

COMPREHENSIVE DEVELOPMENT REVIEW GREENBRYRE GOLF & COUNTRY ESTATES

Prepared for:

THE RURAL MUNICIPALITY OF CORMAN PARK NO. 344
and
THE CORMAN PARK - SASKATOON PLANNING DISTRICT COMMISSION

Prepared By:

Mini Mansion Homes Ltd.

In Association With:

Crosby Hanna & Associates

Catterall & Wright Consulting Engineers

Peters Surveys

and

Nussbaum Company Law Office

December 2010

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1 Introduction

1.1 PURPOSE

The purpose of this document is to provide the Rural Municipality of Corman Park No. 344 and the Saskatoon Planning District with a Comprehensive Development Review (CDR) as required in Section 5.6 of the Saskatoon Planning District Official Community Plan (the OCP).

This Review provides a framework for a proposed community consisting of 143 residential lots and an executive style, nine-hole golf course on portions of the East ½ of Section 12-36-5-W3M. The name of the proposed community is Greenbryre Golf and Country Estates and the Developer of the project is Mini Mansion Homes Ltd.. The Concept Plan for the Development is attached as Appendix “A” to this document.

Questions on the proposal or the material contained within this document should be directed to Jim Walters (306-665-3441) or Gary Gaudet (306-222-9899).

1.2 OVERVIEW

It is the intention of the Developer to enhance the recreational component of the lands by carefully integrating housing into the development. The golf course will continue to offer residents and visitors a chance to relax and enjoy the outdoors.

Designed to be an environmentally friendly, golf-oriented community, the Development incorporates planning, engineering and architectural principles with the goal of creating a community unlike any other in the region.

- The Concept Plan accommodates the “South Service Road” for the future interchange planned at the intersection of Boychuk Drive and Highway #16.
- The development is intended to be registered as a ‘bare land condominium’, though the golf course would remain a separate entity and open to the public.
- Phase I of the development will include 48 residential lots in the southern portion of the community, allowing the golf course to fully operate with its existing 18 holes for the 2011 season.
- Phase II of the development will include the remaining 95 residential lots and will require the golf course to be shut down for 1 - 2 years and concurrently redeveloped into an executive 9-hole course.
- Potential future development in the area could include a commercial parcel in the northeast corner of the community (adjacent to the proposed service road) and additional residential

lots. It is understood that this potential future development would require amendments to the Future Land Use Map and a new CDR application. It is further understood that the R.M. and the City may undertake the development of a concept plan for this portion of the R.M., which would in turn, inform the Developer of future development opportunities.

1.3 LAND USE CONTEXT

The proposed development will be situated on lands located within the R.M. of Corman Park. The lands are not confined entirely by developed roads, but comprise portions of the East ½ Section 12-36-5-W3M. The site is south of Melville Street and east of Range Road 3050 (Boychuk Drive).

The Existing Land Use Context of the Proposed Development is as Follows:

North

- | | |
|---------------------------------------|-----------------------------------|
| - Melville Street: | Adjacent to west site line |
| - A Private Residence: | Adjacent |
| - Saskatoon Christian School: | 300 metres northwest |
| - Lakeview Free Methodist Church: | Across Melville Street |
| - Colosseum Athletics: | Across Melville Street |
| - Lakeshore Garden Centres: | Across Melville Street |
| - Cultivated Land, Sloughs, Bushland: | Across Melville Street |
| - City of Saskatoon: | 470 metres north (to development) |

East

- | | |
|---------------------------------------|------------------------------|
| - Range Road 3050 (Boychuk Drive): | Adjacent to west site line |
| - Two Private Residences: | Each approx. 100 metres east |
| - Cultivated Land, Sloughs, Bushland: | Across Range Road 3050 |

South

- | | |
|--|----------------------------------|
| - A Residence (slated for demolition): | In development area |
| - Cultivated Land, Sloughs, Bushland: | Adjacent to south site line |
| - CN Railway Line: | Approximately 1,400 metres south |

West

- | | |
|---------------------------------------|----------------------------|
| - Cultivated Land, Sloughs, Bushland: | Adjacent to west site line |
| - A Private Residence: | 640 metres west |

Nearby Neighbourhoods Include:

In Saskatoon

- | | |
|------------------------------------|---|
| - Lakeridge: | 470 metres north |
| - Rosewood / Lakewood Subdivision: | Approximately 450 metres northeast to
planned development
1,400 metres northeast to existing
development |
| - Lakeview: | Approximately 1,000 north to development |

1.4 POLICY CONTEXT

The Greenbryre Golf & Country Estates has been designed to meet the requirements of the new (2010) Official Community Plan (OCP) and Zoning Bylaw (ZB) for the Saskatoon Planning District.

The land is identified as a Future Residential Area in the Future Land Use Map in the OCP, and the residential sites are intended to be zoned D-Country Residential 5 District (DCR5).

1.5 SPECIAL INITIATIVES

- Approximately 65% of the planned lots are oriented north-south, which facilitates passive solar, natural heating, cooling and lighting.
- Bare land Condominium: The development is intended to be registered as a bare land condominium development. Information previously provided by Mr. Benedict E. Nussbaum, LLB, on bare land condominiums is attached as Appendix “B” to this report. Mr. Nussbaum and other members of the design team are available to meet with Council and Administration to outline how bare land condominium developments are registered and ultimately function. Generally speaking, it is the responsibility of the condominium association to provide or arrange for services within a bare land condominium development.
- The development will feature a modern private sewage treatment system - a Submerged Attached Growth Reactor (SAGR), that is environmentally friendly and does not intrude upon surrounding development like other systems common in Saskatchewan, such as a lagoon system. Disinfected wastewater and runoff collected in the drainage ponds will be recycled to irrigate the golf course. The sewage treatment system will be owned and operated by the bare land condominium corporation.

2 Inventory and Analysis

2.1 EXISTING LAND USE

The proposed development site consists of 89.47 Hectares (221 acres) in the East ½ Section, approximately 60 hectares (150 acres) in the NE quarter-section. The northeast quarter-section is primarily occupied by the Greenbryre Golf Course, and approximately 30 hectares (75 acres) is comprised of cultivated farmland, semi-wild sloughs and bush area. There are also farm buildings in the northwest corner of the southeast quarter-section which are owned by the developer. The developer has obtained a permit to demolish them.

2.2 PROPOSED LAND USE

The proposed land use is a residential community integrated with a redesigned, 9 hole golf course. Land separated by the service road in the northeast corner of the east ½ section is not included in this development, but may be developed in the future, possibly for commercial use. A private residence is located on the north edge of the golf course (Parcel A, Plan 85S44663) which is also not included in the development.

2.3 SERVICING

- The subdivision will be provided with transportation access via Boychuk Avenue on the east side and Melville Street on the north side. Roadways and community parking areas will be finished with asphalt pavement surfaces.
- Potable water distribution and wastewater collection systems will be constructed along the road right-of-ways.
- Wastewater treatment systems, including disinfection, will provide treatment of domestic wastewater on-site. Treated and disinfected wastewater will be available for re-use by the golf course irrigation system.
- Drainage for the development will entirely be managed on-site and be directed to four stormwater storage ponds, which will store the runoff water for use by the golf course irrigation system. Evaporation from the stormwater ponds will also eliminate some of the surface runoff water from the site. The golf course irrigation system is supplemented with untreated water from an existing SaskWater pipeline.

3 Design Elements

3.1 CONCEPT

The development is a culmination of architectural, marketing and community research and planning. Striving to create a place people can call home, this development is designed to integrate a sophisticated, recreational lifestyle with the aesthetic and privacy of acreage living, all in a great location.

3.2 LAND USE

Greenbryre Golf and Country Estates is proposing a mix of Recreational, and Country Residential Development with the intent of promoting an integration of mixed land uses. Lots range in size from 2,010 m² to 3,386 m², with the average lot size being 2,215 m².

