

EXPRESSWAY AESTHETICS Montreal in the 1960s

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In this paper I examine the Modern aesthetics of the urban expressway as it applies to the Turcot Complex in Montreal, built during the 1960s and early 1970s. The aesthetic value of the elevated expressway was understood in terms of its functionality, to ensure the smooth flow of traffic and the overall working of the city. The possibility of moving at high speeds was part of the aesthetic experience as it contributed to a new way of seeing the world. I argue that the Turcot Complex can be understood in terms of a functionalist aesthetics articulated in the urban theory of Blanche and Daniel van Ginkel of van Ginkel Associates, Montreal. I suggest that the phenomenological experience of the elevated expressway, when functioning as first designed, continues to express the positive qualities as articulated in the work of such perceptive theorists as Kevin Lynch in the 1960s. I compare the van Ginkels' approach with what I call the green aesthetics of today's approach to urban mobility in North American cities. Montreal is currently deciding on how to handle the deteriorating Turcot Complex and I look at some of the options being debated, including the levelling of the elevated system.

In postwar North America, the cross-town expressway was considered a tool to solve the mobility problems of dense intercity traffic. An example is the Montreal plan for an East-West Expressway of 1948 (fig. 1). Designed as a limited access route, the expressway was to function as a multipurpose traffic facilitator: for traffic decongestion in the downtown core, as a transportation network connecting the



FIG. 1. NETWORK OF TRAFFIC WAYS. AN EAST-WEST EXPRESSWAY, MONTREAL, CITY OF MONTREAL PLANNING DEPARTMENT, 1948. | CITY OF MONTRÉAL ARCHIVES SECTION.



FIG. 2. METROPOLITAN BOULEVARD. *URBAN TRANSPORTATION DEVELOPMENTS IN ELEVEN CANADIAN METROPOLITAN AREAS*, OTTAWA, CANADIAN GOOD ROADS ASSOCIATION, 1968, P. 10. | REPRODUCED WITH THE EXPRESS WRITTEN AUTHORIZATION OF THE TRANSPORTATION ASSOCIATION OF CANADA.



FIG. 3. METROPOLITAN BOULEVARD AT THE DÉCARIE INTERCHANGE. *URBAN TRANSPORTATION DEVELOPMENTS IN ELEVEN CANADIAN METROPOLITAN AREAS*, OTTAWA, CANADIAN GOOD ROADS ASSOCIATION, P. 10. | REPRODUCED WITH THE EXPRESS WRITTEN AUTHORIZATION OF THE TRANSPORTATION ASSOCIATION OF CANADA.

major sectors within the city, and as a city bypass route. For city planners, designing an urban expressway often meant choosing the path of least resistance by avoiding the dense core of the city and routing along the waterfront.¹ In the Montreal plan, a major advantage of a waterfront route was the non-interference factor. It was suggested that stable residential neighbourhoods, parks, playgrounds, churches, and shopping centres would not be affected by the new expressway. Although traffic relief was given top priority, other criteria included the possibility of shaping future development and importantly, eliminating blight in slum areas. The report stated:

By running through slums and blighted city blocks, construction will be less costly as regards land acquisition and will at the same time enhance the value of the adjacent areas. If the expressway is conceived along those principles, it can aid in urban rehabilitation, without impairing its primary function of meeting predetermined traffic needs.²

Thus the expressway plan was threefold: it was necessary for traffic control, for opening up new development, and for urban rehabilitation. The expressway would have to fit with the existing arterial system and geographic elements of the mountain, the river, and the Lachine Canal system. It could not interfere with existing stable neighbourhoods, but was seen as ideal for “blight” removal. Primary, too, was the enjoyment factor of driving, by “insuring [drivers] the freedom of movement necessary to make Montreal a pleasant city in which to live and work.”³ The emphasis placed on expressway planning as a tool for rehabilitation would result in major demolitions of functioning neighbourhoods when the plan was implemented as the “Lalonde and Valois Plan” (1959).

By the 1950s the automobile was seen by certain critics as the great destroyer of cities. Accommodating the car in the city through the creation of major road systems had destroyed many essential urban qualities, including human scale

and continuity, and had led to urban sprawl, in the form of ribbon development and monotonous suburbs. The Team Ten members of the Congrès international d’architecture moderne (CIAM) began working on a theory of mobility in which the urban expressway would be lifted from its ameliorative function to a unifying function, both visually and symbolically, to make the form of the city comprehensible, while ensuring the smooth functioning of the traffic network.⁴ In 1960, Team Ten members Blanche and Daniel van Ginkel were hired as consultants in the Montreal Department of Planning.⁵ Drawing on the theory of structuralism and the space-time theory of Sigfried Giedion, they developed an aesthetics of mobility based on the positive aspects of the urban expressway as an art form, and as an essential unifying element of the parts of the city to the greater whole. They developed an aesthetics of the city based on two scales of movement, the scale of the pedestrian and the scale of the automobile. Their theory can be understood, within the

context of the van Ginkels' rerouting of the East-West Expressway plan, designed by Lalonde and Valois.

