



THE CORPORATION OF THE CITY OF COURTENAY

BRIEFING NOTE

To: Council
From: Chief Administrative Officer
Subject: Update on 5th Street Complete Streets Pilot Project

File No.: 8620-01; 16009
Date: January 15, 2018

ISSUE:

This briefing note is to present an update on the 5th Street Complete Streets Pilot Project to Council.

STRATEGIC PRIORITIES REFERENCE:

The Complete Streets Pilot Project is a Council priority and supports the 2016-2018 Strategic Priority.

We value multi-modal transportation in our community

- We support developing multi-modal transportation network plans
- As we build new or replace existing transportation infrastructure, we are consistent with what we learn from our Complete Streets Pilot Project
- △ Support our regional transit service while balancing service improvements with costs

- **Area of Control**
The policy, works and programming matters that fall within Council's jurisdictional authority to act.
- ▲ **Area of Influence**
Matters that fall within shared or agreed jurisdiction between Council and another government or party.
- **Area of Concern**
Matters of interest outside Council's jurisdictional authority to act.

BACKGROUND:

On December 5, 2016, based on the staff report entitled "Street Complete Streets Pilot Project– Presentation by Urban Systems and Concept Options Selection," Council approved Option 1 and directed staff to proceed to detailed design based on the Option 4 (raised) cross section, with parking provided between Fitzgerald and Harmston Avenues, and alternating parking and raingardens provided throughout the remainder of the corridor.

Since Council approval, the project has proceeded through the appropriate project planning phases and a number of key steps have been completed. Construction will commence this spring.

We are here:



Over recent months a number of key activities to prepare for construction have occurred. A “pop-up” intersection study was undertaken to assess potential traffic changes, the approved option proceeded through detailed design, tender documents are being prepared, and communications planning to support effective two-way information sharing has commenced.

An open house is planned for Thursday, January 25, 2018, to provide an opportunity to update neighbours and stakeholders about the final project design and timeline for construction in 2018.

In February, the City of Courtenay will issue a Tender for Construction of the 5th Street Complete Streets Project which includes new surfacing for two vehicle travel lanes, on-street parking, new dedicated bike lanes, new rain gardens and an improved pedestrian streetscape over a half a kilometre of 5th Street, from Fitzgerald Avenue to Menzies Avenue. After examination of the costs, it was determined that the existing power lines would remain above ground. Upon completion, 5th Street will be more comfortable for people of all ages to walk and bike the area, will more effectively manage stormwater on-site using vegetation, and will support economic development in Downtown Courtenay. The design was informed by extensive public input from neighbours and a variety of stakeholders.

Construction will commence in April 2018 and will be completed in the fall. Per the funding requirements, the project must be completed by December 31, 2018. Concepts are attached as Appendix A.

KEY CONSIDERATIONS:

Results of Pop-Up Intersection study

To assess traffic patterns and to inform the detailed design, a “pop up” intersection was installed from April to October 2017 as directed by Council (see Appendix B). The City of Courtenay installed removable pylons and barriers to assess the proposed design and ensure there were no unforeseen consequences due to the new intersection alignment. The temporary installation reduced the pedestrian crossing distance at the intersection by repurposing the northbound and westbound auxiliary lanes, as well as reducing pavement width along the southbound and eastbound approaches.

The City performed a traffic count in March and July 2016, prior to the installation of the “pop-up” and Urban Systems Ltd. conducted traffic counts in the late spring and mid-summer 2017 at 5th Street / Fitzgerald Avenue and neighbouring intersections to assess the impact of the pop-up configuration on traffic volumes and vehicle performance. Morning (7 a.m. – 9 a.m.), midday (11 a.m. – 1 p.m.) and afternoon (3 p.m. – 6 p.m.) traffic counts were conducted to ensure all traffic conditions were evaluated. Public feedback was invited and expected throughout the study period, with most feedback being received when the pop-up was first introduced. Feedback was both positive and negative in terms of perceived travelling experience, and additional feedback was received about the aesthetic of the pop-up materials. Respondents were reminded that the pop-up intersection was a temporary installation and permanent changes will be made with quality materials and infrastructure for both aesthetic and durability.

Key observations:

- Traffic volumes were significantly higher in the PM peak than they were in the AM peak. The northbound left, westbound through, and eastbound through movements carried the highest traffic volumes in the PM peak.

