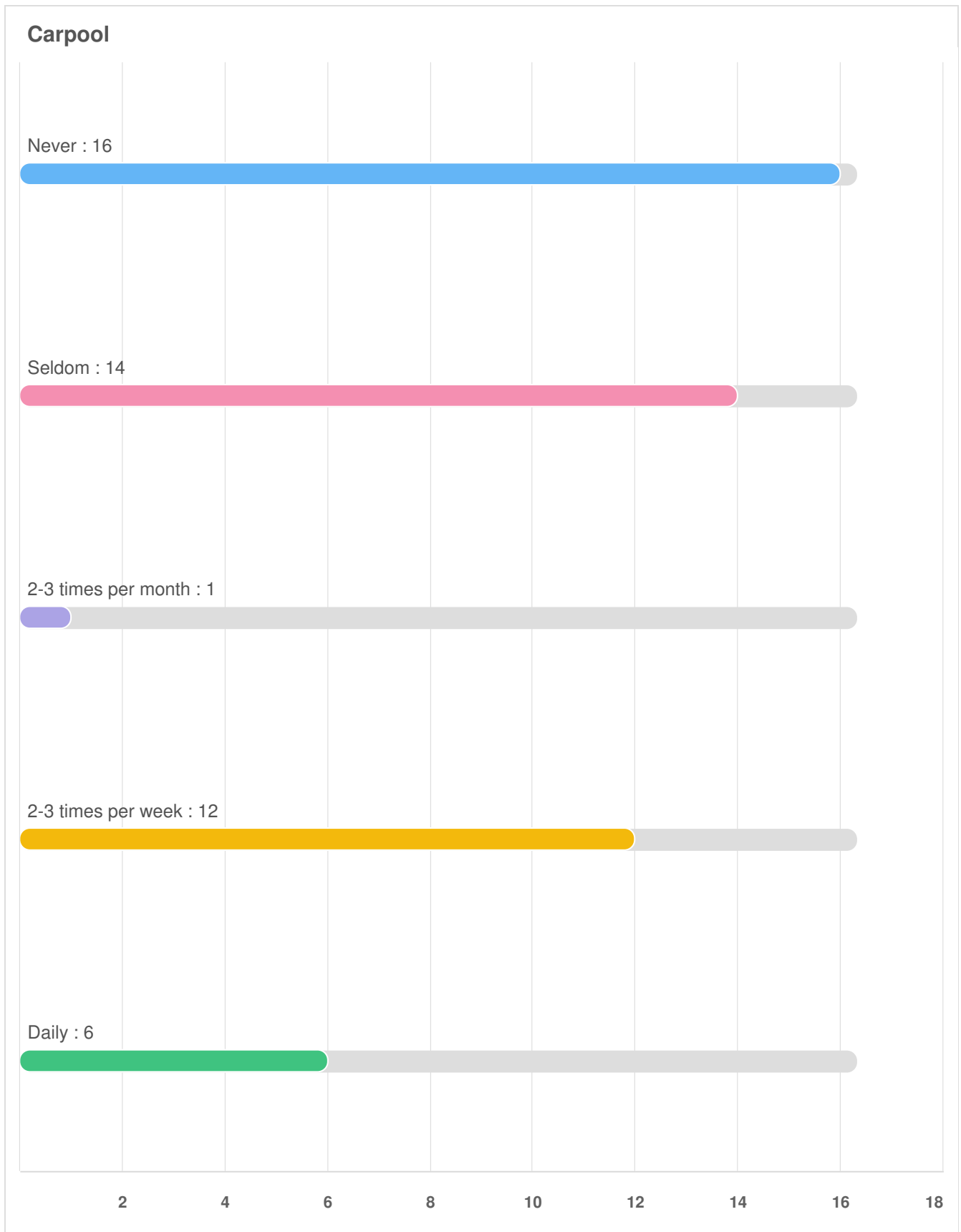
Question type: Likert Question

Q5 | How often do you walk, bike, drive, or carpool for recreation or exercise purposes?