That plan was for a modern, elevated, and minimum-access expressway that would complete the existing form of the modern expressway network already under construction by then. This included the Metropolitan Boulevard, the elevated freeway that would open in 1960, as the Montreal portion of the Trans-Canada Highway (fig. 2). The Metropolitan was connected with the Décarie Interchange, an elevated cloverleaf structure also under construction to freeway standards (fig. 3). The Décarie Boulevard that would eventually open in 1966 would continue south as a below grade route that would be integrated with the Turcot Interchange and eventually with the Champlain Bridge. The Lalonde and Valois study proposed the major east-west route across Montreal and an interchange with the Décarie, and the Champlain Bridge. The Champlain Bridge was also under construction according to plans by Lalonde and Valois, and would open in 1962. Finally, according to the 1948 plan for an East-West Expressway, the elevated expressway would be routed along the harbourfront. When the Lalonde and Valois plan was introduced to the public in 1960, the van Ginkels identified three major problems.⁶ First the expressway would be elevated over Commissioner's Street, the harbourfront road, effectively cutting the city off from the waterfront. Secondly, much of the old city, including significant historic buildings, would be demolished for the inclusion of the expressway entrance and exit ramps. Finally, many residential neighbourhoods and small businesses would be destroyed.⁷ The Lalonde and Valois plan proposed that demolition would displace one thousand four hundred and fifty-six families, thirty business,

and twenty-seven industries. Much of the surrounding land would be changed to parking lots and green-space, or rezoned for industry.⁸ The Lalonde and Valois plan reflected the Montreal Plan of 1948 in its approach to urban rehabilitation through the clearance of "blighted" areas. The proposal to replace communities with parking lots and green spaces amounted to a "sanitization" of the urban environment that was current in postwar planning.⁹ The van Ginkels proposed a new route that they thought would be less disruptive of the city form. They believed that the construction of the East-West Expressway was inevitable, but that it was possible to design with the automobile in a way that would add aesthetic value to the city. That would require an aesthetics of mobility.¹⁰

The van Ginkels drew on Sigfried Giedion's space-time concept in his aesthetics of the American Parkway system of the 1930s. For Giedion, the beauty of the Parkway was expressed in the construction of the motorway for uninterrupted movement. In the theory of functionalism, beauty arises in aesthetic judgment according to the fitness of the object to its purpose or use—in the case of the Parkway, that is mobility. Giedion argued that the driver experiences aesthetic value in movement. In terms of the Parkway, it is not the construction as abstract sculpture that is the object of appreciation, although sculptural forms are aesthetical from a single point of view. The aesthetic experience arises from the kinaesthetic effect of moving over the surface of the road, and seeing in movement. The automobile driver gains a new freedom to control speed, and the aesthetic experience is revealed by movement as space-time feeling. The Parkway is a space-frame construction allowing for the pure enjoyment of nature. The road rises and falls in imitation of the landscape and is almost



FIG. 4. WEST SIDE DEVELOPMENT INCLUDING HENRY HUDSON PARKWAY, 1934-1937. | NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION.

indistinguishable from the land itself. Devices such as centre garden strips camouflage oncoming cars and the driver is liberated by the total sense of freedom from interruptions to the smooth flow of movement by light signals and cross-traffic. As such, the experience is exhilarating as if hovering above the graceful sweeping grades of the Parkway, but at the same time, grounded. However, the Parkway was not meant to penetrate the city, only follow along its edges (fig. 4).¹¹

In a special issue of *Canadian Art* (1962) dedicated to the automobile, the van Ginkels explored the idea of space-time as it applied to expressway design in the urban environment and beyond. Their theory depended on the acceptance of the automobile as part of the modern city, not something to be routed to the edges. The solution was



FIG. 5. THE CITY AS A VISUAL ENTITY. H.P.D. VAN GINKEL, 1962, "DESIGN WITH THE AUTOMOBILE: THE CITY," *CANADIAN ART* 77, VOL. XIX, NO. 1, P. 45. | JOHN REED.



FIG. 6. SCULPTURE, BY MAX BILL. BLANCHE VAN GINKEL, 1962, "DESIGN WITH THE AUTOMOBILE: THE LANDSCAPE," *CANADIAN ART* 77, VOL. XIX, NO. 1, P. 57. | HUGO P. HERDEG.

to understand the aesthetic value of the expressway as an object of beauty, and its potential to act as a unifying element in the city. In their view, the automobile had contributed positive aspects to society, including the value of moving at high speeds, which allows for a particular psychological experience for the driver in terms of kinaesthetic and visual experience (fig. 5). The van Ginkels argued that driving in the automobile conditions what we see and how we see in our everyday experience of the world. Traveling at high speeds creates new visual images of place in time, allowing one to understand the form of the whole city or region. As one moves rapidly, images are received at a high frequency and are superimposed in the mind's eye to form a composite image. As Lemco van Ginkel explained, this new excursion into space-time by way of the expressway allows us to realize the true dimensions of our relationships in our visual environment. It increases our understanding of the

totality of our environment. The automobile is a tool for transportation, leisure and play, but more importantly, it is a stimulus for the creation of new forms of aesthetic merit.¹²

Lemco van Ginkel included the sculptural form of the elevated expressway itself as contributing aesthetic value to the landscape. Since movement is essential to the appreciation of a three-dimensional composition, both sculpture and expressway construction must be experienced in movement. Sculpture can be seen only by moving around the object while the landscape can be seen only by moving through it (fig. 6). A three-dimensional composition, by the nature of the space it defines, creates forces of movement. The early Parkway planners integrated the motorway with the landscape, in an attempt to camouflage the presence of man and machines. However, there is both the landscape of the natural world and the man-made landscape—each with

its own aesthetics. The van Ginkels argued that designing with the automobile means designing with its own scale of speed. And the elevated expressway is especially appropriate to an aesthetics of mobility (fig. 7). Drawing on such examples as the Sandöbron approach trestle, Sweden, Lemco van Ginkel noted that the elevated expressway leaves the ground and its natural features undisturbed. And in certain terrain, the elevated roadway is functionally necessary. She states:

If the road is carried on a structure that has a minimum contact with the ground, the terrain may flow freely below it. In this case, there is play between the artificial and the natural, the smooth mechanism of the one contrasted between the softness or roughness of the other. Treated this way, the structure may become a sculptural element in the landscape, enhancing it in much the same way as does a statue in parkland¹³. (fig. 8)



FIG. 7. THE ROAD IN COUNTERPOINT WITH THE LANDSCAPE. SANDÖBRON APPROACH TRESTLE, SWEDEN. DESIGN BY SKANSKA CEMENTGJUTERIET, 1938-1943. BLANCHE VAN GINKEL, 1962, "DESIGN WITH THE AUTOMOBILE: THE LANDSCAPE," *CANADIAN ART* 77, VOL. XIX, NO. 1, P. 56. | G.E. KIDDER SMITH.



FIG. 8. TURCOT INTERCHANGE, 2009. | PIETER SUPKES.

The final idea is that of the articulation of two scales of movement in the city: the scale of the automobile and the scale of the pedestrian.¹⁴ The ideas expressed were realized in the Central Area Circulation plan of 1961.

In the van Ginkels' plan, the destructive elements of the automobile would be controlled in two ways. First, the East-West Expressway would be built in a route separated from the residential areas slated for demolition in the Lalonde and Valois report.¹⁵ Freed from the ground, the elevated expressway would hug the terrain of the Saint-Jacques escarpment that created a natural break in the urban form. Constructing the route adjacent to the railway meant that disruption of the existing city pattern could be avoided. Secondly, as the land naturally rises toward the downtown, the expressway would continue underground and thus

leave the central core intact, rededicating the "heart of the city" as a pedestrian area. The plan was to encourage pedestrian movement and the use of public transit at the city centre. The van Ginkels proposed a multilevel pedestrian system throughout the central area, Centre Hochelaga. It would be part of the total circulation system of the city connecting the different concentrations of land use and emphasizing three levels of pedestrian circulation: above ground, at ground level and below ground. They recognized that the terraces that arose from the river suggested a three-dimensional quality that they wished to make more apparent in the city form. Centre Hochelaga would be a traffic hub for all public transportation systems in the city: the metro, central rail, bus lines (both rapid and distant), and a proposed airport transit line. Focusing on public transit would reserve the city centre for pedestrian use. The

underground level would connect with the subterranean pedestrian system of the new commercial district on Sainte-Catherine Street, and the financial district. Most importantly, a ground-level pedestrian system would be developed to reconnect the city centre with the human scaled streets of the old city. It was this level that would allow for the complete sense of community at the centre core. Their purpose was to reconnect the old city to the new downtown and re-establish it as a working part of the total city.¹⁶

The Central Area Circulation Study established the new below ground route for the East-West Expressway through the downtown core, thus sparing the old city. However, the van Ginkels' plan for the expressway to run along the Saint-Jacques escarpment to avoid massive demolition was not followed. The process of demolition was undertaken from 1965 to 1970



FIG. 9. CAZELAÏS STREET, THE TANNERY VILLAGE, 2009. | MARGARET E. HODGES.



FIG. 10. PROTEST ON CAZELAÏS STREET, 2009. | MARGARET E. HODGES.

through the Canadian National (CN) right of way in the Turcot Yards and through Saint-Henri neighbourhoods (fig. 9). In addition, a second elevated expressway, the Bonaventure, was built along the remainder of the shoreline as a connection between the downtown and the Champlain Bridge, effectively cutting off the city from the waterfront. This foiled the van Ginkels' plans for a green waterfront development and the revitalization of Griffintown.¹⁷

Much of the network of elevated expressways was completed in time for the opening of the Universal Exposition in April of 1967 (commonly referred to as Expo '67), for example the Turcot Interchange.¹⁸ The East-West Expressway as it evolved from the 1959 Lalonde and Valois plan expressed an image of the space-age mobility of the automobile. The smooth curving forms of white concrete of the Turcot Interchange suggested a futuristic and experimental aspect that blended well with the international and national architecture of the Expo pavilions. A most memorable image on the eastbound lanes of the viaduct is the tangle of looping interconnection of the Turcot Interchange design. The effect is always interesting in

that it gives one the sense of the futuristic vision that the visitors to Expo '67 must have experienced as they approached the modernist monoliths of soaring white concrete. Professor Pieter Sijpkens, of McGill University, described the effect of the Turcot Interchange as he drove over it late on opening day, in 1967: "The Turcot Interchange looming high above the black landscape on its one hundred-foot stilts, lit by two parallel, continuous bands of built-in fluorescent lights, fit very well into this brave new world."¹⁹

The ramps for the proposed Autoroute Ville-Marie were also constructed by 1967, but the Ville-Marie Expressway section, from the Turcot Interchange to the city core, would not be completed until 1970. The two-and-a-half-mile-long section of the Ville-Marie running through Saint-Henri involves two elevated carriageways built as split-level viaducts. The westbound lanes are built nine to eighteen feet above the eastbound lanes. Toward the Turcot Interchange the westbound lanes are cantilevered over the eastbound lanes. Thus, when driving west, one is unaware of the lower levels of the expressway. It is not possible to imagine what the built environment is like below this section.

