1.0 INTRODUCTION

The Disraeli Freeway was completed in 1960 to connect downtown Winnipeg and the northeast area of the city. The freeway is a vital transportation corridor that consists of level roads, an overpass, and a bridge over the Red River. After 50 years, the river bridge has reached the end of its service life and requires replacement. The Disraeli Bridges Project (the Project) includes the construction of a new river bridge. Works associated with the Project include the construction of a new Canadian Pacific Railway (CPR) overpass, realignment of roadworks, the reconstruction of the existing river bridge into an active transportation (AT) bridge and the stabilization of the east bank of the Red River (Figure 1.1). These works do not require a provincial permit and therefore have not been included in the scope of this assessment.

The proposed Disraeli Bridges Project is a Public-Private Partnership (PPP) between the City of Winnipeg and Plenary Roads Winnipeg (PRW). The PRW team includes Plenary Group, PCL Constructors Canada Ltd. (PCL), Wardrop Engineering Inc. (Wardrop), and Stantec Engineering (Stantec). The total Project cost is approximately $195 million.

1.1 PROJECT OVERVIEW

The proposed Project is a multiphase project that is comprised of construction of a new river bridge over the Red River. The Project work plan is to commission the new river bridge immediately adjacent to and west of the existing river bridge and to route traffic to the new river bridge before reconstructing the existing bridge as an AT bridge. This sequence of construction will avoid the closure of the crossing for 18 months that would be required for if the existing river bridge was reconstructed as a vehicle bridge. The construction of the new river bridge will require in-water works to install the river piers and to lift bridge girders into place between the piers. The river piers will be accessed using temporary rock-fill work bridges constructed from either shore. The Bridges will be installed in October 2010 and removed by the end of March 2011. A minimum of four lanes of traffic will remain open throughout construction during all peak travel times (Monday to Friday 6 am to 6 pm) to minimize interruptions to vehicular traffic.

The former Sutherland Manufactured Gas Plant (MGP) site is located immediately east of the existing Disraeli Bridge and is designated as a contaminated site under the Manitoba *Contaminated Sites Remediation Act.* The former MGP site has been the focus of extensive investigations of the soil, groundwater, riverbed sediments.

Zoning and regulation of land use in the Project area falls under the City of Winnipeg Zoning By-law 200/2006 and the Downtown Winnipeg Zoning Bylaw 100/2004. The

Project components will be on property owned by the City of Winnipeg and compatible with all permitted land use and zoning restrictions in the study area. The Project is Winnipeg's largest bridge project to date. At the peak of construction the Disraeli Bridges Project will support 120 construction jobs.

1 — GENERAL LOCATION OF PROPOSED WORKS

1 : 12500

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FIGURE 1.1
DISRAELI BRIDGES PROJECT
GENERAL LOCATION OF PROPOSED WORKS

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1.2 PROJECT SCHEDULE

Initial construction is proposed to begin in November 2010 with completion of the new river bridge scheduled for October 2012. Project components requiring approvals or permits will not commence until the necessary approvals and permits have been received. A Project schedule is provided in Table 1.1.

1.3 PROPONENT

Project Name:	Disraeli Bridges Project
Proponent: Contact:	City of Winnipeg Bill Ebenspanger 106 – 1155 Pacific Avenue Winnipeg, Manitoba R3E 3P1 Phone: (204) 986-3712 Fax: (204) 986-5302
Environmental Approvals Agent: Contact (Wardrop):	Plenary Roads Winnipeg Dave Tyson 400 - 386 Broadway Winnipeg, Manitoba R3C 4M8 Phone: (204) 956-0980 Fax: (204) 957-5389

Table 1.1 Construction Schedule

	Start	Finish	2010 Nov	Dec	2011 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	2012 Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2013 Jan	Feb	Mar	Apr	May	Jun	Jul
New River Bridge																																			
Upland Works	1-Nov-10	13-Jan-13																																	
Site Preparation/Mobilization	1-Nov-10	13-Jun-11																																	
East Approach	2-Dec-10	20-May-11																																	
East Land-based Piers	6-Jan-11	3-May-11																																	
East Abutment	4-Mar-11	20-May-11																																	
West Approach	4-Apr-11	29-Jul-11																																	
West Land-based Piers	4-Apr-11	4-Jul-11																																	
West Abutment	4-Apr-11	6-Sep-12																																	
Bridge Works	15-Jun-11	19-Oct-12																																	
Begin In-channel Works		15-Jun-11																																	
Access Roads	15-Jun-11	31-Mar-12																																	
Pier SU5	29-Jun-11	27-Sep-11																																	
Work Bridges	1-Oct-11	31-Mar-11																																	
Piers SU6 and SU7	25-Oct-11	3-Feb-12																																	
Structural Steel	6-Feb-12	14-Mar-12																																	
Work Bridge Removal	15-Mar-12	31-Mar-12																																	
Complete In-channel Works		31-Mar-11																																	
Deck and Finishing	15-Mar-12	18-Oct-12																																	
Open Bridge to Traffic		19-Oct-12																																	
Upland Works	29-Mar-11	21-Dec-12																																	
Canadian Pacific Railways Overpass	24-May-11	21-Dec-12																																	
Road Works	18-Apr-11	30-Jul-13																																	
Active Transportation Bridge	4-Jan-11	31-Jul-13																																	

1.4 PROJECT MANAGEMENT

The proposed Disraeli Bridges Project is a Public-Private Partnership (PPP) between the City of Winnipeg (City) and PRW (Plenary Group, PCL, Wardrop, and Stantec). The Project follows the "Design-Build-Finance-Maintain" (DBFM) model, which means PRW is responsible for financing, design, construction, and maintenance costs during the 30-year term of the contract, while the City retains ownership of the infrastructure (from construction forward). For its part, the City, with contributing funding from the Governments of Canada and Manitoba, will make a commissioning payment and then annual performance-based service payments to PRW. At the end of the 30-year contract, PRW will turn the Project over to the City in well maintained condition. The City has authorized PRW to act as its delegated agents for the purpose of obtaining the environmental approvals for the Project (Appendix A).