Drive Alone



--



Walk

Never : 1



Seldom : 9



2-3 times per month : 7



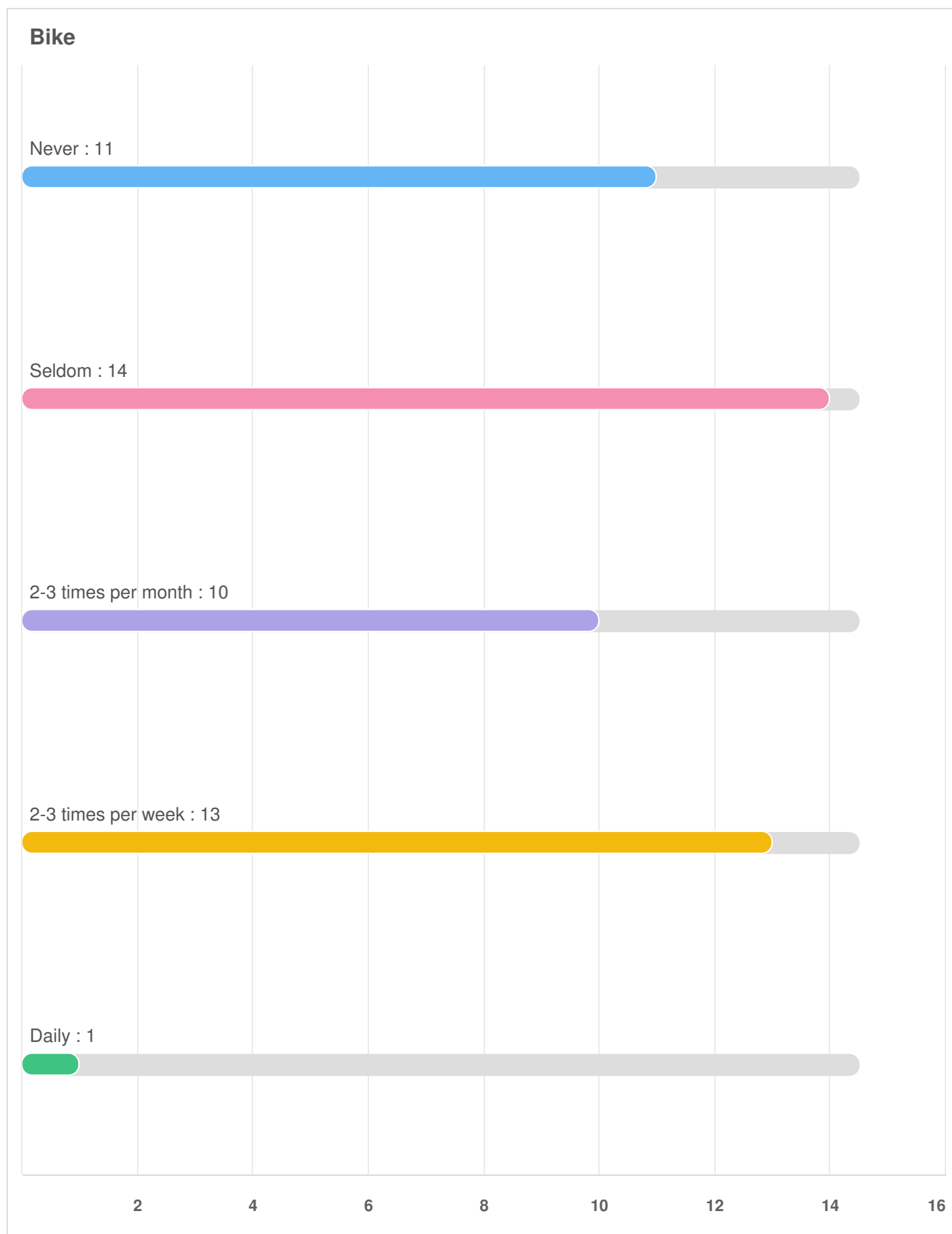
2-3 times per week : 24



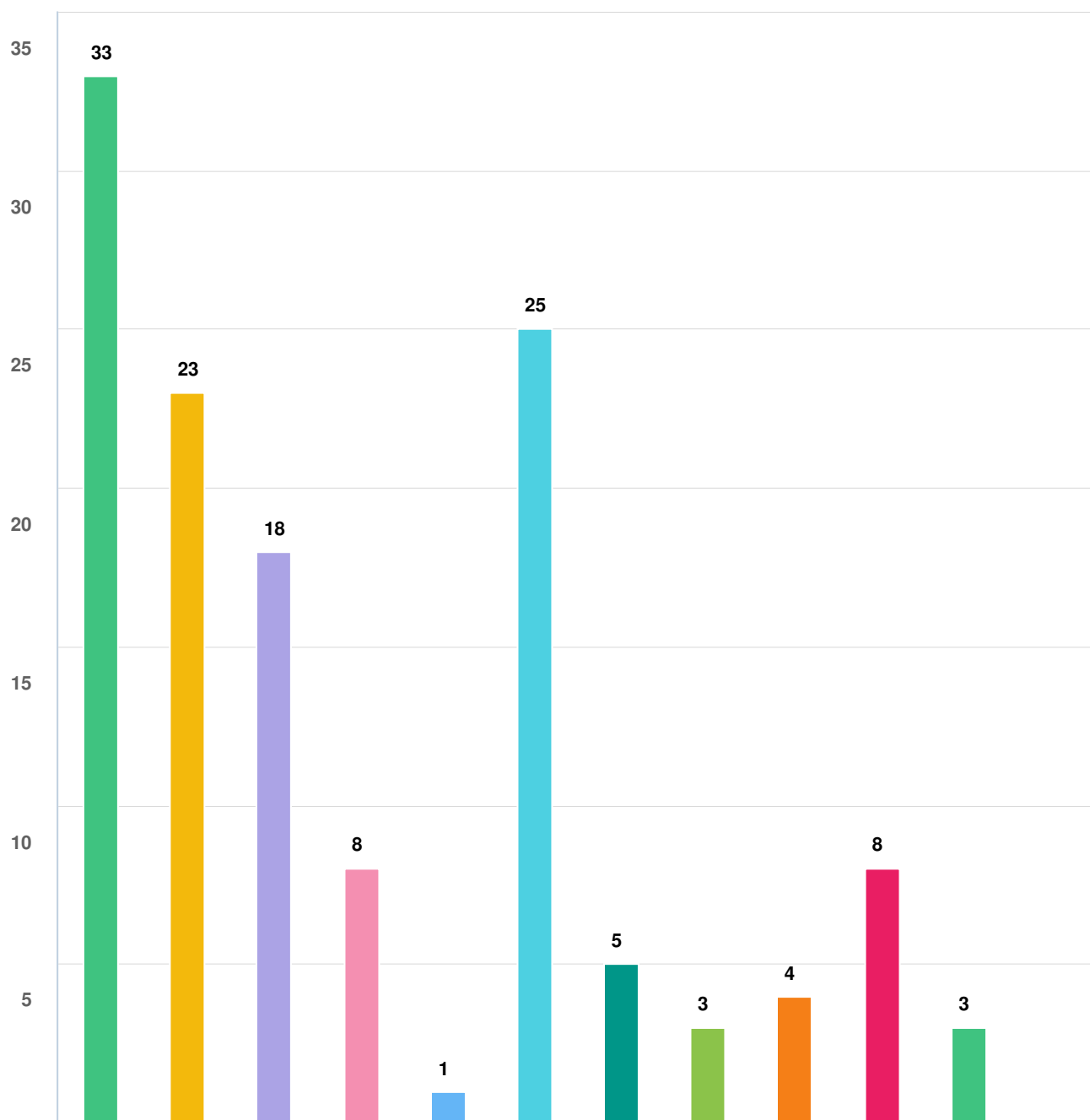
Daily : 8



2 4 6 8 10 12 14 16 18 20 22 24 26



Q6 What are the main issues or challenges for walking in Raymond? (pick your top 3)



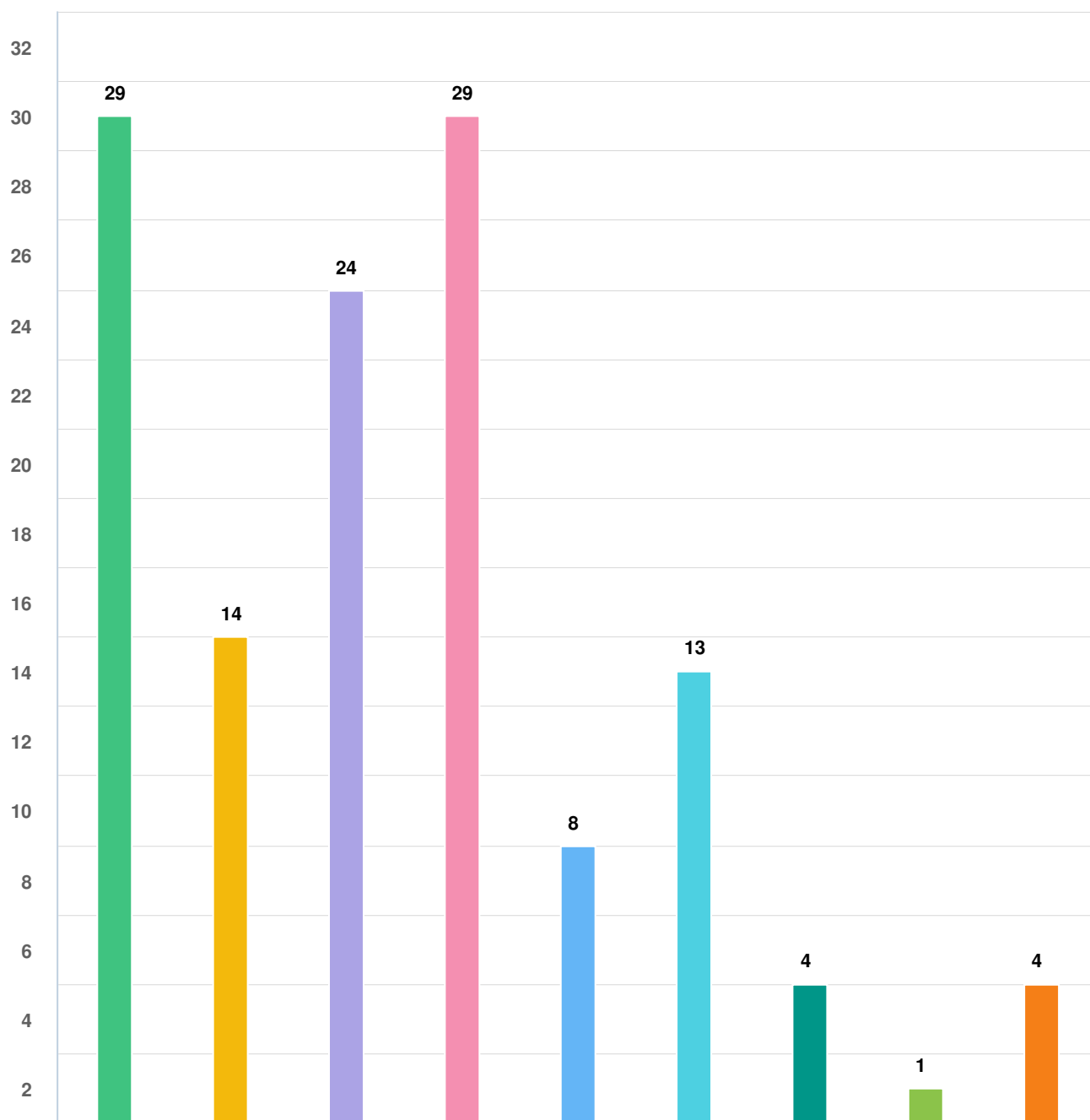
Question options

- Distances are too far
 ● Other (please specify)
 ● Nowhere to walk to
 ● Sidewalks or pathways are not accessible
- Lack of rest areas
 ● Personal safety
 ● Weather and its impacts to mobility
 ● Streets are too wide
- Speed and noise of motor traffic
 ● Intersection safety
 ● Condition of sidewalks or pathways
- Lack of sidewalks or pathways

Mandatory Question (49 response(s))

Question type: Checkbox Question

Q7 What could we do to encourage you to walk more? (pick your top 3)

