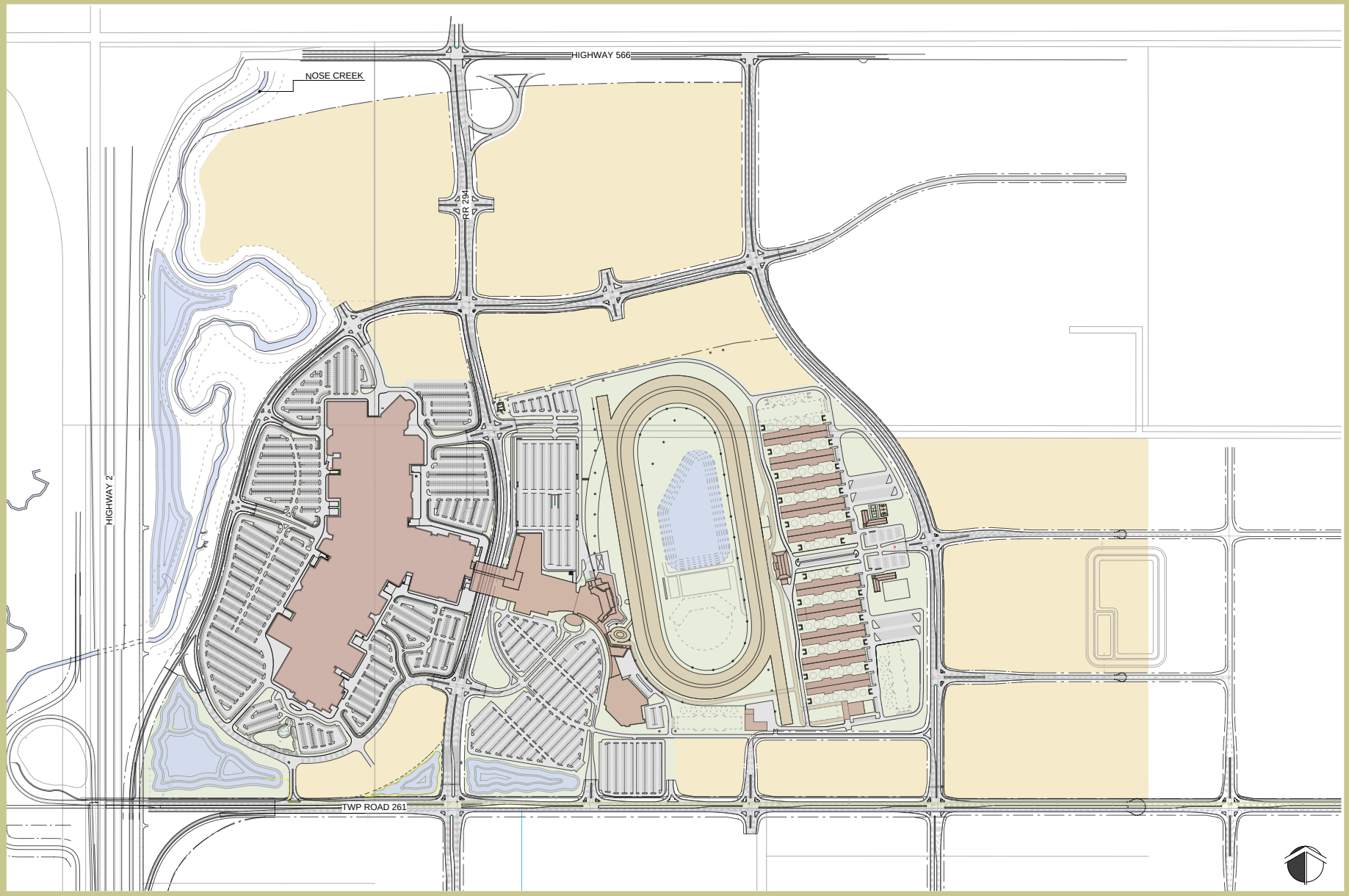


East Balzac - RETAIL AND RACING ENTERTAINMENT CENTRE

July 9, 2006

COMPREHENSIVE LANDSCAPE STRATEGY

TABLE OF CONTENTS PAGE

INTRODUCTION

This ‘Comprehensive Landscape Strategy for the Balzac ‘Retail & Racing Entertainment Centre’ has been prepared in response to a request from the United Horsemen of Alberta and Ivanhoe Cambridge. The document is an adjunct to other Master Site Development Plans that will be submitted for the various developments. This is a broad strategy report that provides a framework for the preparation and review of later Development Permit plans.

LANDSCAPE VISION

The landscape presentation in the ‘Retail & Racing Entertainment Centre’ should be a function of context, utility and aesthetics, consistent with the objective of creating high quality, well-planned developments, infrastructure and recreational amenities. Landscape installations must be sustainable in the sense of utilizing contextually appropriate materials with positive aesthetics that can be maintained in a viable, healthy condition for the life of the development.

THEME AND FOCUS

The ‘Retail & Racing Entertainment Centre’ site is an upland prairie landscape with a rich history in the traditional ranching and rural lifestyle. Activities and values of the ranching heritage will be reinvented in new projects proposed for the ‘Retail & Racing Entertainment Centre’. The project will also facilitate the enhancement and restoration of lands abutting Nose Creek on the west side of the site. The landscape treatment for the ‘Retail & Racing Entertainment Centre’ should be an expression of the rural ranching context and adjacent natural environment. What this means is:

The focus in the Nose Creek area shall be ‘landscape restoration’ – using exclusively native trees, shrubs, forbs, water plants and grasses to replicate the natural fescue prairie and creek edge landscape ecotype – refer to recommended plant list for the Nose Creek area. After establishment, the Nose Creek landscape will be a ‘non-maintained’, non-irrigated natural environment zone.

The focus along the perimeters in the development areas shall be distinctly rural, rather than urban, and will draw design cues from rural settlement patterns (linear shelterbelts), and the natural prairie and coulee landscapes. There will, and should be more latitude in the landscape form and selection and utilization of plant materials for the development areas. Much of the 'perimeter' landscape will be non-irrigated and may include native and dry land grasses. Specific landscaped areas nearer buildings and vehicular site entries will be more intensively landscaped and may be irrigated. Native plants and a limited palette of non-native trees, shrubs and grasses are suggested; refer to recommended plant list for development areas.

WATER AVAILABILITY AND INFLUENCE ON LANDSCAPE DESIGN

The availability of water for basic development uses and fire protection within the area is problematic (per Balzac East Area Structure Plan). As such, the standard of a 'conventional urban' landscape reliant on widespread irrigation with potable water is not appropriate for the 'Retail & Racing Entertainment Centre'. Site specific design solutions are required. While the water supply problem is significant, the solution is not as simplistic as 'utilize only drought tolerant native plants'. Trees, and most shrubs do require water to sustain satisfactory growth. The perception does exist that there are trees that require 'no water'. This is a fallacy, for in this region, the naturally occurring native trees generally exist only where water is present – Aspen stands on north facing slopes, Balsam Poplar in the river and creek flats, Douglas Fir and White Spruce on the spring fed banks of the Bow River, etc. By default, most (but not all) trees that are routinely specified for use in the Calgary region are reasonably adaptable to a 'low (but not zero) water regime'.

The high elevation, short growing season, extreme temperature fluctuations and semi-arid climate severely limit the available choices for hardy trees and shrubs. In very general terms, most woody plants suitable for this planting zone (2 – 3) are reasonably adaptable to limited water availability. There are some obvious exceptions such as white birch, viburnum, cedars, and certain willow species that do require a higher moisture regime for optimum growth.

In some cases, the terrain design may permit storm run-off and rainfall to collect in low areas and swales – this approach would be recommended for the Nose Creek area; and some areas of the development lands.

In development areas, certain landscapes will require irrigation. Where irrigation is required, efficiency and the utilization of the minimum amount of water for irrigation purposes should be the objective. A variety of irrigation design techniques and best management practices warrant consideration, including:

- using irrigation technology (control and proper zoning) to deliver the minimum quantity of water at appropriate intervals
- utilizing low flow, drip and micro irrigation techniques, where appropriate
- designing and operating irrigation systems to acknowledge varying water requirements of different plant materials
- directing surface storm water run-off to planting areas where appropriate (requires the correct plant material selection)
- utilizing captured storm water run-off for irrigation purposes (ie: pump from storm ponds)
- using grey water for irrigation purposes
- eliminating irrigation over spray to hard surface areas
- watering in evening hours to reduce evaporation loss
- shutting down irrigation systems when natural precipitation fulfills requirements, through the use of rain sensors
- mulching the surface of shrub beds and tree pits with organic materials, like bark mulch to retain moisture
- incorporating water retaining elements (hydrogels) in planting mixes

More often than not, the critical factor in utilizing water efficiently for satisfactory landscape viability relates more to maintenance practice than plant selection. Even ‘drought tolerant’ species like poplar, native rose, and potentilla can become accustomed to a regime of ‘heavy watering’, and will appear stressed if the water supply is reduced.