- The pop-up configuration did not result in noticeable differences in traffic volume in the PM peak hour. Motorists did not avoid the altered configuration at 5th Street / Fitzgerald Avenue in any appreciable manner.
- Traffic volumes in May and July 2017 were very similar. No seasonal effects were observed at the 5th Street / Fitzgerald Avenue intersection.
- No degradation in vehicle performance was observed as a result of the altered configuration at 5th Street / Fitzgerald Avenue. In the PM peak hour, over 60 and 75 pedestrians were observed crossing 5th Street or Fitzgerald Avenue at the study intersection in May and July, respectively. The pop-up configuration improved crossing conditions for pedestrians by reducing crossing distance.
- The pop-up configuration increased the level of service of the intersection by reducing the wait time associated with vehicles travelling through the intersection.
- PM peak hour level of service at the intersection improved from level of service D in the original configuration to level of service C for the pop-up configuration in both May and July, 2017 scenarios. This level of service increase is directly related to a reduced delay time in vehicle movements with the pop up configuration.

In conclusion, although the pedestrian crossing distance was shortened at the 5th Street/Fitzgerald Avenue intersection by eliminating the designated and de facto auxiliary lanes, it did not adversely affect vehicle performance at the intersection. In fact, while improving the pedestrian crossing experience the pop-up installation reduced vehicle delay times in the afternoon for vehicles.

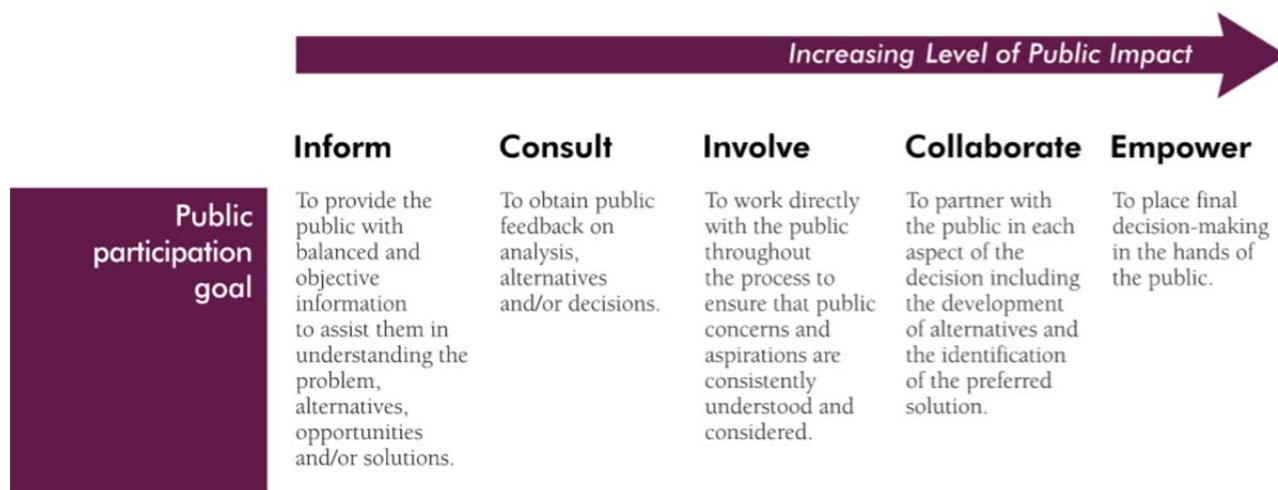
Public impact and interest:

The investment of \$3.253 million in Federal Gas tax funding to construct a Complete Streets Pilot Project on 5th Street presents a considerable opportunity to improve critical infrastructure, advance sustainability commitments and work with the community to mitigate impacts and increase understanding of the needs of people of all ages, abilities, and modes of travel.

The thoughtful nature of complete streets design garners heightened public interest and involvement from design phase, through construction, to project completion. As a pilot project this is even more important for the City of Courtenay as it facilitates opportunities for greater community engagement overall and the ability to inform the planning and delivery of future infrastructure and construction projects.

The community has been engaged throughout the design process that began in February 2016. Broad awareness-raising strategies have been utilized resulting in direct outreach to over 250 properties in the immediate neighbourhood, and over 100 people attending interactive public events in 2016. Two surveys have been conducted, with 640 responses in total. An attached timeline, Appendix C, outlines the decision-making and community engagement process followed to date.

Effective communications and public engagement will continue to be a critical component of this pilot project and will be supported through quality public information and two-way relationships to support high awareness of the project benefits and progress and to mitigate construction impacts. Public engagement efforts will continue to be informed by the International Association of Public Participation (IAP2) values and public participation spectrum.



