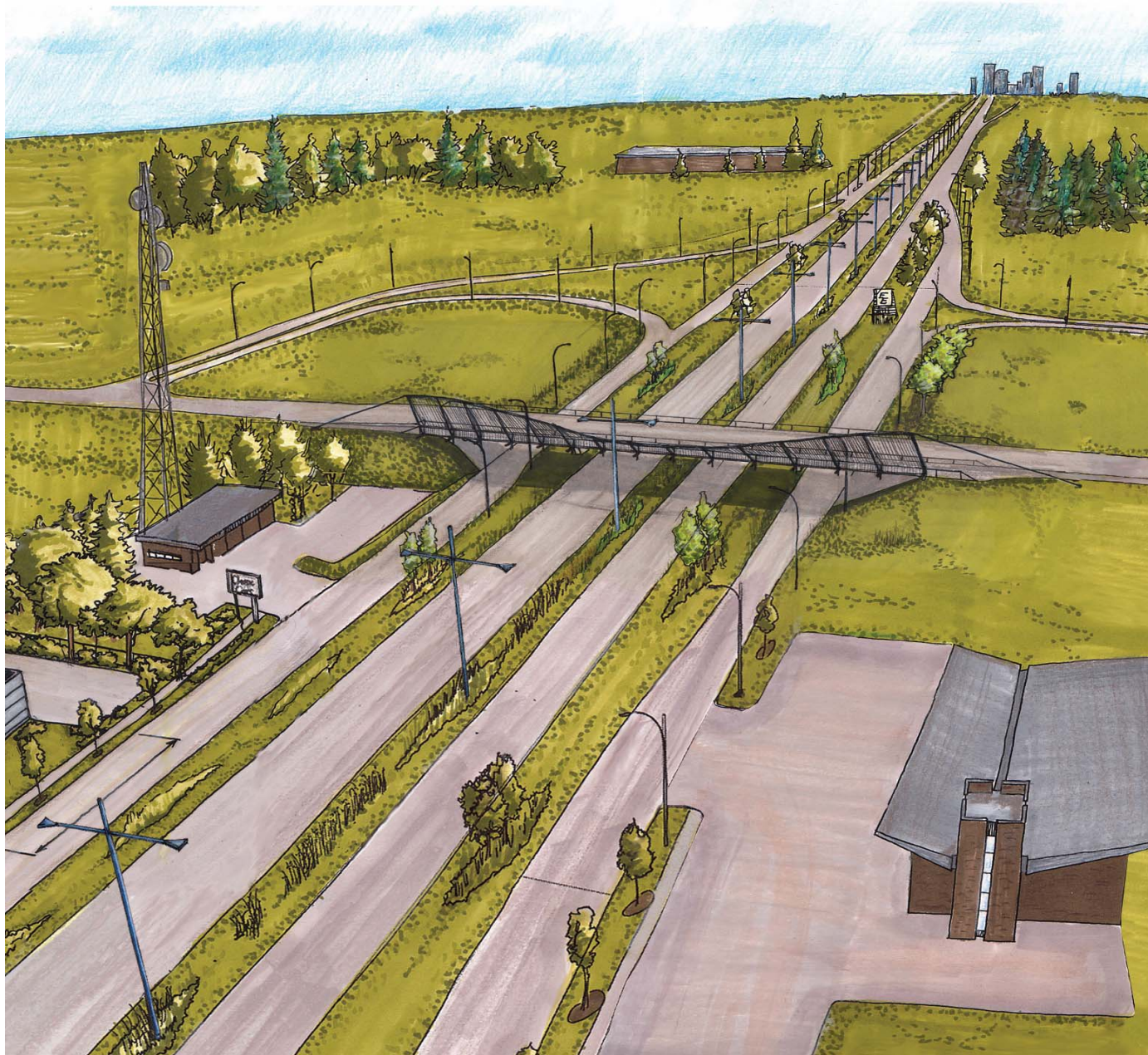


West End Corridor

Urban Design Guidelines

for City of Edmonton
Planning & Development



Prepared by:



Whetzel Environomics
Land Use Planning



CARLYLE + ASSOCIATES
Landscape Architecture + Urban Design



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1.0 EXECUTIVE SUMMARY

The West End Corridor Urban Design Guidelines contain ideas of how Stony Plain Road can be transformed into an aesthetically pleasing gateway, and into a viable transportation and commercial corridor in Edmonton. The Scope of Work for the design guidelines includes both right-of-way and the land along both sides of Stony Plain Road from 231 Street to Anthony Henday Drive.

The purpose of the West End Corridor Urban Design Guidelines is to prepare urban design guidelines that include land use, landscaping, lighting, and signing requirements for the corridor. The guidelines will be based on an innovative and integrated approach of urban design that will result in a vibrant and sustainable gateway into Edmonton. An implementation plan outlines the physical improvements required to achieve the goals as outlined in the urban design guidelines.

There are three (3) phases of implementation of the Urban Design Guidelines, in order to allow for capital funds to be secured and a time span for redevelopment of land and buildings. (1) Short-term goals (within three years) are items that require immediate attention and are necessary for the safety of corridor uses. (2) Medium- (five-to-ten year) and (3) long-term (ten to twenty-five year) goals may tie into schedules for capital improvements like lighting and landscaping.

The West End Corridor Urban Design Guidelines have been written as a framework for future development. The implementation of the guidelines over the long term will require periodic re-evaluation and potential adjustment in design or strategy.

Manasc Isaac Architects Ltd., Carlyle and Associates (landscape architects), Bunt and Associates (transportation planners), Whetzel Environomics Ltd. (land use planning) and GPEC Consulting (civil engineer) were consultants for the West End Corridor Urban Design Guidelines.



2.0 ACKNOWLEDGEMENTS

The West End Corridor Urban Design Guidelines was prepared with input from the following working groups of representatives:

City of Edmonton Mayor and Council

Mayor Stephen Mandel
Councilor Karen Leibovici
Councilor Linda Sloan

City of Edmonton Representatives

Kulbir Singh, Director, Strategic Areas Services, Planning and Policy Services
Carol Belanger, Principal Urban Designer, Planning and Policy Services
Ossama Elgalali, Senior Planner, Planning and Policy Services
Marica Clarke, Planner, Planning and Policy Services
Juliet Anderton, Planner, Planning and Policy Services
Peter Alexander, Planner, Community Services
Chantal Villecourt-Mahl, Planner, Community Services
Gordon Menzies, Transportation and Streets
Brian Latte, Transportation and Streets
Brice Stephenson, Transportation and Streets
Audra Jones, Community Transportation Planning, Transportation and Streets
Rhonda Toohey, Transportation Planning, Transportation and Streets
Don MacDonald, Director, Signals and Street Lighting, Transportation and Streets
Ben Yarmuch, Construction and Maintenance Supervisor, Transportation and Streets
James Rockey, Street Light Coordinator, Transportation and Streets

West End Business Association

Karen Kosof, Executive Director

Consultants

Myron Nebozuk and Shafraaz Kaba, Manasc Isaac Architects Ltd. (Prime Consultant)
Doug Carlyle, Carlyle and Associates (Landscape Architects)
Mark Huberman, Bunt and Associates (Transportation Planners)
Jolie Whetzel, Whetzel Environomics Ltd. (Land Use Planning)
Martin Gillet, GPEC Consulting (Civil Engineer)

3.0 INTRODUCTION

Edmonton's location in the crux of the prairie and aspen parkland provides an opportunity to highlight the landscape in relation to the *BIG* sky. Views of the city as one enters create moments of anticipation and excitement. Views to the forests, farms and sky as one exits spark the anticipation of a journey. These experiences are points of departure for urban design. They can inspire innovative and unique design guidelines and concepts that can distinguish Edmonton from cities anywhere in North America.

The West End Corridor begins from the Edmonton city limits at 231 Street and ends at Anthony Henday Drive. The study area extends 500 metres north and south of Stony the Plain Road and 100 Avenue, and includes the interface of Winterburn Industrial area and Lewis Farms Structure Plans. It is a major commuter link as well as a visitor route and as such, it is an important gateway to the city. The corridor is a transition between the urban and rural, and vice versa. Traveling into Edmonton from the west, one sees farmland and parkland give way to development and a metropolitan area. The corridor is bound by Parkland County to the west, the Winterburn Industrial Area and Westview Village to the north, Anthony Henday Drive Transportation and Utility Corridor to the east, and Normandeau Gardens and Lewis Farms to the south. The corridor has a wide variety of uses, commercial, industrial, residential, and rural uses. There are several locations in the corridor that are listed in the City of Edmonton's inventory of environmentally sensitive areas. With the rapid growth of Lewis Farms, and the commercial activity along Stony Plain Road, it is important to design infrastructure that will assist in the revitalization and presentation of this area.

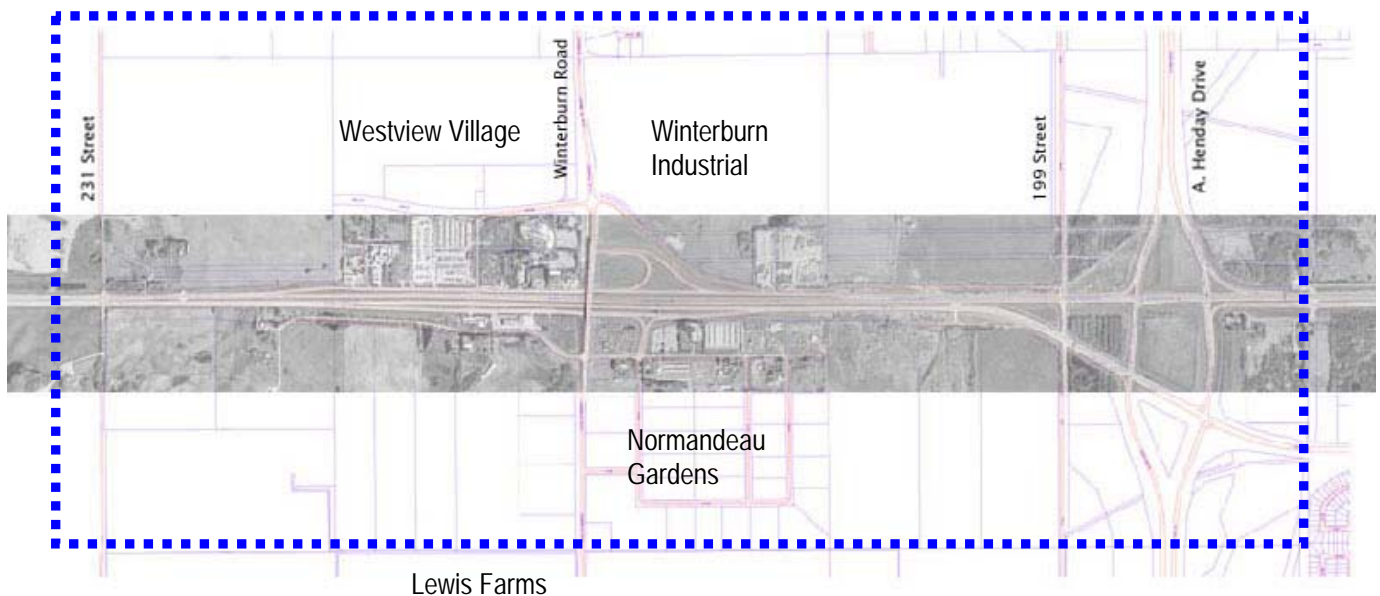


Figure 1: Project Area.

Key features within the Corridor include:

A view of the city skyline in the distance;
Natural Aspen groves and wind-rows on existing farmland;
Winterburn Road Overpass at the middle of the study area;
Large amount of land awaiting development;
Link to the Anthony Henday ring road and utility corridor.

The West End Corridor is a vital link to the communities of Spruce Grove and Stony Plain. The corridor is also labeled as a route to Edmonton City Centre, as opposed to the "Thru Route" designation of Yellowhead Highway, which potentially prompts more people to use this route.



Figure 2: The decision to take Highway 16A is made 50 km from Edmonton.

"These long sequences could make our vast metropolitan areas comprehensible: the driver would see how the city is organized, what it symbolizes, how people use it, how it relates to him. To our way of thinking, the highway is the great neglected opportunity in city design."

- Kevin Lynch, A View from the Road

4.0 TERMS OF REFERENCE AND PURPOSE

The purpose of the West End Corridor Urban Design Guidelines is to prepare planning and development recommendations and designs that will assist in making the entry to the city inviting and aesthetically pleasing, as well as help to direct development along the corridor in an aesthetic, sustainable, and economically efficient manner. The Urban Design Guidelines include consultations with local businesses and residents, as well as other organizations that have a stake in economic development, and that encourage tourism in Edmonton.

4.1 The West End Corridor Urban Design Guidelines will help:

- Improve the visual appearance of the highway corridor through good design that will be consistent with standards set by the Highway 2 Urban Design Guidelines;
- Provide land use and transportation guidelines and recommendations to assist in the growth and ease of mobility through the corridor;
- Create a framework and provide standards for private developers to use in the development of land and property;
- Protect significant environmental, agricultural, and natural features;
- Provide design ideas that celebrate arrival to Edmonton;
- Increase the economic development potential for Stony Plain Road.



Figure 3: Improvements are needed to "soften the concrete look" of the corridor.

5.0 PLANNING AND DESIGN PROCESS

To begin the planning and design process, a Steering Committee was formed in the summer of 2004. At the initial meeting, precedents of new urban design and highway improvements were presented. Personal interviews with Ward One councilors (Stephen Mandel and Karen Leibovici) were undertaken. Other personal interviews also included Karen Kosof from the West End Business Association, Jennifer Jordan of West Edmonton Mall, and Lewis Farms Community League members, (see 10.1 Appendix A for interview transcripts).

The West End Corridor Urban Design Guidelines were created with the input from local residents, businesses, and stakeholders. The first public consultation was held on June 16, 2004; approximately twenty-five people attended, providing feedback on issues such as traffic, safety, cleanliness, signing, business and residential access, and environmental sustainability. Short-, medium- and long-term strategies were discussed, and highway precedents from other jurisdictions were also presented (see 10.0 Appendix A for meeting minutes and workshop feed back).

The results from the public consultation and personal interviews were presented at a second steering committee meeting held in August. At this meeting, preliminary ideas for creating markers within the corridor were presented. These ideas were critiqued and suggestions to explore using a consistent corridor image to match Highway 2 were received. Follow-up meetings with the City's principal urban designer Carol Belanger and Director Kulbir Singh were scheduled to discuss progress and set direction.

The final version of the West End Corridor Urban Design Guidelines will be created after a public meeting in May 2005. Following the public meeting, the guidelines will be presented to Edmonton City Council for approval (in principal), and a phased implementation plan may proceed based on budget approvals.

It is hoped that the West End Corridor Urban Design Guidelines will be implemented based on their practical, sustainable and fiscally efficient design and planning. The City of Edmonton will need to accomplish some immediate improvements in order to garner support for long-term goals.

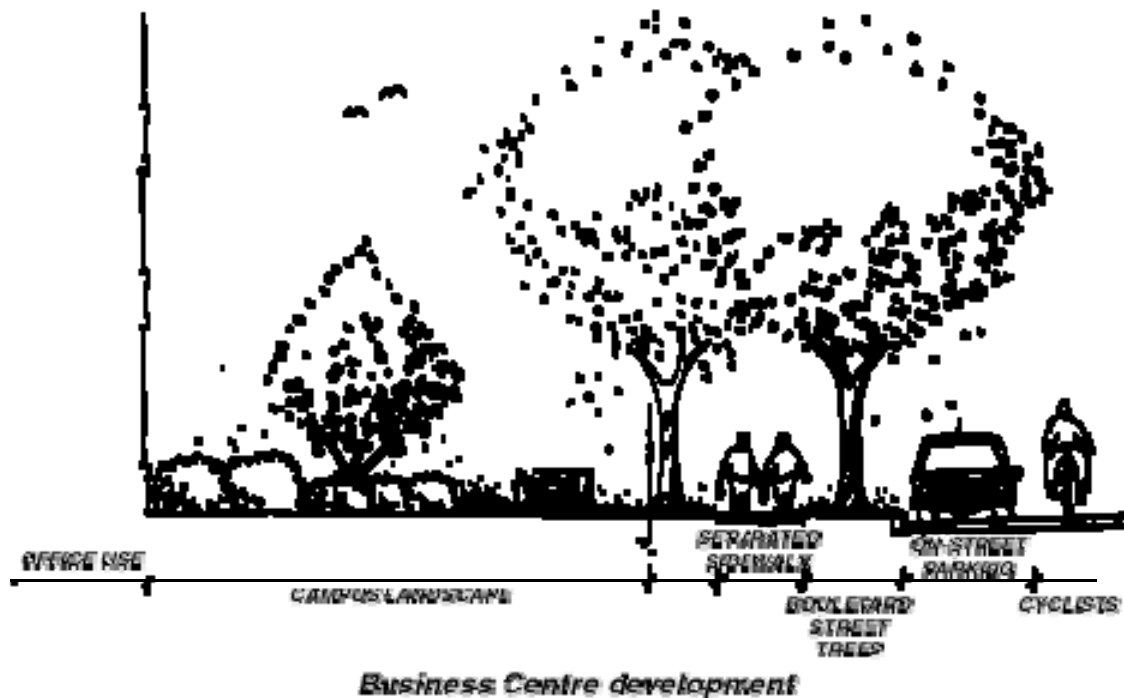
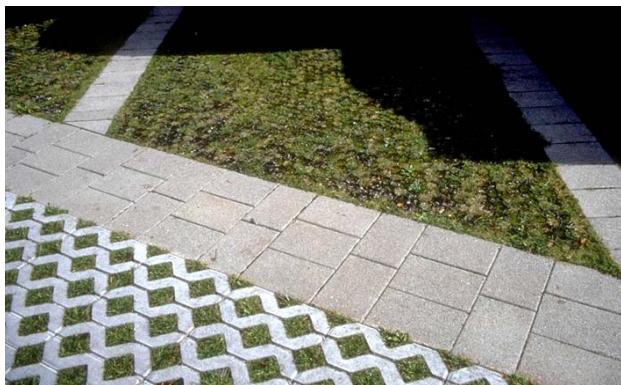


Figure 4: Edmonton's present "Welcome" sign.

6.0 PRECEDENTS

6.1 Highway Oriented Retail (HOR) Re-zoning Policies and Guidelines: Marine Drive Industrial Area, Vancouver, British Columbia

The guidelines developed for the Marine Drive Industrial Area are an excellent precedent in terms of site considerations and sustainability. The guidelines contain many requirements that help improve the quality of development and provide parameters for sustainable site development. Pedestrian and bicycle traffic are encouraged, as are multi-modal links to city transit and trail networks. Sustainable site strategies such as grey water use for irrigation, reduction of impervious surfaces, and the preservation of on site trees and vegetation, are also noteworthy.



Figures 5, 6, 7: Vancouver's HRD Guidelines encourage pervious paving, pedestrian and bike paths that tie into city trail networks and demand greater landscape planting for developments.

6.2 I-95 Roads with Character

- Planting of flowering trees and annuals.
- "Rustic" bridges.
- Demolition of all "cookie-cutter" developments that one can see from a road.
- Bicycle and pedestrian paths along corridor.
- Artist-commissioned "Works of Character" for each community the roads pass through.
- All signage replaced by original works of art.
- Drivers and passengers will be "encouraged" by state troopers, now called "Art Cops," to stop their cars, get out, and take a photo of their families in front of each unique piece, or "Art Stop."



Figure 8: I-95 Highway Signage are commissioned works of art.

6.3 Piestewa Parkway/Freeway, Phoenix, Arizona

- Create noise barriers.
- Make land use changes (to allow commercial and mixed use development).
- New parks buffering residential areas.
- Installation of public art to mark freeway entry/exit points.
- Bicycle/pedestrian routes.

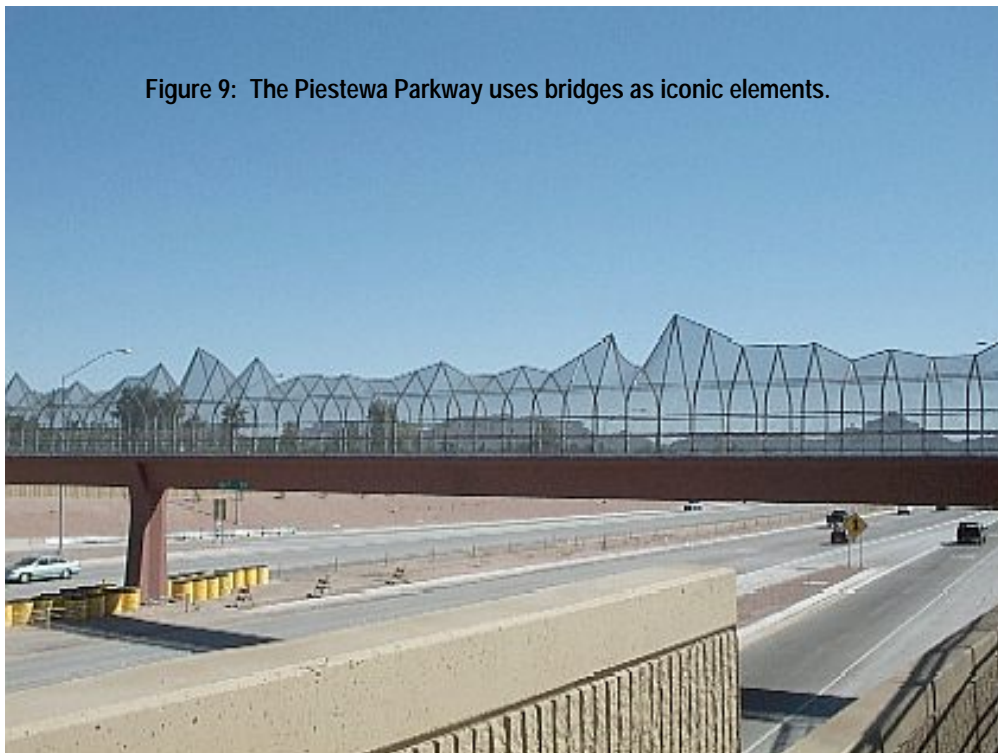


Figure 9: The Piestewa Parkway uses bridges as iconic elements.

6.4 Green Ribbon Highway, Katy/Houston, Texas

- Drought-tolerant planting was a priority.
- Vines/screening plants on retaining walls and noise barriers.
- Signage designed for clarity.
- Visual and physical integration for project elements.
- Create color code for all highway corridors to assist with wayfinding.