1.5 REGULATORY FRAMEWORK

1.5.1 FEDERAL – PROVINCIAL COORDINATION

The Canada-Manitoba Agreement on Environmental Assessment Coordination provides a mechanism to address both provincial and federal requirements with a single environmental assessment, administered by both governments, but with the primary point of contact being the provincial environmental assessment agency, Manitoba Conservation. However, due to the differences in project scoping between the federal and provincial environmental assessments, a separate EIS was submitted to the Canadian Environmental Assessment Agency on August 3, 2010.

1.5.2 PROVINCIAL ENVIRONMENTAL ASSESSMENT AND PERMITTING

The Project constitutes a Class 2 development as a water development that will result in an alteration to a stream channel, which will affect fish habitat as defined by the Classes of Development Regulation 164/88 under the *Environment Act*. The Project will therefore require an Environment Act License prior to the initiation of any works. An Environment Act License is issued upon the Minister's acceptance of an Environment Act Proposal (EAP) and an Environmental Impact Statement (EIS). An EAP was submitted to Manitoba Conservation on 2 March, 2010 (Appendix B). Under the provincial EA process, only the Project component requiring a permit should be included in the EIS. The scope of provincial EIS therefore includes only the new river bridge. The road works, the CPR overpass works, and the AT bridge works do not require an Environment Act License therefore these components are not included in the provincial EIS.

In-water works, including the removal of potentially contaminated sediments resulting from construction activities in the Red River, will be covered by the Environment Act

License for the new river bridge. The removal of any contaminated soil on the upland portion of the Project site does not require an Environment Act License and therefore is not be included in the provincial EIS. The upland contaminants will be managed under a Director's Remediation Order issued pursuant to the *Contaminated Sites Remediation Act* (CSRA). This process will be separate from the EAP review process for the new river bridge. A separate approval will be required for the receiving facility to accept and treat the impacted soil from the upland contamination and the impacted sediments from the Project site defined in the EIS. The approval process for the receiving facility will be concurrent with the development of the Remedial Action Plan for the upland impacted soils.

A Water Rights License will not be required for the Project.

The coordination of approvals begins with the establishment of an interdepartmental review panel called the Technical Advisory Committee (TAC), which is led by the Environmental Assessment and Licensing Branch of Manitoba Conservation and consists of provincial and federal government specialists with the technical expertise necessary to adequately assess the potential impact(s) of a project. Following submission of the EAP and EIS, a technical and public review is conducted. At the end of the public review and comment period, the Director of Environmental Assessment and Licensing will assess the level of public concern. If the Director determines there is significant public concern, the Director will recommend to the Minister that the Clean Environment Commission hold a public hearing. The Commission would make recommendations to the Minister based on the findings of the hearing. Based on the results of project screening, the Minister will either issue or refuse a License.

1.5.3 FEDERAL ENVIRONMENTAL ASSESSMENT AND PERMITTING

The federal environmental assessment process is coordinated by the Canadian Environmental Assessment Agency (CEA Agency) under the *Canadian Environmental Assessment Act* (CEAA). The CEAA process is applied whenever a federal authority has a specified decision-making responsibility in relation to a project, also known as a "trigger" for an environmental assessment. With respect to the Disraeli Bridges Project, the following federal actions trigger the CEAA process:

- The federal government is required to provide a license, permit, or an approval that is listed in the *Law List Regulations* to enable the project to be carried out (e.g., *Navigable Waters Protection Act* approval)

Specifically, the construction of the new river bridge will require a s.5(1) approval under the *Navigable Waters Protection Act* (NWPA) from Transport Canada. As well, the new river bridge may require a *Fisheries Act* s.35(2) authorization from Fisheries and Oceans Canada (DFO). These permits triggered a screening-level environmental assessment under CEAA.

The existing river bridge previously received an NWPA s.5(1) approval therefore, reconstruction of the Bridge into an AT bridge will only require an approval under

s.10(2). This approval is not a law-list trigger under CEAA. A *Fisheries Act* s.35(2) authorization from DFO is not anticipated as reconstruction activities will not require works within the Red River.

As of 21 January, 2010, when a project triggers a federal environmental assessment under CEAA, the federal government is required to scope the environmental assessment to the extent of the proposed project works as defined by the proponent. As a result, the federal environmental assessment requires that all works associated with the Project be included in the EIS, whether or not a federal approval is required for the work. The federal EIS therefore must include the road works, CPR overpass, and AT bridge components in addition to the new river bridge component. An EIS was submitted to the CEA Agency on 3 August, 2010.

1.5.4 REGULATORY ENGAGEMENT

Communications were established with the CEA Agency, Transport Canada – Navigable Waters Protection (TC-NWP), DFO, and Manitoba Conservation immediately upon notice by the City of PRW being the preferred proponent. The following are the most significant communications:

3 February, 2010 – A meeting was held with Manitoba Conservation to discuss the permitting options in addressing contaminants expected to be encountered in the Project area. It was determined a Remedial Action Plan would be submitted for upland works while a similar plan would be incorporated into the Environment Act License to address contaminants encountered in the Red River. Manitoba Conservation requested an environmental assessment scoping document (EASD) to precede the Environment Act License proposal.

