

## **COMMITTEE OF THE WHOLE (WORKING SESSION) – MAY 17, 2011**

### **METROLINX - BOLTON GO COMMUTER RAIL SERVICE FEASIBILITY STUDY WARDS 1, 2 AND 3**

#### **Recommendation**

The Commissioner of Engineering and Public Works, in consultation with the Director of Policy Planning, recommends:

1. THAT the presentation from Metrolinx with respect to the Bolton Commuter Rail Service Feasibility Study be received;
2. That Metrolinx be requested to examine the feasibility of establishing urban type GO Rail station location opportunities in the core areas of Woodbridge and Nashville with a longer term perspective to accommodate travel demand on the future Bolton Commuter Rail service; and
3. That a copy of this report be forwarded to Metrolinx and York Region.

#### **Contribution to Sustainability**

The proposed Bolton GO commuter rail service contributes to sustainability by providing a higher order transit facility within the City which will support compact urban form in the City and offer an alternative mode of transportation to the single occupant vehicle.

In addition, the establishment of the Bolton Go commuter rail service will greatly improve connectivity between various modes of transit within the City including the York Region transit priority corridors, YRT/Viva, Spadina Subway Extension, 407 Transitway and the future Yonge Street Subway extension.

#### **Economic Impact**

There are no immediate economic impacts associated with this report.

#### **Communications Plan**

Metrolinx will be apprised of any resolution passed by Council relating to this item.

#### **Purpose**

The purpose of this report is to supplement the presentation from Metrolinx on the conclusions and recommendations of the Bolton Go Commuter Rail Services Feasibility Study, and to provide staff comments on the Study findings.

#### **Background - Analysis and Options**

In June 2007, the Province of Ontario announced the launch of the Move Ontario 2020 initiative which includes a multi-year rapid transit action plan to develop 900 kilometres of new or improved rapid transit lines in and around the Greater Toronto and Hamilton Area (GTHA).

Furthermore in 2008, the Province approved a series of "Quick Wins" projects recommended by Metrolinx which produce tangible benefits within five years. One Quick Win project included the improvement of service frequencies and bus/ rail connections for the Bolton GO Transit bus

services. The implementation of this project would also stimulate ridership and supports the initiation of the Bolton GO commuter rail service.

As the population in the City continues to grow, the travel demand within the city will increase. This significant growth in the future population of the City indicates potential travel demand to support a commuter rail service between the City and downtown Toronto. Both Metrolinx "The Big Move" and the GO2020 Plans have recommended that a new commuter rail service be implemented on the Bolton corridor within the next 15 years.

The City's 2010 Official Plan (Schedule 10) and York Region's Transportation Master Plan identified the Bolton GO rail service and proposed station locations as part of the future transit network. The proposed five stations were identified in the vicinity of:

- Highway 407 and Islington Avenue
- Woodbridge Village north of Highway 7 at Kipling Avenue
- Rutherford Road and Highway 27
- Major Mackenzie Drive and Highway 27
- Nashville Road and Huntington Road.

The Bolton Go Commuter Rail Service Feasibility Study was initiated in 2008 and was completed in December 2010. This study examined the service and infrastructure requirements to provide a new commuter rail service to Bolton on an existing freight rail corridor where no passenger service currently exists. The study focused primarily on the Canadian Pacific (CP) Railway Mactier Subdivision extending from the Davenport Road/Dundas Street West area of Toronto, northward through the communities of Woodbridge, Vaughan, Kleinburg and Bolton/Caledon to the intersection of the Mactier Subdivision and Highway 9.

The Study included a meeting with the City staff during the early stages of the study in 2009 to discuss future development plans for the City and to identify land use issues in the Woodbridge and Nashville areas. The possibility of developing a GO station at the intersection of Major Mackenzie Drive and the CP line was discussed in detail. Also, in early February 2009, Council directed staff to amend Official Plan Amendment 601 (Kleinburg-Nashville Community Plan) as follows:

*"amend "Schedule A - Land Use" and the policies in "Sub-section 4.11 Transportation" of OPA #601 to provide a potential future GO Train Commuter Station, the location of which will be determined through the GO Transit Environmental Assessment, which may include potential sites generally located at the intersection of Major Mackenzie Drive and the CP Railway, in Part of Lot 21, Concession 9, City of Vaughan and/or at the intersection of Nashville Road and the CP Railway, in Part of Lot 25, Concession 9, City of Vaughan."*

Subsequently, Council at its meeting on January 25, 2011 adopted the following resolution with respect to the importance of GO commuter rail service through the west half of Vaughan:

*"Whereas, the Province of Ontario has vested the co-ordinated development of public transit infrastructure across the Greater Golden Horseshoe in the provincial crown corporation known as Metrolinx; and*

*Whereas, in furtherance of its mandate, Metrolinx has developed a plan for the staged development of all types of public transit infrastructure within the Greater Golden horseshoe; and*

*Whereas, the development of Go Train commuter service through the west half of Vaughan has been identified as a secondary priority within Metrolinx's planning schedule; and*

*Whereas, a significant number of residents of the western half of Vaughan currently travel outside the area to make use of GO Train commuter services running through stations in northern Etobicoke and two stations in the Maple area ( at Major Mackenzie Drive and Rutherford Road); and*

