

Appendix D-1  
Description of the Short-Term Alternatives



Project No. **9309**

Phase **280**

Date **June 2, 2015**

From **Chris Sidlar (LEA)**

To **Edward Presta / City of Toronto**

C.C. **Terry Wallace (LEA)**

Subject **Description of the Short-Term Alternatives**

This memorandum has been prepared to outline in greater detail the development of the short-term alternatives in the St. Clair Avenue West at the Georgetown GO Underpass Transportation Infrastructure Planning Study.

## 1. Development of the Alternatives

### 1.1 *Development of the Short-Term Alternatives*

#### 1.1.1 Do Nothing

As a baseline condition from which to compare and evaluate all other short-term alternatives, a ‘do-nothing’ scenario may be considered. Within the ‘do-nothing’ scenario, no active changes or interventions to the capacity or configuration of the transportation system are proposed. The benefits of this alternative include the absence of impacts to the existing buildings or city infrastructure that may be evident in other alternatives. There is also an absence of construction and all financial costs related to it. However, this alternative does not address any of the existing transportation issues and does not provide opportunities to support future developments. The study area is expected to continue to operate with constraints within its network due to the growth of travel demand of the network. Mobility through the study area is not improved with this alternative since the structure of the transportation network is unchanged within the study area.

#### 1.1.2 Option 1: Southbound Left-Turn from Weston Directed into TTC R.O.W.

This option involves directing southbound left-turn traffic movement from Weston Road onto the streetcar right-of-way east of the Keele Street and St. Clair Avenue West intersection. This will result in vehicles sharing the streetcar ROW east of Keele Street for a limited length. To do this, the barrier curb separating the streetcar ROW and the adjacent lane has to be removed, allowing vehicles to share the use of the eastbound streetcar lane east of Keele Street (**Figure 1-1**). After the underpass, the through lane shared with the streetcar ROW transitions back into current lane configuration of a left turn lane, a through lane and a right-through lane at the intersection of Old Weston Road and St. Clair Avenue West.