4 February, 2010 – A request for advice was submitted to DFO regarding Phase I of the east bank stabilization works. No response was received.

4 February, 2010 – A request for advice was submitted to Manitoba Conservation regarding the proposed reconstruction works for the existing river bridge. A response was received 24 February, 2010, stating that if there were no in-water works, a Manitoba Environment Act License would not be required.

2 March, 2010 – A draft EASD was submitted to Manitoba Conservation for distribution, review, and public comment. The federal comments were received 16 April, 2010 and provincial comments were received 23 April, 2010.

25 March, 2010 – An application under the NWPA for the new river bridge was submitted to TC-NWP. A notice of review was received 16 April, 2010.

6 April, 2010 – In a telephone conversation with Manitoba Conservation it was determined that due to the differences between the federal and provincial Project scope requirements, a separate EIS would need to be submitted for each of the federal and provincial review processes.

28 April, 2010 – An application under the NWPA for the reconstruction of the existing river bridge was submitted to TC-NWP. No response has been received.

29 April, 2010 – Manitoba Water Stewardship confirmed a Water Rights License would not be required for the Project.

6 May, 2010 – A Remedial Action Plan was submitted to Manitoba Conservation to address contaminants encountered during the upland construction components. The plan is currently under consideration by Manitoba Conservation.

7 May, 2010 – A meeting was held at CEA Agency where the Project was presented to CEA Agency, Transport Canada, DFO, and Manitoba Conservation. A copy of the presentation was forwarded to CEA Agency for distribution.

20 May, 2010 – The final draft of the EASD was submitted to Manitoba Conservation.

24 June, 2010 – The Project Description was submitted to the CEA Agency for distribution.

23 July, 2010 – A meeting was held at CEA Agency where the Agency explained the recent changes to CEAA and the potential effects to the Project review process.

27 July, 2010 – A meeting was held at CEA Agency as a continuation of the 23 July, 2010 meeting.

3 August, 2010 Federal EIS was submitted to the CEA Agency.

1.5.5 PROJECT RELATED APPROVALS

Project related approvals include:

- City of Winnipeg Waterways Bylaw Permit
- Provincial *Environment Act* License
- Provincial *Dangerous Goods Handling and Transportation Act* Remediation Order
- Federal *Fisheries Act* authorization

- Federal *Navigable Waters Protection Act* approvals
- Screening report under the federal CEAA

Manitoba Water Stewardship has confirmed that the Project does not require a Water Rights License to Construct Water Control Works in order to proceed.

1.6 DOCUMENT ORGANIZATION

This EIS has been organized under the following main headings:

Executive Summary – Provides a concise summary of the Project.

Section 1: Introduction - Provides a general overview of the Project, information about the City of Winnipeg, background, the need for the Project, the regulatory setting and the proposed Project schedule.

Section 2: Scope of Assessment - Describes the spatial boundaries and temporal boundaries considered in the EIS as well as the impact assessment approach.

Section 3: Public Engagement - Provides an overview of the public involvement activities undertaken by the City for the Project and ongoing community relations.

Section 4: Assessment of Alternatives - Provides a description of the various alternative concepts considered during the development of the proposed Project.

Section 5: Project Description - Provides a detailed overview the Project including the Project components, construction procedures, schedule, maintenance, and integrated measures to prevent adverse effects.

Section 6: Existing Environment - Provides an overview of existing environmental characteristics of the Project site and surrounding area.

Section 7: Effects Assessment, Mitigation, and Monitoring - Describes potential Project-related effects on the physical, terrestrial, aquatic, and human environments, and the significance of those effects. This section includes the cumulative effects assessment and describes proposed mitigation measures and monitoring procedures during construction and performance monitoring procedures following construction.

2.0 SCOPE OF ASSESSMENT

2.1 SCOPE OF PROJECT

The Project includes the construction of a new river bridge. Each of the Project phases (i.e., construction and operation), were included in the assessment of Project-related effects on the environment as detailed in this document.

2.2 SPATIAL BOUNDARIES

2.2.1 REGIONAL STUDY AREA

The regional area of interest is defined by the zone of influence of the Project on the environment. The regional area of interest was primarily used in the compilation of baseline information to assess and determine Project related effects on the physical and human environments. Regional data are also presented in the terrestrial and aquatic baseline sections where appropriate.

The regional study area east of the Red River (north of the Bridge) is bound by the Perimeter Highway (PTH 101) to the north, Lagimodiere Boulevard to the east, Nairn Avenue, Archibald Street, and Provencher Boulevard to the south, and the Red River to the west. The regional study area west of the Red River (south of the Bridge) is bound to the north by Redwood Avenue, to the west by Main Street, to the south by Water Avenue and Provencher Boulevard, and to the east by the Red River. The regional study area includes the Red River between the Provencher Bridge and the Perimeter Highway (PTH 101) bridge (Figure 2.1).

