



Photos/pictures sourced from Urban Design Guidelines (WSP) & Downtown Development Master Plan (FORREC)



Main Street and Beach Areas 1 & 2 Improvements PUBLIC INFORMATION CENTRE 2

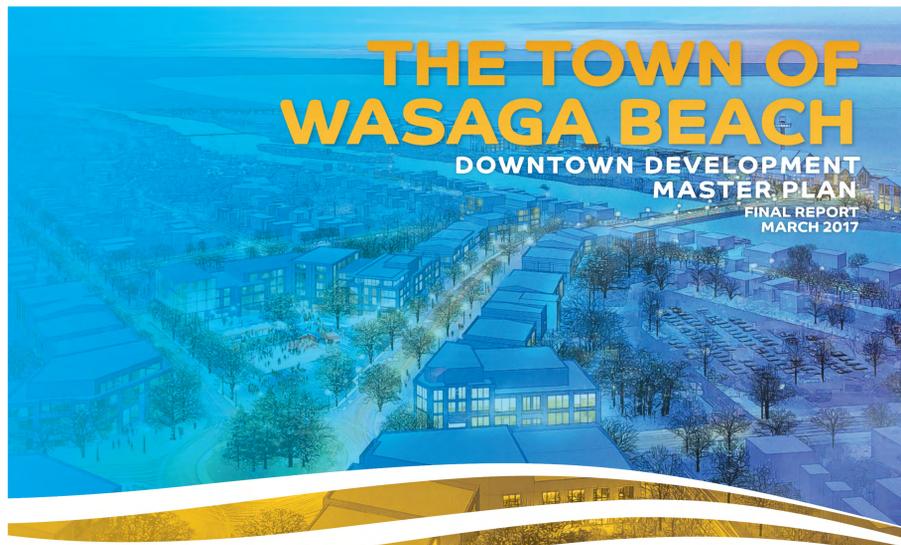


BACKGROUND

Over the past several years, the Town has undertaken a number of initiatives relating to the redevelopment of Main Street and Beach Areas 1 & 2. The most significant to this project include:

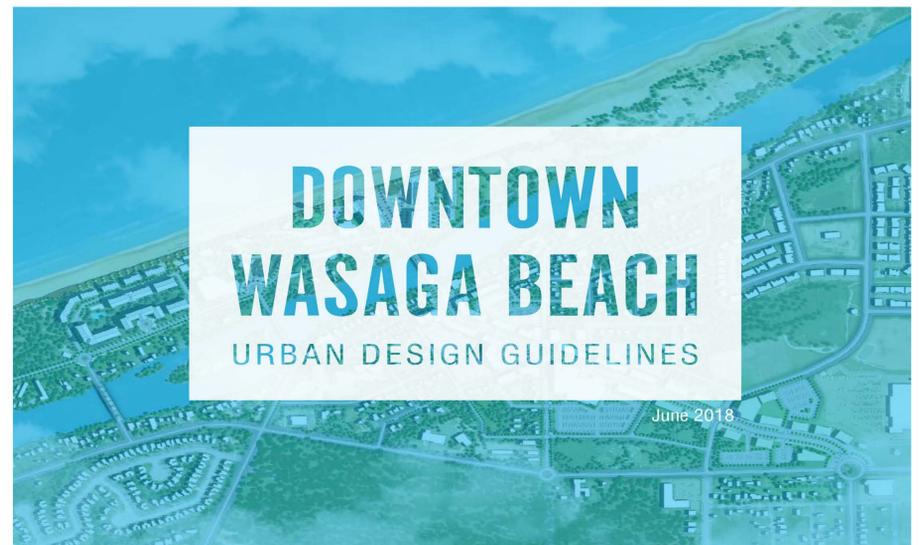
▪ Downtown Development Master Plan (DDMP)

- The DDMP was "designed to promote the evolution of a livable, compact, accessible, sustainable downtown for the entire community."



▪ Downtown Wasaga Beach Urban Design Guidelines (UDG)

- Intended to "encourage development that supports and implements the objectives that are outlined in the DDMP."



OBJECTIVE OF THE STUDY

The objective of this study is to identify and facilitate the implementation of improvements to the study area transportation network in consideration of:

- the natural, socio-economic & heritage environments
- the needs of pedestrians
- the needs of cyclists
- the needs of motorists
- goals and objectives identified in the DDMP, UDG and supporting studies

PURPOSE OF THE STUDY

The purpose of this study is:

- develop alternative solutions to improve the local road network and renew infrastructure to facilitate the overall objectives of the DDMP and UDG
- identify the location, extent and sensitivity of affected environments
- assess the alternatives given potential environmental impacts
- identify the preferred solutions
- establish measures to mitigate impacts
- satisfy the Class EA requirements

PURPOSE OF PIC 2

The purpose of this Public Information Centre (PIC 2) is to:

- continue open channels of communication with public and stakeholders
- detail the study area, study purpose and objective
- review the preferred solutions from PIC 1
- identify alternative design concepts to implement the preferred solutions
- seek input and comments for consideration in the selection of the preferred designs

THE ROLE OF THE PUBLIC

To assist in the completion of this study, the public and stakeholders should:

- review the presentation material
- ask questions of the Town and/or Consultant
- make your opinions known
- submit a comment sheet
- indicate whether you want to be added to the mailing list to be kept informed of the process and future events



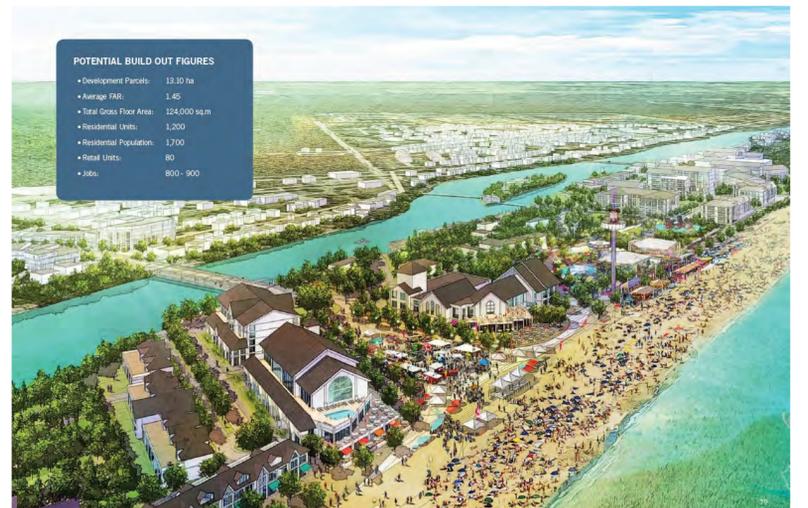
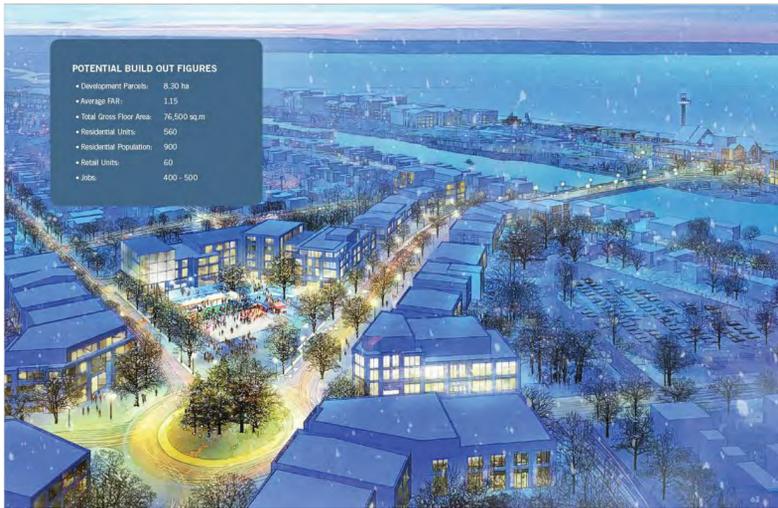
Main Street and Beach Areas 1 & 2 Improvements PURPOSE & OBJECTIVES



DOWNTOWN VISION

The Town of Wasaga Beach has identified the beachfront and surrounding area, consisting of the Main Street, Mosley Street and Beach Drive corridors, as an integral component of the Town's vision to develop a livable, accessible and sustainable all-season town-centre for the entire community, including existing and future residents and visitors.

In consideration of the existing road and infrastructure conditions, and in context of the requirements to support the Town's vision for a Downtown as identified in the *Downtown Development Master Plan* with respect to traffic volumes (vehicular, cycling and pedestrian) and municipal services, a Problem/Opportunity Statement has been defined.



PROBLEM / OPPORTUNITY STATEMENT

That existing traffic and infrastructure needs and deficiencies along the subject lengths of Main Street (from River Road West to Mosley Street), Mosley Street (from Main Street to 6th Street) and Beach Drive be addressed in an environmentally sound manner, in consideration of future traffic needs, current Town standards, active transportation opportunities and municipal infrastructure requirements, with the objective of facilitating future growth while providing safe and efficient travel for all road users."

PROCESS TO ADDRESS THE PROBLEM / OPPORTUNITY STATEMENT

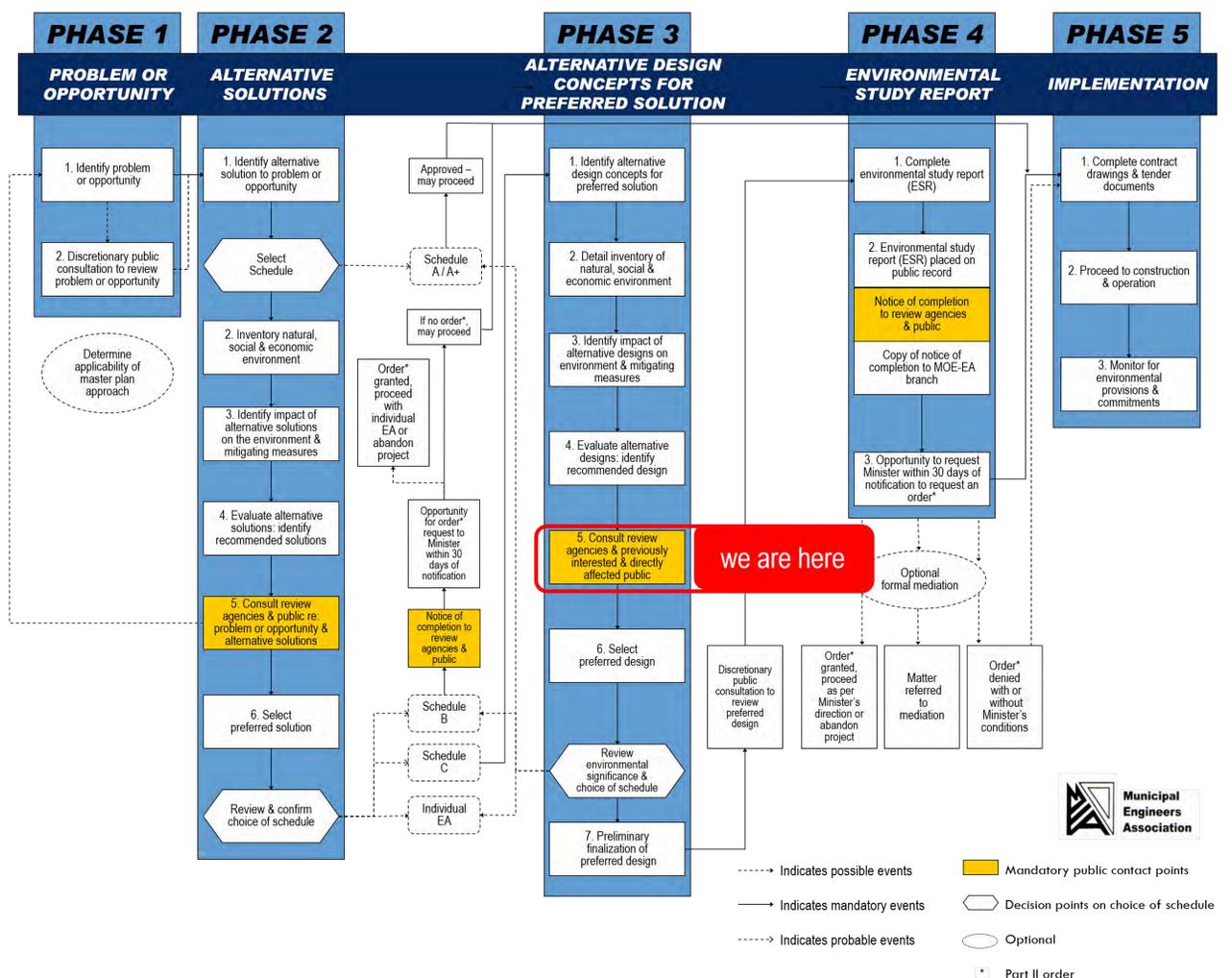
To address the problem/opportunity statement and explore opportunities for improvements to Main St and Beach Areas 1 & 2, a Class Environmental Assessment will be undertaken.

The Class EA schedule is based on the type of project, potential impacts and construction value.

The project will be undertaken as a Schedule C Class EA, with the completion of Phases 1 to 5 (see aside).

Opportunities for public review & input include:

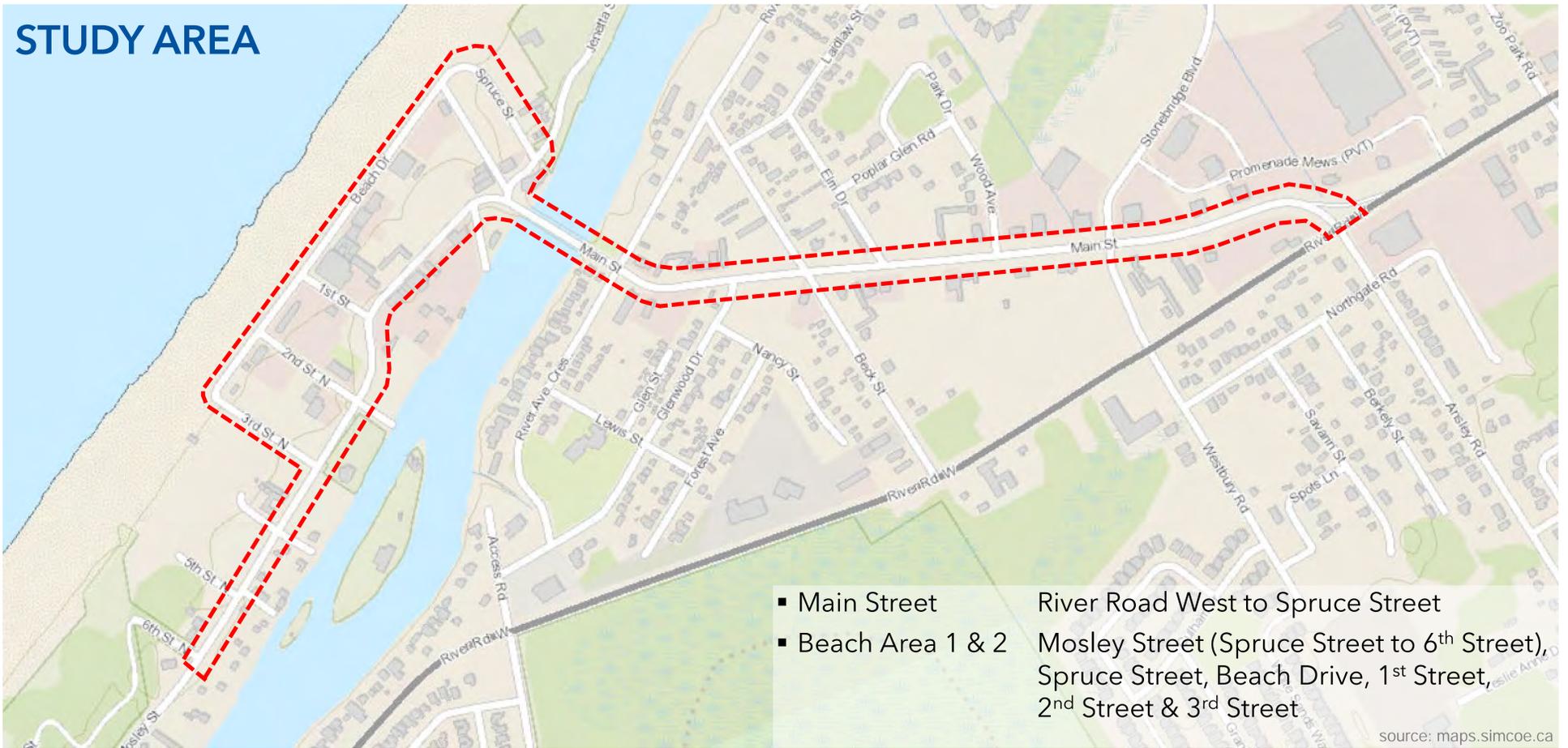
- response to notices (Notice of Commencement, Notice of PICs x2 and Notice of Completion)
- public information centres (PICs x2)
- 30-day review of final report



Main Street and Beach Areas 1 & 2 Improvements PROBLEM IDENTIFICATION



STUDY AREA



- Main Street River Road West to Spruce Street
- Beach Area 1 & 2 Mosley Street (Spruce Street to 6th Street), Spruce Street, Beach Drive, 1st Street, 2nd Street & 3rd Street

source: maps.simcoe.ca



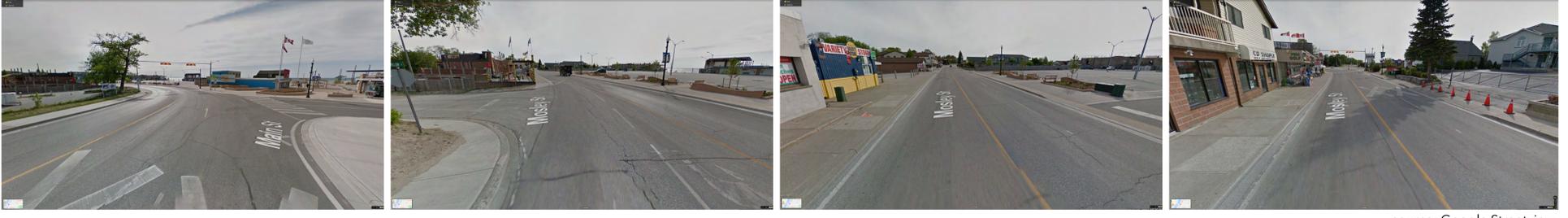
MAIN STREET - River Road West to Stonebridge Boulevard



MAIN STREET - Stonebridge Boulevard to Beck Street



MAIN STREET - Beck Street to River Avenue Crescent / River Road East



MOSLEY STREET - Spruce Street to 1st Street

source: Google Streetview



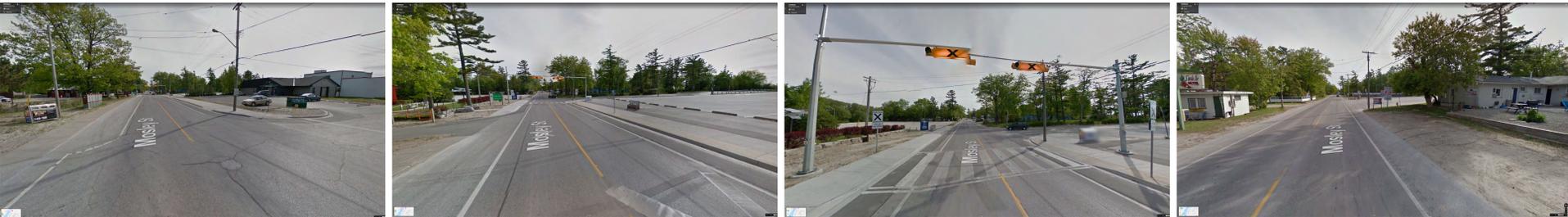
Main Street and Beach Areas 1 & 2 Improvements EXISTING CONDITIONS



AERIAL MAPPING



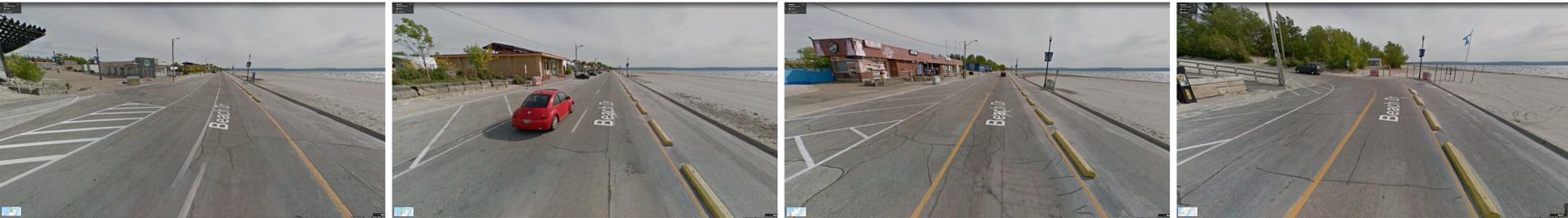
MOSLEY STREET - 1st Street to 2nd Street



MOSLEY STREET - 2nd Street to 3rd Street



MOSLEY STREET - 3rd Street to 6th Street



BEACH DRIVE - Spruce Street to 3rd Street

source: Google Streetview



Main Street and Beach Areas 1 & 2 Improvements EXISTING CONDITIONS



ALTERNATIVE SOLUTIONS

Alternative Solutions were presented at PIC 1 to illustrate different options to addressing the Problem/Opportunity Statement in consideration of the following:

<p>RIGHT-OF-WAY</p> <p>What is the available road right-of-way within which the improvements must be assembled?</p>	<p>VEHICLES</p> <p>What is the most appropriate manner to address more vehicle travel demands?</p>	<p>PARKING</p> <p>What is the most appropriate manner to accommodate demands for parking?</p>	<p>BICYCLES</p> <p>What is the most appropriate manner to address bicycle travel demands?</p>	<p>PEDESTRIANS</p> <p>What is the most appropriate manner to address pedestrian travel demands?</p>	<p>RETAIL / COMMERCIAL</p> <p>What opportunities can be provided to support retail / commercial development?</p>
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EVALUATION OF SOLUTIONS

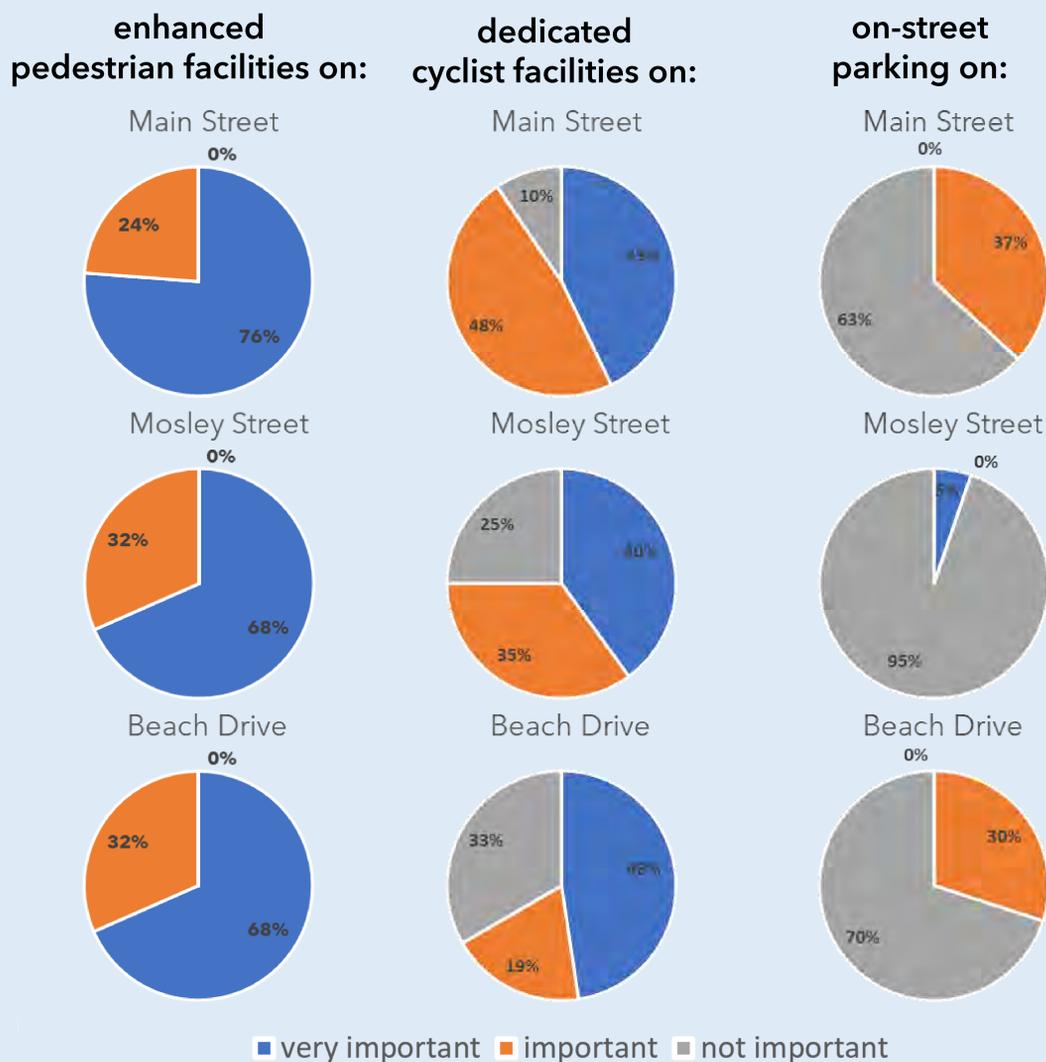
The Alternative Solutions were evaluated based on their ability to achieve the study objectives (namely to accommodate future travel needs of all road users -motorists, cyclists & pedestrians) and the resulting impacts to the following environments:

- Transportation
- Natural
- Cultural
- Social
- Economic

SUMMARY OF PUBLIC INPUT

At PIC 1, a Public Comment Sheet was made available to further solicit input pertaining to the Alternative Solutions and those elements that are of most importance to the public. Respondents were asked:

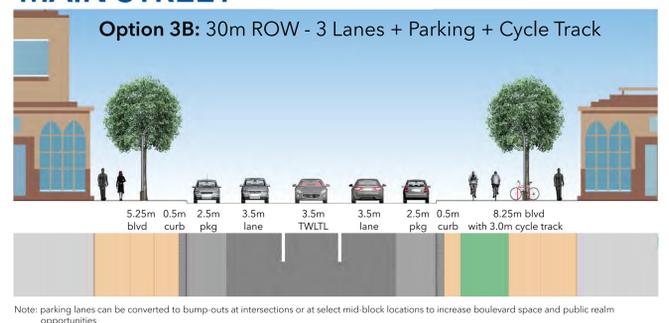
How important is it for you to have ...



