CITY OF VICTORIA

Governance and Priorities Committee Report

Date: January 6, 2014 **From:** Brad Dellebuur, Manager, Transportation

Subject: Douglas Street Bus Lane Improvements - Authorization to Enter into Funding Agreement with BC Transit

Executive Summary

The purpose of this report is to seek Council authorization to enter into a Funding Agreement with BC Transit to implement Phase 1 of Option C (attached) of the Victoria Transit Priority Corridor Plan. BC Transit requires both parties enter into an agreement to allow BC Transit to pay for improvements to the public right-of-way. The agreement covers consultant design services, and subsequent construction work undertaken by City forces.

Council endorsed the Douglas Street Transit Priority Corridor Plan on May 23, 2013, following a presentation by BC Transit staff. BC Transit's consultants have now completed conceptual plans for Phase 1 of the Douglas Street Transit Priority Corridor Plan. Phase 1 of the project is located between Fisgard Street and Hillside Avenue, and includes the removal of curb bulbs at the Douglas/Herald and Douglas/Pembroke intersections; a new pedestrian signal at the Douglas/Pembroke intersection; an expanded bus zone at Douglas Street north of Kings Road; several transit zone relocations and enhancements; and lane marking and signing changes to create peak-hour reserved lanes on the corridor. The estimated cost to construct Phase 1 is $400,000, with construction scheduled to be complete in the spring of 2014.

Urban Systems completed preliminary conceptual plans for the Douglas Street Bus Lane Project under contract with BC Transit. They were selected through a BC Transit-managed competitive RFP process, and it is BC Transits preference to see the project continue with the same design firm. Urban Systems has provided the City a detailed design work plan and estimate ($44,486) for Phase 1 (see attached). As time is of the essence, Urban Systems will be granted a sole source contract to complete this design work. Fees for the detailed design will be recovered from BC Transit, as per the proposed agreement.

Phase 2 of the project (from Hillside Avenue to Tolmie Avenue) needs further definition and discussion with the Ministry of Transportation, BC Transit and the District of Saanich. It is anticipated it will proceed mid-year. The BC Transit Commission has approved investing up to $1.5 million on bus lane improvements on Douglas Street.

Recommendation:

That Council authorize the Mayor and the Corporate Administrator to execute a Funding Agreement with BC Transit, in a form acceptable to the City Solicitor, to enable BC Transit to fund improvements to the public right-of-way associated with Phase 1 of the Victoria Transit Priority Corridor Plan.

Respectfully submitted,

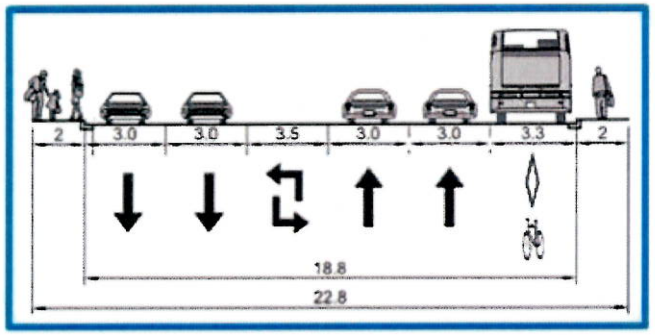
Brad Dellebuur, Manager
Transportation Section

Dwayne Kalynchuk, PEng
Director Engineering and Public Works

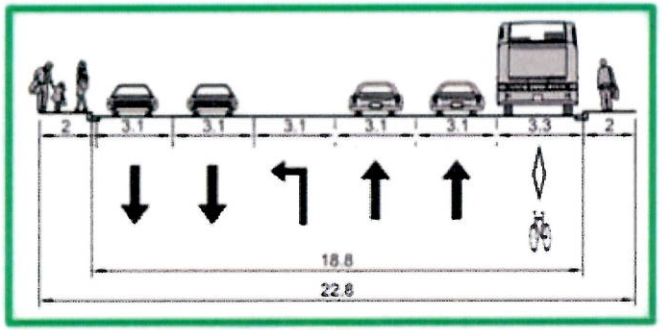
Report accepted and recommended by the Acting City Manager:

Jocelyn Jenkyns

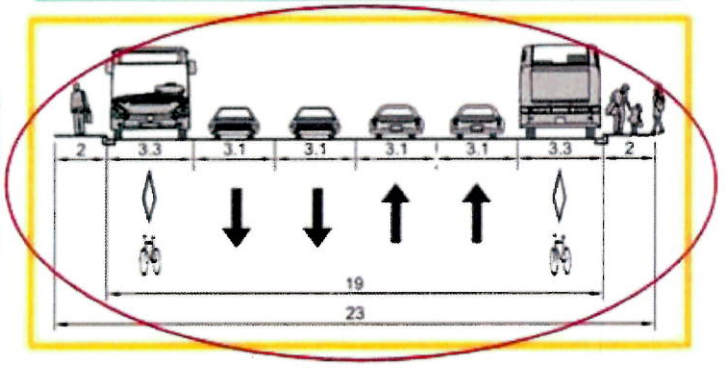
BURNSIDE TO TOLMIE



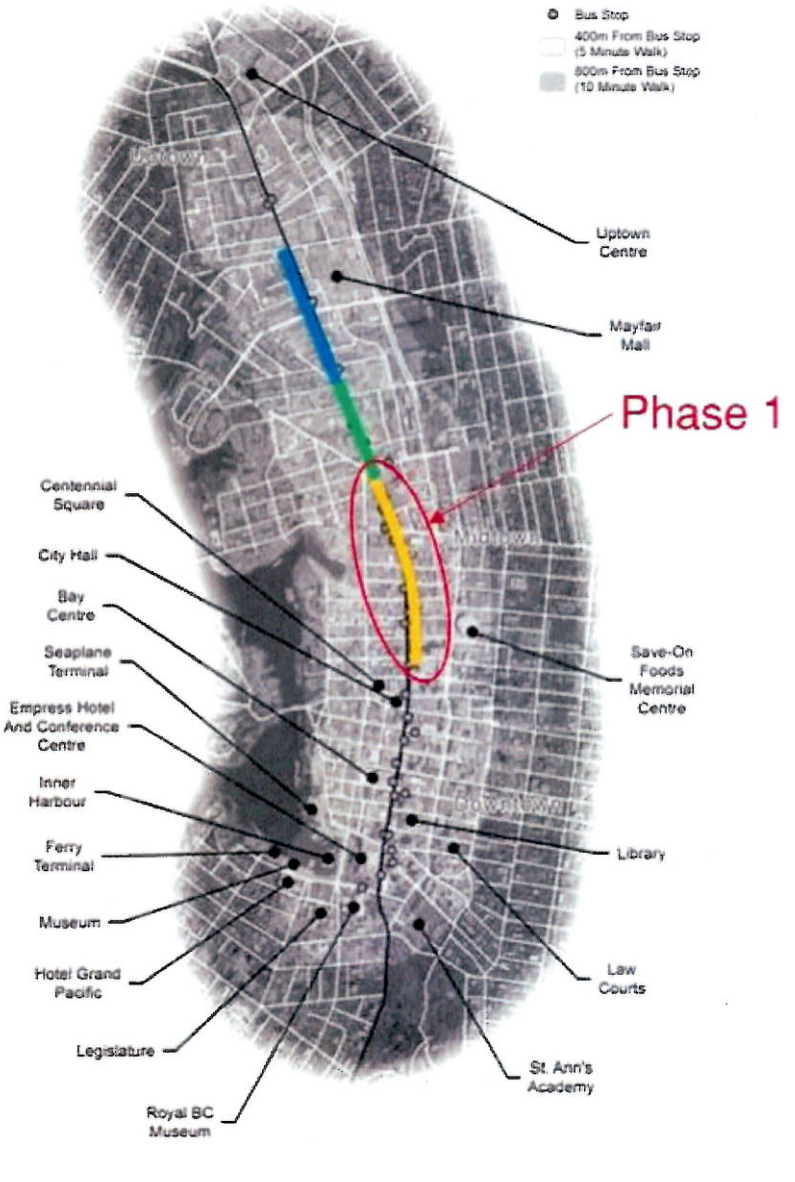
HILLSIDE TO BURNSIDE



HERALD TO HILLSIDE



Phase 1 of Option C



URBAN systems

December 24, 2013 File: 1328-0023-00

City of Victoria
City Hall
1 Centennial Square
Victoria V8W 1P6

Attention: Brad Dellebuur, Manager of Transportation

RE: DOUGLAS STREET TRANSIT PRIORITY CORRIDOR PHASE 1 – PROPOSED DETAILED DESIGN WORK PLAN

Thank you for the opportunity to submit a work plan and fee estimate for provision of consulting services to complete the detailed design of the Phase 1 of the Douglas Street Transit Priority Corridor project.

We have assembled a team with the background knowledge on the Transit Priority project and the expertise and local experience needed to effectively complete this assignment. Our team has the capacity to complete this work within the schedule outlined in the attached work program. We will work closely with the City to develop the design to implement the transit priority corridor. We are enthusiastic about this assignment and supporting City's goals to enhance the sustainability of the community and delivering integrated transportation solutions to improve mobility of people in the City as well as the Capital Region.

The following is our understanding of the project and our proposed work plan and fee estimate.

