

## **8.4 Qualitative Assessment to Develop Short List of Alternative Haul Routes**

### **8.4.1 Comparison of the Alternative Links near the Intersection of Concession 11E and Milborough Line**

Given the location of the proposed site near the intersection of Milborough Line and Concession 11E, the first set of alternative links that were assessed as possible haul route (i.e. connection of links to create a haul route) were: south on Milborough Line, north on Milborough Line, west on Concession 11E, and east on Steeles Avenue.

Steeles Avenue from Milborough Line to Guelph Line was not included in the long list of alternatives because of the substandard visibility along the roadway.

As described in **Section 8.2.2.6**, Milborough Line from Concession 11E to Derry Road was eliminated because of significant engineering and safety deficiencies. An example of the narrow right-of-way and horizontal alignment concerns along this link is illustrated in **Photo 8-56**.



**Photo 8-56: Right-of-way and horizontal alignment along Milborough Line between Concession 11E and Derry Road**

Milborough Line from Concession 11E to Derry Road is the only reasonable connection to Derry Road. Given this link was eliminated, the links of Derry Road between Milborough Line and Guelph Line and Carlisle Road between Milborough Line and Centre Road become discontinuous routes. Consequently, these two east-west links were also eliminated.

The two short listed links at the Concession 11E and Milborough Line intersection were Milborough Line from Concession 11E to Campbellville Road and Concession 11E from the proposed site to Centre Road. These links have the potential for fewer community and alignment impacts than Steeles or Milborough Line south of Concession 11E. As described in **Section 8.2.2.5** and **Section 8.2.2.12** respectively, each link was carried forward to be analyzed as part of the short list of alternatives.

Illustrated in **Photo 8-59** is an example of the straight alignment along Milborough Line between Concession 11E and Campbellville Road. This alignment is likely to offer fewer potential impacts than other possible road sections (such as Milborough Line south of Concession 11E shown in **Photo 8-58** for example).



**Photo 8-59: Horizontal Alignment along Milborough Line between Concession 11E and Campbellville Road**

#### **8.4.2 Comparison of the Links at the Concession 11E and Centre Road Intersection**

Following Concession 11E west, the next set of links that was qualitatively compared to help develop the short list of alternative haul routes was the set of links that intersect at Concession 11E and Centre Road. These links are Centre Road north to Campbellville Road, Concession 11E west to Highway 6, and Centre Road south to Carlisle Road.

Of these three links, the only one that was not carried forward to the short list of alternatives was Centre Road south from Concession 11E. As described in **Section 8.2.2.2**, this link was screened out because it passes through the heart of the Carlisle community, including six businesses, two schools and several other community facilities. One of the key criteria in the first stage of screening is to avoid bisecting settlement and built up areas.

As a result of this Centre Road link being eliminated, the following links were subsequently eliminated primarily because they become discontinuous to a 400 series highway: Centre Road (Carlisle Road to Dundas Street), Carlisle Road (Centre Road to Highway 6), Concession 6E (Centre Road to Highway 6), Parkside Drive (Evans Road to Highway 6), Dundas Street (Guelph Line to Highway 6), and Brant Street (Dundas Street to Highway 407).

The three other links at the Concession 11E and Centre Road intersection were carried forward to the short list of alternatives. As described in **Section 8.2.2.17**, Concession 11E from Centre Road to Highway 6 has a suitable horizontal alignment and no significant engineering deficiencies. As described in **Section 8.2.2.1**, a primary advantage of Centre Road from Concession 11E to Campbellville Road is that it is an existing designated truck route. The suitability of Concession 11E from Milborough Line to Centre Road is discussed in **Section 8.2.2.18** and **Section 8.4.1**.

### **8.4.3 Comparison of the Links at the Milborough Line and Campbellville Intersection**

Following Milborough Line north, the set of links that was compared using a qualitative assessment to help develop the short list of alternative haul routes was the three links that intersect at Campbellville Road and Milborough Line. Two of these links were eliminated, Milborough Line from Campbellville Road north to Highway 401 and Campbellville Road from Centre Road to Milborough Line, and the preferred link carried forward was Campbellville Road from Milborough Line east to Twiss Road.

As described in **Section 8.3.1**, Milborough Line from Campbellville Road to Highway 401 was not carried forward because of feasibility concerns for the new Highway 401 interchange and significant property acquisition would be required. A new interchange here would likely change local traffic patterns and result in a high volume of vehicles passing by the Mountsberg Wildlife Centre.

As described in **Section 8.3.2**, Campbellville Road from Milborough Line to Centre Road was not carried forward primarily because of concerns with the vertical profile that would require significant property acquisition and major reconstruction to resolve.

The link that was preferred and carried forward was Campbellville Road from Milborough Line to Twiss Road. As described in **Section 8.2.2.13**, an advantage of this link is that it is an existing truck route.

### **8.4.4 Qualitative Assessment of Remaining Links**

As described in **Section 8.2.2.11**, the link of Campbellville Road from Highway 6 to Centre Road was a suitable haul route and carried forward to the short list primarily because it is a designated truck route and has no significant engineering deficiencies.

Although Highway 6 between Highway 401 and Highway 403 does bisect a number of communities, this highway was preferred and carried forward to the short list because it is a provincial facility and a designated truck route.

The only links that were eliminated from the long list and whose elimination has not been previously discussed in **Sections 8.4.1, 8.4.2 or 8.4.3**, are Concession 12E, Campbellville Road from Twiss Road to Guelph Line, and Guelph Line.

As described in **Section 8.2.2.22**, it is only reasonable to consider Concession 12E a potential haul route if it can provide access between the proposed site and Centre Road. This is not feasible because connection to the proposed site would require Concession 12E to be extended easterly through a protected wetland.