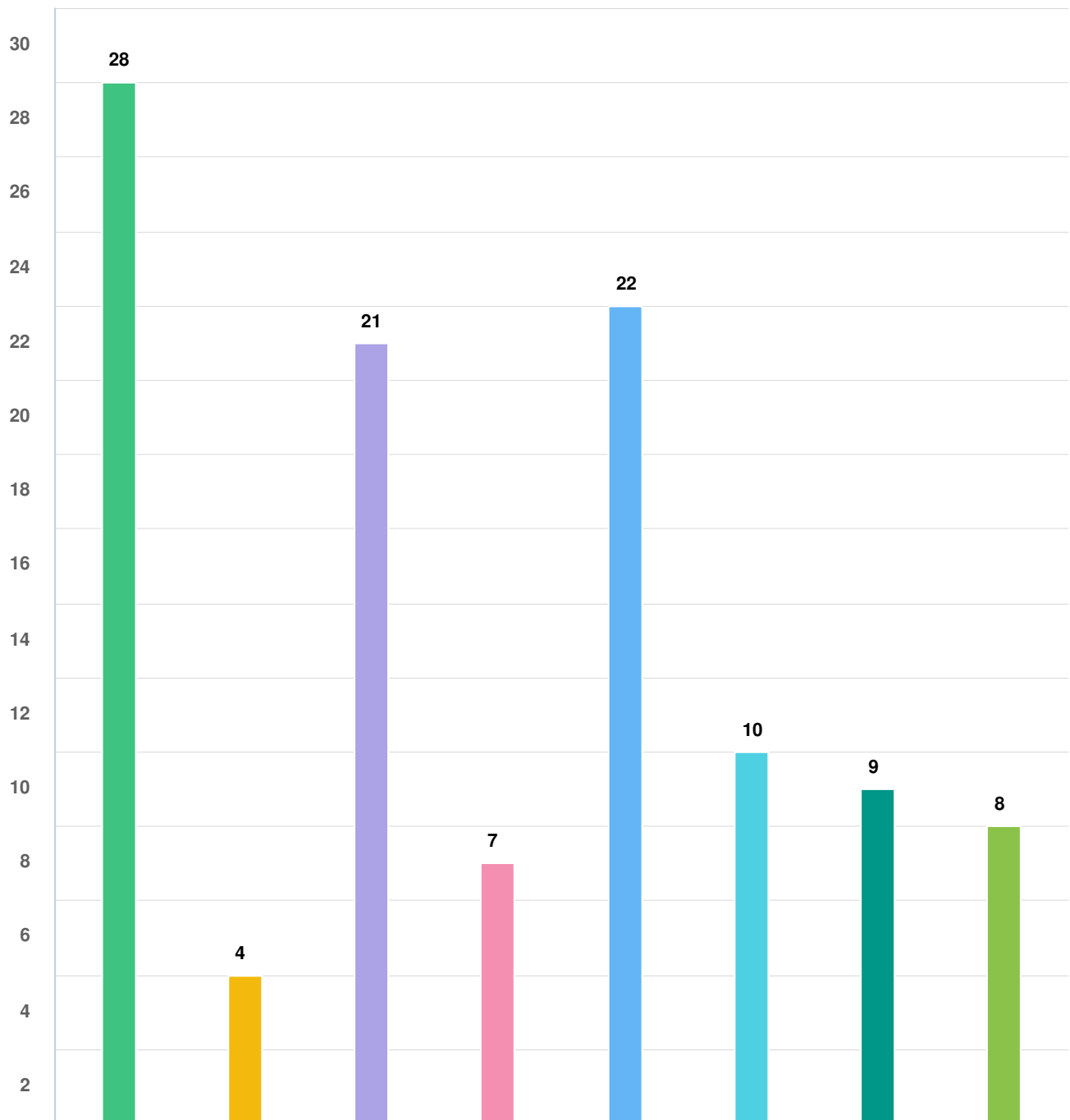


Question options

- Other (please specify)
 ● Nothing would encourage me to walk more
 ● Improve wayfinding/signage
- Provide more benches and places to sit
 ● Provide more and enhance existing crosswalks
- Ensure pathways and sidewalks are well lit
 ● Build more sidewalks
 ● Widen and improve existing sidewalks
- Build more trails and pathways

Mandatory Question (49 response(s))
Question type: Checkbox Question

Q8 What are the main issues or challenges for cycling in Raymond? (pick your top 3)



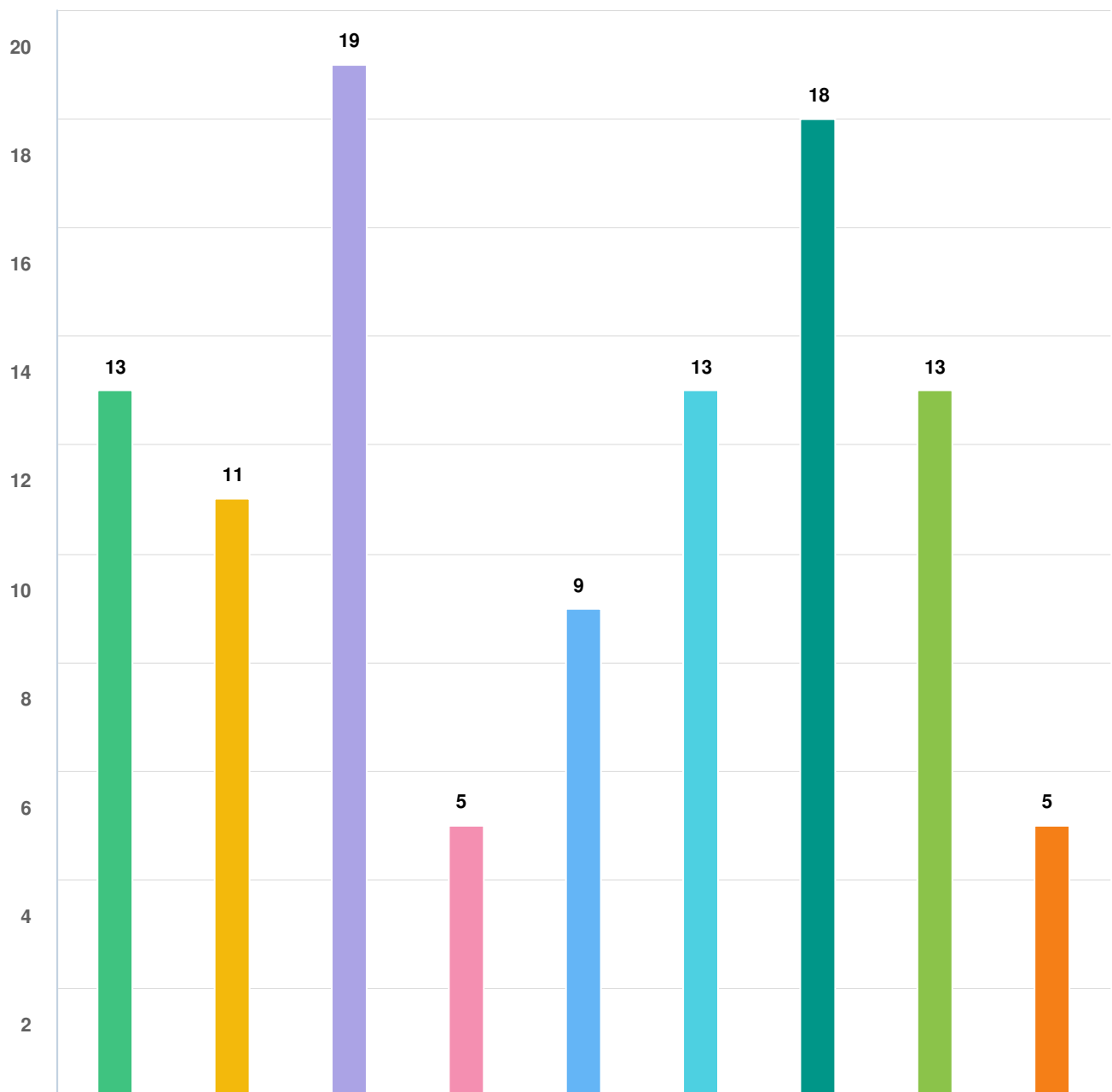
Question options

- Other (please specify)
 ● Bike routes don't go where I need to go
 ● Lack of bike parking
- Weather and its impacts to mobility
 ● Speed and noise of motor traffic
 ● Intersection safety
- Bike routes do not feel safe
 ● Lack of bike routes / gaps in bike route

Mandatory Question (49 response(s))

Question type: Checkbox Question

Q9 What could we do to encourage you to bike more? (pick your top 3)