The geometry of the landscape can be configured to acknowledge the limited availability of water for irrigation purposes. Typically, large urban commercial sites contain numerous small planting islands (typically 2.0 metres wide x 11.0 metres long). These small individual islands are surrounded by hard surfaces that enhance the ‘heat island’ effect. For the development areas, it would be better to consolidate several small islands into larger landscaped areas. These larger islands would have a greater water retention capacity, and could perhaps, be more adaptable to accepting storm water run-off. In addition, the larger islands would have a greater visual presence.

PARKING AND ROADWAYS

The East Balzac Area Structure Plan identifies the need to:

- address screening and buffering treatment (in general)
- consider the importance of visual impacts on the landscape and the Highway 2 and Highway 566 corridors
- provide landscape buffers along the internal roadway and Township Road 261
- assist in maintaining the visual integrity of the Highway 2 and Highway 566 corridors

Proposed developments require and provide significant areas dedicated to surface automobile parking. Landscape form and detail within and adjacent to parking areas shall be provided to:

- visually subdivide and 'break-up' large parking modules into more intimate, legible and visually comfortable spaces
- soften the edge condition of perimeter parking areas to maintain and enhance view satisfaction for motorists using Highway 2 and Township Road 261
- soften the edge condition of parking areas abutting the internal north-south road and the (realigned) Range Road 293
- potentially accept a portion of surface storm water flows to 'absorbent' landscape 'bio-swales' with the dual objectives of providing water for landscape plants and delaying/reducing storm water flows to the ultimate receiving body (note: 'bio-engineered' storm water systems need to be designed by a qualified Professional Engineer)

PEDESTRIAN CIRCULATION

Figure 1 – 'CONCEPTUAL PEDESTRIAN CIRCULATION OVERVIEW' – illustrates the main linkages within the project area. A regional pathway (2.5 metre wide asphalt) will be located:

- along the south side of Highway 566
- along the west side of Range Road 293
- along the north side of Township Road 261
- along the west side of the project adjacent proposed storm water features and Nose Creek

The regional pathway will create a loop around and within the development lands. 'Primary' sidewalks have been illustrated on Fig. 1. These 'primary' sidewalks will facilitate pedestrian access from transit stops and provide connections to the Nose Creek lands. Other sidewalk connections will be provided to suit project needs within the development cells; these connections will be illustrated at the Development Permit level. The regional pathway and 'primary' sidewalks should be separated from adjacent roads by a grassed boulevard.

MAJOR IDENTITY HIERARCHY

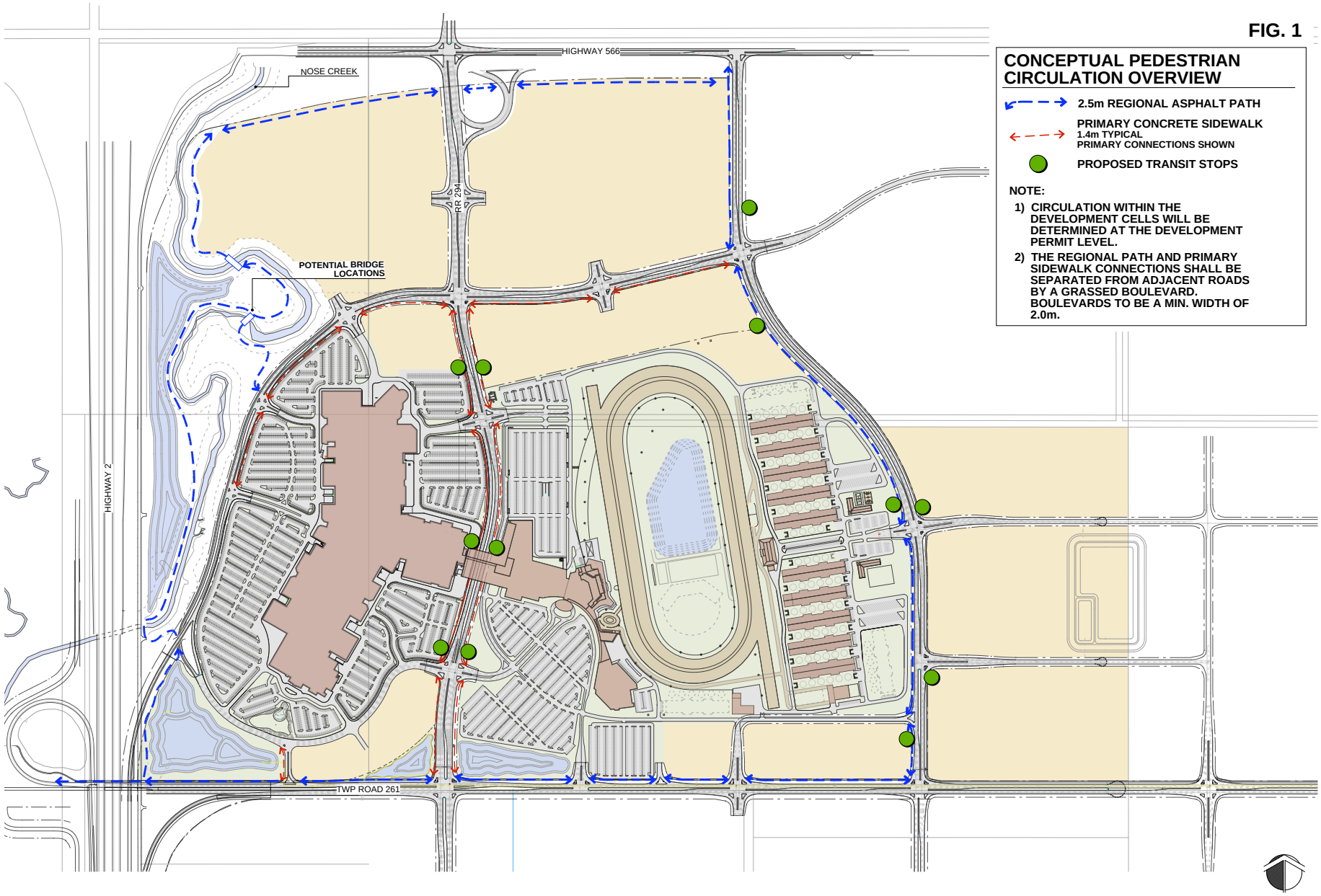
Figure 2 – 'MAJOR IDENTITY HIERARCHY' denotes schematic locations for three levels of facility signage. This type of signage is generally (but not exclusively) more horizontal, rather than vertical in form.

'Major Monument Signs' are located at primary road entries (Highway 566 and Township Road 261); these structures serve to communicate the overall project theme to the viewer. Graphics are simple, legible and bold, and should be limited to the overall development name and logo (not yet determined). The scale needs to be oversized, even perhaps monumental, and definitely 'non-residential. Forms should speak to the western heritage in an evocative, derivative non-literal manner. Materials might include stone, 'desert concrete'' oversize architectural masonry units and heavy steel beams, plates and angles. Coloration should be based on earth tones – sandstone, rust, sage, etc. 'Major Monument Signs' should be illuminated from below or above; lettering could be back-lit, however back-lit fluorescent illuminated 'can' types should be avoided. Neon and LED strip lighting may be appropriate, depending on color and intensity.