As discussed in **Section 8.2.2.14**, Campbellville Road from Twiss Road to Guelph Line was not carried forward because it bisects the settlement area of the Campbellville community. The link also passes by the Campbellville Conservation Area and there are major physical building constraints at the Guelph Line intersection that would impede truck turning.

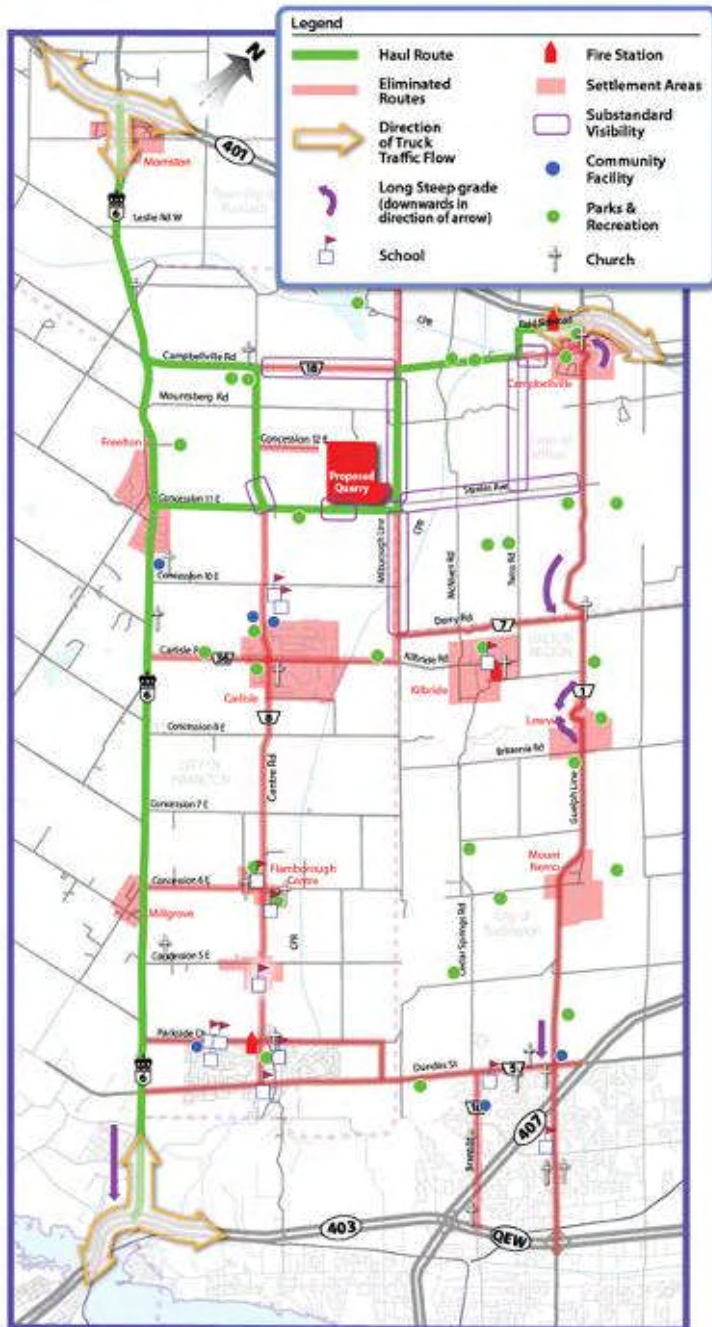
The links that were identified and carried forward in part because they by-pass the settlement area of Campbellville and are existing truck routes were Twiss Road from Campbellville Road to Reid Sideroad (described in **Section 8.2.2.26**) and Reid Sideroad from Twiss Road to Guelph Line (described in **Section 8.2.2.27**). Reid Sideroad has been designed for heavy-truck traffic and has a wide right-of way. This route would allow quarry truck traffic on Reid Sideroad to by-pass the settlement area of Campbellville rather than bisecting the built-up area.

For the assessment of Guelph Line, Reid Sideroad is the only reasonable connection for quarry truck traffic between Guelph Line and the links that have been carried forward. As described in **Section 8.2.2.8**, the Guelph Line link between Reid Sideroad and Derry Road was eliminated because it bisects the settlement area of the Campbellville community. Within Campbellville the link passes by several businesses, two churches, and the Campbellville Ball Park.

Resulting from the elimination of the Guelph Line link from Reid Sideroad to Derry Road, the sections of Guelph Line south of Derry Road were subsequently eliminated.

## 8.5 Short List of Alternative Haul Routes

Using the information presented in earlier sections, **Exhibit 8-10** shows the short list of alternative haul routes. The routes are shown in green. The eliminated links are shown as a faint red line.