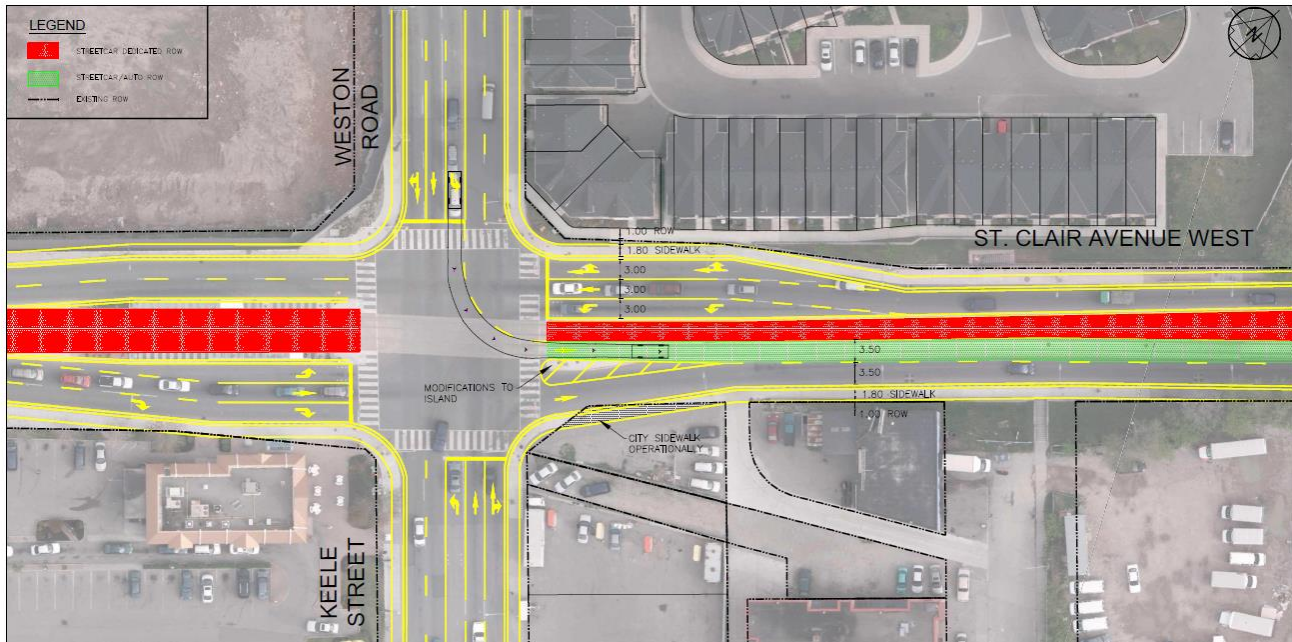


Figure 1-1: Option 1 - Southbound Lefts from Weston Directed into TTC ROW

### 1.1.3 Option 2: Eastbound Traffic Allowed to Shift into TTC ROW East of Keele

This option allows for eastbound traffic along St. Clair Avenue West to transition into the streetcar ROW, turning it into a shared lane. Much like **Option 1**, this option requires the removal of the barrier curb separating the streetcar ROW and the adjacent lane, allowing for eastbound vehicles to share this lane east of Keele Street after the island (**Figure 1-2**). It also requires that the curb and sidewalk on the south side of St. Clair Avenue West at the intersection be re-aligned to match the eastbound lane approaching from St. Clair Avenue, west of the intersection. After the underpass, the through lane shared with the streetcar ROW transitions back into current lane configuration of a left turn lane, a through lane and a right-through lane at the intersection of Old Weston Road and St. Clair Avenue West.