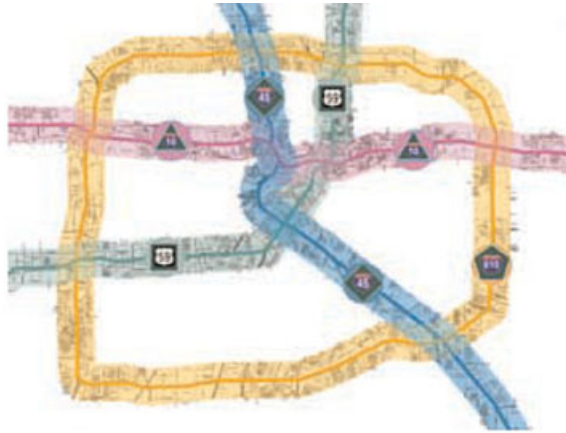
Figure 10: Drought-tolerant planting was a priority in the Green Ribbon Highway.



Figure 11: Trees are planted in geometric compositions.



A-56: Example of graphic that could be used on face of CTB

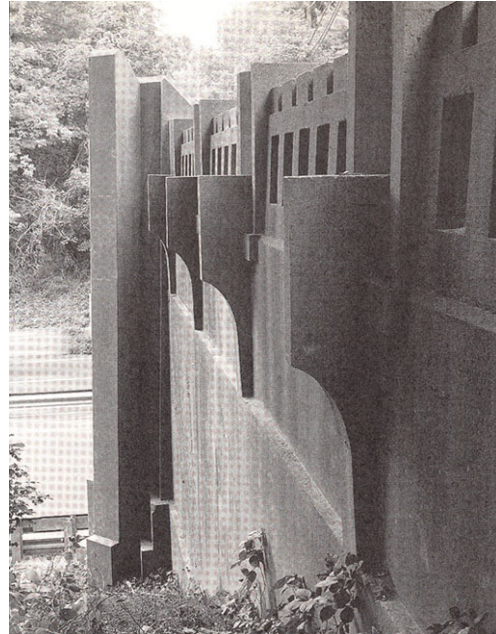
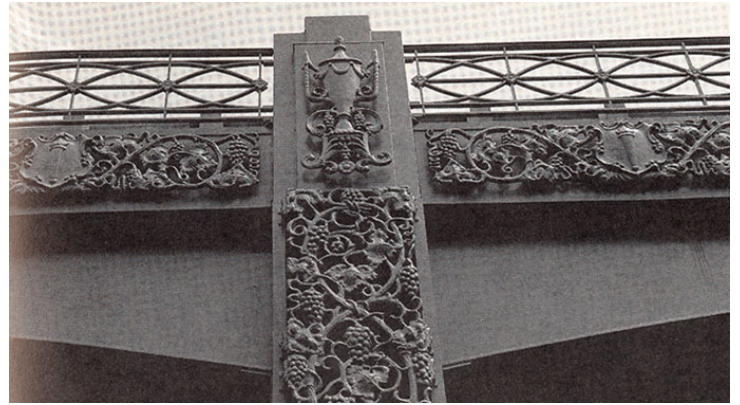
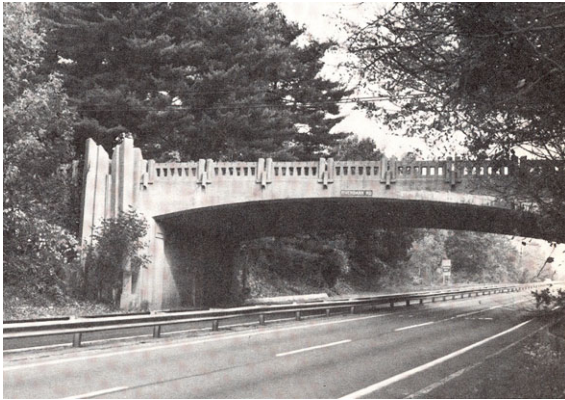


A-57: Map showing example color codes for each corridor

Figure 12: Highways are color coded to provide easier wayfinding and map reading.

6.5 Merritt Parkway, Connecticut

- The Merritt Parkway incorporates a series of thirty-three (33) bridges with distinctive details and ornament. The bridges include detailed reliefs, handrails, and trellises. The Parkway was designed for recreational automobile travel, in addition to providing a route that did not pass through towns and villages in the countryside. The bridges and details along the Parkway have recently been restored.



Figures 13, 14, 15, 16: The Merritt Parkway incorporated an incredible amount of detail in overpasses and bridge structures.

6.6 International Gateway, Melbourne, Australia

- The International Gateway in Melbourne, Australia is a remarkable and striking entry into a world-class city. Incorporating an arching trellis over the roadway, a sculptural sound barrier wall, a bridge with remarkable entry towers, and an angled, yellow beam as the celebratory arch, this gateway speaks to a city that is looking to directly to the future. All design elements are at a large scale for cars that are traveling at high speed.

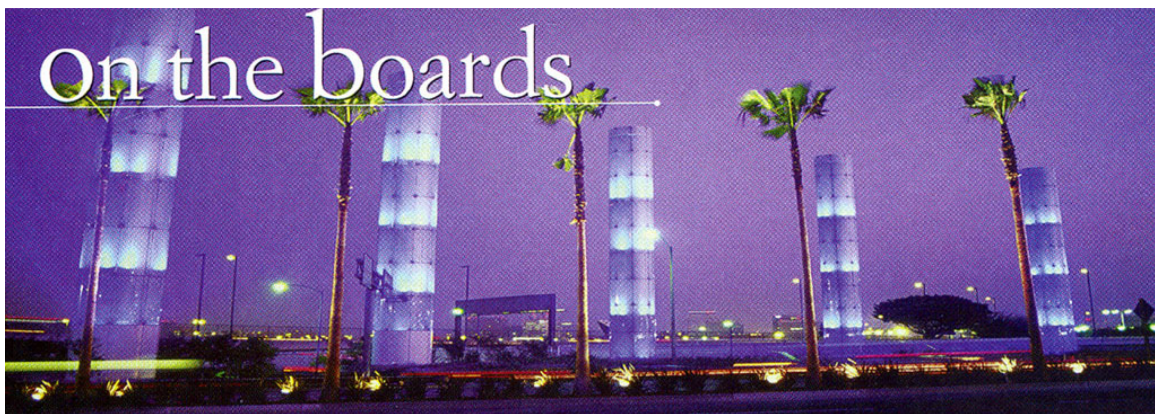


Figures 17, 18, 19 (clockwise from top): Monolithic bridge towers mark the entry into downtown; a trellis over the road creates an elegant spatial transition; a yellow-cantilevered beam acts as a celebratory arch.



6.7 LAX Gateway, Los Angeles, California

- The LAX Gateway includes a kinetic light sculpture that incorporates twenty-six (26) large glass towers by artist Paul Tzanetopoulos. The pylons are part of a \$112 million construction program called the "Gateway LAX Enhancement Project" consisting of eleven (11) variable height pylons (25 to 60 feet) constructed in the median of Century Boulevard, and fifteen (15) 100-foot-high pylons located at the Century/Sepulveda Exchange. They are lit in colorful arrays from dusk till dawn.



Figures 20, and 21: A light sculpture by Paul Tzanetopoulos makes for a dramatic entry into Los Angeles

6.8 Pena Corridor Landscape Master Plan, Denver International Airport, Denver, Colorado

- The Denver International Airport held a design competition for landscape design to screen undesirable views. Hargreaves Associates won the competition with a scheme that was to "enhance and preserve the quality of the entrance experience and Denver International Airport and its literal and symbolic significance as a major portal to the Rocky Mountains West." Like the West End Corridor, there are many disparate building types and uses, as well as unsightly views to screen.



Figures 22, 23, 24, and 25: Competition proposals for the Denver International Airport Corridor.

6.9 Edmonton Precedents (Highway 2/Gateway Boulevard, Yellowhead Highway)

- The City of Edmonton has improved the Highway 2 and the Yellowhead Highway East entry corridors. Improvements include lighting, signage, plantings, and design guideline recommendations. These corridors may influence the design of any subsequent entry corridor guidelines, in order to create a more consistent look as you enter the city.



Figure 26, 27, 28, 29, and 30 clockwise from the top): Gateway Boulevard relief art; Ellerslie Road overpass; Yellowhead business signage; Gateway Boulevard Corridor; Ellerslie Road Overpass beacon lights.

7.0 VISION

Throughout the planning and design process, the Consultant Team searched for a vision that captures the spirit of place and celebrate entry into the city. Highway 2 and Yellowhead East have introduced entry corridor design guidelines. The City of Edmonton's Planning and Development Department desire a vision that is complementary to other entrance corridors. It is essential that the corridor be significant and memorable to the visitor, and also assist people new to Edmonton with a clear path to their destination. The West End Corridor is only 3.2 kilometres (two miles) long and has three major crossroads (231 Street, Winterburn Road, and Anthony Henday Drive); therefore, improvement to the corridor must have an immediate impact.

7.1 Stakeholder Input

Summary of information received from public input and key stakeholder interviews is provided below. Full meeting minutes of the public open house session and key interviews are provided in the appendix.

7.1.1 The West End Corridor should convey a clean, modern, and progressive image of Edmonton;

- Planting needs to curb the incidence of brush fires;
- Garbage from the nearby landfill and trucks in transit need to be cleaned up;
- Need to soften the "concrete" look and feel of the corridor;
- Lighting should be consistent and extend the full length of the corridor;

7.1.2 The West End Corridor should be a high speed route to the city that is easy to navigate;

- It needs to have clear and easy to understand signage for wayfinding;
- Local businesses need good signage to attract customers;
- Review the location and extent of service roads to provide logical access to businesses;

7.1.3 The West End Corridor can foster development and growth by reviewing land use patterns and designating zones that will provide opportunities for economic development;

- The Winterburn Industrial Area Structure Plan has not been changed since the annexation of the land from Parkland County;
- The Lewis Farms Development will have a large impact on the corridor;
- The Stony Plain Road Major Commercial Corridor Overlay does not extend to 231 Street.



Figure 31: The landfill just outside of Edmonton should be screened to provide a more positive impression when entering the city.

7.1.4 The West End Corridor Urban Design Guidelines should be practical, cost effective and easy to implement;

- The Guidelines should not “stay on the shelf,” but be put into practice right away;
- Recommendations and designs should be affordable for the City of Edmonton’s budget as well as local businesses to ensure adoption;
- City of Edmonton departments should be aware of the West End Corridor Urban Design Guidelines and be on board for their implementation;
- The City of Edmonton must accomplish some immediate improvements in order to generate buy-in with the longer-term vision for the corridor.

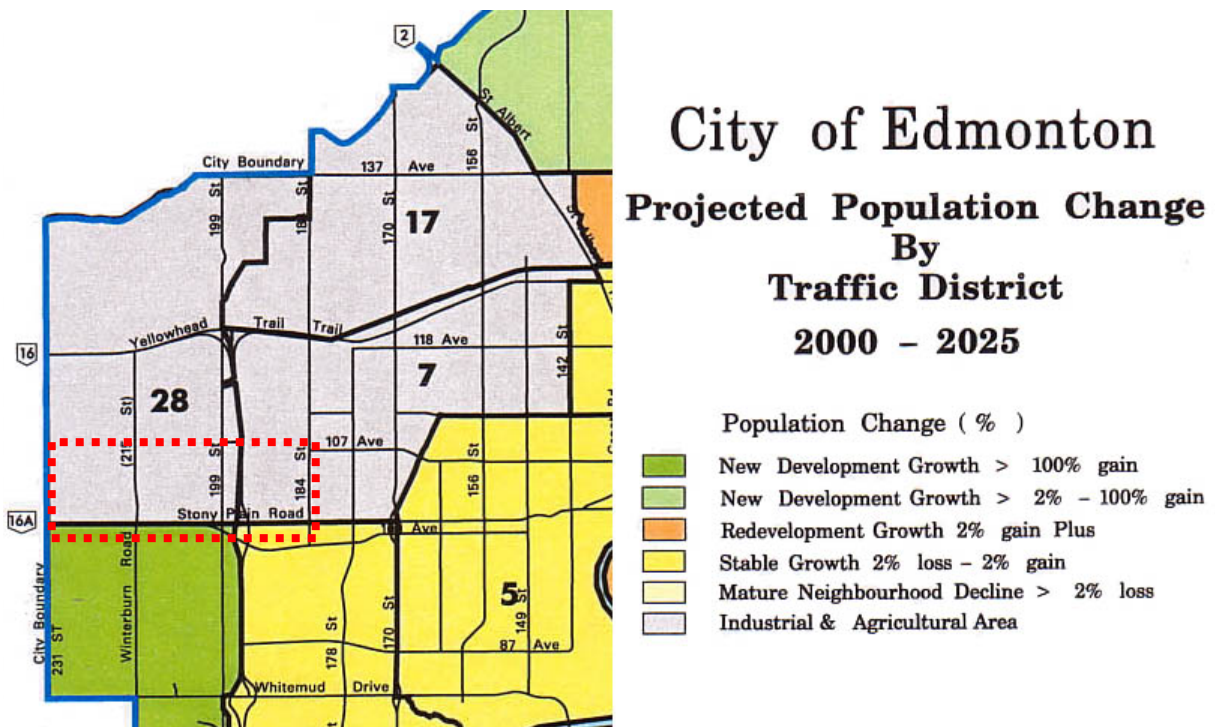


Figure 32: The area immediately south of the West End Corridor is expected to grow substantially in the next twenty (20) years

8.0 URBAN DESIGN FRAMEWORK

There are four (4) main aspects that the Urban Design Guidelines Framework will address: Corridor Aesthetic Improvements, Land Use, Transportation/Mobility, and Sustainability. These four (4) aspects will be implemented in a phased program over time.

8.1 Corridor Aesthetic Improvements

This section outlines design recommendations that will help improve the look of the Stony Plain Road Corridor without compromising its functionality. At present, the West End Corridor is lacking visual consistency and a strong element that would give the corridor an identity. The Stony Plain Road corridor can be made more aesthetically pleasing by creating unifying elements such as lighting and landscaping within the road right-of-way.

The first step to improving the corridor includes a general clean up of all litter and detritus. Some private sites are in violation of City bylaws that do not allow vehicles and other objects on the road right-of-way. City officers should enforce Nuisance Bylaw 10406 Section 3f which defines nuisance to be "wrecked or dismantled vehicles, or those that are unsightly and abandoned, unregistered or uninsured" for sites that are non-compliant. The City of Edmonton may wish to provide matching cash incentives for landscape planting on privately owned lands in order to see improvements along the corridor happen more quickly, as was done for gateway Boulevard.



Figure 33: At this junkyard, vehicles are overflowing into the road right-of-way.

There are a number of improvements essential to bringing a cohesive and contemporary look to the West End Corridor. These include:

- A New Landmark to Greet Travelers
 - Creating a new type of greeting sign for travelers who are entering and exiting the City. Ideas include a “City Limits” marker to act as a totem and welcoming monument, designing a new more dramatic type of “Welcome to Edmonton” sign, dynamic, or creating a “celebratory arch” on the existing Winterburn Overpass.
- Street Lighting
 - Conduct an assessment of all light poles in the West End Corridor.
 - New street lighting poles to replace older, high mast poles;
- Corridor Planting
 - Establish planting at the “City Limits” marker to set the bar on the quality of design for the balance of the Corridor;
 - Use planting to screen the landfill just west of the city limits;
 - Provide planting at intervals in the center highway median and on the edge of collector roads;
 - Appropriate landscape design and planting should be enforced for particular zoning classes; for example, street frontage onto Stony Plain Road must be treated as arterial, to ensure street trees are planted.
- Signing and Wayfinding
 - Relocate small, non-statutory signs that do not aid in wayfinding to areas of lesser vehicle speed;
 - Apply the City of Edmonton’s “1% for Art” policy for creating public art that can be incorporated into new infrastructure (i.e. new overpass at Anthony Henday Drive).

8.1.1 A New Landmark to Greet Travelers

The current “Welcome to Edmonton” sign that greets travelers is beginning to look worn and dated. Furthermore, a small, “Thank You for Visiting Edmonton” sign on the westbound lane is too small to be effective. During the course of the development of the West End Corridor Urban Design Guidelines, several ideas for a landmark element were considered, including tensegrity towers and sculptures. See Appendix C for images of these ideas.



Figure 34: Existing “Welcome to Edmonton” sign is dated and obscured by landscaping.

Objective:

- Create a monumental element that will give visitors to the city a sense of arrival.
- Reference the great petro-chemical industrial support base of the city, as well as the strong visual arts and contemporary sculpture community.
- The marker would be at a significant scale (at least 15 metres high) in order to be visually legible for people traveling at highway speed, and to create a sense of arrival through its prominence.
- The marker would be lit for nighttime visibility and incorporate solar panels in order to avoid trenching electrical conduit to the remote location.
- The marker may also incorporate information such as the current city population, and state that Edmonton is the capital city of Alberta.

Design:

- The new landmark to greet visitors should offer a unique and striking image to travelers that use the West End Corridor. In the course of the Design Guidelines, it became apparent that an open design competition would be the best method to solicit a new marker for the City of Edmonton. Some ideas developed by the consultant team are presented below:

8.1.1a City Limits Marker (Option 1)

To provide a more memorable and visible landmark, the creation of a “City Limits” marker located just inside the City of Edmonton corporate limits on either side of the highway would create a totem in the landscape. Just like the large oil derrick on the Highway 2 Corridor, this will provide a significant marker to orient and welcome travelers and tourists. A simpler, steel structure can reflect Edmonton’s contemporary lifestyle and world-class steel industry.



Figure 35 (top): Leduc Business Park sign.
Figure 36 (above): Initial sketch for City Limits marker.
Figure 37: (left): rendering of proposed City Limits marker.

8.1.1b Celebratory Arch

The triumphant arch has been used throughout history to welcome visitor or returning citizens to a city. The Arc de Triomphe in Paris is a world-renowned example. The celebratory arch in the West End Corridor would welcome people to the city by creating a symbolic structure on the Winterburn Road Overpass. There are two (2) variations for creating the celebratory arch:

Celebratory Arch (Option 1)

Create a pedestrian and bicycle bridge lane that would also be a beautiful structure. The pedestrian bridge lane would be retrofitted to the existing Winterburn Road Overpass, in order to provide a pedestrian/bicycle connection between the Westview Village community and the new communities in Lewis Farms. A structural assessment of the existing overpass would be necessary to evaluate the feasibility of attaching a pedestrian addition. The structure of this pedestrian bridge can express color and form and be reinforced by nighttime lighting. Producing a pedestrian bridge link will create the necessity of building a sidewalk from the Normandeau Gardens community through to the Westview Village community.

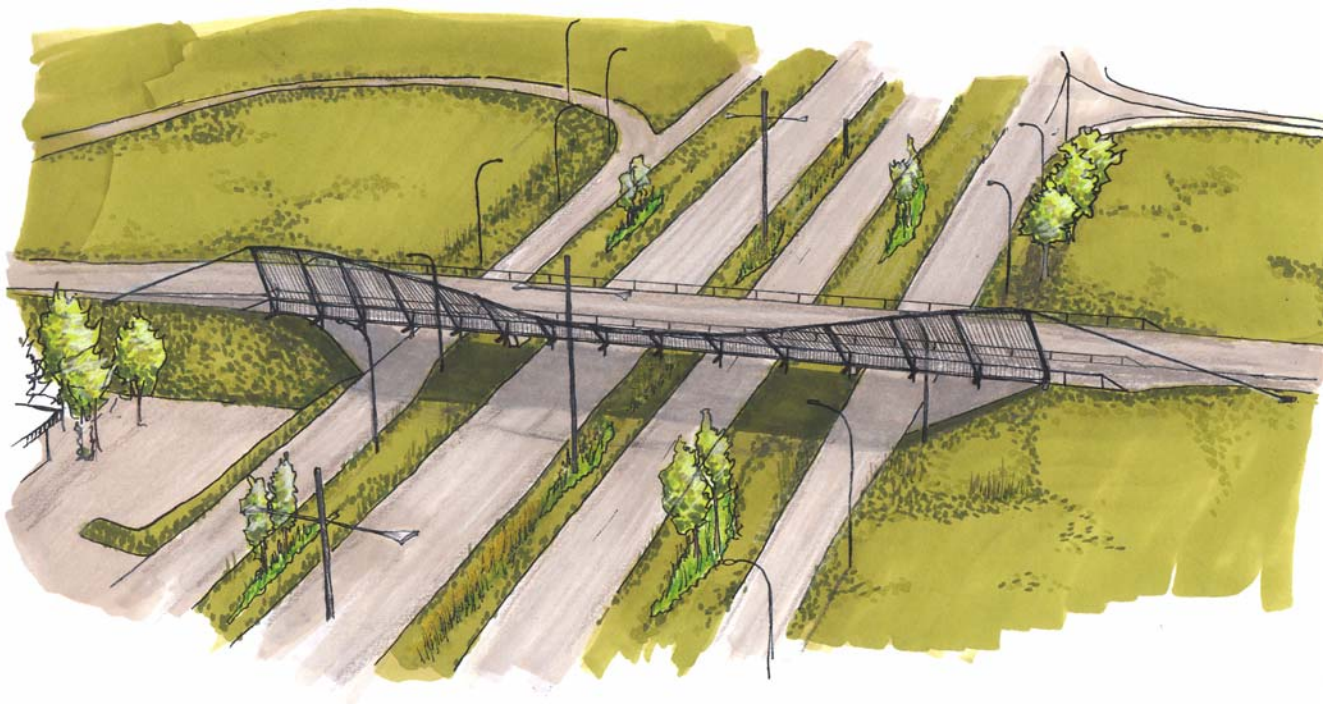


Figure 38: The pedestrian/bicycle bridge addition can function as a sculptural arch.