As construction will occur on one of the main routes to downtown and through a residential neighbourhood, area residents and 5th Street users will require “early and often” information about the project and the project team and contractor will need to understand the needs of the community to best mitigate impacts such as property access, parking, noise, traffic and transit routes, and water service. Staff are already consulting the Courtenay Canada Day Commission about the alternate parade route planned for 2018.

Public engagement objectives per IAP2 Continuum:

1. Involve neighbours and stakeholders early in process to identify opportunities and concerns that can be supported or mitigated throughout construction.
2. Foster two-way relationships that support open information sharing between the project and the community.
3. Provide quality and timely information about the project throughout construction.
4. Demonstrate how the project supports the Regional Growth Strategy, the City of Courtenay’s Official Community Plan and the vision for the transportation network to prioritize connectivity and access to daily destinations and, through a balanced approach to transportation planning, provides all road users safe choices in their mode of transportation.
5. Create opportunities for the project to educate and engage with individuals and groups that are interested in or affected by the project, and those who may not have been involved in past.
6. Demonstrate to the City Council, neighbourhood, and stakeholders what public feedback has been heard and what efforts have been made to respond to concerns through the process and during construction.

NEXT STEPS:

KEY PROJECT PHASES	INFORMATION ACTIVITIES	TIMELINE
Early engagement planning and tender preparation	<ul style="list-style-type: none"> Engagement approach and timeline including engagement objectives, key messaging, stakeholder identification and mapping, communication and engagement tools, etc. Planning for community events in January 2018 	December 2017
Project launch and call for tenders	<ul style="list-style-type: none"> Update to City Council Tender issued for construction drawing package and contract specifications Community awareness activities to provide update on project for 2018 (open house, website, media, neighbourhood outreach etc.) Open house January 25, 2018 Meet with key stakeholders to identify early concerns and refine engagement approach to meet community needs Detailed communications plan to support project to completion Develop project FAQs Review Strategic Priorities Funding Agreement to confirm reporting and funding communications protocols Contract award 	January – March 2018
Active construction and on-going project communications	<ul style="list-style-type: none"> Refine and communicate detailed construction schedule Provide routine, and as needed, updates to all stakeholders Create opportunities for project to educate and engage community and stakeholders (e.g. local students, college, accessibility, businesses, etc.) 	April – December 2018
Project completion		December 31, 2018

Prepared by:



Craig Perry, P.Eng.
 Manager of Engineering Projects



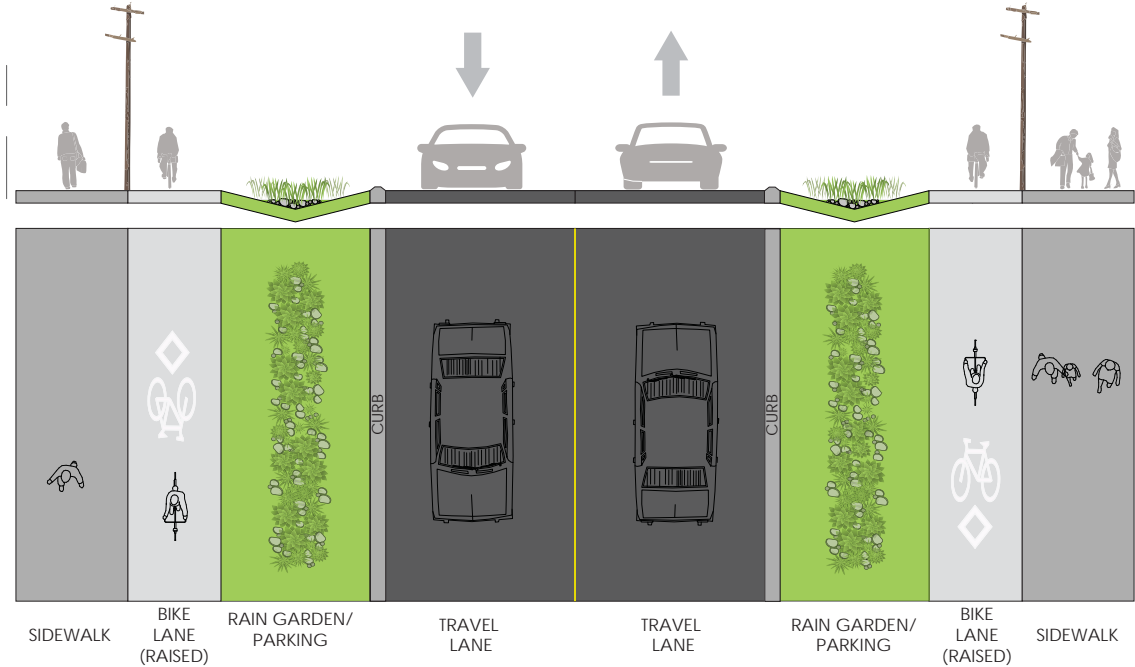
Ryan O'Grady, P.Ag., P.Eng.
 Director of Engineering Services