1. PROJECT UNDERSTANDING

Douglas Street is classified as an arterial road within the City of Victoria. To the north, Douglas Street transitions into Highway 1, which serves as the western gateway to Victoria from other parts of the region and Vancouver Island. Douglas Street generally supports two travel lanes in each direction, with on-street parking in sections south of Hillside Avenue and up to six travel lanes in short segments to the north. South of Tolmie Avenue, the Douglas Street corridor supports anywhere from 700 to 1,700 peak direction vehicles per hour in two travel lanes per direction.

The City of Victoria is advancing the implementation of short term transit priority improvements on Douglas Street following endorsement from the Victoria Regional Transit Commission (Transit Commission) in September 2013. The City has requested Urban Systems to prepare a fee estimate and proposal for effort required to prepare construction-ready engineering drawings for Phase 1 of this project, extending between Hillside Avenue and Fisgard Street.

402 - 645 Fort Street, Victoria, BC V8W 1G2 | T: 250.220.7060

Urban Systems was commissioned by BC Transit to complete the Transit Priority Corridor Plan in 2012. This study examined interim, bus-based transit priority options along Douglas Street, McKenzie Avenue, and Island Highway corridors. This study was based on the goals outlined in the BC Transit's Transit Future Plan (2010) and Victoria Regional Rapid Transit Study (2011).

Through the evaluation and consultation process, a preferred concept was concluded for transit priority improvements on Douglas Street. From Hillside Avenue to Fisgard Street, four general purpose vehicle lanes, and two shared bus-bike lanes operational in the AM/PM peak period only (specifically, 6 – 9 AM and 3 – 6 PM). This cross section is achieved by converting the existing parking and bike lane to the shared bus-bike lane. Parking is permitted in off-peak hours. North of Hillside Avenue, two general purpose vehicle lanes are maintained in each direction, and a northbound only curb side shared peak period bus-bike lane would be added to the corridor through to Tolmie Avenue. This is achieved through lane narrowing and minor curb relocation. Right-turn lanes are maintained with the provision of the bus only lane.

The City of Victoria and BC Transit plan to implement this option in two phases. The first phase extends between Fisgard Street and Hillside Avenue. The second phase extends from Hillside Avenue to Tolmie Avenue, and is intended to interface with improvements being undertaken by the Ministry of Transportation and Infrastructure north of this point.

City of Victoria is moving forward with the implementation of the first phase will require the detailed design and cost estimates of the following items:

1. *Removal of the existing sidewalk extension on the east side of Douglas Street north of Kings Road in front of the Times Colonist Building to allow realignment of the curb line to accommodate layover of three standard buses.* The specific changes pertaining to this modification are as follows:

   - A Hydro pole with streetlighting is located within the sidewalk extension and will require to be relocated to approximately 1.5m east into the public sidewalk. BC Hydro will be consulted for design and coordination of the relocation.
   - Gutter line is missing along majority of this area of Douglas Street. New curb and gutter will be constructed as part of the realignment of the curb. The new gutter line will be designed to meet existing pavement elevation.
   - A catch basin is located in front of the existing sidewalk extension and will require to be relocated to the new curb line. Using information gathered from existing record drawings and the proposed detailed survey, adequate grade will be confirmed for the catch basin lead extension and new rim elevation will be determined.

- A concrete bus bay will be designed to accommodate three 12.7m flyer hybrid buses with 3.0m separation. BC Transit Design Guidelines for Accessible Bus Stops will be referenced for the design of the bus bay to ensure adequate mobility and circulation for the users.
- Condition of the existing sidewalk and pavement along this area of Douglas Street is quite poor. Proposed concrete and asphalt cut lines will be discussed with the City of Victoria to confirm extent of the existing sidewalk and pavement removal.

2. *New pedestrian signal at Douglas Street and Pembroke Street intersection.* The existing pedestrian crossing at this location will be upgraded with an actuated pedestrian signal with two overhead poles and pedestrian push buttons. The signal will rest on flashing green. To accommodate the northbound and southbound bus lanes, curb bulbs on the northeast and northwest corners of this intersection will be removed and replaced with new pavement. Furthermore, the existing centre median will be removed to allow implementation of the proposed laning for the corridor. The following existing infrastructure and features will be impacted by the proposed reconstruction work at this location:

- A side inlet catch basin is located on the northeast corner of the intersection and will require to be relocated as part of the removal of the sidewalk extension. Profile of the new gutter line will confirm the location of the new catch basin. Using information gathered from existing record drawings and the proposed detailed survey, grade of the catch basin lead extension will be confirmed to ensure it meets minimize requirement. New rim elevation will be determined.