BREAKDOWN (PHASE I & II COMBINED)	HECTARES	ACRES
143 Lots	31.67	78.25
Golf Course (Parcels B and D)	33.39	82.50
Open Space and Utility (Parcels E, H, & J)	7.07	17.47
Municipal Buffer (MB1, MB2, MB3, MB4)	0.15	0.37
Roads	9.64	23.82

3.3 ARCHITECTURAL CONTROLS AND LANDSCAPE DEVELOPMENT

The Developer will determine a series of architectural controls for site development, homes and accessory buildings and structures prior to the sale of lots. The Developer will be erecting a high quality metal fence on the rear property lines of the residential properties backing the golf course to provide an aesthetically pleasing and safe separation between the two land uses. The same type of fence will be erected on the entire length of the west boundary of the development to provide separation between the residential lots and adjacent agricultural development. A picture of the type of fence that is proposed is attached in Appendix “C”.

Street lights are proposed to be erected at the following major intersections:

- Greenbryre Lane and Boychuk Drive;
- Greenbryre Lane and Melville Street;
- Greenbryre Crescent North & Boychuk Drive; and
- Greenbryre Street and Melville Street.

Street lights and internal subdivision lighting at individual approaches will use LED lights and be designed to minimize light pollution and enhance the “country-living” atmosphere. The specifications of the proposed light fixtures are attached in Appendix “C”.

4 Transportation and Municipal Services

4.1 COMMUNITY ACCESS

There are four access roads into the community: two from Melville Street and two from Range Road 3050 (Boychuk Dr.). These roads, in turn, provides access to Highway #16 and Highway #11 (which both become Circle Drive in Saskatoon), and Boychuk Drive.

Both Highways and Circle Drive (a ‘freeway’) are double-laned, separated by a grass median. Boychuk Drive is a double-laned arterial separated by a concrete median.

A proposed interchange at Circle Drive and Boychuk Drive will provide grade-separated traffic movements for the east-west and north-south traffic at this main junction. A functional planning study was prepared on behalf of the City of Saskatoon and Saskatchewan Highways & Transportation for the interchange based on future traffic needs. This development fully accommodates the required service road for the proposed interchange. The proposed service road would require 5 golf holes be redesigned and re-oriented in any case (i.e. even if residential development were not proposed). The developer has retained Golf Shape Construction in this regard.

4.2 INTERNAL ROADS

Proposed roadways within the development will be constructed to a rural cross-section with shallow ditches and culverts at driveway and road crossings. Internal roads will have an asphalt surface. 26 lots will face one of four cul-de-sacs throughout the development, with the remainder of the lots facing the internal “through” roads. The Developer will construct all approaches to each individual lot. Proposed roadways are shown in Appendix “D” on Drawing No. 279-003P-C, Schedule C - Paved Roadways.

4.3 EXTERNAL ROADS AND PROJECTED VEHICULAR TRAFFIC

The Developer commissioned AECOM to prepare a study of the projected traffic impact for the development, that is attached as Appendix “J”. The study included a count of current traffic levels around the development site and projects future traffic levels. It is understood that the R.M. will use this study to determine an appropriate road standard for Melville Street and Boychuk Drive.

4.4 PEDESTRIAN AND BICYCLE TRAFFIC

Pedestrian and bicycle traffic will have access to internal roads as well as the open space afforded by the golf course.

4.5 SEWAGE COLLECTION

Sewage collection from the lots will be via a septic tank effluent pump out (STEP) sewer system, which will deliver liquid wastewater to the wastewater treatment system. The STEP sewer system consists of smaller diameter pressure sewer pipes buried to a typical depth of 3 metres, which is below the frost level. Effluent pumps within the two-compartment septic tanks at each residence will provide the pumping required for the liquid wastewater collection. The solids settling compartment of the two-compartment septic tanks will require solids removal, via vacuum truck, on an annual basis.

Sewage collection system is shown in Appendix “D”, on Drawing No. 279-003P-A, Schedule A - Pressure Sewer Pipelines.

4.6 POTABLE WATER SUPPLY AND DISTRIBUTION

Greenbryre Golf & Country Club is presently supplied with potable water from SaskWater via a 75mm water supply pipeline on the east side of the property. SaskWater is agreeable to an increase in water supply for the new development, which will require an upgraded water supply pipeline.

Water will flow into a storage reservoir near the south-east corner of Phase 1, which is central on the site. A pumping system will provide water distribution system pressure for the entire development.

Water will be distributed throughout the development via water distribution pipelines located within the road right-of-ways. Isolation valves and flushing hydrants will be installed as required for maintenance purposes. Fire-fighting capability on the water distribution system will not be provided for this development. Water distribution layout is shown in Appendix “D” on Drawing No. 279-003P-B, Schedule B - Potable Water Pipelines.

4.7 WASTE WATER TREATMENT

Wastewater treatment will be handled on-site, by a SAGR system located in the south-west corner of the development. Wastewater treatment will consist of a tank for balancing flows to the treatment system, an aerated treatment reactor and filtration followed by disinfection by chlorination. The treated and disinfected water will be stored on-site for re-use by the golf course irrigation system. Sludge will be removed from septic tanks at the wastewater treatment plant and from individual holding tanks on an as-required basis by Envirotec. A letter from Envirotec confirming this arrangement is attached in Appendix “F”.

Two examples of similar systems operating in a cold climate, golf-course setting are:

- The Ponds (close to Minneapolis) uses the SAGR process followed by disinfection prior to discharge to the treated effluent storage pond. The pond has fencing around it but there are houses that are very close to the treatment beds as well the effluent pond. The following

pictures show the treated wastewater pond at The Ponds. You can just see the edge of the treated effluent pond as it relates to residential development in the second picture.



- Waterton National Park (Alberta) uses an aerated lagoon followed by filters and disinfection. Treated effluent is stored on the golf course and doubles as a water hazard.

Members of the design team for the Development have been in correspondence with the Ministry of Environment on their requirements for this type of wastewater treatment system. The Ministry has indicated that they are open to seeing one of these systems constructed and approval for same would be considered once a formal application to construct has been submitted. The system final design and application will be forthcoming, pending approval of the Development by R.M. Council and the District Planning Commission.

Attached as Appendix “E” is a proposal from Nelson Environmental Inc. that describes the wastewater treatment system specifications in detail.

4.8 DRAINAGE AND STORMWATER MANAGEMENT

Surface drainage will be directed to four on-site ponding areas. Water management will be required to move water between ponding areas and the golf course irrigation system to ensure that sufficient storage volume is available for seasonal runoff water. Pipelines and pumps for the water management system will be provided.

Stormwater ponding areas will be constructed and/ or expanded in low areas within the development for the purpose of storage of surface water runoff. Soil excavated from ponds will be used for the construction of roadways and to elevate the single family home building sites. Stormwater storage ponds will be designed to have sufficient capacity for storage of the 1:100 design storm runoff event. There is sufficient storage and irrigation capacity on-site to dispose of surface runoff water using irrigation on the golf course. There is also a contingency built into the storage capacity for storm water in that, given a worst case scenario in terms of rainfall, the ponds will be able to contain drainage for an entire year, without discharging into the golf-course irrigation system. The proposed drainage system is shown in Appendix “D” on Drawing No. 279-003P-D, Schedule D - Drainage. Also attached in Appendix “D” is a letter from Catterall & Wright outlining the method and calculations for the stormwater management plan.

4.9 SHALLOW UTILITIES

Shallow utilities will be provided by SaskPower, SaskEnergy and SaskTel along with underground cable following construction of deep utilities. Shallow utilities will be located within the road right-of-way to provide service to the front of each lot. Letters confirming these arrangements are attached as Appendix “F”.

5 Other

5.1 GEOTECHNICAL

A series of geotechnical reports prepared by P. Machibroda Engineering Ltd. are attached as Appendix “G”. The first report, dated December 12, 2008 outlines design considerations for the required storm water ponds that will be integrated into the development. The second report, dated August 17, 2010 outlines foundation design recommendations for residential development in community and takes into account the significant amount rainfall experienced in 2010. Additional recommendations on basement development, in the form of a letter dated November 1, 2010 from P. Machibroda Engineering Ltd. is also attached. The geotechnical engineers note that basements can be considered for sites in the development where the floor slab will be at least 500 mm above the ground water table. Through the sales agreement, the developer will be requiring future residents to design houses in compliance with the attached geotechnical recommendations.