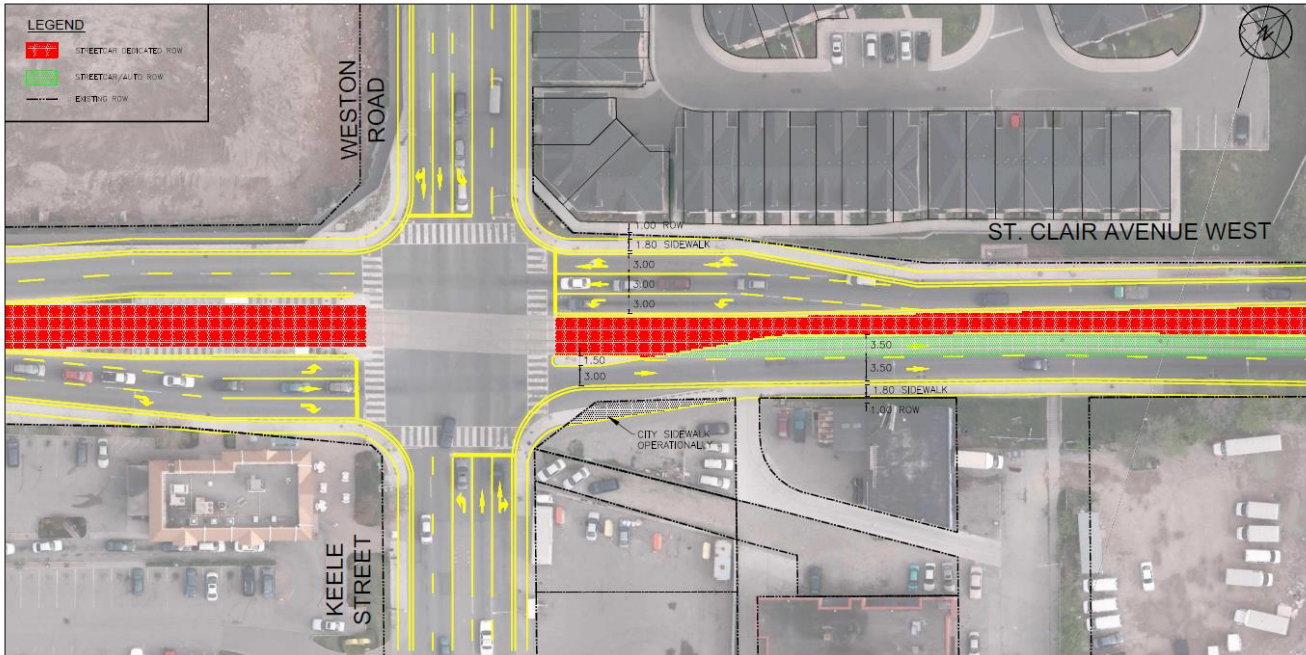


Figure 1-2: Option 2 - Eastbound Traffic Allowed to Shift into TTC ROW Past Island East of Keele

### 1.1.4 Option 3A: Through and Right-Through Lanes at Keele; Left-Through Lane Directed into TTC ROW East of Keele

This option incorporates lane configuration changes for eastbound traffic west of the intersection of Keele and St. Clair. By changing the current eastbound right lane into an eastbound through-right, this option allows for more vehicles to advance through the intersection. The left through lane is directed into the streetcar ROW, creating a shared lane for eastbound traffic east of Keele Street (**Figure 1-3**). It requires the removal of the barrier curb separating the existing eastbound lane and the streetcar ROW and also modifications to the island.

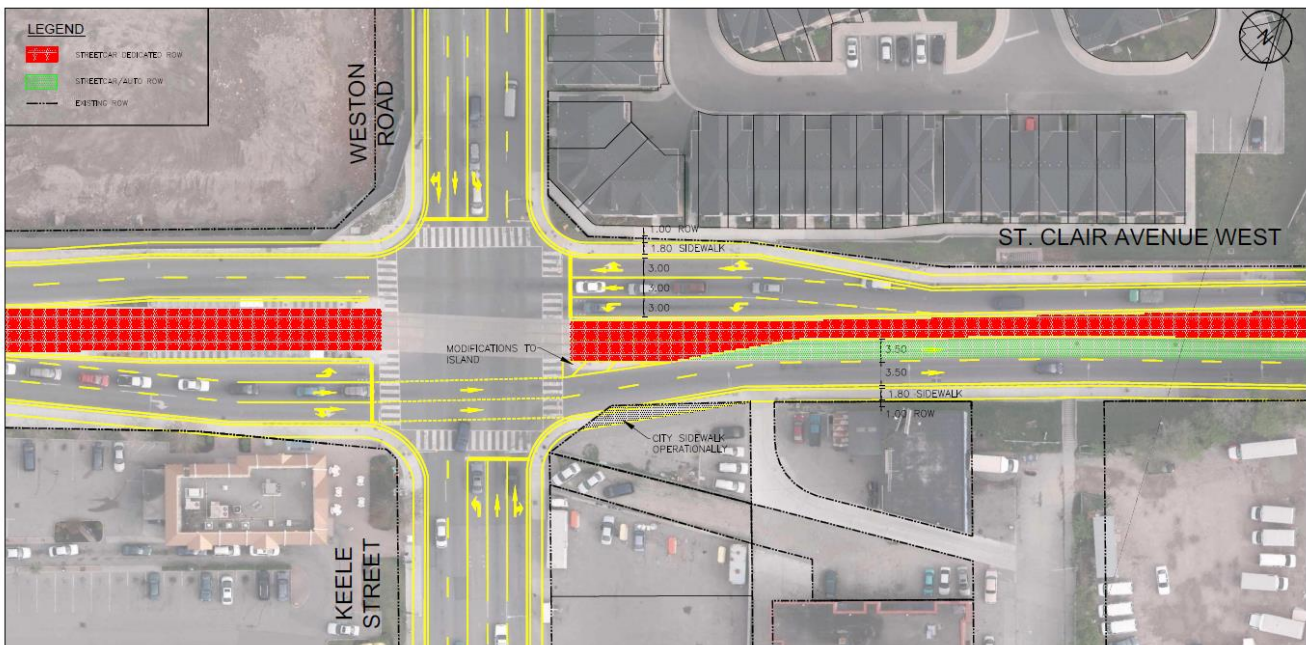


Figure 1-3: Option 3A - Through and Right-Through Lanes at Keele; Left-Through Lane Directed into TTC ROW East of Keele