Writing in the 1960s, Kevin Lynch suggested that one of the most memorable forms in the city is when extensive views are made possible by an elevated portion of a freeway. For example, a raised view can allow for a panoramic vista over the city. A sense of emotional delight arises from the wide visual sweep that is a staple of expressway driving.²⁰ This is the kind of experience that is possible from the high westbound lanes where the bird's eye view over lower Montreal is exhilarating. The expressway succeeds as a high functioning traffic distribution system allowing for an uninterrupted flow. The expressway sends vehicles to the left for the Saint-Jacques connection and again left for the Décarie connection, and then to the right for the Champlain Bridge connection. Under ordinary circumstances this system is rarely blocked with traffic and it is possible to attain a high speed in this section while leaving the city. Lynch noted: "Observers are impressed, even in memory, by the apparent "kinaesthetic" quality of the path, the sense of motion along it: turning, rising, falling. Particularly is this true where the path is traversed at high speed [...] Tactile and inertial senses enter into this perception of motion, but vision seems to be dominant."²¹ After



FIG. 11. DIXIE HIGHWAY (STATE HIGHWAY 805), WEST PALM BEACH, FLORIDA, 2010. | MARGARET E. HODGES.



FIG. 12. CLEMATIS STREET CIRCLE, WEST PALM BEACH, FLORIDA, 2010. | MARGARET E. HODGES.

experiencing this sweeping view and high speed, one gradually descends onto the grade-level roads that run parallel to Turcot yards. Here the view is one of the ascension of the Angrignon Interchange that is also part of the proposed levelling process. It is here, when traffic joins in the grade-level stretch, that traffic becomes a problem at rush hour, due to the traffic stops at the Angrignon Interchange. On approaching the centre, the effect of the cantilevered westbound viaduct first hides, then reveals the view to the city centre. Suddenly the city centre landmarks come into view, which is an exciting experience if the traffic is moving at a rapid pace. Today, however, the aesthetic value of the expressway is often marred when the expressway cannot function at normal speeds due to the overburdening of vehicles. According to recent statistics, as many as two hundred and eighty thousand vehicles use the Turcot Interchange daily.²² The expressway has become inefficient, unhealthy, and dangerous.

In 2007, Transport Quebec announced that the Turcot Complex would be demolished and rebuilt at grade-level or on embankments. The Turcot Complex includes the Turcot Interchange, the De La Vérendrye,

Angrignon, and Montreal-West interchanges, and sections of Autoroutes 20 and 720 (the Ville-Marie). The new green boulevard (placed on embankments), replacing Autoroute 20, and the Canadian Pacific Railway (CPR) tracks will be constructed further north toward Pullman Road. This new location is the approximate location that was proposed by the van Ginkel plan for the placement of the elevated East-West Expressway, close to the Saint-Jacques escarpment. Transport Quebec argued that this move will open up the former rail yard property for future development. After the construction of the new highway, it will take several more years to demolish the old expressway.²³ Transport Quebec's plan has met with public dissatisfaction. The surrounding neighbourhoods will be affected by at least six years of construction. Excessive levels of dust and noise will be produced during this period. Unlike the raised structures of the East-West Expressway, the ground level system will have a more immediate impact on the environment.

Today, as cities seek ways to meet Kyoto levels, a "green aesthetics" is the most likely approach to gain public approval. There is a movement across North America

toward removing freeways and restoring cities for pedestrians and bikers. In many cities this involves proposals for lowering expressways to green embankments, decreasing expressway sizes, as well as rejoining cities to their waterfronts by the levelling of expressways.²⁴ A green aesthetics in terms of mobility also means adding public transit and bike paths to the transportation scheme. The Transport Quebec plan for the new Turcot Complex appears to exemplify such a green aesthetics, as illustrated on Internet with pictures of beautified, manicured, green spaces and bicycle paths. For example, in two images, the Saint-Jacques escarpment is revealed in its current natural state and after, as a manicured landscape with people happily using a bike trail. Similar images show a location off De La Vérendrye, Rue de Roberval, an area that was sheared off by the building of the East-West Expressway. The current landscape appears deserted and damaged. It is revealed beside a photomontage of a landscaped embankment and people happily walking in the area.²⁵ But the images of the greened spaces are reminiscent of the 1959 planning approach of Lalonde and Valois to eliminate blight and replace it with visually