5.2 FIRE AND PROTECTIVE SERVICES

It is expected that the Bare Land Condominium Association will contract the Rural Municipality for fire and protective services.

5.3 POPULATION AND SCHOOLS

Based on the 2006 average household size for the R.M. of Corman Park (3.0 - Source: Census of Canada), the total population of the community could reach 424.

Three Schools - one private school and two in the Prairie Spirit School Division - are near the development. Across Melville Street, the Saskatoon Christian School offers classes for students grades K through 12. Approximately 12 kilometres southwest, on Baker Street (off Highway #11), the South Corman Park School offers classes for students grades K to 6. Approximately 18 kilometres southeast on Highway #16, Clavet has a Composite High School with classes for students grades K through 12.

Comments from the Prairie Spirit School Division are attached as Appendix “H”. To summarize, they monitor enrolment on a year-by-year basis and it will be important them to understand the number and age of students moving into the development area as it is developed and populated.

5.4 RECREATION

The development will feature a redesigned, executive 9-hole golf course, which will continue to serve the public and be operated separately from the bare land condominium corporation.

6 Staging and Implementation

This community (143 lots and redesigned nine hole golf course) will be developed in two phases. Phase I will include 48 residential lots, roads, sites for the water storage building, wastewater plant & treated effluent pond, and a site for storm water retention. Phase I is located in the southern portion of the development area, thus allowing the golf course to operate in full, without disturbance, for the 2011 golf season. Phase II will include 95 residential lots, the redesigned executive 9-hole golf course, roads and utilities.

It is expected that construction of the roads and utilities will take one year to complete. The Developer hopes to start constructing the storm water retention ponds and roads in the spring of 2011. The golf course would remain open (all 18 holes) in 2011 and be closed in 2012, while construction continues, and lots are intended to be available for sale in the fall of 2011. The Developer expects this development to sell out quickly, and intends to require the purchasers of lots to build within a set time frame (e.g. two years), to avoid land speculation and lots being vacant.

Pending sale and build-out of the community presented in this document, the Developer may approach the R.M. to discuss a second phase of residential development. This subsequent development area would be located immediately south of the first phase of the community. This would not be forthcoming for a number of years and it is understood that a second phase would require amendments to the OCP and a new CDR application.

7 Public Consultation

The Developer and the design team held a public open house on September 23, 2010. Invited to the open house were: City and R.M. planning staff, all property owners within one mile of the golf course (list provided by R.M.), the Lakeridge Community Association, the developer of the Rosewood neighbourhood in Saskatoon and local elected officials (City and R.M.). Approximately 20 people attended the come and go event and feedback was generally positive. Comments submitted and a list of attendees to the open house are attached as Appendix “I”. Concerns that were raised by neighbours included:

- increased traffic levels generated by the proposed development;
- existing poor quality access roads to the area;
- light pollution; and
- potential trespassing on farmland by future residents.

To mitigate light pollution, the Developer intends to require the installation of light fixtures that minimize light pollution at intersections and individual approaches. To mitigate potential trespassing by future residents, the Developer intends to erect a high-quality chain link fence along the western edge of the development area.

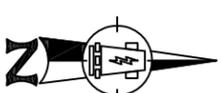
Shortly after the public open house, a traffic review was completed by AECOM. It is expected that the details of road upgrades and traffic management will be worked out in the development servicing agreement.

8 Appendices

Appendix "A"
Development Concept Plan

Greenbryre Golf & Country Estates Part 1

By: Mini Mansion Homes Ltd.



Plan of Proposed Subdivision
 For a Bare Land Condominium
 In the East 1/2 Section 12
 Twp 36, Rge 5, W 3rd Mer
 RM of Corran Park No. 344
SASKATCHEWAN

Scale: 1:2000

- Notes:**
- * Area to be subdivided is outlined with a bold, dashed line and contains 21.43ha (52.96ac)
 - * Distances shown are horizontal at general ground level and are rounded to the nearest metre and decimals of and are approximate and may vary by ± 5.00 metres.
 - * Information shown on this plan was collected between the dates of February 26th, 2007 and August 28th, 2009.
 - * Utility lines shown are for reference only. Locations of lines must be verified by the responsible utility prior to construction.
 - * For detailed topography, contours and spot elevations see Plan P090818-2-02-04.

- Legend**
- Proposed Pond
 - Existing Bush
 - OH Power
 - UG Power
 - Gas Line
 - UG Telephone
 - Fence Barb
 - Bush Edge
 - Road Edge
 - Crop Line
 - Slough

Date: December 3rd, 2010

W.J. Peters S.T.S.

OWNER APPROVED

Mini Mansion Homes Ltd.



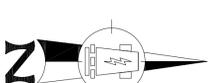
Sask Power Easement Plan No. 101456603

Greenbryre Golf & Country Estates Part 2

By: Mini Mansion Homes Ltd.

Plan of Proposed Subdivision For a Bare Land Condominium In the East 1/2 Section 12 Twp 36, Rge 5, W 3rd Mer RM of Corman Park No. 344 SASKATCHEWAN

Scale: 1:2000



- Notes:
- * Area to be subdivided is outlined with a bold, dashed line and contains 60.67ha (149.92ac)
 - * Distances shown are horizontal at general ground level and are expressed in metres and decimals thereof and are approximate and may vary by ± 300 metres.
 - * Information shown on this plan was collected between the dates of February 26th, 2007 and August 28th, 2009.
 - * Utility lines shown are for reference only. Locations of lines must be verified by the responsible utility prior to construction.
 - * For detailed topography, contours and spot elevations see Plan P090818-2-02-04.

- Legend
- Commercial Property
 - Existing Water
 - Existing Bush
 - OH Power
 - UG Power
 - Gas Line
 - UG Telephone
 - Fence Barb
 - Bush Edge
 - Road Edge
 - Crop Line
 - Slough

Date: December 9th, 2010

OWNER APPROVED
W.J. Peters S.L.S.

Mini Mansion Homes Ltd.



12
36-5-3

Appendix "B"
Bare Land Condominium Information

Nussbaum Company Law Office
Barristers and Solicitors

BENEDICT E. NUSSBAUM L.L.B.
RICHARD J. STEPONCHEV. B.A. (Adv.),L.L.B.

FILE: 5103-125

May 6, 2009

HAND DELIVERED

R.M. OF CORMAN PARK
111 PINEHOUSE DRIVE
SASKATOON, SASKATCHEWAN S7K 5W1

ATTENTION: GLEN GRISMER

Dear Sir:

RE: GREENBRYRE CONDOMINIUM

We advise that we are solicitors for Greenbryre Country Club Ltd. As you know, our client is interested in proceeding with a residential bare land condominium development encompassing portions of the existing golf course. Bare land condominiums are governed by the provisions of The Condominium Property Act, 1993. The legislation, including the statute, the condominium property regulations, and the bylaws, can be found on the Queen's Printer website at <http://www.qb.gov.sk.ca>

1. The bare land condominium corporation comes into existence upon the registration of a condominium plan, which occurs after the project is complete to the stage where the plan can be surveyed and verified. Prior to this stage, approvals must be obtained from the Department of Justice, the Chief Surveyor's Office, and from the municipal jurisdiction in which the condominium is situated, in this case the R.M. of Corman Park.
2. In order to register a bare land condominium, the developer needs to provide a declaration respecting the bare land condominium project and undertaking to complete all of the common areas and obtain a certificate from an engineer, architect, or appraiser verifying the cost to complete the bare land project.(see form I and Form J attached)
3. The developer must also provide a bond in the minimum of a \$100,000.00 to a maximum amount of \$200,000.00 to ensure completion of the common property and common facilities.(see form D attached)

4. Once the survey is complete and the documents have been submitted to the Department of Justice for approval, ISC will provide a transform approval certificate.
5. In the case of the Greenbryre Condominiums, special agreements and documents will be required. Presently, the plan is for the golf course to operate independently of the condominium project. There will have to be special bylaws and agreements in place dealing with, among other things, common roadway development, building restriction covenants and addressing the special relationship between the golf course and the condominium corporation. In addition, there will be an easement and restrictive covenant document, architectural design guidelines, and construction agreements.

