

# **APPENDIX D**

## *AT Project Implementation Plan*

| Project ID | Route Description  | From                                    | To                                      | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Risks                                                   | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|--------------------|-----------------------------------------|-----------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------|----------------------|-----------|-------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1-1a       | Petawawa Boulevard | Doran Road / Mohns Avenue               | Civic Centre Road / Murphy Road         | 1421               | Narrow existing vehicle lanes to accommodate wider, buffered bike lanes. The bike lanes should be delineated between the through lane and any dedicated right-turn lane (i.e. left of any dedicated right-turn lane) - see TAC (2017) Section 5.6.1.2. This improves an important north-south route through Petawawa. Cyclists that desire full separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.                                                                                                                                                                                                                                                                                                                                                  | - Coordination with (and approval from) County required | Yes                                | -                    | -         | \$54,000    | Phase 1: 2018-2023     | - Reallocation of road space to widen the existing bike lanes improves Petawawa Boulevard as the Town's near-term north-south spine route.<br>- Improves comfort of existing bike lanes<br>- Cost effective                                                                                                                                                                                                                                                                                                                                             |
| 1-1b       | Petawawa Boulevard | Civic Centre Road / Murphy Road         | Limestone Trail / Town Centre Boulevard | 799                | Narrow existing vehicle lanes to accommodate wider, buffered bike lanes. The bike lanes should be delineated between the through lane and any dedicated right-turn lane (i.e. left of any dedicated right-turn lane) - see TAC (2017) Section 5.6.1.2. This improves an important north-south route through Petawawa. Cyclists that desire full separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.                                                                                                                                                                                                                                                                                                                                                  | - Coordination with (and approval from) County required | Yes                                | -                    | -         | \$30,000    | Phase 1: 2018-2023     | - Reallocation of road space to widen the existing bike lanes improves Petawawa Boulevard as the Town's near-term north-south spine route.<br>- Improves comfort of existing bike lanes<br>- Cost effective                                                                                                                                                                                                                                                                                                                                             |
| 1-1c       | Petawawa Boulevard | Limestone Trail / Town Centre Boulevard | B Line Road / Golf Course Road          | 5490               | Narrow existing vehicle lanes to accommodate wider, buffered paved shoulders. Bike lanes should be added between the through lane and any dedicated right-turn lane (i.e. left of any dedicated right-turn lane) - see TAC (2017) Section 5.6.1.2. This improves an important north-south connection through Petawawa and to / from Pembroke and the Township of Laurentian Valley. Cyclists that desire full separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.                                                                                                                                                                                                                                                                                    | - Coordination with (and approval from) County required | No                                 | -                    | -         | \$206,000   | Phase 1: 2018-2023     | - Reallocation of road space to widen existing shoulders improves Petawawa Boulevard as the Town's near-term north-south spine route.<br>- Improves comfort of existing bike lanes<br>- Cost effective                                                                                                                                                                                                                                                                                                                                                  |
| 1-2a       | Albert Street      | Island View Drive                       | Victoria Street                         | 844                | Widening the asphalt sidewalk on the west side of the road to a 3.0 metre wide MUP provides a comfortable connection to / from Petawawa Point.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                         | No                                 | -                    | \$232,000 | -           | Phase 1: 2018-2023     | - Albert Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2021-2023<br>- Road surface - 2021-2023<br>- Water infrastructure - 2021-2023<br>- Sanitary sewer - 2022-2023<br>- Provides connections to parks and recreation facilities (Petawawa Point Beach)                                                                                                                                                                                                                                   |
| 1-3a       | Laurentian Drive   | Victoria Street                         | Civic Centre Road                       | 1012               | Widening the asphalt sidewalk on the west side of the road to 3.0 metre wide bidirectional MUP provides a comfortable north-south route and a connection to Valour JK-12 School and Saint Francis of Assisi School.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | - Coordination with (and approval from) County required | No                                 | -                    | \$279,000 | -           | Phase 1: 2018-2023     | - Provides a comfortable cycling facility on a key north-south route<br>- Provides connections to parks and recreation facilities (Petawawa Point Beach via Albert Street)<br>- Links to existing natural areas and trails (Petawawa Terrace Provincial Park)<br>- Provides connections to schools (Valour JK-12 School via project 1-16a and via Civic Centre Road)                                                                                                                                                                                    |
| 1-3b       | Laurentian Drive   | Civic Centre Road                       | Petawawa Boulevard                      | 2485               | Widening the asphalt sidewalk on the west side of the road to 3.0 metre wide bidirectional MUP provides a comfortable north-south route and a connection to Valour JK-12 School and Saint Francis of Assisi School.<br><br>Following implementation of the proposed MUP, the Town should evaluate the need to provide a controlled pedestrian crossing (signal or pedestrian crossover) from the west side of Laurentian Drive to the Petawawa Terrace parking lot and trailhead approximately 80 m north of Sunset Crescent / Ravenwood Crescent. Evaluation should follow the guidance of Section 5.1 of Ontario Traffic Manual Book 15 - Pedestrian Crossing Treatments, and should include conducting an 8-hour count of pedestrian and vehicle volumes at the potential crossing location. | - Coordination with (and approval from) County required | No                                 | -                    | \$684,000 | -           | Phase 1: 2018-2023     | - Provides a comfortable cycling facility on a key north-south route<br>- Links to existing natural areas and trails (Petawawa Terrace Provincial Park)<br>- Provides connections to schools (Valour JK-12 School via project 1-16a and via Civic Centre Road)                                                                                                                                                                                                                                                                                          |
| 1-4a       | Scott Avenue       | Portage Road                            | Hilda Street                            | 196                | Signed route provides a connection between Portage Road and the proposed off-road cycling network south of Nature's Acre Park (south of the intersection of Scott Avenue and Hilda Street).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                         | No                                 | \$ 1,000             | -         | -           | Phase 1: 2018-2023     | - Scott Avenue from Portage Avenue to Hilda Street scheduled for Urban Road reconstruction in 2018 (Source: 2011 10 Year Capital Plan, Town trending 1 year behind schedule)<br>- Scott Avenue revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2028<br>- Road surface - 2018<br>- Water infrastructure - 2018<br>- Sanitary sewer - 2018<br>- Provides a connection to a neighbourhood park (Nature's Acre Park)<br>- Links with proposed trails south of Nature's Acre Park<br>- Low cost facility |