East Balzac – RETAIL & RACING ENTERTAINMENT CENTRE

COMPREHENSIVE LANDSCAPE STRATEGY

FIG. 1

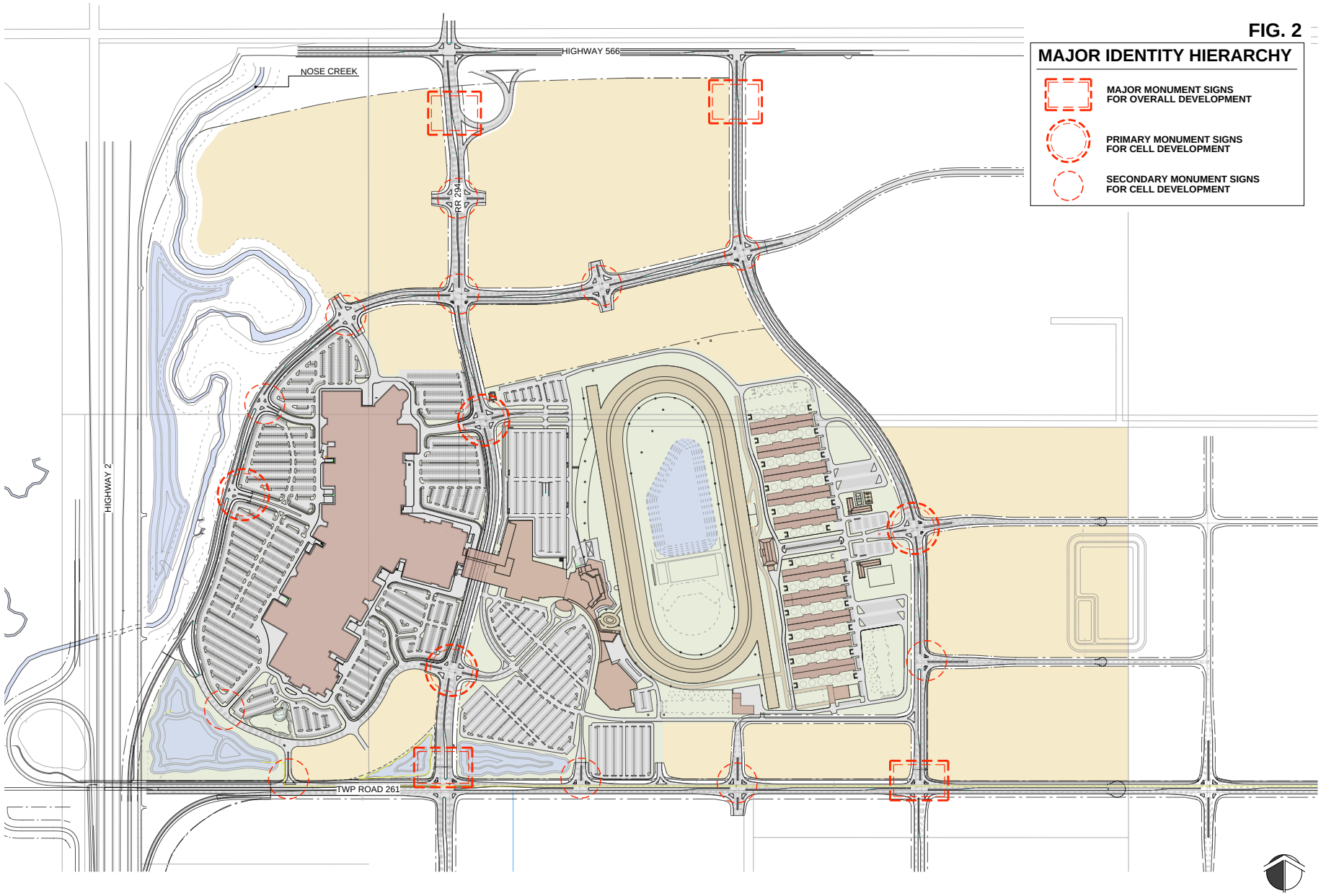


East Balzac - RETAIL AND RACING ENTERTAINMENT CENTRE

July 9, 2006

COMPREHENSIVE LANDSCAPE STRATEGY

FIG. 2



East Balzac - RETAIL AND RACING ENTERTAINMENT CENTRE

July 9, 2006

COMPREHENSIVE LANDSCAPE STRATEGY

'Primary Monument Signs' would be located along internal roads at the principal vehicular entries to each development; these installations identify the function of each development (ie: shopping centre, race track, entertainment centre, etc.), and graphics should be limited to the name and logo of the facility, and the logo of the facility owner/operator (UHA, IC, Olds College, etc.). the form and expression of these "Primary Monument signs' will be derived from the design style established for each project (ie: shopping centre, race track, etc.). There should be a compatibility of form while facilitating the distinctiveness required for each project. While the scale of these installations will be smaller than the 'Major Monument Signs', the principles of distinct legibility and robust form should apply.

'Secondary Monument Signs' are scaled-down versions of 'Primary Monument Signs'; these would be located at 'secondary' vehicular entries from the internal road system and at connections to Township Road 261. In scale, these 'Secondary Monument Signs' would be smaller than the 'Primary Monument Signs'. In some cases (where announcing one project) these signs may be 'reduced copies' of the 'Primary Monument Signs'. In situations where multiple businesses abut a 'Secondary Monument Sign' location a common design form should prevail. In such instances these monument signs might include the logo of the overall project and the name / logo of the principal abutting business use. Materials and forms could be appropriately derived from the 'Major Monument Signs.

This 'Identity Hierarchy' is conceptual in nature and is limited to identifying potential signage installations that have a distinctly 'landscape' related character. Other types of signage (pylon, building signage, directional, regulatory, informational, etc.) will be described under separate documentation.

LANDSCAPE ZONES

A variety of ‘Landscape Zones’ describe various conditions and suggest conceptual landscape treatments within the ‘Retail & Racing Entertainment Centre’ lands.

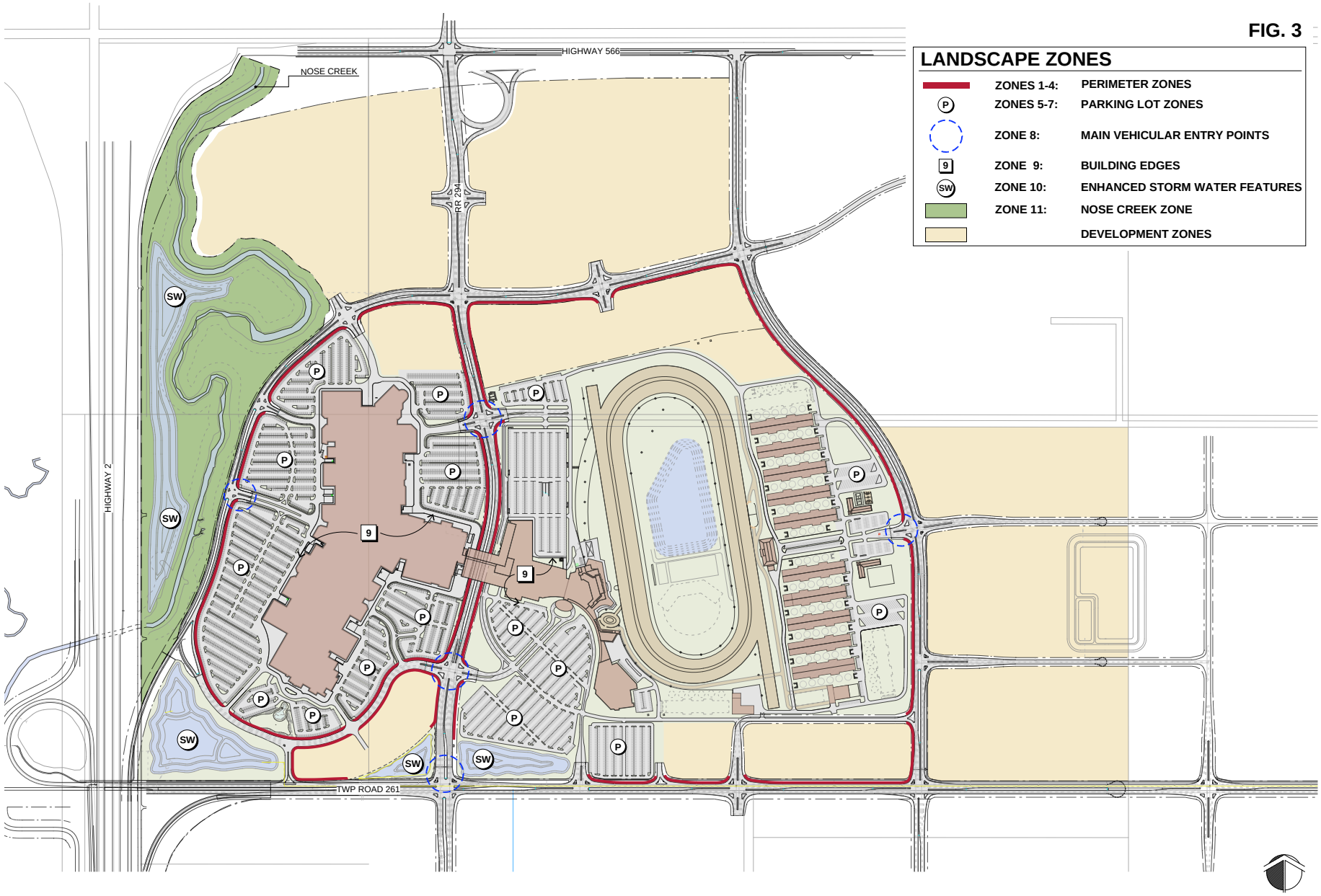
Development Area Zones

Zone 1: Low Perimeter
Zone 2: Tall Perimeter
Zone 3: Sloped Low Perimeter
Zone 4: Sloped Tall Perimeter
Zone 5: Long Islands – Parking Lot
Zone 6: Parking Islands – General
Zone 7: Parking Islands – Narrow
Zone 8: Main Vehicular Entry Roads
Zone 9: Building Edges
Zone 10: Enhanced Storm Water Features