APPENDIX A: Final Concept

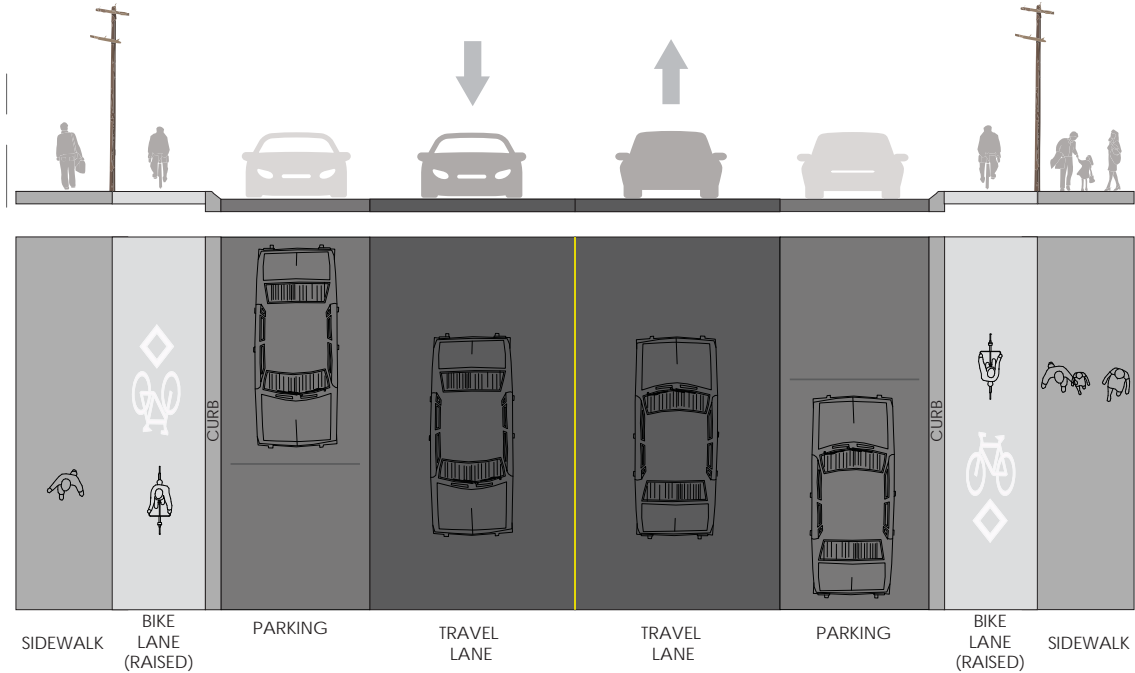
5th Street Complete Streets Pilot Project

Cross Sections

Street cross section with rain gardens (Menzies to Hamston)