| Project ID | Route Description   | From                                | To                                  | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Risks | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|---------------------|-------------------------------------|-------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------|----------------------|-----------|-------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1-5a       | Hilda Street        | Scott Avenue                        | Doran Road                          | 548                | Signed route provides a connection between the Algonquin Trail / Petawawa Boulevard and the proposed off-road cycling network south of Nature's Acre Park (south of the intersection of Scott Avenue and Hilda Street). The route also provides a connection to Mohns Avenue and Our Lady of Sorrows Elementary School.                                                                                                                                                                                                                                       |       | No                                 | \$ 2,000             | -         | -           | Phase 1: 2018-2023     | - Hilda / Lisa scheduled to be planned in 2018, completed in 2019<br>- Hilda Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2018-2029<br>- Road surface - 2018-2029<br>- Water infrastructure - 2018-2029<br>- Sanitary sewer - 2018-2029<br>- Provides a connection to a neighbourhood park (Nature's Acre Park)<br>- Links with proposed trails south of Nature's Acre Park<br>- Low cost facility                                                                                                                                                               |
| 1-6a       | Mohns Avenue        | Petawawa Boulevard                  | Wolfe Avenue                        | 837                | Mohns Avenue is an important east-west collector that also serves Our Lady of Sorrows Elementary School. Re-designate the existing asphalt boulevards with bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Improve asphalt quality of cycle tracks as required, and sign and enforce no parking on new cycle tracks. Improve the side street crossings by painting crosswalks and crossrides, and by modifying the existing mountable curb and channel to a flush curb at crossings for improved rideability. |       | No                                 | -                    | \$419,000 | -           | Phase 1: 2018-2023     | - Resurfacing scheduled for 2020 (Source: 2011 10 Year Capital Plan, Town trending 1 year behind schedule)<br>- Mohns Avenue revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2020-2024<br>- Road surface - 2020-2024<br>- Water infrastructure - 2020-2024<br>- Sanitary sewer - 2020-2024<br>- Connects to schools (Our Lady of Sorrows and Renfrew County Adult High School)<br>- Provides a comfortable separated cycling facility while utilizing existing infrastructure                                                                                              |
| 1-7a       | John Street         | Algonquin Trail                     | Murphy Road                         | 838                | Signed bicycle route on John Street provides a north-south neighbourhood cycling route that, along with Roy Street, connects the proposed in-boulevard multi-use trail on Murphy Road to the Algonquin Trail. Additional work is required to provide a multi-use trail connection from the north end of John Street to the Algonquin Trail. Recommend stop signs for users crossing the motorized portion of the Algonquin Trail, as well as caution signs warning motorized users of the crossing at John Street.                                            |       | No                                 | \$11,000             | -         | -           | Phase 1: 2018-2023     | - Algonquin Trail to Herman Street scheduled for 2019<br>- Herman Street to Murphy Road scheduled for 2022 (Source: 2011 10 Year Capital Plan, Town trending 1 year behind schedule)<br>- John Street Avenue revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2017-2022<br>- Road surface - 2017-2022<br>- Water infrastructure (Herman Street to Murphy Road) - 2021<br>- Sanitary sewer (Herman Street to Murphy Road) - 2021<br>- Comfortable route on local streets<br>- Connects to schools (Herman Street Elementary School via Herman Street)<br>- Low cost facility |
| 1-8a       | Off-Road Connection | Civic Centre Parking                | Leeder Lane                         | 388                | Provide a formal off-road connection south of Civic Centre parking lot and gravel road leading to the "Back 40" parking lot to connect to the existing pathway north of St Francis of Assisi School.                                                                                                                                                                                                                                                                                                                                                          |       | N/A                                | -                    | \$107,000 | -           | Phase 1: 2018-2023     | - Connects to schools (Valour JK-12 School and St Francis of Assisi School) and community facilities (Civic Centre)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1-9a       | Nuthatch Drive      | Murphy Road                         | Cardinal Crescent                   | 563                | Nuthatch Drive, together with Cardinal Crescent and Carla Street, provides a north-south neighbourhood cycling route between Black Bay Road and Murphy Road. Also connects to the Roy Street-John Street neighbourhood cycling route north of Murphy Road.                                                                                                                                                                                                                                                                                                    |       | No                                 | -                    | \$ 2,000  | -           | Phase 1: 2018-2023     | - Nuthatch Drive revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road surface - 2029<br>- Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1-9b       | Cardinal Crescent   | Nuthatch Drive                      | Carla Street                        | 392                | Cardinal Crescent, together with Nuthatch Drive and Carla Street, provides a north-south neighbourhood cycling route between Black Bay Road and Murphy Road.                                                                                                                                                                                                                                                                                                                                                                                                  |       | No                                 | -                    | \$ 2,000  | -           | Phase 1: 2018-2023     | - Cardinal Crescent revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road surface - 2023<br>- Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1-9c       | Carla Street        | Cardinal Crescent                   | Black Bay Road                      | 1156               | Carla Street, together with Nuthatch Drive and Cardinal Crescent, provides a north-south neighbourhood cycling route between Black Bay Road and Murphy Road. Also connects, via the municipal park 100m south of Derek Drive, to the proposed off-road trail along the power line corridor east of Carla Street and west of Industrial Avenue.                                                                                                                                                                                                                |       | No                                 | -                    | \$ 4,000  | -           | Phase 1: 2018-2023     | - Carla Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2022<br>- Road surface - 2022<br>- Comfortable route on local streets<br>- Low cost facility<br>- Provides a connection to a neighbourhood park<br>- Links with proposed trails                                                                                                                                                                                                                                                                                                                             |
| 1-10a      | Butler Boulevard    | Murphy Road                         | Nick Street / Town Centre Boulevard | 148                | Bike lanes are proposed on the northernmost block of Butler Boulevard as an extension of the bike lanes proposed on Town Centre Boulevard. Reallocate the approximate 10 metre road width to 2 x 3.5 metre vehicle lanes and 2 x 1.5 metre bike lanes. Apply bicycle lane pavement markings and signage - Ontario Traffic Manual - Book 18, Section 4.3. Sign and enforce no parking on new bike lanes.                                                                                                                                                       |       | Yes                                | -                    | \$ 4,000  | -           | Phase 1: 2018-2023     | - Provides access to neighbourhood cycling route on Butler Boulevard / Bedard Boulevard / Whippoorwill Drive<br>- Provides access to commerce and employment via Town Centre Boulevard<br>- Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                          |
| 1-10b      | Butler Boulevard    | Nick Street / Town Centre Boulevard | Bedard Boulevard                    | 615                | Together with Bedard Boulevard and Whippoorwill Drive, provides a neighbourhood cycling route between Cardinal Crescent and Murphy Road / Town Centre Boulevard.                                                                                                                                                                                                                                                                                                                                                                                              |       | No                                 | -                    | \$ 2,000  | -           | Phase 1: 2018-2023     | - Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Project ID | Route Description     | From              | To                         | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Risks                                                                                | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------|-----------------------|-------------------|----------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------|----------------------|-----------|-------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1-10c      | Bedard Boulevard      | Butler Boulevard  | Whippoorwill Drive         | 178                | Together with Butler Boulevard and Whippoorwill Drive, provides a neighbourhood cycling route between Cardinal Crescent and Murphy Road / Town Centre Boulevard.                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                      | No                                 | -                    | \$ 1,000  | -           | Phase 1: 2018-2023     | - Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 1-10d      | Whippoorwill Drive    | Cardinal Crescent | Bedard Boulevard           | 164                | Together with Butler Boulevard and Bedard Boulevard, provides a neighbourhood cycling route between Cardinal Crescent and Murphy Road / Town Centre Boulevard.                