Nose Creek Zone

Zone 11: Nose Creek

FIG. 3



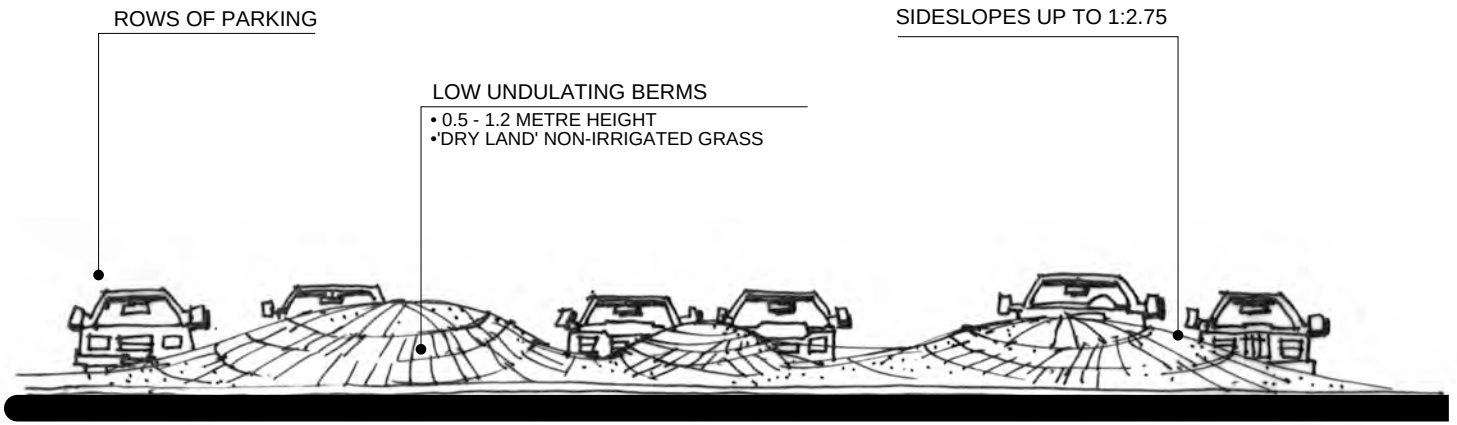
East Balzac - RETAIL AND RACING ENTERTAINMENT CENTRE

July 9, 2006

COMPREHENSIVE LANDSCAPE STRATEGY

LANDSCAPE ZONE 1: **LOW PERIMETER**

Low perimeter landscape zones abut major internal roads and provide a physical separation between the public roadway and internal functions. These zones are located to afford viewing to and from the site while screening adjacent parked vehicles with a series of low, undulating berms.



East Balzac - RETAIL & RACING ENTERTAINMENT CENTRE

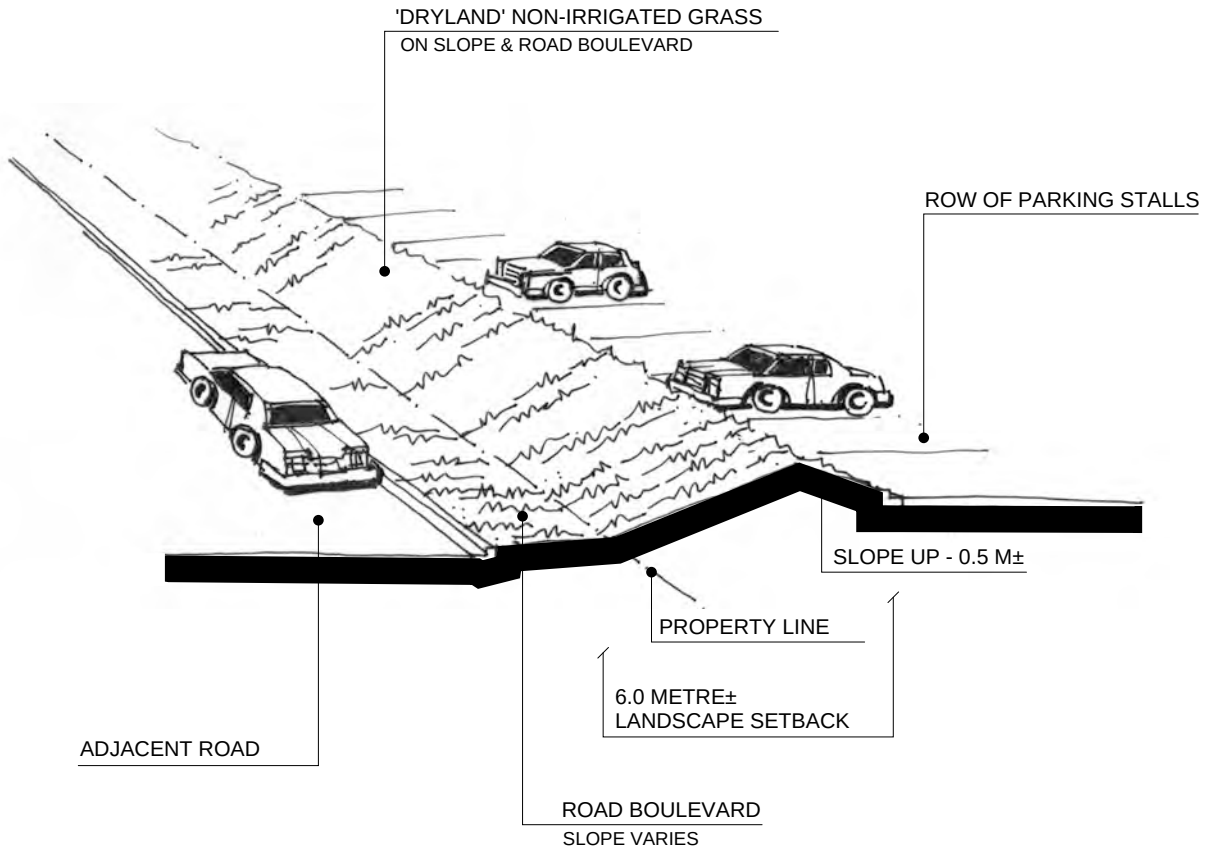
COMPREHENSIVE LANDSCAPE STRATEGY

LANDSCAPE ZONE 2: **TALL PERIMETER**

The zones are located in perimeter areas to provide an alternative landscape form to the grassed ‘Low Perimeter’ zones. The proposed landscape – a double row of deciduous trees reflects the prairie shelterbelt form. Views to and from the site are of less importance in ‘Tall Perimeter’ zones.