**Exhibit 8-10: Short List of Alternative Haul Routes**

## **8.6        Haul Route Alternatives**

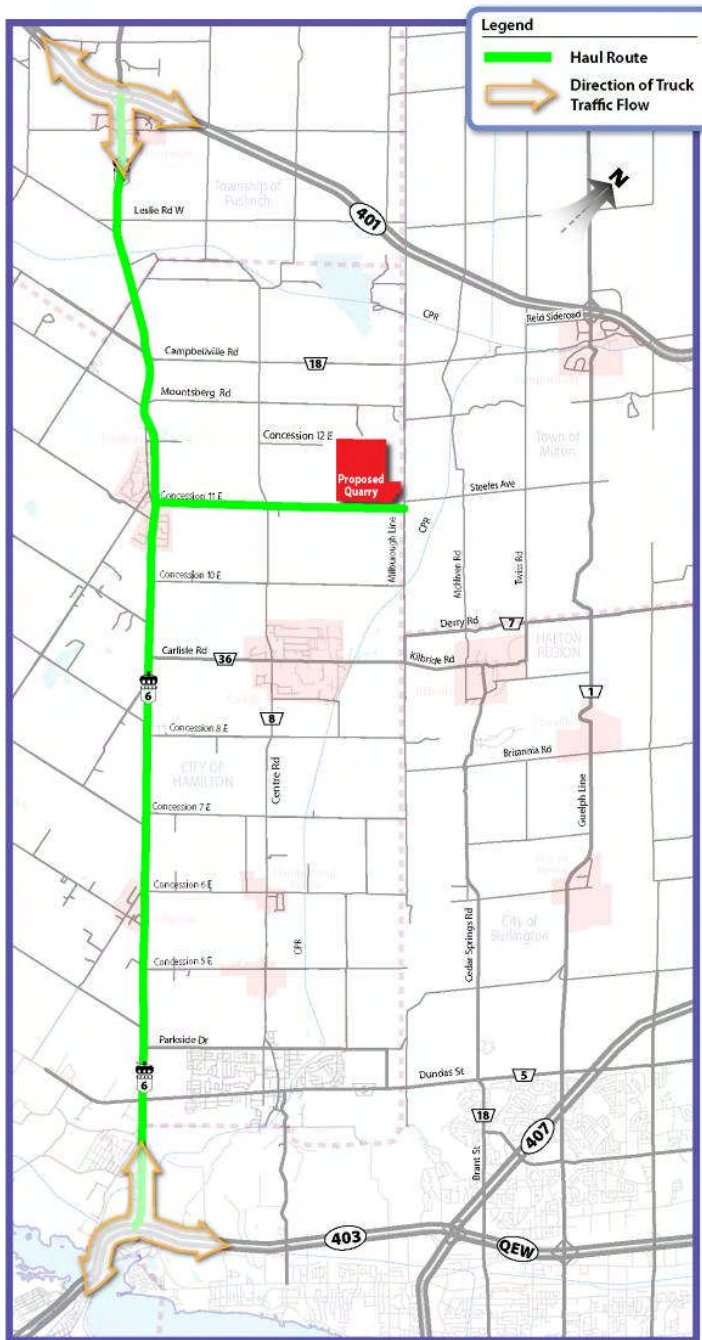
The links that have been carried forward to the short list were combined in all reasonable combinations that would provide a direct and complete haul route between the proposed quarry and the 400 series highways. These combined short listed links have been developed into five potential haul routes. Three of the routes are distinct alternative haul routes, and two of the routes are combination haul routes.

This Section describes each potential haul route in turn:

- Alternative Haul Route 1 – **Section 8.6.1, Exhibit 8-11**
- Alternative Haul Route 2 – **Section 8.6.2, Exhibit 8-12**
- Alternative Haul Route 3 – **Section 8.6.3, Exhibit 8-13**
- Alternative Haul Route 4 – **Section 8.6.4, Exhibit 8-14**
- Alternative Haul Route 5 – **Section 8.6.5, Exhibit 8-15**

The five potential haul routes are carried forward for detailed analysis in the haul route study.

### 8.6.1 Alternative Haul Route 1



In the case of Alternative Haul Route 1, truck traffic destined for Highway 401 east would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 eastbound on-ramp.

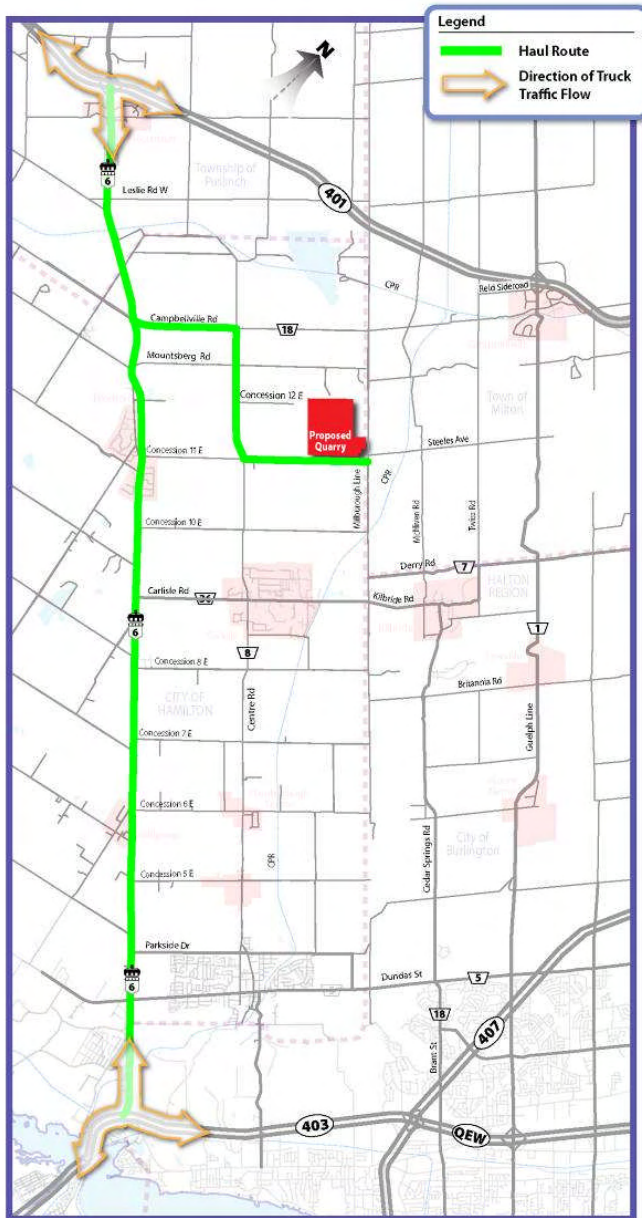
Truck traffic destined for Highway 401 west would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 westbound on-ramp.