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                      | No                                 | -                    | \$ 1,000  | -           | Phase 1: 2018-2023     | - Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 1-11a      | Town Centre Boulevard | Butler Boulevard  | Petawawa Boulevard         | 878                | Bike lanes on Town Centre Boulevard to connect Limestone Trail and Butler Boulevard and allow cyclists to access future retail on Town Centre Boulevard. The bike lanes may be constructed by reallocating the approximate 10 metre road width to 2 x 3.5 metre vehicle lanes and 2 x 1.5 metre bike lanes. Apply bicycle lane pavement markings and signage - Ontario Traffic Manual - Book 18, Section 4.3. Ensure bicycle lanes are sufficiently signed and marked through high volume commercial accesses. Sign and enforce no parking on the new bike lanes. |                                                                                      | Yes                                | -                    | \$19,000  | -           | Phase 1: 2018-2023     | - Provides access to commerce and employment<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 1-12a      | Selley Street         | Laurentian Drive  | Gutzman Road               | 639                | Selley Street, together with Country Lane, Sandy Drive, Isabel Street, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.                                                                                                                                                                                                                                            |                                                                                      | No                                 | -                    | \$ 2,000  | -           | Phase 1: 2018-2023     | - Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 1-12b      | Country Lane          | Gutzman Road      | Sandy Drive                | 829                | Country Lane, together with Selley Street, Sandy Drive, Isabel Street, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.                                                                                                                                                                                                                                            |                                                                                      | No                                 | -                    | \$ 3,000  | -           | Phase 1: 2018-2023     | - Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 1-12c      | Sandy Drive           | Country Lane      | Isabel Street              | 276                | Sandy Drive, together with Selley Street, Sandy Drive, Isabel Street, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.                                                                                                                                                                                                                                             |                                                                                      | No                                 | -                    | \$ 1,000  | -           | Phase 1: 2018-2023     | - Sandy Drive revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2021<br>- Road surface - 2021<br>- Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                       |
| 1-12d      | Isabel Street         | Sandy Drive       | Sack Road                  | 200                | Isabel Street, together with Selley Street, Country Lane, Sandy Drive, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.                                                                                                                                                                                                                                            |                                                                                      | No                                 | -                    | \$ 1,000  | -           | Phase 1: 2018-2023     | - Isabel Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2023<br>- Road surface - 2023<br>- Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                     |
| 1-12e      | Sack Road             | Isabel Street     | Kramer Avenue              | 30                 | Sack Road provides a short connection between Isabel Street and Kramer Avenue, as part of the north-south neighbourhood cycling route between Laurentian Drive and Pine View School.                                                                                                                                                                                                                                                                                                                                                                              |                                                                                      | No                                 | -                    | \$ 1,000  | -           | Phase 1: 2018-2023     | - Comfortable route on local streets<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 1-12f      | Kramer Avenue         | Sack Road         | 100m south of White Street | 284                | Kramer Avenue, together with Selley Street, Country Lane, Sandy Drive, and Isabel Street, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard. Ensure the entrance to the off road cycling connection from the south end of the proposed Kramer Avenue cycling route to Pine View Public School is well signed and easily visible.                                                        |                                                                                      | No                                 | -                    | \$ 1,000  | -           | Phase 1: 2018-2023     | - Comfortable route on local streets<br>- Connects to schools (Pine View Public School)<br>- Low cost facility                                                                                                                                                                                                                                                                                                                                                                                       |
| 1-13a      | Black Bay Road        | Doran Road        | Petawawa Boulevard         | 1806               | Paving the existing gravel shoulders provides an east-west route between Doran Road and Petawawa Boulevard / the Algonquin Trail, and improves the road as a recreational cycling route.                                                                                                                                                                                                                                                                                                                                                                          | - Road platform width requirements could influence cost estimate for paved shoulders | No                                 | \$271,000            | -         | -           | Phase 1: 2018-2023     | - Black Bay Road between Carla Street and Industrial Drive was completed last year with 2nd lift of asphalt to be completed in 2018, including 1.0 metre paved shoulders<br>- Black Bay Road from Petawawa Boulevard to Doran Road to be completed in 2019 (Source: 2011 10 Year Capital Plan, Town trending 1 year behind schedule)<br>- Black Bay Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2019-2029<br>- Road surface - 2019-2029 |

| Project ID | Route Description   | From                                         | To                    | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                   | Risks                                                                                                                                                                                                  | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                                                         |
|------------|---------------------|----------------------------------------------|-----------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------|-----------|-------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1-14a      | Schwanz Road        | Laurentian Drive                             | Petawawa Boulevard    | 1080               | Widening the existing sidewalk to create a multi-use pathway on the west side of Schwanz Road provides a continuation of the multi-use pathway proposed on Laurentian Drive. Design constraints of existing platform width, drainage, and location of hydro poles.                                                                                                    |                                                                                                                                                                                                        | No                                 | \$298,000            | -         | -           | Phase 1: 2018-2023     | - Schwanz Road between Laurentian Drive and Country Lane is being completed in 2018, including 1.0 metre paved shoulders<br>- Schwanz Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2023<br>- Comfortable facility<br>- Connects to schools (Pine View Public School via Sack Road / Kramer Avenue or via Petawawa Boulevard) |
| 1-15a      | Achray Road         | Doran Road                                   | B Line Road           | 4402               | Paving the existing gravel shoulders provides an east-west route between Doran Road and Petawawa Boulevard / the Algonquin Trail, and improves the road as a recreational cycling route.                                                                                                                                                                              | - Road platform width requirements could influence cost estimate for paved shoulders                                                                                                                   | No                                 | \$661,000            | -         | -           | Phase 1: 2018-2023     | - Achray Road between 605m west of Gorr Street and B-Line Road is being completed in 2018, including 1.0m paved shoulders<br>- Achray Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - two segments (R00100 & R00110) - 2020<br>- Road surface - 2020-2028<br>- Proposed Phase 1 to coincide with upcoming road works            |
