McAllister Streetscape Design Options

RECOMMENDATION:

That Committee of Council direct staff to proceed with detailed design for option two, of the McAllister Avenue Streetscape.

PREVIOUS COUNCIL/COMMITTEE ACTION

Committee of Council has authorize staff to proceed with developing a streetscape design and costing for McAllister Avenue, including undergrounding of the current overhead wiring as part of the 2020-2021 capital works budget approval.

REPORT SUMMARY

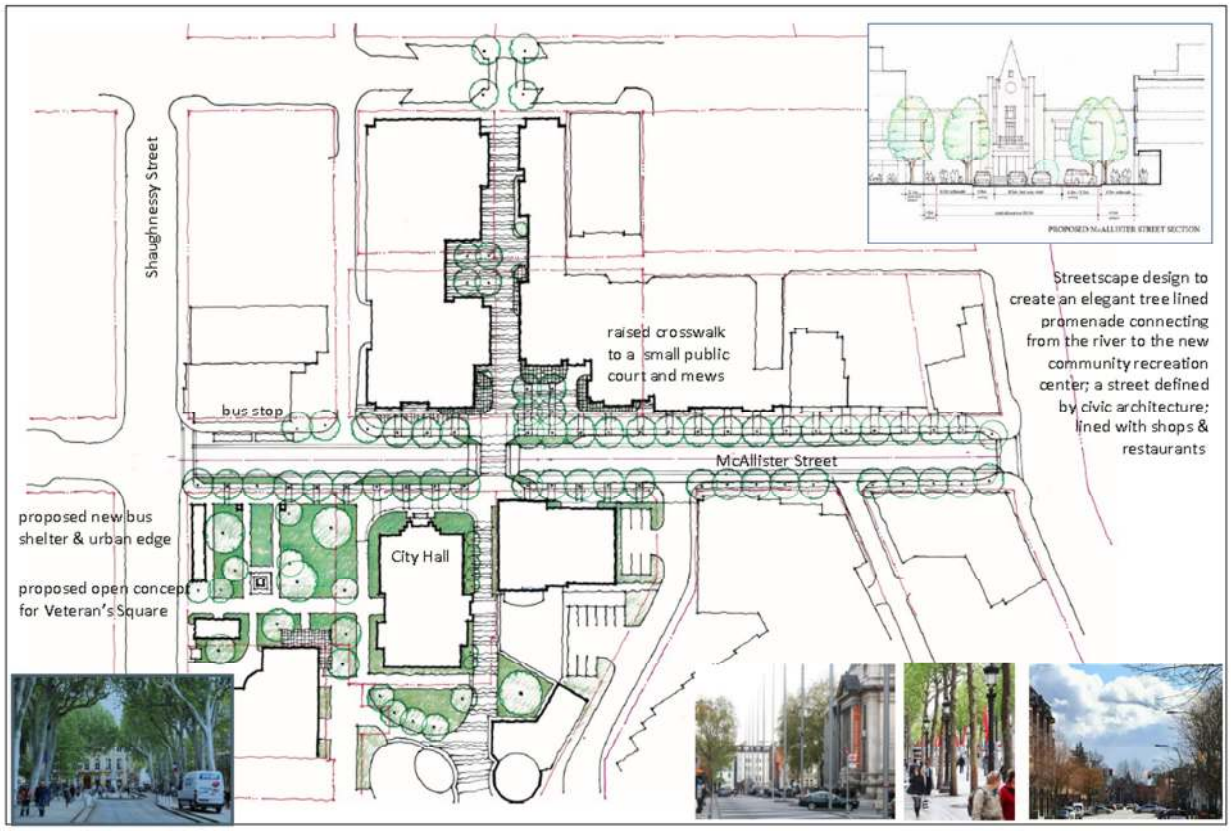
Technical evaluation and design concepts are now complete for the McAllister Avenue Streetscape Design project. This included traffic analysis of the four intersections in the study area, and current and future performance of the road network system. The four design options included one-way and two-way traffic flow options, a mix of parking options, and a range of pedestrian and boulevard design widths. Overall the four design options were determined to have limited impact on current and future traffic volumes and road/intersection performance. The report recommends design option two, which provides for the largest pedestrian and boulevard area, while maintaining a large portion of on-street parking.