- A catch basin is also location on the northwest corner of the intersection. Similarly, the catch basin relocation will be confirmed based on the revised gutter line and grade of the catch basin lead will be verified.
- The existing centre median will be removed to accommodate the proposed laning. Irrigation system is located within the island and will require removal. The existing water service will be capped and abandoned. The City's Parks department will be consulted with regards to the removal of the existing planting.

3. *Consolidation of two existing southbound bus stops to a north of Discovery Street to optimize the transit service.* A 9m long pedestrian landing pad with a bus shelter will be constructed at the proposed bus stop. City ornamental streetlights and trees line this section of Douglas Street. The anticipated work association with this new bus stop installation will be as follows:

- Impact to existing trees and City's cluster lights will be confirmed using the detailed survey information.

- Existing garbage receptable may require to be relocated to accommodate the installation of the new bus shelter and better meet the mobility and circulation of the bus users.
- Impact to the existing mail box will be reviewed and Canada Post will be contacted if relocation is required..
- Incorporation of tactile warning strip will be considered to meet accessibility guidelines.
- Existing bus shelter from current bus stop south of Discovery Street will be relocated to this location. BC Transit Design Guidelines for Accessible Bus Stops will be referenced for the bus shelter installation to ensure adequate mobility and circulation for the users.

4. *Removal of the sidewalk extension on the north east corner of Douglas Street and Herald Street intersection.* This modification is required to accommodate the introduction of the northbound bus only lane at Fisgard Street. This intersection is signalized and the traffic controllers as well as a number of traffic signal junction boxes, electrical and streetlight junction boxes are location in the vicinity of the existing sidewalk extension. Anticipated work at this location are as follows:
   - Preliminary review of this location indicated that one existing traffic signal junction box will be affected by the realignment of the curb line and require relocation. Impact to other junction boxes will be confirmed as part of the detailed design process.
   - Existing street furniture, including garbage receptacle and bench, will require relocation to provide adequate setback from the new curb line.
   - A catch basin is located at the east end of the existing pedestrian ramp and will need to be considered in developing the new pedestrian ramp as part of the proposed curb realignment.

5. *Bus stop removal.* Two existing southbound bus stops on Douglas Street, locating south of Princess Street and south of Discovery Street, will be removed to optimize transit service. The existing shelter located at south of Discover Street will be removed. Condition of this shelter will be assessed to confirmed its suitability for reuse at the new bus stop location to be implemented north of Discovery Street.

6. *Corridor signing and road markings.* The design and construction of peak period reserved lane signage and reserved lane pavement markings are required in both the northbound and southbound direction between Fisgard Street and Hillside Avenue. Signage and pavement marking design will be developed based on the current Manuals of Uniform Traffic Control and Devices published by Transportation Association of Canada and BC Ministry of Transportation and Infrastructure.

In discussion with City of Victoria, it was confirmed that detailed geotechnical investigation will not be required for the proposed relocation and new pavement and curb and gutter construction. The City indicated that the City's supplementary standards for pavement structure and concrete will be applicable for the reconstruction works proposed as part of this project.

2. METHODOLOGY AND WORK PROGRAM

1. PROJECT INITIATION

Following notice to proceed from the City, we will meet with City staff to review and confirm the conceptual plans, project scope, work plan, schedule for deliverable sequencing, approved budget, administrative procedure, and to establish a protocol for project communications. The meeting also provides an opportunity to confirm project objectives, stakeholder sensitivities, and design influences. The project team will discuss and confirm the design criteria with City. In general, the following design guidelines and relevant best practices will be applied as appropriate to this assignment:

- City of Victoria Supplemental Specifications
- Manual of Master Construction Document Platinum Edition (MMCD)
- Manual Of Uniform Traffic Control Devices distributed by Transportation Association of Canada (TAC)
- Manual of Geometric Design Standards for Canadian Roads and Streets distributed by Transportation Association of Canada (TAC)
- MoTI BC Manual Of Uniform Traffic Control Devices

At the Project Initiation Meeting, we would also gather existing information from the City including the followings:

- City base plan in AutoCAD digital format
- Available record drawings for underground infrastructure in the project area
- Available record drawings of previous road upgrading work in the project area

2. LIAISON WITH PRIVATE UTILITIES

Between Hillside Road and Caledonia Avenue, overhead hydro poles with streetlighting are located along the east side of Douglas Street. Standard street lights and City of Victoria Cluster lights are located on the west side. South of Caledonia Ave, the utilities transition to underground. Relocation of a hydro pole with streetlighting will be required as part of the removal of existing sidewalk extension in front of the Times Colonist building.

Early and regular engagement with the impacted utilities agencies is key to ensure that relocations can be designed and constructed without jeopardizing the project completion schedule. We will contact representatives from each of the utility companies (Telus, Fortis BC and Shaw Cable Systems) and inform them of the proposed design. We will also confirm presence of any fibre optic line along this corridor.