| 1-15b      | B Line Road         | Achray Road                                  | Petawawa Boulevard    | 66                 | Provides a short, but important, connection between Achray Road and Petawawa Boulevard / Golf Course Road                                                                                                                                                                                                                                                             | - B Line road is not within the Town of Petawawa - it is the jurisdiction of the Township of Laurentian Valley<br>- Road platform width requirements could influence cost estimate for paved shoulders | No                                 | -                    | \$10,000  | -           | Phase 1: 2018-2023     | - Proposed as Phase 1 in conjunction with Achray Road, to connect Achray Road facility to Petawawa Boulevard                                                                                                                                                                                                                                                                             |
| 1-16a      | Off-Road Connection | Pine View Public School / Petawawa Boulevard | Runge Drive           | 123                | Provides a connection between Pine View Public School and Runge Drive so students can access Pine View Public from the south without using Petawawa Boulevard. Assumed that proposed pathway is asphalt.                                                                                                                                                              | - Property owned by Town of Petawawa                                                                                                                                                                   | N/A                                | -                    | \$34,000  | -           | Phase 1: 2018-2023     | - Comfortable connection to Pine View Public School from Runge Drive and Radtke Road                                                                                                                                                                                                                                                                                                     |
| 1-17a      | Off-Road Connection | Valour JK-12 School                          | Laurentian Drive      | 84                 | Provides a connection between Valour JK-12 School and Laurentian Drive.                                                                                                                                                                                                                                                                                               | - Original development agreement needs to be reviewed to determine comments and final resolution with neighbours                                                                                       | N/A                                | -                    | \$24,000  | -           | Phase 1: 2018-2023     | Comfortable connection to Valour JK-12 School and St Francis of Assisi School from Laurentian Drive                                                                                                                                                                                                                                                                                      |
| 1-18a      | Off-Road Connection | Charles Street                               | Boulder Creek Trail   | 59                 | Improving the informal path between Charles Street and Boulder Creek Trail allows for north-south movement between these street's respective communities without using either Petawawa Boulevard or Laurentian Drive.                                                                                                                                                 |                                                                                                                                                                                                        | N/A                                | -                    | \$17,000  | -           | Phase 1: 2018-2023     | - Connection improves connectivity between the community surrounding Silke Drive and the community surrounding Limestone Trail<br>- Provides a comfortable north-south route for students walking / cycling to Valour JK-12 School and St Francis of Assisi School                                                                                                                       |
| 1-19a      | Algonquin Trail     | Paquette Road                                | Petawawa River        | 871                | The Algonquin Trail between Paquette Road and Portage Road is an important alternative to cycling on Petawawa Boulevard when crossing the Petawawa River between Garrison Petawawa and the Town of Petawawa. Propose widening the existing asphalt pathway. Consider a pedestrian / cyclist crossing of Paquette Road to connect to the Garrison Fitness Trail.       | - Proposed facility is on federal lands and will require coordination with D.N.D to construct                                                                                                          | N/A                                | -                    | \$320,000 | -           | Phase 1: 2018-2023     | - Important to establish a comfortable and safe cycling / walking connection over the Petawawa River<br>- Links to employment (Garrison Petawawa)                                                                                                                                                                                                                                        |
| 1-19b      | Algonquin Trail     | Petawawa River                               | Portage Road          | 404                | The Algonquin Trail between Paquette Road and Portage Road is an important alternative to cycling on Petawawa Boulevard when crossing the Petawawa River between Garrison Petawawa and the Town of Petawawa. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one trail for non-motorized users. |                                                                                                                                                                                                        | N/A                                | -                    | \$112,000 | -           | Phase 1: 2018-2023     | - Important to establish a comfortable and safe cycling / walking connection over the Petawawa River<br>- Links to employment (Garrison Petawawa)                                                                                                                                                                                                                                        |
| 1-20a      | Algonquin Trail     | Portage Road                                 | Doran Road            | 284                | The Algonquin Trail in the Town of Petawawa forms a north-south spine route that many other proposed cycling routes will connect to. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one asphalt trail for non-motorized users.                                                                 |                                                                                                                                                                                                        | N/A                                | -                    | \$79,000  | -           | Phase 1: 2018-2023     | - Important to immediately develop a comfortable cycling / walking north-south spine route through Petawawa<br>- Connects to commerce (Petawawa Boulevard) and employment (Garrison Petawawa)                                                                                                                                                                                            |
| 1-20b      | Algonquin Trail     | Doran Road                                   | Murphy Road           | 1398               | The Algonquin Trail in the town of Petawawa forms a north-south spine route with cycling route connections. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one asphalt trail for non-motorized users.                                                                                          |                                                                                                                                                                                                        | N/A                                | -                    | \$385,000 | -           | Phase 1: 2018-2023     | - Important to immediately develop a comfortable cycling / walking north-south spine route through Petawawa<br>- Connects to schools (Herman Street Elementary School via John Street and Herman Street)                                                                                                                                                                                 |
| 1-21a      | Algonquin Trail     | Murphy Road                                  | Town Centre Boulevard | 803                | The Algonquin Trail in the town of Petawawa forms a north-south spine route that many other proposed cycling routes will connect to. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one asphalt trail for non-motorized users.                                                                 |                                                                                                                                                                                                        | N/A                                | -                    | \$221,000 | -           | Phase 1: 2018-2023     | - Important to immediately develop a comfortable cycling / walking north-south spine route through Petawawa<br>- Connects to commerce and employment (Petawawa Boulevard and Town Centre Boulevard)                                                                                                                                                                                      |

Road jurisdiction: black text = Town of Petawawa, maroon text = County of Renfrew, blue text = federal (Garrison Petawawa), purple text = neighbouring township