BACKGROUND

The streetscape concept for McAllister Avenue is envisaged as a tree-lined promenade as shown on the sketch below. Further, it will be a main pedestrian connection linking the Port Coquitlam Community Centre with the heart of the City's downtown, provide flexibility for events and commercial encroachment to promote lively animation of the corridor.

To achieve this vision, the City has planned to reconstruct McAllister Avenue, including undergrounding the current overhead wiring, widening the pedestrian corridors, and planting street trees along the entire corridor.

Sketch 1

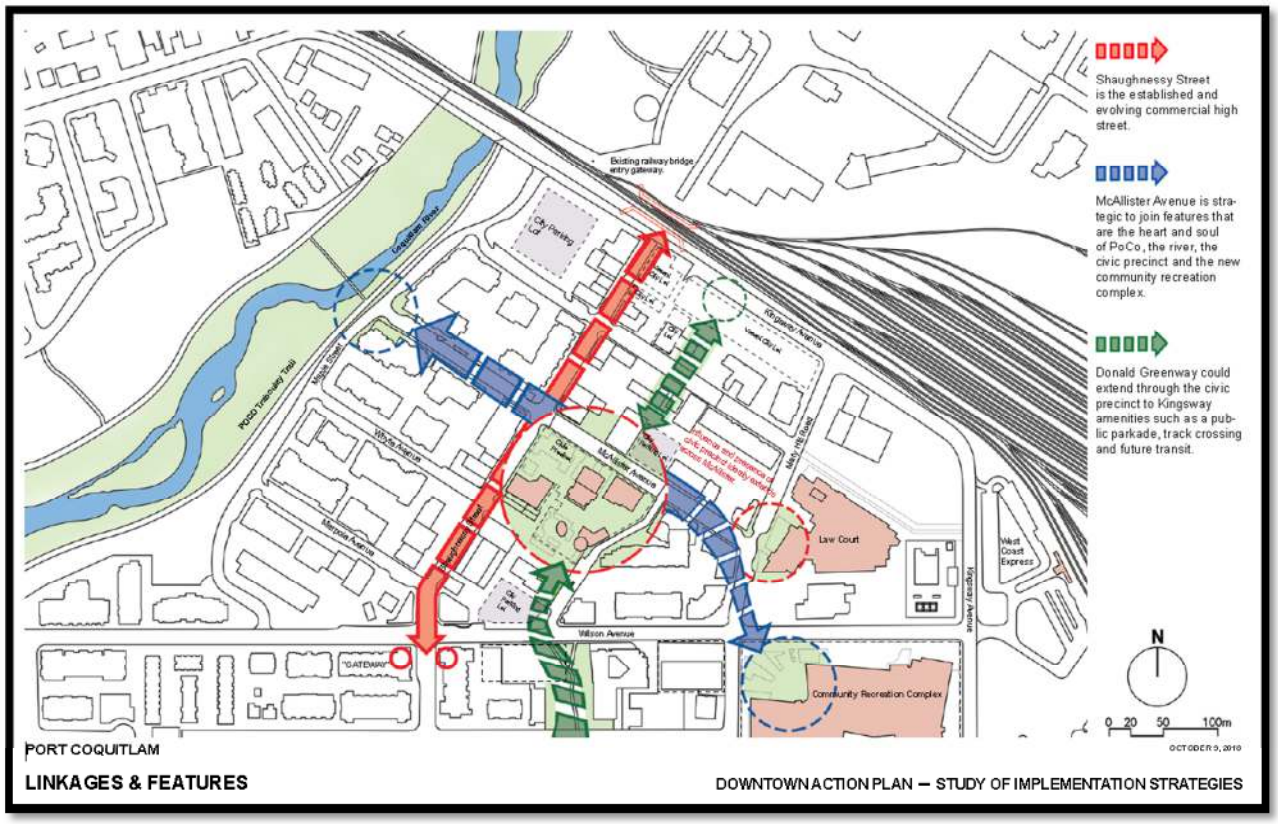


Furthermore, the downtown action plan contemplated one-way traffic on McAllister Ave in order to repurpose road right-of-way to ancillary uses such as wider pedestrian areas, multi-use paths, street trees and café spaces.

Current Conditions:

McAllister Avenue is a two-way street fronting Veterans' Park, provides connections to PoCo Traboulay trail, the PCCC, the future extension of the Donald Pathway, and is anchored by City Hall and the Port Coquitlam Provincial Court (illustrated in Figure 1 below). Currently, the street provides parking (58 total spaces) on the north (angled) and south (parallel) sides, and is comprised of predominantly ground floor commercial developments from Shaughnessy Street to Mary Hill Road.