*Whereas, travel to these stations by motor vehicles increases the number of automobiles on already overcrowded east-west traffic corridors in Vaughan; and*

*Whereas, two hundred and twelve (212) residents have, by means of an electronic petition, already indicated their wish to see GO Train commuter service in the west half of Vaughan made an immediate priority by Metrolinx.”*

### Bolton Go Feasibility Study

The Feasibility Study examined four (4) routing options connecting Union Station to Bolton. North of Steeles Avenue all four options use CP Mactier Subdivision as illustrated on Attachment No.1. Service Option 4 was identified as the preferred option. This option provides service to four new stations on the CP Railway Mactier Subdivision (Bolton, Kleinburg, Vaughan and Woodbridge), one existing station at York University and one new station in the vicinity of Downsview Airport on the Newmarket Subdivision. Service Option 4 will also provide direct rail access to Union Station. The Study indicates that Route Option 4 using the CN Halton and York Subdivisions has yet to be reviewed by CN representatives.

The preferred option avoids the majority of capacity constraints on the Weston Subdivision and has the potential to attract approximately 4,400AM peak period riders in the 2031 horizon. Under this option Bolton corridor trains would also share the Weston Subdivision right-of-way with the Barrie and Georgetown corridor trains and the Pearson Airport Rail service trains between Parkdale and Union Station.

Infrastructure costs for Service Option 4 are the lowest of all options estimated, and has the fewest number of stations of all options. A scheduled trip time for Option 4 is comparable to other options. The service has an estimated infrastructure cost in excess of \$300 million including additional track, signals, structure/culverts improvements, station facilities, parking, tunnels, and trains.

### Proposed Station Sites in the City of Vaughan

The Feasibility Study recommended three (3) stations within the City including:

- “Woodbridge station” at Highway 407 and Islington Road
- “Vaughan (Elder Mills) station” at Rutherford Road
- “Kleinburg station” at Major Mackenzie Drive.

The assessment of potential station locations was focused on commuter type stations including proximity to vacant areas available for commuter parking lots. Therefore two station locations identified in the City's Official Plan and York Region's TMP were not included in this study. Although the study consultants indicated that limited available lands for parking and grading issues in the vicinity of Nashville Road Area and Woodbridge Village area were the main reasons for discounting the sites, urban type station could be a good alternative. The urban type stations consist of a platform and limited pick up/drop off areas and have a lower cost to implement and uses much less land. Two additional stations would have considerable ridership potential which helps in making the potential GO Line successful and improve future transit connectivity.

### Highway 407/Islington (Woodbridge)

The assessment of potential station locations to provide rail service to the Woodbridge community included a review of available sites along Kipling Avenue north of Highway 7. Potential station site locations assessed included the Woodbridge Fairgrounds, Woodbridge Foam facility and the junction of the rail line and Highway 7; Each of the sites, however, were considered inappropriate for the development of a GO station facility primarily because they did not meet the criteria for a commuter station.

An alternate site was identified in the area located just south of Highway 407 and bounded between the rail corridor and Islington Avenue as shown in Attachment No. 2.

The land area is approximately 25,000 sq.m. The future Highway 407 Transitway will provide a good intermodal opportunity at this location. There is a possibility to provide two accesses from Islington Avenue. The north access would serve auto traffic and the south access would serve GO buses. A projected parking demand of 500 spaces could be accommodated comfortably.

The facilities available at this station would include a Kiss 'n' Ride, bus loop with four bus bays and parking. A conceptual site layout based on GO Transit's requirement is shown in Attachment No. 3.

### Rutherford Road (Vaughan - Elder Mills)

Two alternative sites were identified in the vicinity of Rutherford Road. These sites included the land parcels southwest (Site #S4-1) and northeast (Site #S4-2) of the railway crossing at Rutherford Road as shown in Attachment No. 4. Both land parcels can be directly accessed from Rutherford via adjacent major roadways including Regional Road 50, Regional Road 27 and Huntington Road connect to the sites via Rutherford Road.

Site #S4-2 was considered the preferred site due to its location relative to the east side of the right of way.

This site is situated on the western side of the rail corridor. The identified land area is approximately 44,000 sq.m and can accommodate 500 parking spaces in addition to other facilities. This site is also directly accessible from Rutherford Road. Two separate accesses for buses and autos, as shown in Attachment No. 5 are recommended. The eastern access would be used for buses and western access would be used for autos and the Kiss 'n' Ride facility. Four bus bays are recommended to facilitate the pick up and drop off of passengers.

Rutherford Road has also been identified as one of the transit priority corridors in the York Region Transit plan. The placement of a GO station on Rutherford Road will improve accessibility for York Region Transit riders.

### Major Mackenzie Drive (Kleinburg)

One potential site was identified in the area as shown in Attachment No. 6 that meets all of GO Transit's station criteria. This site is located just southeast of the railway crossing at Major Mackenzie Drive. Access to the land would be via Major Mackenzie Drive which will offer direct access from the extension of Highway 427.

The land area available for the station facility is approximately 58,000 sq.m and is owned by CP Railway. Based on the assumption made for the parking requirement a total of 1,000 parking spaces can be accommodated on site. This site is directly accessible from Major Mackenzie Drive and expected to be a potential intermodal point due to the proximity of the Highway 427 terminus.