| Project ID | Route Description   | From                             | To                               | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Risks                                                                                                         | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------|---------------------|----------------------------------|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------|-----------|-------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2-1a       | Island View Drive   | Albert Street                    | East Street                      | 229                | Signed bicycle route completes the connection to Petawawa Point, and together with Albert Street, East Street, and Victoria Street, forms a loop through the Petawawa Point neighbourhood.                                                                                                                                                                                                                                                                           |                                                                                                               | No                                 | -                    | \$ 1,000  | -           | Phase 2: 2024-2028     | - Island View Drive revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2023<br>- Road surface - 2026<br>- Provides connections to parks and recreation facilities (Petawawa Point Beach)<br>- Low cost facility                                                                                                                                                                                 |
| 2-1b       | East Street         | Victoria Street                  | Island View Drive                | 841                | This signed bicycle route, together with Albert Street, Island View Drive, and Victoria Street, forms a loop through the Petawawa Point neighbourhood.                                                                                                                                                                                                                                                                                                               |                                                                                                               | No                                 | -                    | \$ 3,000  | -           | Phase 2: 2024-2028     | - East Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2023<br>- Road surface - 2023<br>- Water infrastructure - 2023<br>- Sanitary sewer - 2023<br>- Provides connections to parks and recreation facilities (Petawawa Point Beach)<br>- Low cost facility                                                                                                                           |
| 2-1c       | Victoria Street     | Albert Street / Laurentian Drive | East Street                      | 223                | This signed bicycle route, together with Albert Street, Island View Drive, and East Street, forms a loop through the Petawawa Point neighbourhood.                                                                                                                                                                                                                                                                                                                   |                                                                                                               | No                                 | -                    | \$ 1,000  | -           | Phase 2: 2024-2028     | - Victoria Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Water infrastructure - 2026<br>- Sanitary sewer - 2026<br>- Provides connections to parks and recreation facilities (Petawawa Point Beach)<br>- Low cost facility                                                                                                                                                                      |
| 2-2a       | Portage Road        | Murphy Road                      | Scott Avenue                     | 2786               | Paved shoulders on Portage Road connects Murphy Road, and the Black Bay community further west, to the Town of Petawawa and Garrison Petawawa. Paved shoulders will also improve the route for recreational cyclists.                                                                                                                                                                                                                                                | - Road platform width requirements could influence cost estimate for paved shoulders                          | No                                 | -                    | \$418,000 | -           | Phase 2: 2024-2028     | - Improves connectivity and recreational cycling, but low priority                                                                                                                                                                                                                                                                                                                                                                               |
| 2-2b       | Portage Road        | Scott Avenue                     | Petawawa Boulevard               | 527                | Modify Portage Road between Scott Avenue and Petawawa Boulevard to an urban cross-section with designated bike lanes and no parking permitted. The bike lanes will connect existing and developing communities off of Portage Road to the Algonquin Trail and Petawawa Boulevard.                                                                                                                                                                                    |                                                                                                               | No                                 | -                    | \$132,000 | -           | Phase 2: 2024-2028     | - East Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - one segment (R00850) - 2025<br>- Road surface - 2025-2028<br>- Sanitary sewer - 2019<br>- Provides a connection to commerce and employment (Petawawa Boulevard, as well as Garrison Petawawa via the Algonquin Trail)                                                                                                          |
| 2-3a       | Victoria Street     | Wolfe Avenue                     | Albert Street / Laurentian Drive | 1263               | Provides a east-west route between Petawawa Boulevard and Laurentian Drive / Petawawa Point. Designate the existing asphalt shoulders as bike lanes by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Sign and enforce no parking on new bike lanes. The proposed bike lanes are a strong candidate for the application of flexible delineator posts between the proposed bike lane and the vehicle lanes. |                                                                                                               | Yes                                | -                    | -         | \$27,000    | Phase 2: 2024-2028     | - Victoria Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Water infrastructure (Alfred Street to Albert Street) - 2026<br>- Sanitary sewer (Wolfe Avenue to 50 m west of Vermont Meadow) - 2025<br>- Sanitary sewer (Alfred Street to Albert Street) - 2026<br>- Links to existing natural areas and trails (Millennium Trail and Petawawa Point Beach via Albert Street)<br>- Low cost facility |
| 2-4a       | Wolfe Avenue        | Victoria Street                  | 100m south of Mohns Avenue       | 211                | A multi-use pathway on east side of Wolfe Road connects the Millennium Trail north of Victoria Street to the off-road connection between Wolfe Road and Dundonald Drive. Consider a pedestrian / cyclist crossing of Victoria Street to the Millennium Trail.                                                                                                                                                                                                        |                                                                                                               | No                                 | -                    | \$138,000 | -           | Phase 2: 2024-2028     | - Wolfe Avenue revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road surface - 2019c<br>- Links to existing natural areas and trails (Millennium Trail and informal trails south of Wolfe Avenue)<br>- Together with projects 3-3b, 3-3c, and 3-3d, connects with community facilities (Civic Centre)                                                                                                     |
| 2-4b       | Off-Road Connection | Dundonald Drive                  | Wolfe Avenue                     | 1325               | Improve existing informal pathways between Wolfe Avenue 100m south of Mohns Avenue and Dundonald Drive 150m west of Volunteer Way. Provides a connection to complete a continuous north-south route from the Millennium Trail / Victoria Street to the north to Volunteer Way and Civic Centre Road to the south.                                                                                                                                                    | Proposed facility is on federal lands (south side PMQs) and will require coordination with D.N.D to construct | N/A                                | -                    | \$232,000 | -           | Phase 2: 2024-2028     | - Together with projects 3-3c, and 3-3d, connects with community facilities (Civic Centre)<br>- Project is on federal lands, therefore timing of project is uncertain                                                                                                                                                                                                                                                                            |
| 2-4c       | Dundonald Drive     | 150m west of Volunteer Way       | Volunteer Way                    | 155                | Multi-use pathway on north side of Dundonald Drive to connect the multi-use pathway on Volunteer Way with proposed north-south off-road connection to Wolfe Avenue (starting 150m west of Volunteer Way).                                                                                                                                                                                                                                                            | Proposed facility is on federal lands (south side PMQs) and will require coordination with D.N.D to construct | No                                 | -                    | \$43,000  | -           | Phase 2: 2024-2028     | - Together with project 3-3d, connects with community facilities (Civic Centre)<br>- Connects to informal trails north of Dundonald Drive<br>- Project is on federal lands, therefore timing of project is uncertain                                                                                                                                                                                                                             |