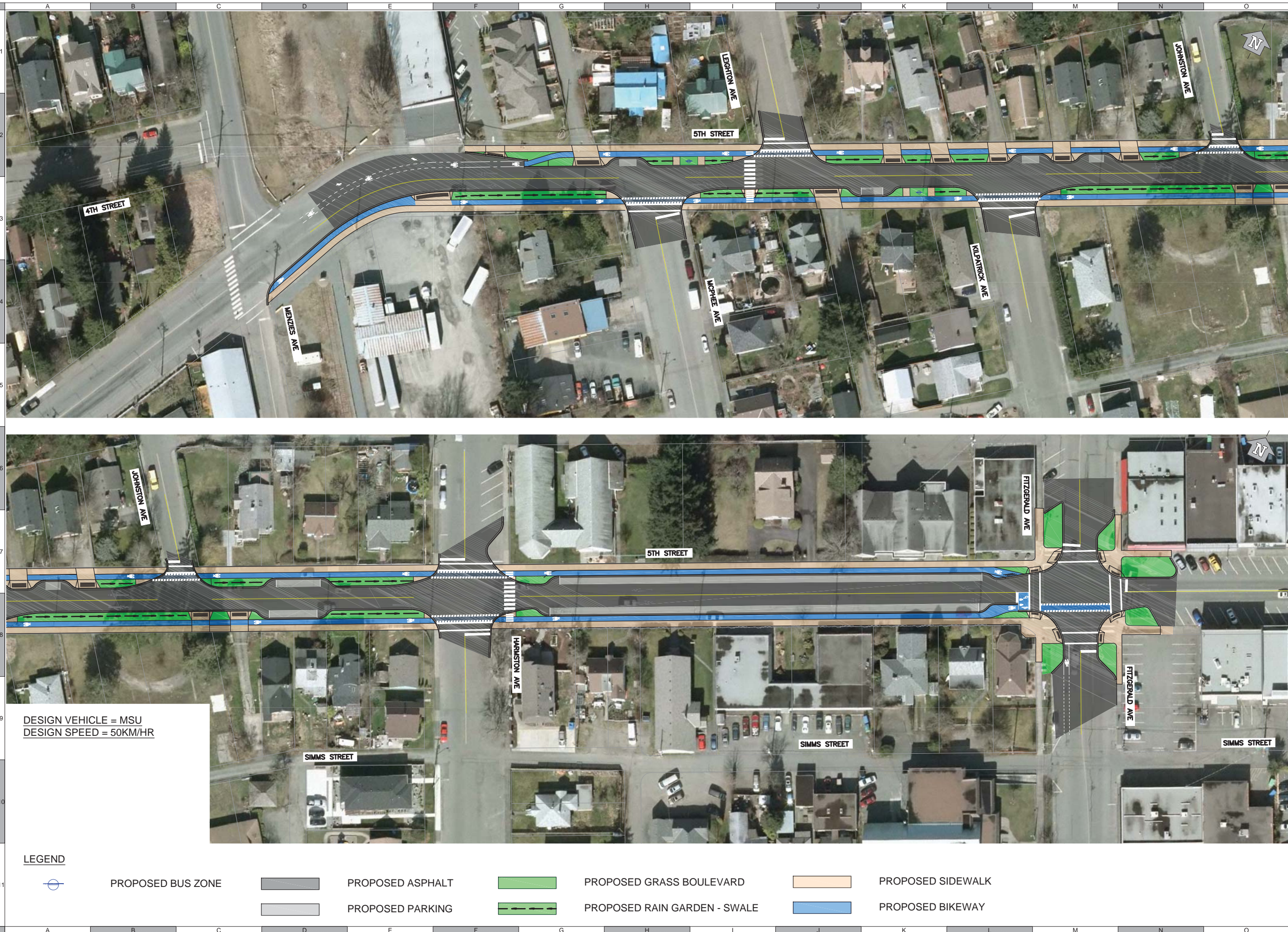


Street cross section with parallel parking (Hamston to Fitzgerald)



SAMPLE PHOTO (NOT EXACTLY AS SHOWN)

U:\Projects_VAN\3222\0014\02\0-Drafting-Design-Analysis\CAD\PROD\PRESENTATION\3222\001402-PRESENTATION-Preferred.dwg - Overall - With Image, 2018-01-09 07:21 am Mnikolich



DESIGN VEHICLE = MSU
DESIGN SPEED = 50KM/HR

LEGEND

- PROPOSED BUS ZONE
- PROPOSED ASPHALT
- PROPOSED GRASS BOULEVARD
- PROPOSED SIDEWALK
- PROPOSED PARKING
- PROPOSED RAIN GARDEN - SWALE
- PROPOSED BIKEWAY

ATTENTION
This drawing is prepared for the sole use of City of Courtenay. No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

SURVEY INFORMATION
Prepared by: -
Coordinate System: -
Compilation Date: -

Professional Seals

#	Date	Issue / Revision	App

City of Courtenay



Scale #m 0 # ## ###

Quality Control by U. Systems
Designed by U. Systems
Drawn by U. Systems

5th Street Complete Streets
Overall - With Image

Sheet Number	# of 10
3222.0014.02	----
Project Number	Drawing Number
3222.0014.02	----
	Revision

NOT FOR CONSTRUCTION

Appendix B: Complete Streets Pilot Project – 5th Street and Fitzgerald Avenue Pop-Up Intersection Staff Report and Council Resolution



THE CORPORATION OF THE CITY OF COURTENAY

STAFF REPORT

To: Council

File No.: 8620-01; 16009

From: Chief Administrative Officer

Date: October 3, 2016

Subject: Complete Streets Pilot Project - 5th Street and Fitzgerald Avenue Pop-Up Intersection

PURPOSE:

The purpose of this report is to review with Council the opportunity to install a temporary ("pop-up") intersection at 5th Street and Fitzgerald Avenue in order to better inform the design process for the 5th Street Complete Streets Pilot Project.