The presence of the GO Station will also improve accessibility for York Region Transit riders. Two separate access points should be provided to serve auto and bus traffic. In anticipation of future demand four to six bus bays are recommended. A conceptual site layout is shown in Attachment No. 7.

The station site selection was based on an investigation of aerial photos, site visits, and a review of land availability along the corridor. Sites should be assessed on a long term perspective that allows consideration for potential redevelopment and urban context to identify all possible station site opportunities to improve future transit connectivity and make the potential GO Line successful.

#### **Staff Consultation with Metrolinx**

At a meeting on March 30, 2011 with Metrolinx project staff, City and York Region staff expressed the need for Metrolinx to review additional sites and provide greater detail on the rationale for discounting two locations in the core areas of Woodbridge and Nashville.

In that meeting and in the subsequent letter to City dated April 11, 2011, Metrolinx indicated that they will support the City in examining opportunities for stations along the corridor by working with the City and York Region to explore opportunities for land acquisition and planning protection. Also, Metrolinx will continue to develop the transit market by expanding GO services in the area and will work with other municipal partners to plan, fund, and build other higher order transit services.

Metrolinx will continue to develop the transit market by expanding GO services in the area including addressing overloads on the existing Barrie and Georgetown lines, and work towards all-day two-way service. The next steps will also include the expansion of GO bus route to serve the Bolton area with connections to the Georgetown GO train and bus service, and the TTC subway at Yorkdale and York Mills.

Prior to the implementation of the Bolton commuter rail service, a Benefits Case, Environmental Assessment and Detail Design must be completed. Metrolinx has advised that these studies are unlikely to occur within the next 10 years given the project modest 2031 ridership within the corridor and competing transit priorities in the Metrolinx Regional Transportation Plan.

#### **Regional Implications**

The Region of York will provide comments to Metrolinx on the Bolton Commuter Rail Service Feasibility Study separately.

#### **Relationship to Vaughan Vision 2020/Strategic Plan**

This report is consistent with the priorities previously set by Council Vaughan Vision 2020 strategic initiatives:

- To enhance and ensure community safety, health and wellness;
- To pursue excellence in service delivery;
- To lead and promote environmental sustainability;
- To plan and manage growth and economic vitality.

This report is therefore consistent with the priorities previously set by Council.

## **Conclusion**

The Bolton Commuter Rail Feasibility Study (December 2010) provides a basis for the proposed routing and station locations within City. The Feasibility Study examined four (4) routing options connecting Union Station to Bolton. Route Option 4 was identified as the preferred option as shown in Attachment No.1. The Study recommended three (3) stations within the City including; "Woodbridge station" at Highway 407 and Islington Road, "Vaughan (Elder Mills) station" at Rutherford Road and "Kleinberg station" at Major Mackenzie Drive. The Study also indicates that Route Option 4 using the CN Halton and York Subdivisions has yet to be reviewed by CN Rail. Based on this Feasibility Study, the potential ridership within the 2031 planning horizon is anticipated to be modest so rail service to Bolton is not contemplated in the next 15 years time frame.

The Feasibility Study focused on commuter type stations, however, an urban type station which has a lower cost to implement and uses up much less land was not considered. Metrolinx has indicated they will continue to work with the City and York Region to explore opportunities for additional stations along the corridor, which may include urban stations in the Villages of Woodbridge and Nashville. Metrolinx will also continue to develop the transit market by expanding GO services in the area and will work with other municipal partners to plan, fund, and build other higher order transit services.

Staff has reviewed the technical aspects of the Feasibility Study as it relates the City and is generally satisfied with its recommendations.

## **Attachments**

1. Bolton GO Commuter Line Route Options
2. Highway 407 Proposed Station Site
3. Conceptual Layout – Highway 407 (Woodbridge) Station
4. Rutherford Road Proposed Station Sites
5. Conceptual Layout – Rutherford Road Station (Alternative 1)
6. Major Mackenzie Drive Station Site
7. Conceptual Layout – Major Mackenzie (Kleinburg) Station