In summary, the registration of the bare land condominium plan is similar to the registration of a plan of subdivision. Individual titles are created which will indicate unit factors pursuant to which each owner pays condominium fees. The condominium fees will be used, in part, to cover all of the costs of the common property, including road maintenance and repair. As such, there may be a limited responsibility for the R.M. since the condominium corporation will be responsible for common areas including road maintenance.

Our expectation is that the rural municipality will work in conjunction with planning and development authority to ensure that the development meets the rural municipality's zoning and development objectives. The legislation itself has numerous assurances and checks in place to ensure that the development actually conforms to intended use. We note that this type of bare land condominium development has been successfully implemented in various locations in Canada including on going development at The Willows in Saskatoon.

We would be pleased to hear from you if you have any further questions or concerns.

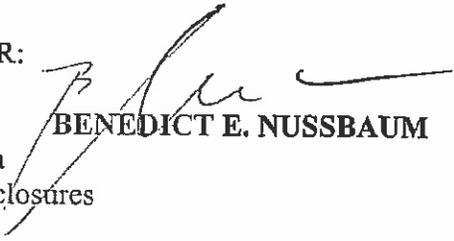
Yours truly,

NUSSBAUM & COMPANY

PER:

/iba

Enclosures



BENEDICT E. NUSSBAUM

FORM D
[Section 16]
Bond

I/we _____ (*the Principal*) as Principal and _____
(*the Surety*) as Surety are held and firmly bound to the Crown in right of Saskatchewan (*the Obligee*) in the
sum of _____ dollars, to be paid to the Obligee, for which payment we jointly and severally bind ourselves,
our executors, administrators, successors and assigns.

Sealed with the respective seals of the Principal and of the Surety and dated the ___ day of _____, 20 __.

If the obligation is not realized on pursuant to *The Condominium Property Regulations, 2001*, the obligation is void
but otherwise remains in force and is subject to being realized on as provided by *The Condominium Property
Act, 1993*.

The obligation may be released in accordance with section 18 of *The Condominium Property Regulations, 2001*.

Signed, sealed and delivered in the presence of

(*Principal*)

(*Surety*)

FORM I
[Section 22]

Declaration of Developer Respecting Bare Land Condominiums

The developer declares:

1. That _____ is the developer of a proposed
(name of developer)
bare land condominium pursuant to Condominium Plan No. _____ and situated in _____,
(name of municipality)
to be located on the following land: _____
(legal description of land)

2. That the developer undertakes to provide the following as shown on the sketch plan attached to this declaration and described as: _____

(describe the nature of improvements, if any, and a description of the common property and common facilities, if any)

3. That if the developer adopts architectural controls respecting improvements on the units, the developer will apply those controls consistently.

Dated this _____ day of _____, 20 _____.

Signed, sealed and delivered in the presence of

(affix seal here)

(Witness)

(Signature of developer)

Certificate of Acceptance

(to be completed by the Minister Responsible for The Condominium Property Act, 1993)

The above declaration is accepted
this _____ day of _____, 20 _____.

Minister Responsible for *The Condominium Property Act, 1993*

Waiver

(to be completed by the Minister Responsible for The Condominium Property Act, 1993)

In accordance with subsection 17(3) of *The Condominium Property Regulations, 2001*, this is a waiver of the requirement to obtain security mentioned in section 17 of those regulations for the proposed bare land condominium mentioned above.

Dated this _____ day of _____, 20 _____.

Minister Responsible for *The Condominium Property Act, 1993*

FORM J
[Section 23]
Certificate of Cost
(Bareland)

RE: Cost to complete the common property and common facilities described in a Developer's Declaration respecting a Bare Land Condominium:

I, _____, of the _____ of _____ in the Province of _____, being a registered _____ (engineer, architect or appraiser) certify that the cost of completing the common property and common facilities described in the attached Form I Declaration of the Developer, dated _____, for the approved Condominium Plan No. _____ in relation to the parcel of land described as: _____

(here include a legal description of the parcel of land from which the bare land condominium plan is created)

is as follows:

(here include a list of common property/facilities and their costs, itemized as set out in Form I Developer's Declaration. Attach a separate sheet if necessary)

- (a) _____ \$ _____
- (b) _____ \$ _____
- (c) _____ \$ _____
- (d) _____ \$ _____
- (e) _____ \$ _____

Dated this _____ day of _____, 20 _____.

(Signature of engineer, architect or appraiser)

(affix seal here)

Appendix "C"
Proposed Street Lights and Fencing



asimpleswitch.com



LEN / LED

LEN / FRIE

LEONIS

SERIES

Landmark of a new world / On all continents and in every discipline, people are creating the environments that we'll inhabit tomorrow. The Leonis is the culmination of years of effort from design professionals dedicated to improving the outdoor lighting environment so that the future will not only be ecologically sound but also aesthetically pleasing. >>





BEAUTY

A well-designed product transcends fashion and has a long life because its form is continuously appreciated and contributes to the beautification of its surroundings. The Leonis is not only a technological marvel, it is a work of art that will stand, and withstand, the test of time. Leonis adds value to any project, large or small, simply by being what it is: A landmark of a new world.

INTELLIGENCE

Philips Lumec has created the Leonis with beauty, sustainability and durability in mind. Environmental responsibility is part of the Philips Lumec company culture and is demonstrated through the Leonis by its efficiency and state-of-the-art light sources as well as its low life-cycle cost. The Leonis allows you to create a beautiful, durable project while providing energy savings and safety. For Philips Lumec, that is the definition of Intelligence. The choice is yours: the outcome is beauty, visible quality, and considerable energy savings. >>

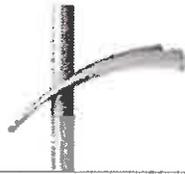
BENEFITS

- › Reduced energy costs and maintenance costs.
 - › Reduced light pollution.
 - › Modular design allows HID to LED system upgrade.
 - › Highly optimized light distribution performance.
 - › Increased design life with its pure lines and dynamic shapes.
-