Truck traffic destined for Highway 403 east would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403/QEW westbound on-ramp.

Exhibit 8-11: Potential Alternative Haul Route 1

### 8.6.2 Alternative Haul Route 2



In the case of Alternative Haul Route 2 truck traffic destined for Highway 401 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and north on Highway 6 to the Highway 401 eastbound on-ramp.

Truck traffic destined for Highway 401 west would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and north on Highway 6 to the Highway 401 westbound on-ramp.

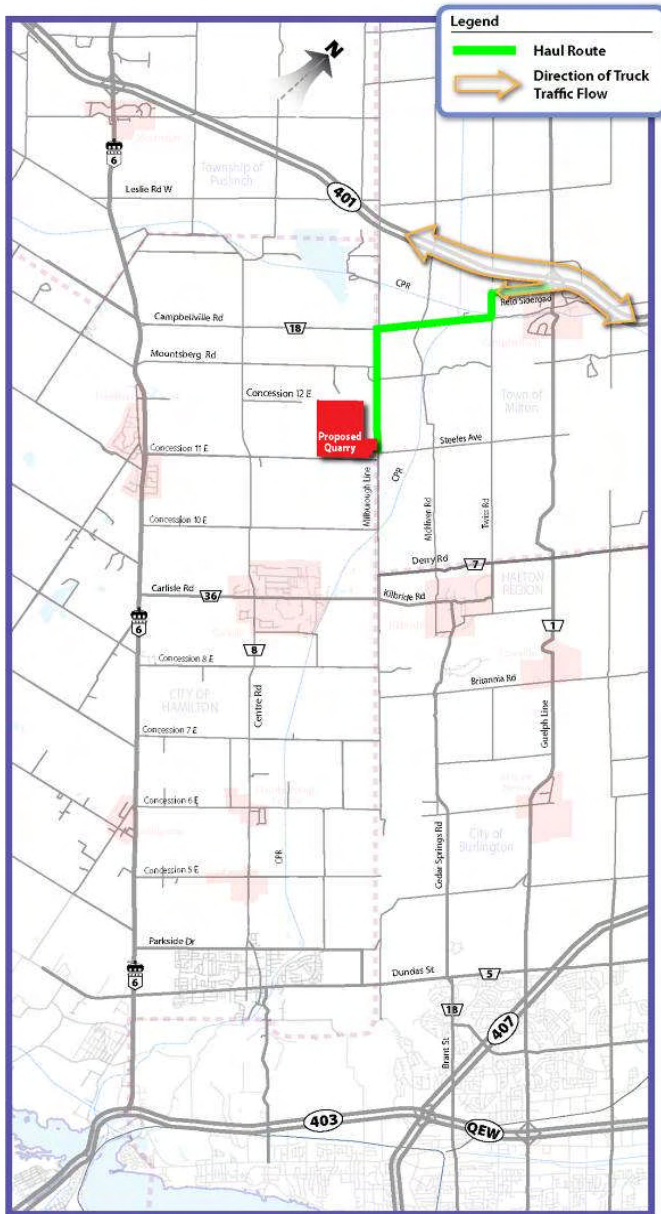
Truck traffic destined for Highway 403 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403 /QEW westbound on-ramp.

**Exhibit 8-12: Potential Alternative Haul Route 2**

### 8.6.3 Alternative Haul Route 3

In the case of Alternative Haul Route 3, truck traffic destined for Highway 401 east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp.



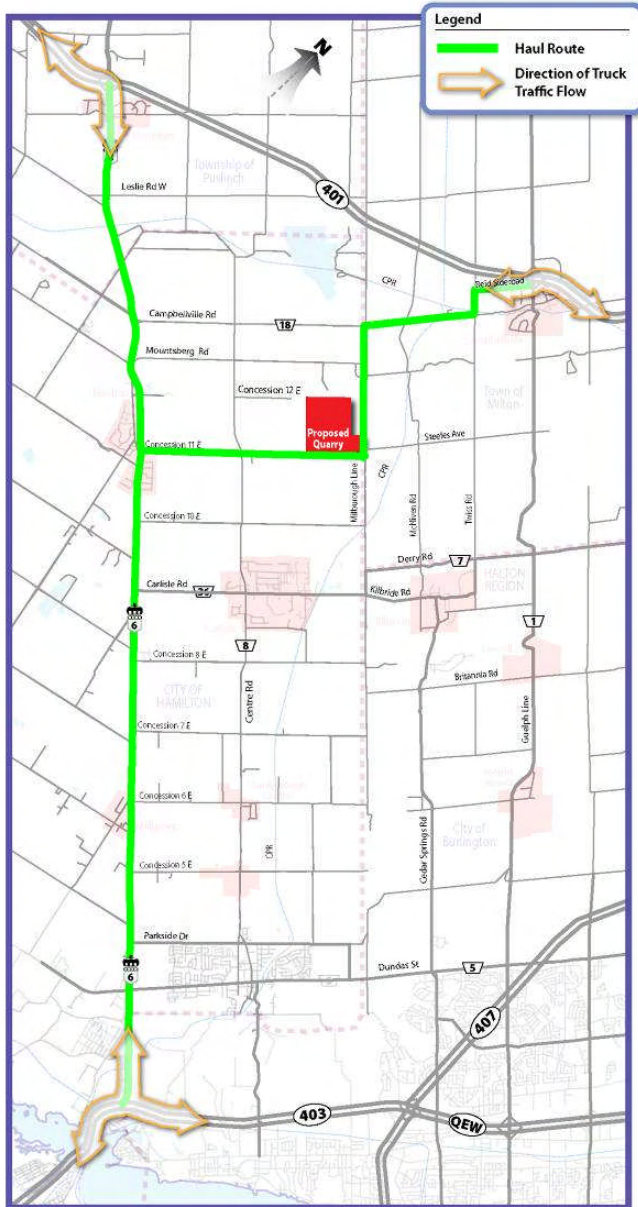
Truck traffic destined for Highway 401 west would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, east on Reid Sideroad and north on Guelph Line to the Highway 401 westbound on-ramp