3. EXISTING DATA REVIEW

The existing data provided by the City will be reviewed to determine requirement of additional survey to facilitate the detailed design work. The review will also confirm the conflicts associated with the proposed sidewalk reconstruction and curb realignment, relocation of bus shelters as well as the proposed pedestrian signal installation.

4. DETAILED FIELD SURVEY

From the review of the existing information, additional detailed survey required to supplement the City's data will be identified. We anticipate that the following areas will require additional survey:

Between Hillside Avenue and Kings Road

- Elevations of existing road centreline, gutter line, top of curb and back of sidewalk will be collected to support the design of the sidewalk removal and new curb alignment
- Location of existing power poles, streetscape, and signs.
- Location of existing streetlights, electrical junction boxes, streetscape and signage;
- Location of existing catch basin, manholes, water valves, and hydrant;
- Inverts of pipes at existing manhole and catch basin that are affected by the proposed reconstruction work will be confirmed;
- Confirmation of existing pavement markings

Between Kings Road and Pembroke Street

- Confirmation of existing pavement marking

Intersection of Pembroke Street

- Elevations of existing road centreline, gutter line, top of curb and back of sidewalk will be collected to support the design of the realignment of curb line and reconstruction of sidewalk at the north side of the intersection;
- Location and elevation of the centre median;
- Location of existing streetlights and electrical junction boxes, streetscape and signs;
- Location of existing catch basin, manholes, water valves, and hydrant;
- Inverts of pipes at existing manhole and catch basin that are affected by the proposed reconstruction work will be confirmed;
- Confirmation of existing pavement markings.
-

Between Pembroke Street and Fisgard Street

- Confirmation of existing pavement marking;
- Location of existing streetlights, trees and street furnishing on the west side of Douglas Street at the proposed new bus stop north of Discovery Street.

Intersection of Herald Street

- Elevations of existing road centreline, gutter line, top of curb and back of sidewalk will be collected to support the design of the realignment of curb line and reconstruction of sidewalk at the northeast corner of the intersection;
- Location of existing traffic light pole and controller box, electrical junction boxes, street furniture, and signs.
- Location of existing catch basin, manholes, water valves, and hydrant;
- Inverts of pipes at existing manhole and catch basin that are affected by the proposed reconstruction work will be confirmed;
- Confirmation of existing pavement markings

The detailed survey will be carried out using electronic total station connected to a digital data recorder. The collected information will be coded in accordance with the City of Victoria's Standards and tied into the existing integrated survey monuments in the project area. Where practical, the survey will be referenced to the legal property monuments. The survey data will be compatible with AutoCAD minimum 2012 version.

5. DETAILED DESIGN

Detailed plan and profile drawings will be developed for the proposed curb and sidewalk reconstruction areas. Existing centreline, proposed gutter line and top of curb, as well as existing back of sidewalk will be shown on the profile drawings. Spot elevations of proposed gutter lines along the curb return will be noted on the plan drawings. All required infrastructure relocations will be detailed. Location, extension of pipes and rim elevations, will be clearly denoted on the drawings. Pedestrian sidewalk ramp as per MMCD standards will be incorporated in the detailed design.

Electrical design will be completed for the proposed streetlight relocation. Electrical design of the pedestrian actual traffic signal at the Pembroke Street intersection will also be developed. Lighting calculations for the intersection will be completed. Pole capacity will be calculated using MoTI pole capacity program for loading. MMCD standards will be used for the design preparation. It is assume that signal timings/programming will be provided by the City.

Design of the proposed bus stop relocation will be detailed on a plan drawing. BC Transit Design Guidelines for Accessible Bus Stops will be used as reference for the proposed bus stop relocation design. Consultation will be made with BC Transit to confirm the design of the shelter relocation as well as accessibility requirements. Surface and circulation considerations at the bus stop, as well as bus stop signage requirement will also be verified with Transit.

A detailed pavement marking and signage plan will be developed for the Douglas Street corridor from Hillside Road to Fisgard Street. Lane widths, details for placement of signage and pavement marking will be shown on this drawing. A schedule of proposed signs will also be included.

Design drawings will be prepared using the MMCD Platinum Edition as well as the City of Victoria Supplementary Specifications. Project specific construction details will be included in the drawings.

6. 90% DRAWING SUBMISSION

In order to meet the project schedule, 90% detailed design drawings will be prepared and submitted in following four separate stages to enable construction work be carried out concurrently with the design.

- East side of Douglas/north of Kings Road
- Douglas/Pembroke
- Douglas/Herald
- Corridor Signing/road marking/bus zone plan

Two set of printed drawings and digital copy in AutoCAD 2012 version or later will be submitted to the City for review and comment. The review will allow various City departments an opportunity to comment on the design and highlight any concerns. A review meeting will be held with the City project team at each stage of the submission to gather City's comments and confirm the design.