2.2.2 LOCAL STUDY AREA

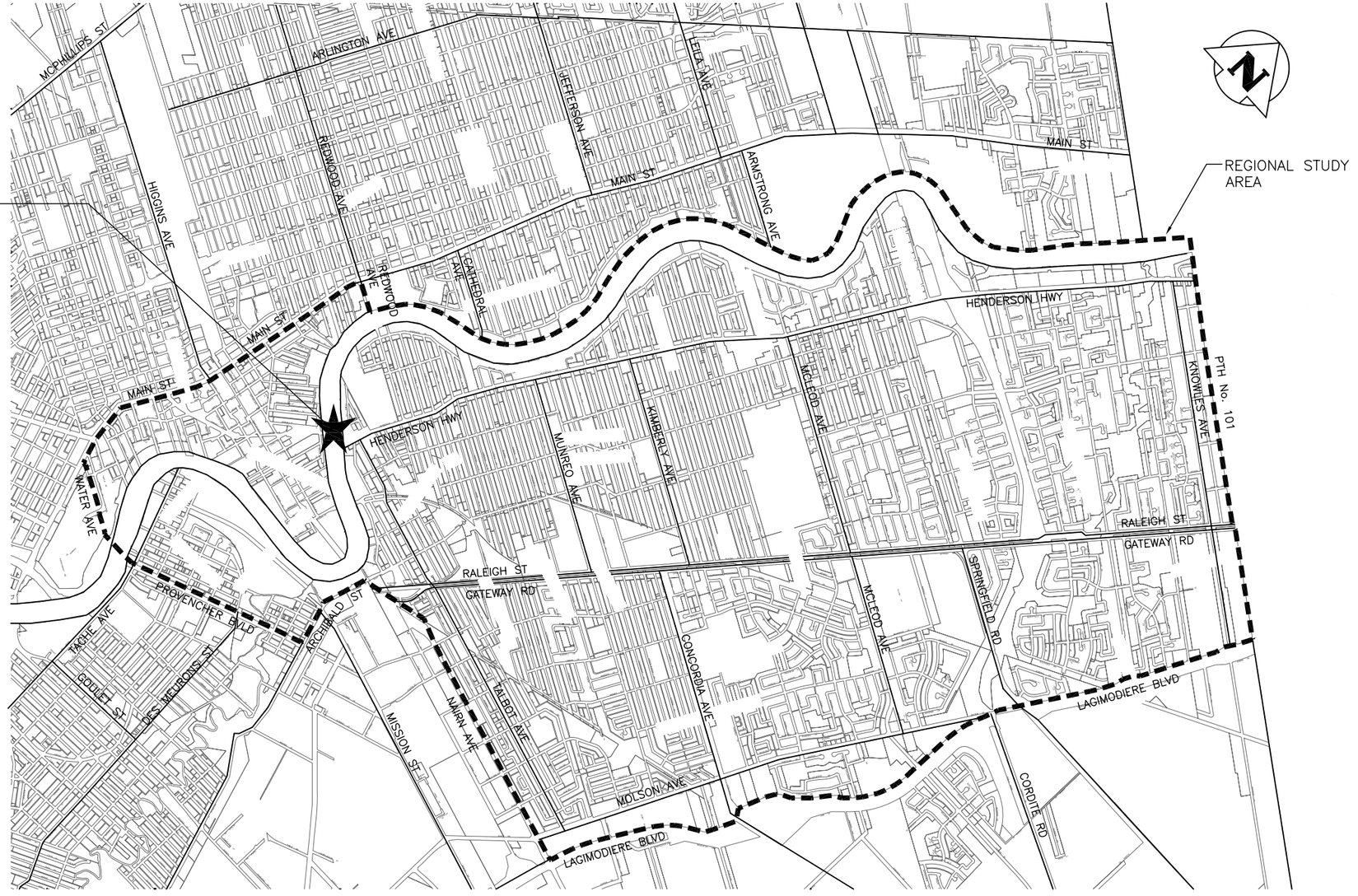
The local study area consists of land and/or waterbodies immediately influenced by the Project. The local study area for the proposed Project includes the Project site and the Red River channel and bank approximately 200 m upstream and 500 m downstream of the existing river bridge (Figure 2.2).

2.2.3 PROJECT SITE

The Project site is defined as the area that will be directly disturbed by Project construction and/or operation. The Project site includes the location of the new river bridge (Figure 2.3).

2.3 TEMPORAL BOUNDARIES

The designed lifespan of the Bridges is 75 years. The assessment will therefore include the construction period plus the 75 year maintenance period for the bridge. Since the new river bridge is vital to the City of Winnipeg's transportation system it is assumed that the bridge will not be decommissioned at the end of the 75 year lifespan; therefore a decommissioning phase was not included in the effects assessment for the Project. At the end of the Project (i.e., 2088) it is expected that any required upgrades or reconstruction would be proposed by the City and permitted through the appropriate government agencies.