### 1.1.5 Option 3B: Two Through Lanes at Keele; Left-Through Lane Directed into TTC ROW East of Keele

This option is similar to **Option 3A** which allows eastbound traffic along St. Clair Avenue West to transition into the streetcar ROW, turning it into a shared lane. However, the difference between these two options is the eastbound lane configuration west of the intersection. For this option, the eastbound left lane is replaced with a through lane (**Figure 1-4**). Vehicles with intentions of turning left must do so at either the previous intersection with Gunns Avenue or at the next intersection with Old Weston Road. For this option to be implemented, the island located to the east of the intersection must be removed as must the barrier curb separating the streetcar ROW and the vehicle lane to the east of the intersection. It also requires that the curb and sidewalk on the south side of St. Clair Avenue West at the intersection be re-aligned to match the eastbound lane approaching from St. Clair Avenue, west of the intersection.

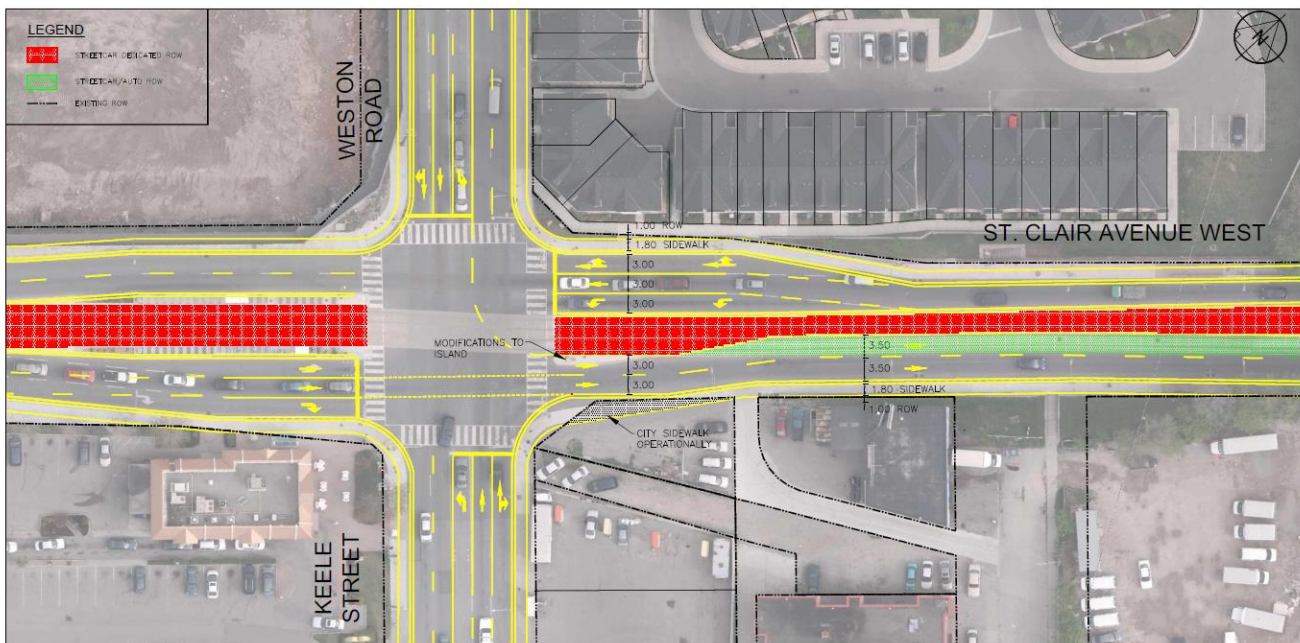