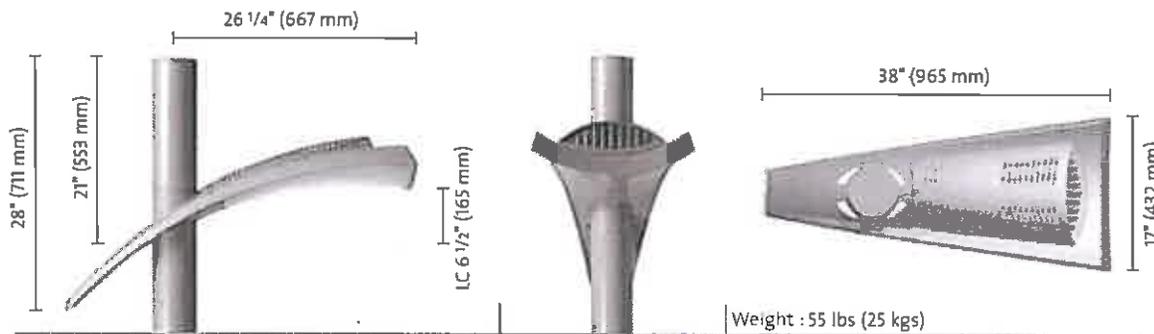
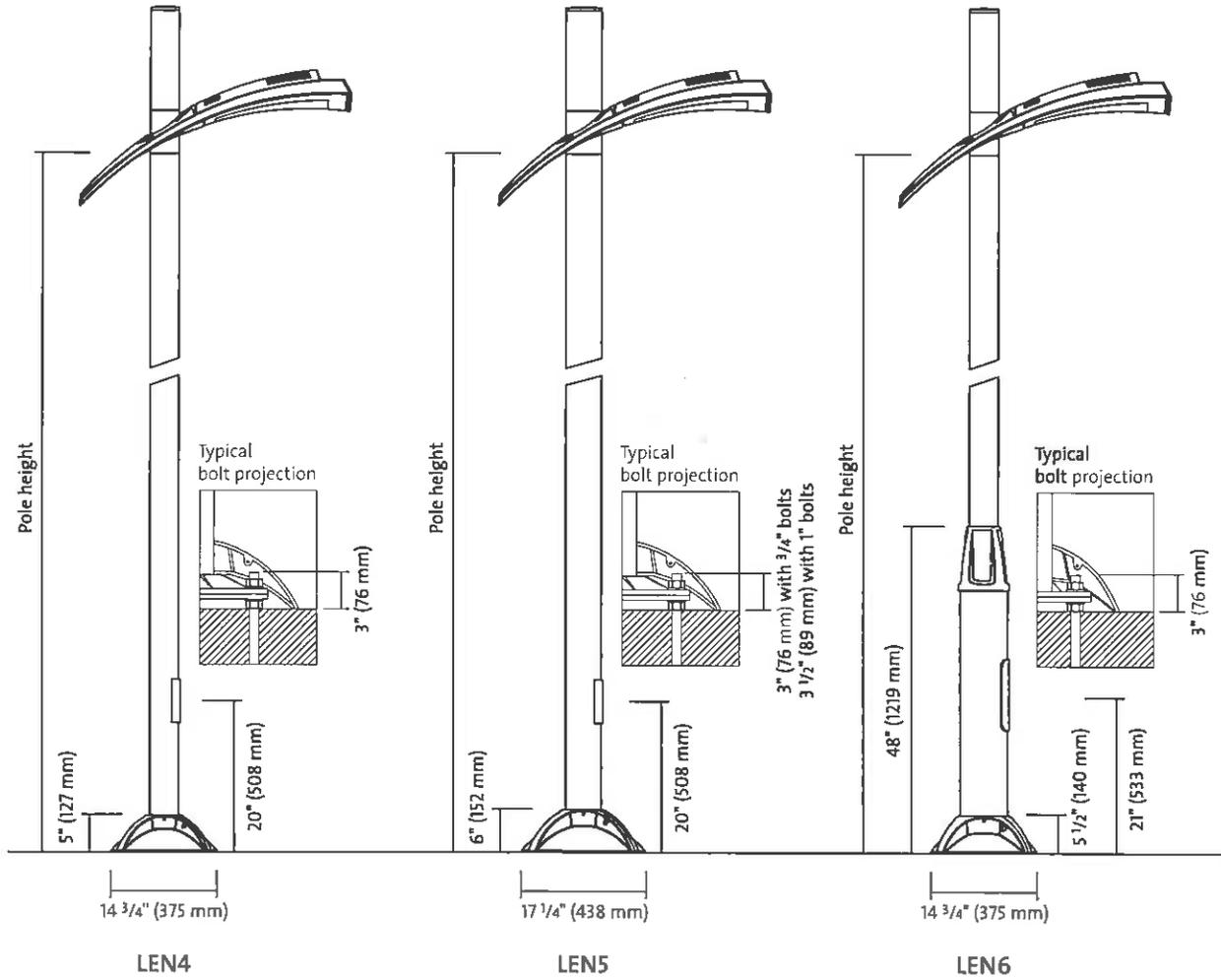
LEONIS

SERIES



LUMINAIRES / LED

Conforme aux normes UL 1598 et CSA C22.2 n° 250.0-08.



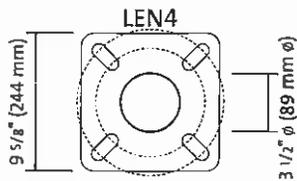
OPTIONAL
 DECORATIVE
 LUMINOUS
 ELEMENT



Philips Lumec se réserve le droit d'apporter des modifications aux caractéristiques de ses produits dans le cadre de son programme permanent de développement, et ce, sans préavis. Pour la dernière mise à jour, consultez www.lumec.com.

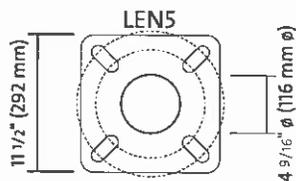
PHILIPS
LUMEC

ANCHOR PLATES



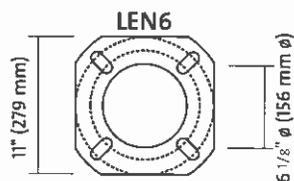
ALUMINUM
 Bolt circle : 8 1/2" (216 mm)
 B.C. from : 6 3/4" to 10" (171 to 254 mm)
 Anchor bolts :
 3/4" - 20" (19 - 508 mm)

STEEL (S)
 Bolt circle : 8 1/2" (216 mm)
 B.C. from : 6 3/4" to 10 1/2" (171 to 267 mm)
 Anchor bolts :
 3/4" - 20" (19 - 508 mm)



ALUMINUM
 Bolt circle : 12 1/2" (318 mm)
 B.C. from : 9 1/4" to 12 3/4" (235 to 324 mm)
 Anchor bolts :
 3/4" - 20" (19 - 508 mm)

STEEL (S)
 Bolt circle : 12 1/2" (318 mm)
 B.C. from (BLN 3/4") : 8" to 12 1/2" (203 to 324 mm)
 B.C. from (BLN 1") : 8" to 12 7/8" (203 to 327 mm)
 Anchor bolts :
 1" - 36" (25 - 914 mm)



ALUMINUM
 Bolt circle : 10 1/2" (267 mm)
 B.C. from : 8 3/4" to 11" (222 to 279 mm)
 Anchor bolts :
 3/4" - 20" (19 - 508 mm)

STEEL (S)
 Bolt circle : 10 1/2" (267 mm)
 B.C. from : 8 3/4" to 11 1/8" (222 to 283 mm)
 Anchor bolts :
 3/4" - 20" (19 - 508 mm)

LEN4 / LED

Wind speed (mph)	Maximum pole height (ft.)	
	ALUMINUM	STEEL (S)
90	18	20
110	18	20
120	18	20
150	16	20

LEN5 / LED

Wind speed (mph)	Maximum pole height (ft.)	
	ALUMINUM	STEEL (S)
90	20	22
110	20	22
120	20	22
150	20	22

LEN6 / LED

Wind speed (mph)	Maximum pole height (ft.)	
	ALUMINUM	STEEL (S)
90	20	22
110	20	22
120	20	22
150	20	22

SPECIFICATIONS

Lens

Tempered soda lime etched glass lens, permanently sealed onto the lower housing.

Lamp (Included) see page 26 for more information on lamps

3500, 5000 or 6300 Lumens LED (light emitting diode) package (40,60 or 82 Watt). Composed of 54 High intensity white LEDs, operating 70 000 hours after which 50% still have over 70% original lumen output. Supplied with a minimum of 100 lumens per watt LED technology.

Light engine the LifeLED™ is composed of 3 main components :

Optical system : (IP66) has an individual pre oriented lens to achieve desired distribution.

Upper housing : Made of gravity die cast 356 aluminum alloy c/w an extruded silicone gasket (duro 60 shore A) and a cast aluminum heat sink optimising the LEDs efficiency and life.

LED system : Each LED have a protection against shut off maintaining operation of light engine.

Driver

High power factor of 90%. Electronic driver, operating range 50 60 Hz. Lamp starting capacity -40F(-40C) degrees. Shall be rated by UL for Class 2 operation (24 volts DC). Weathertightness rating IP54. Assembled on a unitized removable tray with quick disconnect plug.

Housing

The lower housing is made of gravity die cast 356 Aluminum alloy 0.180" (4.6 mm) minimum thickness. welded to the luminaire central adaptor.

Luminaire Options

Luminous decorative element integrating light emitting diodes (LED). Powered by an independant driver.