REGIONAL STUDY AREA

1 : 1000

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FIGURE 2.1
DISRAELI BRIDGES PROJECT
REGIONAL STUDY AREA

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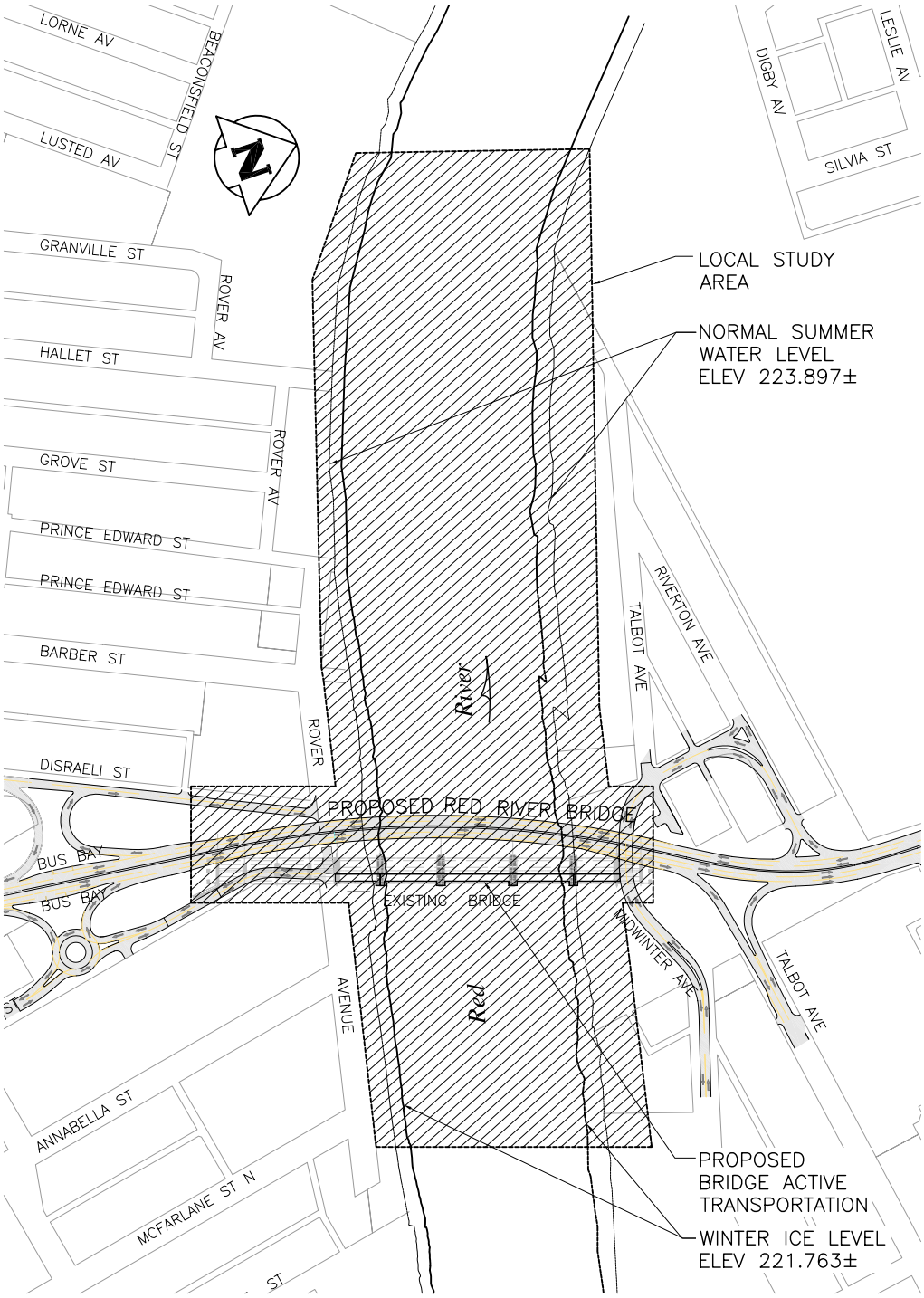

LOCAL STUDY AREA

1 : 5000

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FIGURE 2.2
DISRAELI BRIDGES PROJECT
LOCAL STUDY AREA

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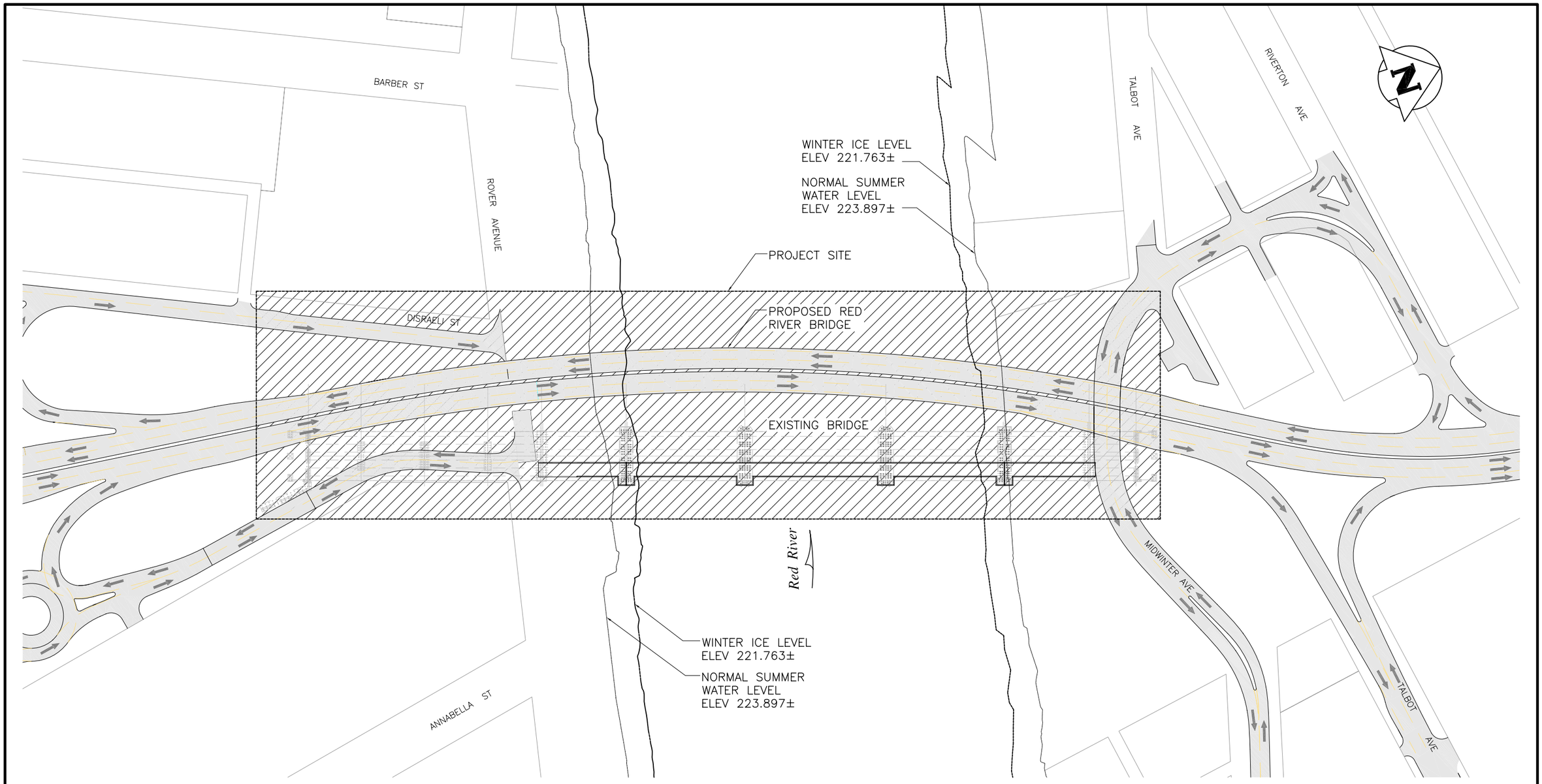