CAO RECOMMENDATIONS:

That, based on the October 3, 2016 staff report entitled "*Complete Streets Pilot Project - 5th Street and Fitzgerald Avenue Pop-Up Intersection*", Council approve Option 1 and direct staff to proceed with installation of the temporary ("pop-up") intersection at 5th Street and Fitzgerald Avenue in 2017.

Respectfully submitted,

David Allen, BES, CLGEM, SCLGM
Chief Administrative Officer

BACKGROUND:

In February 2016, the City of Courtenay was awarded \$3.253 million to construct a Complete Streets Pilot Project on 5th Street between Fitzgerald Avenue and Menzies Avenue, a distance of approximately 530 metres. The community was involved in the conceptual design process in May of this year, with options to be presented to Council in October 2016.

As part of the project development and conceptual design process, the intersection of 5th Street and Fitzgerald Avenue was identified as an important gateway to Downtown Courtenay, and a transition point between the Complete Streets Pilot Project and the Downtown core. Although full intersection improvements were not specifically included in the grant application there may be opportunities to make some improvements to this intersection as part of the overall project.

DISCUSSION:

The intersection of 5th Street and Fitzgerald Avenue is a multi-lane all-way stop. This configuration permits up to eight vehicles to arrive at the intersection simultaneously, which can be confusing to motorists, particularly when coupled with a high volume of pedestrian crossings. Currently pedestrians are not prioritized appropriately at the intersection. The crossing distance is great, exposing pedestrians to vehicles for longer than necessary, and with multiple lanes in each direction it is difficult for pedestrians to be seen by motorists. The retrofit of 5th Street on the west leg of the intersection will likely introduce

dedicated cycling infrastructure to encourage more multi-modal travel, which will further complicate the intersection operations.

The purpose of the proposed “pop-up” intersection is to understand the impacts to traffic when a shift is made from prioritizing vehicle movements to providing space for bike lanes and improved crossings for pedestrians. The intersection re-configuration would reduce the travel lanes approaches from two to one lane in each direction. While this geometry is more typical of an all-way stop intersection configuration, it may lead to traffic back-ups along both 5th Street and Fitzgerald Avenue. The “pop-up” intersection will give staff some indication of how traffic will react to a change at the intersection geometry and where traffic will re-route to avoid the queues. This information will assist staff in designing the transition back to the existing roadway, better understanding the future design requirements of the intersection, as well as determining what improvements may need to be made at surrounding intersections to accommodate possible traffic volume increases.

As part of this approach, staff has undertaken the following:

- Performed traffic counts at 5th and Fitzgerald
- Performed additional traffic counts on adjacent intersections – 4th and Fitzgerald, 5th and Fitzgerald, 5th and Harmston, and 6th and Fitzgerald – in order to assess the “before” traffic conditions.
- Commissioned Urban Systems to review and provide a recommended temporary intersection design and cost estimate for installation.

Urban Systems has prepared a design for a one lane, 4-leg temporary intersection (provided as Attachment A), which will accommodate all traffic movements as well as all vehicle types, including the Fire Department’s ladder truck. The estimated budget to construct the temporary installation will be approximately \$30,000 - \$50,000, which will include the set-up, take-down, material purchases, and internal staff time and labour costs. Public Works staff, under the direction of Urban Systems, will set-up and take-down the temporary intersection, each of which will take the Roads Crew approximately two days.

Staff is proposing the “pop-up” intersection be installed in spring 2017, and run for approximately three to six months. During this trial period, staff would conduct repeat traffic counts at the key intersections listed above, to determine if traffic patterns change as a result of the modifications to the intersection. A spring installation will give staff time to assess the area while school is in and out of session, during warmer months when pedestrian and cyclist volumes will likely be higher, and ensures that the temporary materials would not be in place during the winter months when they may complicate snow clearing. This time frame also fits with the detailed design phase of the project, enabling staff to use the information collected towards the final design of the intersection.

FINANCIAL IMPLICATIONS:

On February 12, 2016 the City of Courtenay was awarded \$3.253 million in funding to construct a Complete Streets Pilot Project on a section of 5th Street. This funding is from the Strategic Priorities fund under the Federal Gas Tax Fund. This grant provides 100% funding for all eligible costs related to the infrastructure project.

The budget for the temporary intersection installation is estimated at \$30,000 - \$50,000 and may need to be funded outside of the grant project. With Council’s support, staff would add this project to the 2017 capital budget for Council’s endorsement.