Luminaire Central Adaptor

Made of aluminum 6061 T6, 4" (102 mm) (LEN4 / LEN6) or 5" (127 mm) (LEN5) outside diameter, complete with a tenon penetrating 9" (229 mm) inside the pole. The tenon shall be mechanically fastened to the pole by two sets of three set screws at 120 degrees around the pole.

*LEN4 pole shaft

Made from a 4" (102 mm) round extruded 6061 T6 aluminum tubing, having a 0.226" (5.7 mm) wall thickness, welded to both the bottom and top of the anchor plate.

SPECIFICATIONS (continued)

LEN5 pole shaft

Made from a 5" (127 mm) round extruded 6061 T6 aluminum tubing, having a 0.219" (5.6 mm) wall thickness, welded to both the bottom and top of the anchor plate.

LEN6 pole shaft

Made from a one piece, seamless 4" round (102 mm) tube of extruded-aluminum welded over and in a 6 5/8" round (168 mm) extruded-aluminum pole base. The assembly is welded to both the top and bottom of a cast-aluminum anchor plate.

Maintenance Opening

2" x 4 1/2" (51 mm x 114 mm) (LEN4 / LEN5) or 4 1/2" x 10" (114 mm x 254 mm) (LEN6) maintenance opening centered 20" (508 mm) (LEN4 / LEN5) or 21" (533 mm) (LEN6) from the bottom of the anchor plate, complete with a weatherproof aluminum cover and a copper ground lug.

Base Cover

Two piece base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Finish

"Hot dip" chemical etching preparation. Lumital™ polyester powder coat finish. Excellent color retention as per #ASTM D2244, and outstanding salt-spray resistance according to #ASTM D2247 testing procedures.

Note

EPA recommendations are calculated according to AASHTO 2001 standards.

* *steel pole also available with the option (5).*

ORDERING INFORMATION

PRODUCT	LAMP ¹	OPTIC	VOLTAGE	LUMINAIRE OPTIONS	LEN4	LEN5	LEN6	POLE OPTIONS	FINISH ²		
					POLE HEIGHT ³				PH (photocell)	BE2/TX	GN7/TX
LEN4	40W49LED4K	2	120	LEDA (amber) ⁴	8 to 20	8 to 22	8 to 22	PH (photocell)			
LEN5	65W49LED4K	3	208 ^{5a}	LEDB (blue) ⁴					BE6/TX	GN4/TX	WHJ/TX
LEN6	90W49LED4K	4	240 ^{5b}	LEDG (green) ⁴					BE8/TX	GN6/TX	NP
		5	277 ^{4c}	LEDR (red) ⁴					BG2/TX	GN8/TX	TG
			347 ^{4d}	LEDW (white)					BK/TX	GV3/TX	TS
									BR/TX	RD2/TX	

¹ Unselected option offered without decorative illumination

² Pole height is in 6 inches increments.

³ Consult Philips Lumec's color chart

⁴ See LED visual effects towards the end of document

^{5a} Available for the LEN4 and LEN5 with the 90W49LED4K lamp and for the LEN6 with all lamps

^{5b} Only available for the LEN6.

^{5c} Decorative luminous element not available with LEN4 with this voltage

^{5d} Decorative luminous element not available with LEN5 and LEN6 with this voltage

ORDERING SAMPLE

PRODUCT	LAMP	OPTIC	VOLTAGE	LUMINAIRE OPTION	POLE HEIGHT	POLE OPTIONS	FINISH
LEN5	65W49LED4K	2	208	LEDB	16	---	NP

Appendix "D"
Engineering Concepts, Drainage and Storm Water



CATTERALL & WRIGHT
CONSULTING ENGINEERS
221, The Arcade Lane
Basingstoke, Hampshire
RG24 0BA
Tel: (01256) 345700 Fax: (01256) 345708

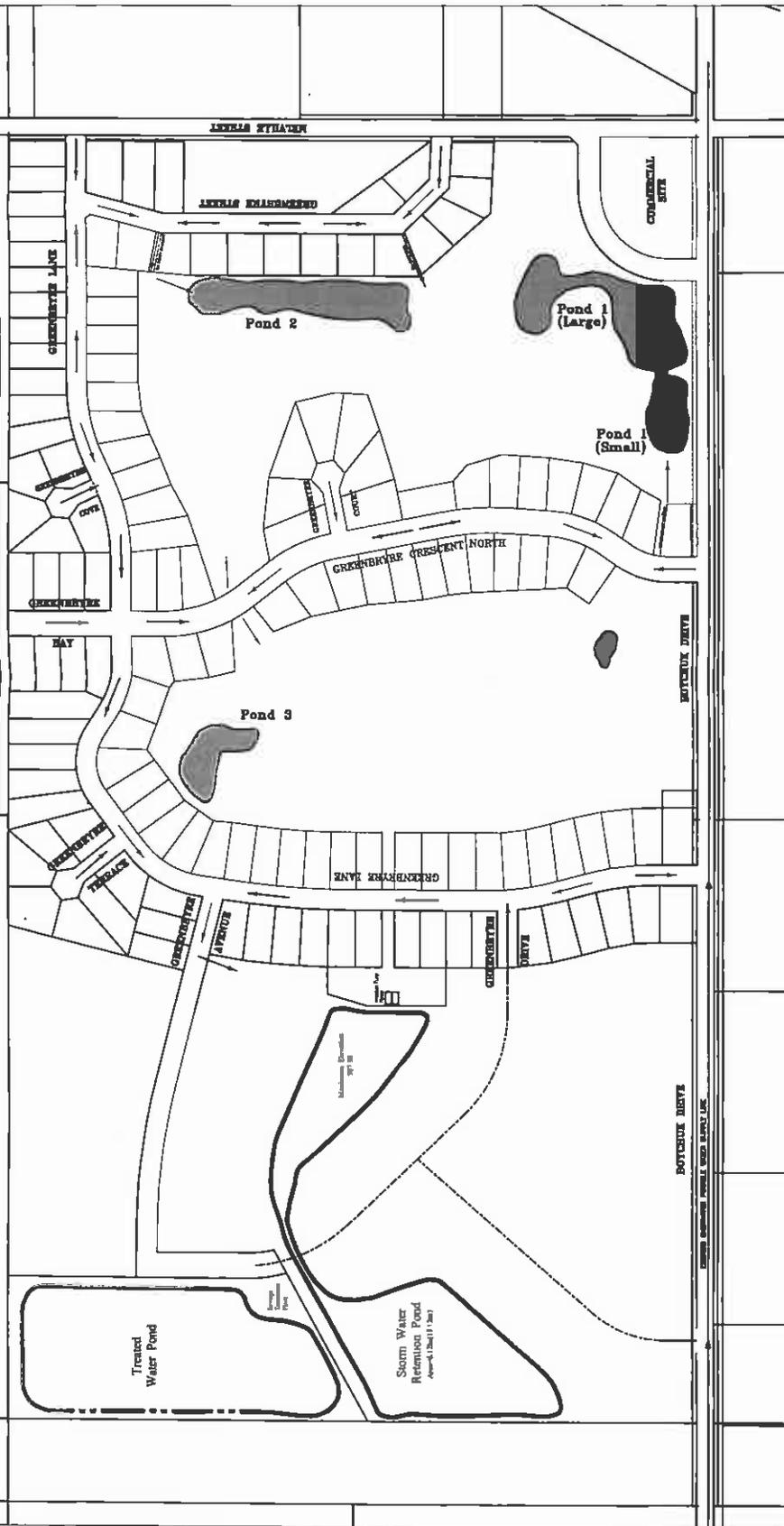
SCALE: 1:1000

DATE: 15/03/04

PROJECT:
MiniMansion Homes Ltd
GREENBRYRE GOLF &
COUNTRY ESTATES

SHEET TITLE:
SCHEDULE 'D'
STORM WATER
DRAINAGE

SCALE	1:1000	DATE	15/03/04
DESIGNER	AW	CHECKED	AW
DATE	15/03/04	PROJECT	279-003P-D



PRELIMINARY
NOT FOR CONSTRUCTION





CATTERALL & WRIGHT

CONSULTING ENGINEERS

1221 – 8th STREET EAST, SASKATOON, SASKATCHEWAN S7H 0S5
TEL: (306) 343-7280 FAX: (306) 956-3199

November 24, 2010

Mini Mansion Homes Ltd.
Box 8766
Saskatoon, SK S7K 6S5

Attention: Mr. Gary Gaudet

Dear Mr. Gaudet:

Re: Greenbryre Estates – Stormwater Ponding for the 100 Year Rainfall Event

On-site stormwater ponding is integral to the development of the golf course and residential developments for Greenbryre Estates. The attached site plan drawing shows the development areas and golf course areas draining to the stormwater ponds. There are a total of 4 ponding areas on the golf course that will function as water hazards for the golf course and will contain runoff water from the developments.