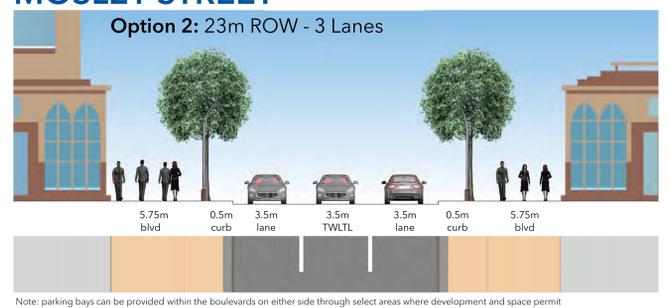
PREFERRED SOLUTIONS

The Preferred Solutions were based on the evaluation, consultation with the Town and consideration of the public input received.

MAIN STREET



MOSLEY STREET



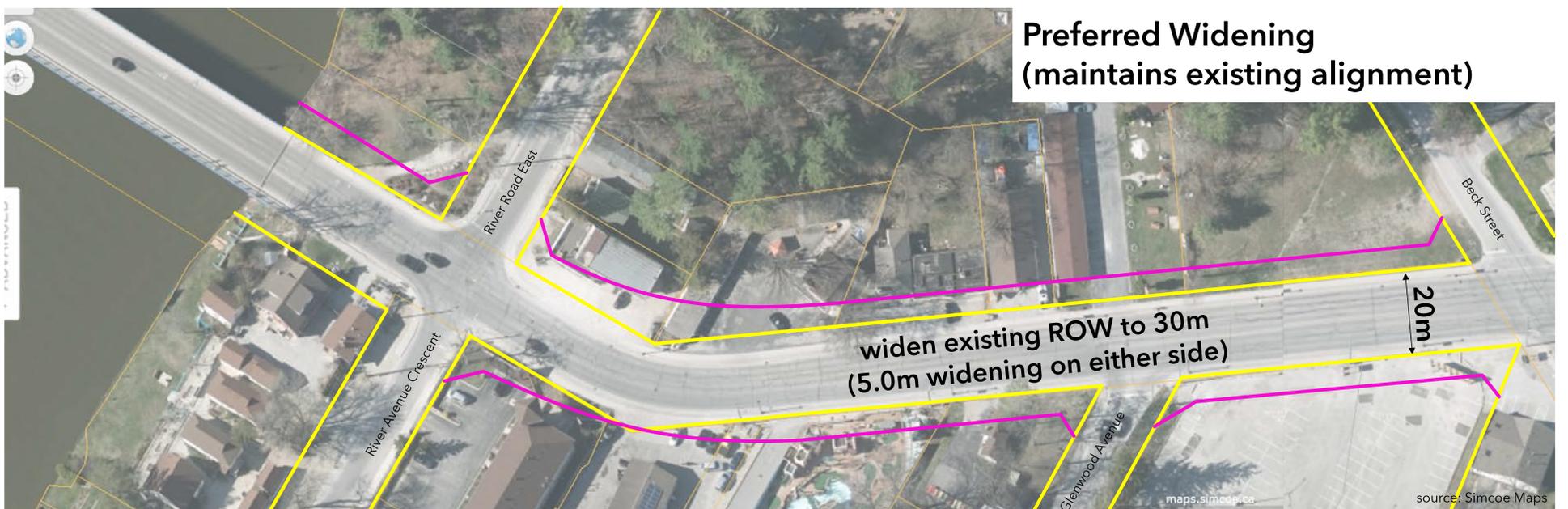
BEACH DRIVE



Main Street and Beach Areas 1 & 2 Improvements RECAP OF PREFERRED SOLUTIONS



MAIN STREET



EVALUATION OF OPTIONS

River Road West to Beck Street

Existing right-of-way is 30 metres (or greater) and thus no additional widening is required.

Beck Street to the River

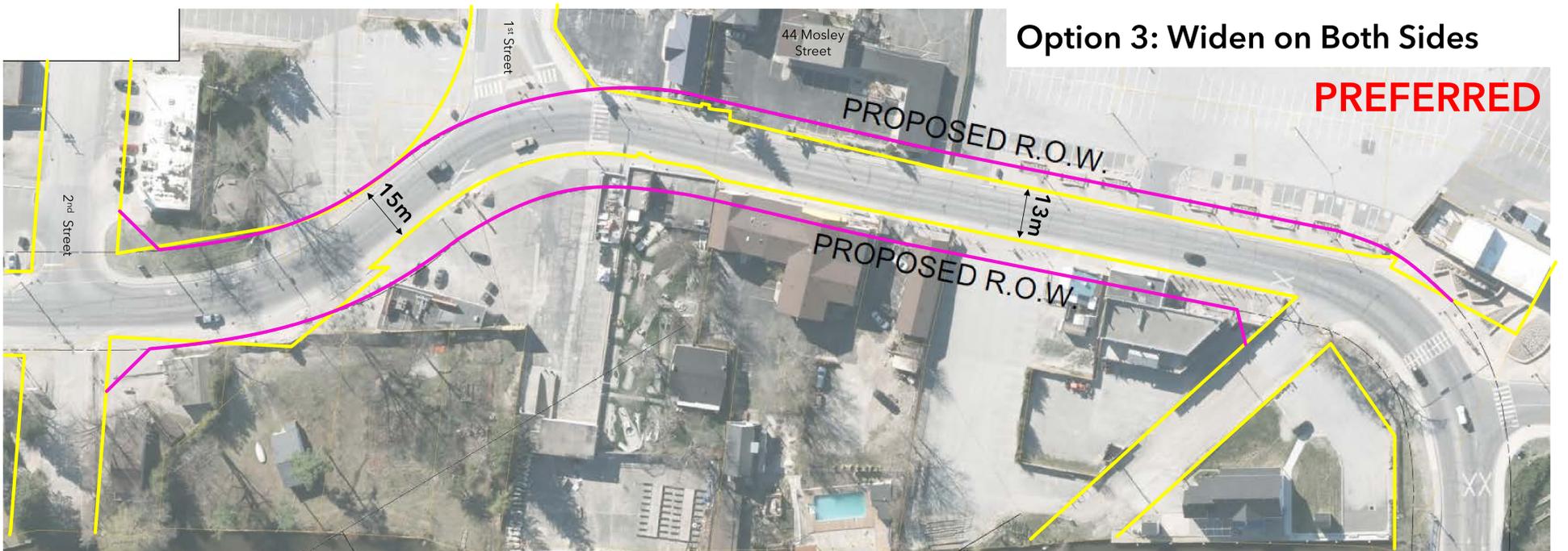
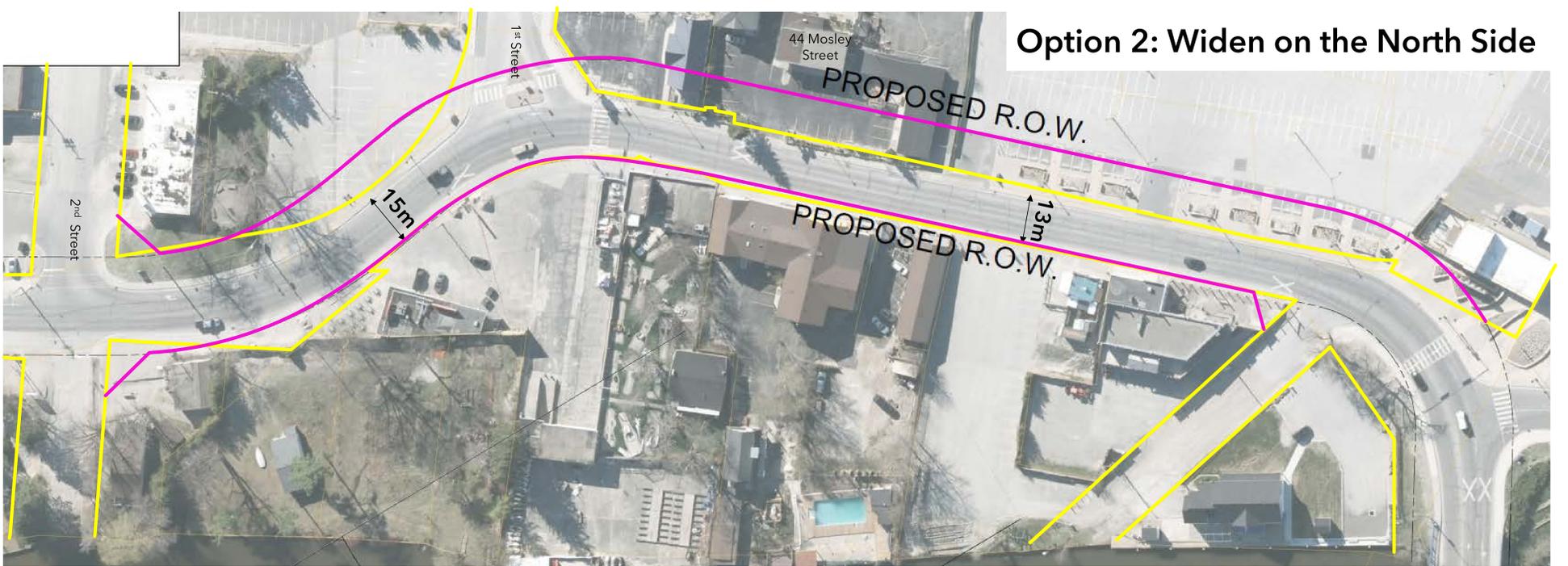
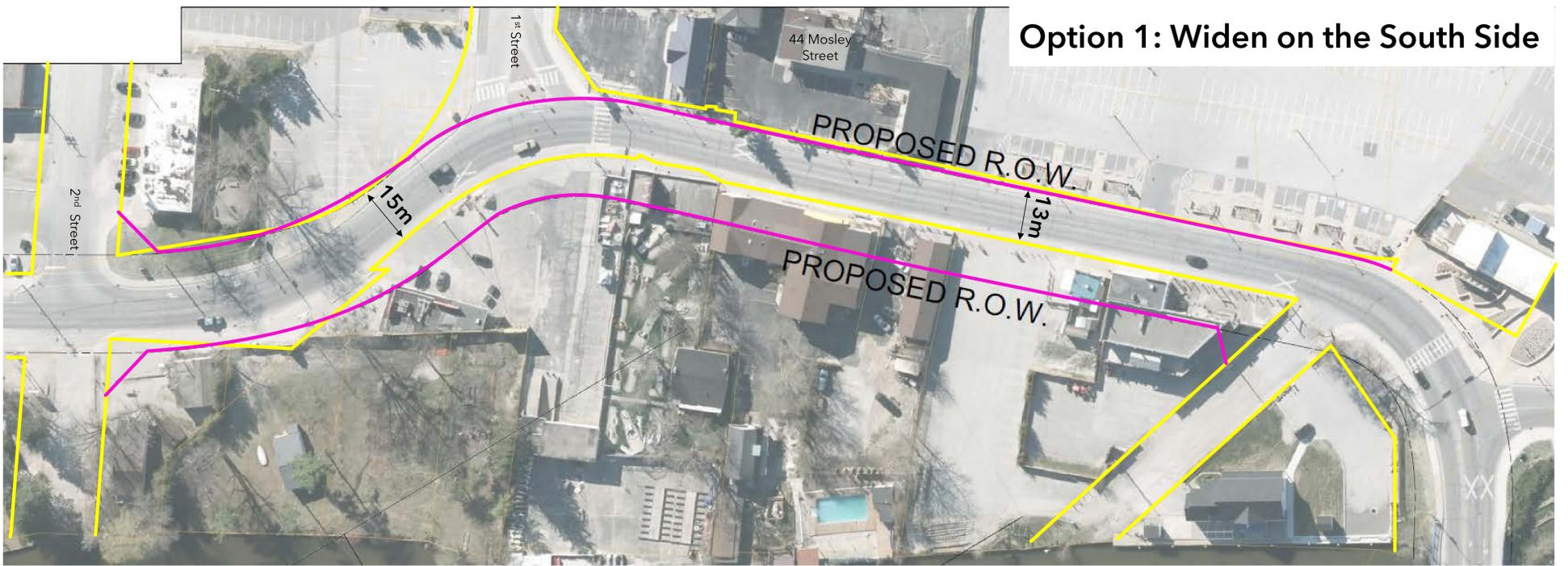
The preferred option is to widen 5.0 metres on both sides, matching the existing 30 metre ROW to the east of Beck Street. This is consistent with the Town's Official Plan and Community Improvement Program policies in place.



Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



MOSLEY STREET - Spruce Street to 2nd Street



source: Simcoe Maps



Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



MOSLEY STREET - Spruce St to 2nd Street (cont'd)



MOSLEY STREET - 2nd Street to 6th Street



source: Simcoe Maps

— existing right-of-way — proposed 23m right-of-way

EVALUATION OF OPTIONS

Spruce Street to 2nd Street

The preferred option to widen Mosley Street to provide a 23m right-of-way is Option 3: Widen on Both Sides

- attempts to balance the impacts to development lands and redevelopment potential on both sides of the road
- Options 1 and 4 have increased impacts to the south side and hence hinder development/redevelopment potential; Option 2 has increased impacts on the north side

2nd Street to 6th Street

The preferred option to widen Mosley Street is simply to best fit the existing right-of-way, attempting to minimize and balance impacts on both sides.

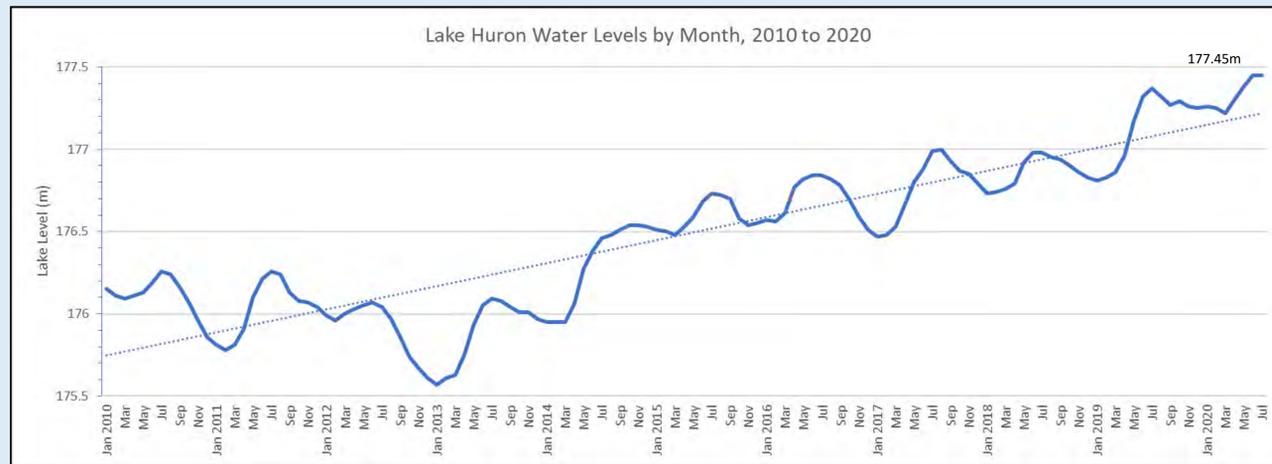


Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



WATER LEVELS & BEACH AREA

Average water levels in Lake Huron (and hence Georgian Bay) have changed considerably over the past years, with record high levels currently being experienced.



Average water levels as reported by Fisheries & Oceans Canada (DFO):