| Project ID | Route Description | From               | To                 | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Risks                                                                                                                                                                    | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                       |
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| 2-4d       | Volunteer Way     | Dundonald Drive    | Civic Centre Road  | 526                | Multi-use pathways on east side of Volunteer Way connects south side PMQs and communities to the north to the Civic Centre and Civic Centre Road to the south. The east side multi-use pathway will also connect to the proposed off-road connection between the Civic Centre and Saint Francis of Assisi School. Construct the multi-use pathway by replacing the existing sidewalk from Dundonald Drive to the Civic Centre and widening the existing asphalt pathway from Civic Centre to Civic Centre Road. Consider moving the existing crosswalk on Dundonald Drive 15 metres east of Volunteer Way to just east of Volunteer Way - in-line with the proposed Volunteer Way multi-use pathway.                                                                                                      | Approximately 85 metres of Volunteer Way is within federal lands (south side PMQs) and therefore construction of proposed facility will require coordination with D.N.D. | No                                 | -                    | \$145,000 | -           | Phase 2: 2024-2028     | - Connects with community facilities (Civic Centre)                                                                                                                                                                                                                                                                                                    |
| 2-5a       | Doran Road        | Petawawa Boulevard | Murphy Road        | 1082               | Doran Road is a north-south arterial that connects several residential areas to the south with the Algonquin Trail and Petawawa Boulevard to the north. It also provides connections to Mohns Avenue and Our Lady of Sorrows Elementary School, as well as Herman Street and Herman Street Elementary School. Re-designate the existing asphalt boulevards as cycle tracks by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Improve asphalt quality of cycle tracks as required, and sign and enforce no parking on new cycle tracks. The side street crossings should also be improved by painting crosswalks and crossrides, and by modifying the existing mountable curb and channel to a flush curb at crossings for improved rideability. |                                                                                                                                                                          | No                                 | -                    | \$542,000 | -           | Phase 2: 2024-2028     | - Provides a connection to commerce and employment (Petawawa Boulevard, as well as Garrison Petawawa via the Algonquin Trail)<br>- Provides a comfortable separated cycling facility while utilizing existing infrastructure                                                                                                                           |
| 2-5b       | Doran Road        | Murphy Road        | Black Bay Road     | 2040               | Widening the existing shoulder and providing a painted buffer extends a north-south cycling route alongside the semi-urban communities east of Doran Road, as well as improves the route for recreational cyclists.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | - Coordination with (and approval from) County required<br>- Road platform width requirements could influence cost estimate for paved shoulders                          | Yes                                | -                    | -         | \$511,000   | Phase 2: 2024-2028     | - Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                     |
| 2-6a       | Herman Street     | Woodland Crescent  | Doran Road         | 539                | Signed bicycle route connects the off-road cycling network north of Woodland Park (to the west) with Doran Street and Herman Street Elementary School (to the east).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                          | No                                 | -                    | \$ 2,000  | -           | Phase 2: 2024-2028     | - Herman Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - two segments (R07000 & R07005) - 2026<br>- Road surface - two segments (T07000 & T07005) - 2026<br>- Provides a connection to a neighbourhood park (Woodland Park)<br>- Links with proposed trails north and west of Woodland Park |
| 2-7a       | Murphy Road       | Eichstaedt Road    | Highway 17         | 2146               | Connects the Black Bay community to Petawawa east of Highway 17. Also provides a recreational cycling loop with Eichstaedt Road and Black Bay Road.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | - Road platform width requirements could influence cost estimate for paved shoulders                                                                                     | No                                 | -                    | \$322,000 | -           | Phase 2: 2024-2028     | - Murphy Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road surface - 2022-2028<br>- Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                   |
| 2-7b       | Murphy Road       | Highway 17         | Woodland Crescent  | 1755               | Connects Petawawa to Highway 17 and to the Black Bay community west of Highway 17. Consider an eastbound left-turn bike lane or bike crossing at Woodland Crescent to transition eastbound cyclists to the north side multi-use trail on Murphy Road east of Woodland Crescent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | - Coordination with (and approval from) County required<br>- Road platform width requirements could influence cost estimate for paved shoulders                          | No                                 | -                    | -         | \$264,000   | Phase 2: 2024-2028     | - Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                     |
| 2-7c       | Murphy Road       | Woodland Crescent  | Doran Road         | 456                | Multi-use pathway on the north side of Murphy Road from Woodland Crescent to Doran Road to continue the multi-use pathway proposed along the length of Murphy Road and Civic Centre Road (within the urban area).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                          | No                                 | -                    | \$126,000 | -           | Phase 2: 2024-2028     | - Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                     |
| 2-7d       | Murphy Road       | Doran Road         | Petawawa Boulevard | 747                | Widen existing asphalt pathway on the north side of Murphy Road from Petawawa Boulevard to Doran Road to a 3.0 metre wide multi-use pathway. The proposed pathway connects to the Algonquin Trail and to the existing multi-use pathway on Civic Centre Road.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                          | No                                 | -                    | \$206,000 | -           | Phase 2: 2024-2028     | - Provides a comfortable east-west route<br>- Connects to schools (Valour JK-12 School and St Francis of Assisi School via Civic Centre Road)<br>- Connects to community facilities (Civic Centre via Civic Centre Road and Volunteer Way)                                                                                                             |

| Project ID | Route Description                                                      | From                        | To                                  | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Risks                                                                                                                      | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                                                                                 |
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| 2-7e       | Intersection of Petawawa Boulevard and Civic Centre Road / Murphy Road | N/A                         | N/A                                 | N/A                | - Provide a crossride south of the existing crosswalk on the north leg of the intersection<br>- Consider providing a dedicated eastbound left-turn and provide a dedicated eastbound left-turn phase to separate eastbound left-turn traffic from the north crosswalk / crossride<br>- Consider providing a dedicated westbound right-turn lane and provide a dedicated westbound right-turn phase to separate westbound right-turn traffic from the north crosswalk / crossride<br>- May also need to accommodate a crossride on the west side of the intersection for the Algonquin Trail. |                                                                                                                            | N/A                                | -                    | -         | \$500,000   | Phase 2: 2024-2028     | - Improves the crossing of Petawawa Boulevard, which is a major barrier for the Murphy Road / Civic Centre Road east-west route to / from Valour JK-12 School and St Francis of Assisi School                                                                                                                                                                                                                    |
| 2-7f       | Civic Centre Road                                                      | Petawawa Boulevard          | Volunteer Way                       | 100                | Multi-use pathway on north side from Petawawa Boulevard to Volunteer Way to connect the existing multi-use pathway on Civic Centre Road to Petawawa Boulevard, the Algonquin Trail, and Murphy Road.                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                            | No                                 | -                    | \$28,000  | -           | Phase 2: 2024-2028     | - Civic Centre Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan)<br>- Road surface - one segment (T06000) - 2023<br>- Connects to schools (Valour JK-12 School and St Francis of Assisi School via existing Civic Centre Road pathway)<br>- Connects to community facilities (Civic Centre via Civic Centre Road and Volunteer Way)                                         |