PROJECT SITE

1 : 1500

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FIGURE 2.3
DISRAELI BRIDGES PROJECT
PROJECT SITE

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2.4 IMPACT ASSESSMENT APPROACH

2.4.1 FOCUS ON VALUED ECOSYSTEM COMPONENTS

The purpose of the EIS is to describe the Project, describe the existing environment, evaluate the potential impacts, both positive and negative, and describe mitigation and monitoring plans, if necessary. The EIS is focused on Valued Ecosystem Components (VECs). The VECs are components of the natural and human environment that are considered important and are likely to be affected by the Project or may have an effect on the Project (Beanlands and Duinker 1983). Value is attributed to an environmental component for a number of reasons, including economics, culture, ecology, science, aesthetics or ethics. By establishing VECs for the Project, the EIS is focused on those environmental components that are of greatest importance and which are most likely to interact with the Project in some way.

The VECs were selected in a two step process that first identified the environmental components that could potentially be affected by the Project or could affect the Project. The environmental components were identified based on previous studies in the area, consultation with Manitoba Conservation and Manitoba Hydro, and professional experience and studies related to the environmental effects of similar projects. The second step involved the selection of a final list of VECs. Selection was based on an interaction assessment which identified the principal elements or activities of the Project and assessed the potential for interaction between these and the environmental components identified in the previous step. Any environmental component that is not expected to interact with the Project was excluded from the environmental assessment.

The environmental components identified as potential VECs for this Project assessment are identified in Table 2.1.

Table 2.1 List of factors to be considered in the Disraeli Bridges Project EIS

Physical Environment	Air Quality
	Noise and Vibration
	Soil Chemistry and Quality
	Hydrogeology
Terrestrial Environment	Vegetation
	Wildlife and Habitat
Aquatic Environment	Surface Hydrology
	Shoreline and Riverbank Stability
	Surface Hydrology
	Surface Water Quality
	Sediment Quality
	Benthic Invertebrates
	Fish and Fish Habitat
Human Environment	Human Health and Safety
	Existing or Planned Land Use
	Economic Development and Local Business
	Vehicle Use and Traffic Flow
	Emergency Services and Transit
	Aesthetics
	Recreation and River Use
Accidental Release of Hazardous Materials	
Effects of the Environment on the Project	Climate change

The potential and magnitude of interactions between Project elements and environmental component was evaluated using a ranking matrix. Potential Project-environment interactions were assessed in relation to the following scale:

0 No interaction

1 Interaction occurs, known mitigation proposed (legislation/regulation/best management practices), effect of interaction is localized, short term (< 2 yrs), and reversible

2 Interaction occurs, effects are unavoidable and immitigable

Any environmental component with an interaction ranking of 0 was eliminated from further consideration. Valued Ecosystem Components are those environmental components with a potential interaction ranking of 1 or 2.

2.4.2 *Mitigation and Residual Effects*

As much as possible, measures to prevent adverse effects have been built into the Project design and proposed construction methods. Mitigation measures will be developed for any significant impacts identified during the determination of significance. To the extent possible, positive effects will be enhanced.

Residual impacts will be determined by measuring mitigation measures against the predicted Project effects. If present, the severity, extent, and duration of any residual effects will be identified.

2.5 Determination of Significance

When undergoing environmental assessment, the proponent of a project is typically required to determine the significance of adverse environmental effects and to provide rationale for the characterization of effects as such. For the Disraeli Bridges Project, a determination of significance was made if the effect was related to a VEC or a residual effect. In determining significance for this Project, the following criteria were used:

- Likelihood
- Nature of effect - positive, neutral, or adverse
- Magnitude – Small (not measurable), moderate (measurable only with well designed monitoring program), and large (noticeable effect)
- Duration – short-term or long-term
- Frequency – how often
- Geographical extent – project site, local study area, or region
- Reversibility – can the population recover from the impact

It is not possible to define the criteria for determining significance in the same way for all aspects of the biophysical and human environment, therefore individual assessment approaches using the above criteria are provided in each section.

2.6 Cumulative Effects Assessment

Cumulative effects are changes to the environment that are caused by an action in combination with other past, present and future human actions (Hegmann et al. 1999). For the Disraeli Bridges Project, any past or current projects have been included in the baseline assessment. Of particular importance to the Project is the existing contamination in the Red River at the site of the new river bridge. On a wider scale, cumulative effects for the Project were assessed using available information on past projects and projects proposed for future development within the City of Winnipeg,

especially those with a known or potential impact on the Red River. These projects include: the Osborne Street Bridge Rehabilitation Project, the Louise Bridge, the Letellier Bridge, the Pierre Delorme Bridge, the Winnipeg Floodway, and the St. Andrews Lock and Dam.