Truck traffic destined for Highway 403/QEW east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp. From here, there are several alternatives to reach the destination including taking the 407 ETR south to Highway 403.

Finally, truck traffic destined for Highway 403 west would travel north on Milborough Line, east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401. From here, there are several alternatives to reach the destination including taking the 407 ETR southwest or Highway 6 south to the 403/QEW.

**Exhibit 8-13: Potential Alternative Haul Route 3**

### 8.6.4 Alternative Haul Route 4



In the case of Alternative Haul Route 4, truck traffic destined for Highway 401 east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp.

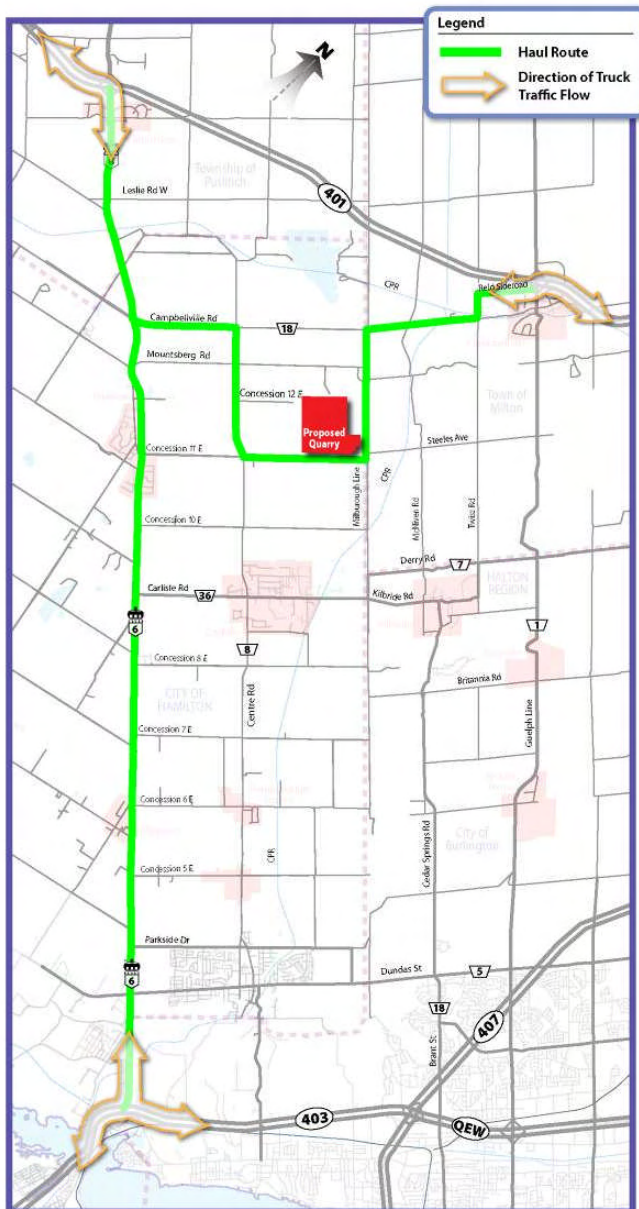
Truck traffic destined for Highway 401 west would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 westbound on-ramp.

Truck traffic destined for Highway 403 east would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403 eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403 westbound on-ramp.

**Exhibit 8-14: Potential Alternative Haul Route 4**

### 8.6.5 Alternative Haul Route 5



In the case of Alternative Haul Route 5, truck traffic destined for Highway 401 east would travel north on Milburough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp.

Truck traffic destined for Highway 401 west would travel west on Concession 11 E, then north on Centre Road, then west on Campbellville, and then north on Highway 6 to the Highway 401 westbound on-ramp.

Truck traffic destined for Highway 403 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, then north on Centre Road, west on Campbellville, and south on Highway 6 to the Highway 403/QEW westbound on-ramp.

