

Appendix F

Visual Quality and Aesthetics

NOTICE

The information contained in this Appendix was developed strictly for the purpose of evaluating the environmental impacts associated with the Ambassador Bridge Enhancement Project and responding to the regulatory requirements applicable to this proposal. Use of this information for other purposes is not intended, and any such use is at the risk of the user.



Ambassador Bridge Enhancement Project

Visual Impact Assessment

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1.0 Affected Environment

As part of the process of providing a comprehensive assessment of the potential impacts of the Ambassador Bridge Enhancement Project, a visual impact study was conducted. Key locations with statewide and local importance in the Detroit area were chosen to provide various “key vantage points” within the viewshed surrounding the Ambassador Bridge.

2.0 Methodology

Throughout this evaluation of aesthetic conditions and impacts, categories of visual quality and visual impact significance were systematically used. Visual quality was characterized as being poor, moderate or good. The significance of visual impacts were categorized as being low, neutral or high with the understanding that the impacts could be positive or negative.

A radius of five miles is recognized as a reasonable viewshed for visual assessments. This distance has its origins from the US Forest Service and the “distance zones” set forth in their landscape management journal.¹ It is also a distance where most activities that are occurring are not a point of interest to the casual observer.² The highest points of the bridge are considered the control points for assessment of the “worst case” visual impacts. Locations of historical significance or considerable public access that varied in distance and direction from the proposed expansion were chosen as key vantage points. These vantage points were examined with respect to the affected population, existing visual quality and expected impacts.

3.0 Key Vantage Points and Current Views

Based on the above methodology the following “Key Vantage Points” were chosen to best depict the visual impact from the Ambassador Bridge Enhancement Project. Each vantage point is depicted in Figure 1.

¹ U.S. Forest Service, Agriculture Handbook Number 434, February 1973.

² New York State Department of Environmental Conservation, The DEC Policy System DEP-00-2 Assessing and Mitigating Visual Impacts. July 31, 2000.