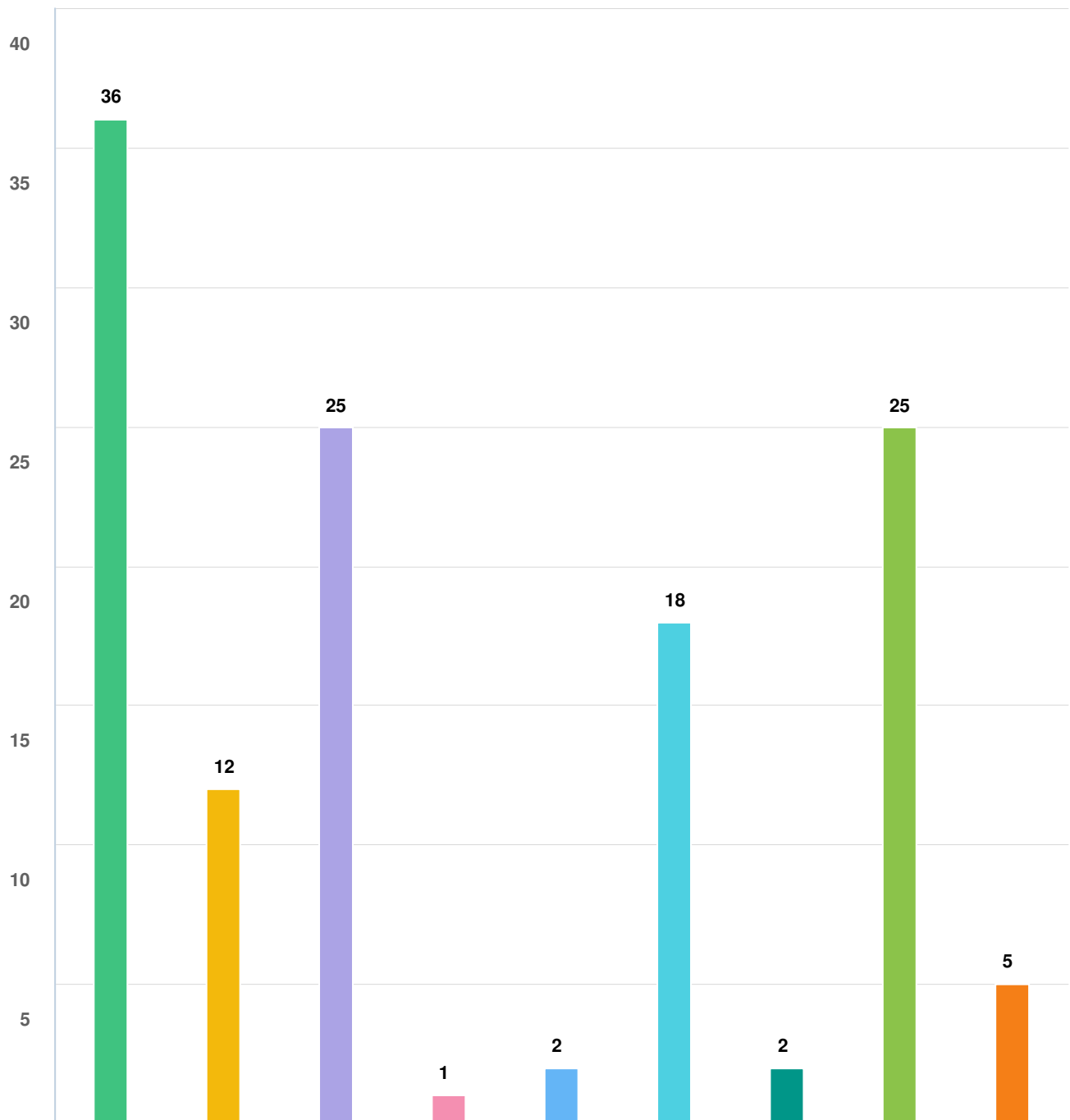
Question options

- Other (please specify)
 ● Nothing would encourage me to bike more
 ● Ensure bike routes are well lit
- Ensure bike routes are maintained year-round
 ● Provide more bike parking
 ● Better wayfinding/signage for cycling
- Build connected cycling routes to local destinations (schools/recreation/churches/shopping)
- Build bike routes visually separated from traffic (ie. painted bike lanes)
- Build bike routes physically separated from traffic (ie. barriers or other protection)

Mandatory Question (49 response(s))

Question type: Checkbox Question

Q10 What are the main issues or challenges for driving around Raymond? (pick your top 3)



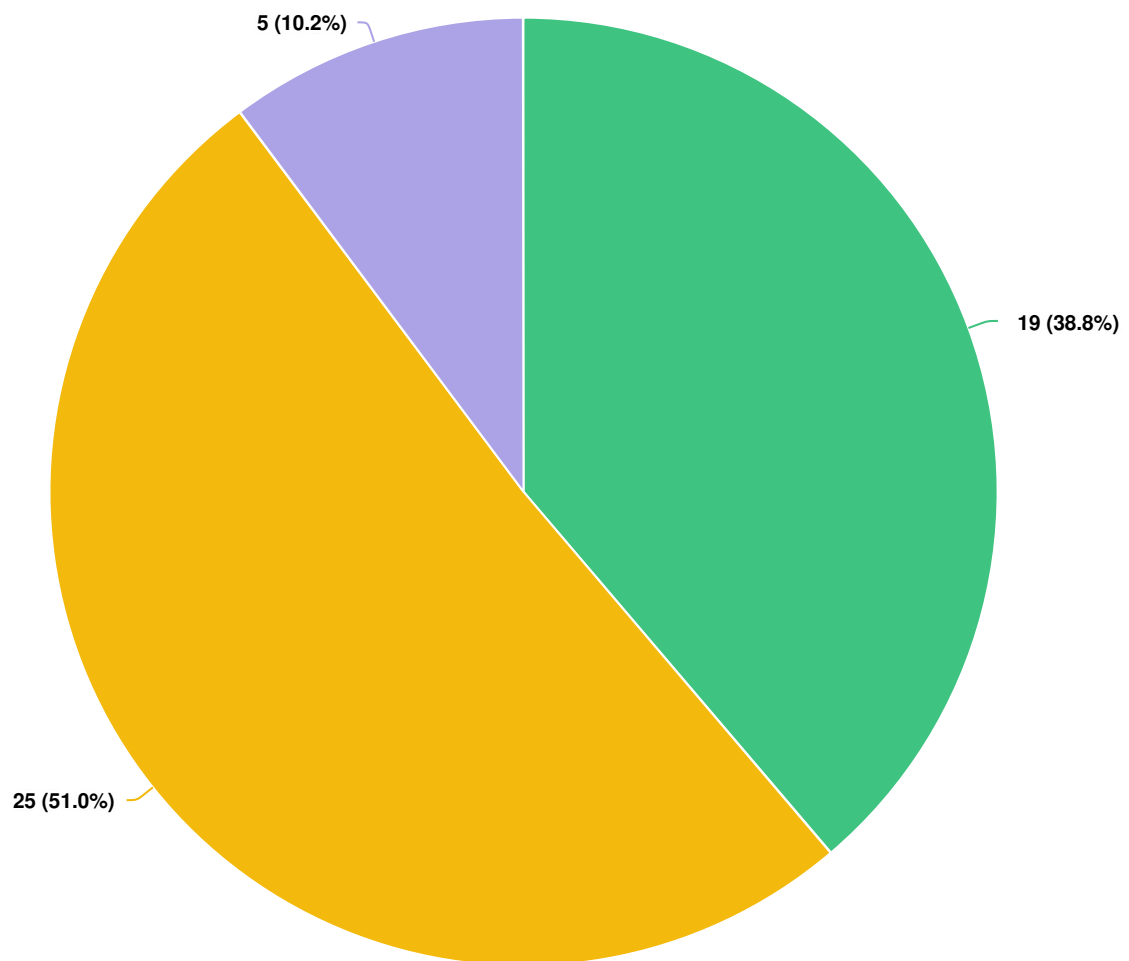
Question options

- Other (please specify)
 ● Weather/Road Conditions
 ● Lack of Parking
- Visibility of pedestrians/cyclists at intersections
 ● Wayfinding and signage
 ● Lane/road widths
- Traffic control at Intersections
 ● Traffic safety and speeding
 ● Roadway surface conditions (cracks, rutting, potholes)

Mandatory Question (49 response(s))

Question type: Checkbox Question

Q11 | The Town of Raymond may be considering changes to posted speeds within neighborhoods around Town (excluding major roads and playground/school zones). What is your preference related to posted speeds?