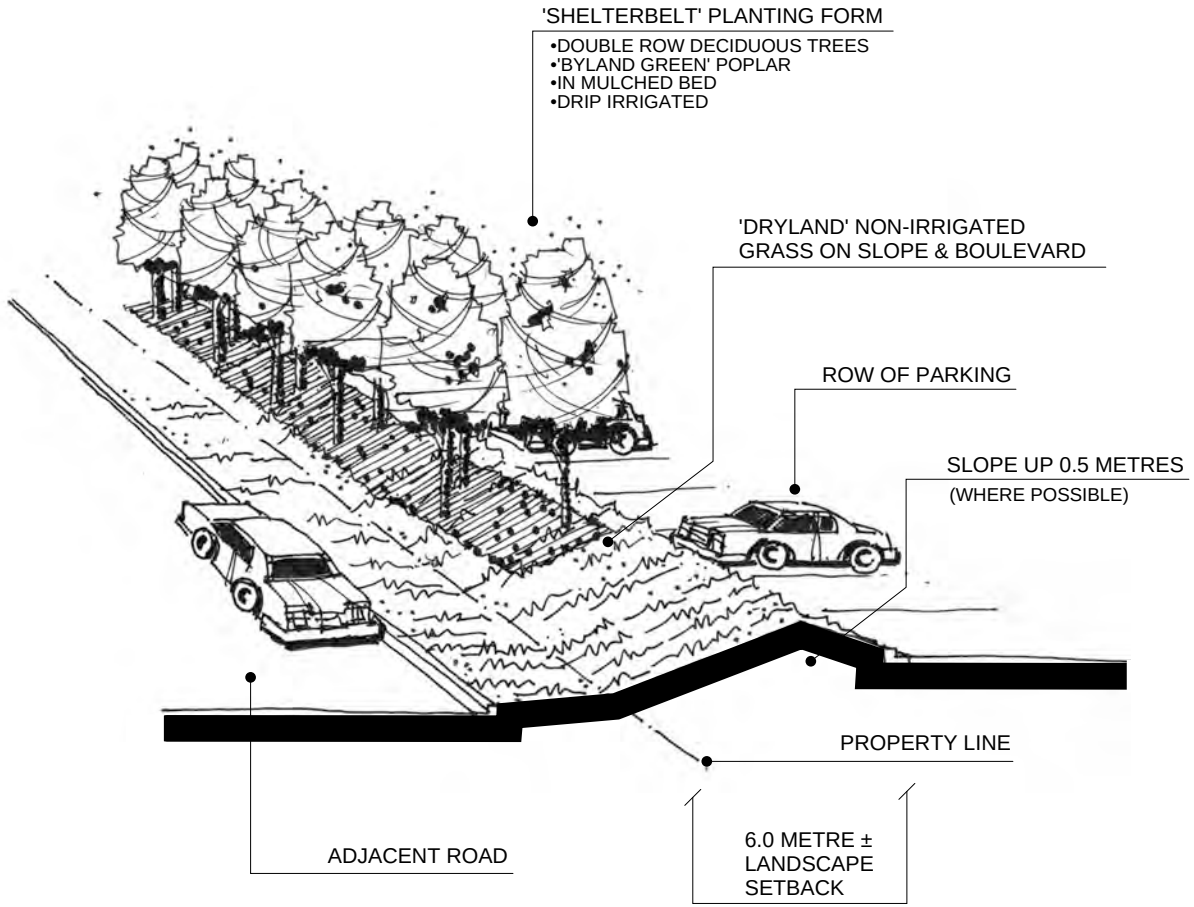
LANDSCAPE ZONE 3: **SLOPED LOW PERIMETER**

Sloped low perimeter landscapes are generally characterized by a slope up from the abutting road. This slope visually 'extends' the landscape for adjacent road users. Where grades permit, it is desirable to berm up slightly from abutting parking rows to obscure the fronts of parked vehicles.



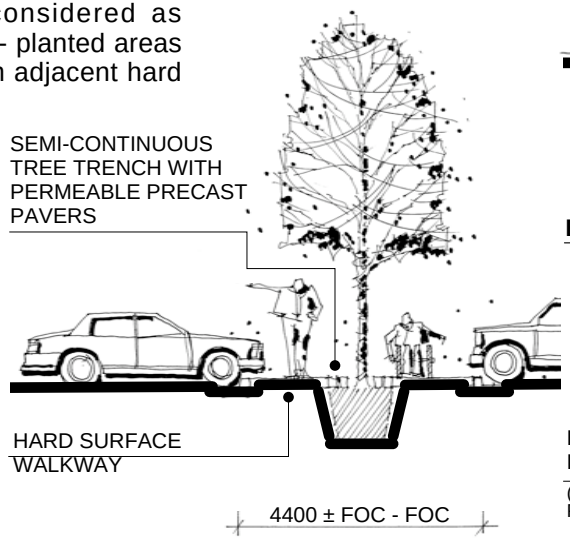
LANDSCAPE ZONE 4: **SLOPED TALL PERIMETER**

This zone is similar to Zone 2 – 'Tall Perimeter', except the provided landscape setback will be sloped in response to site grading conditions.

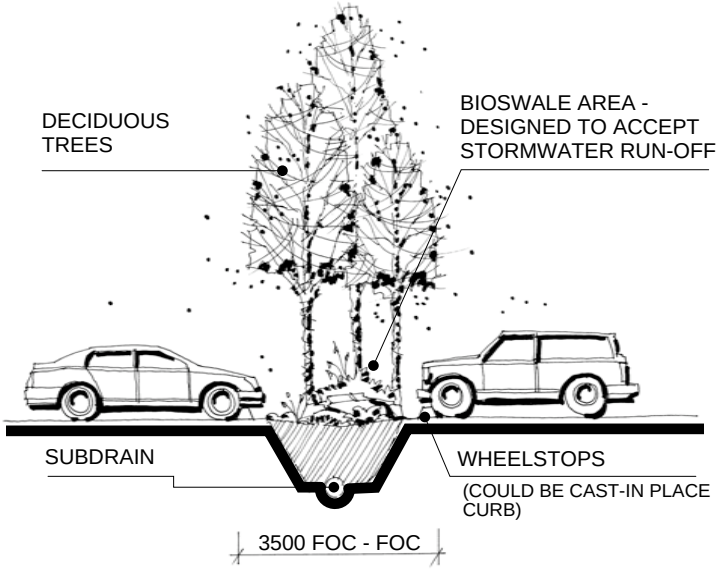


LANDSCAPE ZONE 5: **LONG ISLANDS - PARKING LOT**

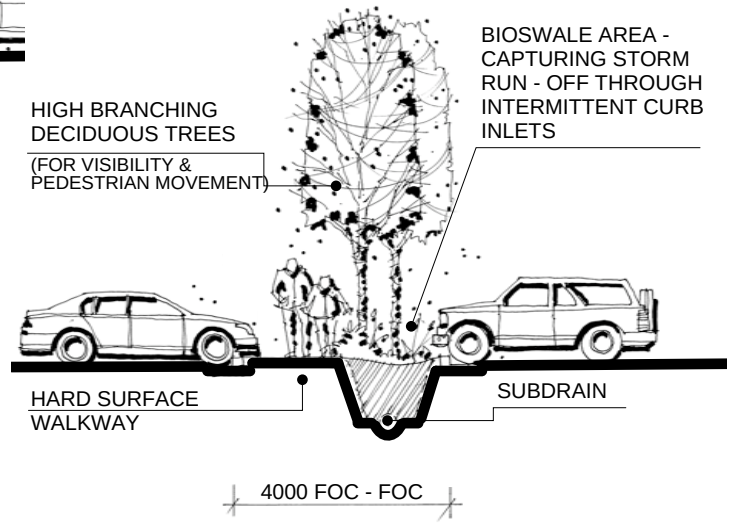
Long parking lot islands orient perpendicular to parking stalls and serve to subdivide larger parking cells and, where appropriate provide pedestrian connections to the buildings. Fewer 'wider' long islands rather than more frequent 'narrow' long islands are preferable to provide more contiguous areas for planting. As a guideline, 4.0 metres would be the preferred width, with a long island located every three parking modules (driving lane with parking each side). Long parking islands should be considered as opportunities to implement bio-swales - planted areas designed to capture storm run-off from adjacent hard surfaces.



LINEAR WALKWAY CONCEPT WITH CENTRE TREE RUN



BIOSWALE LINEAR PLANTING CONCEPT



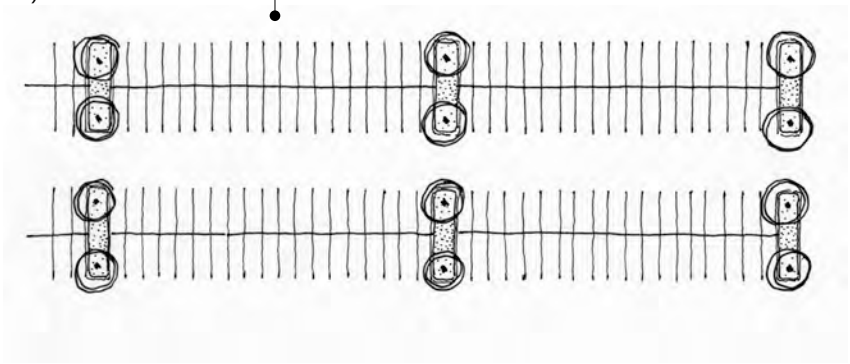
BIOSWALE WITH WALKWAY

LANDSCAPE ZONE 6: **PARKING ISLANDS - GENERAL**

The ‘consolidation’ of several ‘small’ (less then 2.0 m width) parking lot islands into larger, more contiguous landscape elements is desirable, particularly within the context of limited water availability for irrigation purposes. Larger intensively planted islands will be more viable, and have a greater visual presence within larger surface parking areas. Diverting storm water run-off to the parking islands should be considered.

