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## **Turcot Interchange, manifesto for an appropriate design approach**

Major infrastructure projects in urban settings should always use a phased approach, in order to properly analyse and integrate solutions that aim not only at minimizing negative impacts but also maximizing positive effects, as well as procedures to correct errors of the past in the implementation of each phase.

The Government of Quebec, facing a nightmare of structural problems in its road network, recently announced a major project to reconstruct the Turcot Interchange. It is worth noting that this project is actually a series of smaller projects (1) rebuilding a part of the East-West Highway from Ville Saint-Pierre to the Turcot; (2) rebuilding another part from the Turcot to Greene Avenue in Lower Westmount; and (3) rebuilding the A-15 on an embankment halfway to the Champlain Bridge. With the Turcot proposal, we find ourselves with three half-projects instead of one project, properly done.

In the present brief, we have first attempted to identify the design criteria and considerations surrounding the need to intervene in the interchange. Secondly, we identify the urban requirements needed to establish what is at stake surrounding the project. Finally, three types of interventions will be elaborated based on experiences established in other cities.

### 1- Considerations surrounding the reconstruction of the Turcot Interchange:

1. The Ville Marie Autoroute is essentially a commuter expressway (used mornings and evenings by residents to commute between the home and the workplace). Incomplete, it was hastily built after the 1970 October Crisis and must now be degraded to a local run since it no longer forms part of the Trans-Canada-Highway (as is the case with the Parliamentary-Hill Dufferin-Montmorency Autoroute in Quebec City)
2. There are presently five (5) East-West Highways parallel to the waterways in the greater Montréal region.
3. Highway A--15, also constructed rapidly between April 1966 and April 1967 is actually the only cross-town expressway forming a Trans-Quebec road link. That link must be maintained to connect the regions of North-West Quebec (Laval, Laurentides, Lanaudière, Outaouais) to the economic cradle of South-Eastern Quebec including the New England States.
4. The advanced deterioration of the structural portion of the A-15 requires its immediate replacement.

5. The classification of A-15 as a national Highway requires expressway standards as inserting one or two stop lights would render this section incompatible with the rest of the expressway from the Metropolitan to the Champlain Bridge.
  6. Other peripheral links, as being projected by the GRUHM to diminish the dependence of A-15 are now blocked by urban political controversy. For example, the A-25 Bridge which was supposed to be a cross-island route has now become another commuter run because of the configuration of the access routes. In the same way, the Mercier Bridge is still not linked with the A-30 bypass road because of political bickering.
  7. Considering its secondary importance as an interchange between a national highway and a local run, the Turcot Interchange must not be seen as the heart of the road network in Montreal. The true center of this network is at the Decarie/Metropolitan interchange at the crossing of A-15 with A-40, that where the trans-Canada Highway crosses the Trans-Quebec route.
- 2- The design criteria for the reconstruction of the Turcot Interchange:
1. All interventions must eliminate physical barriers cutting up various neighborhoods and isolating them from other sectors of the city.
  2. All interventions must remain within existing right-of-ways without additional expropriations.
  3. Any intervention encouraging the reduction of individual vehicles for commuting must be implemented.
  4. Interventions permitting the addition of new public transport lines must be encouraged.
- 3- Particular steps to follow in the reconfiguration of the Turcot Interchange to diminish traffic counts from 280 000 vehicles per day in 2008 to 150 000 vehicles per day in 2020:
1. All interventions must permit the elimination of redundant local ramps. These ramps must not be rebuilt. (As an example, the ramps linking Ville-Marie to the southbound A-15 towards the Champlain Bridge are redundant as traffic coming from downtown would use the Atwater entrance to access the bridge.
  2. All interventions must permit the reduction of width of existing structures to permit the reduction in the number of lanes available for cars to allow the insertion of a Metro Express Line (dedicated mass transit) in the Ville Marie right of way.
  3. This Metro-Express line, originally proposed by GRU during public hearings on the Notre-Dame project in 2001, must form part of an overall view of the transport plan for Montréal.

4. A short term measure should also include a tram line running from Lachine to be linked up with the downtown network on René-Lévesque Boulevard.
  5. The number of lanes along the A-15 south of the Turcot yard should be diminished from 6 to 4 lanes to be compatible with the federal stretch, now at 4 lanes between the Atwater entrance and the Champlain Bridge.
- 4- Particular interventions on the A-15 to minimize intrusions in the Côte Saint-Paul neighbourhood and to permit the recuperation of the Cabot Sector:
1. The construction of the new A-15 between the Lachine canal and the de La Vérendrye interchange must be built underneath the existing structure, much like what is envisaged in the reconstruction of the Metropolitan Expressway. In this way, the new highway will remain in the existing right-of-way and avoids expropriations of adjoining properties.
  2. The expropriation or relocation of the Eddy Ecological Center must not be permitted considering the shortage of such installations.
  3. The reconstruction of the expressway must include the covering of this stretch of depressed highway. In essence, the highway must be tunneled between Eddy and Dunn Streets to allow for the planning of a park or community garden on top and to minimize noise pollution.
  4. Extra costs implied for this type of construction should be financed by road users (tolls or other user taxes) as these costs are directly attributable to the intrusion of highway in the city-landscape.
  5. This covering of the expressway should also apply on the entire stretch of the Decarie Expressway (A-15) from the Metropolitan to the Champlain Bridge.
- 5- Other interventions in the Turcot yards:
1. Conservation of the eastbound lanes in their existing right-of-way and reconstruction of the westbound lanes to the north.
  2. Develop the linear park on the St-Jacques escarpment including a foot base of 50 meters wide to the south of Pullman Street (15 hectares).
  3. Preserve the function of rail yards in Turcot to allow for repair, parking and maintenance of commuter and inter-city train equipment. These functions must remain in this location to liberate the Point from these nuisances.
  4. Limit the roadwork to a temporary splice at grade for the westbound lanes at Angrignon Boulevard to avoid interventions in the Montreal West/Ville Saint Pierre highway complex at this point in time.
  5. The Montreal West Ville Saint Pierre highway complex should be reviewed independently once the design parameters are known.

by Pierre Brisset, Architect,  
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