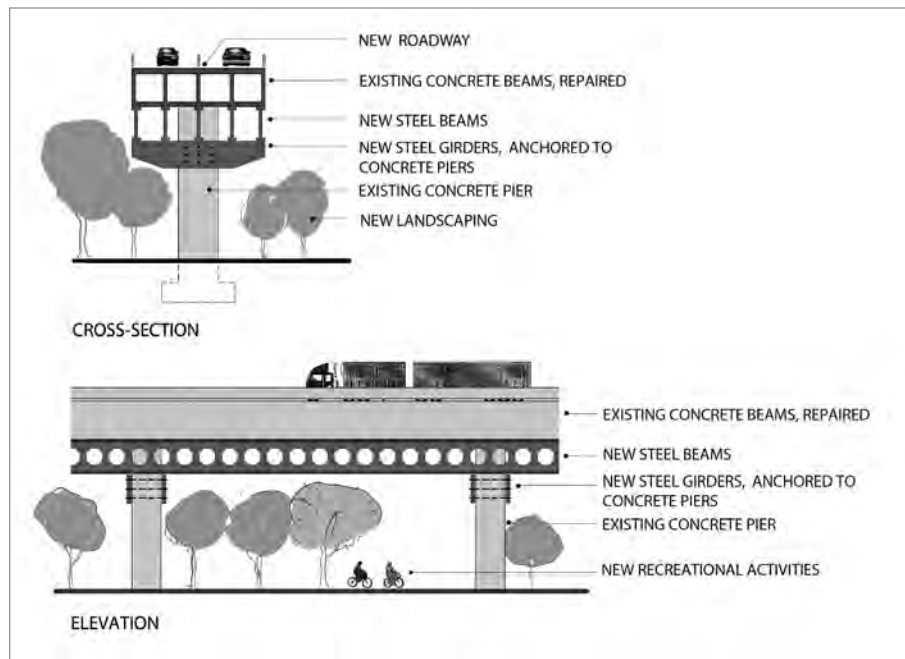


FIG. 13. TURCOT INTERCHANGE 2, 2009. | PIETER SUPKES.

“sanitized” green landscaped areas. The plan does not represent a true green aesthetics. What becomes clear is that the green embankments do not contribute to a healthier environment as they fail to reduce the number of cars that will use the Turcot. One of the main objectives of the Transport Quebec plan is to maintain the current vehicle capacity, and, in fact, to increase it, but now at ground level or on embankments, which will increase the amount of traffic noise and pollution in local neighbourhoods. The Transport Quebec plan also involves more demolition in neighbourhoods, such as along the north side of Cazalais Street, where citizens carried out a series of protests, to no avail (fig. 10). The street is part of the historic Tannery Village that was partially demolished during the original construction of the East-West Expressway, and now will lose one hundred and sixty units of rare affordable housing very close to downtown for the levelling of the Turcot Interchange.²⁶

American traffic experts Paul Moore and Ian Lockwood have suggested that the solution to the Turcot involves the reduction of traffic by the creation of a road system that is greatly reduced in scale. They argue that the adjacent neighbourhoods, such as Saint-Henri, will best be revived with the design of a system of city streets and roundabouts. For example, in Atlanta, home of Paul Moore, freeways that have divided and polluted the city for decades are being replaced with smaller, pedestrian-scaled streets and bicycle paths. Lockwood, an Orlando (Florida) planner, suggests that major highways should stop at the limits of the city. They were never meant to be city-systems. He states that the highway is about long trips and speed, while the city is about short trips and access.²⁷ In his plan for the rehabilitation of West Palm Beach (Florida), Moore began with the premise that “place” should trump speed and service. Rather than the 1950s era concept of undoing congestion in the inner city,

the expressway only brings in more cars and discourages the use of public transit. Lockwood celebrates congestion in the city as it inspires new means of public transit.²⁸ At West Palm Beach, decades of road construction and street widening had resulted in a system that catered to heavy north-south traffic flow and destroyed the pedestrian value of the downtown and surrounding neighbourhoods. Many main roads were actually narrowed, and complicated with roundabouts, with the goal of eliminating through traffic and creating more “walkable” spaces for the pedestrian. A new Downtown Master Plan was devised to introduce traffic calming measures, improve the street environment for business and pedestrians, and to create aesthetic value.²⁹ As Lockwood explains, Dixie Highway (805), a hostile commuter route from the north, was reduced to two lanes through the downtown (fig. 11). Olive Boulevard (Federal Highway 1), a hostile commuter route from the Fort Worth suburbs, was reduced from five lanes to two lanes, and landscaped with street trees and decorative lighting. Street parking was returned to the downtown area. As a result there has been a revitalization of shopping in the heart of the downtown. Clematis Street was a one-way three-lane street with two parking lanes. It is now a two-lane two-way street that has been transformed into a high pedestrian and shopping area including a public library, a plaza, and streetscaping that enhances the aesthetic value of the downtown (fig. 12).³⁰ The effect of this redevelopment is of a traffic calming blanket in the heart of the downtown, creating a harmonious relationship between cars and pedestrians.

In terms of the Transport Quebec plan to level the Turcot Complex, Lockwood and Moore have suggested that the Turcot Complex be replaced with a series of city streets and roundabout systems,

thus discouraging through traffic. Such development could occur by having cars exit off Highway 20 near Ville Saint-Pierre, and routing traffic along a system of streets in commercial, retail, and residential areas. The Lachine Canal could be fully developed for leisure activities with parks and walking paths, and they suggested the unearthing of the river under the Turcot Yards. As in West Palm Beach, traffic calming techniques would ensure a resurgence of investment in these areas. Finally, they suggested that the Harbourfront Commission's plan to level the Bonaventure Expressway is a sound one and that the elevated expressway should be replaced with a system of city streets.³¹ Lockwood and Moore's suggestions are attractive, especially in the case of the levelling of the elevated Bonaventure. The inclusion of pedestrian-friendly streets in this area would enhance the overall environment and is reminiscent of the van Ginkel plan for the revitalization of Old Montreal, Griffintown, and the Lachine Canal. However, one wonders if they solve the problem of traffic in the city. As reported by Andy Riga, Lockwood and Moore suggest that the approximately two hundred and eighty thousand vehicles would be dispersed throughout the neighbourhoods along the Turcot Complex, at low speeds, allowing for the demolition of the elevated expressway. Eventually, many drivers would shift to other means of transportation, including public transit, bicycling, and walking. Residential and commercial properties would be saved and the neighbourhoods enhanced through new investment stimulus. Suburban sprawl would be reduced as more people would be attracted to the convenience of urban living.³² It could be argued that this inner road dispersal system will function efficiently with numerous paths to distribute the body of east-west traffic flow to the downtown. For example, at West Palm Beach, South