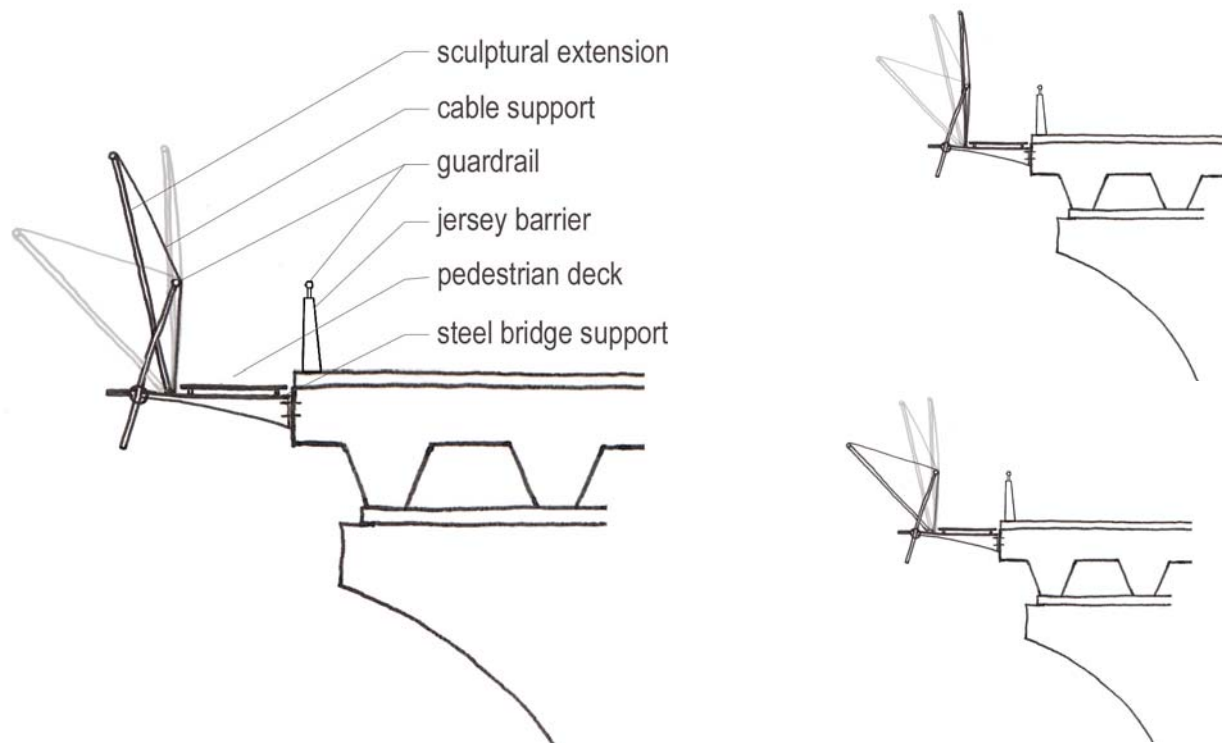


Figure 39, 40, and 41: Diagrammatic section of sculptural pedestrian bridge showing undulating guard.

Celebratory Arch (*Option 2*)

The celebratory arch could match the aesthetic of the Ellerslie Overpass on Highway 2 and would incorporate the message “Welcome to Edmonton” in bold, six-foot high letters. Beacon lights and new bridge lighting would ensure nighttime visibility. This option would work best if a aesthetic entry corridor similar to Highway 2 is preferred. A structural review would be required to determine if the beacon feature lighting can be incorporated on the bridge or along side on the bermed ground.



Figure 42: Illustration of the Winterburn Overpass with Highway 2-type detailing and “Welcome to Edmonton” lettering.

8.1.2 Street Lighting

Street lighting will be one of the most significant visual improvements to the West End Corridor. The consistency and impact of street lighting is critical in order to tie the corridor together. At present, high-mast light poles are found in the center highway median, from Anthony Henday Drive to the Winterburn Road Overpass. Street lighting must be continuous to the city limits.

A feature color for the davit poles in West End Corridor can provide visual impact. An region of Stony Plain Road to the east of the study area uses light blue as an accent colour. Gateway Boulevard uses dark blue, as does Highway 2 uses dark blue poles. For the West End Corridor, dark blue is recommended to provide a bold color and to tie into the lighter blue used further east on Stony Plain Road.

At the moment, the davit poles on the collector roads are rusting and deteriorating. Unfortunately, the Traffic Operations Department does not intend to replace streetlights in the West End Corridor during the next ten (10) years. The benefits of clean and consistent lighting can be seen, at present, in the Highway 2 corridor.

Objective:

- Provide continuous street lighting for the entire length of the West End Corridor, consistency, and to make it feel a part of the city;
- Improve traffic safety by the extension of highway lighting to the city limits;
- Conduct an assessment of all davit poles in the West End Corridor.
- Replace existing davit poles that are rusting and deteriorating, with galvanized and powder coated steel poles on arterial roads, and plain galvanized poles for collector roads.

Guidelines:

- Lighting provided for future collector road development is to supplement highway corridor lighting;
- The guidelines provided in this study, require further detailed design. The general intent is to keep lighting consistent throughout the West End Corridor.

References:

- City of Edmonton Design and Installation Standards, Chapter 6 – Street Lighting
- TAC Geometric Design Standards for Canadian Roads, Chapter 3.1 Roadside Safety.



Figure 43: Existing davit poles are in various states of rusting and disrepair.



Figure 44: Lighting along Highway 2 uses simple poles and luminaries that improve the look of the corridor

8.1.2.1 Highway Light Standard Selection:

There are hundreds of types of davit poles and luminaires to choose from. The minimum light standard recommended for the West End Corridor is to match the Highway 2 poles and luminaires manufactured by: Kim Lighting, davit type: circular).

- Single post standard, complete with flat, horizontal luminaire arm (Nova Pole manufactures standard davit and high mast lighting poles approved by Alberta Infrastructure and the City of Edmonton);
- Color: Federal Standard 595B, Color 15052 Dark Blue (to match Gateway Boulevard);
- Break away base required.

8.1.2.2 Highway Light Standard Layout:

- 70 metres on centre (detailed design review is required to verify sufficient light levels);
- Minimum 8 metres from travel lane edge (for cars travel at 100 km/h);
- Light standard plan will be required for Planning and Development Department approval.
- Design to be completed with the "Clear Zone Concept" to avoid collisions with vehicles traveling the corridor. Speed, traffic volumes and the slope on the internal median determine the actual distance that light poles should be offset from the road edge. Based on this, the clear distance can range from a minimum of 2-3 metres (low traffic/speed and flat shoulders & ditch) to 11.5 – 14 metres (high speed/traffic and maximum allowable slopes). An actual engineering design would be required to determine the clear zone along each segment of the corridor. However, there are measures that can be taken to minimize the impact of infringing on the clear zone such as using breakaway pole bases, or protecting the pole with roadside barriers.

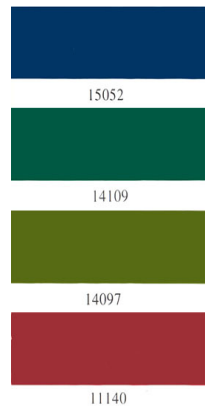


Figure 45: Light pole colour options from Federal Standard 595B. The top blue colour is the preferred option.

8.1.2.3 Highway Light Standard Luminaires:

- Color corrected high-pressure sodium lamp.
- Lower power consumption, long life, relatively low cost.
- Respects Dark Skies light cut off recommendations
- IP66 compliant luminaires, options include:
- The Hestia, Onyx, or the Helios Series by Lumec Schrader
- Metropolis or 1658 Max by Disano; and Circular by Kim Lighting (Fig. 42)



Figure 46: Hestia by Lumec Schrader



Figure 47: 1658 Max by Disano.

8.1.2.4 Flood Lighting for City Limits Marker and/or “Welcome to Edmonton” Signs:

- Type: Architectural Floodlights (AFL) by Kim Lighting, Metal Halide, colour: black

If the West End Corridor is to be consistent in design to the Highway 2 Corridor, the same beacon lighting can be incorporated into the overpass bridge structures.

8.1.2.5 Beacon Light Standard:

Steel I Beam frame (details to be match Highway 2, and the Ellerslie Bridge beacon lights).

8.1.2.6 Beacon Light Standard Luminaires:

Type: Wall Forms (Kim Lighting – cut off face mounting), colour: dark blue (Federal S 15052).

Lamp: LED lamp, long life, low power consumption, low maintenance cost, instant start



Figure 48: Beacon lighting on Ellerslie bridge overpass



Figure 49: Illustration of beacon lights constructed on Winterburn Overpass.

8.1.3 Corridor Planting

The West End Corridor is in the midst of Aspen parkland. Natural features will be enhanced by effective planting design.

Objectives:

- Respect existing natural areas that exist within the West End Corridor;
- Provide planted edges to screen undesirable views (i.e. landfill, industrial, or junk storage yards);
- Plantings to complement the existing natural Aspen parkland and farm windrows;
- Remove dead trees from the Corridor, particularly at the “Welcome to Edmonton” sign;
- Plant species to help pre-treat water run-off from highways and roads;
- Provide color and seasonal variation through landscape plantings;
- Create visual continuity and design legibility, as seen from the ground and the air;
- Plantings are to be cost-effective and manageable by The City of Edmonton Community Services.



Figure 50: In the midst of Aspen Parkland.

General Landscape Guidelines:

- Existing trees and vegetation should be retained where possible and incorporated into site planning;
- Groups of trees should be retained to protect against isolated tree hazard situations and to preserve the associated under storey vegetation for minimum disturbance of existing conditions;
- A variety of hardy trees and vegetation should be provided to minimize maintenance, water use and integrate the planting design into the local ecosystem as much as possible; The “Parks Naturally” program is encouraged;
- Plantings higher than 30 centimetres are not to be located at the intersection of the interchange ramps and the Highway;
- Provide clear sightlines at the terminus of ramps at all Corridor and secondary road intersections;
- Plantings are not to obscure signage along the Corridor.
- Provide locations of existing utilities, and maintain utility setback clearances for tree and shrub planting;
- Ensure approvals are met with City departments (Community Services, Streets and Transportation, Planning and Development, Asset Management and Public Works), as well as Alberta Infrastructure and Transportation.

8.1.3.1 Tree Plantings – Screening

Plant trees in linear blocks parallel to the Corridor to screen unsightly areas.

Species: Trembling Aspen (*Populus Tremuloides*), Balsam Poplar, (*Populus Balsamifera*)

Size: 25 – 65 mm caliper

- Location:
- a) At landfill site outside Edmonton City Limits, adjacent to eastbound highway. Trees to be installed in road right-of-way in coordination with Alberta Transportation and the private landowner.
 - b) At vehicle junkyard west of the Winterburn Overpass, adjacent to service road and westbound highway. Trees to be installed in road right-of-way in coordination with private landowner.
 - c) Both in and adjacent to highway lands.

Notes: Coniferous trees and shrubs, especially Spruce, have a low to nil tolerance for periodic saline atmospheres, and so are appropriate to roadside environments. Screen tree plantings are planted in association with an understorey of shrub species that may include a selection of the following species, which are indigenous to the Parkland, and selected in association with micro-climatic conditions: *Amelanchier Alnifolia* (Saskatoon), *Cornus Stolonifera* (Dogwood), *Elaeagnus Commutata* (Wolfwillow), *Potentilla Fruticosa* (Cinquefoil), *Prunus Virginiana* (Choke Cherry), *Salix Bebbiana* (Beaked Willow), *Salix Glauca* (Grayleaf Willow), *Shepherdia Canadensis* (Canadian Buffalo-Berry), *Symphoricarpos Occidentalis* (Buckbrush).



Figure 51: The landfill located just west of the city limits is visible from the

8.1.3.2 Tree Planting – Highway Edges

Plant triangular patterns of trees along highway edges to provide formal landscape design.

Species: Trembling Aspen (*Populus Tremuloides*)

Size: 25 – 65 mm caliper

Location: Typically installed at the road edge between the highway and the service roads or road right-of-way, and in accordance with available space (i.e. corridor edge conditions, transportation safety, with utility corridors and land conditions). See typical plan.

Dimensions: Setback from travel lane edge (5metres).

Nine (9) trees grouped in triangular pattern. Patterns to align with median light pole locations (70 metres on centre).

Notes: The shrub plantings would be similar to that in the screenings group, but of only the lower height species for visibility and so would include: *Elaeagnus commutata* (Wolfwillow), *Potentilla fruticosa* (Cinquefoil), *Salix glauca* (Grayleaf Willow), *Shepherdia canadensis* (Canadian Buffalo-Berry), *Symphoricarpus occidentalis* (Buckbrush).

The understorey would vary with the microclimatic and soil moisture conditions as such alternates may include roses (in drier conditions) and willow (in the extreme wet conditions).

8.1.3.3 Shrub Planting - Highway Medians and Edges

Low shrub planting is recommended for the center highway median and road edges. Shrubs, along with moist grasses, are to help with pre-treatment of water run-off from the highway.

Possible Species:

Gold Flame Spirea – A deciduous compact dwarf shrub. Gold foliage in the spring turns to green then orange-red in the fall. Displays clusters of light crimson flowers all summer.

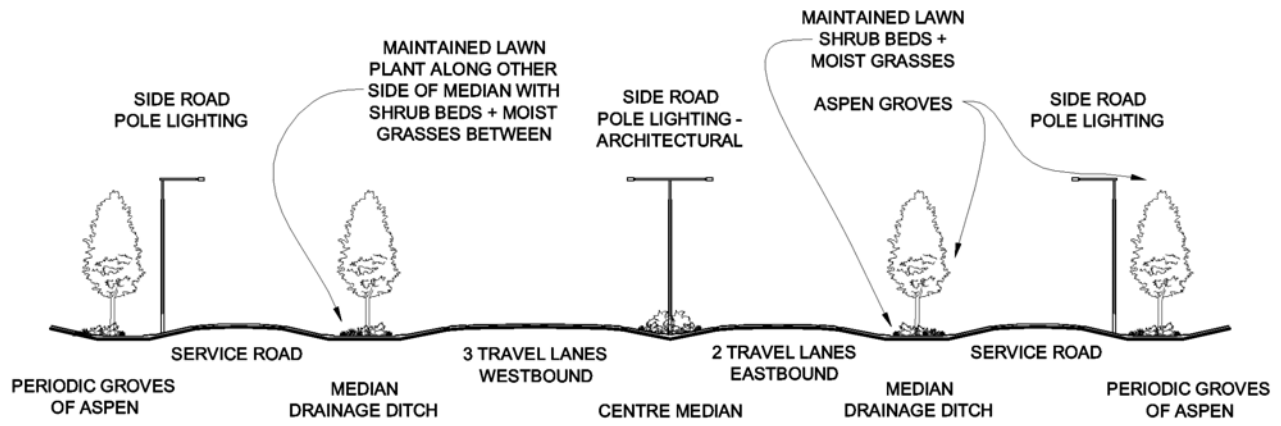
Potentilla – A deciduous compact shrub. Grows 3-10 cm high yellow flowers from March to May.

Notes: The shrub plantings would be similar to that in the screenings group, but consist of only the lower height species for visibility and would include: *Elaeagnus commutata* (Wolfwillow), *Potentilla Fruticosa* (Cinquefoil), *Salix Glauca* (Grayleaf Willow), *Shepherdia Canadensis* (Canadian Buffalo-Berry), *Symphoricarpus Occidentalis* (Buckbrush).

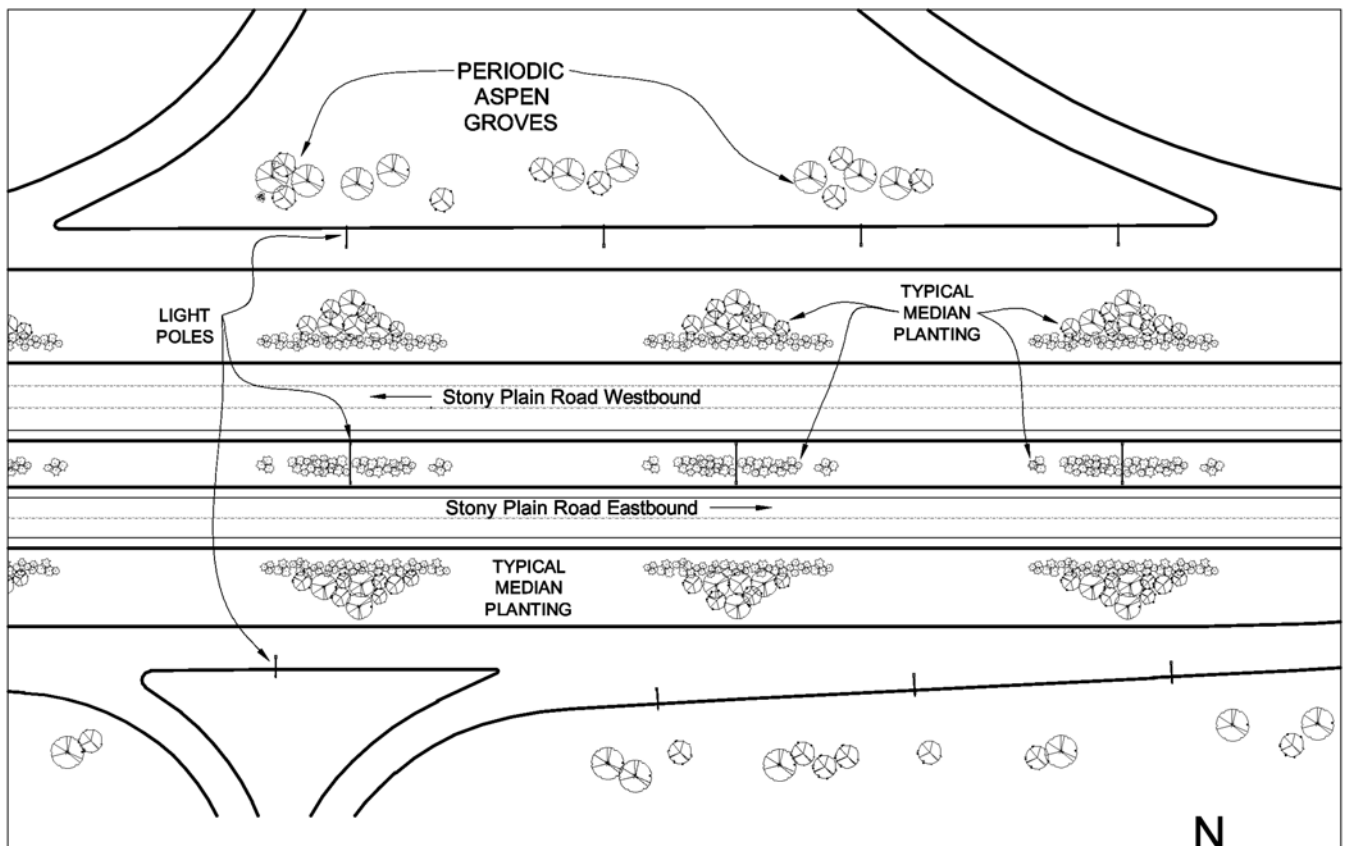
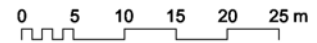
The understorey would vary with the microclimatic and soil moisture conditions and so alternates may include roses in drier conditions and willow in the extreme wet conditions.



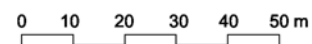
Figure 52: Gold Flame Spirea.



**PLANTING STRATEGY
DEMONSTRATION SECTION
PARKLAND HIGHWAY - ROUTE 16A**



**PLANTING STRATEGY
DEMONSTRATION PLAN - PARTIAL
PARKLAND HIGHWAY - ROUTE 16A**



8.1.3.4 Grass Planting

Existing grasses in the West End Corridor are to remain. Grasses disturbed during improvements are to be replaced with a reclamation short grass mix, follow standard planting details as approved by City of Edmonton Community Services.

8.2 Signage and Wayfinding

Signage is a significant component to create an aesthetically pleasing entrance corridor. Signage is to be large and legible. Signs are to be spaced to avoid confusion and reduce clutter along the roadside. Businesses along the West End Corridor will benefit by all signage being large, clear and clutter-free.

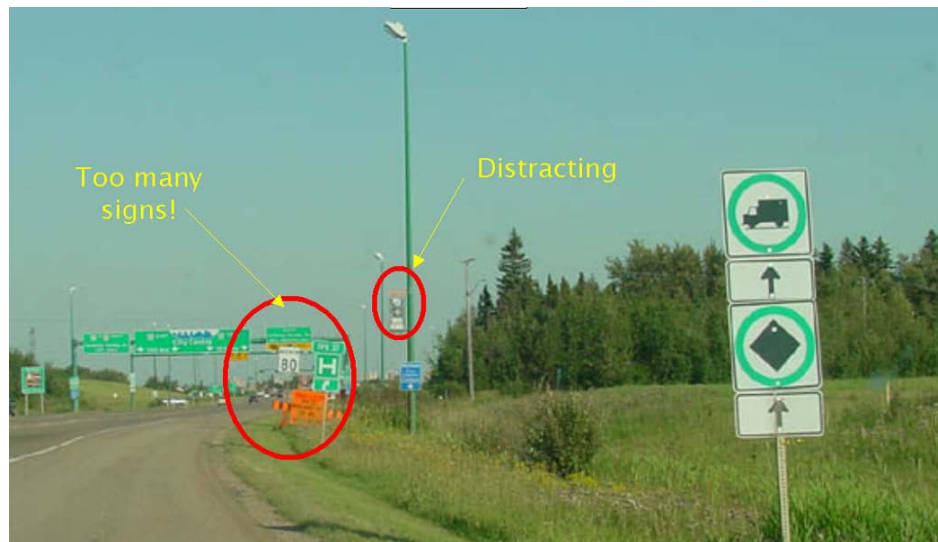


Figure 55: Too many signs make wayfinding difficult.

Objectives

- Reduce the proliferation of signage along the corridor edge;
- Improve signing mounting details, orientation and clarity;
- Improve wayfinding throughout the West End Corridor;
- Provide opportunity for local business signage that is aesthetically pleasing and effective, but located outside of the road right-of-way.

Guidelines

- Allow *only* statutory signs and directional signs in the West End Corridor road right-of-way. Remove commercial "Show Home" banner signs from light poles when past expiry date of exhibition.
- Remove service/not-for-profit club signs that are too small for highway speed legibility, and relocate to lower speed collector roads. Consultation with these groups may be required;
- Amend City of Edmonton Signs and Banner Bylaws to disallow banners and non-statutory signs along all highway corridors;
- Remove informational or guide signing from street light poles and mount on sign structures;



Figure 54: Relocate service club / not-for-profit group signs to lower speed roads.

- Limit the amount of small informational signs to six (6) per sign structure;
- Place sign structures not closer than 60 metres apart. Sign location is ideally at the midpoint between light poles;
- Minimize signage within 150 metres of any intersection;
- Sign structure to be galvanized steel channels;
- No commercial signs *on private property* are allowed fronting the West End Corridor (Stony Plain Road and 100 Avenue);
- Signs to be set back 5 metres from highway road edge or property line;
- Provide an information node with directions to City of Edmonton bicycle routes for incoming cyclists. Possible locations include along the multi-use trail or a pull-out area on the highway;
- All wayfinding, regulatory, and information signage must conform to TAC Standards (to maintain consistency for motorists across the country) as well as the City of Edmonton Sign Standards and Guidelines.