| 2-8a       | Limestone Trail                                                        | Petawawa Boulevard          | Laurentian Drive                    | 742                | Connect to the Algonquin Trail, Town Centre Boulevard and Petawawa Boulevard in the west with Laurentian Drive in the east. Road widening is required to accommodate bike lanes. Sign and enforce no parking on the new bike lanes.                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                            | Yes                                | -                    | \$186,000 | -           | Phase 2: 2024-2028     | - Limestone Trail revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road surface - 2026<br>- Connects to commerce and employment (Petawawa Boulevard and Town Centre Boulevard)<br>- Links to existing natural areas (Petawawa Terrace Provincial Park)                                                                                                                    |
| 2-8b       | Renfrew Street                                                         | Proposed off-road facility  | Limestone Trail                     | 145                | A Signed bike route is recommended to connect Limestone Trail with the proposed off-road facility running east-west on the hydro utility corridor north of Riverstone Trail. Ensure entrance to off-road cycling network at corner of Renfrew Street is well signed                                                                                                                                                                                                                                                                                                                          | Coordination required to ensure agreement in place to construct related proposed off-road facility on Hydro owned property | No                                 | -                    | \$ 1,000  | -           | Phase 2: 2024-2028     | - Links to proposed trails (off-road facility running east-west on the hydro utility corridor north of Riverstone Trail)                                                                                                                                                                                                                                                                                         |
| 2-9a       | Gutzman Road                                                           | Petawawa Boulevard          | Country Lane / Selley Street        | 562                | Paving the existing gravel shoulders on Gutzman Road provides an east-west route between Petawawa Boulevard / the Algonquin Trail, Laurentian Drive, and the north-south neighbourhood cycling route at Country Lane / Selley Street.                                                                                                                                                                                                                                                                                                                                                        | - Road platform width requirements could influence cost estimate for paved shoulders                                       | No                                 | -                    | \$85,000  | -           | Phase 2: 2024-2028     | - Gutzman Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - one segment (R03000) - 2027<br>- Road surface - 2021-2032<br>- Improves connectivity with north-south neighbourhood cycling route on Selley Street / Country Lane<br>- Low priority                                                                                                           |
| 2-10a      | Biesenthal Road                                                        | Petawawa Boulevard          | Achray Road                         | 3469               | Paving the existing gravel shoulders provides a north-south route between Petawawa Boulevard / the Algonquin Trail and Achray Road, and improves the road as a recreational cycling route.                                                                                                                                                                                                                                                                                                                                                                                                   | - Road platform width requirements could influence cost estimate for paved shoulders                                       | No                                 | -                    | \$521,000 | -           | Phase 2: 2024-2028     | - Biesenthal Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road surface - 2020<br>- Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                              |
| 2-11a      | Off-Road Connection                                                    | Scott Avenue / Hilda Street | Proposed trails west of Sammy Drive | 235                | Connect Scott Avenue / Hilda Street to proposed trail network west of Sammy Drive and Oak Avenue through "Nature's Acre" park. This connection provides an alternative off-road north-south route between Portage Road and Doran Road, and creates a recreational off-road cycling opportunity.                                                                                                                                                                                                                                                                                              |                                                                                                                            | N/A                                | -                    | \$42,000  | -           | Phase 2: 2024-2028     | - Links to proposed trail network                                                                                                                                                                                                                                                                                                                                                                                |
| 3-1a       | Petawawa Boulevard                                                     | Paquette Boulevard          | Victoria Street                     | 906                | It is recommended that the future expansion of Petawawa Boulevard accommodate cycle tracks due to the volume of traffic on Petawawa Boulevard. This project is a key connection over the Petawawa River between the Town of Petawawa and Garrison Petawawa. Cyclists that desire complete separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.                                                                                                                                                                                                     | Contingent on funding for the expansion of Petawawa Boulevard from Paquette Road to Doran Road / Mohns Avenue              | No                                 | -                    | -         | \$907,000   | Phase 3: 2029+         | - Petawawa Boulevard revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Water infrastructure - 2022<br>- Sanitary sewer - 2022<br>- Key connection to employment (Garrison Petawawa); however, uncertain timing of funding that is required from upper levels of government for the Petawawa Boulevard widening<br>- Algonquin Trail will provide connection in the interim |
| 3-1b       | Petawawa Boulevard                                                     | Victoria Street             | Doran Road / Mohns Avenue           | 221                | It is recommended that the future expansion of Petawawa Boulevard accommodate cycle tracks due to the volume of traffic on Petawawa Boulevard. This project is an important north-south route through the Town of Petawawa. Cyclists that desire complete separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.                                                                                                                                                                                                                                     | Contingent on funding for the expansion of Petawawa Boulevard from Paquette Road to Doran Road / Mohns Avenue              | No                                 | -                    | -         | \$221,000   | Phase 3: 2029+         | - Petawawa Boulevard revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Water infrastructure - 2022<br>- Sanitary sewer - 2022<br>- Key connection to employment (Garrison Petawawa); however, uncertain timing of funding that is required from upper levels of government for the Petawawa Boulevard widening<br>- Algonquin Trail will provide connection in the interim |



| Project ID | Route Description | From               | To                        | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Risks                                                                                                                                           | Potential Location for Delineators | Capital Project Cost | Town Cost | County Cost | Proposed Phase (Years) | Phasing Rational                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| 3-3a       | Victoria Street   | Petawawa Boulevard | Wolfe Avenue              | 875                | This section of Victoria Street forms an important east-west route between Petawawa Boulevard and Petawawa Point / the south side PMQs. The existing asphalt boulevards should be re-designated as cycle tracks by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Improve asphalt quality of cycle tracks as required, and sign and enforce no parking on new cycle tracks. The side street crossings should also be improved by painting crosswalks and crossrides, and by modifying the existing mountable curb and channel to a flush curb at crossings for improved rideability. | - Coordination with (and approval from) County required                                                                                         | No                                 | -                    | -         | \$438,000   | Phase 3: 2029+         | - Victoria Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Water infrastructure - 2025-2026<br>- Sanitary sewer (Ethel Street to Wolfe Avenue) - 2026<br>- Provides a connection to commerce and employment (Petawawa Boulevard, as well as Garrison Petawawa via the Algonquin Trail)<br>- Links to existing natural areas and trails (Millennium Trail)<br>- Provides connections to schools (Renfrew County Adult High School)<br>- Provides a comfortable separated cycling facility while utilizing existing infrastructure<br>- Note from Town staff that reconstruction might not be considered until after 2030, since complete reconstruction in 2010 |