ADMINISTRATIVE IMPLICATIONS:

This project will inform the overall 5th Street Complete Streets Pilot Project which is part of Staff's 2016 work plan and as such, the project work is already accounted for.

ASSET MANAGEMENT IMPLICATIONS:


The use of a temporary installation of the 5th / Fitzgerald intersection will provide the supporting data, analysis and community feedback for the final design of the 5th Street Complete Streets Pilot Project. Investing a relatively small amount of budget in advance of the final design will ensure that we build the appropriate infrastructure assets that balance all modes of transportation, consistent with the City's transportation policies and strategic priorities.

STRATEGIC PRIORITIES REFERENCE:

The Complete Streets Pilot Project is a Council priority and supports the 2016- 2018 Strategic Priority

We value multi-modal transportation in our community

- We support developing multi-modal transportation network plans
- As we build new or replace existing transportation infrastructure, we are consistent with what we learn from our Complete Streets Pilot Project
- △ Support our regional transit service while balancing service improvements with costs



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OFFICIAL COMMUNITY PLAN REFERENCE:*The Downtown*

Maintain a pedestrian orientation in downtown and integrated transportation planning (i.e., taking all modes of movement into account). (pg 11)

Transportation

5.2 Goals

2. Development of a transportation system that provides choices for different modes of travel including vehicle, transit, pedestrian, cycling and people with mobility impairments. (pg 59)

REGIONAL GROWTH STRATEGY REFERENCE:

Goal 4 – Transportation (pg 49, 50)

Objective 4-B:

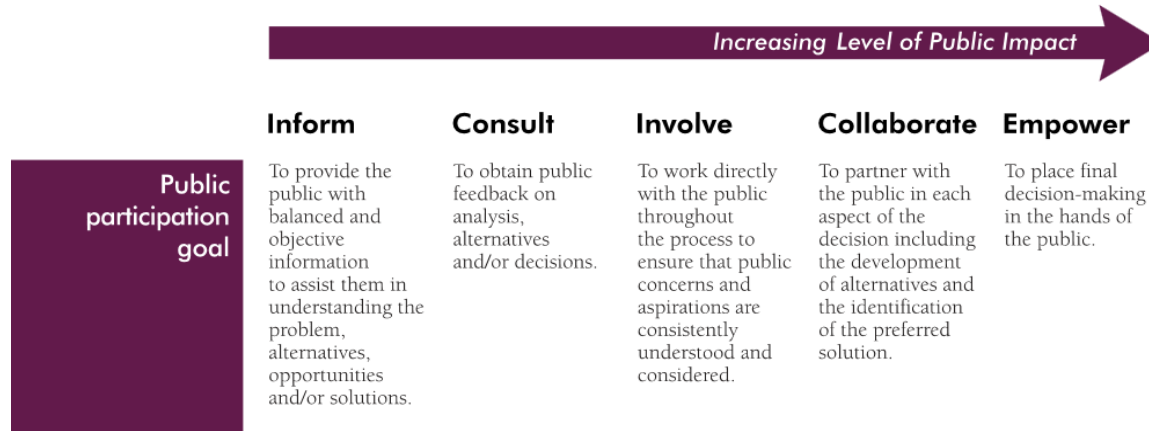
Improve bicycle and pedestrian infrastructure to increase the use of active transportation options.

Targets: 20% bicycle and pedestrian commuters by 2030

CITIZEN/PUBLIC ENGAGEMENT:

Staff will inform and consult with key stakeholders and the public based on the IAP2 Spectrum of Public Participation:

http://c.ymcdn.com/sites/www.iap2.org/resource/resmgr/imported/IAP2%20Spectrum_vertical.pdf



Changes to traffic patterns are not typically well received and staff anticipates some negative feedback especially at the initial stage of the installation. Staff will work to engage with the public by placing project information signage at the intersection to speak to nature of the project and the benefits of the knowledge gained by this undertaking; preparing media releases and newspaper and radio advertising will be prepared well in advance of the installation.

Staff will then monitor traffic patterns over a three to six month period following the installation, in order to compare the “before and after” traffic impacts. The City will also seek feedback from key stakeholders and the community throughout the process. At the end of the temporary installation, Urban Systems Ltd will review the traffic data and community feedback, and incorporate it into the final design of the 5th Street Complete Streets Pilot Project.