Sapodilla Avenue and Tamarind Avenue to the west of the downtown have been maintained as commuter routes, although speed has been reduced by the introduction of roundabouts and streetscaping in residential neighbourhoods. These routes carry trucks to inner city areas, however the major truck routes are multi-lane expressways such as the I-95 that skirt the inner city neighbourhoods. In Montreal, it seems that only the projected Autoroute 30, the south shore bypass road, could assist in this task, combined with the introduction of rapid transit to the areas off island and parking lots to keep the cars off the island. These are projects that will take years to complete.³³

Pieter Sijpkes is one of the few proponents of repairing the Turcot Interchange for permanent use, through the addition of structural arches built below the expressway. He rejects the demolition of the Turcot Interchange as too costly and environmentally damaging. Illustrations of his system also suggest an aesthetically appealing solution (fig. 13). Supporting the raised expressways may be the best solution, if combined with improving the adjacent areas with green space and bike paths. At about one half of the cost of the proposed Transport Quebec plan, there would be more money to invest in public transit and pedestrian and bike paths throughout the city.³⁴ Rehabilitating the Turcot Complex would allow time for the development of a rapid transit system beyond the island to encourage public transit use from the suburbs. With the elevated expressways restored, the Turcot Complex would regain some of its original aesthetic value. And, with the reduction of vehicular use, the expressway could regain its original functional quality.

If a system of inner city commuter routes were developed in conjunction with a rehabilitated Turcot Complex, this would

have the potential of producing an overall traffic calming effect within the city of Montreal. The approach would result in a substantial reduction in the projected cost of the Transport Quebec plan. Thus, a much greater monetary investment in the public transit system would be possible. Also, the environmental cost would be reduced if the Turcot Complex is not demolished. Rehabilitation would contribute to a true green aesthetics, more than simply a visually sanitized environment that is in reality given over to commuter purposes. Finally, the Transport Quebec plan to lower the elevated expressway onto green embankments, closer to the Saint-Jacques escarpment, would effectively destroy one of the most important natural areas of the city. The most positive aspect of the elevated expressway system is that it leaves the natural landscape of the Saint-Jacques escarpment untouched. The escarpment is an area of approximately four kilometres in length that is ideal for the development of parklands and walking trails.³⁵ It is in the interest of the city to develop whatever existing natural areas and water areas for the enhancement of inner city living that will truly add aesthetic value, and environmental health. In addition, the development of the existing system of inner city roads would revitalize the neighbourhoods that border the Turcot Complex. Attractive neighbourhoods could assist in reducing the loss of families who seek the suburbs to find comfortable living environments, and they could bring people back to the city. As in the van Ginkels' conception, this is designing for two scales of movement, the scale of the pedestrian and the scale of the automobile, with a harmonious relationship between the automobile and the pedestrian at the smaller scale. By rehabilitating the Turcot and reducing traffic flow, two scales of movement can be maintained in the city.