**Exhibit 8-15: Potential Alternative Haul Route 5**

## **9. DESCRIPTIONS OF THE 5 ALTERNATIVE HAUL ROUTES**

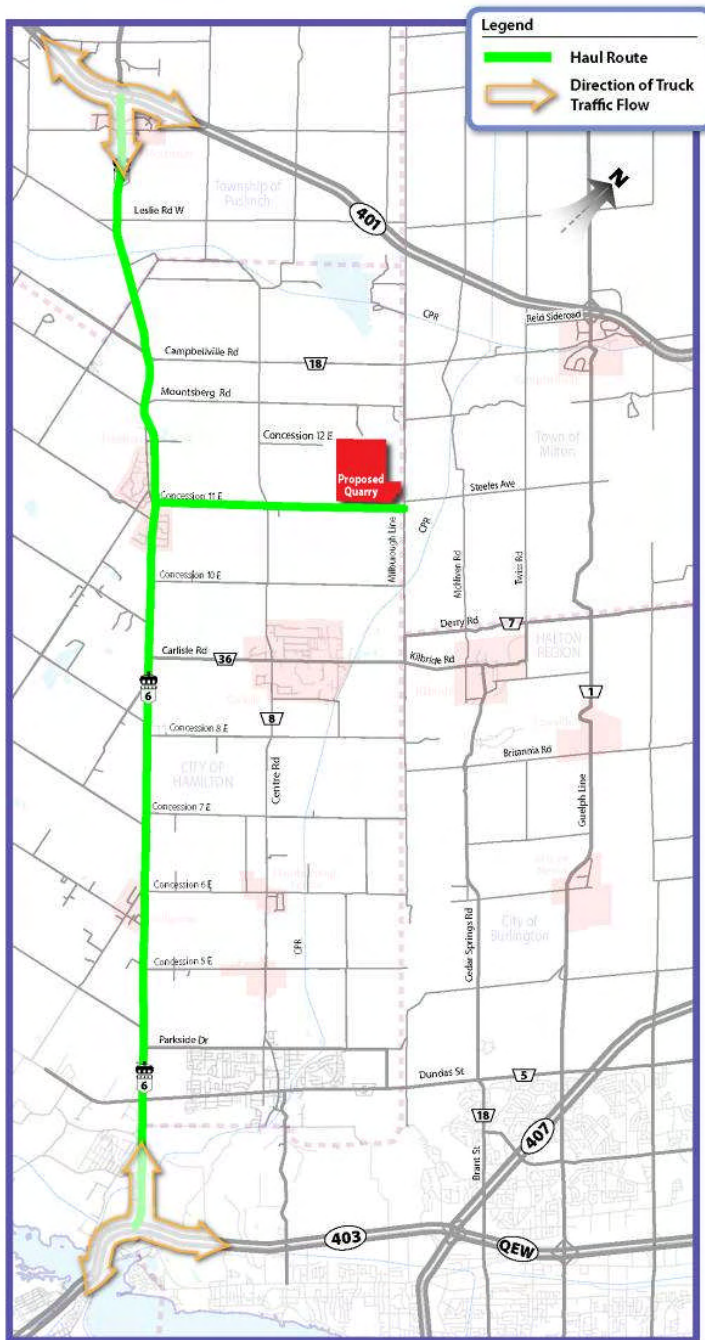
The links that have been carried forward to the short list were combined in all reasonable combinations that would provide a direct and complete haul route between the proposed quarry and the 400 series highways. These combined short listed links have been developed into five potential haul routes. Three of the routes are distinct alternative haul routes, and two of the routes are combination haul routes. The five potential haul routes were carried forward for detailed analysis in the haul route study.

### **9.1 Location and Travel Directions of the 5 Alternative Haul Routes**

This Section describes the route location and quarry truck travel directions for each alternative haul route in turn:

- Alternative Haul Route 1 – **Section 9.1.1, Exhibit 9-1**
- Alternative Haul Route 2 – **Section 9.1.2, Exhibit 9-2**
- Alternative Haul Route 3 – **Section 9.1.3, Exhibit 9-3**
- Alternative Haul Route 4 – **Section 9.1.4, Exhibit 9-4**
- Alternative Haul Route 5 – **Section 9.1.5, Exhibit 9-5**

### 9.1.1 Alternative Haul Route 1



In the case of Alternative Haul Route 1, truck traffic destined for Highway 401 east would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 eastbound on-ramp.

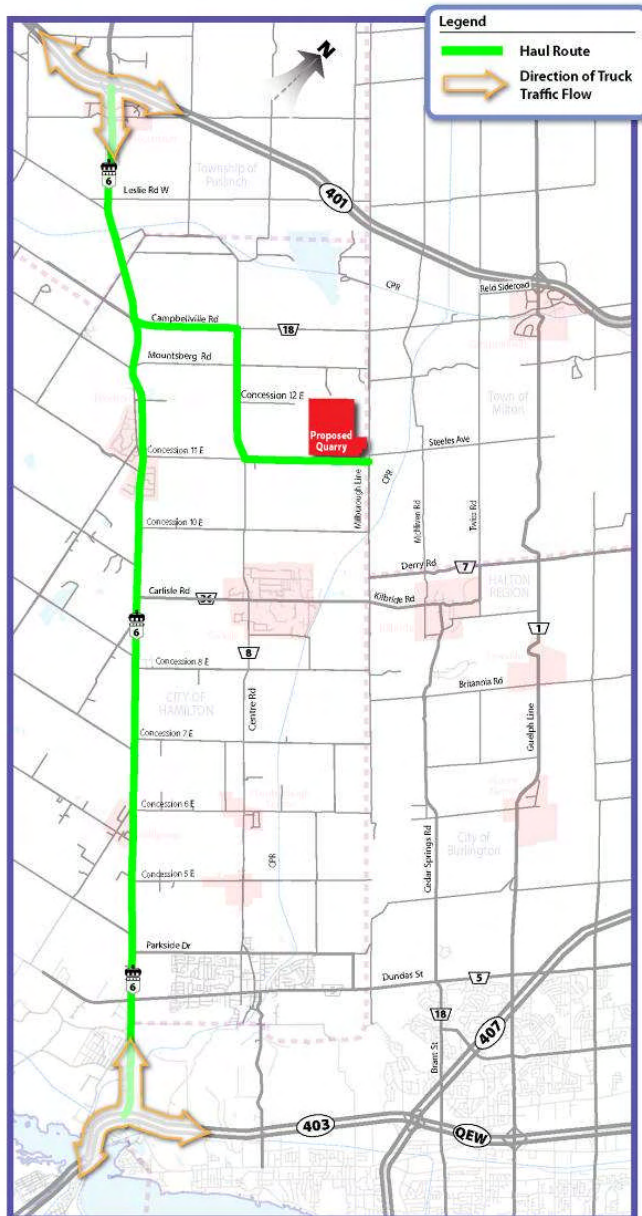
Truck traffic destined for Highway 401 west would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 westbound on-ramp.