TYPICAL 'CONVENTIONAL' LAYOUT

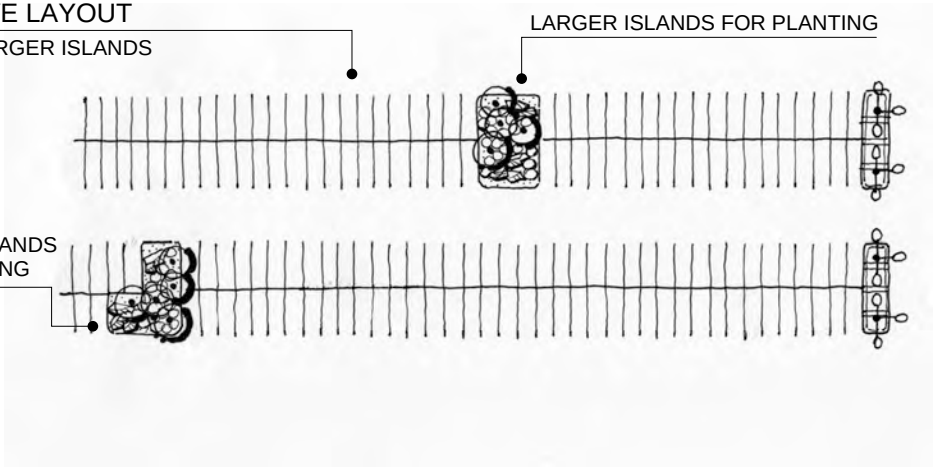
NARROW ISLANDS (<2.0 M)



ALTERNATIVE LAYOUT

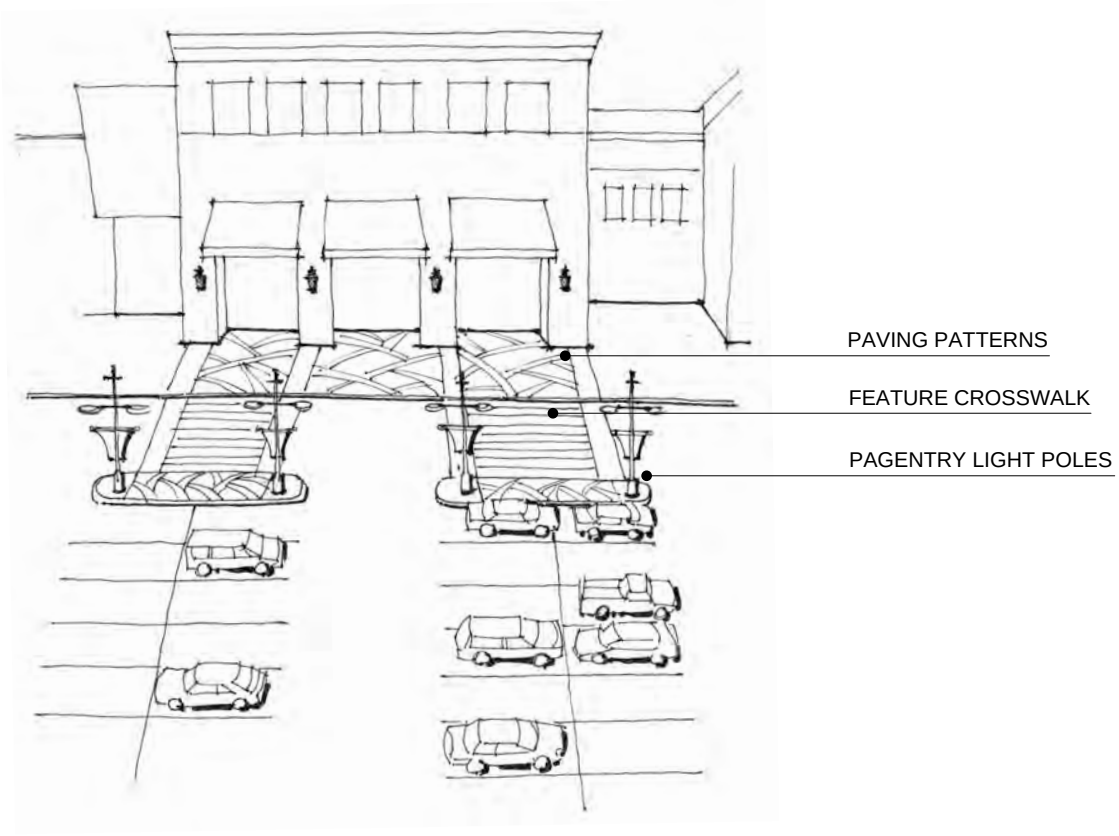
FEWER BUT LARGER ISLANDS

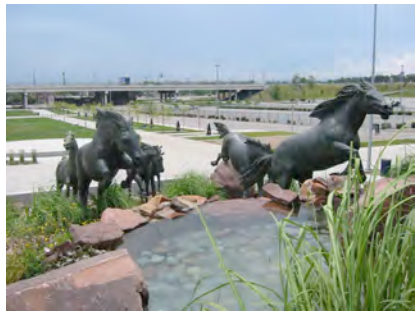
LARGER ISLANDS FOR PLANTING



LANDSCAPE ZONE 7: **PARKING ISLANDS - NARROW**

These zones include 'small' parking bulbs (2.0 metres and less in width) where significant soft landscape installations are not viable. Smaller islands may be hard landscaped only, where appropriate, using boulders, cobbles, stones, gravels and architectural pavements. Islands may be enhanced with light poles and pagentry elements.

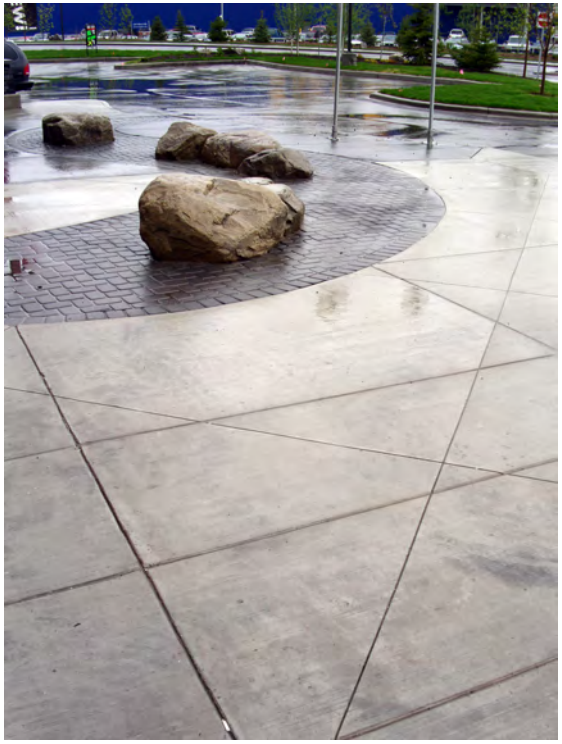




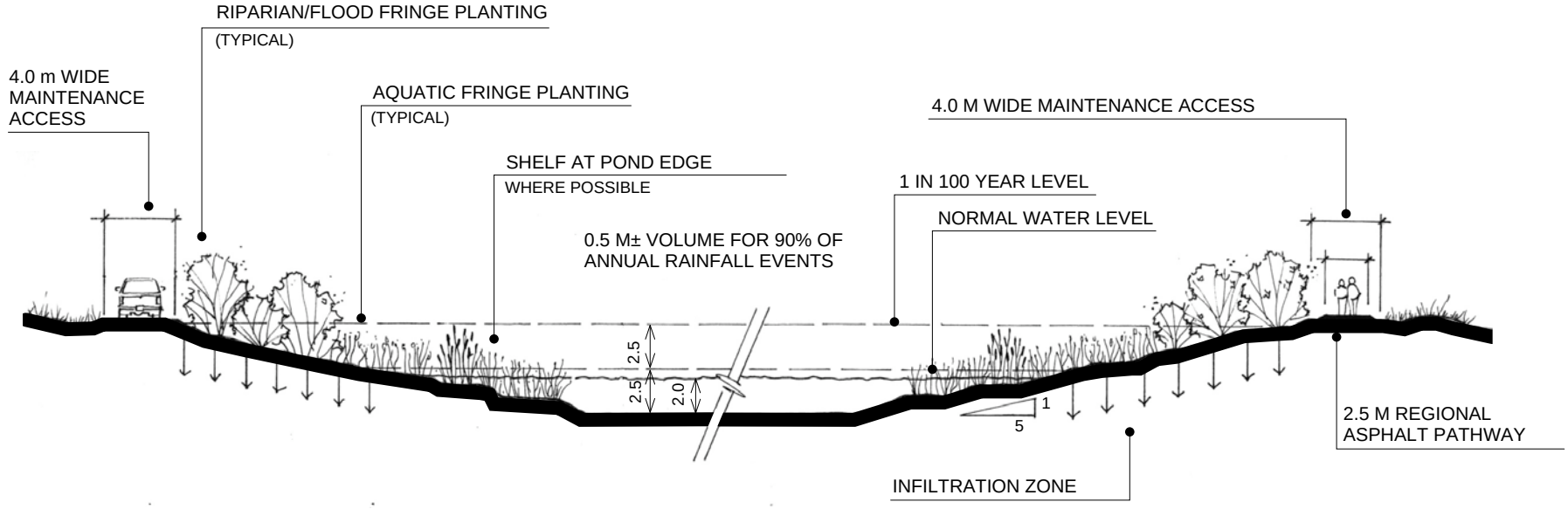
TYPICAL ENTRY TREATMENT - SCHEMATIC PLAN

LANDSCAPE ZONE 9: **BUILDING EDGES**

Spaces near and abutting buildings may be more intensively landscaped and appear more ‘urban’ than outlying perimeter landscapes.