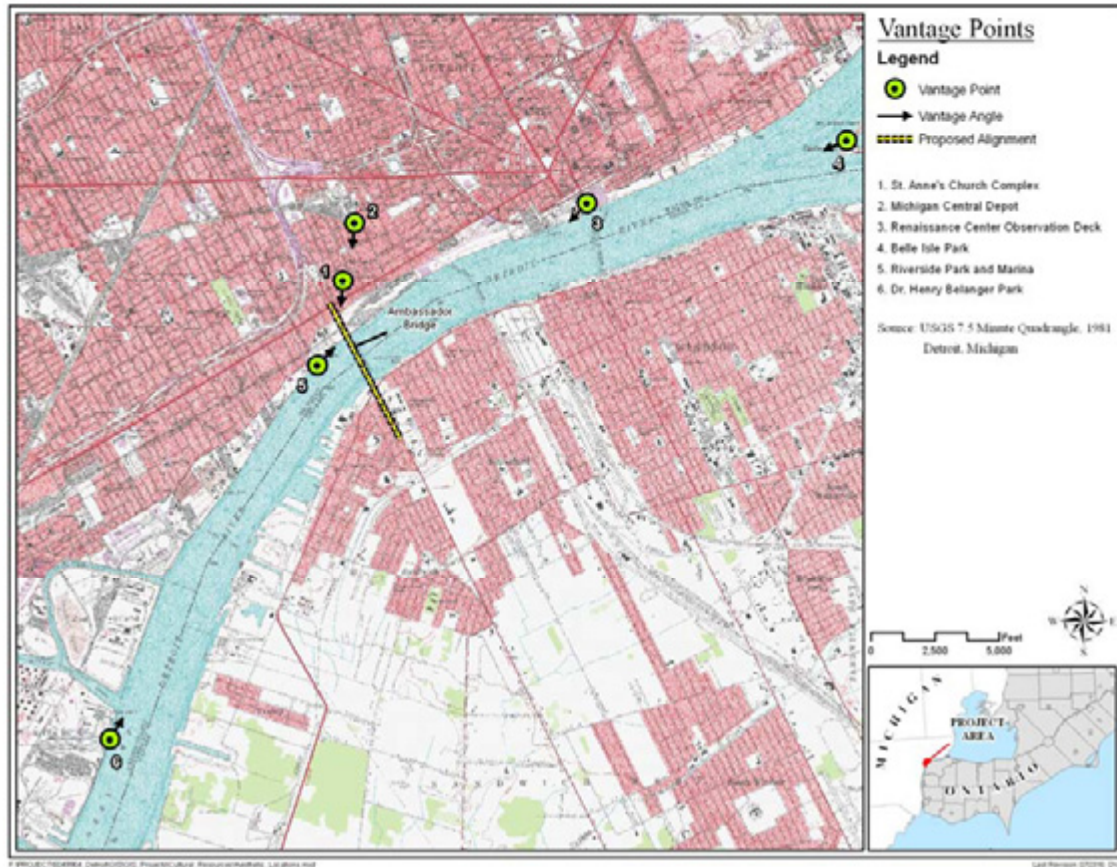


Figure 1: Vantage Points

3.1 St. Anne's Church Complex

St. Anne's Church complex is located just east of the base of the existing Ambassador Bridge Structure. Established in 1701 it was one of the first buildings to be constructed at the site of what would become modern Detroit and has been in continuous operation since 1704 making it the second oldest continuously operated Catholic parish in the United States³. St Anne's parish has occupied an important role in Detroit's past and continues to be an important part of the community today. Given the cathedral's proximity to the bridge, the amount of public use and the fact that it is listed on the National Register of Historic Places, it was selected as a key vantage point.

3.1.1 Existing View

The existing view from St. Anne's Cathedral complex is shown in Figure 2. The historical significance of this vantage point is easily apparent to the viewer. The visual quality of this vantage point is "moderate" given the context. Various industrial/commercial buildings along

³ Archdiocese of Detroit, 2007. Retrieved on February 15, 2007 from <http://www.aodonline.org/AODOnline/History+and+Archives+12437/History+of+the+Archdiocese+-+Summary.htm>

with the existing customs plaza impede the view of the bridge but the visibility of the bridge remains “high” due to the cathedral’s proximity to the structure. It should be noted that proposed changes in the view shed will only be visible from the southwest corner of the St. Anne’s complex. Currently the view from the southwest corner is dominated by the existing Ambassador Bridge which is located at the base of the bridge less than a half a mile to the east.



Figure 2: Existing view from St Anne’s Cathedral

3.1.2 Impacts

The impact of the proposed bridge from this vantage point is considered “high” due to the project’s visual dominance. The post construction view will enhance aesthetic quality by providing features that are consistent with existing conditions. As seen in Figure 3, the new structure will follow the current theme of the existing view which conforms to the historic use of the area as an international crossing.



Figure 3: Simulation view of project from St. Anne's Cathedral

3.2 Michigan Central Station (Penn Central Station)

Located 1.7 miles northeast of the Ambassador Bridge, Michigan Central Station is considered a landmark of the Detroit cityscape. Constructed in 1913 the station quickly ran into difficult times brought on by the combination of the Great Depression and the rise in popularity of the automobile. The station was permanently closed in 1988. However, restoration and redevelopment plans are currently being discussed. The Michigan Central Stations' architectural significance and likelihood for future development resulted in its inclusion as a key vantage point. Currently, an affiliate of DIBC owns the station.

3.2.1 Existing View

Figure 3 displays the current view from the area south of the historic Michigan Central Station. The area has what many would consider "poor" aesthetic quality with much of the surrounding area consisting of abandoned industrial land and buildings in various states of disrepair. The visibility of the proposed bridge will be "low" from this location due to the distance. The quality of the view from the station, to the south, towards the existing bridge would be considered "moderate" because of the presence of the spires of St. Anne's Cathedral and the Ambassador Bridge which dominate the skyline in this direction.



Figure 4: Existing view from Michigan Central Station

3.2.2 Impacts

The post-construction view from the station would have the same aesthetic quality previously noted. Figure 5 demonstrates that the new span would not interfere with the view of the cathedral spire or the existing bridge given the location of the new span to the west of the existing one. In fact the quality of the view would be upgraded to “good” given the grandeur of the proposed span combined with the historic presence of the existing span.