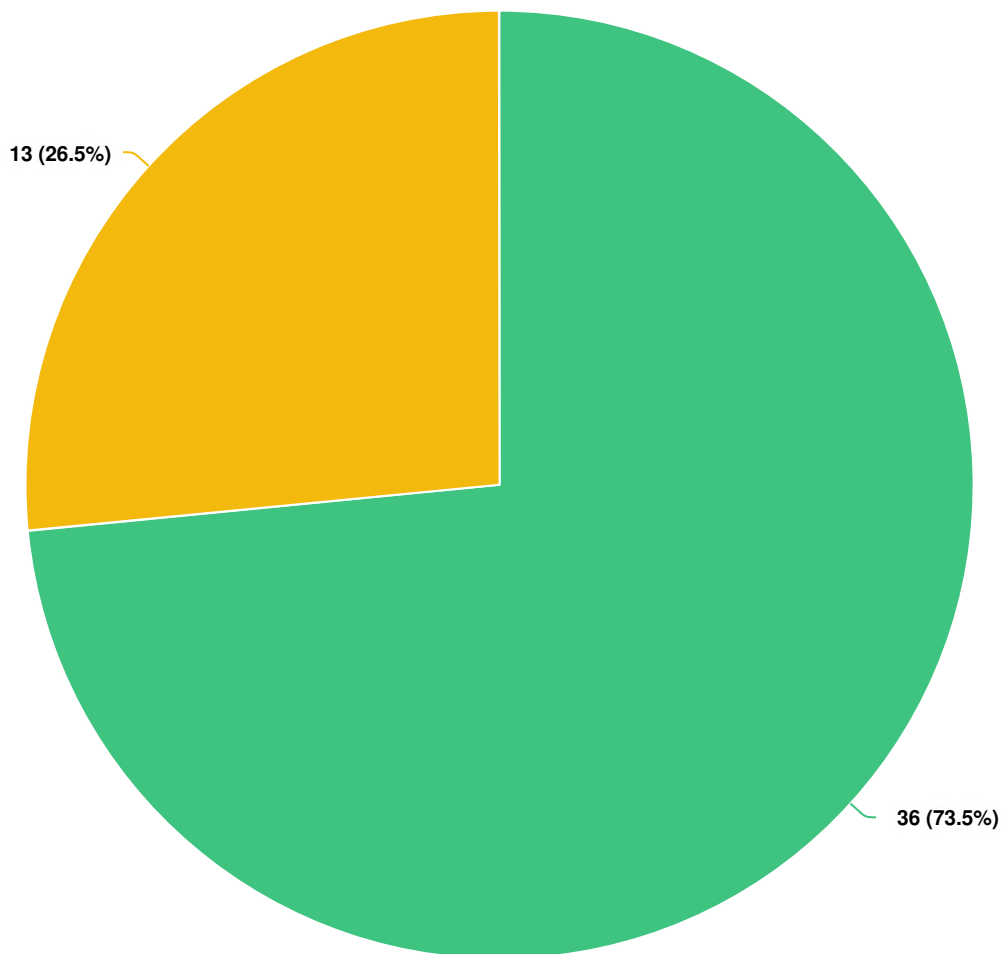


Question options

- ☐ Reduce Neighborhood speeds to 30 km/h
- ☐ Reduce Neighborhood speeds to 40 km/h
- ☐ No change - keep speeds at 50km/h throughout Town

Mandatory Question (49 response(s))
Question type: Radio Button Question

Q12 Related to speed zones, would you prefer if school zones and playground zones were kept separate (as they are currently), or all school zones converted to playground zones with year-round speed reductions?



Question options

- Convert all school zones to playground zones - speed reduced to 30 km/h year-round?
- Keep as is - school zone speeds reduced only during school year, playground zones reduced year-round

Mandatory Question (49 response(s))
Question type: Radio Button Question

APPENDIX D - CLIMATE CHANGE STRATEGIES

Key Hazard Risks and Opportunities

Table 1 - Climate Change Hazards, Mitigation Goals, and Potential Actions

Potential Hazards	Goals	Potential Actions
Local Flooding	Reduce transportation interruptions and property damage from flooding	- Adjust design standards for increased rainfall (climate informed IDF curves) - Integrate low impact development features to augment the stormwater system
Extreme Heat	Provide supports for public mobility during extreme heat Plan for future extreme temperatures	- Integrate natural and built shade features and access to water in strategic locations - Integrate drought resistant vegetation (native plants not necessarily appropriate for future temperatures) - Adjust road surface O&M and life cycle planning for more rapid deterioration - Adjust design standards and material selection for future temperatures
High Winds	Plan for increased broken tree limbs and downed power lines	- Design placement of trees away from power lines and over major roadways - Increase O&M for trees especially support for “young trees” and pruning of trees over major roads and power lines - Bury power lines for critical roads (access/egress) - Increase operating budget or emergency funding to support clean up of debris on roadways following storms
Wildfire, other types of fire events	Plan for rapid evacuation of Town	- Regularly train/practice emergency response protocols for widespread evacuation - Maintain good conditions for at least 2 access/egress routes out of Town - Evacuation communications materials including consideration of vulnerable and diverse population - Supports in place to help transport vulnerable residents during evacuation
Hazardous material spills	Reduce likelihood of spills	- Emergency management plan in place to deal with unexpected spills especially for major access/egress routes - Set speed limit for vehicles transporting hazardous materials
Power & water outages	Reduce duration of Town being without power & water	- Assess backup power requirements for critical infrastructure and services, and enhance where necessary to sustain desired levels of service - Plan for interruptions to supply chain for critical supplies - Establish third party agreements for backup supplies - Develop plan for temporary or alternate water supply including deployment details

Climate Strategies Slideshow



Visioning Workshop, Climate Resilience

Town of Raymond Transportation Master Plan

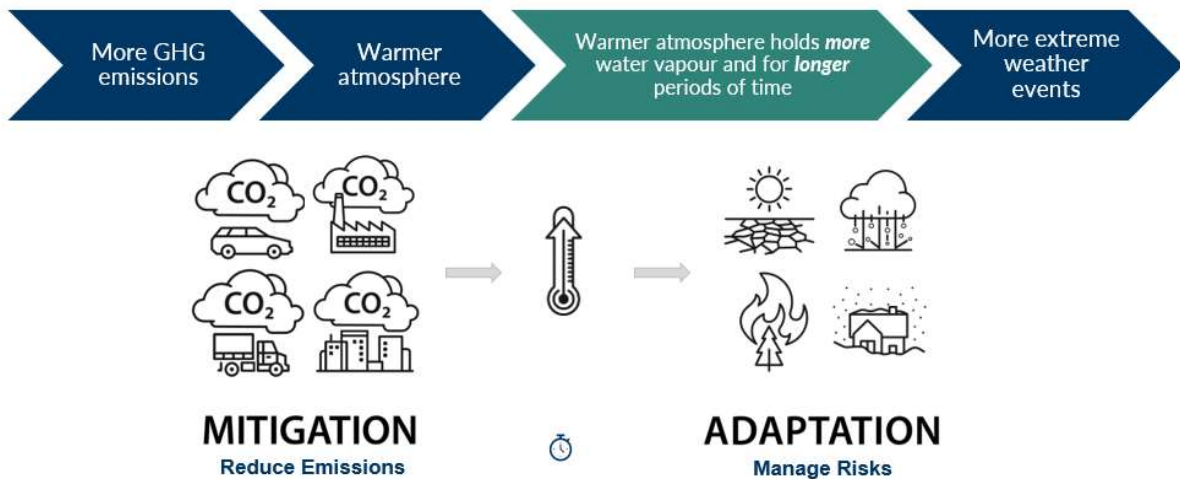
Twyla Kowalczyk, P.Eng., M.Sc.