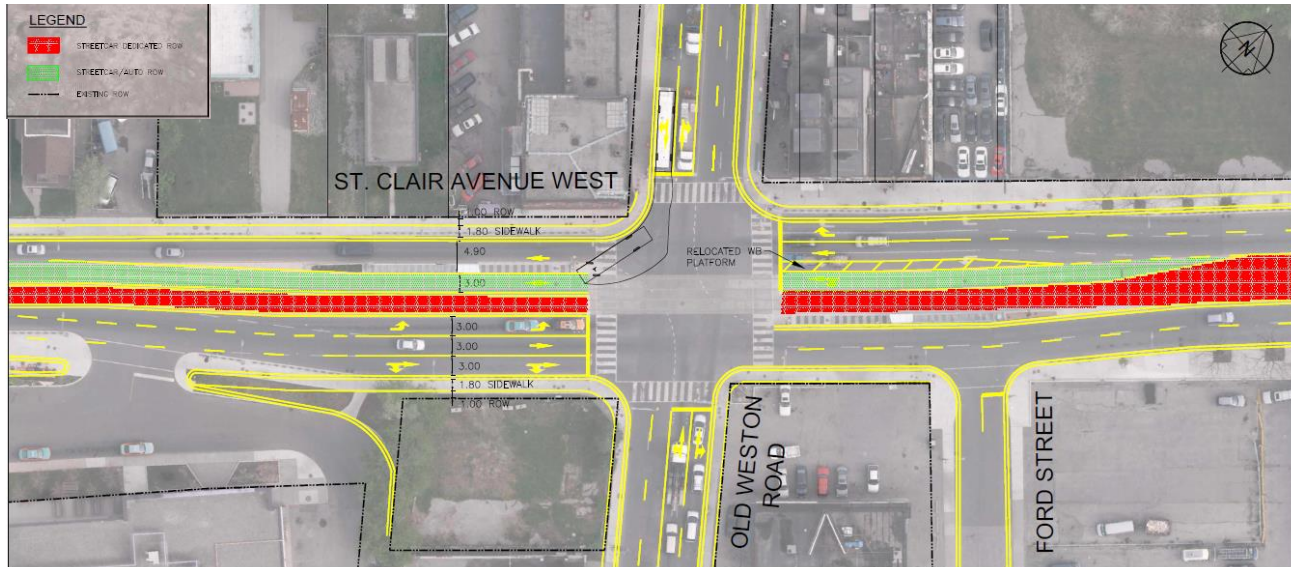


Figure 1-4: Option 3B – Two lanes at Keele; left-Through lane directed into TTC ROW east of Keele

### 1.1.6 Option 4: Shift TTC Platform to East of Old Weston; Allow Left-Through Use of Platform Lane; Allow Auto Use of TTC ROW West of Old Weston

**Option 4** involves the most change of the aforementioned options. At Old Weston and St. Clair, Westbound-left traffic is directed into the streetcar ROW and can also be used by westbound through vehicles. The platform west of the intersection which previously separated the streetcar ROW from the westbound through lane is relocated east of the intersection to separate the westbound through lane from the westbound left-through lane shared with streetcars (**Figure 1-5**). By allowing vehicles to proceed through the intersection in the streetcar ROW, the streetcar ROW to the west of the intersection must also be shared so as to allow cars to shift in and out of the lane. For this option to be implemented, the barrier curb separating the streetcar ROW from the adjacent lane must be removed.