7. COST ESTIMATE

Based on the approved design, MMCD and City of Victoria construction specifications, a Class "B" construction cost estimate will be prepared at each stage. We understand that the proposed construction of this assignment will be undertaken by the City's crew. We will obtain from the City any available current unit rates to develop a Class "D" construction cost estimate. A 10% contingency will be included.

8. FINAL "ISSUE FOR TENDER" DRAWING SUBMISSION

After the review meeting with the City on each 90% design submission, the City's comments will be addressed and incorporate into the design. Final design drawings including general construction notes and construction details specific to the design will be prepared. Final "Issued for Tender" drawing package will be submitted to the City. The final drawings will be signed and sealed by the engineer of record. Two set in hardcopy and in digital AutoCAD 2012 format will be provide to the City.

3. PROJECT TEAM

Urban has assembled a talented and experienced project team with sufficient available capacity to commit the necessary effort and attention to this assignment over the entire project schedule. The team composition is tailored specifically to the project requirements. The following section outlines the key individuals and subconsultant proposed for this assignment. All team members are committed to their roles for the duration of this assignment. All engineers are currently registered in good standing with APEGBC.

ELIZABETH LAU, P.ENG. | PROJECT MANAGER | URBAN SYSTEMS LTD.

Elizabeth is a Senior Engineer with over 25 years of experience in the design and delivery of roadway and municipal infrastructure projects and has been responsible for project management in a variety of multi-disciplinary infrastructure design and construction projects. Her past work experience include engineering consulting, construction contracting, as well as project engineer with municipal and provincial governments. With her broad background, she has gained a comprehensive understanding of various

practices of municipal engineering. She joined Urban Systems in January 2013 and her focus in the Urban Systems Victoria office is to provide engineering services to local municipalities and First Nations on Vancouver Island, supporting projects with Provincial Government and Regional Districts, and offering leadership in design and construction projects.

Elizabeth has extensive project experience on Vancouver Island and has been providing engineering consulting service for municipalities, CRD, First Nations, and developers in the Capital Region and on Vancouver Island for the past 15 years. She was involved with the City's sidewalk construction projects in the past. With her extensive local knowledge, she fully understands the priorities and requirements of the local municipalities, and sensitive to the current local issues that can impact project success. Elizabeth has has extensive experience preparing and administering construction contracts in Master Municipal Construction Documents (MMCD) format. Elizabeth is adept at providing overall project management, coordinating multi-disciplined design teams, client and stakeholder liaison, identifying project constraints and developing strategies to minimize risks.

Roles and Responsibilities for Douglass Street Transit Priority Design:

As the Project Lead, Elizabeth's roles and responsibilities will include:

- Primary liaison with City of Victoria Project Manager;
- Ensure compliance with overall project objectives and schedule;
- Provide technical leadership for the project
- Liaise private utility agencies; and
- Critically review all deliverables prior to submission.

JOSH WORKMAN, EIT. | TRANSPORTATION ENGINEER | URBAN SYSTEMS LTD.

Josh is a Transportation Engineer with 5 years of experience specializing in urban street design with an emphasis on active modes. He has experience in multi-modal street design, micro-simulation, detailed cost estimation, and safety analysis. Josh was involved in the Admirals Road Transportation Study and has a good understanding of the objectives and design constraints of the projects. Josh was also involved in the Saanich Shelbourne Area Corridor Plan and the current Victoria Transit Improvement Project. These projects offer him clear understanding of the transportation issues in the Capital Region.

Roles and Responsibilities for Douglass Street Transit Priority Design:

- With his involvement in the conceptual design of the Douglas Street Transit Priority Corridor, Josh will provide valuable background information to the design process.
- Preparing the pavement marking and signage plan.

RUBEN MOOTOOSAMY | SENIOR DESIGN TECHNOLOGIST | URBAN SYSTEMS LTD.

Ruben is a Senior Design Technologist with extensive experience in urban road and highway design. Much of his experience relates to upgrading and/or rehabilitation of existing highways and roadways including assignments for MOTI and several lower mainland municipalities. Recent projects have included Hwy 15 Border Crossing, Highway 17/McTavish Road Interchange, Marine Drive/Lions Gate Transit Priority Project, 16th Avenue roundabout at UBC, and the Hwy 17 / Beacon Avenue Interchange Study.

For each of the assignments noted above, Ruben was responsible for assembling base plan information, developing the roadway and utility relocation designs using AutoCAD, Civil 3D and/or CAiCE design software, overseeing the work of junior design staff, overall drawing quality control, liaising with other design leads, and quantity takeoffs.