## **Report prepared by:**

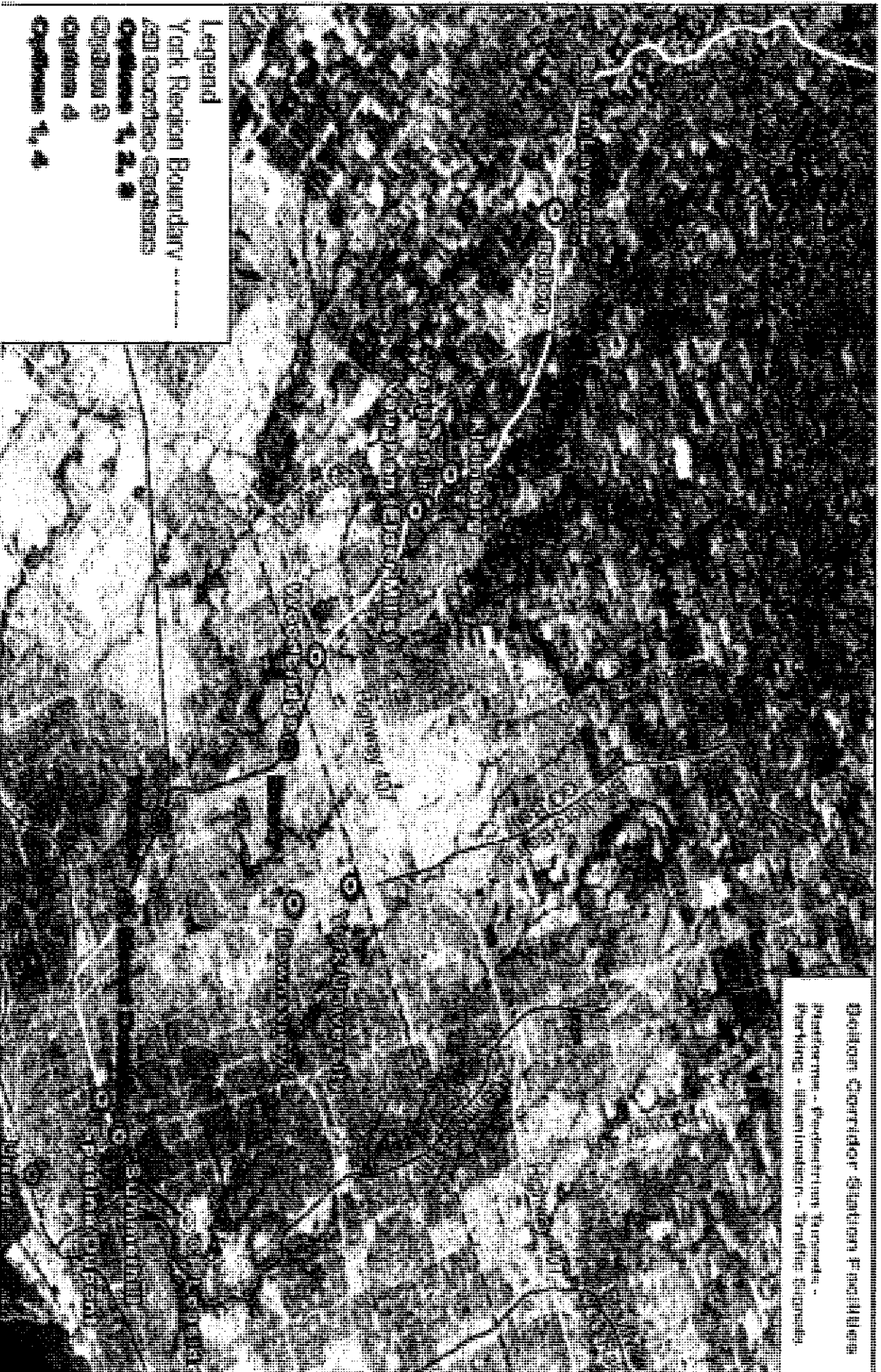
Mehrak Hakimi, Transportation Analyst, Ext. 8295  
Selma Hubjer, Transportation Engineer, Ext. 8674

Respectfully submitted,