Climate Resilience Specialist

August 24, 2022

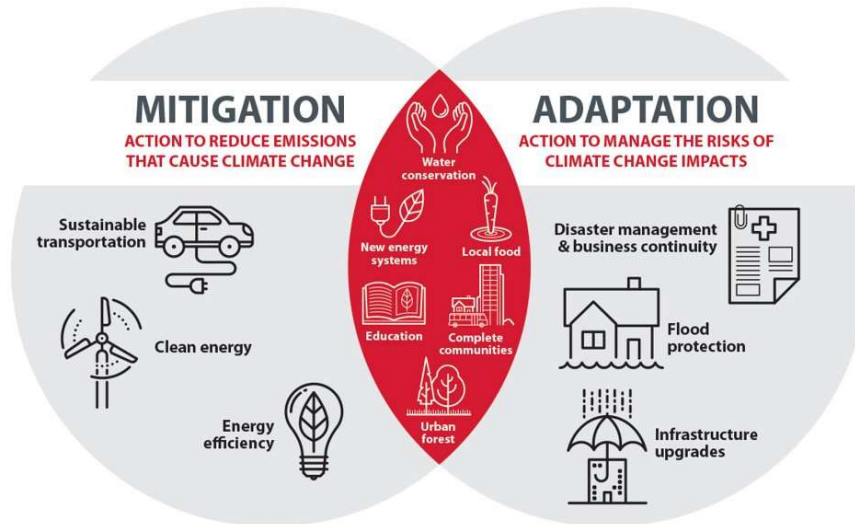
1

Climate Resilience



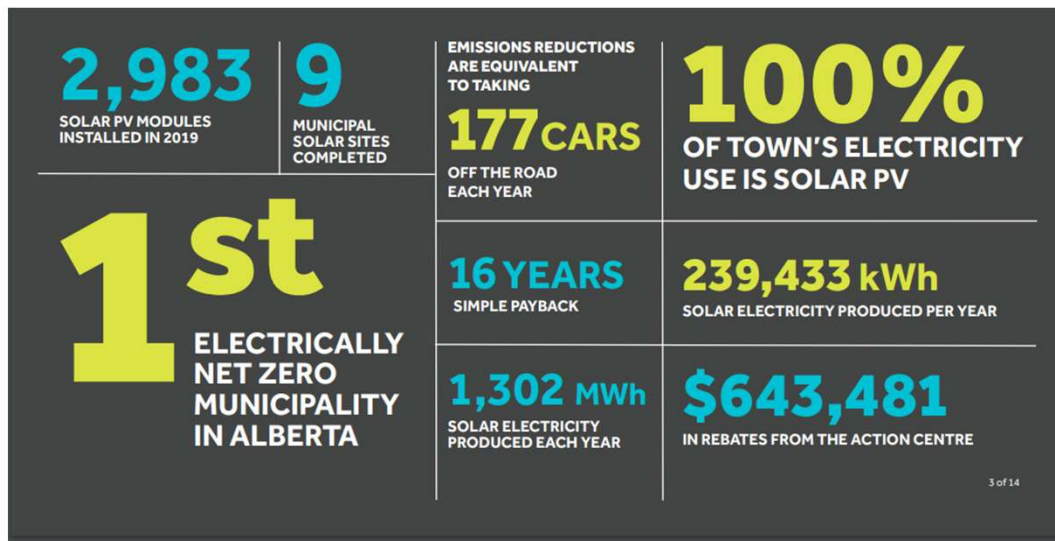
2

Climate Resilience



3

Raymond is a Net Zero Leader



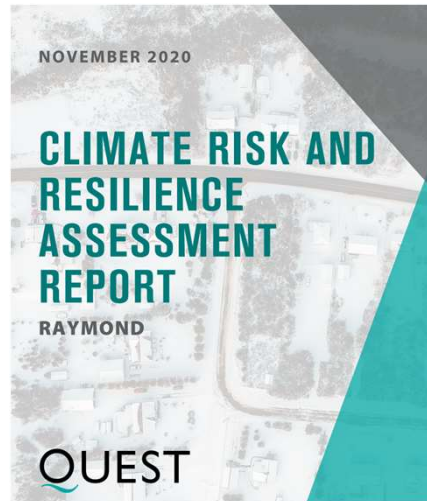
3 of 14



4

Overview of QUEST Climate Risk Report

-  Local Flooding
-  Extreme Heat
-  High intensity winds
-  Wildfires
-  Hazardous Material Spills
-  Power & Water Outages



5

Changes since 2020 QUEST Report

From Sustainable by Nature – Raymond Environmental Strategic Plan v3 – 2022



- South drainage diversion project completed 2019, north phase in progress. Assumption that southern diversion project will allow existing stormwater system to handle internal drainage in a big event.



- EV charging stations: 1 level 2 charger at municipal offices; 2 level 3 chargers to be installed in 2022



- Municipal tree inventory 2021 (confirm completed)
- Municipal tree inspection cycle – to be completed 2022
- Municipal tree planting initiative – ongoing – 100 new trees/year in public spaces



6

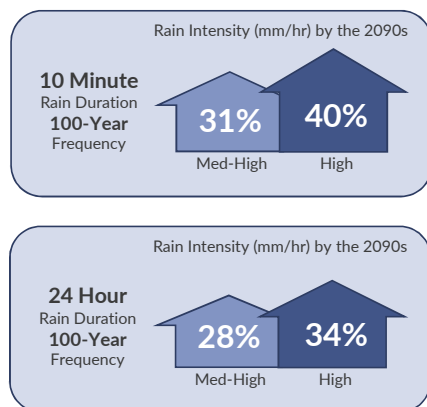
Local Flooding



7

Local Flooding Impacts to Transportation

Climate Change Impacts to
Intensity-Duration-Frequency (IDF) Curves
Town of Raymond



8

Local Flooding Actions for Transportation



Goal Reduce transportation interruptions and property damage from flooding

- Actions**
- Adjust design standards for increased rainfall (climate informed IDF curves)
 - Integrate low impact development features to augment the stormwater system



9

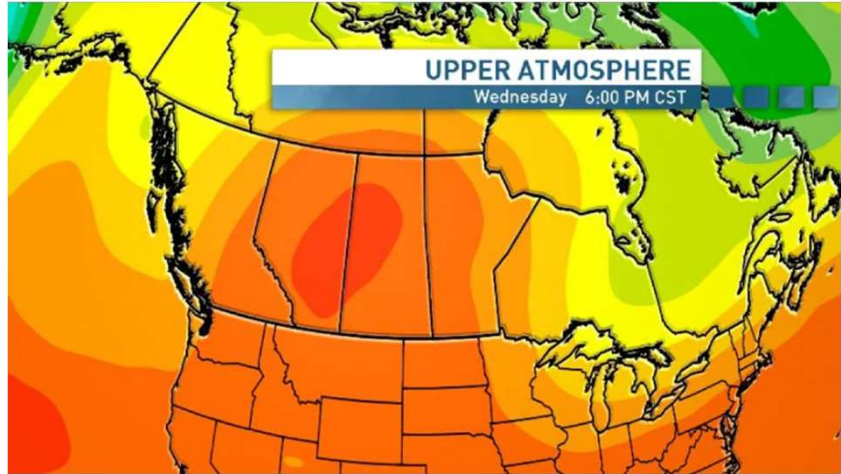
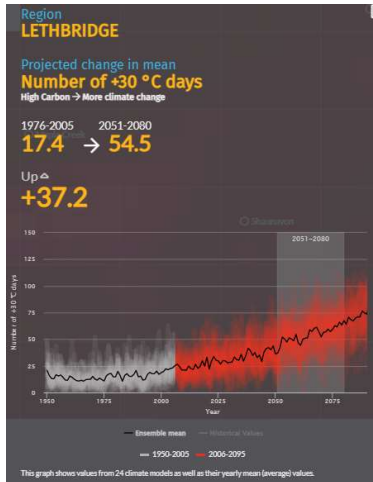
Extreme Heat



10

Hazards: Hot Days

Heat Dome 2021



11

Impacts from Heat on Transportation

Heat and Asphalt

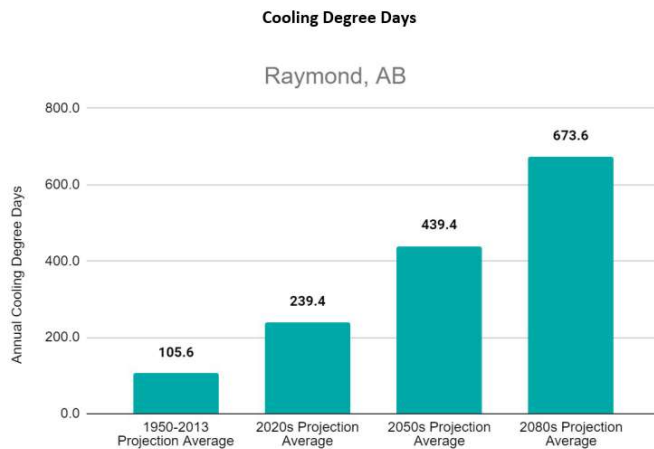


- Asphalt binder grade
- Mixture gradation
- Thickness of asphaltic concrete layer
- Base layer thickness
- Stabilizing base layers



12

Heat Waves = More Cooling Degree Days



- Plan for increased energy usage for air conditioning



Cooling degree days are the number of degrees Celsius a given day's mean temperature is above 18 °C.



13

Extreme Heat Actions for Transportation



Goal Provide supports for public mobility during extreme heat

Actions

- Integrate natural and built shade features and access to water in strategic locations



14

Extreme Heat Actions for Transportation



Goal Plan for future extreme temperatures

- Actions**
- Integrate drought resistant vegetation (native plants not necessarily appropriate for future temperatures)
 - Adjust road surface O&M and life cycle planning for more rapid deterioration
 - Adjust design standards and material selection for future temperatures



15

High Wind



16

Wind, Roads & Public Safety



17

Wind Actions for Transportation



Goal Plan for increased broken tree limbs and downed power lines

- Actions**
- Design placement of trees away from power lines and over major roadways/intersections
 - Increase O&M especially support for “young trees” and pruning of trees over major roads and power lines
 - Bury power lines for critical roads (access/egress)
 - Increase operating budget or emergency funding to support clean up of debris on roadways following storms



18

Wildfire



19

Wildfire and Emergency Response

Likelihood and severity dependent on temperature, amount of precipitation, soil conditions, and wind.