NOTES

1. See the plan, *An East-West Expressway, 1948*, Montréal, City Planning Department. The plan was the culmination of studies for a Master Plan (1944) and parking surveys from 1945 to 1947. American interwar highways were illustrated as models, for example New York and environs, including Major Deegan Boulevard, Triborough Bridge, Henry Hudson Parkway and Interchange, the Lincoln Tunnel and Gowanus (Brooklyn). Other models included Lincoln Park, Chicago, Hollywood Parkway, Los Angeles, and the Slussen, Stockholm (today under redevelopment).
 2. *Id.* : 18.
 3. *Id.* : 19.
 4. Smithson, Alison and Peter, 1967, *Urban Structuring*, New York, Reinhold Publishing, p. 50-51. Theories of "mobility" and "change" were developed by Team Ten members determined to improve on the ideas of the older CIAM generation. Their ideas involved the theory of structuralism and sociologically informed planning. Members, including Aldo van Eyck, Daniel van Ginkel, the Smithsons, and Blanche Lemco (later van Ginkel), shared ideas and developed concerns for "human associations." Team Ten thinking evolved into the theory of "urban identification."
 5. In 1960, the van Ginkels were hired by Claude Robillard, planning director, to act as consultants in the reorganization of the Planning Department. See Canadian Centre for Architecture (CCA) Archives, File 27-A17-02, Letter to Edmond Bacon, City Planning Commissioner, Philadelphia, Pa., from Blanche van Ginkel, August 14, 1962. Daniel van Ginkel was a founding member of Team Ten in 1956. He was a younger member of the Dutch CIAM and collaborated with Aldo van Eyck on the design of the New Town, Nagele, in Holland. They and the younger English members of CIAM, such as Alison and Peter Smithson, formed Team Ten at the Dubrovnik CIAM 10. Blanche Lemco initiated the Philadelphia CIAM Group for Architectural Investigation in 1951. She met Daniel van Ginkel at the 1953 CIAM 9, Aix-en-Provence. She contributed to CIAM 9 and CIAM 10 and, with Daniel, presented the Design for Bowring Park, Saint John's, Nfld., at CIAM 11, Otterlo. As such, the van Ginkels were instrumental in introducing ideas that were essential to aligning the Montreal Planning Department's procedures with international trends. See Hodges, Margaret Emily, 2004, *Blanche Lemco van Ginkel and H.P. Daniel van Ginkel: Urban Planning*, Ph.D. dissertation in art history and communication studies, Montreal, McGill University.
 6. The Lalonde and Valois plan was illustrated in *The Gazette* (Montreal), March 25, 1960. There was no public consultation process in the postwar period. When the East-West Expressway was announced to the public in the Montreal news, the destructive aspects of the access ramps were not illustrated and the public remained unaware of the dramatic changes that were being proposed. The van Ginkels expressed their concerns to Michel Chevalier, secretary of the Port Council, and they were commissioned to complete a study of the Port that argued against the elevated expressway along the harbour, claiming that it would hamper trucking operations. Their major concern, however, was to save the old city from demolition.
 7. See Simard, Jacques, H.P. Daniel van Ginkel, and Blanche van Ginkel, 1960, *Preliminary Port Study for the Montreal Port Council*, Montreal, Montreal Port Council, p. 1-43.
 8. CCA Archives, File 27-A11-04, Montreal Port, Digest of Reports, Lalonde and Valois, 1959, *Autostrade Est-Ouest*.
 9. Montreal was involved in several projects concerning slum clearance by the 1950s. Examples include the Dozois Report of 1954, which resulted in the clearance of 19.7 acres downtown for the development of the Jeanne-Mance Housing project (1956-1958), and the clearance of approximately 24 acres for the building of the Canadian Broadcasting Corporation in 1958, which displaced approximately 200 families. Both of these areas were considered "blighted."
- Note: The van Ginkels were particularly concerned with the negative impact of harbourfront expressways on cities such as New York and Toronto. Such expressway designs had the effect of severing the waterfront from the city. In her theory of urban identification, Lemco van Ginkel compared the urban landscape to a great fabric that needed to be woven together through planning, not divided by expressways.
10. Daniel van Ginkel began to develop his theory of two scales of movement in the city as early as 1957 in his proposal for a study on the place of the child in the city. He approached Ian McHarg at the University of Pennsylvania concerning a publication in collaboration with Aldo van Eyck. See CCA Archives, File 27-A47-03, Letter to Ian McHarg, May 3, 1957; see also CCA Archives, File 27-A47-03, Daniel van Ginkel, notes for *The Child in the City*. The van Ginkels articulated their theory of two scales of movement, one for the automobile and one for the pedestrian, in numerous articles. They suggested the idea of the car as "mechanized man" and the pedestrian as "unmechanized man." Of particular importance to this paper is the special 1962 issue of *Canadian Art* 77 dedicated to the automobile. Blanche was guest editor of the issue and both of the van Ginkels contributed an article. Several of Blanche's writings concern the movement of the pedestrian in the city. She developed a space-time theory of movement as it applied to the pedestrian. For example, see "The City Centre Pedestrian," *Architecture Canada*, Journal of the Society for the Study of Architecture in Canada, 1966, vol. 43, no. 8, p. 36-39.
 11. Giedion, Sigfried, 1963, *Space, Time and Architecture: The Growth of a New Tradition*, Cambridge, Harvard Press, p. 727-736. This author based his idea of the motor-way as space-frame construction on the Cubist concept of fragmented seeing represented in painting.
 12. van Ginkel, Blanche, 1962, "Editorial," *Canadian Art* 77, vol. XIX, no. 1, p. 19.
 13. van Ginkel, Blanche, 1962, "The Landscape," *Canadian Art* 77, vol. XIX, no. 1, p. 55.
 14. See van Ginkel, Blanche, 1962, "Landscape," and van Ginkel, H.P. Daniel, "The City," *Canadian Art* 77, vol. XIX, no. 1, for this idea.
 15. CCA Archives, File 27-A11-04, Montréal Port, Digest of Reports, Lalonde and Valois, 1959, *Autostrade Est-Ouest*.
 16. CCA Archives, File 27-A13-03, Van Ginkel Associates, *Central Area Circulation: A Preliminary Study*, March 1961, p. 1-23. See also CCA Archives, File 27-A13-03, "Proposed Plan for Central Area," 1961, Montreal Central Area Circulation, Presentation Posters. Michel Chevalier, executive director of the Montreal Citizens Committee, recommended that the Committee commission the van Ginkels to complete this study, and it was presented in the fall of 1961. Claude Robillard, director of the City Planning Department, established the study as the official working document of the Planning Department.
- Note: Part of the van Ginkel plan involved the establishment of multi-storey parking facilities at the Guy and Berri interchanges to keep all automobile traffic out of the city centre. Furthermore, a system of jitney buses would provide transportation to the centre

of the city. Their desire was to encourage the use of public transit and they felt that the use of jitney buses would greatly reduce pollution. The idea exemplifies their theory of two scales of movement. Their values are expressed today in Montreal's annual Car Free Day in the downtown core. For the parking facility plans, see CCA Archives, File 27-A13-03, August-December, 1960.

17. CCA Archives, File 27-A17-10, Van Ginkel Associates, *Rehabilitation of the Old City of Montreal: Draft Report*, January 1963, p. 1-47. The van Ginkels prepared an exhibition, "Le Vieux-Montréal," which was displayed in the lobby of Place Ville-Marie during February and March of 1963. Finally, in January of 1964, a federal Cabinet order enforced the preservation of Old Montreal as a historic site.