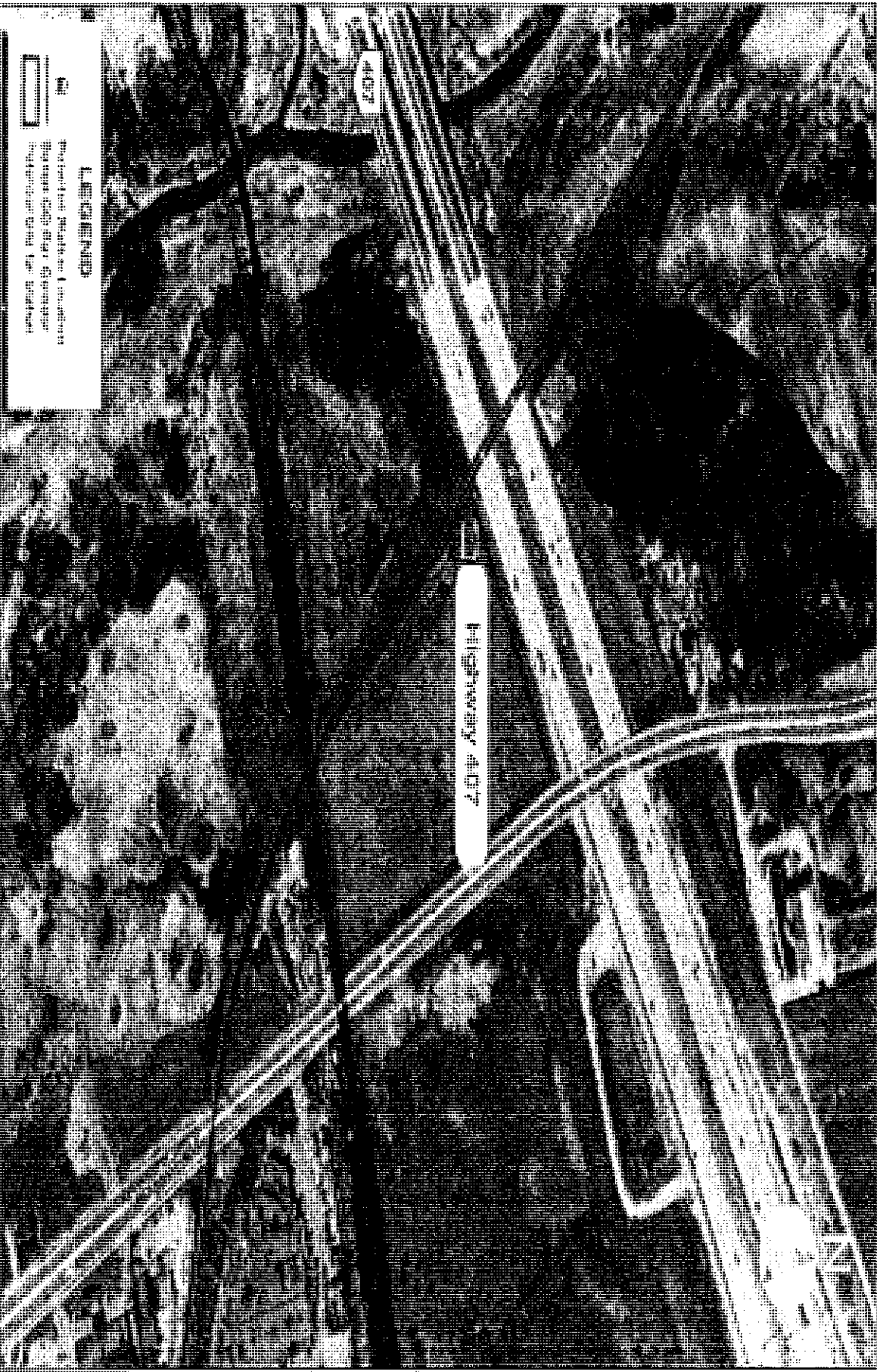
Bill Robinson, P. Eng.  
Commissioner of Engineering  
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Andrew Pearce, C.E.T.  
Director of Development/  
Transportation Engineering