Figure 1



DISCUSSION

The following section provides analysis of four streetscape design options for McAllister Ave. and considers pedestrian improvement options along the Shaughnessy St. corridor.

Streetscape Designs

To ensure maximum flexibility for space utilization, all design options incorporate a level cross section without curb and gutter (shared street). This is achieved by sinking drainage infrastructure below the road surface and delineating travel lanes with material variations and physical barriers such as concrete banding and removable bollards or planters.

This means that the entire road cross section is available for special event planning and provides greater flexibility of use. In addition, all options include setting new developments back from the property line and incorporating alcoves to promote patio and pedestrian uses.

McAllister Streetscape Design Options

To assist with visualizing the shared street concept, staff have included renderings from a similar shared street project in Chicago below.

https://www.asce.org/magazine/20160802-chicago-builds-new-type-of-shared-street/

Furthermore all streetscape designs will incorporate:

- Multi-use pathway on south side (3m), pedestrian area on the north side (varying width)
- Raised mid-block pedestrian crossing and new public plaza on north side of the street
- Street trees, bollards, planting pockets and furnishings in the boulevards spaces

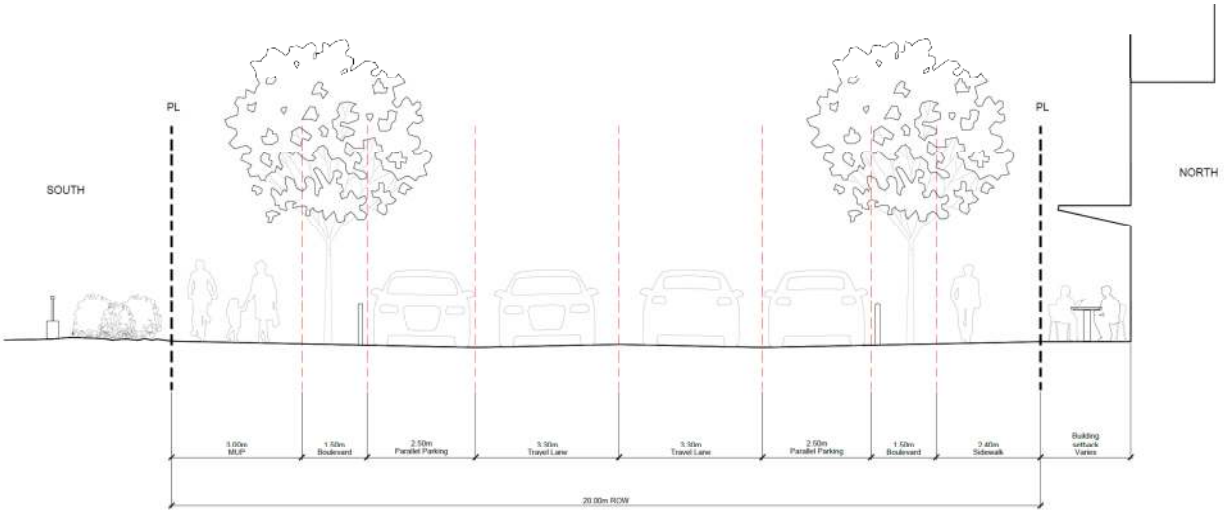
McAllister Streetscape Design Options

Design Option 1

- Two way traffic
- Parallel parking on both sides
- Parking spaces provided: 36

Option 1 – Rendering

Option 1 – Cross Section

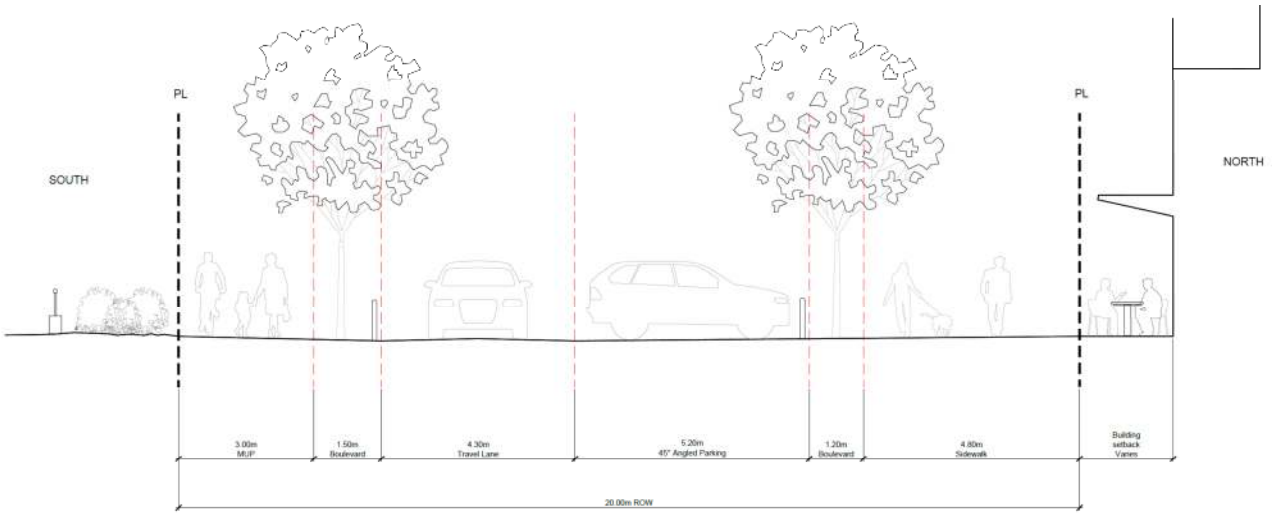


Design Option 2

- One way traffic (east bound)
- Angled parking on the north side; no parking on the south side
- Parking spaces provided: 42
- Potential for a double row of street trees within the North boulevard

Option 2 - Rendering

Option 2 – Cross Section

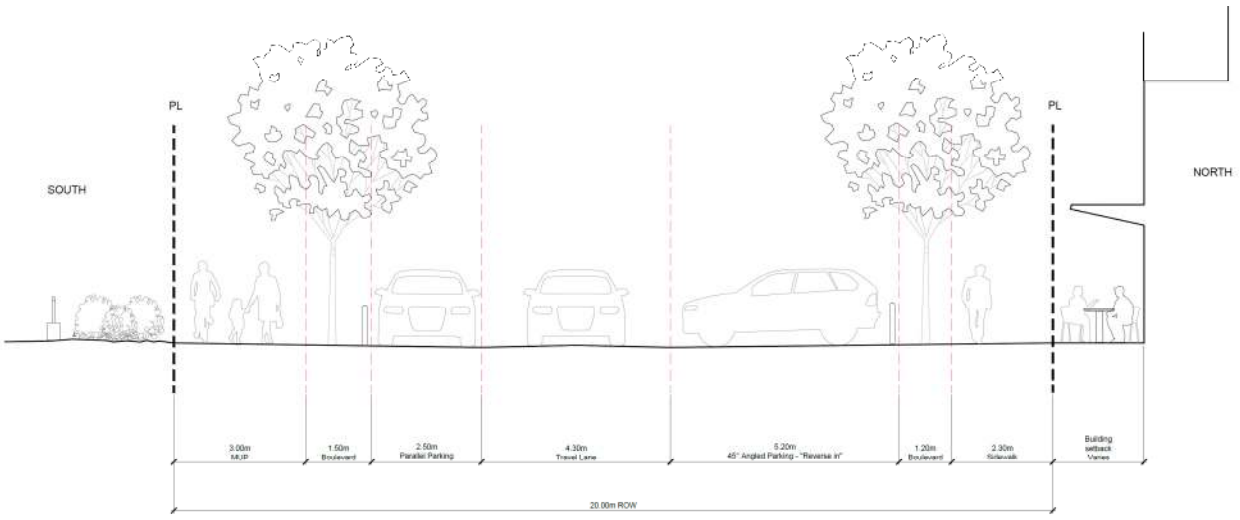


Design Option 3

- One way traffic (east bound)
- Angled parking on the north side, parallel parking south side
- Parking spaces provided: 56