Figure 55: Signs should not be spaced closer than 60 metres apart.

8.3 Building Design Guidelines

The West End Corridor Urban Design Guidelines are to provide City of Edmonton Development Officers tools to enable them to enforce the quality of design desired of developments and subdivisions along the Stony Plain Road Corridor. By following the guidelines, the City will ensure that the West End Corridor will develop in a smart and functional manner.

The Urban Design Guidelines set forth in this document reflect the desire of the City of Edmonton to foster a high level of design quality in both the public and the built realm of developments along this highway corridor. At the time of writing these Urban Design Guidelines, the land use guidelines (in particular) may not be congruous with the legislative framework of the City of Edmonton. Therefore, the land use guidelines are to be implemented in the future, as per the Implementation Plan. The City of Edmonton has begun to implement “Smart Growth” policies that may be more in line with the recommendations found in the West End Corridor Urban Design Guidelines. The Urban Design Guidelines need to be uniformly implemented in order to achieve the overall desired aesthetic and functional design vision.

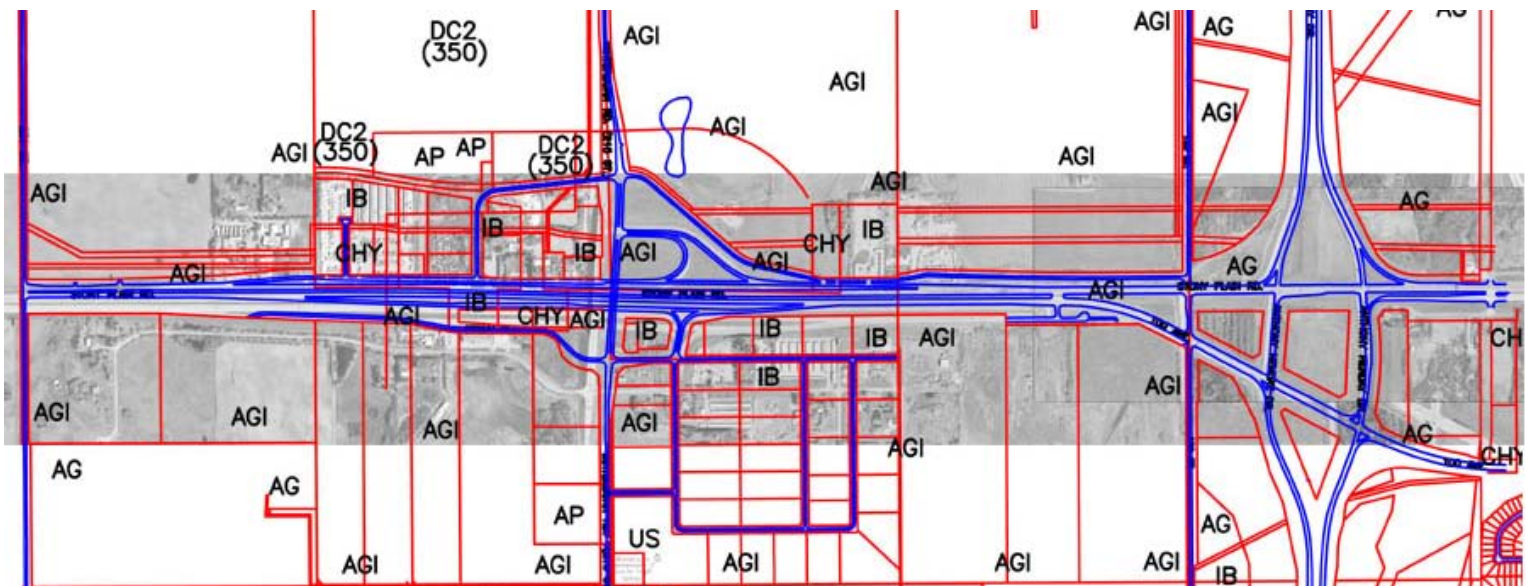


Figure 56: Land use zones in the West End Corridor

In conjunction with the Stony Plain Road Major Commercial Corridor Overlay, the West End Corridor Urban Design Guidelines provide standards for:

- Building design guidelines;
- Parking facilities;
- Storm water run-off and impervious surfaces;
- Landscaping and screening of parking and loading facilities;
- Outdoor storage areas;
- Commercial signs
- Streetscape improvements and public space;
- Multi-use trail
- Sustainability

8.3.1 General Provisions

- .1 Landowners and developers with land abutting the Corridor will be required to utilize the Urban Design Guidelines in conjunction with requirements set out by the Stony Plain Road Major Commercial Corridor overlay and Land Use Bylaw for new uses or proposed expansion of an existing development.
- .2 Currently, the Stony Plain Road Major Commercial Corridor Overlay does not extend to the city limits. The Overlay needs to be extended to the city limits in order to provide consistency throughout the Corridor. Alternatively, this area can be designated a “green buffer zone” where no development is allowed to take place. This would provide an area of relief with green space that welcomes visitors to our city without the immediate view of commercial development. This would require rezoning from AGI to AG or perhaps even AP (Public Parks).

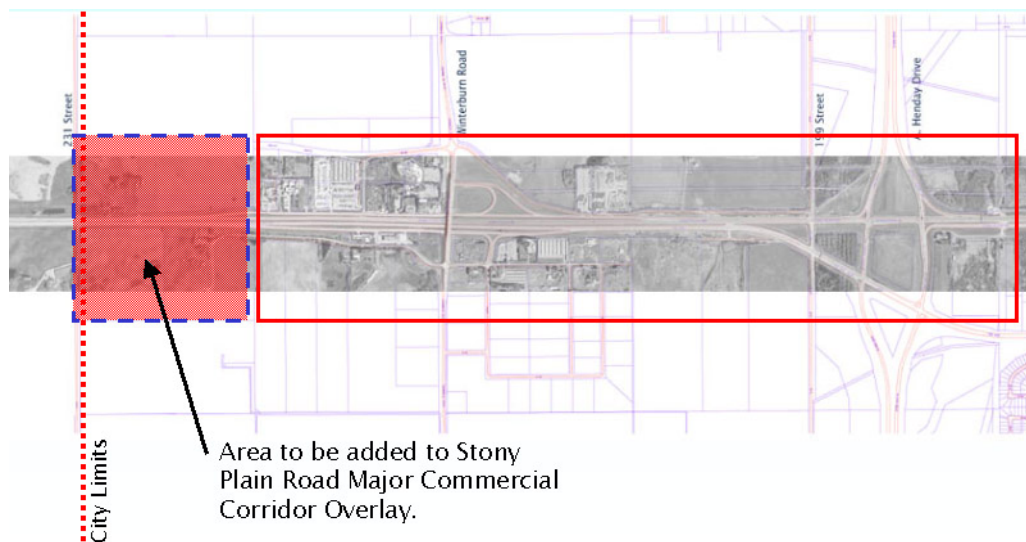


Figure 57: Area not covered by existing MCC and should be added to maintain consistency or kept “green.”

- .3 Developments should improve and enhance the quality of the public realm through high quality architectural building expression, careful site planning, public and private landscaping, and appropriate vehicular and pedestrian circulation. The density of deciduous tree planting on development sites is to be increased from current land use bylaw standards to effectively screen parking, blank walls and service elements from the highway, and integrate both right-of-way and development parcel landscapes.
- .4 It is strongly recommended that the Industrial Land Group within the Planning and Development Department conduct an Area Structure Plan for Winterburn Industrial Area, including a transportation impact assessment. This will provide information for the further development of access along the Stony Plain Road corridor. The Community Services Department and the Parkland Services Branch should be an active participant in this comprehensive plan. The current Winterburn Industrial Area Plan was adopted from Parkland County, and last amended in 1980.
- .5 A storm and sanitary water management plan will also be required for development from 215 Street to 231 Street, north of Stony Plain Road.

- .6 A neighbourhood structure plan (NSP) is highly recommended for the south side of Stony Plain Road that is not covered in the Lewis Farms ASP. This involves the Normandeau Gardens community and established businesses along the service roads adjacent to Stony Plain Road.
- .7 The Lewis Farms Area Structure Plan will need to be updated to be in line with the Neighbourhood Structure Plan created for the land south of Stony Plain Road (that includes Normandeau Gardens).
- .8 New development or redevelopment of sites within the Corridor will be required to relocate utility services underground.

8.3.2 Commercial (Retail) Land Use

The type of uses suited to the West End Corridor are those not normally found or are not appropriate in a neighbourhood commercial centre. Neighbourhood commercial centres are the “hub” of a community. The West End Corridor should not compete nearby Lewis Farms commercial centre. Retail uses that would be better accommodated in the West End Corridor include:

- Retail that requires large sites by nature of the product (e.g. furniture, home improvement);
- Retail that generally requires the use of a car is are based on car servicing or products;
- Retail that serves a large catchment area;
- Retail that does not sell goods that are or can be conveniently available in neighbourhood centres.

8.3.3 Building Design Guidelines

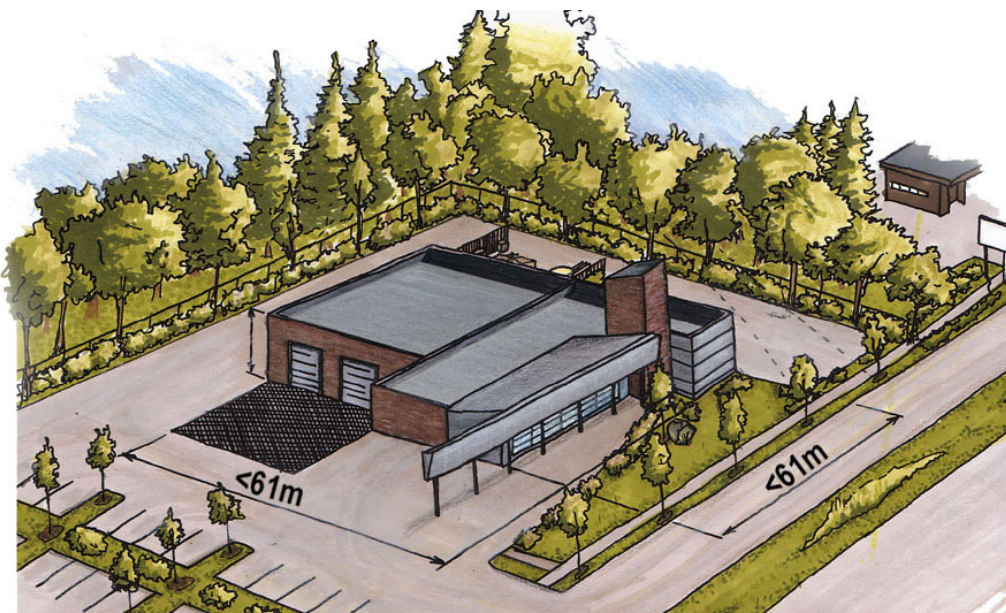
In addition to the Major Commercial Corridor Overlay, the following architectural guidelines are provided for the design of buildings adjacent to Stony Plain Road along the West End Corridor. These guidelines may also impact development in both the Winterburn Industrial Area and Lewis Farms.

Building Height

- Building height is to be within the parameters of the Stony Plain Road Major Commercial Corridor Overlay (Bylaw 12800).
- For new **mixed-use** development, the Development Officer may allow a height of up to 18.3 metres where increased height also assists in providing usable open space at grade and does not impact residential neighbourhoods.

Building Width and Depth

- In addition to Major Commercial Corridor Overlay parameters, the width or depth of a new development should not exceed 61 metres;



* Building Articulation achieved through shading systems, horizontal and vertical offsets in form, changes in material and colour.

* Vertical circulation (stairs) expressed in building form.

* Canopy integrates signage, lighting and weather protection.

Figure 58: New developments in the Corridor can incorporate design elements to improve the quality of buildings.

Building Massing and Form

In addition to the Major Commercial Corridor Overlay parameters, the following guidelines should be observed:

- Generic “big box” building designs should be avoided. Buildings that have articulation and transparency towards the street in their main façade are encouraged;
- Buildings that incorporate multiple entries and easy access from parking areas and adjacent streets are welcomed;
- Building articulation includes using building-integrated canopy and shading systems, variation and offsets in the building form, or changes in material or colour;

Figure 59: Example of good building articulation and transparency to the street.



- Building form and function can be expressed by vertical circulation or other service elements that are located on the perimeter of the building, such as elevators or stair shafts;

Figure 60: Circulation and service elements can be expressed in the building form.



Figure 61: Entries integrated functionally and aesthetically into the design.



- Building entries should provide weather protection that fits in with the architectural design;
- Integrate signage, lighting, and display systems for building canopies and awnings;

Figure 62: Canopy integrates signage, lighting and weather protection into the design.



- Canopy and awning systems should be large enough to provide sufficient weather protection and to reduce the perceived mass and scale of larger buildings;

Figure 63: Sunshades help protect the building and reduce perceived mass.



- If possible, buildings should be orientated to maximize solar orientation for best use of daylighting and passive solar heat gain. Ensure shading is also provided to counteract excessive heat gain;
- Building should be designed and constructed to conserve energy and reduce long-term operating costs.



Figure 64: Solar orientation to maximize conservation of energy.

8.3.4 Parking Facilities

- .1 No parking or maneuvering will be allowed in the landscaped setback;
- .2 At grade parking facilities should be located to the rear or side of buildings;
- .3 Street and entry path lighting should be integrated into site design.
- .4 Provide deciduous trees to give shade to asphalt or concrete parking areas to deter heat island effect. Protect trees from cars by providing curbs or wheel stops.



Figure 65: Entry path incorporates lighting and landscaping.

Surface parking facilities should be located to the rear and/or beside the building rather than in front, towards the street.

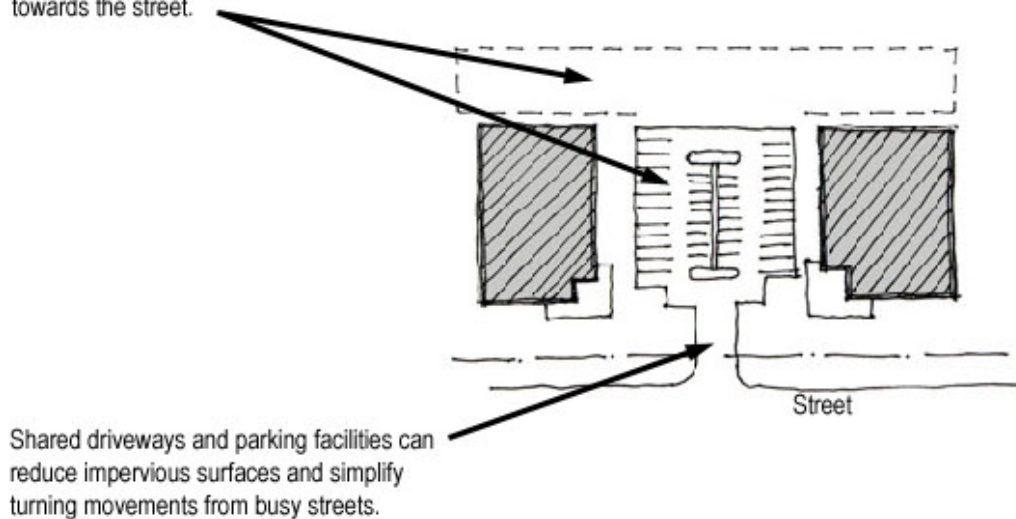


Figure 66: Combined driveway for two buildings with shared parking.

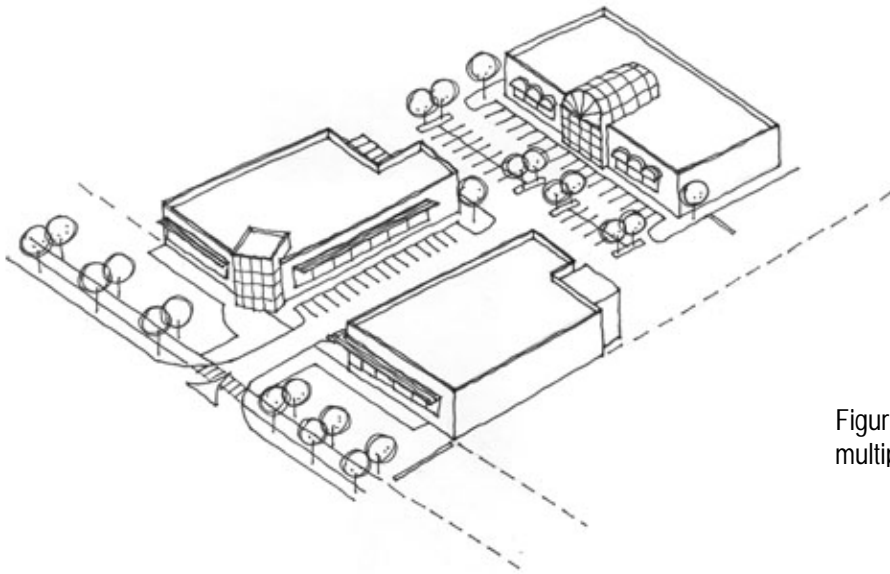


Figure 67: Shared parking and driveway for multiple buildings.

8.3.5 Storm Water Run-off and Impervious Surfaces

- .1 Storm water runoff from building roofs and parking lots should be managed on site as much as possible, to reduce the impact on drainage infrastructure;
- .2 On-site storm water management includes incorporating rainwater cistern, or ponds, or providing swales to natural drainage paths. Rainwater (grey-water) can be used for site irrigation. Mosquito control will be required for ponds on site;
- .3 Where possible, shared driveways to adjacent properties should be provided, to minimize impervious surfaces (concrete or asphalt), maximize safety by decreasing turning movements, and increase the area of landscaped area bordering the properties;
- .4 Install oil grit interceptors and/or other treatment works to treat (filter and reduce) surface runoff from parking lots.



Figure 68: Ponds can provide on-site storm water storage, as well as aesthetically pleasing features.

8.3.6 Planting and Screening of Parking and Loading Facilities

- .1 Retain large stands of existing trees and vegetation where possible and incorporate into site planning;
- .2 If tree retention is not possible, trees should be relocated to other parts of the site. This does not apply to *Trembling Aspen* (*Populus tremloides*), as they are unlikely to survive relocation;
- .3 Using proper techniques during construction to preserve and relocate not only existing soils but smaller trees and shrubs is a good landscape principle. The top 40-60mm of soil is the site seed source. Proper use of this part of the soil profile will help control and reduce weed infestation post construction.
- .4 Cultivars of the aspen parkland should be provided to minimize maintenance, water use and integrate planting design into the local plant community as much as possible. Provide trees with understorey planting, to a maximum of 1.5m, and compatible with CPTED guidelines;
- .5 A variety of planting heights should be provided to screen parking and loading areas. Coniferous trees are preferred. . Ensure visual access to signs, entries, and access areas. Provide trees with understorey planting, to a maximum of 1.5metres, and compatible with CPTED guidelines.



Figure 69,70: Layered landscape treatment to screen parking and provide visual interest.

- .6 Crime Prevention through Environmental Design (CPTED) principles should be recognized;
- .7 Security fences should be limited to chain link fence that is accompanied by appropriate hedging or other plant material that minimizes its visual impact;
- .8 Loading areas should not be visible from the highway (Stony Plain Road) or major arterial roads;
- .9 If possible, loading area access should be from lanes or side streets.

8.3.7 Outdoor Storage Areas

- .1 Outdoor storage areas should be limited to the rear yard areas and screened from streets and main entrances with coniferous trees;
- .2 Screening should include fencing, plantings and earth berms that filter undesirable views.

8.3.8 Commercial Signs

- .1 No commercial signs will be permitted in the landscaped setback area of the Corridor;
- .2 Billboard signs and mobile signs are not permissible on building sites adjacent to Stony Plain Road or 100 Avenue, for the extent of the West End Entry Corridor;
- .3 Corporate signs should be architecturally integrated with the development;

8.3.9 Streetscape Improvements and Public Space

- .1 Continuous sidewalks should be provided for the full street frontage of a new development site for pedestrian use). This is not consistent with the present concept (for low cost industrial and rural areas. In order to improve the design quality and walkability of this area, this policy must be changed.
- .2 Provide a landscaped boulevard and sidewalk with a row of trees on arterial and collector roads.
- .3 Street lighting must be approved by the Traffic Operations department of Streets and Transportation.
- .4 Crime Prevention through Environmental Design (CPTED) principles should be followed.
- .5 Landscape design should provide views into buildings, and certain special features, (i.e. rock gardens large diameter rocks, not rock mulch and flower beds).
- .6 Opportunities for pedestrian interest along the site frontage should be provided (i.e. landscape design or sculptural art).
- .7 Landscape design should provide opportunities to sit, view, or take part in walking along the street.
- .8 Appropriate landscape lighting (secondary, direct, or indirect), and appropriate building lighting should be provided, and not spill over onto adjacent properties or generate glare. Buildings are encouraged to be "lit from within" to provide a glowing lantern effect, rather than being lit by exterior lights.
- .9 Pole mounted lighting should include cut-off shields to minimize glare and light pollution. Site lighting should follow Dark Skies principles.
See www.darksky.org. At present, the City of Edmonton does not use cut-off shields.
- .10 Spacing of trees are to be 4 to 6 metres apart, taking into consideration site entries and driveways.
- .11 Landscape treatment of corner sites should contribute to the public amenities of these intersections by providing feature landscaping, seating areas, and if possible, public art.
- .12 Low feature plant material should be located in the required landscape setback.



Figure 71: Public sculptures and art to be encouraged.



Figure 72: Provide seating for public use.

- .13 Surface parking lots should be set back a minimum of 1.2 metres from the property line and screened with either a hedgerow or low wall at a minimum height of 1.0 metre.
- .14 Public art is encouraged for high visibility locations.
- .15 Public Art can be incorporated into infrastructure projects such as the proposed Anthony Henday Overpass. Relief art may be incorporated into concrete bridge structures, and steel sculptures may be placed in strategic locations. Landscape art installations are also possibilities. The Edmonton Arts Council or non-profit, charitable society Art and Design in Public Places Program may be called on to assist in administering a competition for artwork and providing guidance for further artistic opportunities.