OPTIONS:

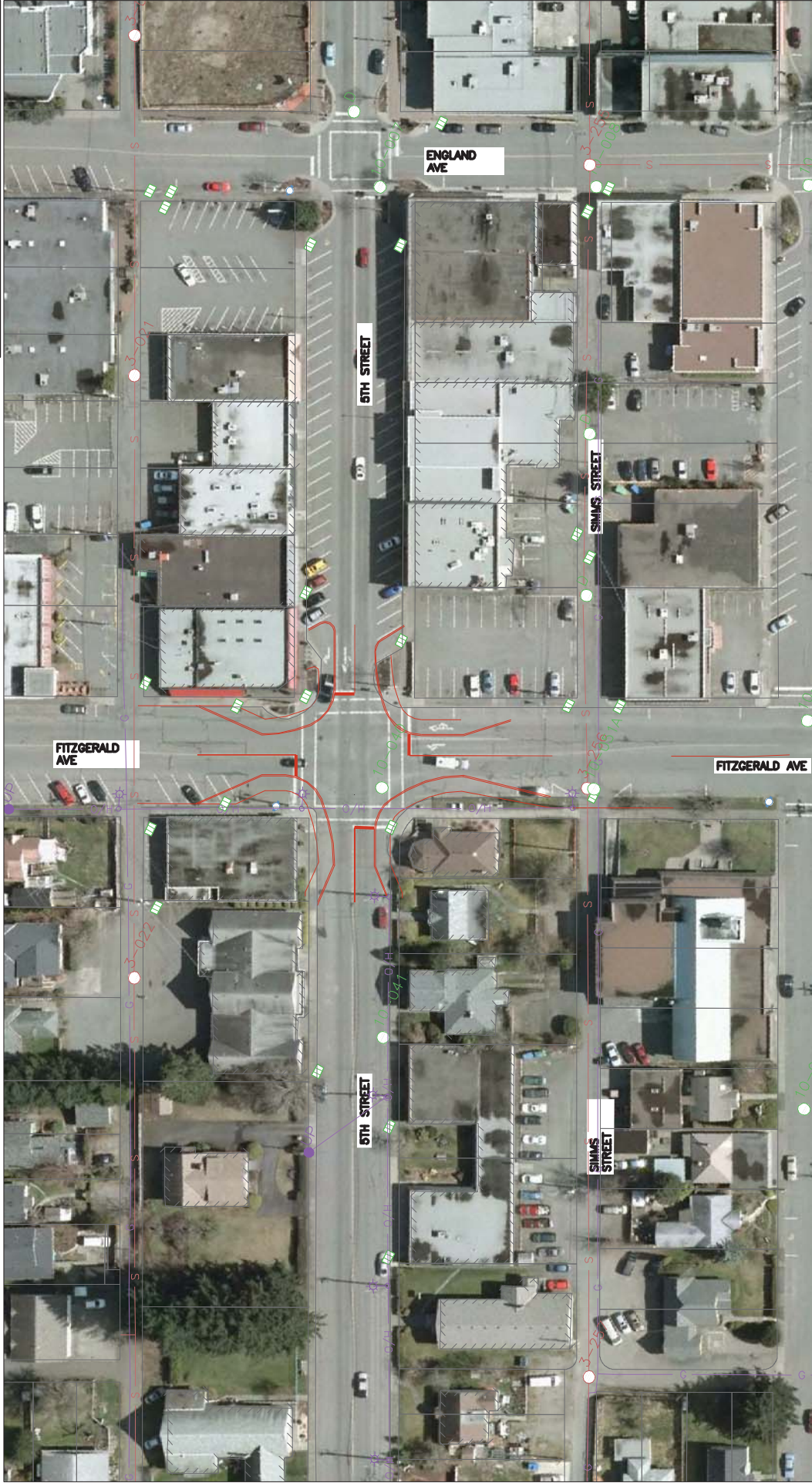
- Option 1: Council directs staff to proceed with the installation of a temporary intersection at 5th and include this in the 2017 City budget.
- Option 2: That Council does not support with the installation of a temporary “pop-up” intersection at 5th Street and Fitzgerald Avenue.

Prepared by:

Lesley Hatch, P.Eng.
 Director of Engineering Services

ATTACHMENT A - Temporary Intersection Design Option 1 (4-Leg)

5th ST- FITZGERALD AVE INTERSECTION



ISSUED FOR
DISCUSSION ONLY
Aug 04 2016
urban@urbansys.com

Client/Project	CITY OF COURTENAY
Scale	1:750
Date	2016-08-04
Figure	SK-02
Title	INTERSECTION DESIGN

APPENDIX C: Timeline of decisions and public engagement to date

5th Street Complete Streets Pilot Project - Project Timeline to Date