Roles and Responsibilities for Douglass Street Transit Priority Design:

- Assembling base plans;
- Developing curb realignment;
- Identifying utility impacts and relocation requirements;
- Quantity take-offs for cost estimates; and
- Preparing construction cost estimate.

PETER BOUDREAU ENGINEERING | ELECTRICAL SUBCONSULTANT

Peter Boudreau Engineering locating in Victoria specializes in electrical design services for large and small scale MOTI and municipal transportation projects, and has significant roadway lighting and signal design experience on Vancouver Island. The principles of PBX were formerly with PBA Engineering Ltd. and had collaborated with Urban Systems on numerous projects including McTavish Road Interchange. For this assignment, Peter Boudreau Engineering will be responsible for design of pedestrian signal and City of Victoria ornamental streetlight relocation.

4. SCHEDULE

The City has specified that all construction of the Phase 1 Douglas Street Transit Priority Corridor must be completed by March 31, 2014. The City has identified component of the overall project to be submitted separately to expedite the construction. We anticipate a 10-week project schedule to complete the proposed scope of work. Our schedule is based on receiving a notice to proceed from the City by January 6, 2014. One week allowance has been incorporated in the schedule for City's review of the 90% submission. Although the project has a relatively short timeframe, we have designed our work plan for various tasks and activities to be carried out concurrently to minimize the duration for completing this study and meeting the City's schedule. All our team members have the resource and capacity to meet this schedule. We are fully committed to working diligently to assist the City with achieving the goals of

this assignment successfully. We will available to commence with the survey work immediately after the New Year.

Table 1 outlines the proposed schedule for the project. We wish to emphasize that this schedule is flexible and may be updated following the project initiation meeting to ensure that it meets the need of the City. Any proposed or consequential changes to the project schedule or individual milestone dates will be reviewed and confirmed with the City.

5. FEE ESTIMATE

Based on our understanding of the project scope and schedule, and on the project budget limitations, we propose to complete this assignment to City's satisfaction for an ***Upset Fee of $29,720*** plus applicable taxes.

A detailed fee derivation based on the activities described in our Methodology is shown in ***Table 2.*** This fee derivation identifies the hourly charge-out rates and time allocations for all Urban Systems personnel involved in delivering the assignment as well as disbursements and all sub-consultant costs. The identified charge-out rates are inclusive of payroll burden, business overhead and potential profit. Charge out and disbursement rates for the electrical subconsultant Peter Boudreau Engineering are attached to this letter.

The above upset fee is based on the assumption that GST is additional to all fees at time of invoicing. .Urban Systems' internal disbursements will be charged at a flat 7% of our labour expenses incurred. Payment is due upon receipt within thirty (30) days. Invoicing will be on a monthly basis in accordance with the City's requirements and will include a budget tracking summary and a statement of work completed during the period. Hourly rates are exclusive of disbursement charges and applicable taxes.

Table 1

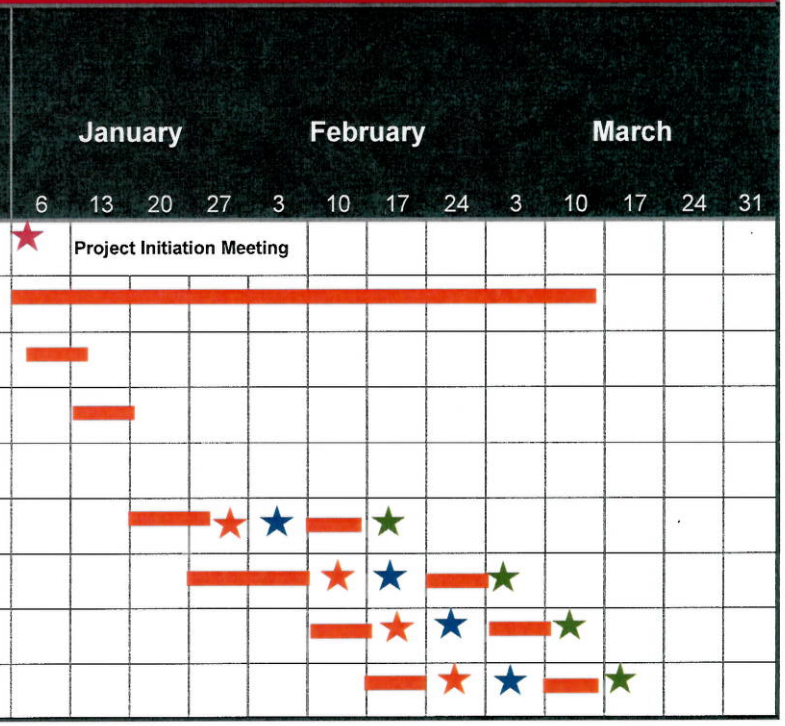
URBAN systems

PROPOSED SCHEDULE

City of Victoria

Douglas Street Transit Priority Corridor Phase 1

Detailed Design



1	Project Initiation
2	Liaison with Private Utility Companies
3	Existing Data Review
4	Detailed Field Survey
5	Detailed Design
.1	East Side of Douglas Street, North of Kings Road
.2	Douglas Street and Pembroke Street
.3	Douglas Street and Herald Street
.4	Overall Plan for Pavement Marking and Signage and Bus Zone Changes