3.0 PUBLIC ENGAGEMENT

The City conducted an extensive Public Engagement Program to solicit public input on the reconstruction of the existing river bridge. The goal of the public engagement program was for the public to contribute meaningfully to ensure a project that is: '*Technically sound; reflects the needs of the community, and city in general; cost-effective; environmentally responsible and safe; and, generally understood and accepted by most of those affected.'*

The public consultation process unfolded in three distinct stages: (i) research phase resulting in a Community Profile and Impact Study (April 2006); (ii) Stakeholder Advisory Committee (SAC) to work closely with the Project consultants and City of Winnipeg Project representatives; and, (iii) public communication to provide information about the Project and obtain public input. Community profiling provided an overview of the key physical, social, and economic characteristics of the communities and an understanding of the historical roots and the current areas of focus and development within these communities. During consultation, the City worked closely with the SAC, which included representation from area residents, businesses, and city-wide organizations to review design concepts. The SAC attended a series of eight meetings that included the presentation of Project information and opportunity for questions and discussions. After considering the needs of all users of the Disraeli Bridges, the SAC developed three Project options to present to the broad public: Concept A, Concept B and Concept C. The public consultation process included:

- a newsletter delivered to neighbourhoods closes to the Project
- display ads in the Winnipeg Free Press, Winnipeg Sun, and The Herald
- three public open houses were conducted to provide a forum for the public to ask questions and provide comments
- surveys, including a random telephone survey with 400 residents and a survey distributed to businesses in the community, were used to provide Project information and to solicit comments

In total, approximately 700 individuals registered their views about the Project either through response coupons, open house comment sheets, general emails, and the phone or mail-back surveys.

The City continued to engage the public in refining and modifying what would eventually become seven reconstruction concepts. However, throughout the consultation process, the City received significant and increasing public concern regarding traffic constrictions and interruptions that would be necessary during the refurbishment of the existing river

bridge. Each of the concepts presented had the potential to result in extended periods of traffic restrictions and closures with a possibility of the bridge being closed for the entire 18 month refurbishment. The issue of bridge closure during the construction period played out in the media and forced the City to explore alternative options. As a result, two new options were identified, referred to as Modified Concept A and Modified Concept B.

Details and results of the public engagement process undertaken by the City from April 2008 to June 2009 are included in a report prepared by Susan Frieg and Associates (Appendix C).

After securing additional provincial funding, a motion was put forward to construct a new river bridge adjacent to the existing river bridge. The proposed plan will see minimal disruption to motorists, allowing traffic to utilize the existing river bridge during construction. The Project also features the development of a separate active transportation bridge built on the piers of the existing river bridge. Although the option of a new river bridge was not considered by the City until after the public engagement program had been concluded, the recommendations of the SAC were integrated into the revised Project design with a separate pedestrian/cyclist bridge and a 1.8 m wide sidewalk on the new vehicular bridge. Communication with the public is continuing throughout the development and construction of the Project.

3.1 OPEN HOUSES APRIL 13-14, 2010

Public information centres were held in Elmwood and Point Douglas on April 13 and 14, 2010, respectively. Key Project members from the City of Winnipeg and Plenary Roads Winnipeg were present for the duration of the open houses to answer questions.

The open houses were informal, “drop in” events. Display boards presented Project-related information pertaining to:

- Key Aspects of the Disraeli Bridges Project
- Active Transportation (AT) Bridge
- Project Aesthetics and Landscaping
- Bridge Alignment
- Environmental Considerations
- Land Acquisition
- Public-Private Partnership
- The Plenary Roads Winnipeg team
- Project Timeline

A sign-in sheet was located at the entrance of both venues in order to capture the number of attendees and their contact information. Comment forms were available to obtain information on the types of people attending the open house (residents, business owners, commuters, etc.), what aspects of the Project brought them to the open house, and to ensure that those persons wishing to share any comments could do so.

The Elmwood open house was attended by 346 persons and the Point Douglas open house was attended by 97 persons. Table 3.1 presents a summary of the comment forms' multiple choice questions.

Table 3.1 Summary of April 13-14 Open Houses comment forms' multiple-choice questions

	Elmwood	Point Douglas
How did you hear about the open house?		
Newspaper Advertisement	35%	18%
Flyer in the Mail	15%	20%
Community Organization		11%
Email Invitation	13%	
Are you a ... ?		
Resident in the adjacent neighbourhood	36%	35%
Commuter who uses Disraeli Bridge	40%	24%
Resident along Disraeli Bridges Project Route	17%	
Representative of a community group		20%
What aspects of the Disraeli Bridge brought you to this event?		
Wanted a general overview of the Project	34%	34%
Active Transportation		18%
Vehicle Bridge	19%	10%
Bridge Alignment	14%	10%

Main comments and concerns from the comment forms' long answers include:

- Positive comments that existing river bridge will be open to traffic during construction.
- Positive comments regarding the new river bridge design.
- Recommendations that a six lane design (or a fifth 'swing lane') would be preferable to the four lane design for the new river bridge.
- Concerns regarding riverbank erosion along Talbot Avenue; residents have reported that the existing river bridge has resulted in elevated erosion over the past 50 years and are concerned about the effect of the new bridge piers on riverflow and riverbank erosion.
- Concerns regarding traffic flow during construction.
- Comments about a lack of information regarding Project details including schedule, financing, alignment and landscaping.