20

Wildfire Actions for Transportation



Goal Plan for rapid evacuation of Town

Actions

- Regularly train/practice emergency response protocols for widespread evacuation
- Maintain good conditions for at least 2 access/egress routes out of Town
- Evacuation communications materials including consideration of vulnerable and diverse population
- Supports in place to help transport vulnerable residents during evacuation



21

Hazardous Materials Spills



22

Transport of Hazardous Waste Materials



23

Hazardous Transport Actions for Transportation



Goal Reduce likelihood of spills

- Actions**
- Emergency management plan in place to deal with unexpected spills especially for major access/egress routes
 - Set speed limit for vehicles transporting hazardous materials



24

Water and Power Outages



25

Power/Water Outage Actions for Transportation



Goal Reduce duration of Town being without power & water

- Actions**
- Assess **backup power** requirements for critical infrastructure and services, and enhance where necessary to sustain desired levels of service
 - Plan for **interruptions to supply chain** for critical supplies
 - Establish third party agreements for backup supplies
 - Develop plan for temporary or alternate water supply including **deployment details**



26

Climate Adaptation Actions for Transportation

HAZARDS	GOALS	POTENTIAL ACTIONS
Local flooding	Reduce transportation interruptions and property damage from flooding	- Adjust design standards for increased rainfall (climate informed IDF curves) - Integrate low impact development features to augment the stormwater system
Extreme Heat	Provide supports for public mobility during extreme heat Plan for future extreme temperatures	- Integrate natural and built shade features and access to water in strategic locations - Integrate drought resistant vegetation (native plants not necessarily appropriate for future temperatures) - Adjust road surface O&M and life cycle planning for more rapid deterioration - Adjust design standards and material selection for future temperatures
High winds	Plan for increased broken tree limbs and downed power lines	- Design placement of trees away from power lines and over major roadways - Increase O&M for trees especially support for "young trees" and pruning of trees over major roads and power lines - Bury power lines for critical roads (access/egress) - Increase operating budget or emergency funding to support clean up of debris on roadways following storms

27

Climate Adaptation Actions for Transportation

HAZARDS	GOALS	POTENTIAL ACTIONS FOR TRANSPORTATION
Wildfire, other types of fire events	Plan for rapid evacuation of Town	- Regularly train/practice emergency response protocols for widespread evacuation - Maintain good conditions for at least 2 access/egress routes out of Town - Evacuation communications materials including consideration of vulnerable and diverse population - Supports in place to help transport vulnerable residents during evacuation
Hazardous material spills	Reduce likelihood of spills	- Emergency management plan in place to deal with unexpected spills especially for major access/egress routes - Set speed limit for vehicles transporting hazardous materials
Power & water outages	Reduce duration of Town being without power & water	- Assess backup power requirements for critical infrastructure and services, and enhance where necessary to sustain desired levels of service - Plan for interruptions to supply chain for critical supplies - Establish third party agreements for backup supplies - Develop plan for temporary or alternate water supply including deployment details

28

Resilient Solutions: Adaptation and Mitigation

29

Mitigation Solutions



30

Opportunities for Adaptation and Mitigation

Adaptation:

Cooling/Shade



Hail Protection



Mitigation:

Solar Power

Backup Power



Victoria Athletic Carport, Raymond
Solar and shade for vehicles



31

Opportunities for Adaptation and Mitigation

Adaptation:

Cooling/Shade



Flooding



Biodiversity



Power Outage



Mitigation:

Carbon sequestration

Not just the number of trees, but what type,
and where to place them to absorb runoff.



32

Climate Resilience Discussion

1. What climate risks do you want to prioritize in the TMP?
2. Where do you see the best opportunity to integrate?
3. Are there other initiatives that should align to manage these risks?



APPENDIX E - CAPITAL IMPROVEMENTS PROGRAM

Roadways Capital Improvements Program

Table 1 - Rehabilitation Program - Roadways

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2026	100N	g2M32MBgRi	\$ 69,600	\$ 402,000
2026	100N	g2M32MBgRi	\$ 69,600	
2026	100E	UF095u2T6q	\$ 16,800	
2026	100E	UF095u2T6q	\$ 16,800	
2026	100E	UF095u2T6q	\$ 69,300	
2026	100E	UF095u2T6q	\$ 69,300	
2026	100S	bN1cehMVVR	\$ 45,300	
2026	100S	bN1cehMVVR	\$ 45,300	
2027	200E	39IBoysfu8	\$ 33,000	\$ 367,200
2027	200E	39IBoysfu8	\$ 33,000	
2027	300E	cNupN6Xfgf	\$ 71,100	
2027	200W	xOpRfmYRMs	\$ 71,100	
2027	200W	xOpRfmYRMs	\$ 70,800	
2027	300N	VoNRlitrLBV	\$ 70,800	
2027	300N	VoNRlitrLBV	\$ 17,400	
2028	100N	g2M32MBgRi	\$ 17,400	\$ 324,000
2028	100N	g2M32MBgRi	\$ 56,100	
2028	100N	g2M32MBgRi	\$ 56,100	
2028	100N	g2M32MBgRi	\$ 33,600	
2028	BROADWAY N	Mg9QdPMSbP	\$ 33,600	
2028	200E	39IBoysfu8	\$ 12,900	
2028	200E	39IBoysfu8	\$ 12,900	
2028	300E	cNupN6Xfgf	\$ 50,700	
2028	300E	cNupN6Xfgf	\$ 50,700	
2029	250W	vEwPibBvjr	\$ 12,300	\$ 434,400
2029	250W	vEwPibBvjr	\$ 12,300	
2029	100S	bN1cehMVVR	\$ 45,300	
2029	100S	bN1cehMVVR	\$ 45,300	
2029	100S	bN1cehMVVR	\$ 45,300	
2029	200E	39IBoysfu8	\$ 51,000	
2029	200E	39IBoysfu8	\$ 88,800	
2029	50W	1ZQ6ipDyb9	\$ 88,800	
2029	50W	1ZQ6ipDyb9	\$ 45,300	
2030	200W	xOpRfmYRMs	\$ 45,300	\$ 297,900
2030	200W	xOpRfmYRMs	\$ 26,100	
2030	100E	UF095u2T6q	\$ 26,100	
2030	100E	UF095u2T6q	\$ 50,100	
2030	50W	1ZQ6ipDyb9	\$ 50,100	
2030	50W	1ZQ6ipDyb9	\$ 27,300	

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2030	100N	g2M32MBgRi	\$ 27,300	
2030	100N	g2M32MBgRi	\$ 45,600	
2031	CHURCH AVE	OhlCtj27eZ	\$ 49,500	\$ 316,200
2031	CHURCH AVE	OhlCtj27eZ	\$ 49,500	
2031	400E	Skh3EvvVo7	\$ 31,500	
2031	400E	Skh3EvvVo7	\$ 24,900	
2031	PARK AVE	m3vMm4yZBL	\$ 24,900	
2031	PARK AVE	m3vMm4yZBL	\$ 45,300	
2031	CHURCH AVE	OhlCtj27eZ	\$ 45,300	
2031	CHURCH AVE	OhlCtj27eZ	\$ 45,300	
2032	300S	deRGDYINqL	\$ 71,700	\$ 276,600
2032	300S	deRGDYINqL	\$ 46,200	
2032	150W	4LRrMIOTyp	\$ 46,200	
2032	150W	4LRrMIOTyp	\$ 12,600	
2032	100S	bN1cehMVVR	\$ 27,300	
2032	100S	bN1cehMVVR	\$ 27,300	
2032	100S	bN1cehMVVR	\$ 45,300	
2033	PARK AVE	m3vMm4yZBL	\$ 45,300	\$ 316,500
2033	PARK AVE	m3vMm4yZBL	\$ 45,300	
2033	300W	IYFQBJUCFq	\$ 45,300	
2033	300W	IYFQBJUCFq	\$ 45,600	
2033	BROADWAY S	NGBK7qJ4CR	\$ 45,600	
2033	BROADWAY S	NGBK7qJ4CR	\$ 44,400	
2033	200W	xOpRfmYRMs	\$ 22,500	
2033	200W	xOpRfmYRMs	\$ 22,500	
2034	BROADWAY S	NGBK7qJ4CR	\$ 1,200	\$ 328,500
2034	BROADWAY S	NGBK7qJ4CR	\$ 1,200	
2034	BROADWAY S	NGBK7qJ4CR	\$ 52,200	
2034	300E	cNupN6Xfgf	\$ 52,200	
2034	300E	cNupN6Xfgf	\$ 13,200	
2034	500N	yjOZoc1ITw	\$ 13,200	
2034	500N	yjOZoc1ITw	\$ 71,100	
2034	100N	g2M32MBgRi	\$ 71,100	
2034	100N	g2M32MBgRi	\$ 53,100	
2035	250E	QMjCLW4b8u	\$ 53,100	\$ 330,600
2035	250E	QMjCLW4b8u	\$ 19,500	
2035	50W	1ZQ6ipDyb9	\$ 19,500	
2035	50W	1ZQ6ipDyb9	\$ 23,100	
2035	250W	vEwPibBvjr	\$ 23,100	
2035	200E	39IBoysfu8	\$ 11,700	
2035	200E	39IBoysfu8	\$ 45,000	
2035	100W	mPKK3ShhbP	\$ 45,000	