Figure 5: Simulation view of project from Michigan Central Station

3.3 Renaissance Center Observation Deck

The Renaissance Center or “Ren-Cen” as it is commonly known was built in 1977. At the time of its construction it was the tallest “all hotel” skyscraper in the world. The structure was developed by the Detroit Renaissance in cooperation with the Ford Motor Company with the intention of revitalizing the downtown core of the city. Ownership changed several times and the building was eventually purchased by General Motors Corporation who completed extensive renovations in 2003. Due to the height of the center tower, its location approximately 2 miles east of the Ambassador Bridge and the presence of a public observation deck the Renaissance Center was selected as a key vantage point.

3.3.1 Existing View

The observation deck and the dining facility at the top of the centre tower provide one of the only complete panoramas of the City of Detroit. The historic layout of the city along with development and changes that have occurred in the past 200 years can be observed from this vantage point. As Figure 6 demonstrates, the observation deck also provides an uninterrupted view of the entire project area. This combined with the Aesthetic appeal of the river result in a “good” aesthetic quality. The visibility of the proposed project area would also be considered “high” given the location and prominence of the existing Ambassador Bridge. However, much of the north shore of the river south of the Ambassador Bridge is heavily industrialized and detracts from the overall aesthetic quality looking in this direction.



Figure 6: Existing view from the Renaissance Centre Observation Deck

3.3.2 Impacts

The impact of the proposed bridge from this location is considered “low” because it is approximately two miles from the new bridge. However, the impact is positive as it provides one of the best unobstructed views of the entire structure (Figure 7). The new structure will be slightly further away than the existing bridge and will be a new feature to the use of the area as an international crossing adding to the aesthetic character of this vantage point. By design the new bridge will be consistent in “form and function” with the existing one. The proposed bridge will also serve to mitigate some of the negative visual impacts that are a result of the industrial areas

located down stream, making the view more aesthetically pleasing. The quality of the view from this vantage point will continue to be categorized as “good”.



Figure 7: Simulation view of the project from the Renaissance Centre Observation Deck

3.4 Belle Isle Park

The City of Detroit purchased Belle Isle in 1879 with the intent of developing a signature public park on the island. Renowned landscape architect Frederick Law Olmstead was commissioned to design the park and it remains the largest city owned island park in the US.⁴ Located approximately five miles to the east of the Ambassador Bridge in the center of the Detroit River, the island provides an unobstructed river-level view of the existing structure from the east. This view and the amount of visitor traffic to the island make it an important vantage point.

3.4.1 Existing View

The view from the west end of Belle Isle Park encompasses both the skyline of Detroit and the skyline of Windsor (Figure 8). For this reason, combined with the fact that waterfront property in the area west to the existing bridge is mostly parkland and public space, aesthetic quality from this vantage point is “high”. This vantage point is at the outer limit of the five-mile radius that has been established and details of structures within the project area cannot be seen. However, the striking silhouette of the existing bridge provides a “high” quality view.

⁴ Detroit Department of Recreation, 2007. Belle Isle. Retrieved on February 15, 2007



Figure 8: Existing view from Belle Isle Park

3.4.2 Impacts

The significance of the impact of the new span would be considered “low” given the expanse of the view, distance of the island from the new bridge and the location of the new bridge behind the existing one. The aesthetic quality of the view would continue to be considered “good”. The new span will be similar thematically and provide a new signature silhouette demonstrating Detroit’s commitment to continuing to improve the city for the future (Figure 9).



Figure 9: Simulation view of the project from Belle Isle Park

3.5 Riverside Park

Located directly to the west of the existing Ambassador Bridge, Riverside Park provides riverfront access to the general public. Post September 11, 2001, the size of the park has been reduced from 21 acres to 9 acres because of security risks associated with the existing bridge.⁵ Riverside Park provides a rare uninterrupted view of the project area and consequently has been selected as a vantage point for the purposes of this study.

3.5.1 Existing View

Figure 10 provides a panoramic view of the existing Ambassador Bridge from the Riverside Park. The aesthetically pleasing quality of the existing riverfront park and its close proximity to the bridge determine that this area has a “good” aesthetic quality. The view to the southwest (i.e. behind the viewer) is impaired by the presence of heavy industrial activity.



Figure 10: Existing view from Riverside Park

3.5.2 Impacts

The park is the first location to the west of the project area that provides the public with access to the river front and an unobstructed view of the new bridge. The impact of the new structure will be considered “high” given the proximity of the park to the project area. However, the nature of the impact will not significantly detract from the aesthetics of this view given the fact that the Ambassador Bridge will be parallel to the new bridge (Figure 11). The new structure will impair the view of the existing bridge, however, the design will allow the two spans to act in a complimentary manner to one another.