**Figure 1-5: Option 4 - Shift TTC platform to East of Old Weston; Allow left-through Use of Platform Lane; Allow Auto Use of TTC ROW West of Old Weston**

### 1.1.7 Option 5: Shared Westbound Transit Lane East Of Weston Road – Extends to Left-Turn Lane at Intersection

**Option 5** incorporates the use of a shared streetcar/vehicle lane. In this option, westbound vehicles along St. Clair Avenue West are allowed to utilize the streetcar ROW. To the east of the intersection of St. Clair Avenue and Weston Road, the shared lane extends into the westbound left turning lane (**Figure 1-6**). Between Old Weston Road and Weston Road, vehicles traveling via St. Clair Avenue are permitted to shift in and out of the shared transit lane. Vehicles in the shared lane traveling through the intersection are directed out of the shared lane via lane lines to proceed through the intersection. The configuration consists of two through lanes, a designated right turn lane and a shared left/streetcar lane.

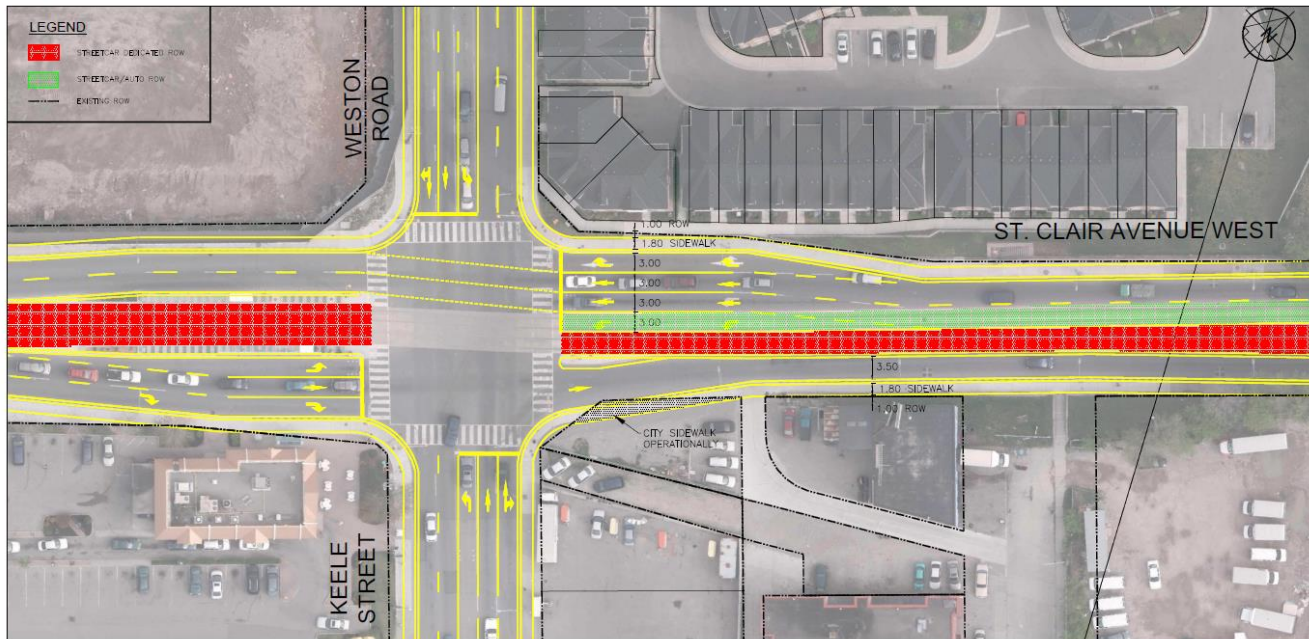


Figure 1-6: Option 5 - Shared Westbound Transit Lane East of Weston Road - Extends to the Left-Turn Lane at Intersection

### 1.1.8 Option 6: Shared Westbound Transit Lane East of Weston Road – Terminates Before Intersection

Similar to **Option 5**, this alternative incorporates the use of a shared streetcar/vehicle lane to direct westbound traffic between Old Weston Road and Weston Road via St. Clair Avenue West. Vehicles along St. Clair Avenue West are allowed to utilize the streetcar ROW. Unlike **Option 5**, the shared lane terminates before the intersection, forcing vehicles out of the lane to allow streetcars the right-of-way once more (**Figure 1-7**). The lane configuration at the intersection consists of a designated streetcar ROW separated by a barrier curb, a left turn lane, a through lane and a right-through lane.