- Comments indicating there was not enough public/community consultation.
- Concerns regarding the aesthetics of the new river bridge and adequate green space.
- Concerns over traffic noise, especially along Talbot Avenue and Riverton Avenue.
- Concerns about Project going over budget.

4.0 ASSESSMENT OF ALTERNATIVES

Seven project alternatives were considered. There was significant public involvement in the development and evaluation of the alternatives. The “do nothing” approach was considered but was not an option as the bridge superstructure is at the end of the service life. The “do nothing” approach would result in a significant and unacceptable risk to public health and safety.

4.1 PROJECT DEVELOPMENT

The City conducted an extensive consultation process to solicit public input on three concepts to reconstruct the existing river bridge. During consultation, the City worked closely with a key Stakeholder Advisory Committee (SAC), which included representation from area residents, businesses, and city-wide organizations to review design concepts. As part of the public consultation process, a newsletter, display ads in the Winnipeg Free Press, Winnipeg Sun, and The Herald and surveys were distributed to area residents and businesses to provide Project information and to solicit feedback. Three public open houses were conducted to provide a forum for the public to ask questions and provide feedback. As a result, the City received approximately 700 individual responses with feedback. The three concepts considered included:

1. **Concept A**: Basic rehabilitation for the structures with a proposed deck width of 20 m, including two 4.4 m shared vehicle and cyclist curb lanes and one 1.8 m sidewalk on the east side. Modification of piers or abutments is not required.

2. **Concept B**: Similar to Concept A, with 4.4 m shared vehicle and cyclist curb lanes, but with the deck widened to 22.1 m to accommodate a second 1.8 m wide sidewalk on the west side. With two sidewalks, pedestrians would not have to cross the roadway or go under the bridge to reach the other end, enhancing accessibility and security. This option requires piling as well as modifications and widening of the land-based piers and abutments and additional girder lines supporting the wider deck.

3. **Concept C**: This option requires the deck to be widened to 21.4 m, includes only one sidewalk widened from 1.8 to 2.5 m, and would increase vehicle and cyclist shared curb lanes from 4.4 to 4.75 m. With this concept, the widened sidewalk provides more accommodation for pedestrians and recreational users. As with Concept A, the sidewalk would be located along the east edge. This option also requires piling and modifications and widening of the land-based piers and abutments, and additional girder lines supporting the wider deck.

Public input was positive about providing additional amenities to serve cyclists and pedestrians; however there wasn't a clear majority on which option was would best provide the amenities. Through the public consultation process another option was put forward:

4. **Concept D**: Standard rehabilitation of the existing river bridge while building an additional adjacent cyclist/pedestrian bridge.

Concept D was highly rated by the SAC and after further analysis by the Public Works department was recommended to City Council. Once the results of the public input had been analyzed and presented, the SAC further assessed these three options in light of the input. As a result, two new options were identified, referred to as Modified Concept A and Modified Concept B. The first was submitted by a community-based organization while the second was developed by the SAC in an effort to combine all of the features that the majority support, namely cyclists and pedestrians. The modified concepts are as follows:

5. **Modified Concept A**: In addition to a basic rehabilitation of the bridge **structures** as described with Concept A, an additional multi-use bridge would be built over the river for cyclists and pedestrians that would link to the existing Active Transportation Route along Annabella in Point Douglas to Brazier Avenue in Elmwood.

6. **Modified Concept B**: The SAC developed this option by expanding the amount of deck in order to provide the best features of both Concepts B and C. This option would include two widened sidewalks that could be used as multi-purpose, recreational pathways. This option also requires piling and modifications and widening of the land-based piers and abutments, and additional girder lines supporting the wider deck.

After full discussion, the SAC evaluated each option according to the Project goal and evaluation criteria, including:

- Technical soundness - function and least design risk
- Needs of the community
- Needs of the City
- Cost effectiveness - best value for money spent
- Environmentally responsible - increases cycling, using existing facilities, construction impacts
- Personal safety - actual and perception
- Access - connection to neighbouring communities
- Generally understood and accepted by most of those affected.

Two options rated highly in meeting the evaluative criteria that the SAC established for the Project – Concept B and Modified Concept A. However, each option did so in different ways. Following additional evaluation, Modified Concept A (refurbishment of existing river bridge and construction of a new active transportation bridge) was recommended to City Council. However, throughout the consultation process, the City received significant and building public concern regarding traffic constrictions and interruptions that would be necessary during the refurbishment of the existing river bridge. Each of the concepts presented had the potential to result in extended periods of traffic restrictions and closures with a possibility of the bridge being closed for the entire 18 month refurbishment.

City Council approved the procurement process for the Project to be a public-private partnership/design-build-finance-maintain (P3/DBFM) model for a refurbishment of the existing structures or new construction. The City adopted the P3/DBFM model because the DBFM model provides extended lifecycle benefits compared to projects that are delivered using conventional methods. The benefits include:

- transfer of upfront financing costs;
- overall Project cost certainty;
- transfer of risk to the private sector; and
- transfer of maintenance costs for the term of the contract.

Following an initial Request for Qualifications, the three qualified proponents were selected and then issued a Request for Proposal. At the completion of the process, the City selected PRW as the preferred proponent. The PRW proposal presented a solution that avoids the crossing closure:

7. The **PRW proposal** is based on Modified Concept A. However, instead of building a new active transportation bridge and refurbishing of the existing river bridge, the PRW proposal reversed the bridge functions: building a new vehicle bridge and reconstructing the existing river bridge into an active transportation bridge. The significant advantages of a new vehicle bridge are that it maintains the concept of two bridges (one for vehicles and one for active transportation) and it will not cause extended restrictions or closures to bridge traffic.