Storm water ponds within the development cells and within the Nose Creek lands will be enhanced to provide characteristics consistent with 'constructed wetlands'. Side slopes will be moderated to a maximum of 1:5, and where possible level 'shelves' will be created at the water edge to sustain aquatic and riparian plants.



LANDSCAPE ZONE 11: **NOSE CREEK**

All lands in and adjacent to the Nose Creek corridor that are disturbed as a result of the construction activities of the development shall be restored in accordance with Alberta Environmental Protection regulations. Other areas abutting Nose Creek that are unaffected by the construction of the development shall remain 'as is', except for necessary improvements related to creek hydrology and creek bank stabilization related to public safety. At the Development Permit level a 'Restoration Plan' shall be prepared for the Nose Creek lands. This Plan shall include two components, developed in a collaborative manner:

A Restoration Report prepared by a qualified 'Natural Areas Restoration' consultant (ecologist, botanist, biologist, etc.) documenting, among other things existing soils, wildlife habitat, plant communities, rare and endangered plants, etc. The report shall recommend methods for salvaging organic soils for reuse in restoration activities, and provide recommended plant species lists for restoration purposes. In addition, the report shall address maintenance activities required for successful establishment of the restoration plan.

A Restoration Landscape Plan prepared by a qualified landscape architect. The Landscape Plan shall be prepared at a detailed design level (construction working documents), and be based on the above referenced Restoration Report. The Landscape Plan shall describe detailed site grading, topsoil salvage and reuse, proposed plant materials (grass seed mixes, forbs, shrubs and trees), hard landscape elements (pathways, etc.) and other required items (slope retention, etc.)

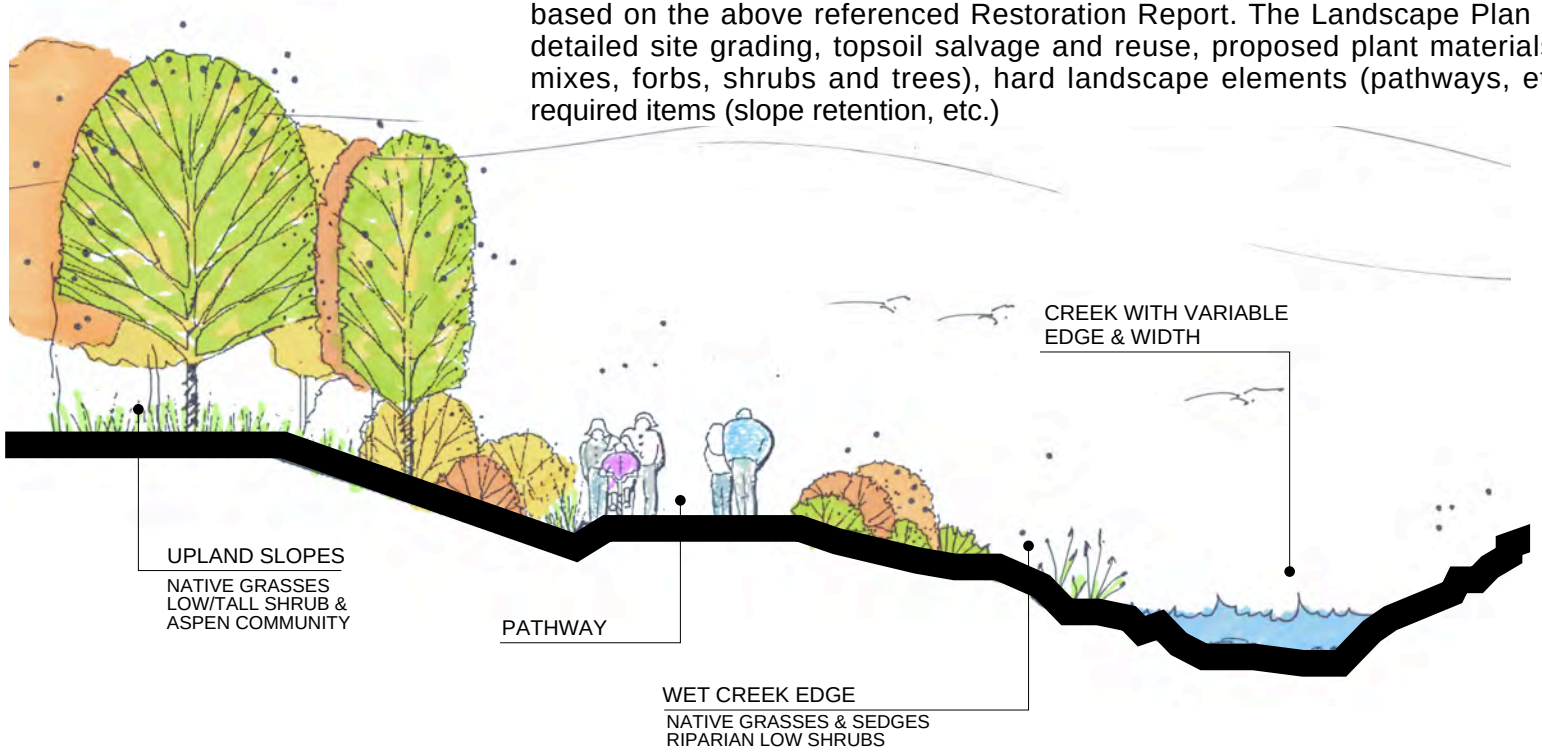
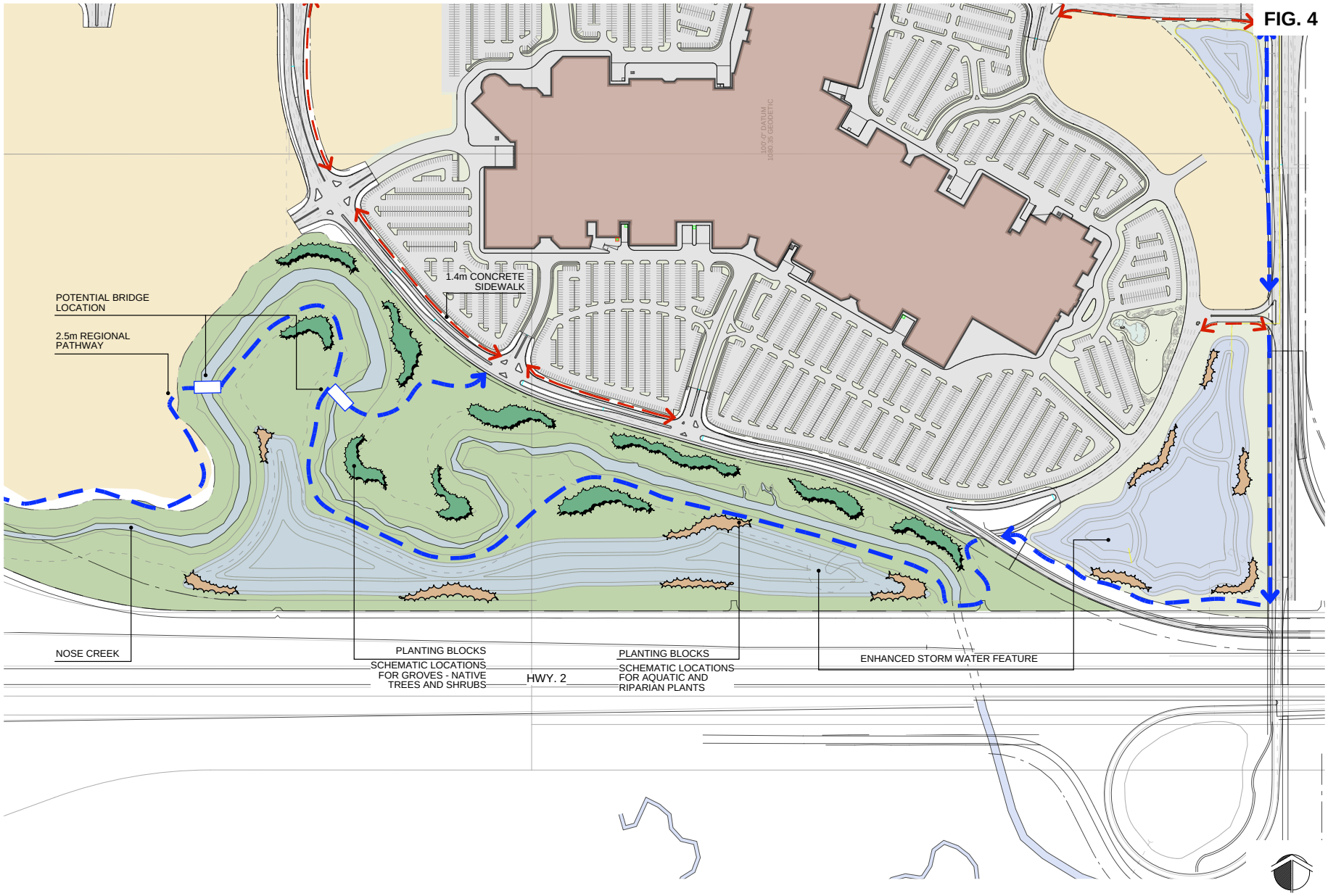