Option 3 - Rendering

Option 3 – Cross Section

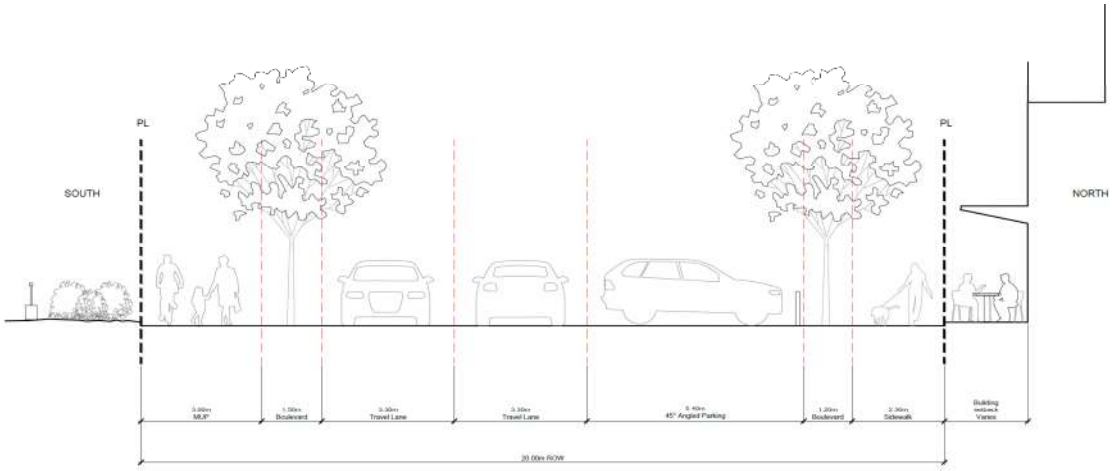


Design Option 4

- Two way traffic
- One sided angled parking on the north side between Shaughnessy Street and Donald Street
- Parking spaces provided – 33
- Parallel parking on the north and south side from Donald Street to Mary Hill Road
- Street trees, bollards and furnishings in boulevard spaces

Option 4 - Rendering

Option 4 – Cross Section



McAllister Streetscape Design Options

Below is a table of design specifics for comparison purposes:

	Design Option 1	Design Option 2	Design Option 3	Design Option 4
Traffic Flow	Two-way	One-way (EB)	One-way (EB)	Two-way
Total Pedestrian and Blvd Width	3.9m (N) & 1.5m (S)	6.0m(N) & 1.5m (S)	3.5m(N) & 1.5m (S)	3.6m (N) & 1.5m (S)
Building Setbacks	1.8m to 2.4m	1.8m to 2.4m	1.8m to 2.4m	1.8m to 2.4m
Multi Use Path on South Side	3.0m	3.0m	3.0m	3.0m
Parking	Parallel both sides	Front angle (north side; no parking south side.	Parallel parking on south side; Back in angled parking on north side	West of Donald: Front angle parking on north side; No parking on south side East of Donald: Parallel parking north side; Parallel parking south side
Parking Stalls	36 (20 fewer)	42 (14 fewer)	56 (2 fewer)	27 (29 fewer)
Benefits	-consistent with current streetscape designs	-large flexible width on north side (6.0m)	-negligible loss in parking	-produces linear park near Donald St. as parking is transitioned
Challenges	-limited café space on north side	-impacts TransLink Bus route 175	-back in angled parking -impacts TransLink Bus route 175	-inconsistent cross section between Shaughnessy St and Mary Hill Rd

Through the traffic analysis (attachment 2) it was determined that restricting traffic to one-way has minimal impact to the surrounding road network and in consultation with the City's land and development facilitator, understand that one-way traffic will have minimal impacts on any adjacent commercial development. Therefore, staff is recommending Option 2 as the preferred design option as it provides greater flexibility for the northern pedestrian area and allows for programming of this space with enhanced landscaping and street furniture.

In the Downtown Action Plan, Elgin Avenue was also envisioned as a one-way street to address traffic concerns with left hand turns. However, this has been addressed by restricting left turns onto Shaughnessy Street, and the decision on McAllister does not influence or require any changes on Elgin Avenue.

One-way traffic on McAllister allows a narrower travel lane that enhances multi-modal transportation in the downtown. There is also a relationship to City Hall, Veterans' Park and Leigh Square that will maximize downtown animation. Events and activities can flow into the public realm on McAllister and future restaurant, patios and nearby retail. Additionally, this option still provides 42 on-street parking spaces.