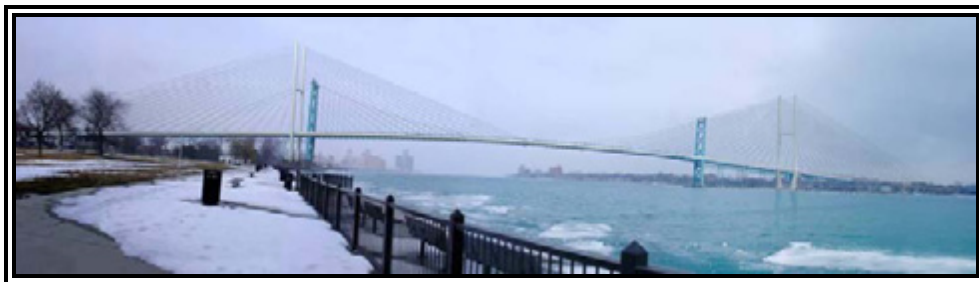


Figure 11: Simulation view of the project from Riverside Park

⁵ Duvall et al, 2005. Revitalizing Riverside: Community Perspectives on Enhancing an Urban Park. University of Michigan. Retrieved on February 15, 2007 from http://www.snre.umich.edu/eplab/research/nwf_riverside.html

3.6 Dr. Henry Belanger Park

Belanger Park provides the only public access to the Detroit River from the City of Rouge River. Dr. Henry Belanger Park has undergone recent revitalization and public usage has recently increased,⁶ making the park a local aesthetic resource. The park's suitability as an important vantage point is also related to its location approximately 5 miles to the west of the proposed enhancement project.

3.6.1 Existing View

The view from Belanger Park is at the western limit of the viewshed. Figure 12 illustrates the "moderate" aesthetic quality of this view due to a combination of both "poor" and "good" quality aesthetic features within this viewshed. This vantage point is at the outer limit of the established five-mile radius. Details of structures within the project area cannot be seen. The heavily industrialized shoreline that is present on both sides of the river looking east toward the existing bridge detracts from the aesthetic quality of this area. The quality of the view from the park contains the positive impacts of the river front, the historic elements of the Cities of Detroit and Windsor and the existing Ambassador Bridge as a symbol of the important trade relationship between the U.S. and Canada.



Figure 12: Existing view from Dr. Henry Belanger Park

3.6.2 Impacts

The impact of the proposed new bridge will be "low" given the distance to the project area and the surrounding industrialization. The construction of the new span will serve to improve the current view from Belanger Park by complimenting the "eye-catching" silhouette of the existing bridge as demonstrated by Figure 13.

⁶ Sea Grant Michigan, 2006. Greenways: Improving Shorelines: Ecology, Economics and Education. Retrieved on February 15, 2007 from <http://www.miseagrant.umich.edu/greenways/greenway09.html>



Figure 13: Simulation view of project from Dr. Henry Belanger Park

4.0 Mitigation

The project involves the construction of a large physical feature that will have an aesthetic effect. Design measures will be incorporated to mitigate potential adverse effects and reduce impacts to the historic character of the existing Ambassador Bridge. The design of the proposed structure will incorporate non-specular materials into the design of the project components to decrease reflectivity and visibility of project features. The new span is designed to meet the Secretary of the Interior Standards for Rehabilitation 3, 9 and 10 to be consistent with the historic status of the Ambassador Bridge which is eligible for listing on the National Register of Historic Places.

Standard 3 states that each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken. The proposed design meets this standard by not replicating suspension cable design of the original bridge.

Standard 9 states that new additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

The proposed design meets this standard. The existing span will not be physically affected by the new span. In fact, the existence of the new span will extend the life of the existing span through the removal of heavy truck traffic that adversely affects the structural integrity of the existing span. The new work is differentiated from the old in that it incorporates state of the art engineering. The new span will be of cable stay construction in contrast to the suspension cable design of the original bridge. The new span will be constructed primarily of concrete – permitting a clean design that will provide a visual contrast with the intricate exposed steel structure of the existing span. The new span will be wider than the existing span, but will roughly parallel its course and will match its clearance height and the line of its arc over the river.

Standard 10 states that new additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. The proposed design meets this standard. The two spans will be structurally independent of each other.