2000: 175.98m

2010: 176.11m

Jan to Jul 2020: 177.33m

July 2020: 177.45m

Monthly Mean Water Levels in metres

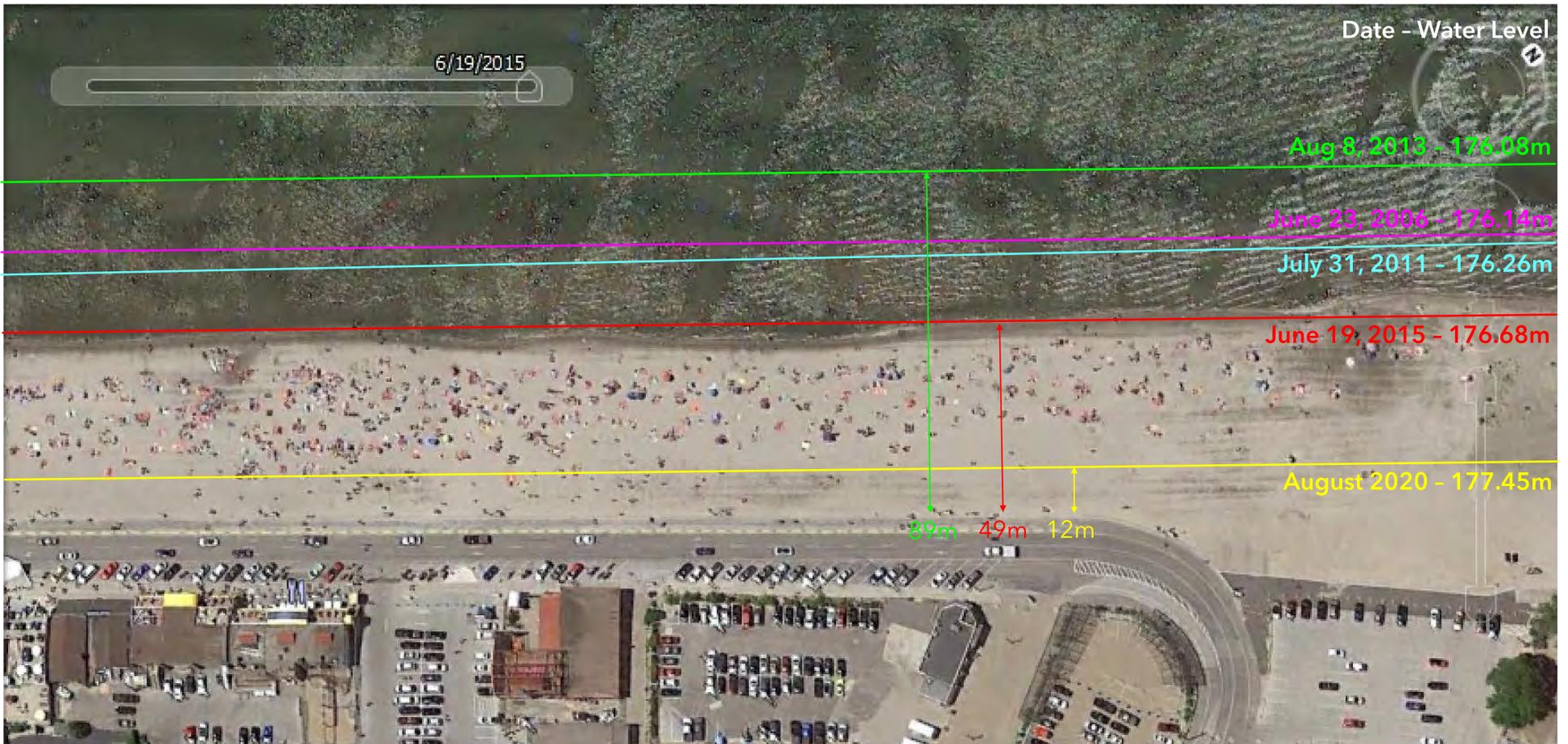
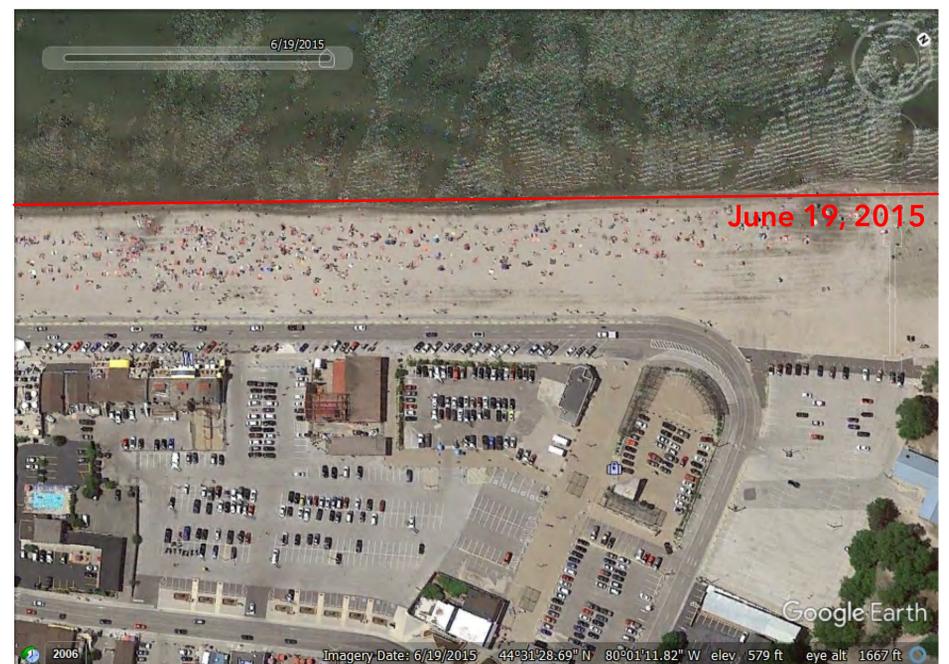
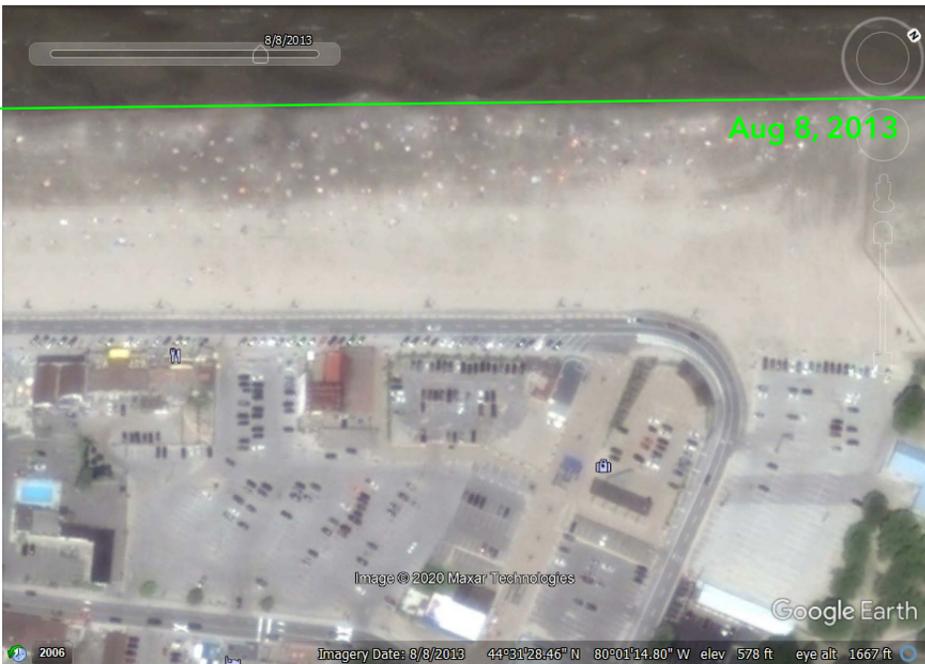
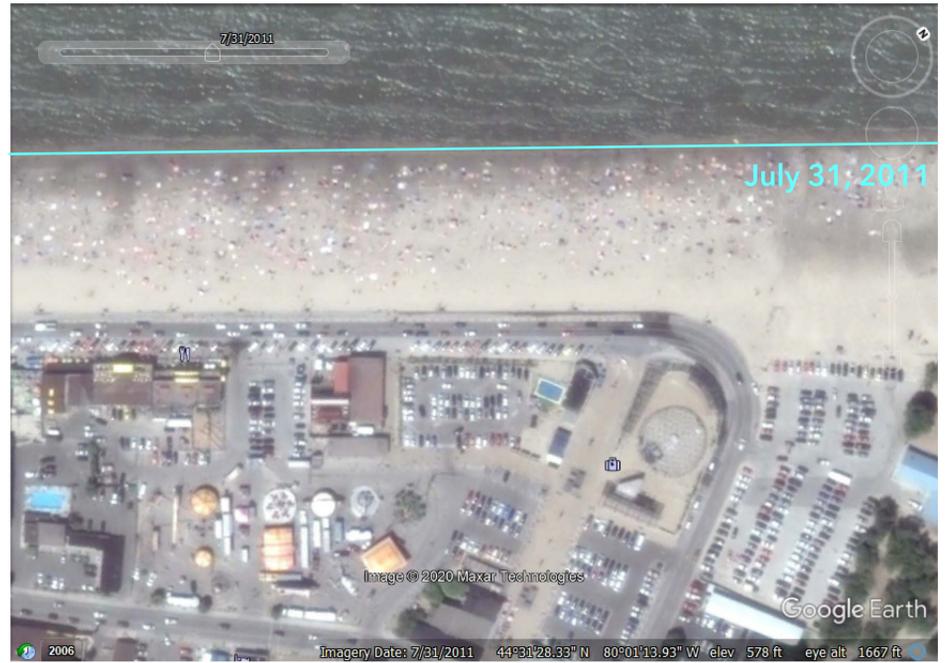
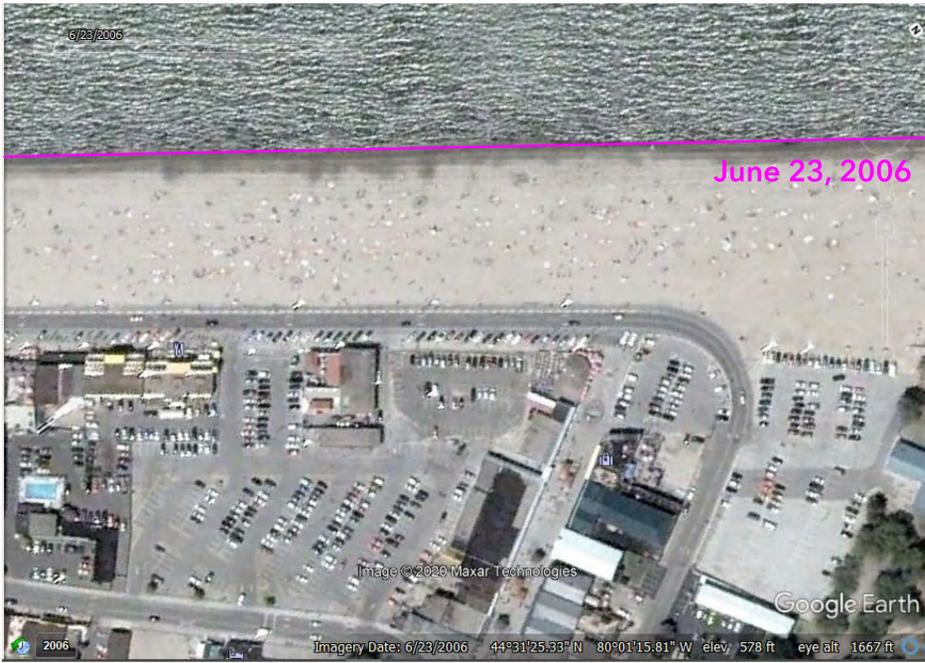
July 2020	Lake Huron
Mean for Month (preliminary data)	177.45
Mean for month last year	177.37
Mean for month, last 10 years	176.60
Statistics for period of record	1918-2019
Maximum monthly mean / year	177.39 1986
Mean for month, All Time	176.59
Minimum monthly mean / year	175.78 1964
Probable mean for next month	177.43
Chart Datum	176.00



Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



WATER LEVELS & BEACH AREA



Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING

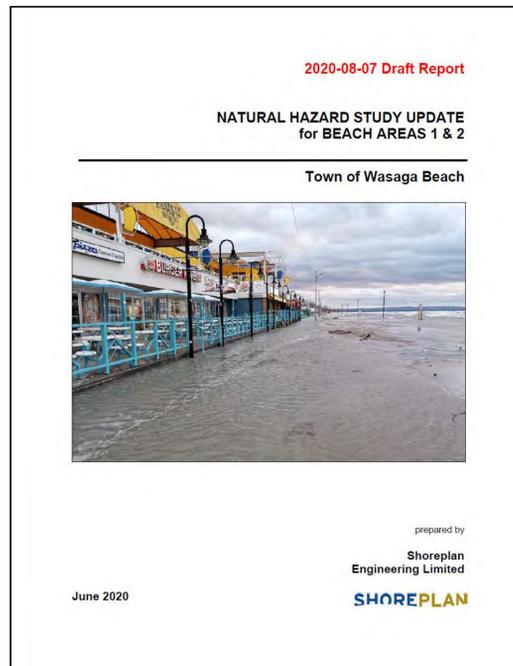


NATURAL HAZARDS STUDY

To address the impacts of the high water levels on the area and future development potential, a *Natural Hazard Study Update* was completed.

The goals of the study:

- identify the location of the flood hazard areas, erosion hazard areas and dynamic beach hazard areas
- determine appropriate setbacks from these features to facilitate future development Beach 1 & 2 areas



100-Year Flood Level

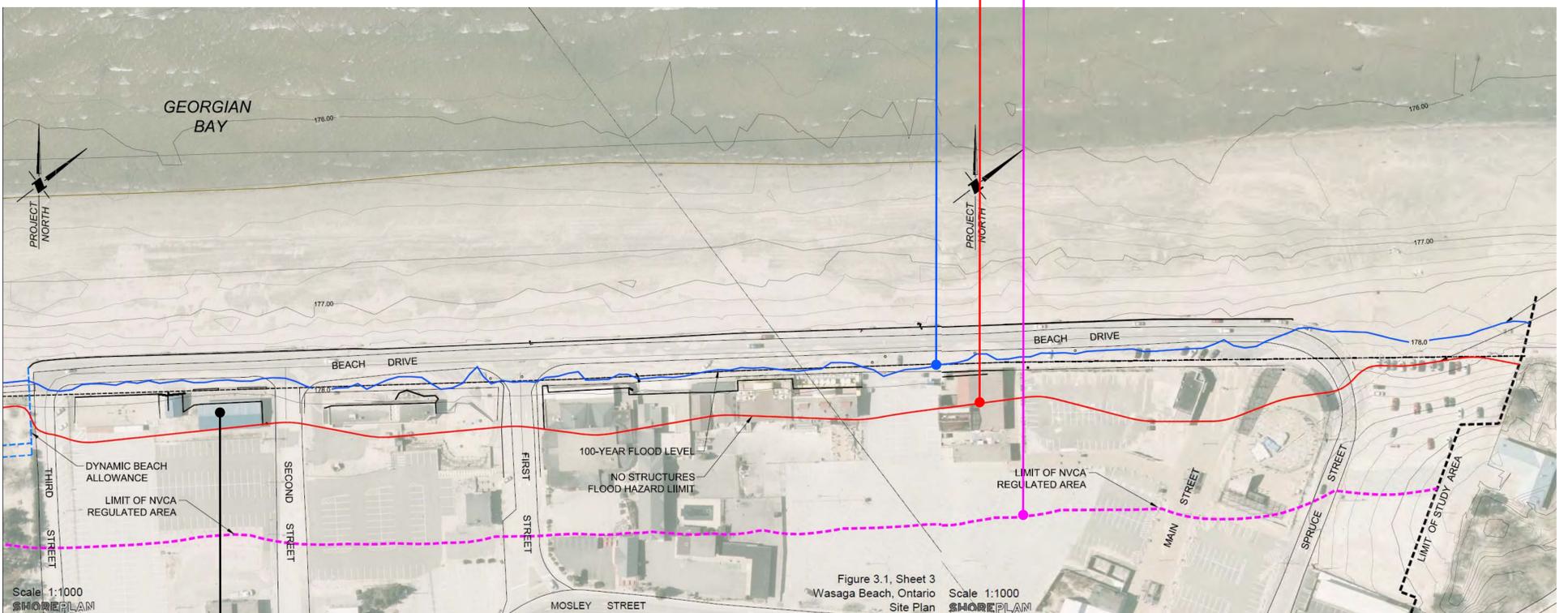
- the water level having a 1% probability of occurrence in any given year

No Structures Flood Hazard

- 100-year storm + consideration for wave uprush
- development beyond this limit is outside the flood hazard and hence would not require floodproofing

NVCA Regulated Area

- guards against the risks associated with natural hazards
- 15m beyond limit of natural hazards



Developing in the Flood Hazard Area

- development within the flood hazard area is permitted if specific conditions are met, including compliance with flood-proofing and access standards
- new development could be allowed within the flood hazard area if these standards are met with designs completed by a qualified professional engineer

STUDY FINDINGS / RECOMMENDATIONS

Build a Wall

- constructing a wall along Beach Drive to meet the flood-proofing standard on its own is NOT practical due to the height of the wall that would be required

Raise the Road

- raising the elevation of the Beach Drive as part of the redevelopment would simplify the floodproofing designs
- an increase of $\pm 3\text{m}$ would be necessary to keep the wave uprush below the flood elevation, which is NOT practical
- any increase in road elevation should be done in conjunction with floodproofing

Raise the Road + Revetment

- one option is to raise the road 1.2m (from 177.7m to 178.9m)
- construct revetment / shore protection along the beach
- floodproof to a minimum structural opening of 179.5m (+ 0.6m)



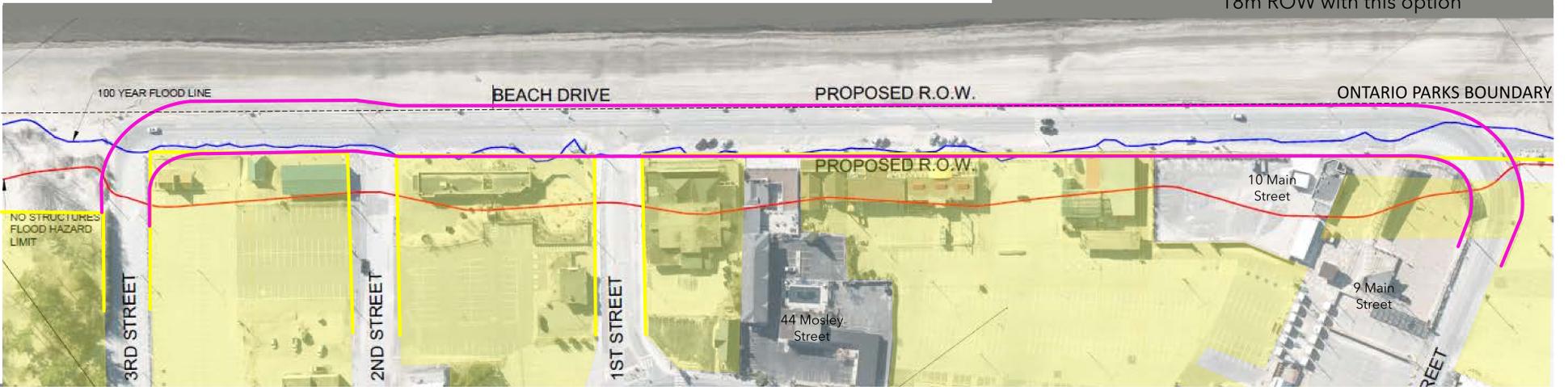
Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



BEACH DRIVE

Option 1: Existing Road Alignment (south edge at buildings)

Note: could also maintain the existing 18m ROW with this option



Option 2: Recover Minimum Beach (shift of 7.5 metres south) **PREFERRED**



Option 3: 100 Year Flood Line (shift of 22 metres south)



Option 4: No Structure Flood Hazard Limit (shift 44 metres south)



— existing right-of-way
 Town property
— proposed 20m right-of-way

EVALUATION OF OPTIONS

The preferred option to provide a 20m right-of-way is Option 2: Recover Minimum Beach

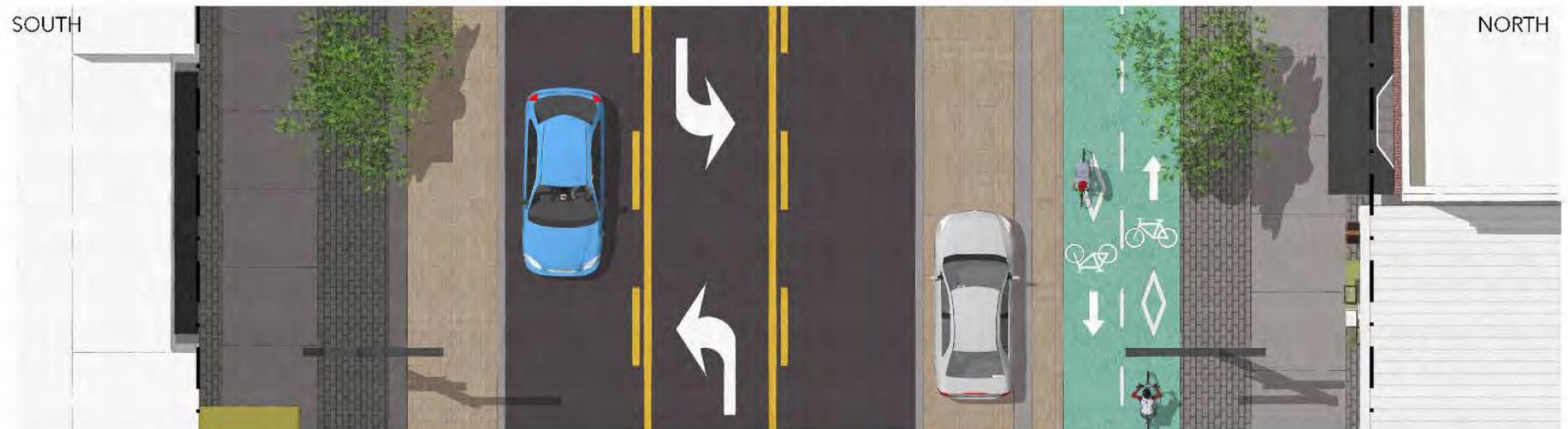
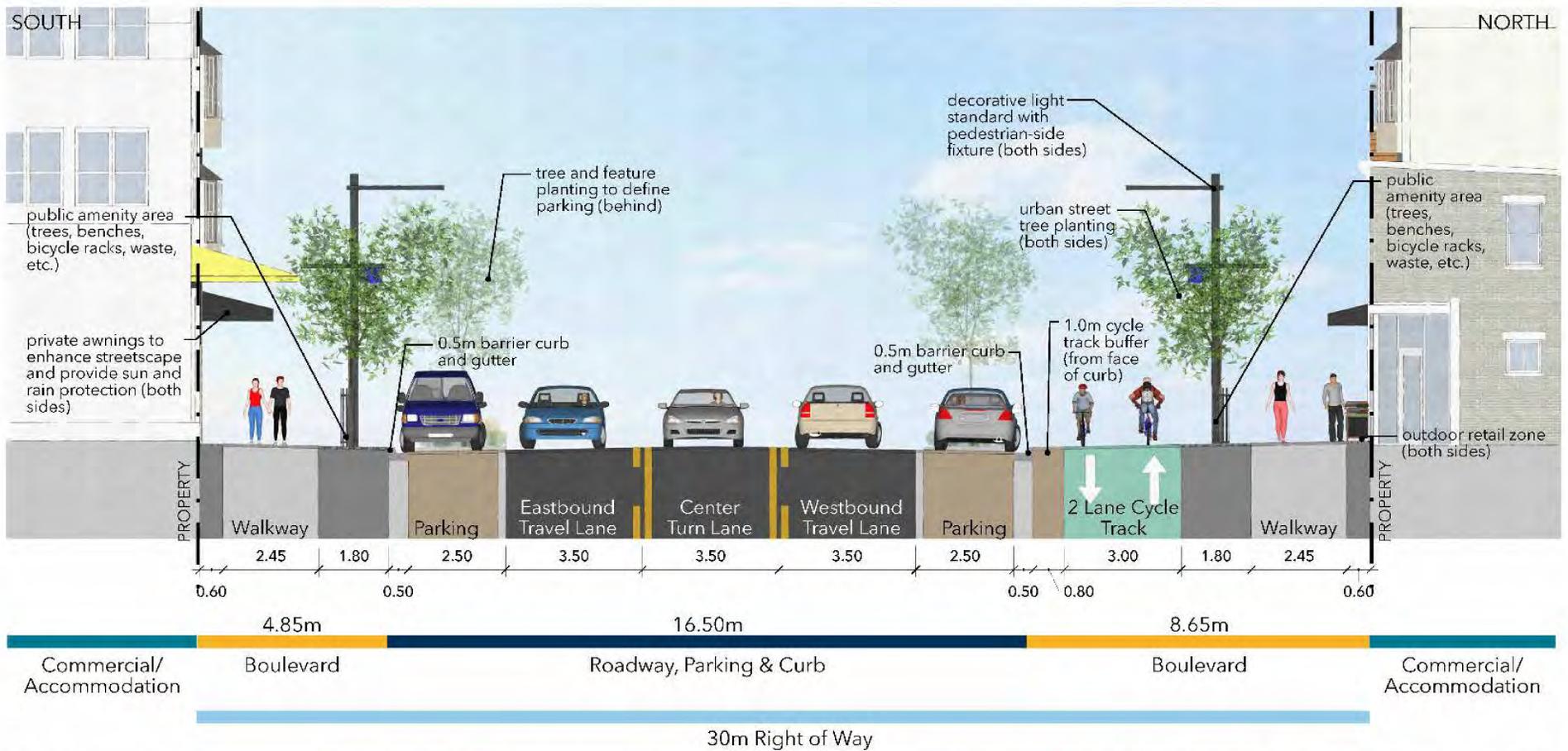
- provides an increased minimum area of beach during high water periods
- maximizes remaining development lands to the south
- ensures existing Ontario Parks boundary can be respected



Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



MAIN STREET - Option 1



KEY FEATURES

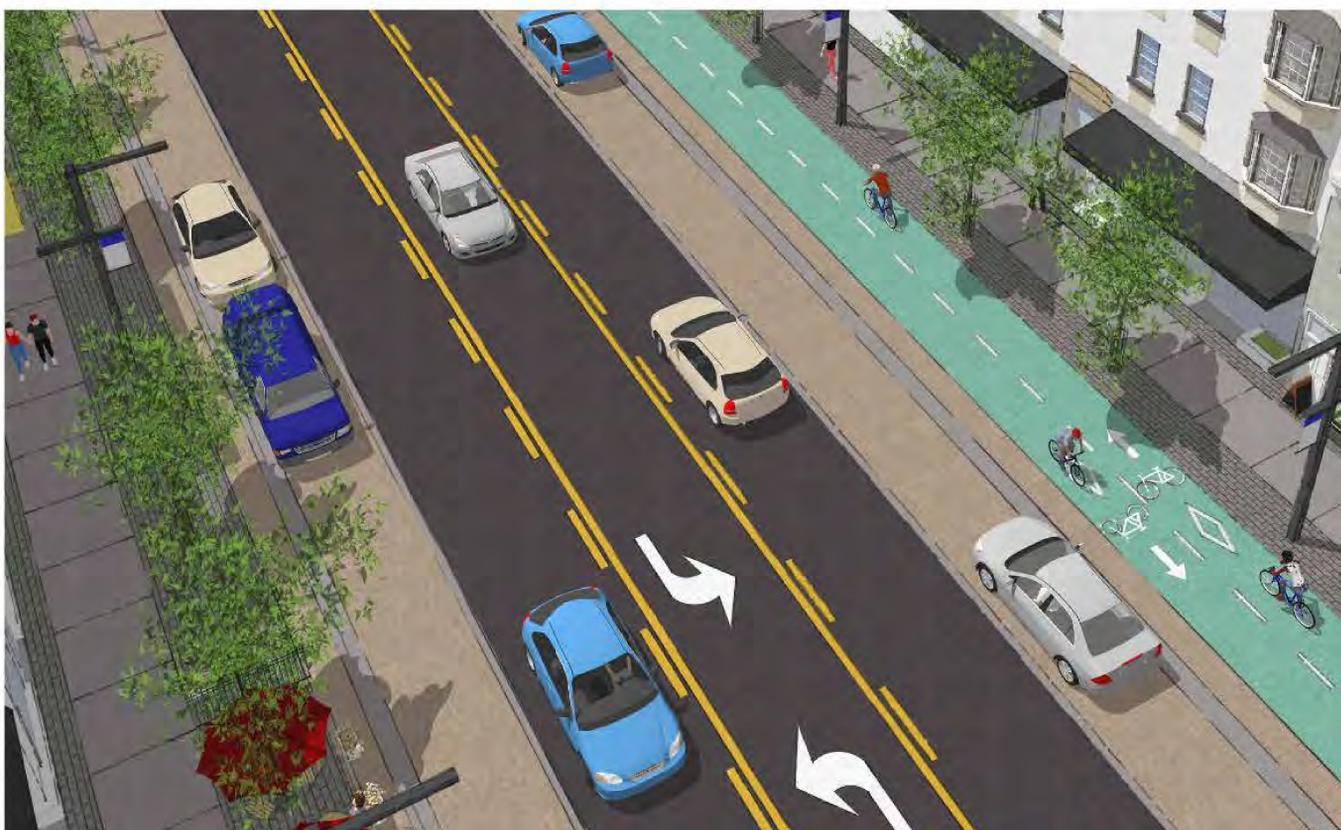
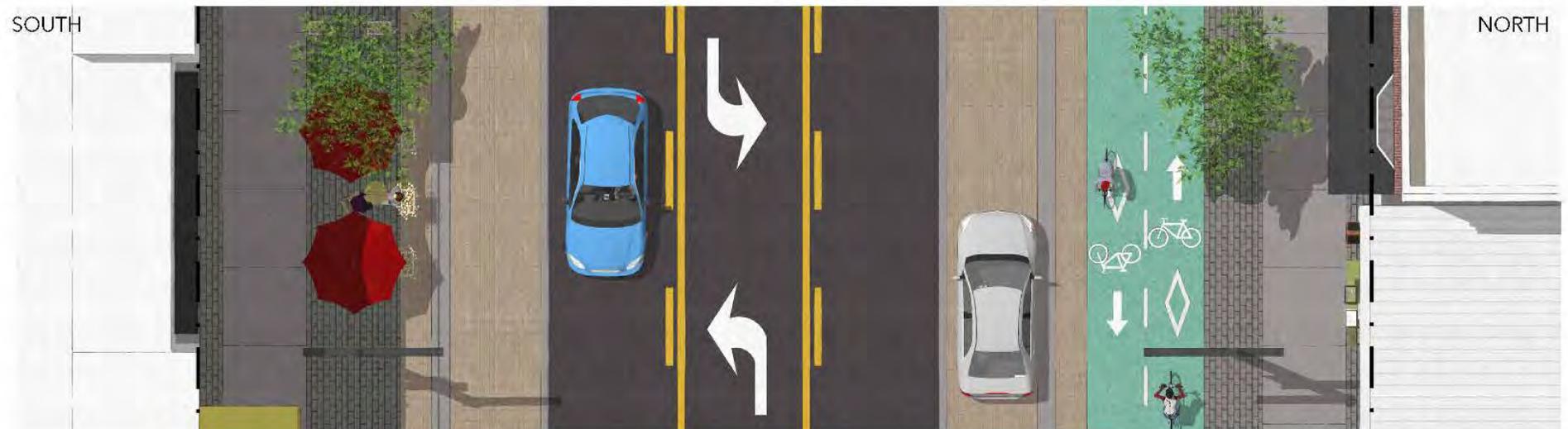
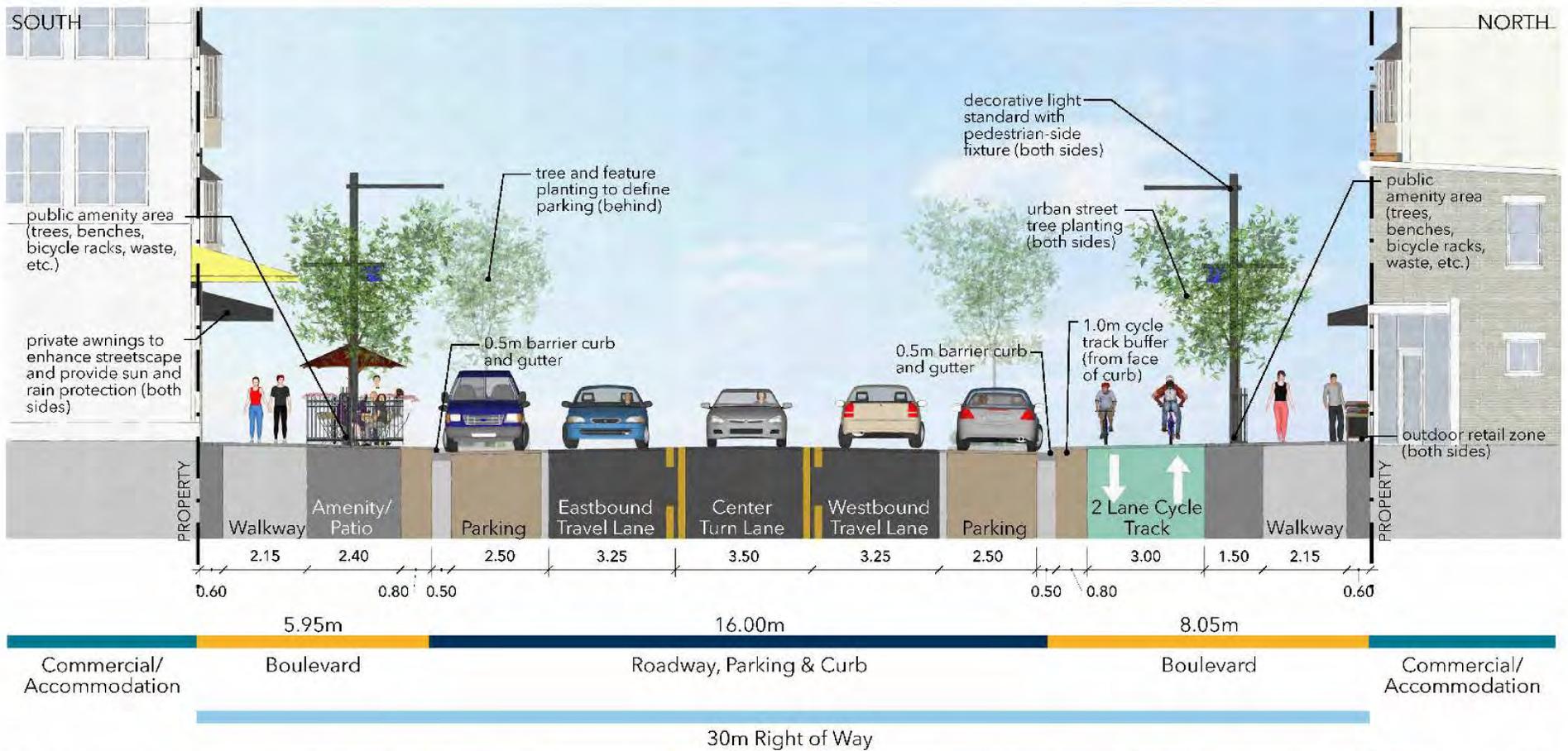
- incorporates 3.5m travel lanes for through and turn lanes (which is considered typical)
- standard 2.5m on-street parking provided on both sides
- 2.45m walkways are provided on both sides of the road
- urban planting provided on both sides
- cycle track of 3.0m (minimum recommended width) provided on the north side to facilitate a connection to Beach Drive
- 1.8m tree amenity zone separates the cycle track from the pedestrian walkway, and a 1.0m buffer is provided to separate the cycle track from the parking lane (to avoid impacts with opening doors)
- intersection and/or mid-block "bump-outs" can be provided to facilitate pedestrian crossings



Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION



MAIN STREET - Option 2



KEY FEATURES

- travel lanes are reduced from 3.5 to 3.25m to help reduce travel speeds; centre turn lane maintained at 3.5m given need of turning vehicles
- standard 2.5m on-street parking provided on both sides
- walkways reduced to 2.15m to accommodate provision of an amenity/patio space on south side
- urban plantings on both sides
- cycle track of 3.0m (minimum recommended width) provided on the north side to facilitate a connection to Beach Drive
- 1.5m tree amenity zone separates the cycle track from the pedestrian walkway, and a 1.0m buffer is provided to separate the cycle track from the parking lane (to avoid impacts with opening doors)
- intersection and/or mid-block "bump-outs" can be provided to facilitate pedestrian crossings

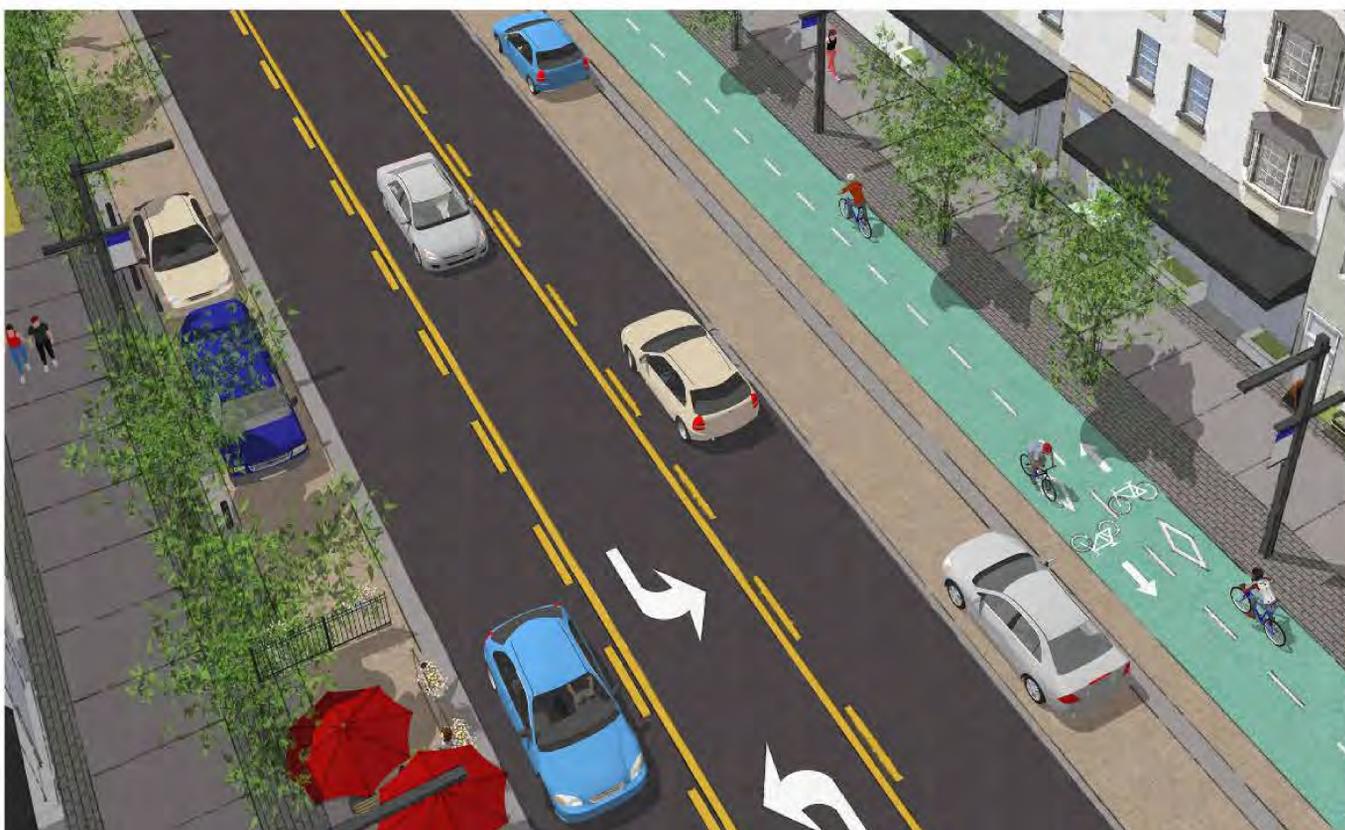
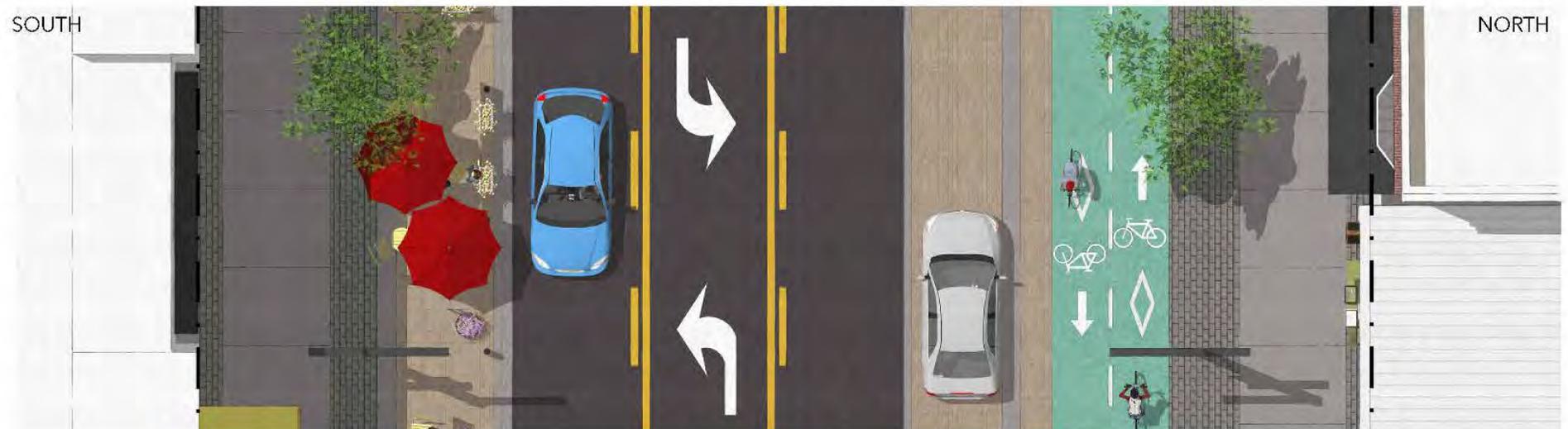
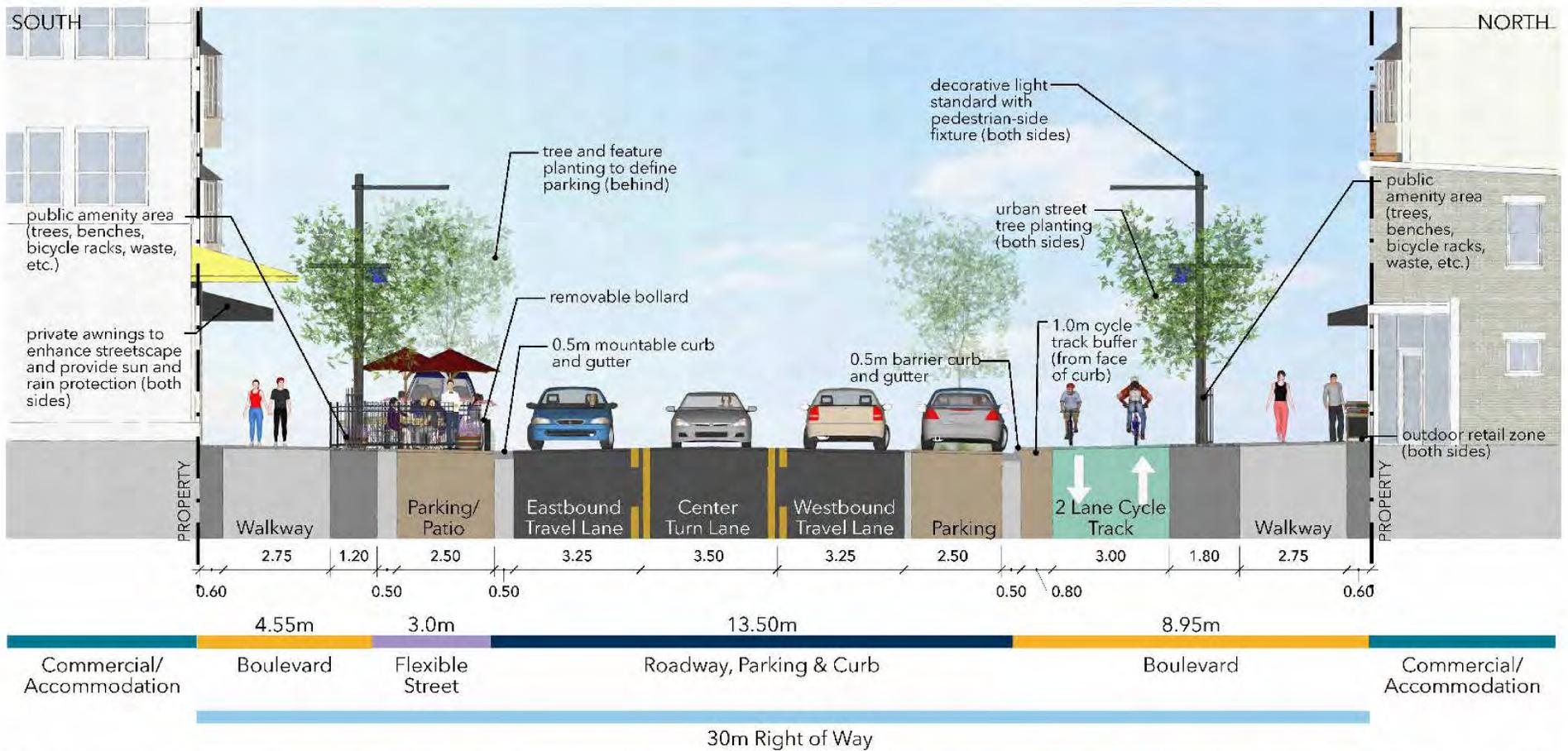


Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION



MAIN STREET - Option 3

PREFERRED



KEY FEATURES

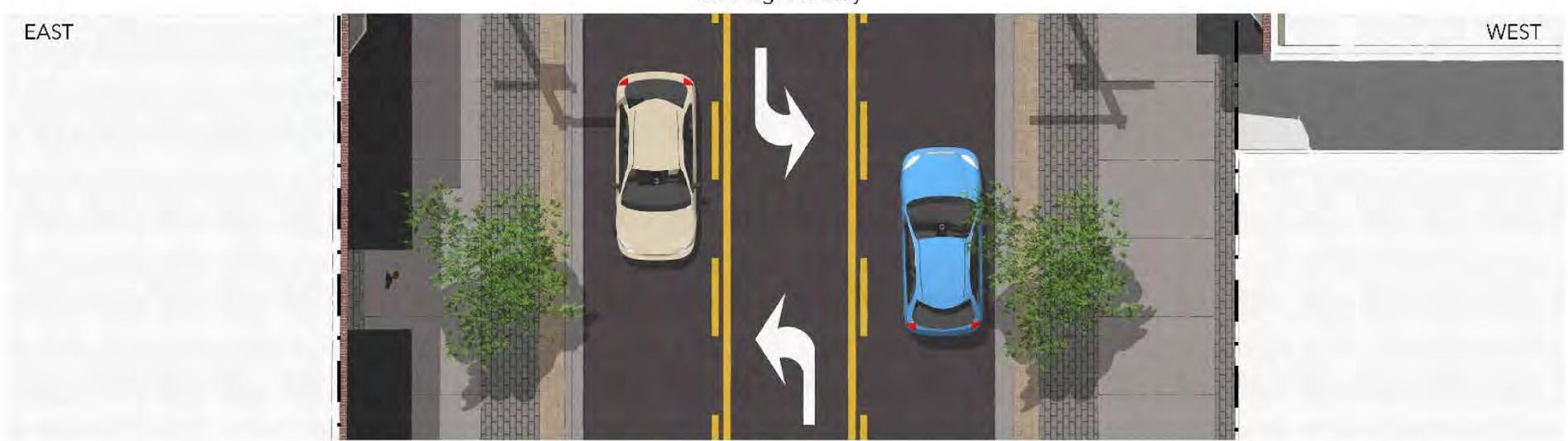
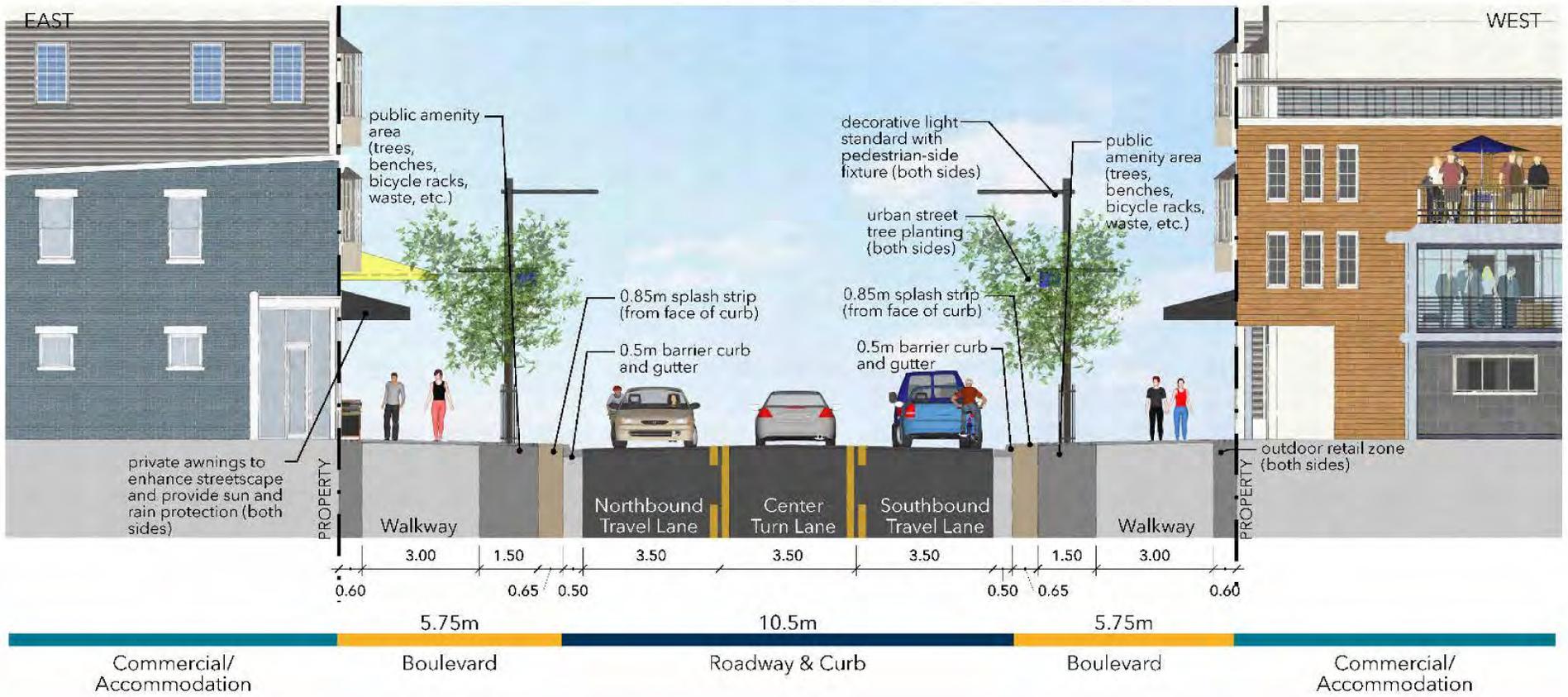
- travel lanes are reduced from 3.5 to 3.25m to help reduce travel speeds; centre turn lane maintained at 3.5m given need of turning vehicles
- standard 2.5m on-street parking provided on north side; flexible parking provided on the south side which can also be used for patio space (via moveable bollards)
- walkways increased to 2.75m
- urban plantings on both sides
- cycle track of 3.0m (min recommended width) provided on the north side to facilitate a connection to Beach Drive
- 1.8m tree amenity zone separates the cycle track from the pedestrian walkway, and a 1.0m buffer is provided to separate the cycle track from the parking lane (to avoid impacts with opening doors)
- intersection and/or mid-block "bump-outs" can be provided to facilitate pedestrian crossings



Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION



MOSLEY STREET - Option 1

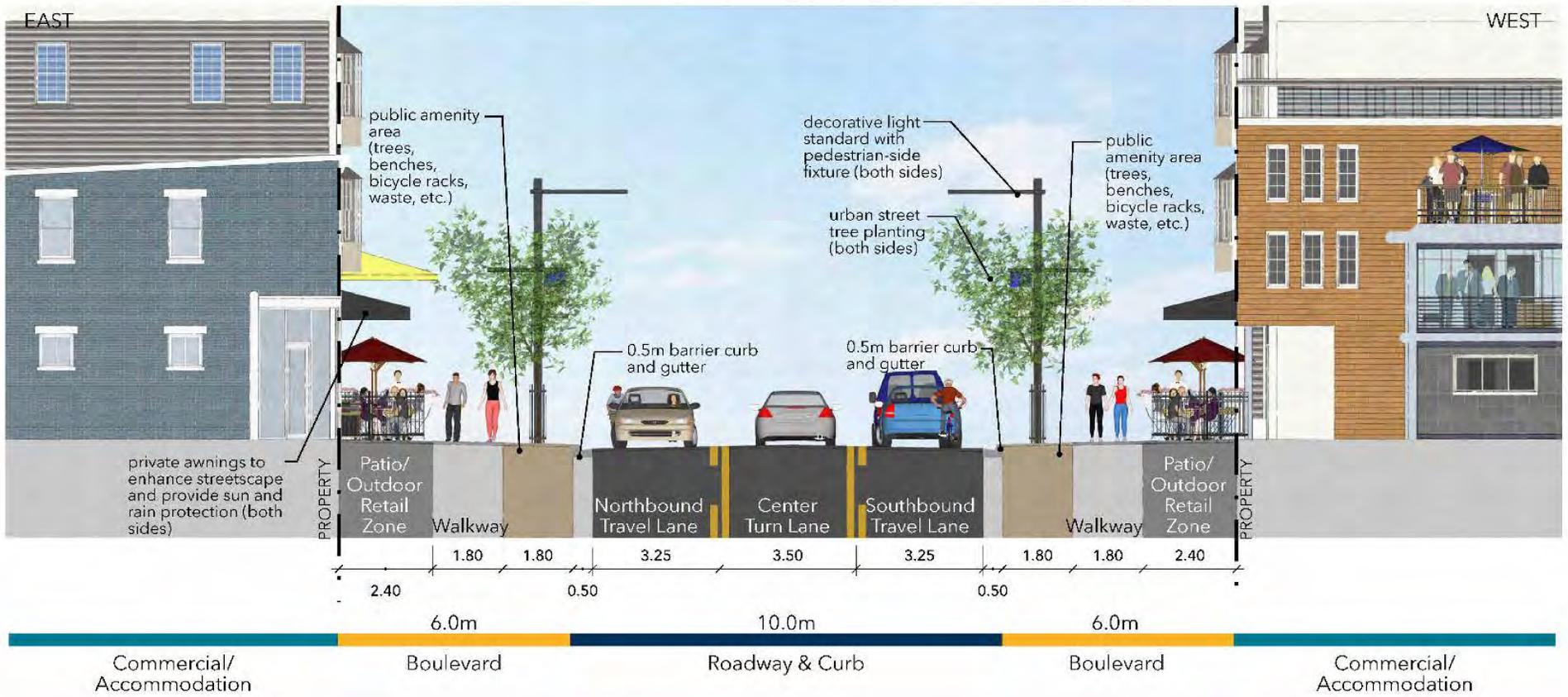


- ### KEY FEATURES
- incorporates 3.5m travel lanes for through and turn lanes (which is considered typical)
 - 3.0m walkways are provided on both sides of the road
 - the 1.5m amenity area serves as a buffer between the travel lanes and the pedestrian realm

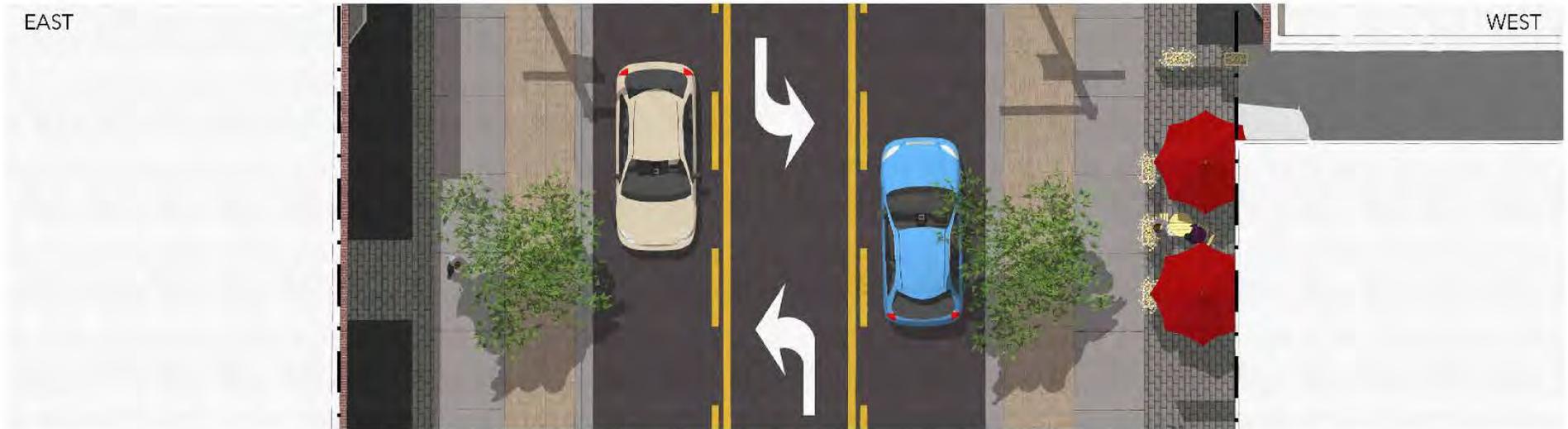


Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION





23m Right of Way



KEY FEATURES

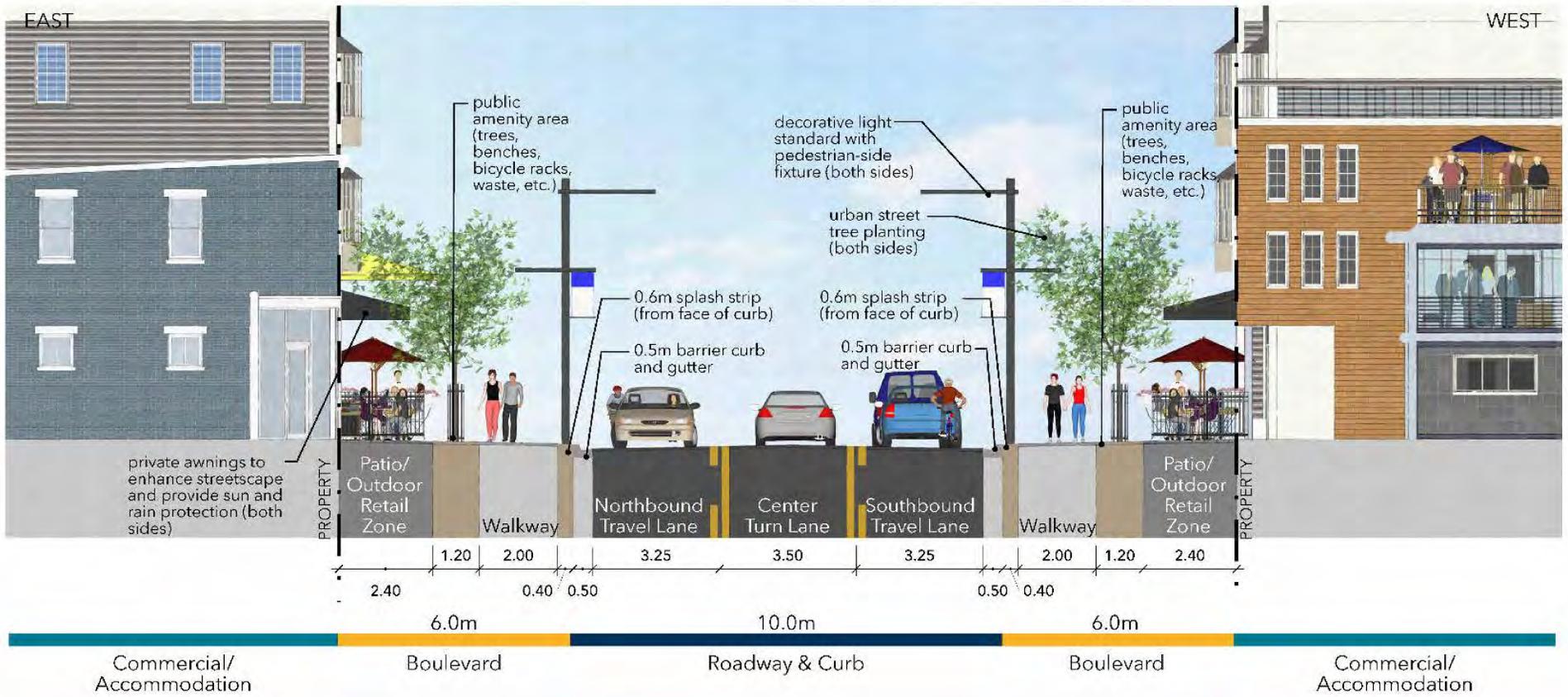
- travel lanes are reduced from 3.5 to 3.25m to help reduce travel speeds; centre turn lane maintained at 3.5m given need of turning vehicles
- 6.0m boulevards provided on both sides which accommodate a building-side patio/retail zone, a 1.8m sidewalk and a 1.8m amenity area
- the 1.8m amenity area serves as a buffer between the travel lanes and the pedestrian realm
- pedestrians will have in excess of 4.2m of walking space in normal conditions (where patios are not present)
- the 1.8m+ constraint only occurs where a patio and a tree/light standard are in the same proximity of the street



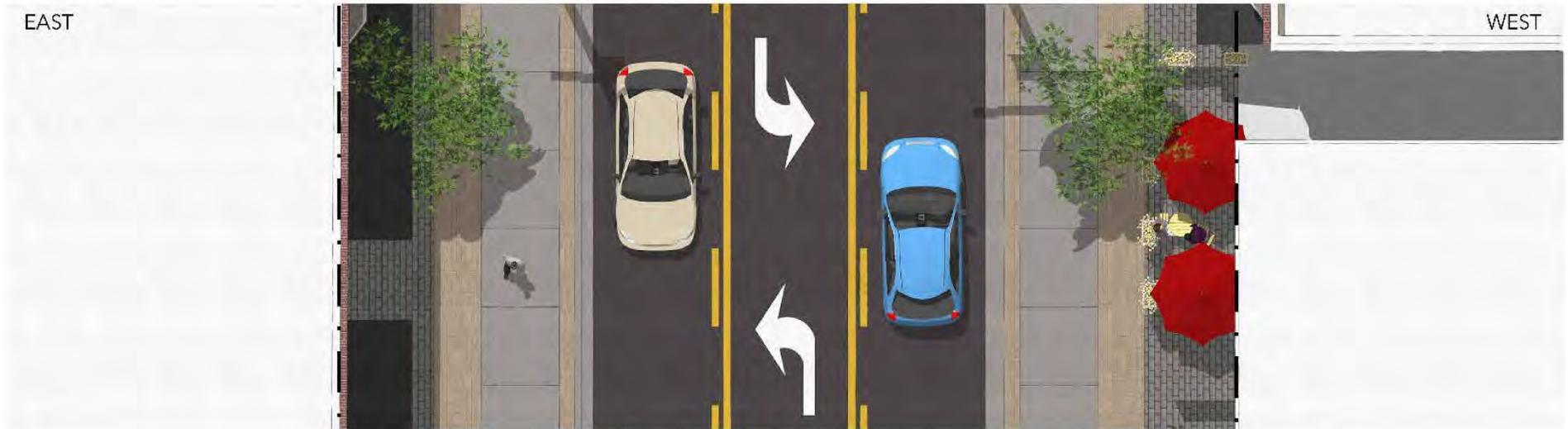
Main Street and Beach Areas 1 & 2 Improvements
ROAD CROSS-SECTION



MOSLEY STREET - Option 3



23m Right of Way



KEY FEATURES

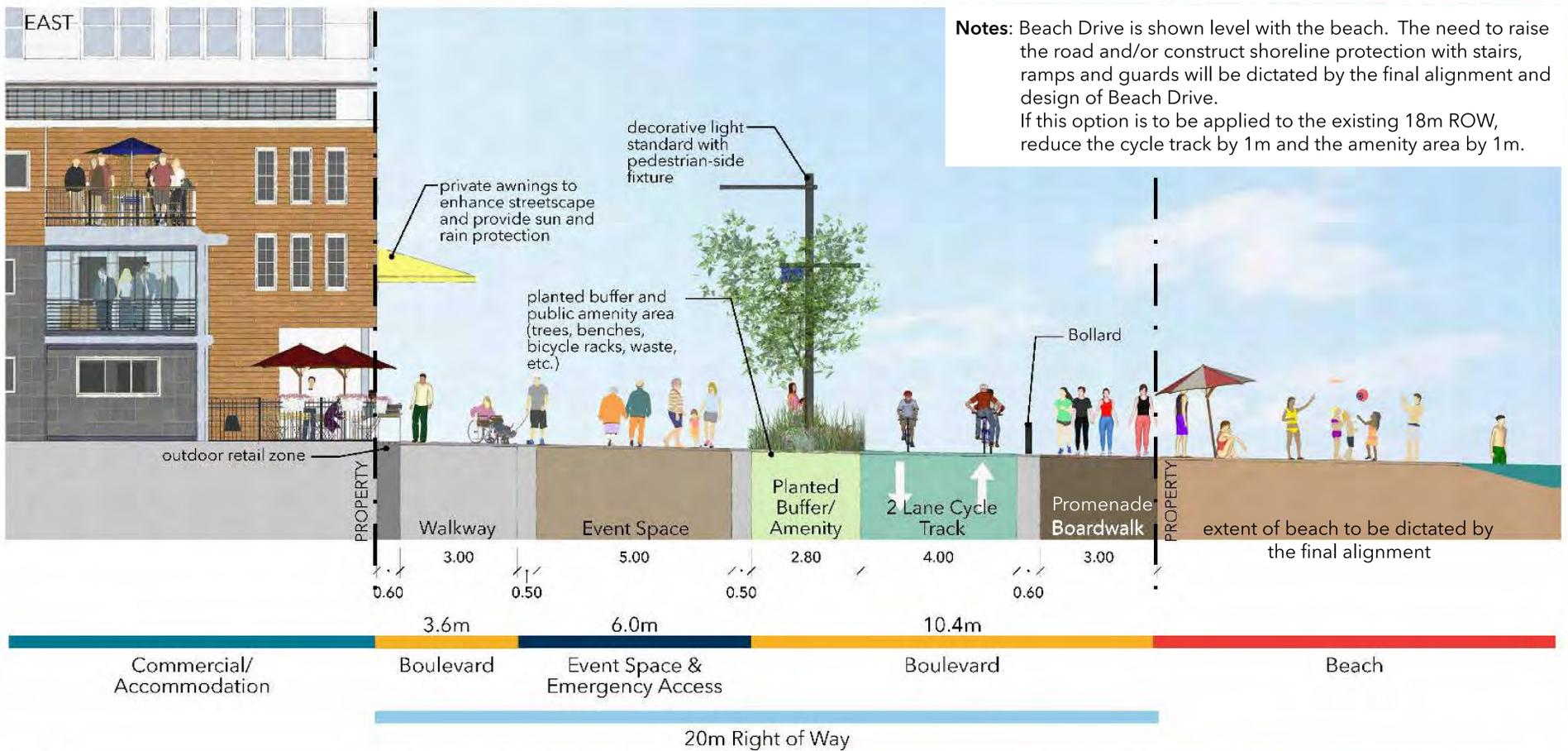
- travel lanes are reduced from 3.5 to 3.25m to help reduce travel speeds; centre turn lane maintained at 3.5m given need of turning vehicles
- 6.0m boulevards provided on both sides which accommodate a building-side patio/retail zone, a centralized tree/amenity zone, and a 2.0m sidewalk with a 0.4m curbside splash strip
- trees are further away from the road
- allows for winter snow storage (as the primary walkway can be moved to the patio zone as a winter condition - defined by sidewalk clearing operations)



Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION



BEACH DRIVE - Option 1



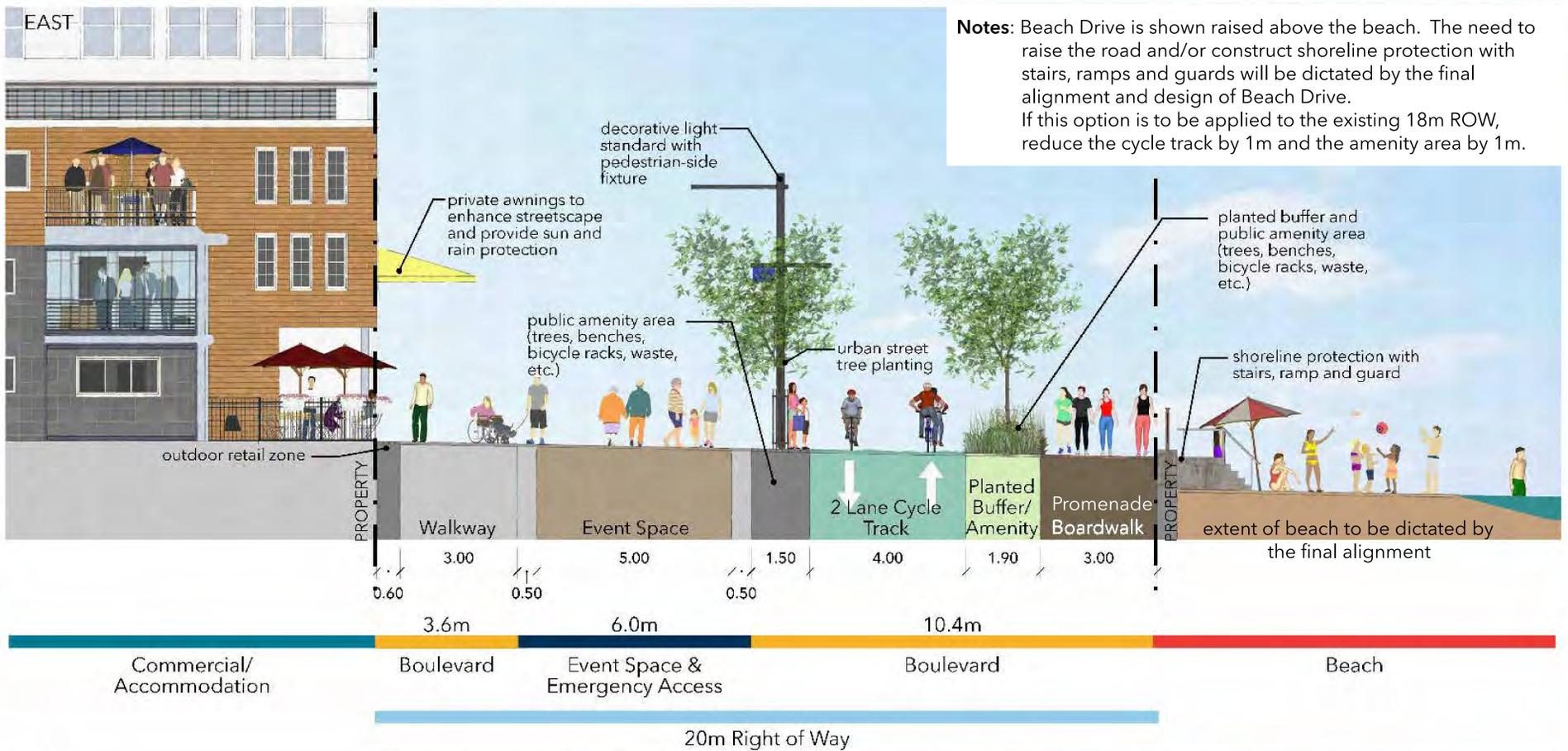
KEY FEATURES

- a generous 3.0m pedestrian walkway and a 0.6m building apron are provided between the buildings and the 6.0m events plaza
- separating the events plaza from the cycle track/boardwalk is a 2.8m naturalized landscape buffer
- buffer to include low-maintenance Georgian Bay shoreline plantings with trees, benches and other public amenities for both the events plaza and bikeway/boardwalk
- the big advantage is that the buffer is of sufficient width such that trees could be planted without the need for expensive underground urban tree infrastructure (eg. tree pits)
- a 4.0m cycle track is proposed (widened from 3.0m given the expected higher volume of cyclists along the beach strip) adjacent to the 3.0m boardwalk)



Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION





KEY FEATURES

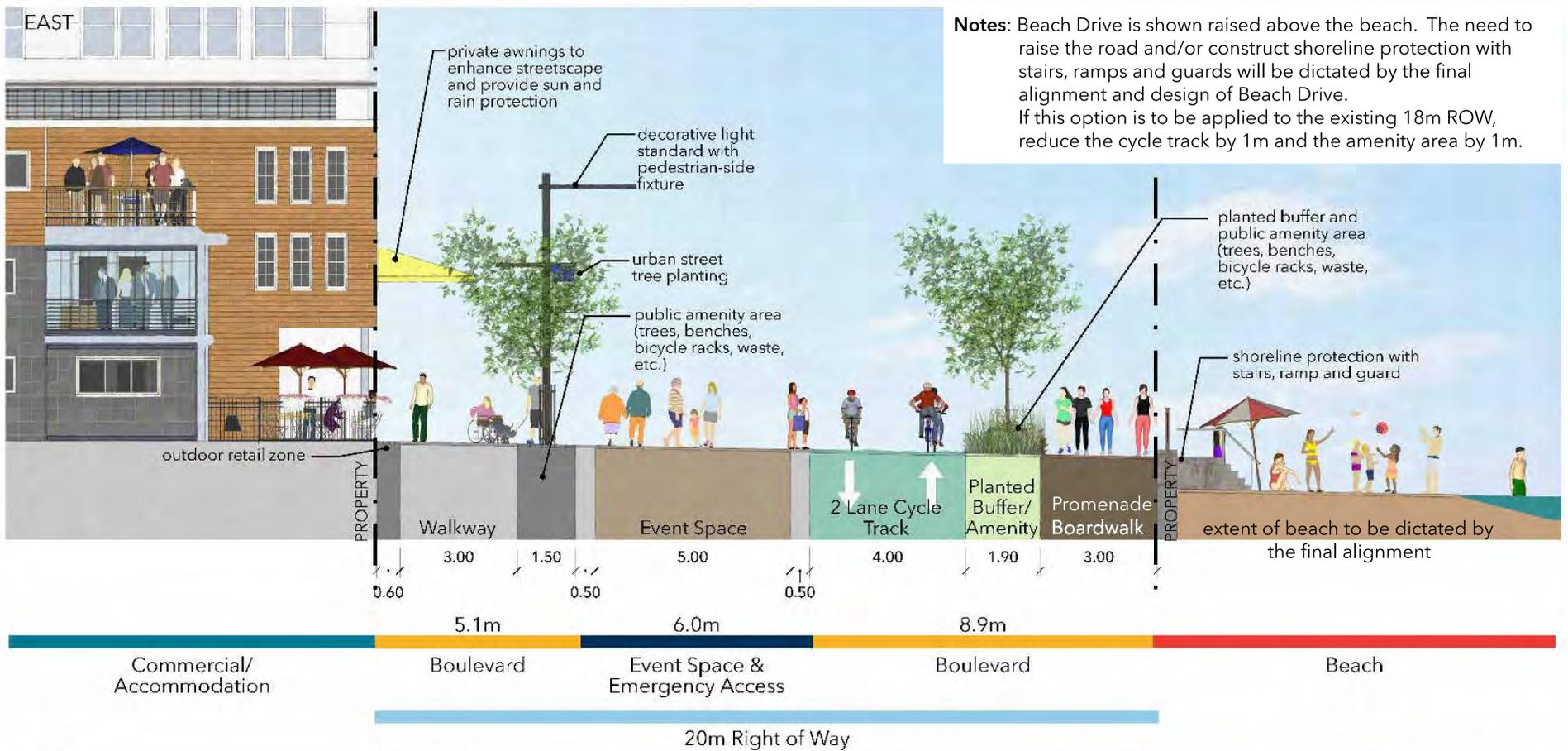
- the pedestrian walkway and events plaza are the same as in Option 1
- the events plaza is separated from the cycle track by an urban tree planting/public amenity strip, which should be supported by urban tree planting infrastructure (eg. Soil Cells)
- the amenity area delineate the cycle from the track/events plaza while still providing access, and could include bike racks, benches and other features (during events, this area could accommodate pedestrians)
- similar to Option 1, the 4.0m cycle track is separated from the 3.0m boardwalk by a 1.9m naturalized landscape buffer
- the boardwalk is raised above the beach and is accessed by stairs/ramps at controlled points (but could also be level with the beach depending on the final location/relation with the beach)



Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION



BEACH DRIVE - Option 3



KEY FEATURES

- as a variation of Option 2, the urban tree planting is placed between the 3.0m sidewalk and the events plaza to provide some shade in this area
- it would be hard surfaced between the tree pits and supported by urban tree planting infrastructure (eg Soil Cells)
- on the other side, the events plaza and 4.0m cycle track would be directly adjacent to each other
- like Option 2, the 4.0m cycle track is separated from the 3.0m boardwalk by a 1.9m naturalized landscape buffer
- the boardwalk is raised above the beach and is accessed by stairs/ramps at controlled points (but could also be level with the beach depending on the final location/relation with the beach)



Main Street and Beach Areas 1 & 2 Improvements ROAD CROSS-SECTION



INTERSECTION OPERATIONS

To identify intersection improvements required to accommodate planned growth, operations at the study area intersections were reviewed based on the following:

- Projected traffic volumes for 2026, 2031 & 2041
- Proposed 3-lane cross-sections on Main Street and Mosley Street
- Closure of Beach Drive
- Existing intersection control

2026 Average PM Peak Hour

- All intersections provide acceptable operations (Level of Service C or better)
- No intersection improvements are necessary to support 2026 conditions

2031 Average PM Peak Hour

Improvements required to address poor intersection operations at the following intersections

- Beck Street & Main Street
 - Potential improvements:
 - traffic signals
 - roundabout

2041 Average PM Peak Hour

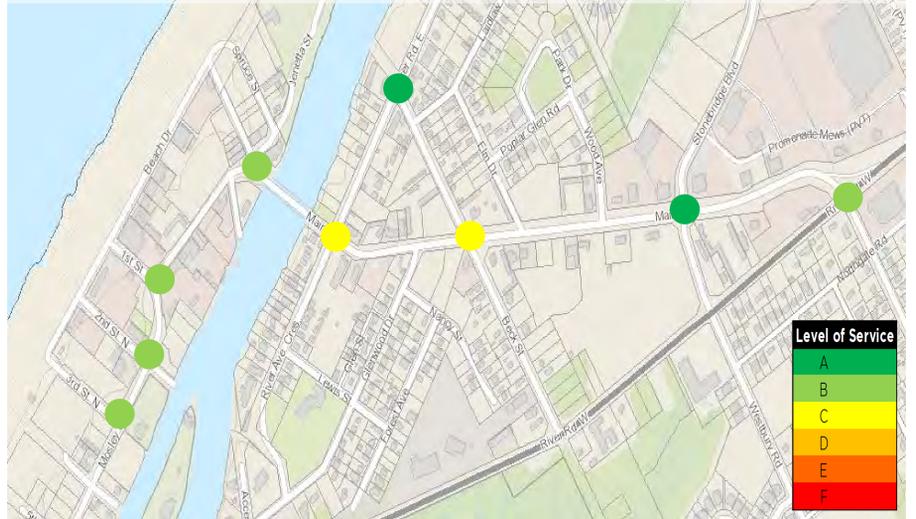
Improvements required to address poor intersection operations at the following intersections

- River Road East/River Crescent Avenue & Main Street
 - Potential improvements
 - traffic signals
 - turn restrictions and/or other improvements
- While still acceptable, operations at the following intersections are approaching poor (LOS E) and may warrant improvements:
 - 1st Street & Mosley Street (traffic signals or roundabout)
 - Spruce Street & Main Street (traffic signals or roundabout)

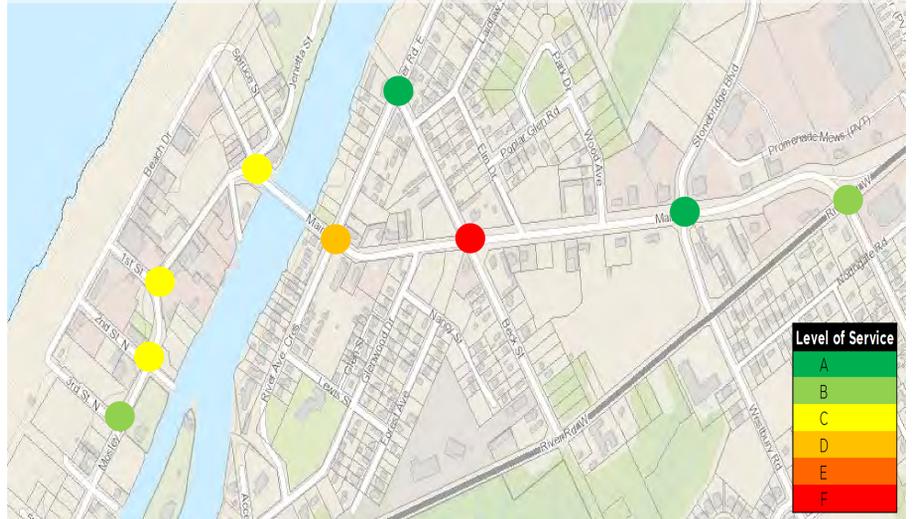
Closure of Beach Drive

- Volumes on 1st, 2nd, 3rd and Spruce Street have been adjusted to reflect the closure of Beach Drive, as each will predominantly serve as access roads to future development
- The northwesterly terminus of the side streets may require additional property from adjacent development lands to facilitate turning movements of motorists, service vehicles and emergency response vehicles
- 1st Street and Spruce Street have been reconfigured to serve two-way traffic (inbound and outbound)

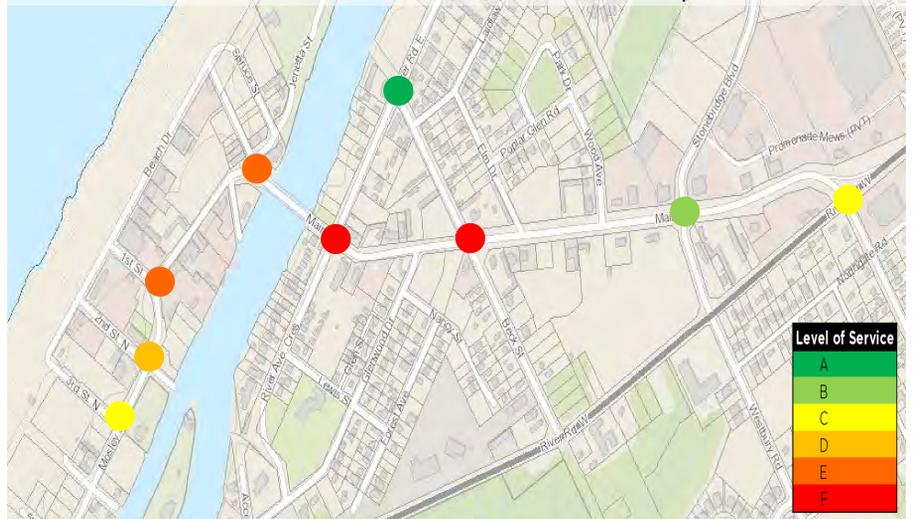
2026 AVERAGE PM PEAK HOUR – 25% Development



2031 AVERAGE PM PEAK HOUR – 50% Development



2041 AVERAGE PM PEAK HOUR – 100% Development

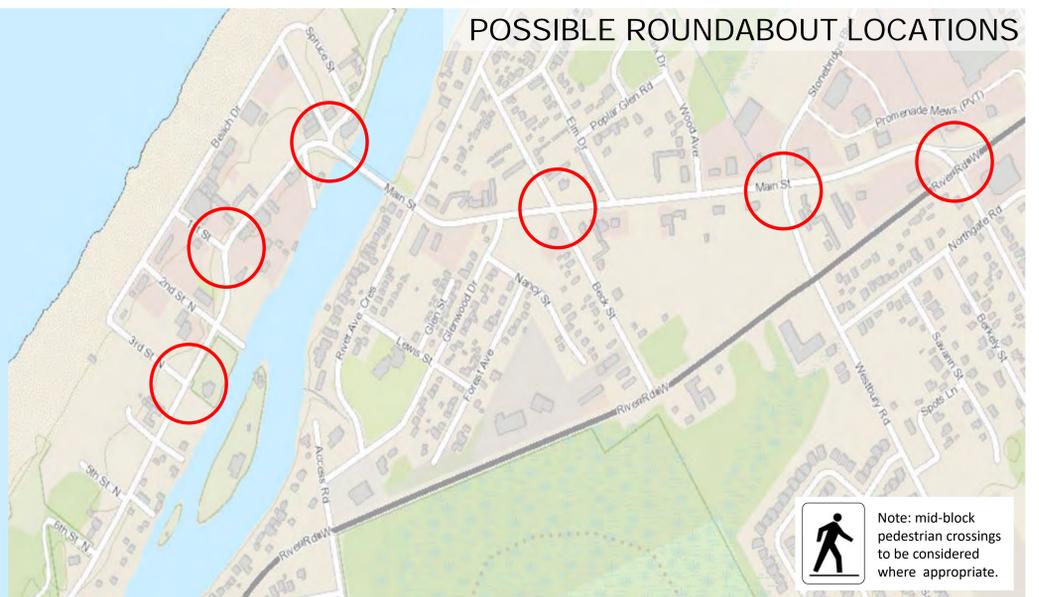


Main Street and Beach Areas 1 & 2 Improvements TRAFFIC OPERATIONS



CONSIDERATION FOR ROUNDABOUT CONTROL

- The feasibility of implementing roundabouts has been reviewed for the following intersections:
 - River Road West & Main Street/Ansley Road
 - Stoneridge Boulevard & Main Street
 - Beck Street & Main Street
 - Spruce Street & Main Street & Mosley Street
 - 1st Street & Mosley Street
 - 3rd Street & Mosley Street
- Assessment has considered single lane roundabouts, with the exception of the River Road West approaches at Main Street

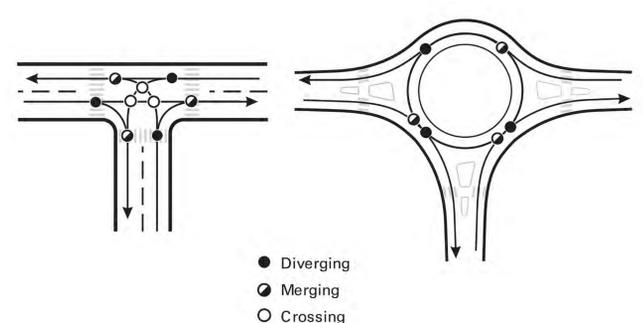
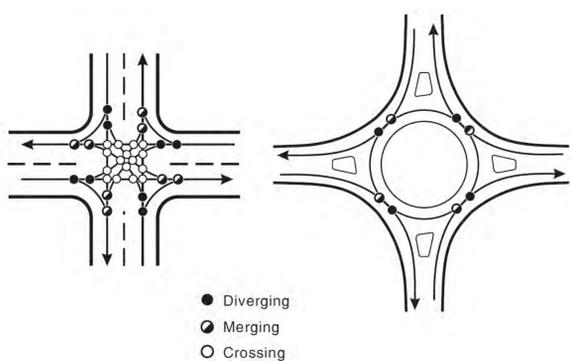


Advantages

- Increased safety
 - significant decrease in severe accidents
 - less conflict points than standard intersection
 - lower speeds (reduces severity of accidents)
- Greater capacity than a signal or all-way stop control intersection operating at the same Level of Service
- Traffic calming effect
- Environmental benefits - reduces stop and go traffic which reduces emissions, fuel consumption and noise
- Aesthetically pleasing (landscaped islands)
- Unaffected by power outages

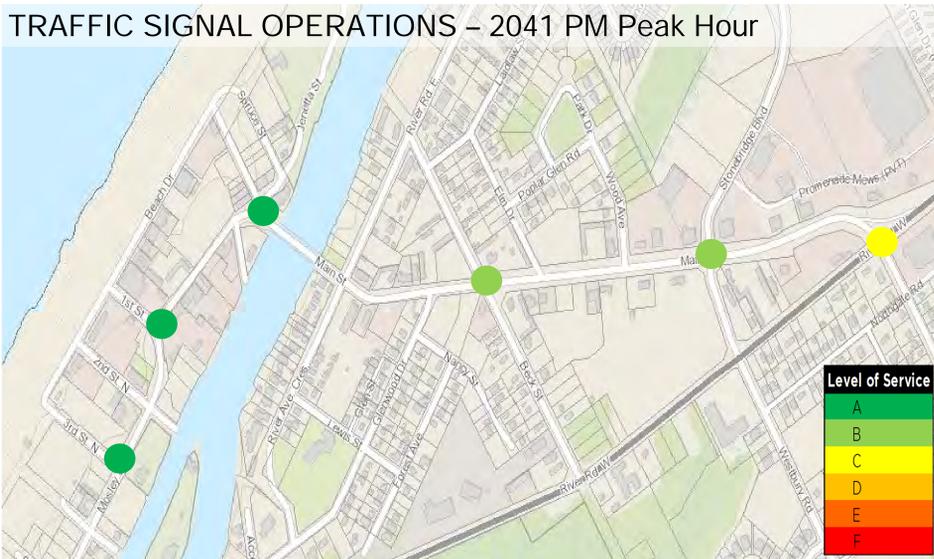
Disadvantages

- Land requirements are typically greater than standard intersection
- Difficult for pedestrians to cross - particularly for those with vision impairment
- Can be intimidating for cyclists to navigate
- Dual or multi-lane roundabouts result in increased accidents (albeit non-injury crashes)
- No provision for emergency vehicle priority
- Can disrupt vehicle platoons if placed along a signal coordinated corridor

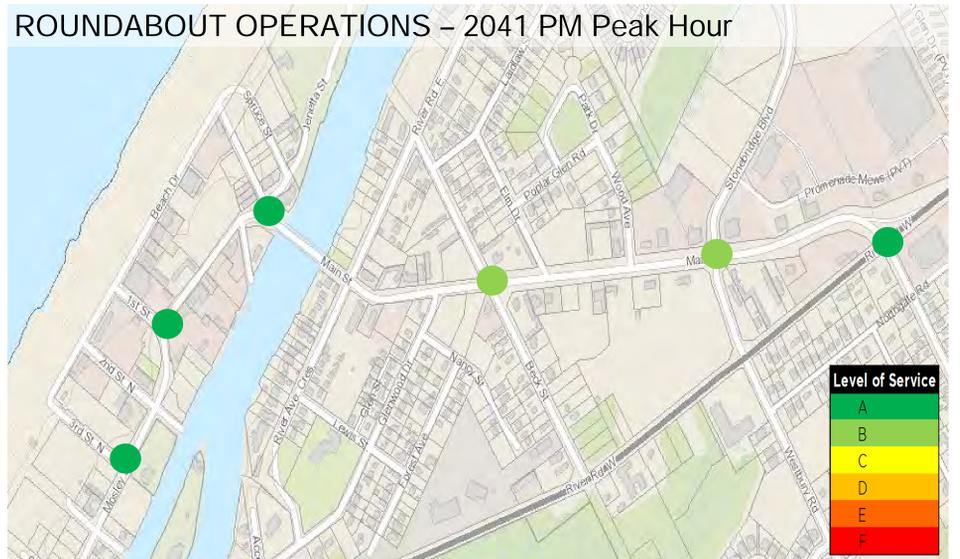


TRAFFIC SIGNAL CONTROL VS ROUNDABOUT CONTROL

TRAFFIC SIGNAL OPERATIONS - 2041 PM Peak Hour



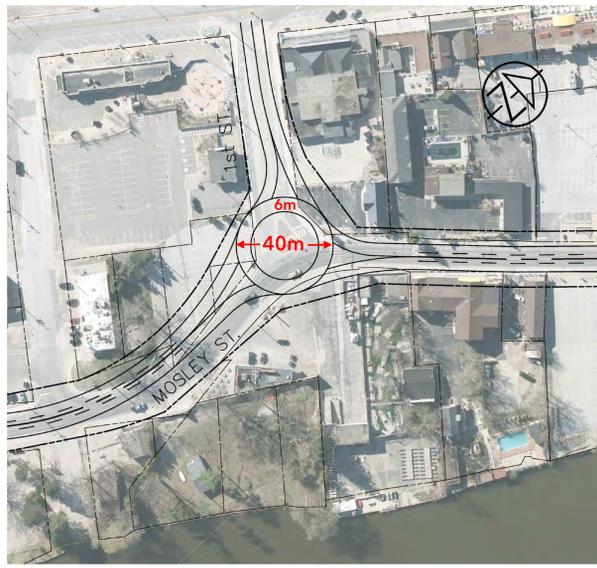
ROUNDABOUT OPERATIONS - 2041 PM Peak Hour



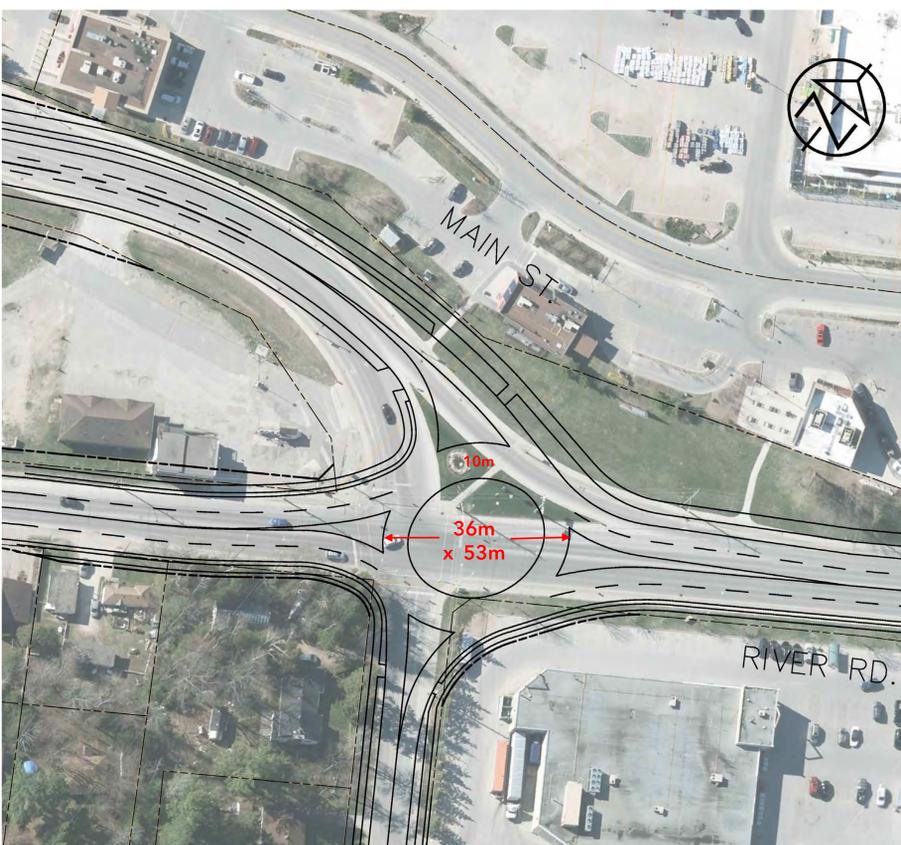
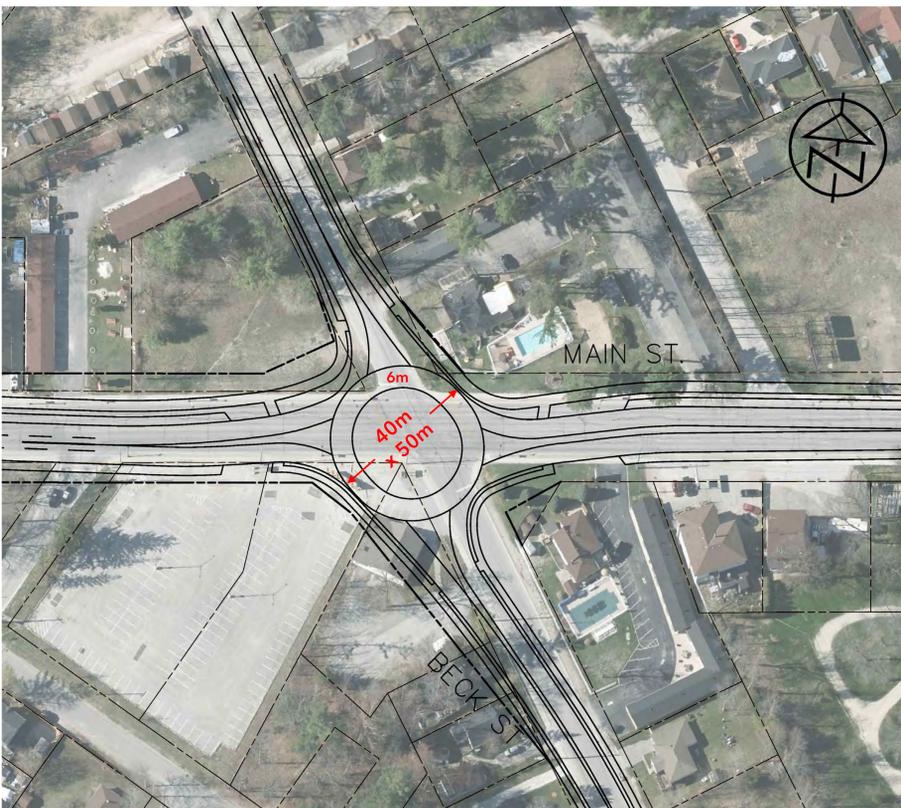
Main Street and Beach Areas 1 & 2 Improvements ROUNDABOUTS



FUNCTIONAL DESIGNS



Roundabout configurations are PRELIMINARY in nature and are only intended to show the overall design approach, roundabout footprint and potential property impacts. Further detail design will be required.