Truck traffic destined for Highway 403 east would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403/QEW westbound on-ramp.

**Exhibit 9-1: Potential Alternative Haul Route 1**

## 9.1.2 Alternative Haul Route 2



In the case of Alternative Haul Route 2 truck traffic destined for Highway 401 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville Road, and north on Highway 6 to the Highway 401 eastbound on-ramp.

Truck traffic destined for Highway 401 west would travel west on Concession 11 E, then north on Centre Road, west on Campbellville Road, and north on Highway 6 to the Highway 401 westbound on-ramp.

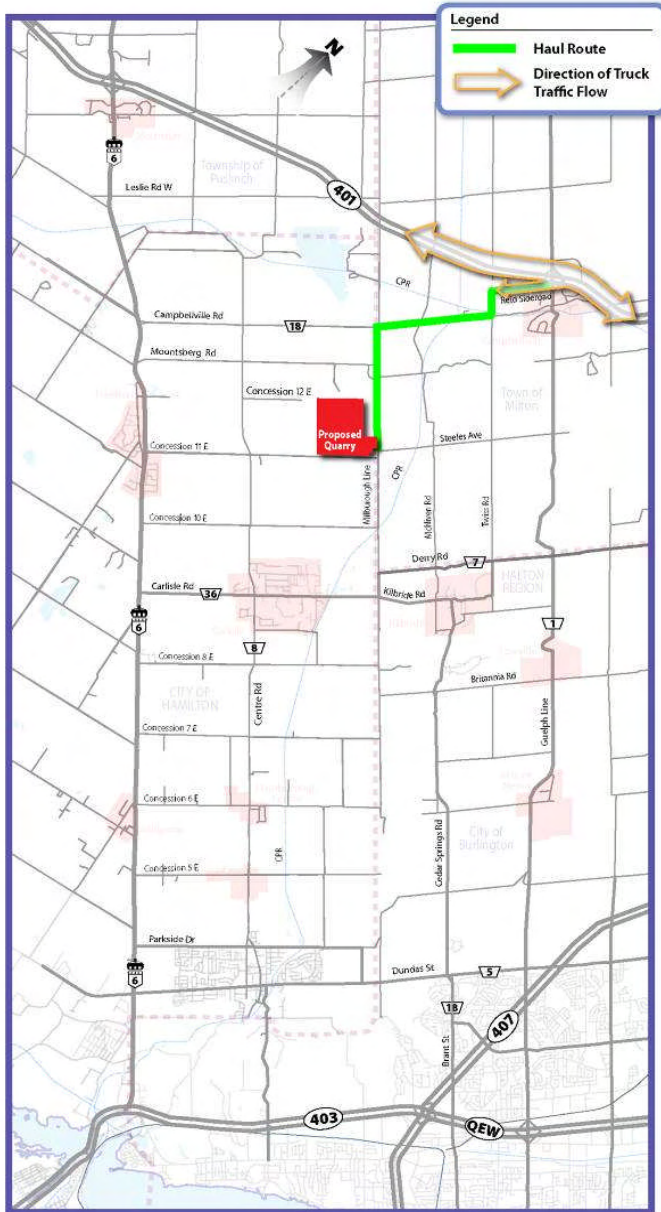
Truck traffic destined for Highway 403 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville Road, and south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, north on Centre Road, west on Campbellville Road, and south on Highway 6 to the Highway 403 /QEW westbound on-ramp.

**Exhibit 9-2: Potential Alternative Haul Route 2**

### 9.1.3 Alternative Haul Route 3

In the case of Alternative Haul Route 3, truck traffic destined for Highway 401 east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp.



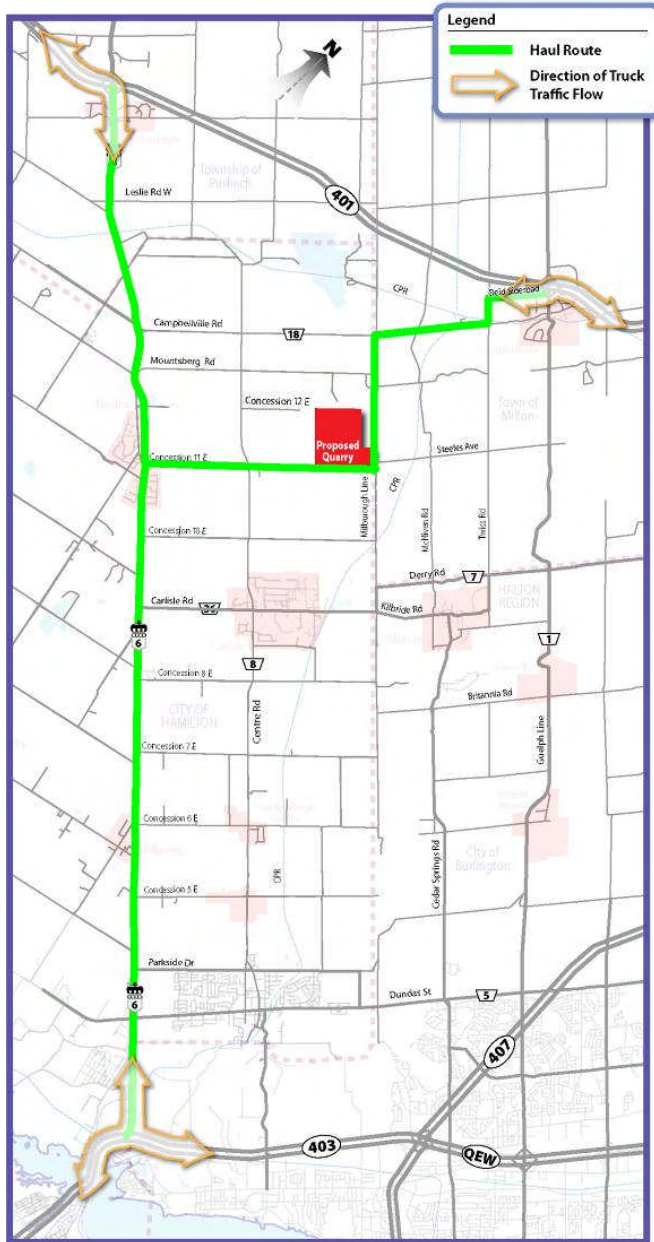
Truck traffic destined for Highway 401 west would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, east on Reid Sideroad and north on Guelph Line to the Highway 401 westbound on-ramp