The stormwater ponds were evaluated for the design storm, which is defined as the 100-year rainfall event, during which 75mm of rainfall will fall in a 1 hour storm duration.

Pond 1 is comprised of a small pond and a larger pond. The small pond is at a higher elevation than the large pond and will fill and spill into the large pond. Pond 1 normal water level (NWL) and high water level (HWL) elevations are:

Pond 1 (small pond) NWL = 508.50
HWL = 508.72
Water level rise = 0.22 metres

Pond 1 (large pond) NWL = 508.00
HWL = 508.72
Water level rise = 0.72 metres

Pond 2 is designed for a maximum water level rise of 0.6 metres and will spill to pond 1 when it reaches this level.

Pond 2	NWL = 508.50
	HWL = 509.10
	Water level rise = 0.60 metres

Ponds 3 and 4 are immediately adjacent to each other and could be connected if desired, though water levels would then be similar.

Pond 3	NWL = 507.50
	HWL = 508.10
	Water level rise = 0.60 metres

Pond 4	NWL = 507.20
	HWL = 508.05
	Water level rise = 0.85 metres

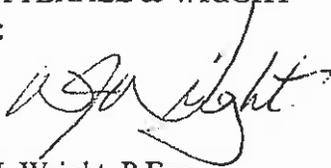
The south storm pond will be constructed as part of Phase 1 of the development and becomes the main stormwater storage pond for the entire development. Piping and pumping will connect the other ponds with the south pond to transfer water throughout the development. During periods of drought, water can be transferred into ponds 1-4 from the south pond. The piping and pumping will transfer water from ponds 1-4 to the south pond following periods of extensive runoff to ensure that the water level in ponds 1-4 is adequate to store runoff from future storms.

South Storm Pond	NWL = 503.50
	HWL = 504.85
	Water level rise = 1.35 metres, which includes pumped storm runoff water volumes from ponds 1-4 following the design 100-year storm.

In addition to the 100-year storm event, the capacity of the south stormwater pond was evaluated for a "worse-case" scenario of runoff from the maximum annual rainfall with no discharge from the pond to the golf course irrigation system. Under this scenario, the water level rise in the pond is estimated to be 3.98 metres, which can be contained within the stormwater pond parcel.

Development of housing adjacent to the stormwater ponding areas must be constructed to meet established minimum vertical separation distances above the estimated peak flood levels.

Yours truly,
CATTERALL & WRIGHT
Per:

A handwritten signature in black ink, appearing to read 'W.J. Wright', written over the 'Per:' line.

W.J. Wright, P.Eng.

Greenbryre Estates

Stormwater Ponding

100 Year Storm Event - Estimated Pond Water level Rise

Pond 2

NWL	508.5
HWL	509.1
WL Rise	0.60m

Pond 2 drains into pond 1 at HWL

Pond 1 (large portion)

NWL	508.00
HWL	508.72
WL Rise	0.72m

Pond 1 (small portion) - Overflows into large portion at 508.5

NWL	508.50
HWL	508.72
WL Rise	0.22m

Pond 3

NWL	507.50
HWL	508.10
WL Rise	0.60m

Pond 3 drains into pond 4 at HWL

Pond 4

NWL	507.20
HWL	508.05
WL Rise	0.85m

South Stormwater Pond (Pond 5)

NWL	503.50
HWL	504.85
WL Rise	1.35m

Above high water level includes pumped water volumes from ponds 1-4 after the storm

Estimated Maximum Water Level Rise Scenario

South Stormwater Pond (Pond 5)

Maximum annual rainfall with no Irrigation.

Estimated HWL = 507.48

Water Level Rise = 3.98m

Appendix "E"
Submerged Attached Growth Reactor



Nelson Environmental Inc.

NELSON ENVIRONMENTAL INC.



Proposal for:

**Greenbryre Development
Submerged Attached Growth Reactor (SAGR)
Wastewater Treatment System**

May 4, 2009

Project Reference: cd1643.02

1.0 Project Overview

This proposal presents the Submerged Attached Growth Reactor (SAGR) to treat the wastewater for a residential development at the Greenbryre Golf and Country Club in Corman Park, SK. A two-stage SAGR system, incorporating a vertical flow section followed by a horizontal flow bed, gives the system the flexibility to deal with varying flow and loading conditions. The SAGR system is designed around average flows with the capability of hydraulically accommodating peak flows.

The treatment system will handle all wastewater generated from 48 town houses and 147 detached homes. Effluent will be filtered and disinfected prior to discharge to the irrigation storage ponds or alternate effluent disposal.

The process components for the proposed system include:

- Primary treatment – Buffering Septic tank
- Secondary treatment – SAGR (Submerged Attached Growth Reactor)
- Filtration – Cloth Disk Filter
- UV disinfection

Key features of the proposed process include:

- 1) Minimal sludge handling requirements – periodic pumping of the septic tanks
- 2) Minimal mechanical components – aeration blowers, disk filter backwash
- 3) Low operation and maintenance costs
- 4) Minimal operator intervention required for system operation
- 5) Stable operations – high resistance to biological upsets
- 6) Aesthetically pleasant system
- 7) Excellent track record for similar cold climate applications (mostly in Minnesota)
- 8) Design life of the system is 20 years



2.0 SAGR Treatment Process

i. Process Overview

The following is a summary of the process flow:

- a) Wastewater is collected in a 200 m³ gallon buffering/ recirculating tank.
- b) The vertical flow beds are fed by dosing pumps, and the effluent from the bed recycles back into the recirculating tank. Water discharged from the vertical flow beds is equal to the incoming flow.
- c) Effluent from the vertical flow beds is directed to the horizontal flow bed for secondary BOD removal
- d) After passing through the horizontal flow bed, the effluent from the system would be directed to a disc filter for final polishing and uv disinfection prior to discharging to the irrigation pond.

ii. CBOD and Ammonia Removal Process

The Submerged Attached Growth Reactor (SAGR) is designed to provide both CBOD removal and nitrification (ammonia removal) in moderate to cold climates. The SAGR is essentially a contained clean gravel bed with infiltration and collection chambers. LINEAR aeration throughout the floor of the SAGR provides aerobic conditions that are required for treatment. The SAGR would be covered with a layer of mulch for insulation purposes.



Due to the long sludge age in the gravel bed, and appropriate design and sizing, the SAGR process efficiently digests internal biomass.

3.0 System Design Parameters

Preliminary design loads and flows are summarized in the following table:

		Influent	Expected Effluent	
			Winter	Summer
Average Daily Flow	m ³ /day	200		
BOD	mg/L	185	10	10
TSS	mg/L	200	5	5
NH₃	mg/L	40	10	5

*Influent loads and flows estimated by Nelson Environmental Inc.

The SAGR treatment system will have the following approximate dimensions

SAGR	bed depth (m)	Area (sm)
Vertical Flow	1.37	1,694
Horizontal Flow	1.37	502
Total		2,196

4.0 SAGR Aeration Processes

i. Submerged Attached Growth Reactor (SAGR) LINEAR Aeration System

The LINEAR diffuser lines are LDPE (Low Density Polyethylene) with air releases, spaced at 230 mm centers ("SR90" tubing) on the top of the tubing. The air releases require 14 kPa (2 psi) more than hydrostatic pressure to allow air to pass through.