# Bolton GO Commuter Line Route Options

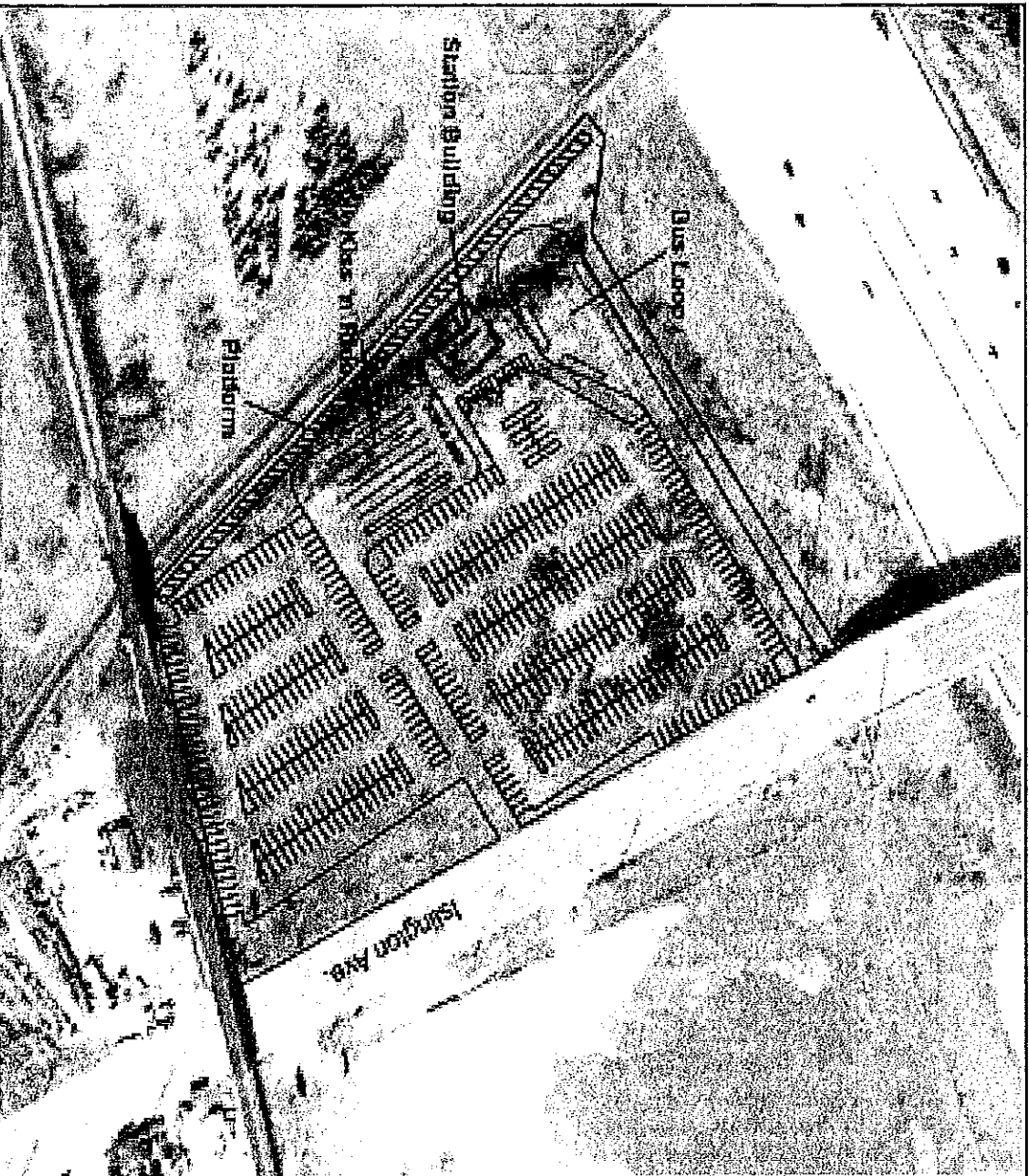


Highway 407 Proposed Station Site





### Conceptual Layout- Highway 407 (Woodbridge) Station

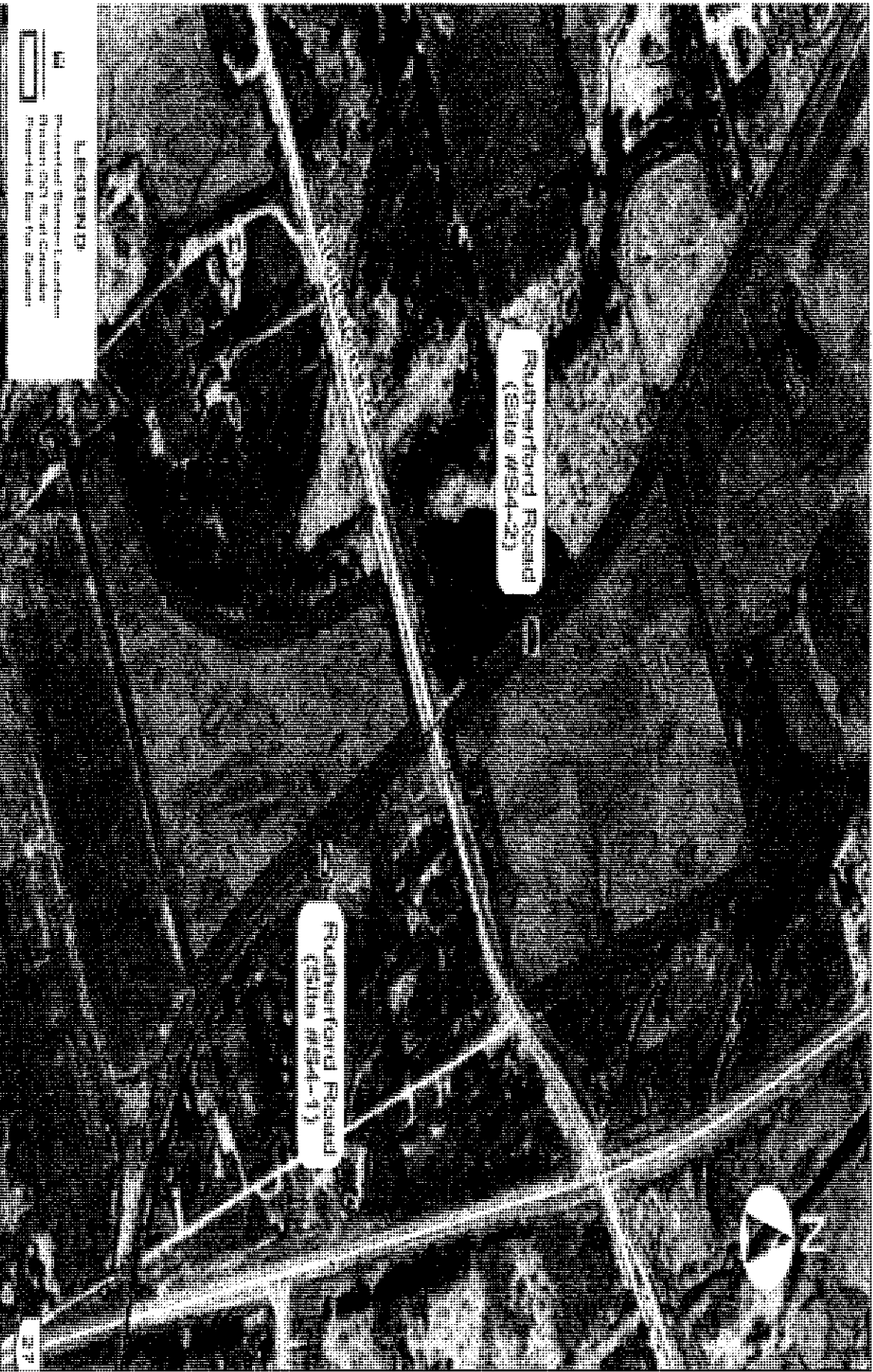


Ground Bird's Eye View

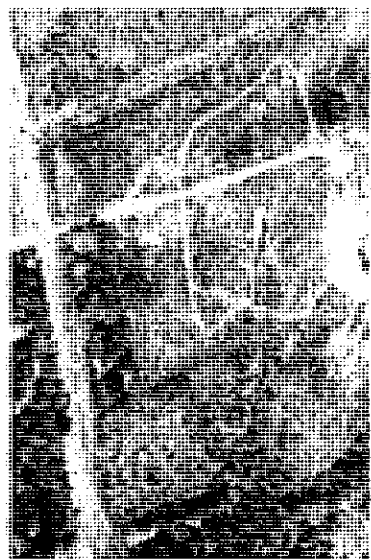
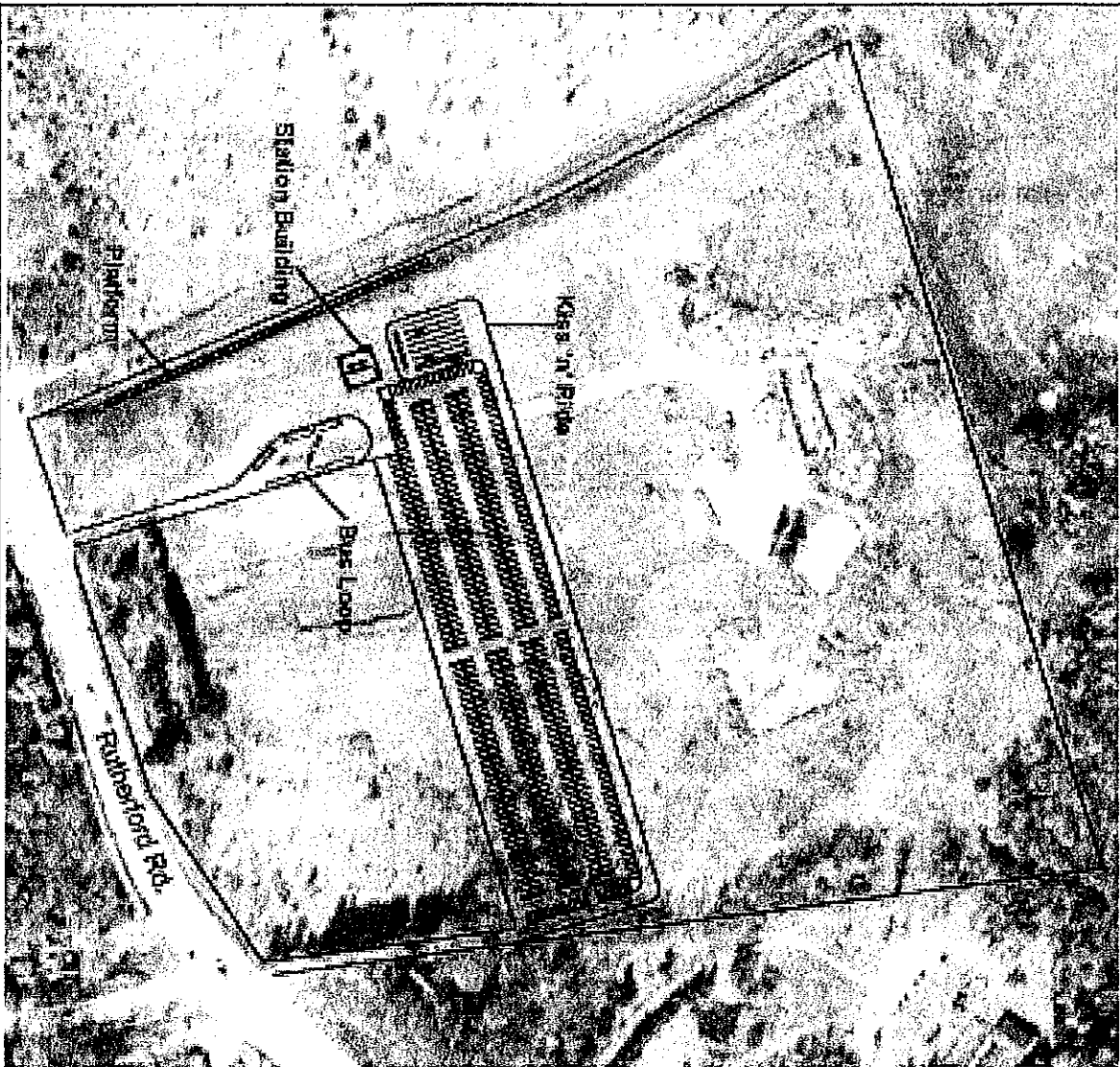
#### Noted Assumptions

- Scale - W 2.5m x 5.5m
- Platform Size - W 170m L 120m (8 Cars)
- Excavation Depth - Low way excavated 2m - 4m in 10m x 5m
- Platform Construction - Full concrete
- Building Footprint - 7000m<sup>2</sup>
- Station Access - Open - 1200m<sup>2</sup> for
- Station from Access - 100m
- Proposed Signage - 10000m<sup>2</sup>