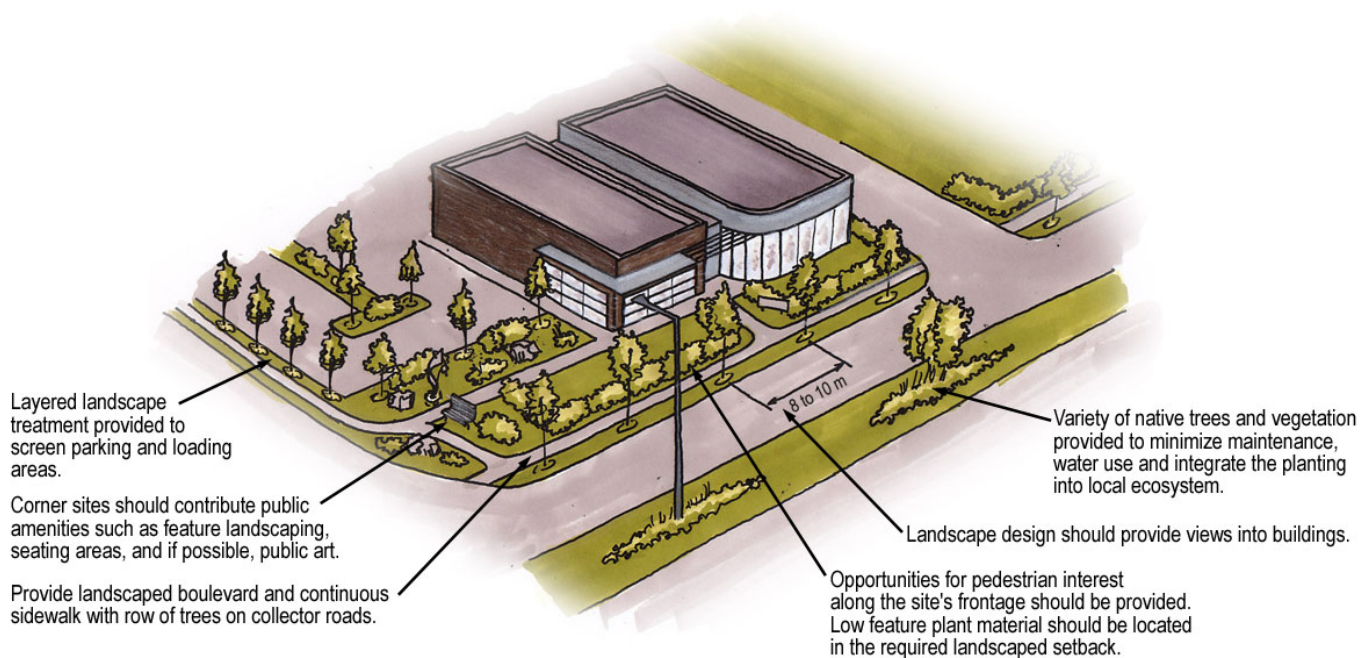


Figure 73: Streetscape amenities and public space

8.3.10 Multi-Use Trail

As roadway improvements are implemented along the Highway 16A Corridor, consideration should be given to accommodating bicycles within the road right-of-way. It is noted that the planned multi-use trail network does not include Stony Plain Road at this time. The closest multi-use trail segments are located on 95th Avenue (south of the plan area and along Anthony Henday Drive south of 95th Avenue). A pedestrian and bike link from Winterburn School to the Westview Village Community north of Stony Plain Road has been identified as a way to increase safety. There needs to be planned multi-use trails within the Lewis Farms Area Development Plan that will link this community to other neighbourhoods in Edmonton.

A multi-use trail should ultimately link Edmonton with Spruce Grove and Stony Plain, to encourage alternative transportation to the car, as well as recreational activity. This link may be best served along an existing or abandoned railway cut line. Discussions with Alberta Transportation and the cities of Spruce Grove, and Stony Plain need to occur to establish interest and timelines for this endeavour. At the present time, Alberta Transportation does not support the idea of a multi-use trail to Spruce Grove or Stony Plain.

along or near Highway 16A. The multi-use trail development must be subject to further consultation and approval.

The guidelines for the development of the multi-use trail system include:

- .1 Provide multi-use trail links to Westview Village, Spruce Grove and Stony Plain;
- .2 Avoid developing multi-use trail network near busy arterial or collector roads (as currently designated in the Lewis Farms ASP);
- .3 Direct public connections through neighbourhoods should be provided where appropriate taking into account CPTED principles. Public connection through the Lewis Farms golf course is also recommended;
- .4 Proposed multi-use trail plans should be reviewed by Walkable Edmonton, Trans Canada Trail and Alberta Trail Net.



Figure 74. A multi-use trail is ideally separated from busy roads for safety.

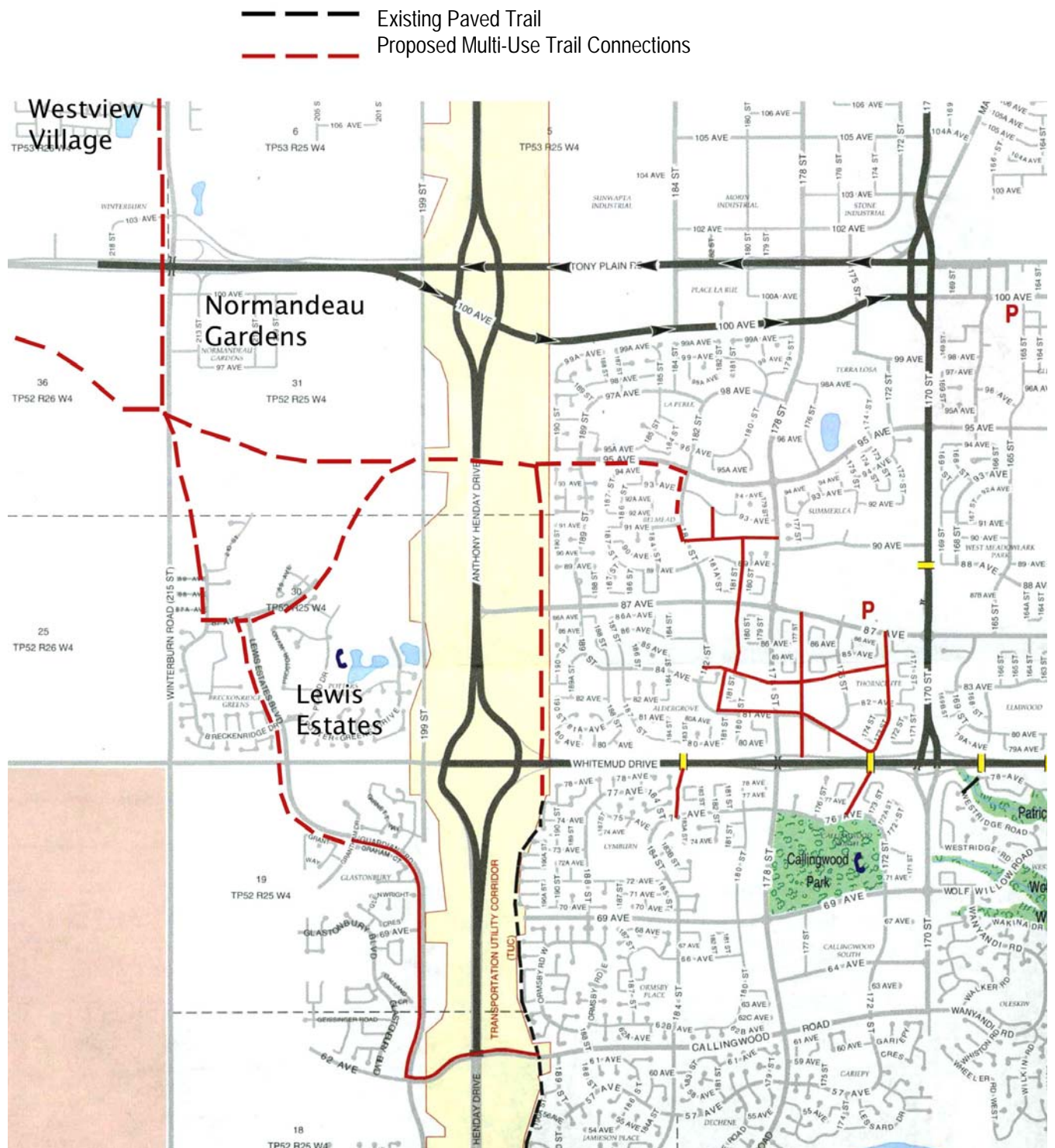


Figure 75: A Multi-Use trail network in the city connecting different communities.

8.3.11 Sustainability

- .1 Grey water should be used on-site for irrigation purposes in order to reduce potable water use, and relieve wastewater systems, and runoff.
- .2 Where possible, re-use topsoil disturbed during the construction of new buildings and structures, for new site planting and landscape development;
- .3 In the course of new construction, on-site soil quality should be improved (where necessary by remediation;
- .4 Contaminated soils should be reconditioned or replaced with quality soils, to enhance plant growth and water quality;
- .5 Site development shall meet Alberta Environment and City of Edmonton requirements where existing soils are polluted or otherwise toxic;
- .6 Link development to adjacent walkways, multi-use trails, and greenways to encourage walking and bicycling;
- .7 Existing landscape standards in City of Edmonton's Design and Construction Standards, Volume 5 Landscape - contains existing standards and installation requirements for landscape materials to be maintained by the city. These guidelines will require the preparation of an appropriate plant material list, especially for areas around any SWMF.

8.3.12 Tourist Information Centre

- .1 The City of Edmonton can set an example of design excellent by creating a tTourist Information Centre that would incorporate the design guidelines listed above.
- .2 At present, the nearest Tourist Information Centre is located in Stony Plain, off Highway 16A on Dog Rump Road.
- .3 A Feasibility Study would have to be initiated to determine the scope of a new Tourist Information Centre and to explore options of public-private partnership.
- .4 Economic Development Edmonton has created a temporary seasonal Tourist Information Centre in the west end, and would be a valuable source of information regarding the feasibility of this centre.



Figure 76: A seasonal, open air Tourist Information Centre may create a benchmark for excellent design and development for the corridor.

8.3.13 Design Peer Review Panel

- .1 A Design Peer Review Panel should review and evaluate developments that wish to vary from the urban design guidelines.
- .2 The Design Peer Review Panel would be composed of two architects and two urban designers and/or planners and one member from the community.
- .3 The Panel would be able to recommend approval for permits, based on the quality of design and innovation that is proposed by the developer/architect. City Council would have final say in the approval of development permits.
- .4 This system has been used throughout the City Vancouver with great success.

8.4 Transportation and Corridor Mobility

The purpose of this study is to create an attractive and functional corridor that serves as a gateway to the Capital Region from the west along the Highway 16A corridor. In order to achieve this overriding goal, it was important to understand and gain an appreciation for existing and future transportation characteristics associated with the highway corridor.

The development of a transportation system within and adjacent to the plan area and the development of an access control plan along the Highway 16A corridor to service levels of development as may be contemplated represents the central theme of this component of the assignment. To maintain the function and the integrity of existing and adjacent roadways and key intersections operations, to maintain levels of traffic service along the corridor which are consistent with the functional designation of the facility (freeway) and to provide safe and efficient access to existing/future land uses, consideration must be given to the incremental increase in corridor traffic movements and adjacent development area traffic activity.

8.4.1 Transportation Study Context and Scope

To facilitate the review and impacts associated with future corridor upgrading elements, a broad review of the traffic movements and the development of a preliminary access control management strategy were completed. In general, the impacts on traffic accommodation and circulation resulting from the construction and operation of the project have been documented.

8.4.2 Objectives

Developing a transportation plan at this stage of planning will ensure that roadways and plan area accesses have the capability to perform satisfactorily, that the access system is designed to reflect current and future roadway geometric standards and that the overall plan responds to City and Provincial desires and expectations. The specific objectives to be achieved by the transportation component of the plan were to:

- Review the current City Transportation Master Plan;
- Review current transportation network development, land use plans, and available traffic information in terms of operations, design, and collision histories;
- Identify future travel demands;
- Assess the traffic implications associated with the development area taking into consideration land use intensity and mix and neighbourhood sensitivities;

- Provide reliable guidance in the planning of area roadways and highway access locations and off-site improvements required to permit the adjacent roadway system to satisfactorily accommodate site and off-site generated traffic, and on-site circulation (and interface between the on-site circulation system and off site infrastructure);
- Assess the compatibility and integration of the plan with City plans for the Anthony Henday Drive and Highway 16A intersection;
- Provide a credible basis for estimating roadway and access improvements, geometric requirements and traffic control requirements, and;
- Develop a cost-effective plan, one that can be sensitively staged.

8.4.3 Methodology

The analysis and assessment presented in the following sections reflects an understanding of the development site's locational attributes, site access requirements and adjacent traffic accommodation issues and concerns. The assessment was completed using the following methodology:

- An examination of the development area with respect to existing conditions: land use, roadways, traffic conditions, etc.;
- Identifying future vehicular trip patterns generated to and from the development area based on population and development projections as well as approved subdivision plans.
- An overall analysis and assessment of the estimated roadway volumes within the study area to identify arterial roadway requirements, to identify possible roadway capacity restrictions, and to assess the overall traffic impacts of the development area, and;
- The development of a staged access control management plan.

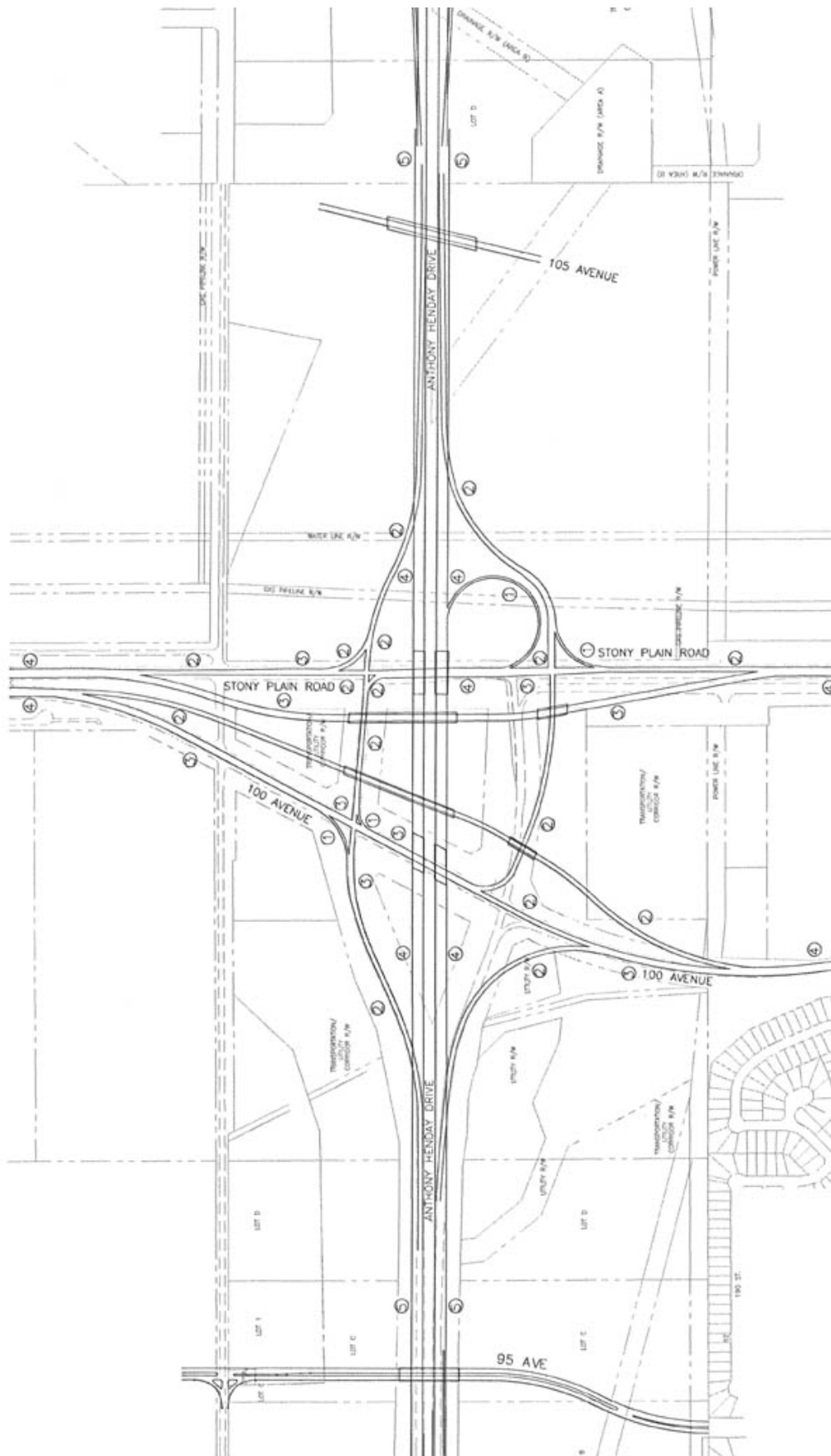


Figure 77: Proposed plan for Anthony Henday Drive Interchange at Stony Plain Road

8.4.4 Existing Transportation System

The existing roadway network within the study corridor is described below:

- .1 Stony Plain Road (Highway 16A) is a rural highway separated by a rural ditch section. The posted speed limit along Stony Plain transitions from 80km/h east of Anthony Henday Drive to 100km/h west of Anthony Henday Drive to the west City limits. The Stony Plain Road study corridor is both a Truck Route and a Dangerous Goods Truck Route.

Although Stony Plain Road currently operates as an expressway facility, (access to the corridor is available via at-grade and grade separated interchanges), the corridor is designated as a freeway facility under the Highway Penetrator Agreement. Based upon public input and stakeholder interviews, the development of the corridor as an ultimate freeway facility is consistent with the expectations of area stakeholders who desire to maintain the Stony Plain Road corridor as a high speed route into the City.

- .2 Winterburn Road (215th Street) is a north-south arterial roadway which bisects the Stony Plain Road study corridor. Winterburn Road is a two lane undivided rural roadway both north and south of Stony Plain Road. Winterburn Road does not intersect Stony Plain Road as its crossing is grade separated through an overpass. The Winterburn Road overpass is a four-lane divided section. At-grade intersections at both ends of the overpass provide service road connections to accommodate the movement of vehicles on and off of Stony Plain Road via service road slip ramps paralleling Stony Plain Road. Winterburn Road is a 24-hour Truck Route.

The existing design of the Winterburn Road interchange combines the development of one and two way service roads with on and off ramps. This design technique often leads to undesirable traffic movements and operations. Based on discussions with Alberta transportation, an overall review of the interchange is contemplated.

- .3 231st Street (Hillview Road) is currently a north-south two-lane rural roadway which forms the west boundary of the City of Edmonton. Its intersection with Stony Plain Road is two-way stop controlled in the north-south direction. 231st Street is classified as an arterial roadway. A review of the Lewis Farms Area Structure Plan identifies Hillview Road as ultimately be developed as a four-lane arterial roadway. Although not identified as a truck route at this time, consideration has been given to relocating the existing truck route on Winterburn Road to Hillview Road.

- .4 Anthony Henday Drive (Highway 216) forms the east boundary of the study corridor. At present, the intersection of Anthony Henday Drive (AHD) and Stony Plain Road is an at-grade intersection controlled by traffic signals. Anthony Henday Drive will be upgraded over time to operate as a fully controlled freeway facility, including the construction of an interchange at its intersection with Stony Plain Road. Anthony Henday Drive is a Truck Route and a Dangerous Goods Truck Route.
- .5 At the west end of the Stony Plain Road corridor, two eastbound and two westbound lanes have been constructed. Eastbound and westbound left turn bays and tapers, as well as right turn tapers, are developed at its intersection with 231st Street. Short northbound and southbound right turn acceleration tapers are also constructed at this intersection.
- .6 Moving east along Stony Plain Road towards Winterburn Road, an eastbound slip ramp located approximately midway between 231st Street and Winterburn Road becomes a one-way service road paralleling the eastbound lanes of Stony Plain Road. The service road provides access to a number of industrial/business uses adjacent to and south of Stony Plain Road both east and west of Winterburn Road. This service road merges back with the two eastbound lanes of Stony Plain Road, at a location approximately 550m east of Winterburn Road, as a third eastbound lane. A fourth eastbound lane is picked up at a location prior to Anthony Henday Drive.
- .7 At the east end of the study corridor, two at-grade intersections with Anthony Henday Drive (northbound and southbound lanes) with both the eastbound and westbound lanes of Stony Plain Road have been set up to accommodate an ultimate split diamond interchange.
- .8 From Anthony Henday Drive moving west along Stony Plain Road, four westbound lanes are carried through the Anthony Henday Drive intersections. The most northerly westbound lane is dropped approximately midway between Anthony Henday Drive and Winterburn Road as it exits the corridor as a slip ramp which becomes a one-way service road paralleling the westbound lanes of Stony Plain Road. The westbound service road provides access to a number of industrial/business uses adjacent to and north of Stony Plain Road both east and west of Winterburn Road. This service road merges back into two eastbound travel lanes of Stony Plain Road at a location approximately 1000m west of Winterburn Road. (Three westbound lanes on Stony Plain Road are carried just beyond the Winterburn Road overpass, and narrow to two lanes prior to the service road merge, dropping the most northerly lane.)

8.4.5 Existing Daily Traffic Volumes

Existing and historical traffic flows on Stony Plain Road were ascertained based upon a review of the City of Edmonton traffic volume databases. Available Annual Average Weekday Daily Traffic (AADT) volume information is presented in **Table 8-3-1**.

Table 8- 3-1: Historical Roadway Traffic Flows (AADT)

Year	Stony Plain Road East of 231 Street	Stony Plain Road West of AHD
1998	31,900	38,600
1999	30,500	34,400
2000	28,200	36,900
2001	30,000	35,800
2002	32,700	37,100
2003	33,800	41,300

Based on historical information, traffic along the Stony Plain Road corridor has increased by about 6% over the five-year period between 1998 and 2003. 2003 traffic flows were in the order of 41,000 vehicles per day west of Anthony Henday Drive and about 34,000 vehicles per day at 231st Street. In comparison, Highway 16 (Yellowhead Trail) accommodated about 46,000 vehicles per day west of Anthony Henday Drive in 2003.

Based on a review of truck traffic activity along both Yellowhead Trail and Stony Plain Road, it is noted that the Yellowhead Trail accommodates about twice as many heavy vehicles as does Stony Plain Road. More specifically, it has been noted that approximately 20% of the daily traffic activity on Yellowhead Trail is heavy truck traffic.