| 3-4a       | Doran Road        | Black Bay Road     | Achray Road               | 3642               | Paving the existing shoulder and providing a painted buffer provides an improved route for recreational cyclists, connects to Achray Road, and improves the route to existing mountain bike trails on Forest Lea Road.                                                                                                                                                                                                                                                                                                                                                                                                                         | - Coordination with (and approval from) County required<br>- Road platform width requirements could influence cost estimate for paved shoulders | No                                 | -                    | -         | \$911,000   | Phase 3: 2029+         | - Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3-5a       | Herman Street     | Doran Road         | Murphy Road               | 976                | Bike lanes serve Herman Street Elementary School and provide a route between Murphy Road, John Street, and Doran Road. The route also connects to Butler Boulevard and Town Centre Boulevard south of Murphy Road. Widen existing shoulders by narrowing existing vehicle lanes to the minimum width (3.0 metres). Designate asphalt shoulders as bike lanes by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Sign and enforce no parking on new bike lanes.                                                                                                                        |                                                                                                                                                 | No                                 | -                    | \$21,000  | -           | Phase 3: 2029+         | - Herman Street revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - two segments (R07000 & R07005) - 2026<br>- Road surface - two segments (T07000 & T07005) - 2026<br>- Water infrastructure (John Street to Murphy Road) - 2026<br>- Sanitary sewer (Murphy Road to 131 m W of Laroche) - 2026<br>- Provides a connection to a neighbourhood park<br>- Connects to schools (Herman Street Elementary School)<br>- Note from Town staff that reconstruction might not be considered until after 2030, since complete reconstruction in 2013                                                                                                                  |
| 3-6a       | Eichstaedt Road   | Murphy Road        | Black Bay Road            | 900                | Connects to Murphy Road and Black Bay Road to provide a recreational cycling route and improve connectivity west of Highway 17.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - Road platform width requirements could influence cost estimate for paved shoulders                                                            | No                                 | -                    | \$135,000 | -           | Phase 3: 2029+         | - Eichstaedt Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road surface - 2023-2024<br>- Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3-6b       | Black Bay Road    | Eichstaedt Road    | Highway 17                | 2532               | Paving the existing shoulder provides a recreational cycling route and improves connectivity west of Highway 17.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | - Road platform width requirements could influence cost estimate for paved shoulders                                                            | No                                 | -                    | \$380,000 | -           | Phase 3: 2029+         | - Black Bay Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2019-2029<br>- Road surface - 2019-2029<br>- Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3-6c       | Black Bay Road    | Highway 17         | Doran Road                | 2007               | Paving the existing gravel shoulders provides an east-west route between Highway 17 and Doran Road, and improves the road as a recreational cycling route.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | - Road platform width requirements could influence cost estimate for paved shoulders                                                            | No                                 | -                    | \$302,000 | -           | Phase 3: 2029+         | - Black Bay Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2019-2029<br>- Road surface - 2019-2029<br>- Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3-7a       | Airport Road      | Doran Road         | Petawawa Boulevard        | 2638               | Paving the existing gravel shoulders provides an east-west route between Doran Road and Petawawa Boulevard / the Algonquin Trail, and improves the road as a recreational cycling route.                                                                                                                                                                                                                                                                                                                                                                                                                                                       | - Road platform width requirements could influence cost estimate for paved shoulders                                                            | No                                 | -                    | \$396,000 | -           | Phase 3: 2029+         | - Airport Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - one segment (R00300) - 2023<br>- Road surface - 2019-2023<br>- Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3-7b       | Radtke Road       | Petawawa Boulevard | Behnke Crescent           | 1740               | Paving the existing gravel shoulders on Radtke Road provides a connection between Petawawa Boulevard / the Algonquin Trail and the residential community at the east end of Radtke Road. The cost of widening Radtke Road between 75 metres east of Runge Road and 350 metres east of Runge Road, where there is a steep slope of 9% grade bounded by traffic barrier on both sides on the road, may be above standard unit price - consider providing a wide paved shoulder for uphill (westbound) cyclists only.                                                                                                                             | - Road platform width requirements could influence cost estimate for paved shoulders                                                            | No                                 | -                    | \$262,000 | -           | Phase 3: 2029+         | - Radtke Road revised replacement years (earlier than 2030, Source: 2013 Asset Management Plan):<br>- Road base - 2023-2026<br>- Road surface - 2023-2026<br>- Connects to schools (Pine View Public School via Runge Drive)<br>- Note from Town staff that reconstruction might not be considered until after 2030, since complete reconstruction in 2016 of section from River Drive to half-way to bottom of hill                                                                                                                                                                                                                                                                                          |
| 3-8a       | Golf Course Road  | Petawawa Boulevard | Town of Petawawa boundary | 1199               | Connects several residential streets, such as Pinegrove Crescent, Lakeview Avenue, and Easy Street, to Petawawa Boulevard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | - Road platform width requirements could influence cost estimate for paved shoulders                                                            | No                                 | -                    | \$180,000 | -           | Phase 3: 2029+         | - Improves connectivity and recreational cycling<br>- Low priority                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Project ID  | Route Description                                                                     | From | To  | Segment Length (m) | Project Description                                                                                                                                                                                                                                                                                                        | Risks | Potential Location for Delineators | Capital Project Cost | Town Cost          | County Cost        | Proposed Phase (Years) | Phasing Rational                                                                                                                  |
|-------------|---------------------------------------------------------------------------------------|------|-----|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------|----------------------|--------------------|--------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>3-9a</b> | <b>Intersection of Petawawa Boulevard and Limestone Trail / Town Centre Boulevard</b> | N/A  | N/A | N/A                | - Recommend widening Town Centre Boulevard and Limestone Trail on their respective approaches to Petawawa Boulevard to permit the construction of eastbound and westbound bike lanes through the intersection.<br>- May also need to accommodate a crossride on the west side of the intersection for the Algonquin Trail. |       | N/A                                | -                    | -                  | <b>\$300,000</b>   | Phase 3: 2029+         | - Improves the crossing of Petawawa Boulevard, which is a major barrier for the Town Centre Boulevard / Limestone east-west route |
|             |                                                                                       |      |     |                    |                                                                                                                                                                                                                                                                                                                            |       | <b>Total:</b>                      | <b>\$1,244,000</b>   | <b>\$7,817,000</b> | <b>\$4,369,000</b> |                        |                                                                                                                                   |