EVALUATION OF ROUNDABOUTS

Roundabouts are recommended to be further considered at the noted intersections:

- Main Street & River Road West
- Main Street & Stonebridge Boulevard
- Main Street & Beck Street.

As area development occurs, the Town should take the necessary steps to protect for the potential for roundabouts in the near future.

Given the proposed closure of Beach Drive to automobile traffic, and in considering the redevelopment potential of the area and the associated changes to the road system expected (namely to the side streets), roundabouts along Mosley Street are not considered necessary.



Main Street and Beach Areas 1 & 2 Improvements ROUNDABOUTS



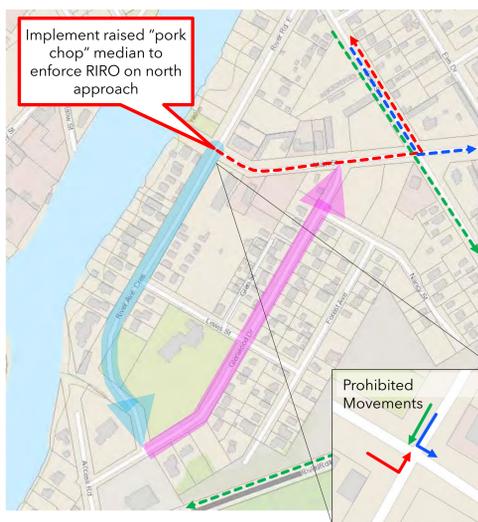
IMPROVEMENT OPTIONS

Option 1 Maintain Existing Configuration



- Currently, River Avenue Crescent is one-way southbound between Main Street and Glenwood Drive, whereas Glenwood Drive is one-way northbound between River Avenue Crescent and Main Street.
- Sight line concerns in both directions along Main Street at River Avenue Crescent/River Road East due to the bridge to the west and horizontal curve to the east
- Poor operations at intersection of Main Street with River Avenue Crescent/River Road East by 2041 under future total conditions (LOS F, v/c = 1.32, delay = 235 seconds).
- Proposed 3-lane cross-section on Main Street will provide exclusive left turn lanes but will not improve 2041 intersection conditions. If existing configuration is maintained, intersection improvements required by 2041 (traffic signals)
- While signal control addresses some of the sight line issues, left turns from Main Street to River Avenue Crescent and River Avenue East during green phase will still be completed with reduced sight lines for oncoming traffic

Option 2 RIRO on River Road East at Main Street



- Maintain River Avenue Crescent and Glenwood Drive as currently exist
- Implement raised "pork chop" island on River Avenue East at Main Street or centre median on Main Street to create a right-in/right-out (RIRO)
- RIRO eliminates left turns to/from River Avenue East at Main Street and southbound through from River Avenue East to River Avenue Crescent - thus addressing most of the critical safety concerns at the intersection (although WB left to River Avenue Crescent remains)
- RIRO addresses poor operating conditions through 2041
- Some redistribution of traffic (as illustrated in in-set) will occur with restricted left turn movements

Option 3 Convert River Avenue Crescent to two-way with traffic signals at Main Street



- Convert River Avenue Crescent to two-way operations through removal of existing bicycle lanes
- Signalize intersection of River Avenue Crescent/River Road East with Main Street by 2031
- Conversion will likely result in increased volumes on River Avenue Crescent as road becomes two-way connection between River Road West and Main Street
- Decrease in volumes on Glenwood Drive anticipated
- While signal control addresses some of the sight line issues, left turns from Main Street to River Avenue Crescent and River Avenue East during green phase will still be completed with reduced sight lines for oncoming traffic



Main Street and Beach Areas 1 & 2 Improvements RIVER AVENUE CRES & GLENWOOD DR



IMPROVEMENT OPTIONS

Option 4

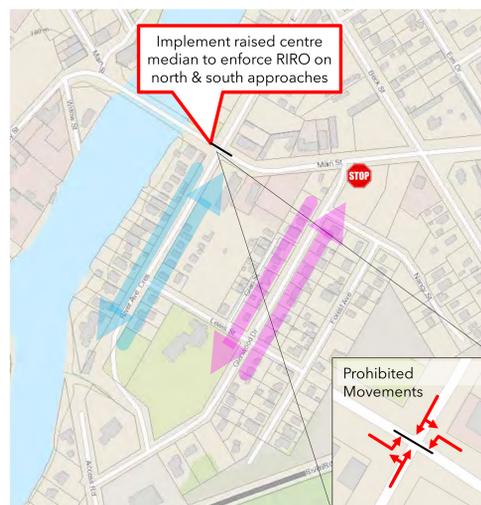
Convert River Avenue Crescent to two-way operations with raised centre median on Main Street Reverse Glenwood Drive to one-way operations in the southbound direction



- Convert River Avenue Crescent to two-way operations through removal of existing bicycle lanes
- Implement raised centre median on Main Street at River Avenue Crescent/River Road East to eliminate all left turn and crossing manoeuvres at the intersection
- Reversing operations on Glenwood Drive to one-way in the southbound direction allows for inbound left turns from Main Street, which are otherwise eliminated at River Crescent Avenue
- No construction required along Glenwood Drive (ie. road already accommodates one-way traffic)
- Future construction of roundabouts along Main Street at Beck Street and/or Stonebridge Boulevard would provide turnaround option for motorists in River Avenue Crescent/Glenwood Drive area that would like to head towards the beach but are unable to due to the raised median
- In absence of roundabouts on Main Street, motorists in the River Avenue Crescent/Glenwood Drive area wanting to access the Beach would be required to travel east on Main Street, north on Beck Street and south on River Avenue East - thus increasing traffic on the noted streets.

Option 5

Convert River Avenue Crescent to two-way operations with raised centre median on Main Street Convert Glenwood Drive to two-way operations with full moves intersection on Main Street



PREFERRED

- Convert River Avenue Crescent to two-way operations through removal of existing bicycle lanes
- Implement raised centre median on Main Street at River Avenue Crescent/River Road East - thus enforcing right-in/right-out only
- Convert Glenwood Drive to two-way operations (requires widening of existing road platform to a minimum of 6.5m)
- Full moves intersection at Glenwood Drive with Main Street (stop control on Glenwood Drive will operate acceptably through 2041)
- Eliminates all left turn and crossing manoeuvres at River Avenue Crescent/River Road East intersection
- Full movements at Glenwood Drive provides alternate location for inbound left turns from Main Street (ie. those displaced from River Avenue Crescent)

EVALUATION OF OPTIONS

The preferred option to address River Avenue Crescent and Glenwood Drive is Option 5

- Eliminates safety concerns at Main Street and River Avenue Crescent/River Road East intersection with respect to sight lines and crossing manoeuvres
- Improves traffic flow in and out of River Avenue Crescent/Glenwood Drive neighbourhood
- Full movement intersection at Glenwood Drive and Main Street will accommodate inbound left turns from Main Street that will otherwise be prohibited at River Avenue Crescent
- Simplifies road network for motorists - does not require overly complicated alternative routes that are otherwise induced by the combination of one-way operations and restricted turning movements.



Main Street and Beach Areas 1 & 2 Improvements RIVER AVENUE CRES & GLENWOOD DR



ROAD ALIGNMENTS & WIDENING

Main Street

- Maintain existing 30m ROW section (River Road West to Beck Street)
- Increase 20m ROW section (Beck Street to River) to 30m by widening 5m equally on both side

Mosley Street

- Introduce a 23m ROW
- Widen road on the both sides from Spruce Street to 2nd Street
- Widen & straighten ROW from 2nd Street to 6th Street

Beach Drive

- Introduce a 20m ROW
- Shift road alignment south by 7.5m to increase beach area under high water conditions (Option 2)
- No impact to Ontario Parks lands

ROAD CROSS-SECTIONS

Main Street

- Option 3



Mosley Street

- Option 2



Beach Drive

- Option 2



ROUNDBABOUTS

Main Street & Beck Street



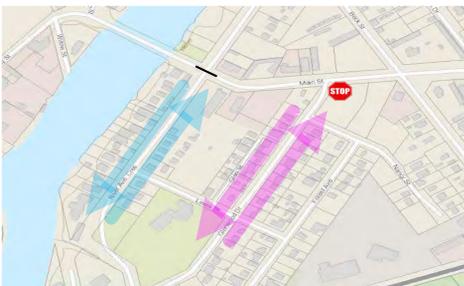
Main Street & Stonebridge Blvd



Main Street & River Road West



RIVER AVENUE CRESCENT & GLENWOOD DRIVE



Option 5

- Convert River Avenue Crescent to two-way operations with raised centre median on Main Street
- Convert Glenwood Drive to two-way operations with full moves intersection on Main Street

NEXT STEPS

- All public comments will be reviewed and summarized.
- The development of the Alternative Design Concepts will be revisited and additional options and/or modifications to existing options will be considered, as necessary.
- The assessment of the Alternative Design Concepts will be revisited in context of the public comments and updated, as necessary.
- The Preferred Design Concepts will be identified.
- An Environmental Study Report will be prepared to document the Class EA process and the development and assessment of the Alternative Solutions and Alternative Design Concepts.
- A Notice of Study Completion will be circulated to inform the Public of the completion of the report and provide further opportunity for comment and review



Main Street and Beach Areas 1 & 2 Improvements SUMMARY & NEXT STEPS





Main Street and Beach Areas 1 & 2 Improvements

BEACH DRIVE

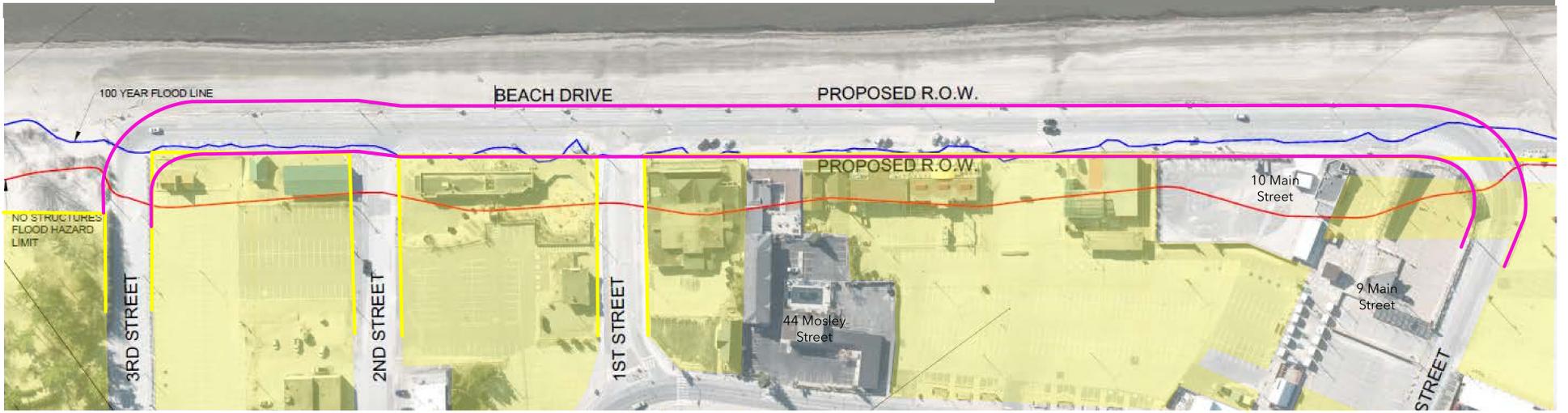


Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



BEACH DRIVE

Option 1: Existing Road Alignment (south edge at buildings)

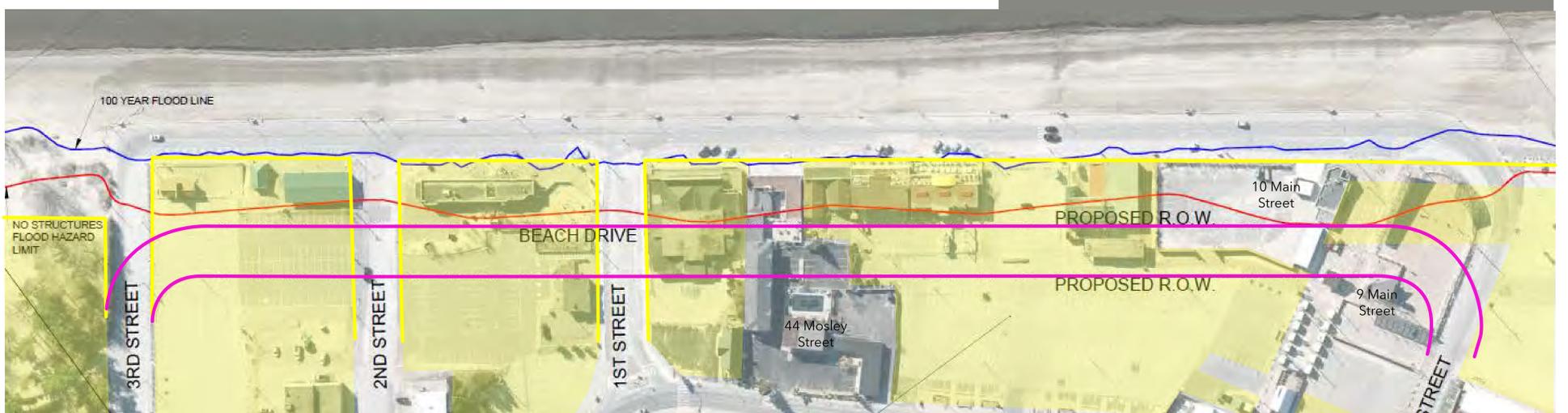


Option 2: 100 Year Flood Line (shift of 24 metres south)

PREFERRED



Option 3: No Structure Flood Hazard Limit (shift 46 metres south)



— existing right-of-way

■ Town property

— proposed 20m right-of-way

EVALUATION OF OPTIONS



Main Street and Beach Areas 1 & 2 Improvements ROAD ALIGNMENT & WIDENING



INTERSECTION OPERATIONS

To identify intersection improvements required to accommodate planned growth, operations at the study area intersections were reviewed based on the following:

- Projected traffic volumes for 2026, 2031 & 2041
- Proposed 3-lane cross-sections on Main Street and Mosley Street
- Closure of Beach Drive

2026 Average PM Peak Hour

- All intersections provide acceptable operations (Level of Service C or better)
- No intersection improvements are necessary to support 2026 conditions

2031 Average PM Peak Hour

Improvements required to address poor intersection operations at the following intersections

- Beck Street & Main Street
 - Potential improvements:
 - traffic signals
 - roundabout

2041 Average PM Peak Hour

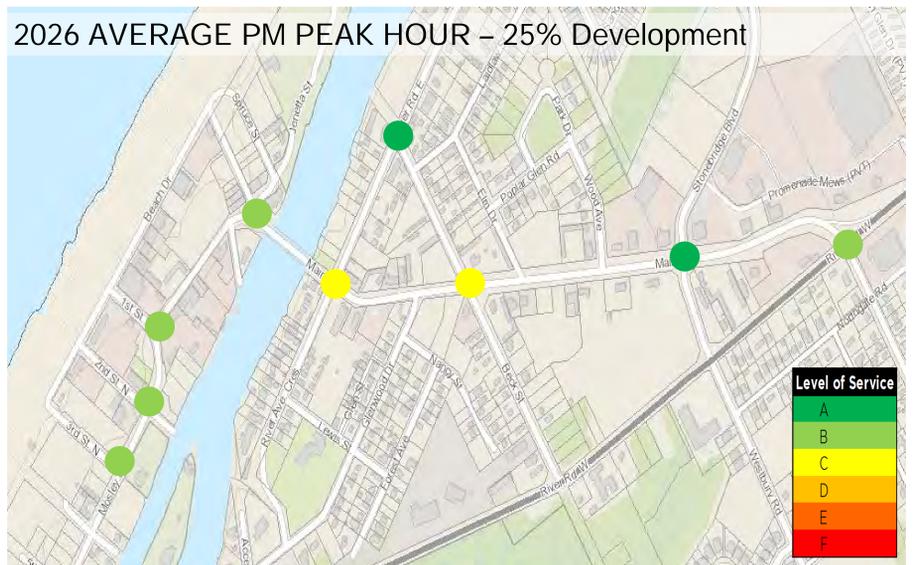
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- River Road East/River Crescent Avenue & Main Street
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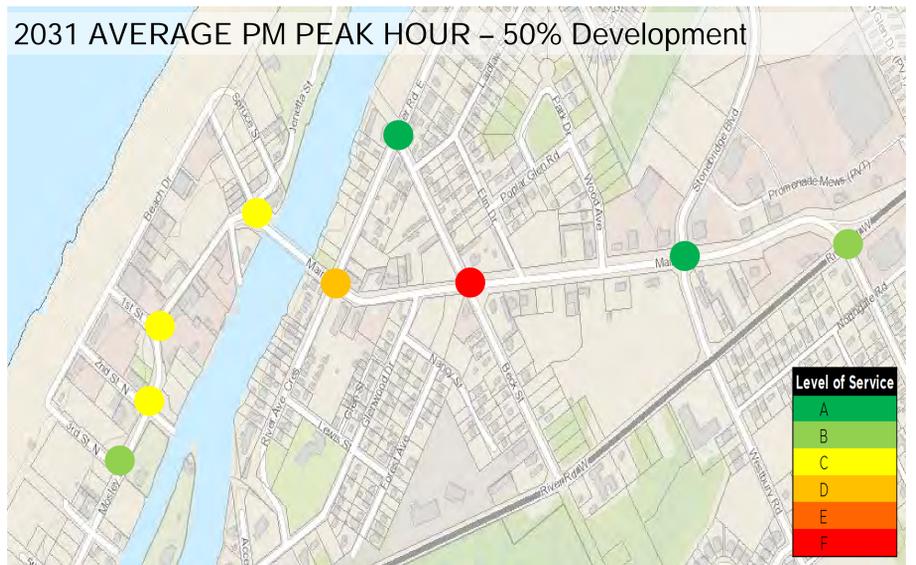
Closure of Beach Drive

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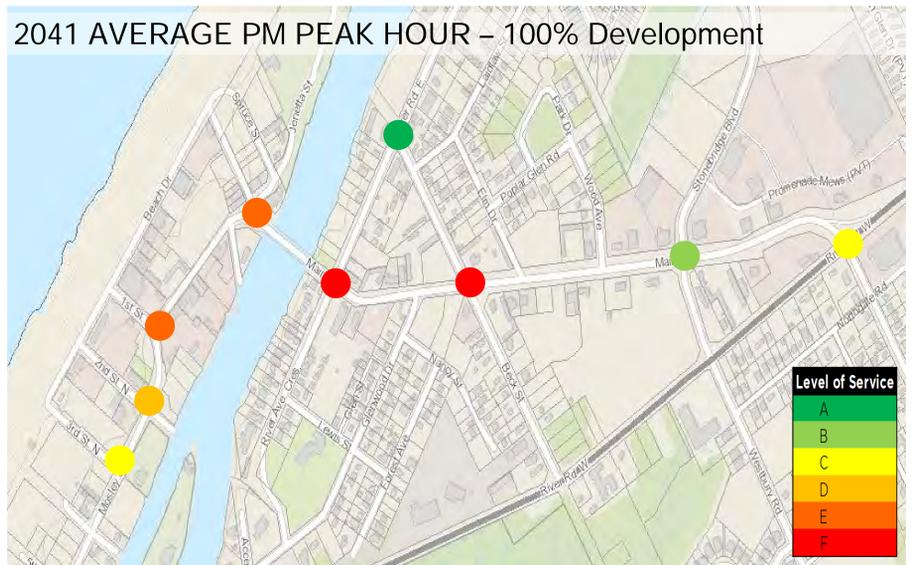
2026 AVERAGE PM PEAK HOUR – 25% Development



2031 AVERAGE PM PEAK HOUR – 50% Development



2041 AVERAGE PM PEAK HOUR – 100% Development

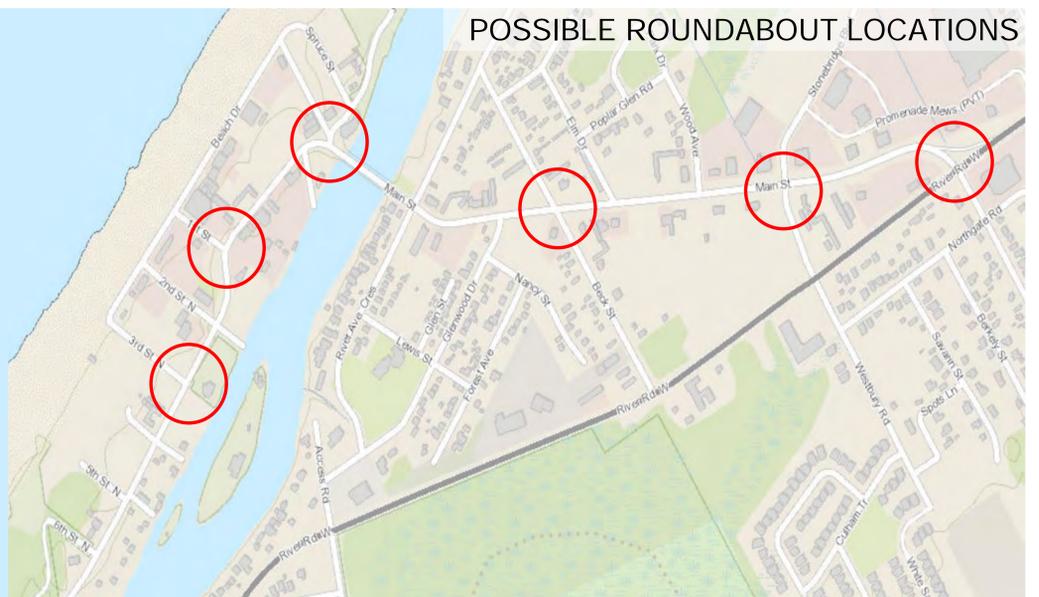


Main Street and Beach Areas 1 & 2 Improvements TRAFFIC OPERATIONS



CONSIDERATION FOR ROUNDABOUT CONTROL

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- Assessment has considered single lane roundabouts, with the exception of the River Road West approaches at Main Street

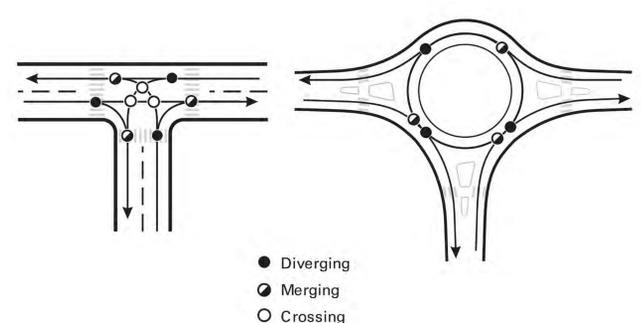
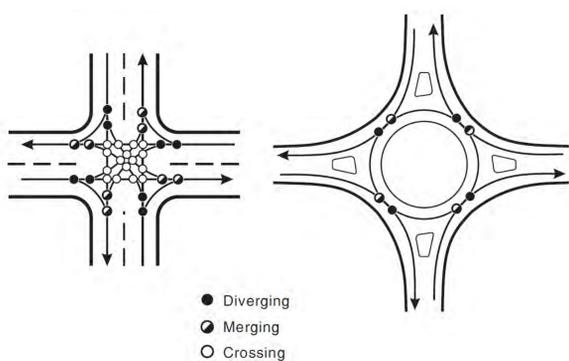