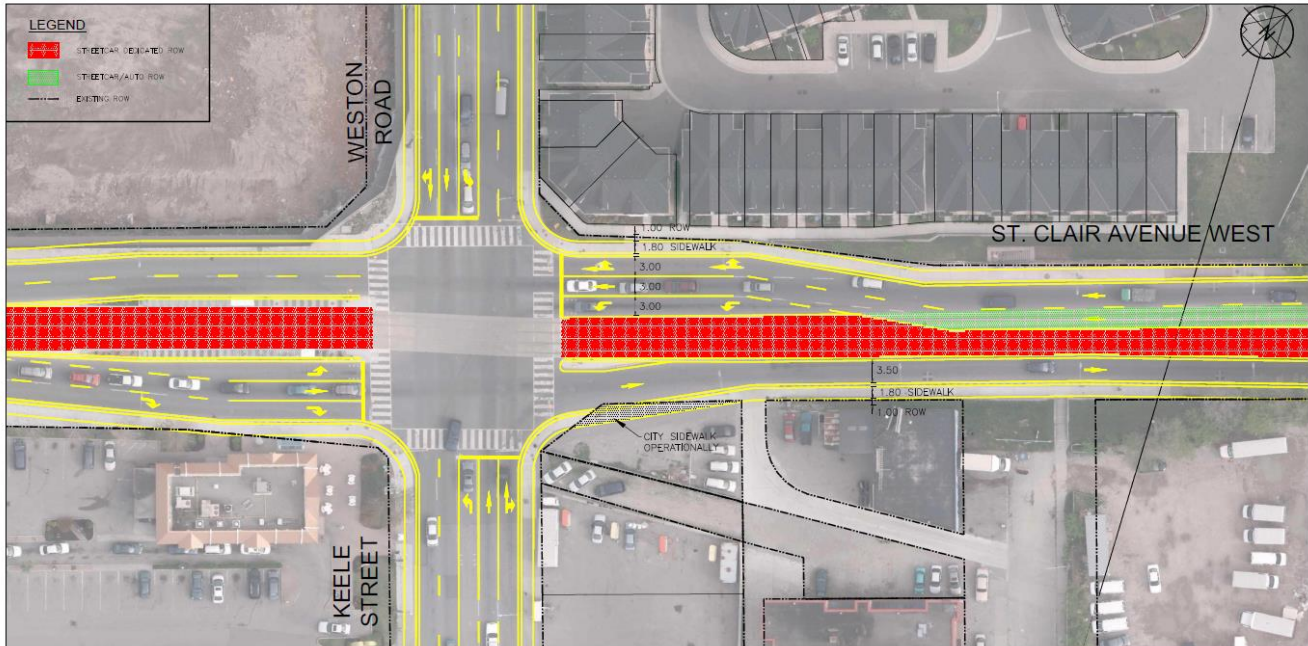


Figure 1-7: Option 6 - Shared Westbound Transit Lane East of Weston Road - Terminates Before Intersection

### 1.1.9 Option 7: Shared Westbound Transit Lane East of Weston Road; Center-Through Lane Transitions to Exclusive Left-Turn Lane

This option is similar to **Option 5 & 6** in that it utilizes a shared streetcar lane east of the intersection of Weston and St. Clair Avenue. Westbound vehicles along St. Clair are allowed to utilize the streetcar ROW. Unlike the aforementioned options, this option terminates the centre through lane prior to the intersection and converts it into an exclusive left turn lane. Based on discussions with the TAC members, it was determined that due to potential conflicts produced as a result of merging out of the left-lane in advance of Weston Road this option was removed from the analysis.