Truck traffic destined for Highway 403/QEW east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp. From here, there are several alternatives to reach the destination including taking the 407 ETR south to Highway 403.

Finally, truck traffic destined for Highway 403 west would travel north on Milborough Line, east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401. From here, there are several alternatives to reach the destination including taking the 407 ETR southwest or Highway 6 south to the 403/QEW.

**Exhibit 9-3: Potential Alternative Haul Route 3**

### 9.1.4 Alternative Haul Route 4



In the case of Alternative Haul Route 4, truck traffic destined for Highway 401 east would travel north on Milborough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp.

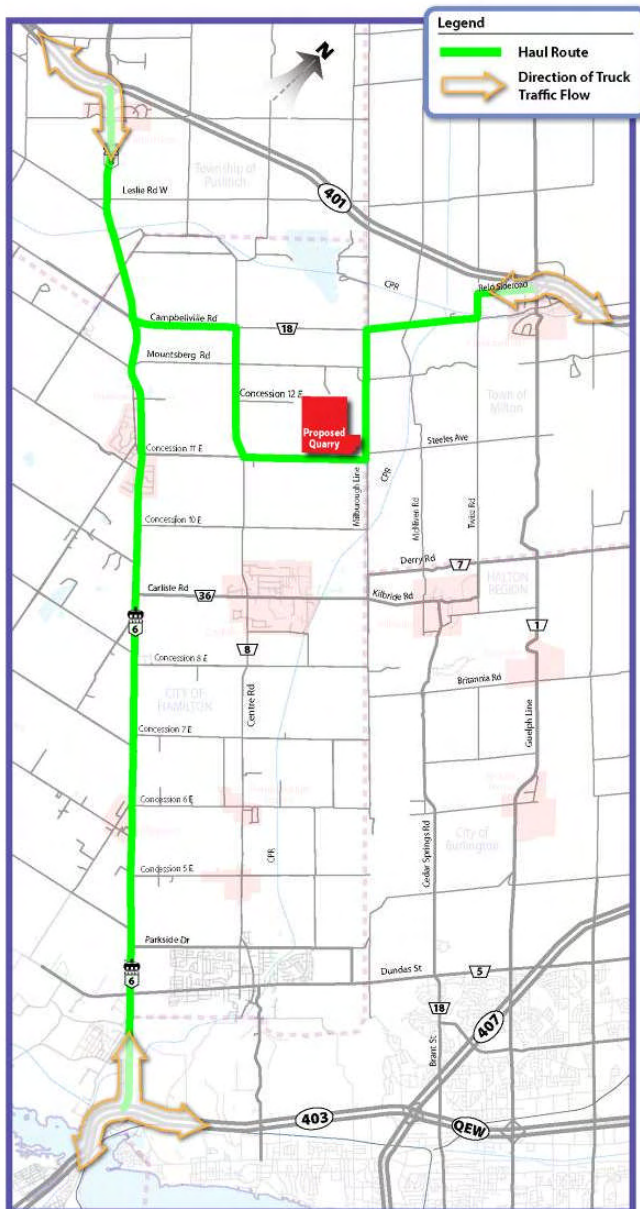
Truck traffic destined for Highway 401 west would travel west on Concession 11 E, and then north on Highway 6 to the Highway 401 westbound on-ramp.

Truck traffic destined for Highway 403 east would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403 eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, and then south on Highway 6 to the Highway 403 westbound on-ramp.

**Exhibit 9-4: Potential Alternative Haul Route 4**

### 9.1.5 Alternative Haul Route 5



**Exhibit 9-5: Potential Alternative Haul Route 5**

In the case of Alternative Haul Route 5, truck traffic destined for Highway 401 east would travel north on Milburough Line, then east on Campbellville Road, north on Twiss Road, and east on Reid Sideroad to the Highway 401 eastbound on-ramp.

Truck traffic destined for Highway 401 west would travel west on Concession 11 E, then north on Centre Road, then west on Campbellville Road, and then north on Highway 6 to the Highway 401 westbound on-ramp.

Truck traffic destined for Highway 403 east would travel west on Concession 11 E, then north on Centre Road, west on Campbellville Road, and south on Highway 6 to the Highway 403/QEW eastbound on-ramp.

Finally, truck traffic destined for Highway 403 west would travel west on Concession 11 E, then north on Centre Road, west on Campbellville Road, and south on Highway 6 to the Highway 403/QEW westbound on-ramp.