Advantages

- Increased safety
 - significant decrease in severe accidents
 - less conflict points than standard intersection
 - lower speeds (reduces severity of accidents)
- Greater capacity than a signal or all-way stop control intersection operating at the same Level of Service
- Traffic calming effect
- Environmental benefits - reduces stop and go traffic which reduces emissions, fuel consumption and noise
- Aesthetically pleasing (landscaped islands)
- Unaffected by power outages

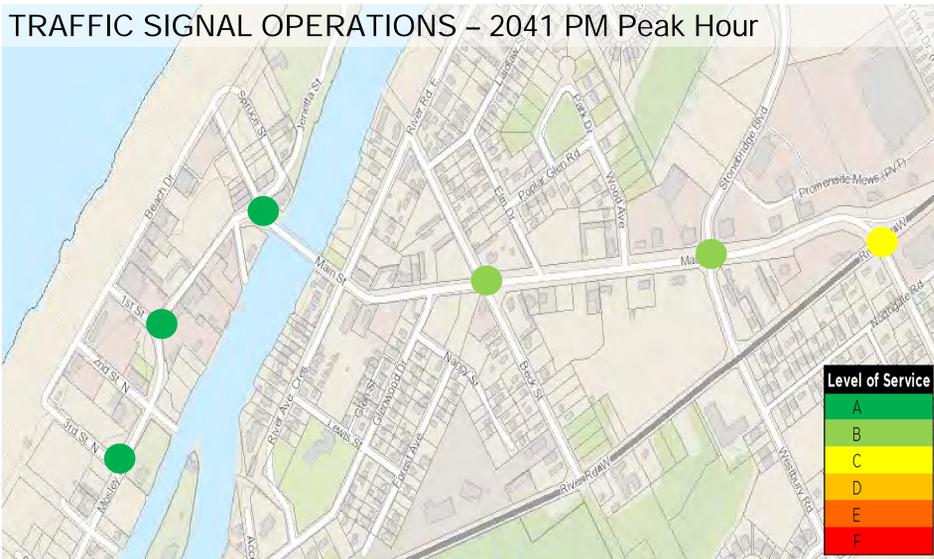
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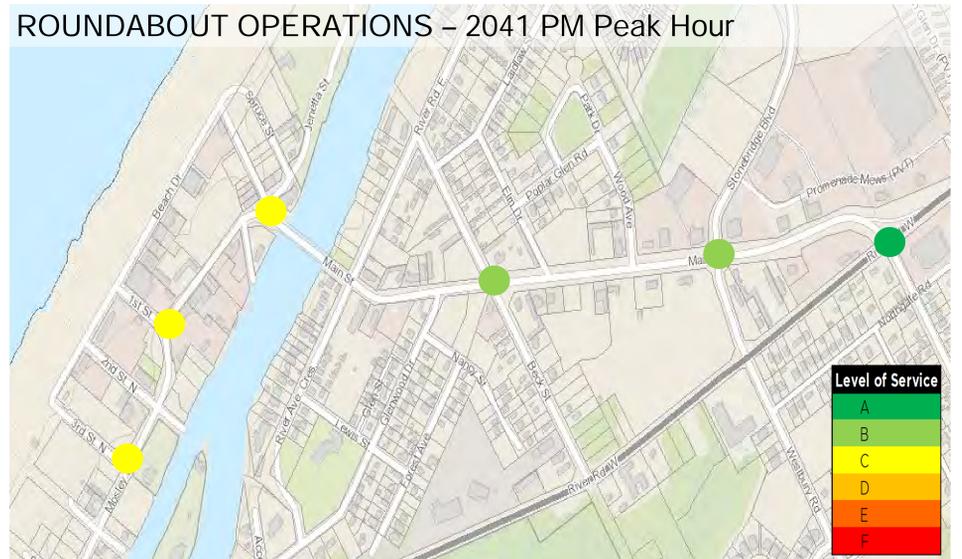


TRAFFIC SIGNAL CONTROL VS ROUNDABOUT CONTROL

TRAFFIC SIGNAL OPERATIONS - 2041 PM Peak Hour



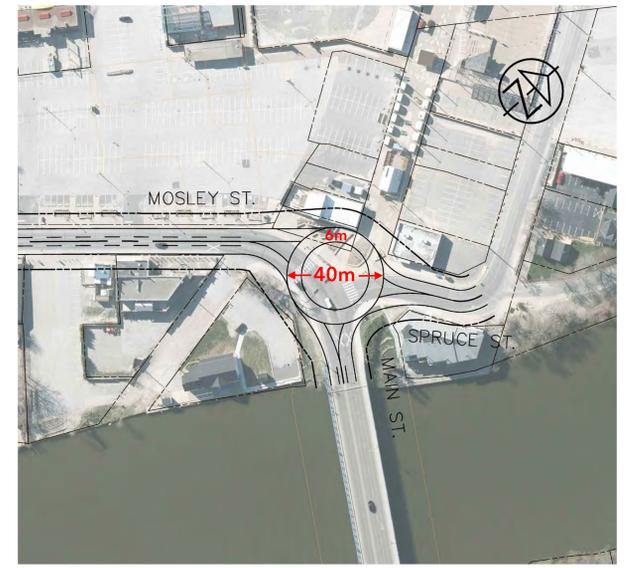
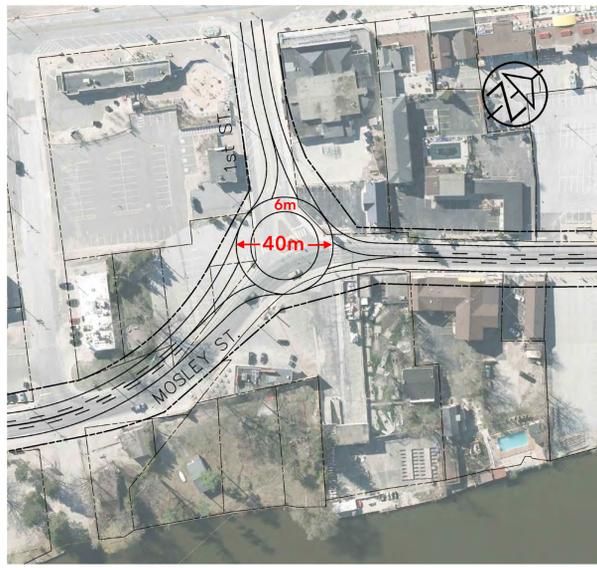
ROUNDABOUT OPERATIONS - 2041 PM Peak Hour



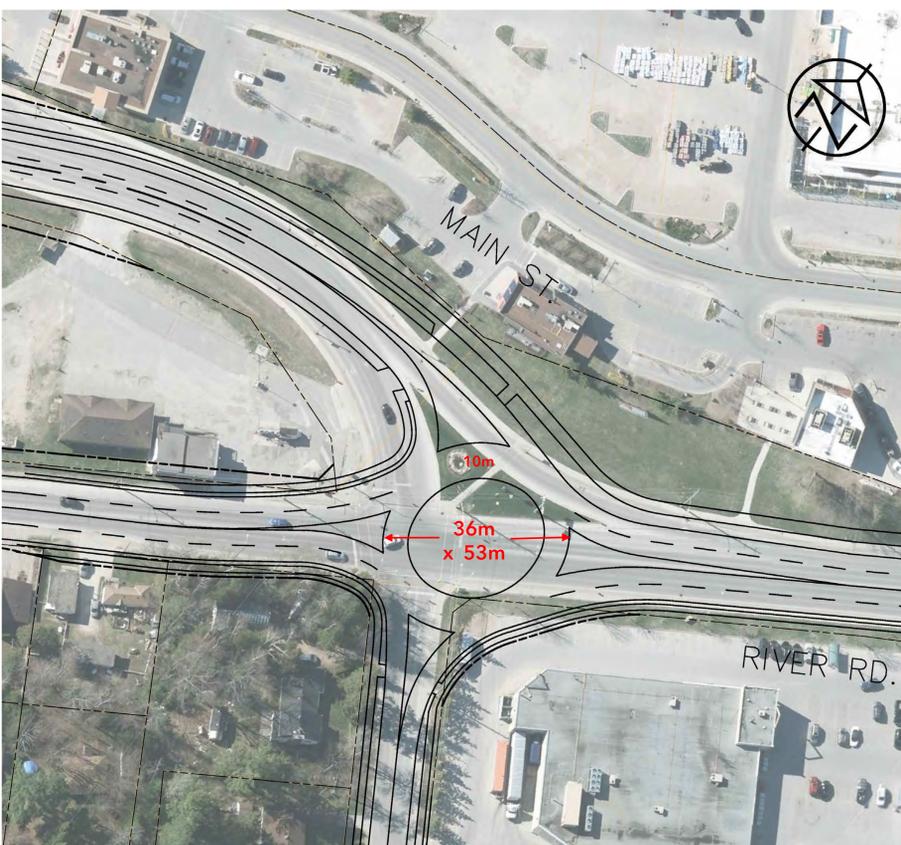
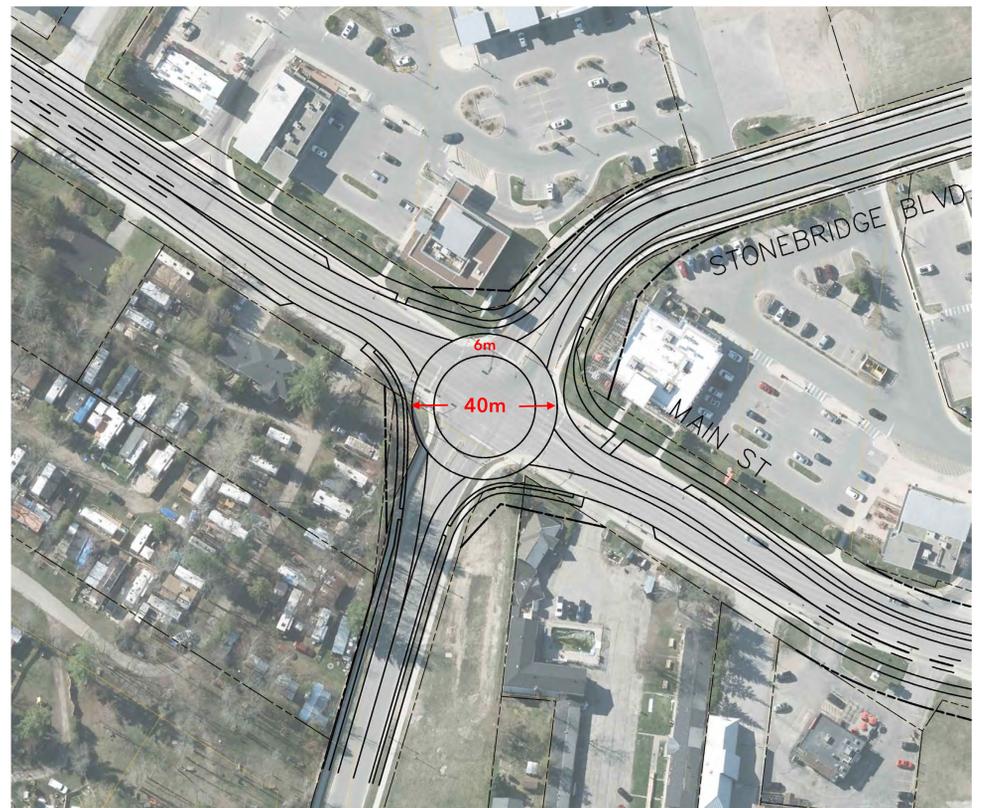
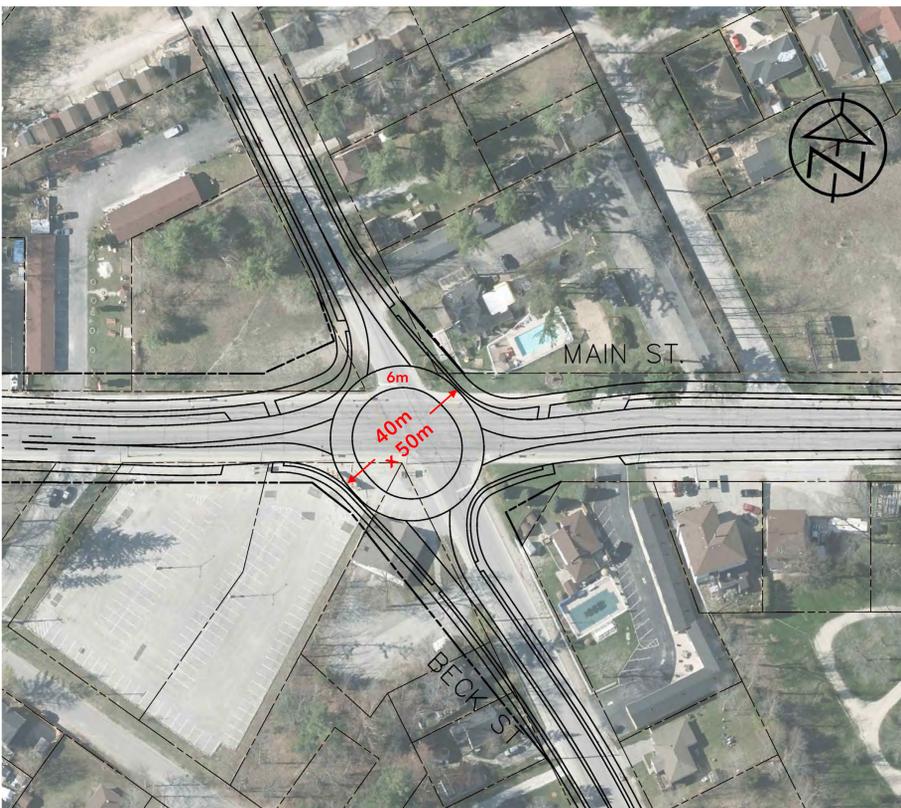
Main Street and Beach Areas 1 & 2 Improvements ROUNDABOUTS



FUNCTIONAL DESIGNS



Roundabout configurations are PRELIMINARY in nature and are only intended to show the overall design approach, roundabout footprint and potential property impacts. Further detail design will be required.



EVALUATION OF ROUNDABOUTS

Roundabouts are recommended to be further considered at the noted intersections:

- Main Street & River Road West
- Main Street & Stonebridge Boulevard
- Main Street & Beck Street.

As area development occurs, the Town should take the necessary steps to protect for the potential for roundabouts in the near future.

Given the proposed closure of Beach Drive to automobile traffic, and in considering the redevelopment potential of the area and the associated changes to the road system expected (namely to the side streets), roundabouts along Mosley Street are not considered necessary.



Main Street and Beach Areas 1 & 2 Improvements ROUNDABOUTS



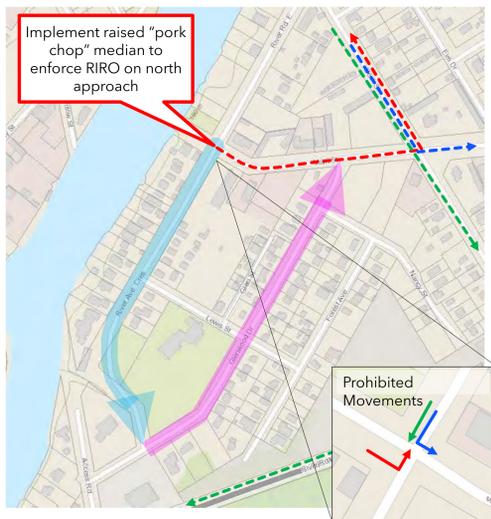
IMPROVEMENT OPTIONS

Option 1 Maintain Existing Configuration



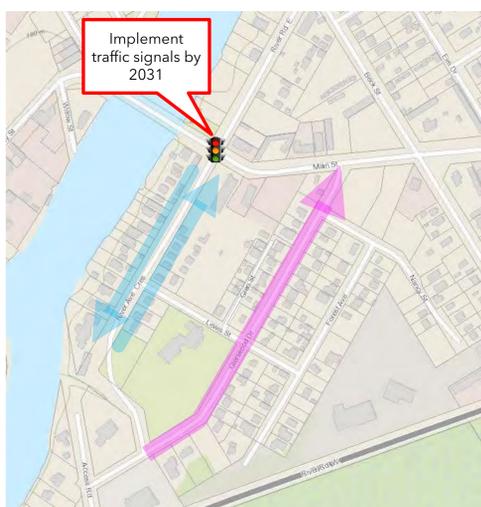
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- Sight line concerns in both directions along Main Street at River Avenue Crescent/River Road East due to bridge to the west and horizontal curve to the east
- Poor operations at intersection of Main Street with River Avenue Crescent/River Road East by 2041 under future total conditions (LOS F, v/c = 1.32, delay = 235 seconds).
- Proposed 3-lane cross-section on Main Street will provide exclusive left turn lanes, but will not improve 2041 conditions
- If existing configuration is maintained, intersection improvements required by 2041 (traffic signals)

Option 2 RIRO on River Road East at Main Street



- Maintain River Avenue Crescent and Glenwood Drive as currently exist
- Implement raised "pork chop" island on River Avenue East at Main Street or centre median on Main Street to create a right-in/right-out (RIRO)
- RIRO eliminates left turns to/from River Avenue East at Main Street and southbound through from River Avenue East to River Avenue Crescent - thus addressing most of the critical safety concerns at the intersection (although WB left to River Avenue Crescent remains)
- RIRO addresses poor operating conditions through 2041
- Some redistribution of traffic (as illustrated in in-set) will occur with restricted left turn movements

Option 3 Convert River Avenue Crescent to two-way with traffic signals at Main Street



- Convert River Avenue Crescent to two-way operations through removal of existing bicycle lanes
- Signalize intersection of River Avenue Crescent/River Road East with Main Street by 2031
- Conversion will likely result in increased volumes on River Avenue Crescent as road becomes connection two-way connection between River Road West and Main Street
- Decrease in volumes on Glenwood Drive anticipated
- While signal control addresses some of the sight line issues, left turns from Main Street to River Avenue Crescent and River Avenue East during green phase will still be completed with reduced sight lines for oncoming traffic



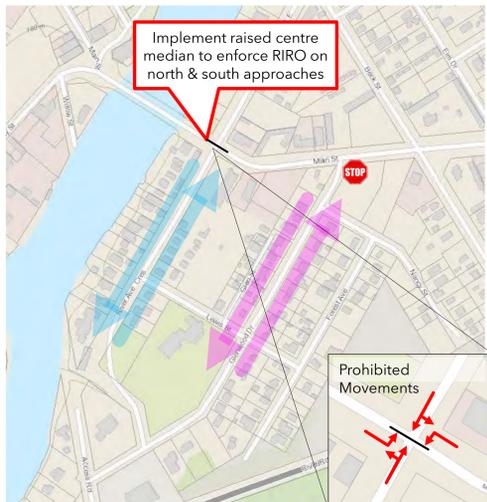
Main Street and Beach Areas 1 & 2 Improvements RIVER AVENUE CRES & GLENWOOD DR



IMPROVEMENT OPTIONS

Option 4

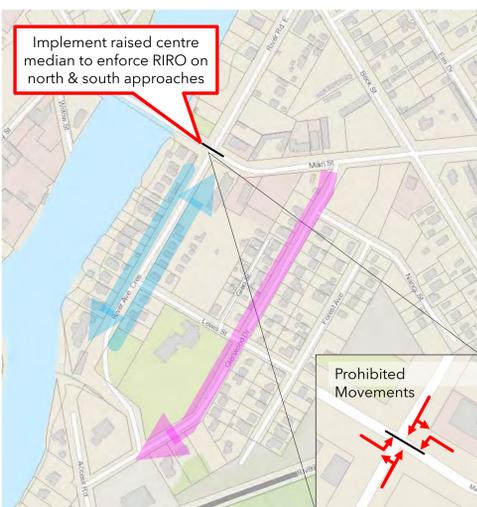
Convert River Avenue Crescent to two-way operations with raised centre median on Main Street Convert Glenwood Drive to two-way operations with full moves intersection on Main Street



- Convert River Avenue Crescent to two-way operations through removal of existing bicycle lanes
- Implement raised centre median on Main Street at River Avenue Crescent/River Road East -thus enforcing right-in/right-out only
- Convert Glenwood Drive to two-way operations (requires widening of existing road platform)
- Full moves intersection at Glenwood Drive with Main Street (stop control on Glenwood Drive will operate acceptably through 2041)
- Eliminates all left turn and crossing manoeuvres at River Avenue Crescent/River Road East intersection
- Full movements at Glenwood Drive provides alternate location for inbound left turns from Main Street (ie. those displaced from River Avenue Crescent)

Option 5

Convert River Avenue Crescent to two-way operations with raised centre median on Main Street Reverse Glenwood Drive to one-way operations in the southbound direction



PREFERRED

- Convert River Avenue Crescent to two-way operations through removal of existing bicycle lanes
- Implement raised centre median on Main Street at River Avenue Crescent/River Road East -thus enforcing right-in/right-out only (eliminates all left turn and crossing manoeuvres)
- Eliminates all left turn and crossing manoeuvres at River Avenue Crescent/River Road East intersection
- Reversing operations on Glenwood Drive to one-way in the southbound direction allows for inbound left turns from Main Street, which are otherwise eliminated at River Crescent Avenue.
- No construction required along Glenwood Drive (ie. road already accommodates one-way traffic)
- Future construction of roundabouts along Main Street at Beck Street and/or Stoneridge Boulevard would provide turnaround option for motorists in River Avenue Crescent/Glenwood Drive area that would like to head towards the beach but are unable to due to the raised median

EVALUATION OF OPTIONS

The preferred option to address River Avenue Crescent and Glenwood Drive is Option 5



Main Street and Beach Areas 1 & 2 Improvements RIVER AVENUE CRES & GLENWOOD DR



ROAD ALIGNMENTS & WIDENING

Main Street

- Maintain existing 30m ROW section (River Road West to Beck Street)
- Increase 20m ROW section (Beck Street to River) to 30m by widening 5m equally on both side

Mosley Street

- Introduce a 23m ROW
- Widen road on the north side from Spruce Street to 2nd Street
- Widen & straighten ROW from 2nd Street to 6th Street

Beach Drive

- Introduce a 20m ROW
- Shift road alignment south, outside of the 100-year flood limit

ROAD CROSS-SECTIONS

Main Street

- Option 3



Mosley Street

- Option 2



Beach Drive

- Option 2



ROUNDBABOUTS

Main Street & Beck Street



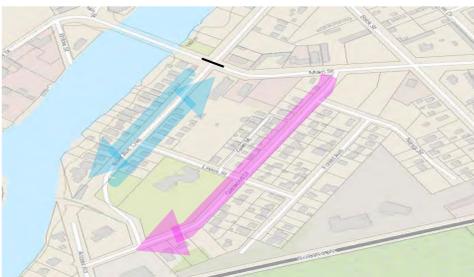
Main Street & Stonebridge Blvd



Main Street & River Road West



RIVER AVENUE CRES & GLENWOOD DRIVE



Option 5

- Convert River Avenue Crescent to two-way operations with raised centre median on Main Street
- Reverse Glenwood Drive to one-way operations in the southbound direction

NEXT STEPS

- All public comments will be reviewed and summarized.
- The development of the Alternative Design Concepts will be revisited and additional options and/or modifications to existing options will be considered, as necessary.
- The assessment of the Alternative Design Concepts will be revisited in context of the public comments and updated, as necessary.
- The Preferred Solutions will be identified.
- An Environmental Study Report will be prepared to document the Class EA process and the development and assessment of the Alternative Solutions and Alternative Design Concepts.
- A Notice of Study Completion will be circulated to inform the Public of the completion of the report and provide further opportunity for comment and review



Main Street and Beach Areas 1 & 2 Improvements SUMMARY & NEXT STEPS