8.4.6 Roadway Development

8.4.6.1 Short Term

- .1 The City of Edmonton's 2005-2009 Construction Program was reviewed to identify infrastructure requirements within the study area within a five-year horizon. Based on this review, reconstruction of the two lanes on Winterburn Road south of Stony Plain Road has been identified as a 'Developer Driven' project. The construction of an additional Stony Plain Road westbound lane east of Anthony Henday Drive (just outside the study area) has been identified as a City of Edmonton funded project. No upgrades to 231st Street or Anthony Henday Drive have been identified within the short-term time frame.

8.4.6.2 Long Term

.1 The construction of an interchange at Stony Plain Road and Anthony Henday Drive is an Alberta Transportation project. Based upon discussions with City and Alberta Transportation representatives, it has been determined that the completion of interchanges at Whitemud Drive and 87th Avenue along the Anthony Henday Drive corridor represent priority interchange locations for completion. The construction of the Stony Plain Road interchange will follow the completion of these two interchanges. It is anticipated that the AHD/Stony Plain Road interchange will be in operation within an approximate 10-year time frame. The construction of the interchange is also somewhat dependent on the timing of the extension of AHD north of Yellowhead Trail to St. Albert's West Regional Road.

.2 The City's long-term model (beyond 20 years) is an interchange at 231st Street and Stony Plain Road. The City's long-term model anticipates that approximately 70,000 vehicles per day may be present along Stony Plain Road west of Anthony Henday Drive.

.3 An Area Structure Plan (Lewis Farms ASP) exists for the area south of Stony Plain Road bounded by 231st Street and Anthony Henday Drive to the west and east respectively and bounded by Whitemud Drive to the south. The ASP currently identifies a right in/out access to Stony Plain Road midway between 231st Street and Winterburn Road. A second right in/out has also been identified at the east end of the corridor. Initially a flyover at 204th Street was identified in the ASP however this concept has since been removed from the plan.

In regards to the above, given the long-term traffic flows anticipated to be accommodated on this segment of Stony Plain Road, coupled with the upgrading of the corridor to a full freeway facility over time, the at-grade accesses illustrated in the Lewis Farms ASP cannot safely be accommodated along Stony Plain Road. As such, it is understood that the Transportation and Streets Department plans to advance an amendment to the Lewis farms ASP to eliminate any reference to the development of at-grade access facilities along this section of Stony Plain Road.

Winterburn Road through the Lewis Farms ASP represents a key north-south connector between Highway 16A and Whitemud Drive. The importance of this link was highlighted in the Lewis Farms ASP which designated this roadway as a four-lane divided arterial facility. Given the location of the planned Enoch Casino, it is anticipated that Winterburn Road will be used as a convenient link between Highway 16A and this development. As mentioned previously, the upgrading of Winterburn Road will be predominantly developer driven.

.4 The study corridor also forms the south boundary of the Winterburn Industrial Area. The Winterburn Industrial Area is bounded to the north by Highway 16, to the east by Anthony Henday Drive and to the west by Highway 60. The Winterburn Industrial ASP is somewhat dated (1979) however it identifies five access locations to the plan area, one of which falls within the study corridor as the Winterburn interchange along Stony Plain Road.

8.4.7 Access Control Management Plan

Preferred Access Plan

A final stage of the assessment was to investigate and identify a preferred access control management plan for the corridor at a preliminary level of planning.

- .1 Based upon a review of future traffic flow movements, Highway 16A between 231st Street and Anthony Henday Drive is planned to be upgraded over time to a freeway facility. This includes the construction of an interchange at the junction of Stony Plain Road and Anthony Henday Drive (within an approximate 10 year horizon) and the construction of an interchange at the intersection of Stony Plain Road and 231st Street (in the longer term time frame). Given this designation,

direct access to the corridor should be restricted in order to maintain an appropriate design regime for the carriageway. Direct access to Stony Plain Road should be restricted. It is imperative that the Stony Plain Road access control plan reflect the access limitations associated with the corridor which have been agreed upon by the City of Edmonton and Alberta Transportation.

- .2 Promoting an access control management strategy that restricts direct access to the corridor will continue to allow the corridor to provide for free-flowing traffic movements that promotes the efficient, effective and safe movement of goods and people.
- .3 In regards to traffic speeds along the corridor, traffic speeds along the corridor should reflect and be consistent with current and anticipated operations and with the designation of the facility as a freeway facility. As mentioned previously, the construction of a right in/out access at approximately 220th Street would necessitate a review of the corridor's design and posted speed limits which is inconsistent with current and future operations. More specifically, it may not be possible to construct the right in/out access to an appropriate design standard to allow the operation of the right in/out and the upstream Winterburn Road interchange to operate at current posted speed limits. In addition to the above, the possible future development of a downstream interchange at 231st Street in combination with the right in/out at 220th Street would force a review of overall corridor design standards and posted speed limits. Reducing current traffic speeds at this time is not recommended.
- .4 At present, a service road has been developed along the north side of the Stony Plain Road corridor between 199th Street and Winterburn Road. The service road currently operates as a frontage road facility. As development activity within the Winterburn Area Structure Plan proceeds, specifically within those areas of the plan bounded by 199th Street and Winterburn Road, consideration could be given to the development of an internal service road network that would have the advantage of providing more access opportunities to local development initiatives. If this roadway network option is pursued, the elimination of the frontage service road could be completed on a staged basis.
- .5 Based upon a review of comments received from the public at open houses and workshops, the need to create an improved signing plan in the immediate vicinity of the Winterburn Road interchange was identified. The geometric roadway plan associated with this interchange, including the use of one way and two-way service roads is sometimes confusing for motorists seeking development sites located on either side of the roadway. It is recommended that a detailed review of the existing signing plan be completed in combination with the completion of a concept planning study for the Winterburn Road interchange. Any improvements to the existing plan should be consistent with the recommendations of this study.
- .7 A privately owned landfill site is just beyond the scope of the West End Corridor Study area. Access to the site is off Highway 16A and poses a risk to traffic safety along the corridor, as vehicles slow down to turn into the landfill site. Relocating the access to this site to 231st Street would greatly improve the traffic safety along

the highway. The private owner, Parkland County and Alberta Transportation would have to be consulted to find a solution.

- .8 There are two highway centre median gaps that occur along the West End Corridor. One gap is located near 231st Street and another is located close to 199th Street. A safety audit should be completed to evaluate the need for the median gaps and ensure that public safety is not endangered.

8.5 Sustainability

Sustainable and ecologically friendly development is the goal of the West End Corridor Urban Design Guidelines. Resource and energy efficiency is an important feature in the West End Corridor Urban Design Guidelines. By demonstrating leadership in energy and resource conservation, the City of Edmonton sets a standard for businesses to follow.

Objectives:

- Enhance the natural capital of the West End Corridor;
- Return as much public land back to natural Aspen Parkland;
- Protect agricultural land at the city limits;
- Respect areas that are identified by the City of Edmonton Inventory of Significant Natural Areas and Environmentally Sensitive areas;
- Provide landscape plantings that will pre-treat water run-off from the highway and associated roads;
- Promote practices and design that are energy efficient and conserve resources.

Guidelines:

- Guidelines and principles for sustainability have been provided throughout the Urban Design Guidelines. Items such as the multi-use trail, planted medians, and strategies to minimize impervious surfaces are but some of the sustainable practices mandated by the guidelines.
- The City of Edmonton may wish to consider mandating Leadership in Energy and Environmental Design (LEED) certification or similar standard for buildings in the West End Corridor as a pilot project. Other cities such as Calgary and Vancouver have mandated the LEED certification standard for all city-funded building projects. See www.cagbc.org for more information.

9.0 IMPLEMENTATION

The West End Corridor Urban Design Guidelines provide strategies and a design framework for implementation over a long period of time. There are short, medium and long-term aspects for the Urban Design Guidelines. The phasing of the Urban Design Guidelines allows Administration and City Council to develop budgets and partnerships for the implementation of designs contained within the guideline. In some cases, further detailed design as well as other studies and planning need to occur. All of the strategies contained with the Urban Design Guidelines will require approval by respective Planning and Development and other City of Edmonton departments.

9.1 Short Term Implementation (Phase 1) Goals (to be completed by 2008)

9.1.1 Corridor Aesthetics

- .1 Clean up the litter and detritus along the corridor and enforce Nuisance Bylaw #10406 for sites in non-compliance.
- .2 Hold a design competition for a landmark to greet travelers to the City and provide associated planting to set the standard along the corridor.
- .3 Remove dead spruce trees located near existing "Welcome to Edmonton" sign and replace with cultivars of the aspen parkland. Ensure vegetation will survive salt spray from highway.
- .4 Screen visible landfill views with vegetation (dense aspen trees, native cultivars).
- .5 Relocate small, illegible service club/community group signs to areas with lower speed limit. This may not be located in the West End Corridor.
- .6 Relocate signs mounted on light poles to free-standing, ground mount sign structures modeled on TAC standards/Highway 2 corridor precedent.
- .7 Minimize signage within 150m of intersections to avoid driver confusion.
- .8 Remove "show home" banners on high mast light poles after maximum time allotted for banner installation expires.
- .9 Conduct assessment of all light poles within West End Corridor Urban Design Guideline area.



Figure 78: Replace dead trees in the corridor.

9.1.2 Land Use

- .1 Review the extent of the Stony Plain Road Major Commercial Corridor Overlay. Extend the overlay to 231 Street (city limits) to ensure design consistency throughout the West End Corridor scope OR designate the area as a “green” buffer zone where no development will occur.
- .2 Conduct a Comprehensive Plan for Winterburn Industrial Area, including a transportation impact assessment. This will provide information for the further development of access along the Stony Plain Road corridor.
- .3 In addition to the Comprehensive Plan, a Storm and Sanitary Water Management Plan should be completed for the Winterburn Industrial Area and lands extending west to the city limits.
- .4 A Neighbourhood Structure Plan is required for the lands located on the south side of Stony Plain Road and 100 Avenue which are not included as part of the Lewis Farms ASP. This may be a developer-driven NSP.

9.1.3 Transportation and Corridor Mobility

- .1 Negotiate relocation of access road for bordering landfill sites to 231 Street with private owner, Parkland County and Alberta Transportation.
- .2 Transportation and Streets department to review highway median gaps that are a public safety concern. A Safety Audit may be required, and this item can be part of the Comprehensive Plan process for Winterburn Industrial Area.
- .3 Begin dialogue with Alberta Transportation and communities of Spruce Grove and Stony Plain regarding an extension of a Multi-use trail system from Edmonton to outlying regions.

9.1.4 Sustainability

- .1 Identify and respect the function of natural areas within the West End Corridor, particularly the Lewis Farms ASP.
- .2 Encourage new, sustainable development within the West End Corridor.

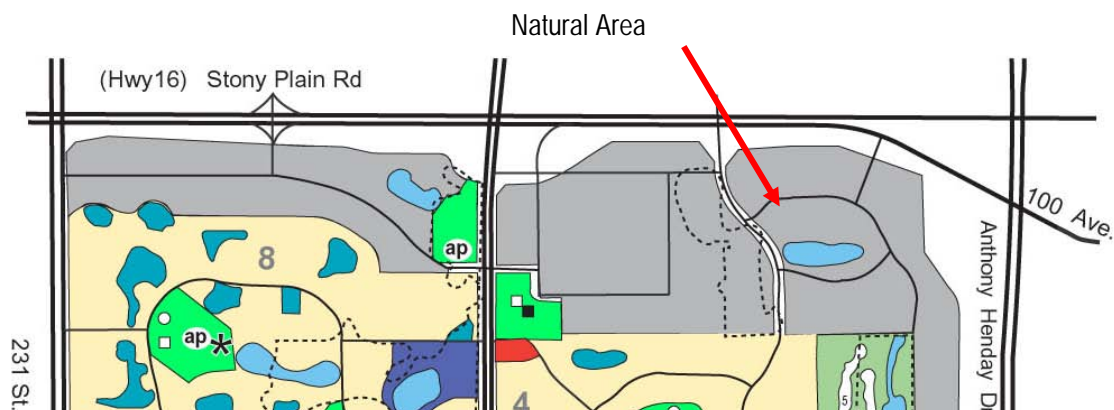


Figure 79: Respect the natural area identified in the Lewis Farms ASP.

9.2 Medium Term Implementation (Phase 2) Goals (to be completed by 2015)

9.2.1 Corridor Aesthetics:

- .1 Install new Corridor street lighting and extend lighting to corporate city limits;
- .2 Establish highway median and road edge planting;
- .3 Design and build a sculptural pedestrian/cyclist bridge on the west side of the Winterburn overpass (Option 2A in creating a new landmark for visitors);
- .4 Coordinate design competition for public art on proposed Anthony Henday overpass.
- .5 Provide matching grants (cash incentives) to local landowners for landscape planting and beautification.



Figure 80: Highway median planting will improve the appearance of the corridor.

9.2.2 Land Use

- .1 Amend sign and banner bylaws and/or guidelines to forbid commercial signs in all entry corridors (i.e. Show home banners and commercial billboard advertising);
- .2 Coordinate and implement the land use aspect of the West End Corridor Urban Design Guidelines in the (re)development of land abutting the Corridor;
- .3 Relocate overhead utilities (power, telephone) into buried conduits;
- .4 Commence feasibility study to assess the development of a Tourist Information Centre along this corridor.

9.2.3 Transportation and Corridor Mobility

- .1 Create pedestrian/cyclist connections from Westview Village to Winterburn School and Lewis Farm Communities;
- .2 Plan a Multi-Use trail to Spruce Grove and Stony Plain communities;
- .3 Commence detailed design of grade-separated interchange at Anthony Henday Overpass and Stony Plain Road.

9.2.4 Sustainability

- .1 Encourage one new development to incorporate on-site storm water management and reduce water run-off to recharge aquifers.

9.3 Long Term Implementation (Phase 3) Goals (to be completed by 2020)

9.3.1 Corridor Aesthetics

- .1 Create public art installations as part of new infrastructure (Anthony Henday Interchange);
- .2 Complete planting on road right-of-ways at Anthony Henday Interchange.

9.3.2 Land Use

- .1 Review progress of implementation of land use aspect of the West End Corridor Urban Design Guidelines;
- .2 If proven feasible, design and construct a Tourist Information Centre.

9.3.3 Transportation and Corridor Mobility

- .1 Create pedestrian/cyclist connections to Spruce Grove and Stony Plain Communities;
- .2 Create Multi-Use trail connection to Anthony Henday Drive trail;
- .3 Consult the City of Edmonton's overall "Intelligent Transportation System" implementation with respect for an overhead dynamic sign to deliver road conditions and traffic reports.

9.3.4 Sustainability

- .1 By now, sustainability should not have to be a separate consideration. True sustainability will be seamlessly integrated in the design, construction and implementation of infrastructure and buildings.

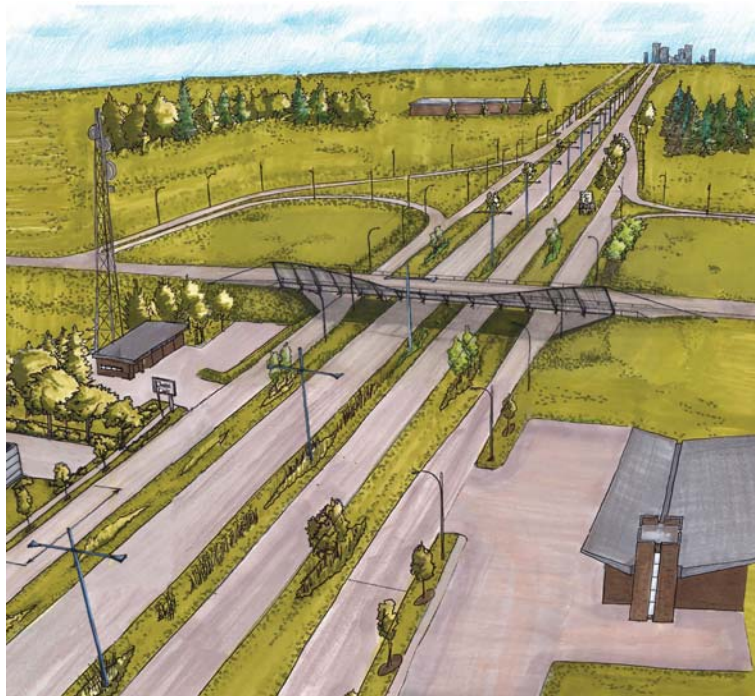


Figure 81: A view of the Winterburn Overpass with sculptural pedestrian bridge and other improvements.

10.0 OPINION OF PROBABLE CAPITAL COST OF IMPROVEMENTS

10.1 Opinion of Probable Capital Cost of Improvements – Short Term

Short Term Goals (Phase 1)	Cost	Responsibility
Corridor Aesthetics		
1. Clean up Litter and detritus	\$1,000	Community Services
2. Design Competition for entry corridor landmark/welcome sign	\$400,000	Corporate Services
3. Replacement of dead spruce trees at Welcome sign with aspen species	\$3,000	Community Services
4. Screen landfill with dense aspen trees and shrubs	n/a	Parkland County
5. Relocation of illegible signs to areas with lower speed limits	\$5,000	Transportation and Streets
6. Relocation of light pole mounted signs to new steel channel mounting	\$25,000	Transportation and Streets
7. Minimize signage within 150 m of street intersections.	\$5,000	Transportation and Streets
8. Remove "Show Home" banners after max. time allotted for banners expires.	\$2,000	Transportation and Streets
9. Conduct assessment of all light poles within West End Corridor area	n/a	Transportation and Streets
Land Use		
1. Extend Stony Plain Road Major Commercial Corridor Overlay to 231 Street	n/a	Planning & Development
2. Conduct comprehensive plan for Winterburn Ind. Area (transportation impact)	n/a	Planning & Development
3. Complete Storm and Sanitary Water Management Plan for Winterburn Area	n/a	Public Works
4. Neighbourhood Structure Plan for south side of Stony Plain Rd. & 100 Ave.	Developer	Developer
Sustainability		
1. Encourage new, sustainable development within the West End Corridor	n/a	Planning & Development

Total: \$441,000

NOTES:

City Council Approved \$275,000 for capital funding of West End Corridor and Yellowhead East Corridor combined improvement projects in 2005.

Allow +/- 50% for Opinion of Probably Cost estimates

10.2 Opinion of Probable Capital Cost of Improvements – Medium Term

Medium Term Goals (Phase 2)	Cost	Responsibility
Corridor Aesthetics		
1. Install new street lighting (50 new poles at \$10 000 to \$17 000 per pole)	\$500,000	up to \$850,000 Trans. & Streets
2. Establish highway median and road edge planting (\$1 609.00 per lineal metre)	\$400,000	Community Services
3. Design and build pedestrian/cyclist bridge on west side of Winterburn overpass	\$750,000	Transportation and Streets
4. Public art competition budget for Anthony Henday overpass	\$50,000	Community Services and T&S
5. Provide matching grants for local landscape improvements/beautification	\$200,000	Planning & Development
Land Use		
1. Amend sign and banner bylaw to forbid commercial sign in all entry corridors	n/a	Planning & Development
2. Implement land use aspects of Design Guidelines of land abutting the Corridor	n/a	Planning & Development
3. Relocation of overhead utilities into buried conduits	Developer	Developer Corp. Services/Public
4. Commence feasibility study of Tourist Information Centre	\$50,000	Works/EED
Transportation and Corridor Mobility		
1. Create pedestrian connections from Westview Village to Winterburn School	\$250,000	T&S and/or by Developer
2. Plan multi-Use trail to Spruce Grove and Stony Plain communities	\$50,000	Community Services/P&D Alberta
3. Commence design of Anthony Henday grade-separated interchange	n/a	Infrastructure/Transportation
Sustainability		
1. Encourage storm water mngt. /reduction of water run-off for new developments	n/a	P&D/Public Works

Total: \$2,250,000 up to \$2,600,000

NOTES:

City Council Approved \$275,000 for capital funding of West End Corridor and Yellowhead East Corridor combined improvement projects in 2005.

Allow +/- 50% for Opinion of Probably Cost estimates

10.3 Opinion of Probable Capital Cost of Improvements- Long Term

Long Term Goals (Phase 3)	Cost	Responsibility
Corridor Aesthetics		
1. Create public art installations as part of Anthony Henday Interchange infrastructure	\$100,000	Community Services and T&S
2. Complete planting on road right-of-ways at Anthony Henday Interchange	\$500,000	Community Services and T&S
Land Use		
1. Review progress of West End Corridor Urban Design Guidelines	n/a	Planning & Development Corp. Services/Public Works/EED
2. Commence design and construction of Tourist Info Centre	\$1,500,000	
Transportation and Corridor Mobility		
1. Create pedestrian/cyclist connections (Spruce Grove to Stony Plain Communities)	\$250,000	Community Services/T&S
2. Create Multi-Use trail connection to city trail network	\$500,000	Community Services/T&S
3. Overhead sign to deliver road/traffic conditions and info (if warranted)	\$600,000	Transportation and Streets
Sustainability		
1. To be seamlessly integrated in the design, construction and implementation of infrastructure		

Total: \$3,950,000

Total Project Cost (All Phases): \$6,491,000 (2005 dollars)

NOTES:

City Council Approved \$275,000 for capital funding of West End Corridor and Yellowhead East Corridor combined improvement projects in 2005.

Allow +/- 50% for Opinion of Probably Cost estimates

11.0 APPENDICES

Appendix A:

Interview and Workshop Minutes



West End Corridor Urban Design Guidelines

Personal Interview with Councillor Stephen Mandel

March 24, 2004 9:30 am

1.a. What image(s) / presence does the existing highway convey?

- Dumpy city without style or class.

1.b. What do you want to see?

- Something to set a standard for other developments along corridor to follow.
- Something that announces that you've arrived.
-

1.c. How can this image best be achieved?

- Spend money on landscaping.
- Create an ambiance for the road.
- Enforcing landscaping standards.
-

2.a. Is a name important for this highway segment for image building purposes as the "Parkland Highway?"

- None really necessary.

2.b. Do you have any other suggestions for naming this corridor?

N/A

3. What improvements can be made to enhance highway 16A as an efficient transportation corridor and a major entrance to the Capital Region?

- Review sign location.
- Make it six lanes.

4. What physical improvements can be made to enhance the visual quality and experience for various users of highway 16A/Stony Plain Road?

- Clean up median of highway.

5. What opportunities do you see to enhance the future developments in the vicinity of Highway 16A?

- Industrial and commercial nodes may be created.

6. What new business/tourism opportunities exist now or could exist in the next 5 - 10 years?

- Commercial development will follow what is happening further east (170 St. to 184 St.)

7. In your opinion, what are the key land use planning issues that need to be addressed?

- Rural industrial land use will change to rural residential (behind commercial zones).

8. Can you identify any capital improvements planned that would affect future development and enhancement of this part of Highway 16A?