However, should Council wish to maintain the two-way traffic flow, staff supports option 1 as an alternative design approach. Option 1 retains the existing traffic flow while providing an enhanced pedestrian area of 3.9 m. This is larger than a typical sidewalk width (1.5m) and provides a level of flexibility for animating the space. Design option 1 maintains 36 parking spaces by providing parallel parking on both sides of the street.

Option 3 and 4 were generally not supported by staff. Option 3 while maintaining the current level of parking, also requires back in angled parking that is a significant departure for the City. While this option provides one way traffic it does not provide the enhanced sidewalk area.

Option 4 provides the fewest on-street parking spaces and was discounted for this reason.

Shaughnessy Street Pedestrian Safety Improvements

As part of the traffic analysis, pedestrian safety improvements along Shaughnessy St. at Elgin Ave. and Whyte Ave. were considered.

Elgin Avenue:

To further improve intersection performance at the Shaughnessy Street and Elgin Avenue intersection, the installation of a traffic signal was considered. Signal warrant analysis was conducted and the results showed that a full traffic signal is warranted in 2019 and 2029. The peak hour traffic operation analysis indicated that during the PM peak, the average delay experienced by westbound right-turn vehicles was significantly decreased, while the northbound queue might spill over further upstream to McAllister Avenue. Overall, the installation of a traffic signal would be beneficial during the PM peak to accommodate right hand turns from Elgin.

After further consideration, staff are not recommending signalization as the infrastructure would have minimal value given the majority of movements are prohibited at this location. Pedestrian visibility at Elgin is good, with well-defined curb extensions. Alternatively, staff recommend a rectangular rapid flashing beacon be installed and the interim median treatment be replaced by removable planting beds (or similar) to further enhance the character of Shaughnessy Street.

Whyte Avenue:

After reviewing this crossing it was determined that the sightlines at this heavily used crossing require improvement to meet industry standards. Accordingly, the traffic consultant has recommended the following list of potential improvements ranked in order of most cost effective to least.

Table 5 – Shaughnessy St. / Whyte Ave Pedestrian Crossing Improvements

Option	Improvement	Benefit	Cost
1	Remove parking stalls adjacent to crossings	Improved sightlines	$500
2	Construct curb extensions (NW & SW corners)	Decrease pedestrian crossing time while improving sightlines	$10,000
3	Install a Rectangular Rapid Flashing Beacon at the Crosswalk	Improved driver response; same impact to vehicle traffic as current condition	$75,000
4	Install a Pedestrian controlled signalized crossing	Decrease pedestrian conflict; opportunity to align timing with corridor to improve intersection performance	$200,000

A rectangular rapid flashing beacon would not impact traffic flow over current conditions, however would increase driver response and provide a safer crossing opportunity for pedestrians. Whereas, a pedestrian controlled signal would be a decreased service level for pedestrians as their crossing ability would be restricted to align with corridor signal timing. A pedestrian controlled signal does provide the highest level of protection and provides opportunities to align the signal timing with other intersections along the corridor for improved traffic flow.

Accordingly, a decision must be made on which mode of traffic to prioritize at this location. Considering a guiding principle of the Downtown Action plan was to ensure that the Downtown is walkable, staff recommend the construction of curb extensions at the north west corner and the south west corner and installation of a rectangular rapid flashing beacon. This will avoid delays to pedestrians and improve walkability.

FINANCIAL IMPLICATIONS

The estimated costs for the project are provided below. It should be noted that these are class C estimates which are prepared with limited site information and are based on some assumed site conditions (typically +/- 25 to 40% of the actual project costs). Class C estimates are used for

project planning and following approval to proceed with detailed design and further investigations and more accurate estimates are prepared.

Funding for McAllister Avenue streetscape improvements is included in the Capital Works budget for design in 2020 and construction in 2021.

	Cost range	Comments
Surface works	$2.5M to $2.9M	The estimate ranges provides for a variety of design options including: pavement, tile, landscaping design, etc.
Underground Utilities	$0.625M	Includes BC Hydro
Contingency (30%)	$0.85M to $0.95M	The contingency ranges based on the estimated costs of the final design options
Total	**$3.975M to $4.475M**	

OPTIONS **(✓= Staff Recommendation)**

	#	Description
✓	1	Approve proceeding to detail design of option 2.
	2	Approve an alternative desgin option.
	3	Refer the design concepts back to staff for further analysis.

ATTACHMENTS

Att#1: Design Options

Att#2: Traffic Analysis

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