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2035	100W	mPKK3ShhbP	\$ 45,300	
2035	BROADWAY N	Mg9QdPMSbP	\$ 45,300	

Concrete Capital Improvements Program

Table 2 - Rehabilitation Program - Sidewalks

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2026	Broadway N	SW005	\$ 32,200	\$ 260,400
2026	400N	SW027	\$ 51,500	
2026	200W	SW099	\$ 53,200	
2026	Park Avenue	SW232	\$ 40,600	
2026	100E	SW250	\$ 41,400	
2026	200S	SW315	\$ 41,500	
2027	Broadway N	SW159	\$ 39,000	\$ 197,600
2027	Broadway N	SW158	\$ 11,300	
2027	100S	SW302	\$ 27,000	
2027	400N	SW050	\$ 41,400	
2027	100N	SW137	\$ 52,900	
2027	300N	SW100	\$ 26,000	
2028	100N	SW125	\$ 25,300	\$ 219,700
2028	200E	SW246	\$ 25,300	
2028	Broadway N	SW006	\$ 32,200	
2028	Church Avenue	SW275	\$ 54,200	
2028	100W	SW280	\$ 41,400	
2028	Church Avenue	SW278	\$ 41,300	
2029	Broadway S	SW308	\$ 40,600	\$ 253,000
2029	Church Avenue	SW288	\$ 40,400	
2029	100E	SW317	\$ 40,600	
2029	250W	SW195	\$ 22,900	
2029	200W	SW028	\$ 53,400	
2029	Broadway N	SW220	\$ 55,100	
2030	100E	SW083	\$ 40,600	\$ 220,500
2030		SW154	\$ 17,100	
2030	100S	SW273	\$ 21,000	
2030	250W	SW126	\$ 53,200	
2030	100N	SW190	\$ 44,300	
2030	100N	SW192	\$ 44,300	
2031	100N	SW210	\$ 40,300	\$ 256,000
2031	100N	SW146	\$ 52,500	
2031	200N	SW106	\$ 26,600	
2031	Broadway N	SW151	\$ 38,900	
2031	100N	SW169	\$ 53,400	
2031	100N	SW191	\$ 44,300	
2032	200E	SW233	\$ 41,400	\$ 261,600
2032	200W	SW204	\$ 41,800	
2032	200W	SW287	\$ 41,400	
2032	Broadway N	SW018	\$ 40,700	

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2032	200W	SW201	\$ 41,800	
2032	Park Avenue	SW222	\$ 54,500	
2033		SW171	\$ 16,100	\$ 221,400
2033	100E	SW262	\$ 41,400	
2033	Broadway S	SW311	\$ 40,600	
2033	100W	SW284	\$ 41,400	
2033	Park Avenue	SW231	\$ 40,600	
2033	Church Avenue	SW215	\$ 41,300	
2034	Park Avenue	SW260	\$ 54,500	\$ 230,000
2034	200W	SW202	\$ 41,400	
2034	200N	SW070	\$ 20,100	
2034	100S	SW318	\$ 41,400	
2034	100N	SW124	\$ 19,300	
2034	200N	SW124	\$ 53,300	
2035	100N	SW218	\$ 52,500	\$ 278,600
2035	400N	SW012	\$ 26,300	
2035	200N	SW178	\$ 53,500	
2035	100N	SW160	\$ 52,400	
2035	100W	SW300	\$ 53,300	
2035	Broadway N	SW091	\$ 40,600	

Table 3 - Rehabilitation Program - Curbs

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2026	100N	RD069	\$52,400	\$ 153,600
2026	100N	RD155	\$ 1,200	
2026	100S	RD108	\$21,100	
2026	200W	RD129	\$53,400	
2026	250E	RD158	\$25,500	
2027	200W	RD006	\$53,300	\$ 220,400
2027	BROADWAY N	RD040	\$53,500	
2027	400S	RD059	\$32,200	
2027	50W	RD064	\$53,200	
2027	150W	RD077	\$28,200	
2028	350S	RD086	\$53,600	\$ 216,000
2028	100S	RD111	\$53,000	
2028	200E	RD146	\$54,400	
2028	100N	RD165	\$27,100	
2028	200N	RD200	\$27,900	
2029	250W	RD090	\$19,900	\$ 176,300
2029	200W	RD074	\$38,100	
2029	BROADWAY N	RD039	\$53,300	

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2029	150W	RD092	\$38,100	
2029	400N	RD123	\$26,900	
2030	400N	RD187	\$26,700	\$ 268,600
2030	BROADWAY S	RD035	\$54,400	
2030	300N	RD054	\$53,300	
2030	200E	RD149	\$53,300	
2030	200E	RD239	\$80,900	
2031	BROADWAY N	RD038	\$53,300	
2031	400N	RD121	\$26,800	\$ 211,900
2031	200W	RD130	\$53,200	
2031	100N	RD164	\$25,300	
2031	200N	RD204	\$53,300	
2032	100E	RD044	\$53,300	\$ 232,900
2032	100W	RD047	\$54,100	
2032	CHURCH AVE	RD005	\$53,100	
2032	BROADWAY S	RD018	\$53,400	
2032	150W	RD076	\$19,000	
2033	50W	RD079	\$21,900	
2033	200E	RD148	\$53,400	\$ 236,300
2033	100E	RD139	\$53,300	
2033	250E	RD168	\$53,300	
2033	100W	RD136	\$54,400	
2033	100E	RD140	\$53,300	
2034	100E	RD138	\$57,200	\$ 233,100
2034	CHURCH AVE	RD009	\$54,200	
2034	200S	RD104	\$26,700	
2034	200E	RD251	\$41,600	
2034	100E	RD141	\$53,400	
2034	400E	RD082	\$26,700	

Table 4 - Rehabilitation Program – Wheelchair Ramps

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2026	200W	WR025	\$ 4,700	\$ 14,700
2026	200N	WR039	\$ 4,700	
2026	200W	WR059	\$ 5,300	
2027	100N	WR060	\$ 5,300	\$ 15,300
2027	100N	WR069	\$ 5,300	
2027	200E	WR045	\$ 4,700	
2028	100S	WR102	\$ 4,700	\$ 14,100
2028	BROADWAY N	WR006	\$ 4,700	
2028	300W	WR053	\$ 4,700	
2029	100N	WR054	\$ 5,300	\$ 15,300

Year	Road Segment	Asset ID	Capital Cost (Rehab)	Annual Program Cost
2029	250W	WR055	\$ 5,300	
2029	BROADWAY N	WR077	\$ 4,700	
2030	BROADWAY N	WR078	\$ 4,700	\$ 14,700
2030	BROADWAY N	WR079	\$ 5,300	
2030	100N	WR083	\$ 4,700	
2031	50S	WR096	\$ 4,700	\$ 14,100
2031	100E	WR105	\$ 4,700	
2031	200N	WR046	\$ 4,700	
2032	100W	WR065	\$ 4,700	\$ 14,100
2032	BROADWAY N	WR073	\$ 4,700	
2032	BROADWAY N	WR074	\$ 4,700	
2033	200N	WR048	\$ 4,700	\$ 19,400
2033	200W	WR024	\$ 5,300	
2033	100S	WR101	\$ 4,700	
2033	200N	WR021	\$ 4,700	
2034	300W	WR022	\$ 4,700	\$ 18,800
2034	200E	WR047	\$ 4,700	
2034	300N	WR013	\$ 4,700	
2034	100E	WR044	\$ 4,700	
2035	400N	WR002	\$ 4,700	\$ 18,800
2035	300N	WR014	\$ 4,700	
2035	BROADWAY S	WR088	\$ 4,700	
2035	PARK AVE	WR091	\$ 4,700	