- No.

9. Do you have any other comments, questions, suggestions, etc?

- Review Ellerslie overpass- and highway 2 corridor.

Personal Interview with Councillor Karen Leibovici

March 25, 2004 8:30 am



1.a. What image(s) / presence does the existing highway convey?

- "A hodge-podge of different looks along corridor."

1.b. What do you want to see?

- Something to create a good impression from major corridor.
- Something that provides an impression that you are entering the Capital City Region.
- Something that will show that we are prosperous city and one of the largest cities in Alberta.

1.c. How can this image/idea best be achieved?

- Mandated standards.
- "Let's be a little creative!"
- Review other worldly cities and their corridors to apply best practices.

2.a. Is a name important for this highway segment for image building purposes as the "Parkland Highway?"

- The corridor is within Edmonton- and does not need to be named the Parkland Highway.

2.b. Do you have any other suggestions for naming this corridor?

N/A

3. What improvements can be made to enhance highway 16A as an efficient transportation corridor and a major entrance to the Capital Region?

- Better signage.

4. What physical improvements can be made to enhance the visual quality and experience for various users of highway 16A/Stony Plain Road?

- Create a rest area for travelers with toilets, etc.
- Provide emergency phones.
- Create a "look out" area for visitors.

5. What opportunities do you see to enhance the future developments in the vicinity of Highway 16A?

- Mandated standards.

6. What new business/tourism opportunities exist now or could exist in the next 5 - 10 years?

- Create information kiosk/visitor's centre for West Side of city – for visitors doing the "Calgary-Banff-Jasper-Edmonton" loop.

7. In your opinion, what are the key land use planning issues that need to be addressed?

- Create industrial prestige overlays/zoning to attract good businesses.

8. Can you identify any capital improvements planned that would affect future development and enhancement of this part of Highway 16A?

- Other corridor studies in effect (Yellowhead East), North corridors.

9. Do you have any other comments, questions, suggestions, etc?

- Need to extend study further to 170 St. – as 170. 178 & 184 have important developments and impacts to the corridor area.
- Contact Normandau Gardens- they are a stakeholder in this area.
- Contact Winterburn School for consultation.

West End Corridor Urban Design Guidelines

Interview with Karon Kosof, Executive Director of the West End Business Association
March 15, 2004



General Comments about the Urban Design Guidelines for Stony Plain Road:

She doesn't think we should reinvent the wheel

She wondered who is funding this project and its subsequent implementation. I explained we are commissioned to do the work for the guideline portion only.

She asked if Anthony Henday falls under provincial or city jurisdiction. I told her that the city is responsible for the maintenance, although the overall project is a provincial initiative.

She explained that businesses need clear indication of who has authority - and for what jurisdiction.

She wondered if the section we are studying would be made into a BRZ. She noted that businesses are very territorial, and thus the boundary of a potential BRZ needs to be very strategic.

She stated that north of the Winterburn interchange, there are significant businesses and more wealth.

Businesses locate in the Winterburn region because of the low taxes- and she fears that a BRZ would not go over very well. Some of the businesses are struggling, and additional taxes might make them fold up shop. She thinks business might be taxed highly to make improvements that we might recommend.

Karon does not think the "warped" cloverleaf of the Winterburn road overpass is problematic... It needs to be rationalized, more intuitive.

Need to consider how this area is zoned- i.e. if it is zoned agricultural, can it be rezoned for commercial?

There is an opportunity to inform her members about this project in the WEBA newsletter... Information needs to be received no later than March 16th. I have called Kulbir to see if he would like to have any info in the newsletter.

Also, there is an after business mixer on March 31st at the Mayfield Inn, 5:00 to 7:30pm.

Her contact info is: 457-5796,
 fax 475-8577
 karon@weba.org

West End Corridor Urban Design Guidelines
Personal Interview with Jennifer Jordan, Stakeholder (West Edmonton Mall)

April 8, 2004 2:05 pm



1.a. What image(s) / presence does the existing highway convey?

- Do not recall any presence or images.

1.b. What do you want to see?

- Need to see West Edmonton mall presence
- Corridor needs to be entry to the destination of Edmonton
-

1.c. How can this image best be achieved?

- Signage / Ads / Billboards for West Edmonton Mall- maybe smaller scale billboards.

2.a. Is a name important for this highway segment for image building purposes as the "Parkland Highway?"

- None really necessary.

2.b. Do you have any other suggestions for naming this corridor?

N/A

3. What improvements can be made to enhance highway 16A as an efficient transportation corridor and a major entrance to the Capital Region?

- Review sign location.

4. What physical improvements can be made to enhance the visual quality and experience for various users of highway 16A/Stony Plain Road?

- Don't know.

5. What opportunities do you see to enhance the future developments in the vicinity of Highway 16A?

- Anthony Henday interchange to be completed/built.

6. What new business/tourism opportunities exist now or could exist in the next 5 - 10 years?

- West Edmonton Mall expansion-
 - o potential for office space in tower
 - o new entertainment/retail possibilities and exclusive tenants

7. In your opinion, what are the key land use planning issues that need to be addressed?

- Urban Sprawl.

8. Can you identify any capital improvements planned that would affect future development and enhancement of this part of Highway 16A?

- No.

9. Do you have any other comments, questions, suggestions, etc?

- West Edmonton Mall is undergoing a rebranding program- new identity will require new signage.
- View of the Mall from a distance is important.
- Lighting/security is important.
- Making the Mall easy to find is vital.
- West Edmonton Mall is trying to be attractive as a destination for tourists/consumers.



MEETING MINUTES # 1

Public Consultation Workshop

Date: June 16, 2004 7:00 pm **Page:** 1 of 3
Project: West End Corridor **File No.:** 20-4060.30

Present: Kulbir Singh **Company:** Director of Urban Design **Email:** kulbir.singh@edmonton.ca

Chantal Villecourt – Planning Tech
 Mahl
 Public Attendees To be provided by Chantel
 Jolie Whetzel Whetzel Environomics
 Mark Huberman Bunt & Associates
 Doug Carlyle Carlyle & Associates
 Shafraaz Kaba Manasc Isaac Architects
 Myron Nebozuk Manasc Isaac Architects

Circulation: Kulbir Singh **Company:** Director of Urban Design **Email:** Kulbir.singh@edmonton.ca
 Shafraaz Kaba shafraaz@miarch.com
 Myron Nebozuk mnebozuk@miarch.com
 Consultant Team
 Members

No.	Item	Action
1.0	Introduction by Kulbir Singh <ul style="list-style-type: none"> • Background; • Precedent examples (Gateway Boulevard & Calgary Trail); • Conceptual goal for this project (informative, pleasurable, civilizing); • Hard numbers (22,000 cars per day may double in ten years); • Public Consultation Scope (2 public meetings, short and long term suggestions requested); • Timeline (consultants report due this September). 	
1.1	Presentation by Shafraaz Kaba (7:20 pm) <ul style="list-style-type: none"> • Background; • Project Scope; • Currant conditions. 	
1.2	Break out into three groups (8:10 pm) <ul style="list-style-type: none"> • Landscape & Aesthetics; • Road Access & Signage; • Sustainability, Short & Long Term solutions. 	



MEETING MINUTES # 1

No.	Item	Action
1.3	<p>Presentation of each group's discussion (8:50 pm)</p> <p>Landscape & Aesthetics (Peter Alexander, presenter);</p> <ul style="list-style-type: none"> • What is the image of our city that we want to convey? • Conflicts exists between one way & two way traffic; • Way finding desirable; • Lighting desirable; • Landscape design should curb incidence of roadside brush fires; • Garbage from passing dump trucks is an issue. Can the police ticket offenders? <p>Road Access & Signage (Martin Gillet, presenter)</p> <ul style="list-style-type: none"> • Winterburn Road access is unforgiving and difficult to navigate; • Let's soften up the "concrete look"; • Design team should take a close look at the intersection (where the old Winterburn Post Office is); • Distinct local business signage needed; • Regarding tourist potential, two zones of influence are anticipated; <ul style="list-style-type: none"> • Within our zone, a Tourist Centre can welcome people; • Before reaching our zone, how can we encourage people to choose our road over others? • Zoning's influence on this corridor: for example, is a landfill a permitted use? <p>Sustainability / Short & Long Term Solutions (Jolie Whetzel, presenter);</p> <ul style="list-style-type: none"> • Short term issues; <ul style="list-style-type: none"> • Maintenance, clean up; • Traffic congestion at Wal-Mart & interchanges; • Bike Safety /pedestrian safety; • Land use conflicts between highway use commercial and adjacent uses; • Long Term issues <ul style="list-style-type: none"> • Tying bicycling trails into Anthony Henday Drive; • Introduction of wild flowers for natural colour; • Aesthetic issues: use of totemic elements and designed signage desirable; • Incorporate a lookout kiosk that is not so big as to serve as an overnight truck stop. 	



MEETING MINUTES # 1

No.	Item	Action
1.5	<p>Wrap-up (Kulbir Singh-9:00 pm)</p> <ul style="list-style-type: none">• Observation: Design guidelines not mentioned by any of the three groups;• Next Steps: Design development proceeds, accompanied by cost estimates. We reconvene in September to discuss our progress.• Date of next meeting to be set later;• Meeting adjourned at 9:10 pm;• Minutes recorded by Myron Nebozuk.	

Recorded by: Myron Nebozuk

Date: June 16, 2004

Please review these meeting minutes and report any errors or omissions within 10 days, otherwise these minutes will be deemed to be correct as written.



MEETING MINUTES # 2

Public Presentation of Draft Report

Date: May 24, 2005 7:00 pm **Page:** 1 of 2
Project: West End Corridor **File No.:** 20-4060.30

Present:	Company:	Email
Kulbir Singh	Director of S.A.S.	kulbir.singh@edmonton.ca
Carol Belanger	Principal Urban Designer	Carol.belanger@edmonton.ca
Greg Ball	City of Edmonton	Greg.ball@edmonton.ca
Larry Benowski	City of Edmonton	Larry.benowski@edmonton.ca
Mark Huberman	Bunt & Associates	
Doug Carlyle	Carlyle & Associates	
Shafraaz Kaba	Manasc Isaac Architects	shafraaz@miarch.com
Vivian Manasc	Manasc Isaac Architects	Vivian@miarch.com

Circulation:	Company:	Email
All present		
Myron Nebozuk	Manasc Isaac Architects	mnebozuk@miarch.com
Consultant Team		

No.	Item	Action
2.0	Introduction by Kulbir Singh (7:15 pm) <ul style="list-style-type: none"> Background of West End Corridor; Approved budget of \$275,000 for entry corridors (Yellowhead East and West End Corridor) Need for public input on priorities for spending capital budget 	
2.1	Presentation by Shafraaz Kaba (7:20 pm) <ul style="list-style-type: none"> Background; Project Scope; Review public workshop results; Examine precedents; Review Urban Design Guidelines Implementation Plan 	
2.2	Comments / Questions regarding the Guidelines	



MEETING MINUTES # 2

No.	Item	Action
	<ul style="list-style-type: none"> • Would the pedestrian link across Stony Plain Road to West View Village/Winterburn Industrial be a bridge or a tunnel? • When out-of-town visitors arrive at our hotel, they ask how far is it to the city or West Edmonton Mall. They do not get an impression that they have arrived in a large city. • It is good that there are pedestrian and seating amenities in new industrial areas. People are being to demand these amenities, as there is nowhere to go in these industrial ghettos. • The dump on the outskirts of the city blows at least one large garbage bag full of refuse to my property. How can this be improved? • How can the city enforce trucks that do not have tarps buttoned down to the top of their dump trucks? • Can the city provide “free taxes” or a matching grant for businesses/properties that clean up and renovate their businesses/yards? Can this be a partnership with the City in an effort to encourage more properties to join a clean up program? • How do we ”embrass” our neighbours into cleaning up yards and properties? • Spruce Grove/Parkland County is interested in a multi-use trail link. • The landfill to the west of the city may be closed in 3 to 5 years. At this time, it will be covered over and planted. 	
2.3	<p>Implementation Priorities</p> <p>Given 5 red dots for each short, medium and long term initiatives, people were asked to place their dots where they felt it was most useful and relevant for improvements in the corridor.</p> <p>See attached sheets for break-down of “red dot” priorities.</p>	
2.4	Kulbir Wrapped up the public presentation at 8:50pm.	

Recorded by: Shafraaz Kaba

Date:

June 8, 2005

Please review these meeting minutes and report any errors or omissions within 10 days, otherwise these minutes will be deemed to be correct as written.

"RED DOT" Implementation Priorities as designated by local stakeholders, May 24th, 2005

Short Term Goals (Phase 1)	Responsibility	Priority
Corridor Aesthetics		
1. Clean up Litter and detritus	Community Services	12 Dots
2. Design Competition for entry corridor landmark/welcome sign	Planning & Development	4 Dots
3. Replacement of dead spruce trees at Welcome sign with aspen	Community Services	No Dots
4. Screen landfill with dense aspen trees and shrubs	Parkland County	13 Dots
5. Relocation of illegible signs to areas with lower speed limits	Transportation and Streets	1 Dot
6. Relocation of light pole mounted signs to new steel channel mounting	Transportation and Streets	No Dots
7. Minimize signage within 150 m of street intersections.	Transportation and Streets	1 Dot
8. Remove banners after max. time allotted for banners expires.	Transportation and Streets	No Dots
9. Conduct assessment of all light poles within West End Corridor area	Transportation and Streets	2 Dots
Land Use		
1. Extend Stony Plain Road Major Commercial Corridor Overlay to 231 St.	Planning & Development	7 Dots
2. Revise Area Structure Plan for Winterburn Ind. Area	Developer/Planning and Dev.	5 Dots
Sustainability		
1. Encourage new, sustainable development within the West End Corridor	Planning & Development	4 Dots

RED DOT Implementation Priorities as designated by local stakeholders, May 24th, 2005

Medium Term Goals (Phase 2)	Responsibility	Priority
Corridor Aesthetics		
1. Install new street median lighting from 231 St. to Anthony Henday	Transportation And Streets	8 Dots
2. Install new street lighting on collector roads within the corridor	Transportation And Streets	10 Dots
3. Establish highway median and road edge planting	Community Services	8 Dots
4. Design and build pedestrian/cyclist bridge on Winterburn overpass	Transportation and Streets	2 Dots
5. Public art competition for the Entry Corridor	Planning & Development	No Dots
Design Guidelines		
1. Changes to sign and banner bylaw to limit commercial signs	Planning & Development	No Dots
2. Implement land use aspects of Design Guidelines	Planning & Development	No Dots
3. Relocation of overhead utilities into buried conduits	Developer	2 Dots
4. Commence feasibility study of Tourist Information Centre	Corp. Services/Public Works/EED	2 Dots
Transportation and Corridor Mobility		
1. Pedestrian connections from Westview Village to Winterburn School	T&S and/or by Developer	4 Dots
2. Plan multi-Use trail to Spruce Grove and Stony Plain communities	Community Services/P&D	2 Dots
3. Commence design of Anthony Henday grade-separated interchange	Alberta Infrastructure/Transportation	3 Dots
Sustainability		
1. Encourage storm water mngt. /reduction of water run-off for developments	P&D/Public Works	1 Dot

RED DOT Implementation Priorities as designated by local stakeholders, May 24th, 2005

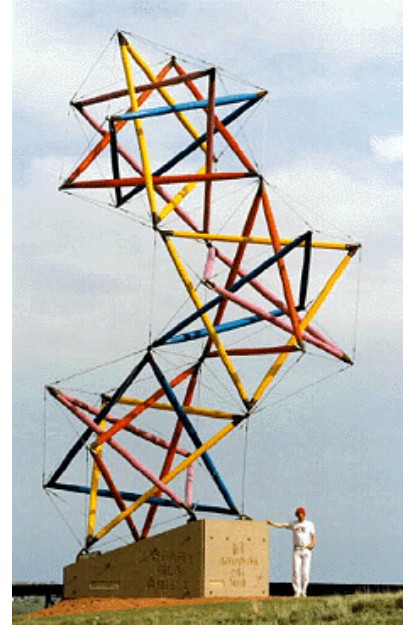
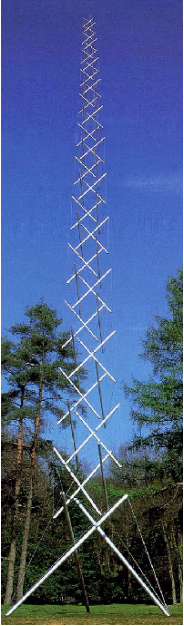
Long Term Goals (Phase 3)	Responsibility	Priority
Corridor Aesthetics		
1. Create public art installations as part of Henday Interchange	Community Services and T&S	7 Dots
2. Complete planting on road right-of-ways at Anthony Henday Interchange	Community Services and T&S	7 Dots
Land Use		
1. Review progress of West End Corridor Urban Design Guidelines	Planning & Development	1 Dot
2. Commence design and construction of Tourist Info Centre	Corp. Services/EED	No Dots
Transportation and Corridor Mobility		
1. Create pedestrian/cyclist link -Spruce Grove to Stony Plain Communities	Community Services/T&S	7 Dots
2. Create Multi-Use trail connection to city trail network	Community Services/T&S	2 Dots
3. Overhead sign to deliver road/traffic conditions and driver information	Transportation and Streets	1 Dot
Sustainability		
1. To be seamlessly integrated in the design, construction and implementation of infrastructure		5 Dots

Appendix B:

Design Ideas Explored and Considered

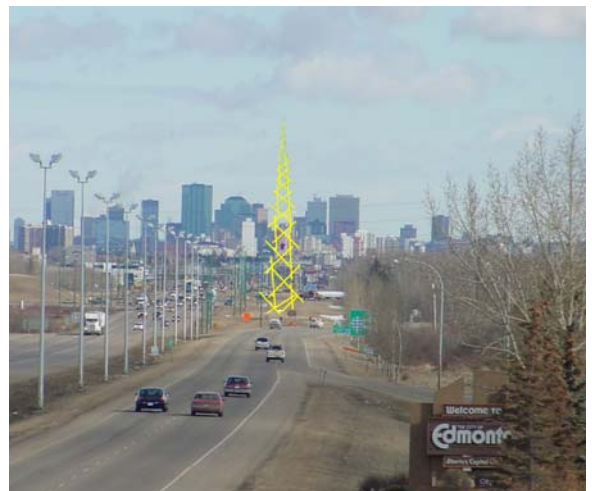
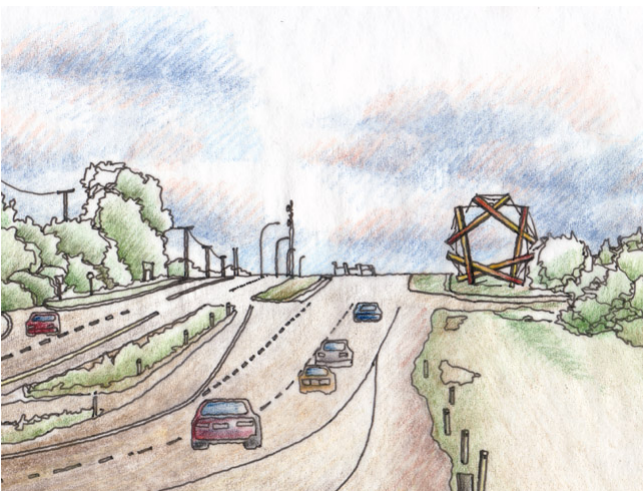
Design Ideas Explored and Considered

During the course of the West End Corridor Urban Design Guidelines, there were many ideas that were explored for feasibility and brainstorming. The following ideas were presented to the Steering Committee for feedback and discussion.



Idea 1: Tensegrity Structures as landscape markers.

Tensegrity structures were proposed as landmark structures that could be built along the West End Corridor in order to help with wayfinding. Tensegrity structures are strong and light weight and do not need substantial foundations. The images below show tensegrity structures as proposed at 231 Street and near 199 Street respectively.



Idea 2: Dynamic “Welcome to Edmonton” Sign

A new “Welcome to Edmonton” sign can incorporate a video screen to provide more than just a welcome message. The sign could be programmed to welcome delegates to a conference, or make visitors aware of the current festival, conference or events underway in the city. The sign would be located in a strategic location away from on- or off-ramps and would not interfere with wayfinding. The location of the current “Welcome to Edmonton” sign in the West End Corridor is a suitable location. The City of Edmonton would need to designate a staff position that would oversee the programming of the video screen. Opportunity for incorporating solar power is possible, to showcase innovative technology use.

This idea was not feasible due to many reasons. The Traffic Operations department had some concern that the dynamic signs would cause driver distraction. Visibility of the sign and moving images are also problematic when traveling at high speed. Recently install dynamic signs at Finesse Furnishing and at Rexall Place have not been warmly received. Solar power would be an expensive option to power these signs.



A new dynamic “Welcome to Edmonton” sign incorporates an electronic screen that would flash visitors’ images and information of what’s happening in the city.

Idea 3: A Visitor's Information Centre

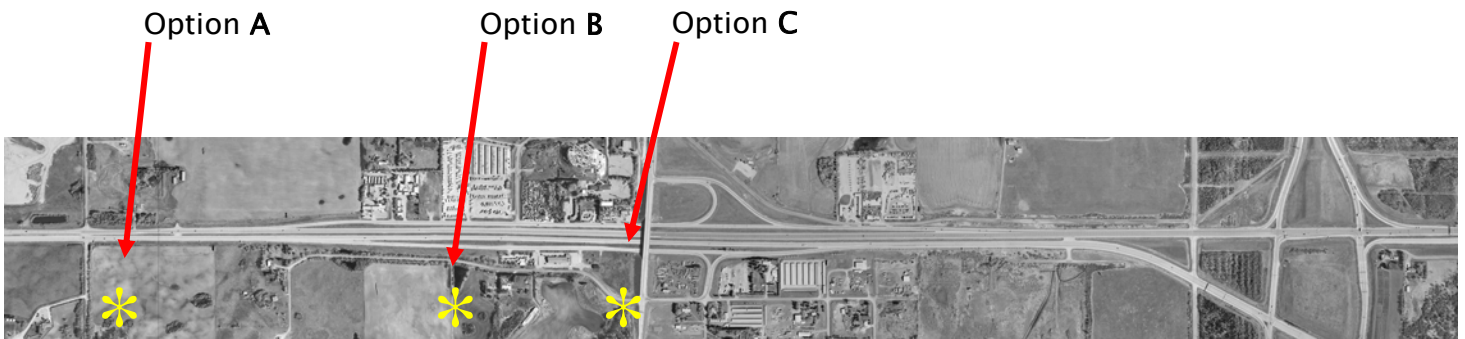
Early in the design guidelines, there was thought to create an open-air, *seasonal*/tourist information pavilion. There has been a precedent for a tourist information centre. Edmonton Economic Development operated a information centre out of a trailer on Stony Plain Road at 178 Street and also 184 Street. Sufficient drop-in numbers did not make it a feasible endeavour. The peak number of visitor's was 3,000 people in July for these centres. At one point, Edmonton has a joint Tourist Information Centre with Spruce Grove on campsite road. Presently, there is a Tourist Information Centre in Stony Plain, and it is likely that visitor's would stop there on their way into Edmonton. According to Edmonton Economic Development, more people arrive from the east side of the city than the west.