★ *90% Submission*

★ *90 % Review Meeting*

★ *Final Submission*

TABLE 2

PROPOSED FEE SCHEDULE

URBAN systems

City of Victoria Douglas Street Transit Priority Corridor Phase Detailed Design		USL Personnel & Hourly Rate							Subconsultants			Totals
		Elizabeth Lau $185	Josh Workman $120	R. Mootoosamy $130	Graphic/ Admin. $90	Total Fees	Disbursements	Total Fees and Disbursements	Survey	Electrical	Subconsultant Fees Total	
1	Project Initiation	4			2	$ 920	$ 70	$ 990			$ -	$ 990
2	Liaison with Private Utility Companies	2	4			$ 850	$ 70	$ 920			$ -	$ 920
3	Existing Data Review	2	2			$ 610	$ 50	$ 660			$ -	$ 660
4	Detailed Field Survey	2		10		$ 1,670	$ 130	$ 1,800	$2,220		$ 2,220	$ 4,020
5	90% Detailed Design	16	4	100		$ 16,440	$ 1,320	$ 17,760		$9,750	$ 9,750	$ 27,510
6	90% Design Review Meeting	6			1	$ 1,200	$ 100	$ 1,300			$ -	$ 1,300
7	Cost Estimate	2	2	4		$ 1,130	$ 90	$ 1,220			$ -	$ 1,220
8	Final Design Submission	8		10	1	$ 2,870	$ 230	$ 3,100			$ -	$ 3,100
	TOTAL HOURS	42	12	124	4							
	TOTAL FEES (excluding GST)	$7,770	$1,440	$16,120	$360	$25,690	$2,060	$ 27,750	$2,220	$9,750	$11,970	$ 39,720
	GST	$389	$72	$806	$18	$1,285	$247	$ 1,532	$266	$1,170	$1,436	$ 4,766
	TOTAL (INCLUDING GST)	$8,159	$1,512	$16,926	$378	$26,975	$2,307	$ 29,282	$2,486	$10,920	$13,406	$ 44,486

We thank you for the opportunity to continue our conceptual design work on this project and provide a work plan and fee estimate proposal to complete the required detailed design of the Douglas Street Transit Priority Corridor Phase 1 works. We look forward to working with the City on this assignment. I am available to discuss our work plan and respond to any questions you have on our submission.

Sincerely,

URBAN SYSTEMS LTD.

Elizabeth Lau, P.Eng.,
Senior Engineer

T: 250.220.7060

Encl.

Douglas Street Litre Proposal FINAL

ACTIVITY	CODE	HOURLY RATE
SENIOR DESIGN ENGINEER	SDE	$150
DESIGN ENGINEER	DE	$135
SENIOR DESIGNER	SDN	$130
CAD TECHNICIAN	CAD	$80
PROJECT ADMINISTRATOR	PA	$75

PROJECT DISBURSEMENTS

PLOTS	MEDIA TYPE	BLACK AND WHITE	COLOUR
A1 to E SIZE	BOND	$3.50	$4.50
A1 to E SIZE	VELLUM	$11.00	$12.50
A1 to E SIZE	MYLAR	$22.00	$24.00
A3 or 11" x 17"	MYLAR	$11.00	$12.50
A3 or 11" x 17"	BOND	$2.00	$4.00
A4 - 8 ½" x 11"	BOND	$1.00	$2.00
PHOTOCOPIES			
A3 or 11" x 17"	BOND	$0.25	$1.50
A4 - 8 ½" x 11"	BOND	$0.15	$0.75

LAMINATES		
1	A3 or 11" x 17"	$12.00
2	A4 - 8 ½" x 11"	$7.50
3	**BINDING**	
4	Cerlox Binding	$5.00
5	Binders c/w Tabs	$15.00
6	**DESIGN FOLDER**	
7	Electrical	$40.00
8	Traffic	$50.00

9 TRAVEL	10	11
MILEAGE	per KM	$0.60
MEALS – per Diem	Breakfast	$14
	Lunch	$19
	Dinner	$23

Accommodation, freight and other associated project expenses will be charged at cost plus 15%.

Applicable taxes not included.