### Rutherford Road Proposed Station Sites



## Conceptual Layout – Rutherford Road Station (Alternative 1)



Current Bird's Eye View

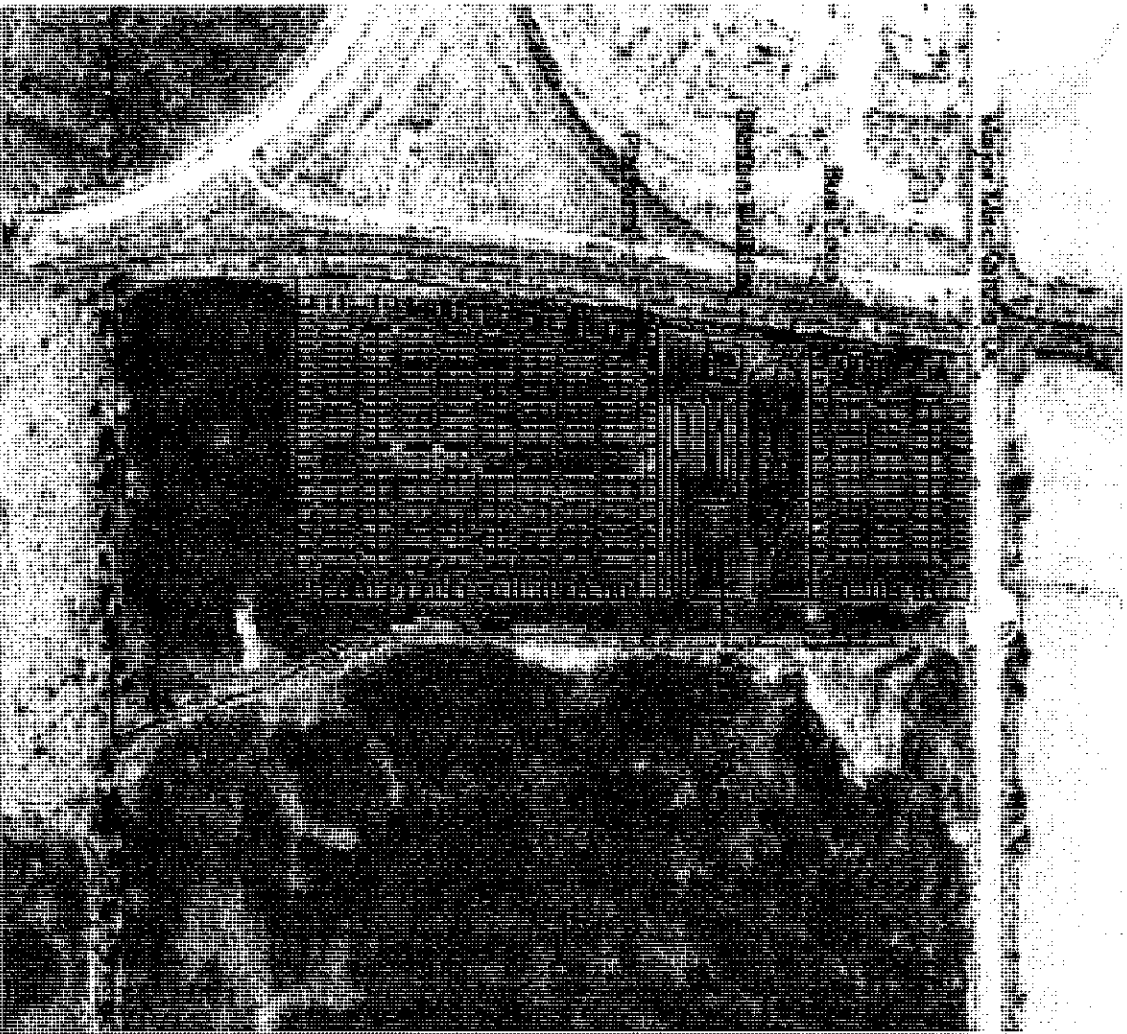
**Noted Assumptions**

- Size: 5.2m x 21.25m L x 5.5m
- Platform Size: 16.75m L x 1.75m (10 Cars)
- Construction Width: 16m way construction 7m  
• Kiosk at 16m x 2.2m
- Platform Orientation: E of track
- Bus Loop Footprint: 300m<sup>2</sup>
- Station Access from: Rutherford
- Distance from Access: 125m
- Proposed Signaled Intersection

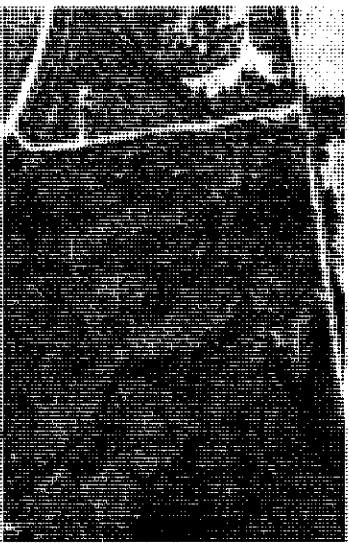
Major Mackenzie Drive Station Site



### Conceptual Layout- Major Mackenzie (Kleinburg) Station



**Current District East View**



**Major Assumptions**

- Garage - W 1,001 3.5m
- Parking 500 - W 1,001 1.0m (10 Cars)
- Centralized Washrooms - Two sets of 1000 sq. ft.
  - Kitchen 200 sq. ft.
  - Access to both major washrooms - 1400 sq. ft. of lavatories
- Building Footprint: 3,000 sq. ft.
- 30 meter Access from Major Maintenance
- Circle Drive from Access to 1000 1.0m
- Proposed Signalized Access to 1000 1.0m