Note: The development of the waterfront had been part of the van Ginkel plan to reconnect the city to the river. Their plans took form as part of their proposal for Expo '67. The site for the world exhibition was to occupy the entire area from the Champlain Bridge to the Jacques-Cartier Bridge. The plan comprised six sections along the waterfront, including the restored old city, an international housing exhibit, and the Expo pavilions. The idea was to create a cohesive whole that would improve the fabric of the city for future use. With the subsequent selection of the island sites for Expo '67, by Mayor Jean Drapeau, the construction of the Bonaventure Expressway was given priority as the main commuter route to the Expo islands. And with the completion of the elevated Bonaventure Expressway, the waterfront was cut off from the city. The van Ginkels' ideas are illustrated in their presentation maquette, "Man in the City," at the Canadian Centre for Architecture. Today, the Montreal Harbourfront Corporation proposes the replacement of the elevated Bonaventure Expressway with a boulevard, and the development of adjacent areas, in their *Montreal Harbourfront Vision 2025: the City and the St. Lawrence: a Proposal for the Future*, 2004, Montreal, Société du havre de Montréal. The current plan reflects the van Ginkels' idea to reconnect the city of Montreal with its waterfront.

18. Mignogna, Dominic, 1969, *A Study of the Existing Montreal Expressway System*, Ph.D. dissertation in urban planning, Montreal, McGill University.
19. Riga, Andy, "Turcot: McGill Architect Says It Can Be Saved," *The Gazette* (Montreal), April 29, 2009. The futuristic, built-in lights were replaced with pole lighting a couple of

years later due to the eroding effect of road salt on the aluminum casing.

20. Lynch, Kevin, 1960, *The Image of the City*, Cambridge, Harvard Press, p. 42-44.
21. *Id.* : 97-98.
22. See Gauthier, Pierre Jochen Jaeger, and Jason Prince (eds.), "Introduction," in *Montreal at the Crossroads: Superhighways, The Turcot and the Environment*, Montreal, Black Rose Books, 2009.
23. Transport Quebec, *Reconstruction of the Turcot Complex, in Montreal*, [<http://www.mtq.gouv.qc.ca>], accessed March 18, 2009. With the discovery of a crack in a pillar near Greene Avenue (2007), and more cracks revealed in inspections, repair work on the Ville-Marie has been ongoing, creating serious traffic congestion. From ground level, the once beautiful modernist forms of the expressway now reveal crumbling concrete and exposed steel reinforcement bars.
24. The list includes: Portland Harbor Drive, San Francisco Embarcadero, Milwaukee Park East, Toronto Gardiner, New York West Side, Robert Moses Parkway, Paris Pompidou, Rochester Innerloop, Trenton Route 29, Akron Innerbelt, Washington Whitehurst, Cleveland Shoreline, Nashville Downtown Loop, New Haven Route 34, Tokyo Metropolitan, Sidney Cahill, to name a few. A successful reuse of an elevated structure is the New York High Line, a railroad trestle running along the Hudson River that had been abandoned in 1980. It is being rehabilitated into a linear park with the first phase opened to the public in June 2009. Additional phases are in progress.
25. Transport Quebec, *op. cit.*
26. "Turcot Yards," *The Gazette* (Montreal), February 5, 2007, p. A3. See also "Life, Death and Turcot," *Mirror News*, March 4, 2009, and "'Lost Cause' Protest in the Shadow of Turcot," *The Gazette* (Montreal), September 27, 2008.
27. Riga, Andy, "Rethinking Montreal's Urban Highways: What to do about the Turcot, Notre Dame?" *The Gazette* (Montreal) "Metropolitan News," April 6, 2009, and "Urban Highway Revisited," *The Gazette* (Montreal), April 4, 2009, p. A3. For an informative discussion of the impact of expressway traffic on human health, see Ferguson, N. Meaghan, Robert J. Moriarity, Frederic Gagnon, and Melanie J. McCavour, 2009, "The Health Effects of Road Traffic—A Brief Overview," in Gauthier *et al.*, *Montréal at the Crossroads...*, *op. cit.* : 135-144.
28. Riga, *ibid.* See also Lockwood, Ian and Joel Mann, 2009, "Transportation and Highways in Montreal," in Gauthier *et al.*, *Montréal at the Crossroads...*, *op. cit.* : 155-169.
29. See Duany, Andres and Elizabeth Plater-Zyberk, 2001, *Downtown Master Plan for the City of West Palm Beach, Florida*, West Palm Beach, City of West Palm Beach, Florida. Also see Riga, Andy, "Reconstructing the Turcot," *The Gazette* (Montreal), April 17, 2009.
30. See Lockwood, Ian, *West Palm Beach Traffic Presentation*, [http://www.njsmartchoices.org/.../west_palm_beach_traffic_calming_presentation.pdf], accessed February 4, 2010.
31. Riga, "Reconstructing the Turcot," *op. cit.*
32. *Ibid.*
33. Riga, Andy, "The Turcot: Mapping Out the Alternative Routes," *The Gazette* (Montreal), April 18, 2009. Also see Bisson, Bruno, "Les grands projets routiers du MTQ vont nuire à Montréal," *La Presse*, April 3, 2009.
34. Riga, "Turcot: McGill Architect Says It Can Be Saved," *op. cit.*
35. For a discussion of Pieter Sijpkens's support system for the Turcot and his views on the value of the Saint-Jacques escarpment as a natural parkland, see Sijpkens, Pieter, 2009, "What Is Still 'Very' Good at Turcot," in Gauthier *et al.*, *Montréal at the Crossroads...*, *op. cit.* : 59-70.