FIG. 4



July 9, 2006

East Balzac - RETAIL AND RACING ENTERTAINMENT CENTRE

COMPREHENSIVE LANDSCAPE STRATEGY

LANDSCAPE GUIDELINES

The landscape requirements described herein are supplementary to the requirements stated in the Balzac East Area Structure Plan. The requirements of the BEASP will not be restated here, with the exception of the plant material quantity requirements of that document, that are:

> xii. Except for road right-of-ways, trees/shrubs shall be planted and maintained in the overall minimum ratio of one tree/shrub per 45 square meters (490 square feet) of the soft landscaped area identified in the Landscape Plan. Trees shall comprise at least 50% of the tree/shrub mixture used to satisfy this requirement.
> xiii. Coniferous trees shall comprise a minimum portion of one-third (1/3) of all trees planted, and where feasible, trees should be planted in clusters or landscape groupings.
> xiv. The minimum size for deciduous trees shall be 50 mm (2.0 inches) caliper.
> xv. The minimum size for small coniferous trees shall be a height of 2 meters (6.5 feet) and for large coniferous trees, a height of 3 meters (9.8 feet).
> xvi. Shrubs shall be a minimum height or spread of 600 mm at the time of planting.

The following guidelines are supplementary to the BEASP requirements:

- An average landscaped setback of 6.0 metres, more or less, shall be provided from the property line on all frontages; the setback shall be reserved for landscape purposes, but may contain signage, and other appropriate elements.
- Parking islands located opposite building entrances/ exits may be treated with low shrubs, or decorative feature hard surface and vertical landscape elements including lighting, bollards and pageantry, as an alternative to trees.
- The minimum width for planted parking islands shall be 2.0 metres measured from face of curb to face of curb.
- Large raised planting beds instead of a number of smaller beds are encouraged.
- Shrubs shall be planted in masses, and these groups shall consist of no fewer than 15 shrubs with at least 5 plants of each species used; the minimum size for shrubs is a #5 container size.
- Non-irrigated grassed areas are to be seeded with an appropriate native and / or dry land grass seed mix.
- Where required, retaining walls shall be constructed of materials that are an integral part of the landscape design, or are those which primarily define the appearance of the principal building. Suggested materials would include local hard, durable sandstone boulders, rundlestone boulders, fieldstone and limestone boulders. Wood or timber retaining walls are not permitted.
- Low, flowing landscape berms (approximately 0.5 to 1.2 metres in height) shall be incorporated in the perimeter landscaped setback areas, where grades permit.

East Balzac – RETAIL & RACING ENTERTAINMENT CENTRE

COMPREHENSIVE LANDSCAPE STRATEGY

- All plants and planting shall be Chinook Region hardy, nursery-grown material, supplied by a full member in good standing of the Landscape Alberta Nursery Trades Association (LANTA) – Nursery Grower designation.
- The Landscape Contractor engaged shall be a full member in good standing of the Landscape Alberta Nursery Trades Association (LANTA) – Commercial designation.
- A landscape plan prepared by a landscape architect who is a full member of the Alberta Association of Landscape Architects shall be submitted with each development permit application.

IRRIGATION GUIDELINES

- Irrigation guidelines apply to development lands only – areas in and adjacent Nose Creek will not be irrigated (except by temporary means as required for establishment).
- The fundamental concept is to emphasize the conservation of potable water.
- Grassed road medians and boulevards in the public road ROW will not be irrigated.
- Grassed landscaped setback areas on the perimeter of development lands will not be irrigated.
- Landscape areas designed to receive surface storm water run-off flows, may not need to be irrigated.
- Certain landscape installations (ie: tree rows in perimeters) may have irrigation designed for establishment, and later abandonment (ie; drip irrigation).
- A qualified practitioner shall prepare an irrigation strategy for each Development Permit application. Qualified practitioner means Certified Irrigation Designer – Commercial as certified by The Irrigation Association. The strategy may be a text and graphic supported document, but is not to be a 'construction drawing'. It shall describe intended methods of providing irrigation water to planting areas designated as 'to be irrigated'. It shall include a water budget, and address options for utilizing non-potable water sources for irrigation purposes.
- The BEASP guidelines state that a detailed irrigation plan shall be submitted with the Development Permit application. As a matter of practicality, a detailed irrigation plan ('construction documents') is best prepared and submitted with the Building Permit submission, and that is the recommendation of these guidelines.
- A qualified practitioner shall prepare detailed construction documents for the irrigation system. Qualified practitioner means Certified Irrigation Designer – Commercial as certified by The Irrigation Association.
- The irrigation system shall be configured to minimize the use of potable water, and shall employ the principles of hydrozoning. Low flow, drip and micro irrigation techniques shall be employed, where appropriate.
- The irrigation system shall be designed to a minimum 75% efficiency as defined by The Irrigation Association, and shall include a rain sensor, master valve, and flow sensor.
- The Irrigation Contractor engaged shall be a full member in good standing of the Landscape Alberta Nursery Trades Association (LANTA) – Irrigation Contractor designation.

East Balzac – RETAIL & RACING ENTERTAINMENT CENTRE

COMPREHENSIVE LANDSCAPE STRATEGY

RECOMMENDED PLANT LISTS

NOSE CREEK AND ENHANCED STORM WATER FEATURES
Native Trees And Shrubs (Non-Irrigated)

TREES	SHRUBS	WETLAND PLANTS (Non-Irrigated)	
Trembling Aspen	Silver Buffaloberry		
Balsam Poplar	Saskatoon	AQUATIC	RIPARIAN
Plains Cottonwood	Red Osier Dogwood	Cattails	Sandbar Willow
	Wolf Willow	Sedge	Yellow Twig Willow
	Prickly Wild Rose	Common Spikerush	Bebbs Willow
	Common Wild Rose	Bulrush	Lucida Willow
	Gooseberry		
	Buckbrush		
	Common Potentilla		
	Russet Buffaloberry		

DEVELOPMENT CELLS

TREES (IRRIGATED)	Russian Mountain Ash	SHRUBS (IRRIGATED)	Dogwood
Byland Green Poplar	Mayday	Mugo Pine	Nanking Cherry
Prairie Sky Poplar	Colorado Spruce	Juniper	Lilac
Brandon Elm	White Spruce	Hardy Rose	Dwarf Lilac
Trembling Aspen	Foothills Green Ash	Potentilla	Honeysuckle
Columnar Aspen	Prairie Spire Green Ash	Spirea	Mockorange
Hawthorn	Rosthern Crabapple	Cotoneaster	Sandcherry
Chokecherry	Siberian Crabapple	Pygmy Caragana	Russian Almond

TREES AND SHRUBS (Non-Irrigated): For native trees and shrubs in this zone see plants listed in Nose Creek (above).

East Balzac – RETAIL & RACING ENTERTAINMENT CENTRE

COMPREHENSIVE LANDSCAPE STRATEGY