Three site options were considered for a proposed Tourist Information Centre:

Option A: On the hilltop to the east of 231 street. Access is problematic with no room for acceleration/deceleration lanes.

Option B: Stony Plain Road Commercial strip

Option C: Adjacent to Winterburn overpass



It may be suitable to conduct a feasibility study in the future for a Tourist Information Centre. The ideal centre would provide snacks/drinks, (there are no facilities on the corridor at present) and well as information. The Tourist Information Centre may be run as a Public-Private Partnership by Edmonton Economic Development with a local motel or other service establishment. Thus, for this report, only a feasibility study is recommended for the medium term time frame.

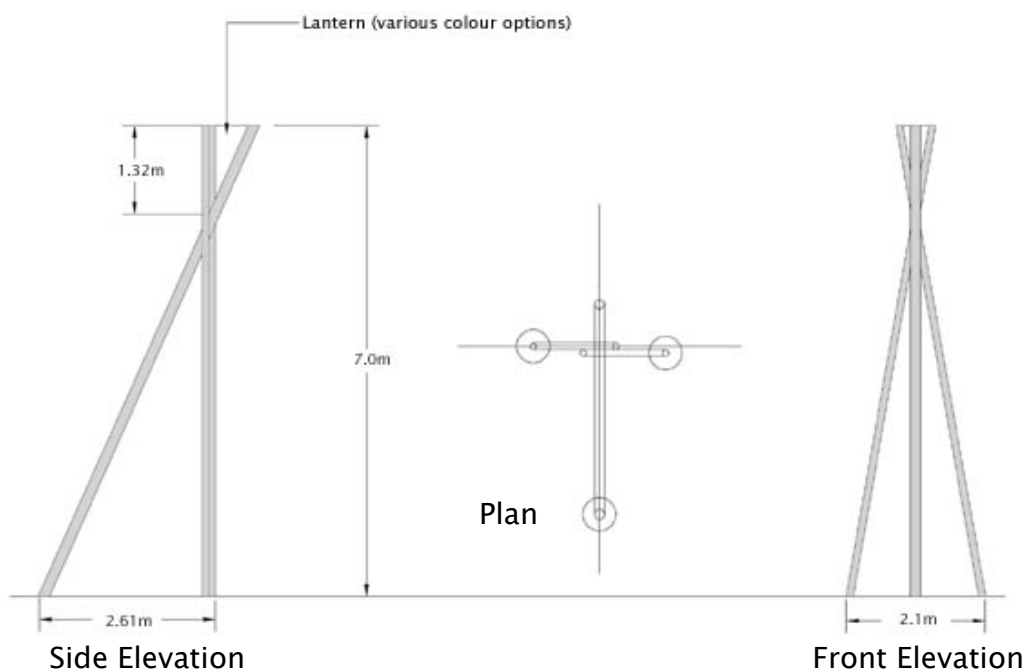
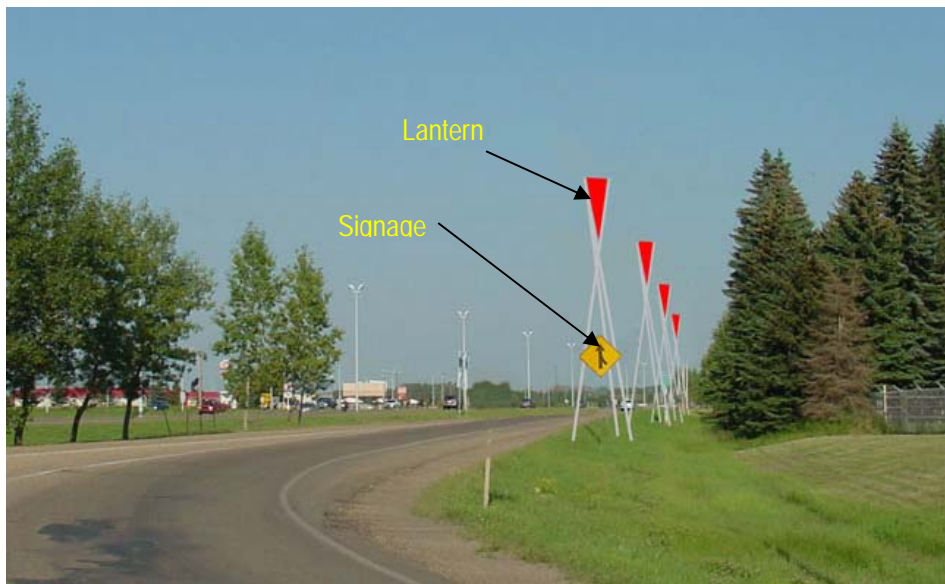
Idea 4: Pylon Lighting/Signage Markers for the West End Corridor

Create corridor pylon markers

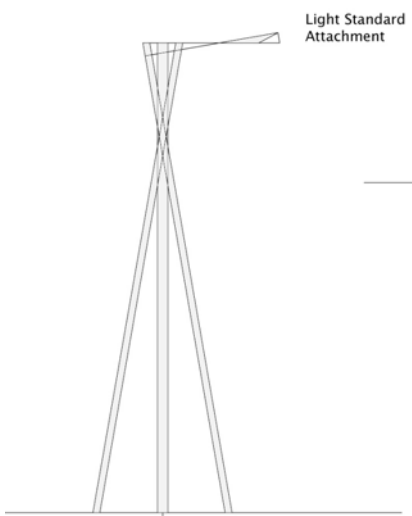
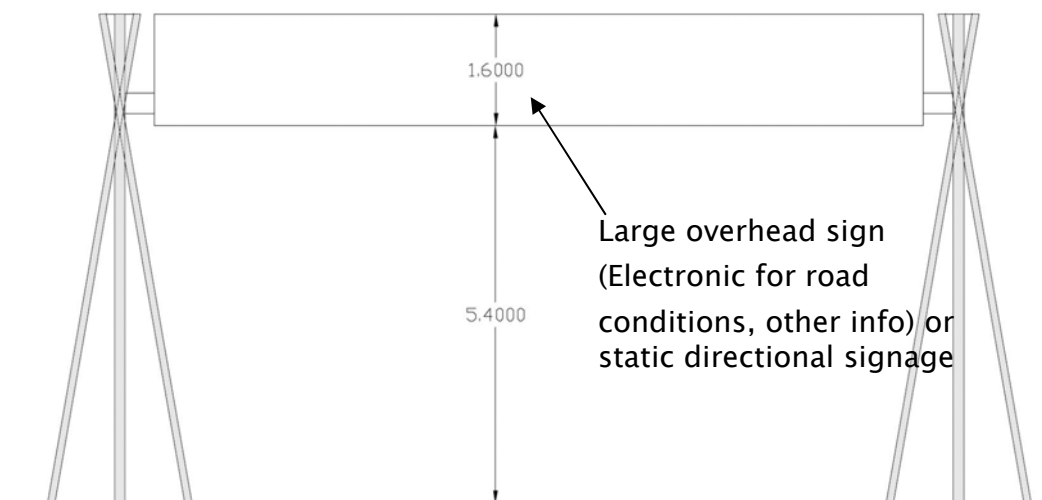
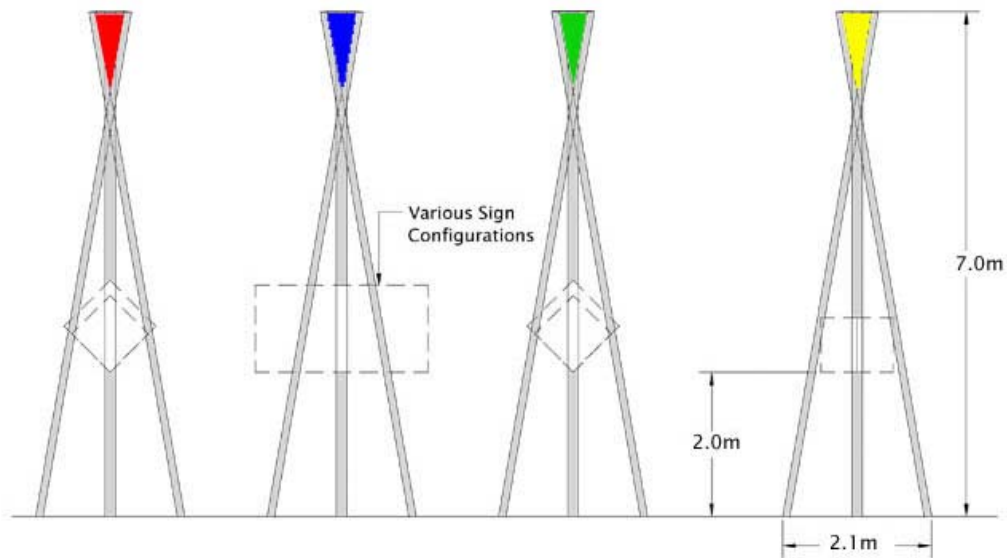
- to assist in wayfinding by using colour coded lanterns
- to carry highway-scaled signage (both statutory and information signage)
- for distinct corridor ambient lighting/street lighting that would help give character to the West End Corridor.

Pylon markers would provide a modern interpretation of the City of Edmonton: a hi-tech, diverse economy, with history and culture rooted in a beautiful river valley. The markers would be strong, lightweight elements that would incorporate a breakaway base.

The idea was abandoned due to the probable high cost of creating custom light and sign structures, and their associated installation and maintenance costs.



Idea 4: Pylon Lighting/Signage Markers for the West End Corridor



Idea 5: Provide High Speed Transit Stations

The City of Edmonton is considering design and implementation of a high-speed transit bus route. Easy and convenient access to transit will yield more riders. Two high speed transit stops were suggested for Stony Plain Road. Stops along Stony Plain Road could also be part of a commuter bus network that could reach Spruce Grove and Stony Plain communities. The Streets and Transportation department have designated a park and ride location on Webber Green Road in the Lewis Farms community as the transit location that will be served by high speed transit service.



Appendix C:

References

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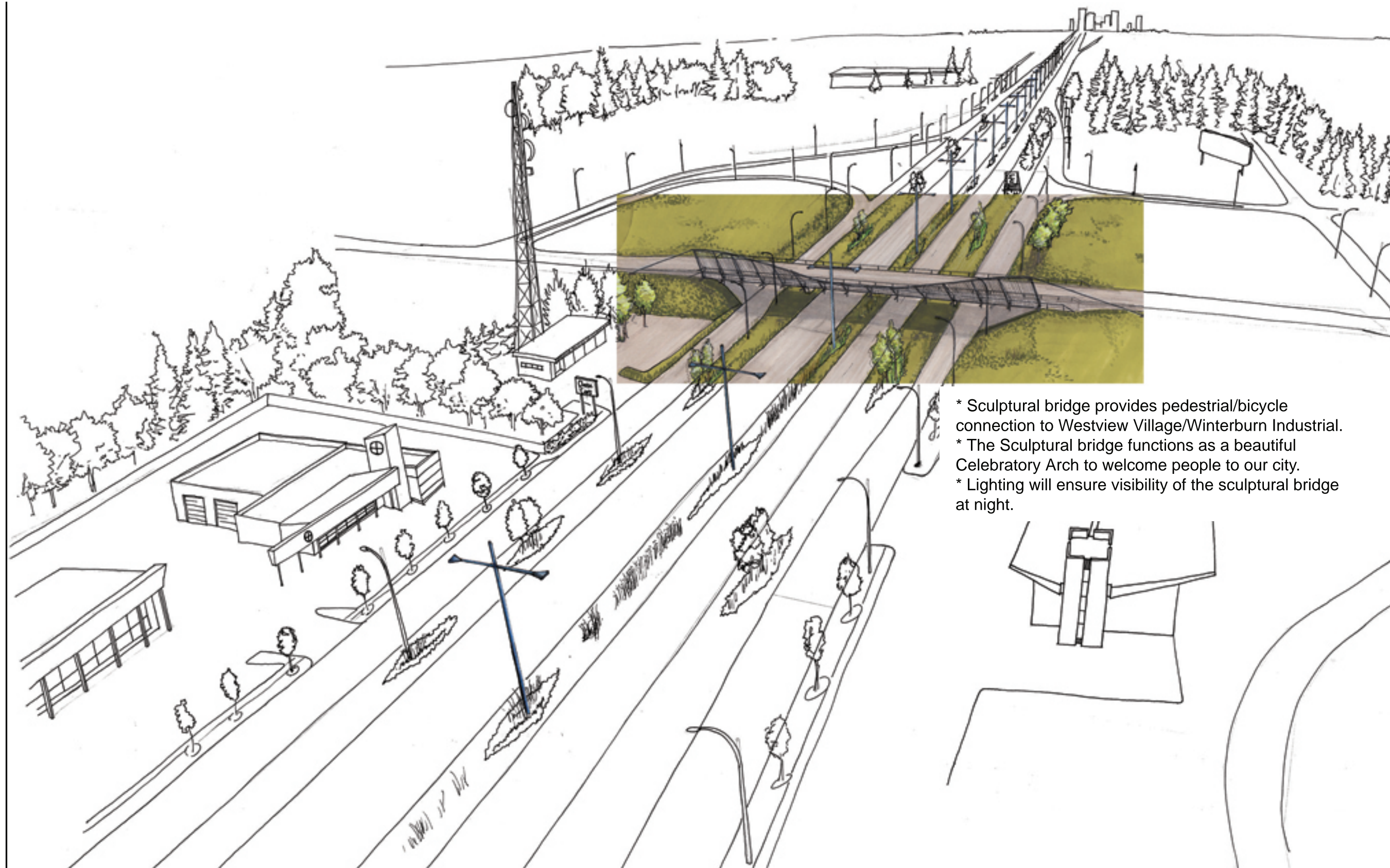
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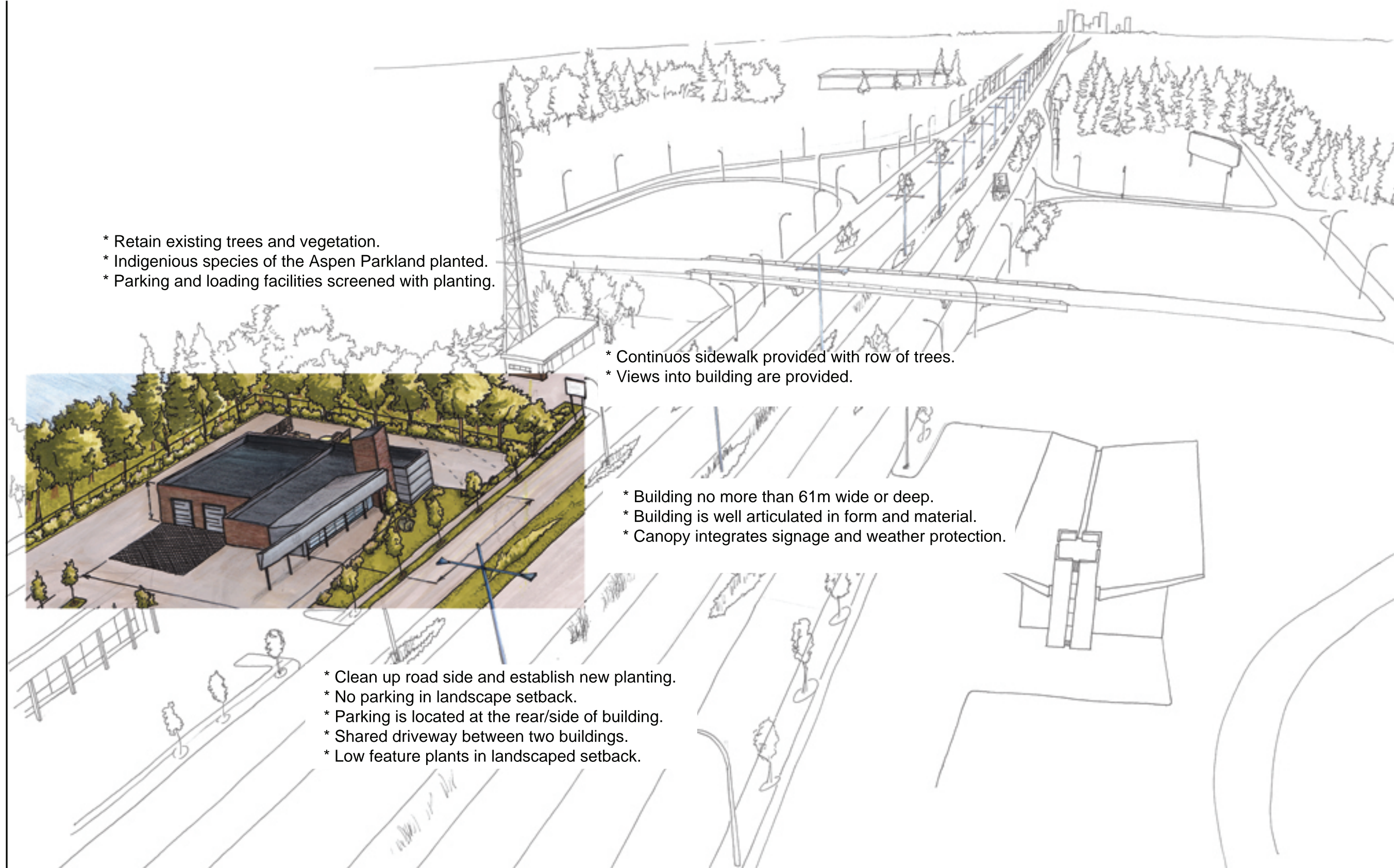
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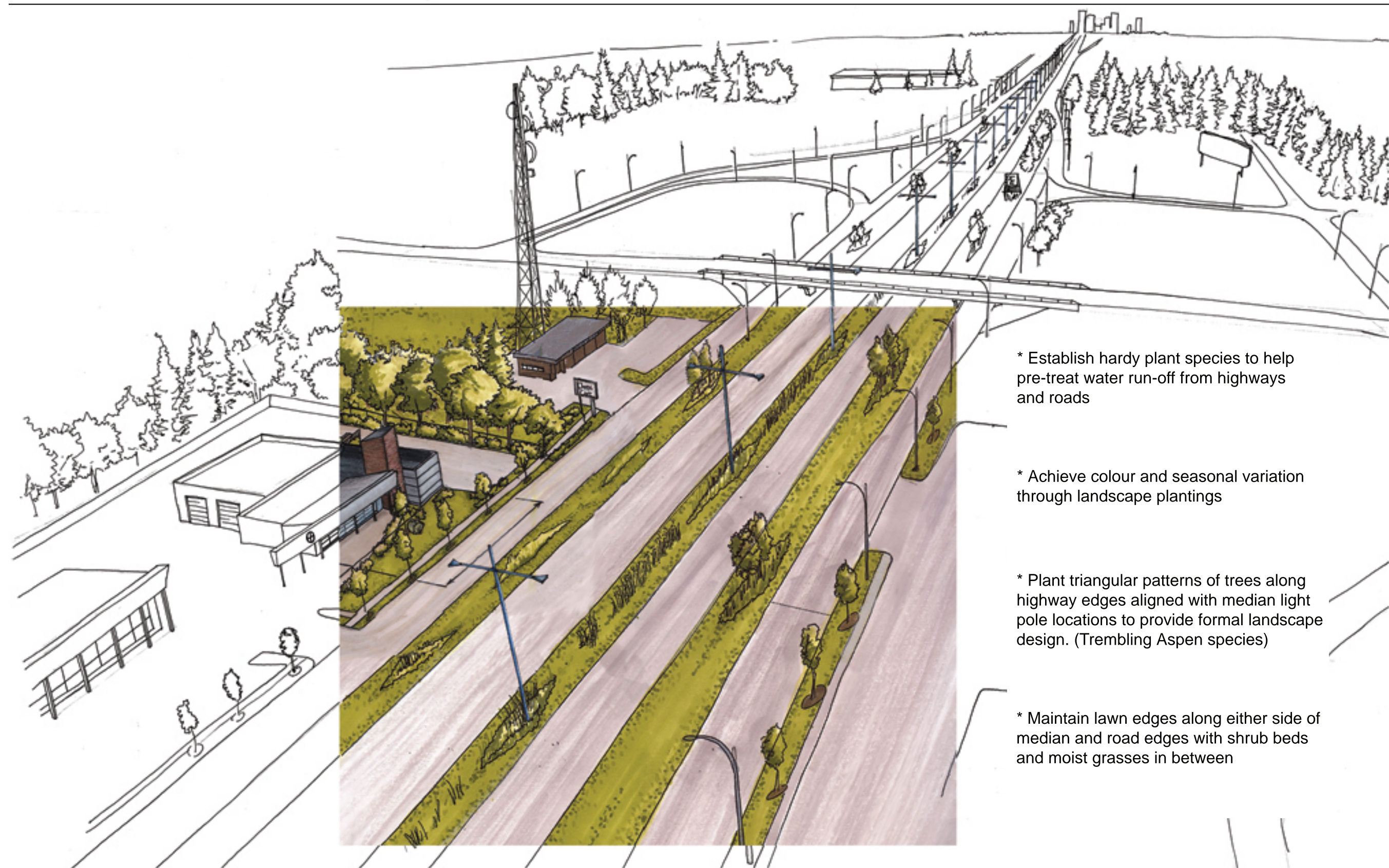
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Appendix D:
Design Concepts



- * Sculptural bridge provides pedestrian/bicycle connection to Westview Village/Winterburn Industrial.
- * The Sculptural bridge functions as a beautiful Celebratory Arch to welcome people to our city.
- * Lighting will ensure visibility of the sculptural bridge at night.





* Establish hardy plant species to help pre-treat water run-off from highways and roads

* Achieve colour and seasonal variation through landscape plantings

* Plant triangular patterns of trees along highway edges aligned with median light pole locations to provide formal landscape design. (Trembling Aspen species)

* Maintain lawn edges along either side of median and road edges with shrub beds and moist grasses in between