The diffuser locations have been spaced according to the projected oxygen demand in the SAGR. The design diffuser distribution is critical to ensure that nitrification occurs.

In addition to providing oxygen for BOD removal and nitrification the proposed aeration system brings numerous other long-term performance benefits to this sub-surface flow system.

- Sludge digestion in gravel layer is enhanced due to fully aerobic conditions.
- Year-around odor free operation.

ii. SAGR HDPE Header & Feeder System

High Density Polyethylene (HDPE) laterals run along the top on each side of the SAGR. The laterals are located in the top layer of insulating mulch. All HDPE piping connections and fittings are thermally fused to ensure maximum strength and durability. A shallow buried HDPE header connects blowers to the SAGR laterals.

HDPE service saddles are thermally fused to the lateral piping for each diffuser line. HDPE drop legs provide air to the individual diffuser lines.

All header and feeder piping is designed to accommodate increased airflow for high pressure and volume cleaning without increasing header friction losses by more than 1 psi. This allows for management of additional organic load, improved diffuser maintenance and additional odor control.

iii. Positive Displacement Blowers

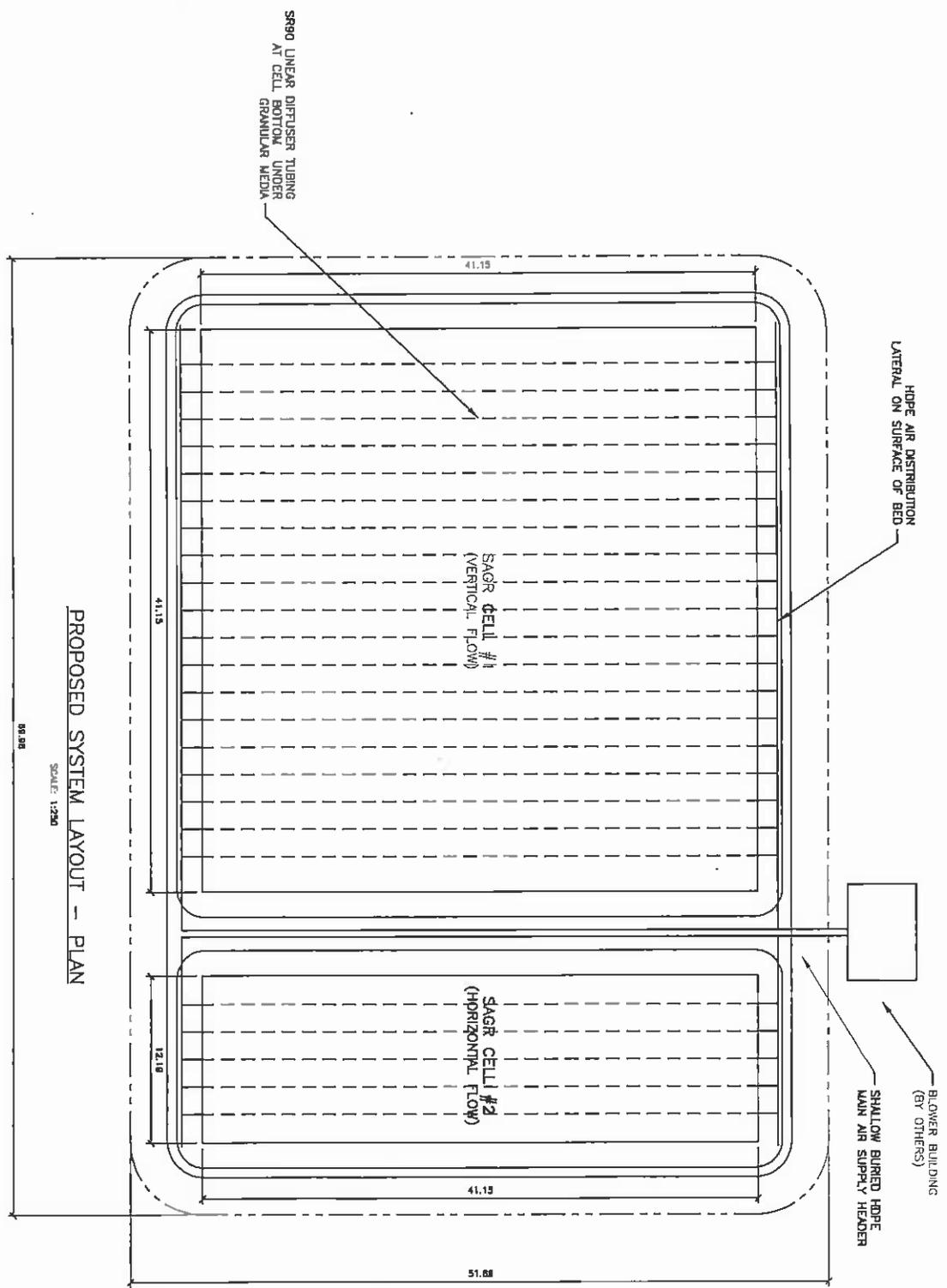
Air supply for the SAGR aeration system will be provided by two (2) 20 hp positive displacement blowers (12.6 bhp), each capable of providing 329 SCFM at a discharge pressure of 5.2 psi. Blowers would be capable of operating at 8.1 psi intermittently for diffuser purging. One blower is in operation and one on standby. All blowers are equipped with sound attenuating enclosures. Actual sound levels will be 73 dB(A) at one meter free field measurement.

- Civil works including transport piping, inter-cell piping, discharge piping, manholes, valves, access roads to site, site roads and landscaping, etc.
- Materials and construction required for the SAGR:
 - infiltration and collection chambers
 - granular material
 - insulating peat or mulch
 - HDPE Containment Liner
- Buildings to house blowers, filtration and disinfection
- Blower power hookup
- Providing power to site
- Restoration

Budgetary cost for the SAGR (Submerged Attached Growth Reactor) Treatment System as per Nelson scope of work is:

\$ _____ plus GST (FOB job site)

Budget prices valid for 60 days.



PROPOSED SYSTEM LAYOUT -- PLAN

SCALE: 1:250



NELSON ENVIRONMENTAL INC.

94 DURAND ROAD
WINNIPEG, MANITOBA
CANADA R2J 9T2

Ph: (204) 948-7900
Fax: (204) 237-0550
www.nelsonenvironmental.com

STATE	BH
APPROVED	MK
REF #	CD1643.02

GREEBRYRE DEVELOPMENT
RM OF CORMAN PARK
OPTAER WASTEWATER TREATMENT SYSTEM

DATE: 2009/05/04
SCALE: AS NOTED
DRAWING NO. 1 OF 1

Appendix "F"
Utilities, Solid Waste and Sludge Disposal



SaskWater
The Quality Advantage

May 10, 2010

(306) 694-7740

Attention: Gary Gaudet
Greenbryre Golf & Country Club
Box 8766
SASKATOON SK S7K 6S5

File: Greenbryre Golf & Country Club

Dear Mr. Gaudet:

Re: Potable Water Supply to Greenbryre Golf & Country Club

I am writing as a follow up to our conversation of April 14, 2010, regarding your plans for Greenbryre Golf & Country Estates and SaskWater's ability to provide potable water to your new development.

As discussed, SaskWater's engineering department has advised that the planned upgrades to the Clarence Avenue pump station have been delayed and are now scheduled for summer 2011. Once these upgrades are complete, SaskWater will be able to provide the requested flow to your planned development.

You advised that your plan for Greenbryre Golf & Country Estates has changed from a combination of houses, condominiums, and town houses to 300 houses on ½ acre lots. It would appear that the volume of water requested in your original Request for Service may need to be reviewed. Please provide an update at your earliest convenience.

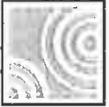
Finally, when we spoke, you advised that you would have your revised plan sent to me. As of this date, I have not received anything. I would appreciate if you could have the latest revision sent to me to assist in planning, and indicate on the plans where you intend to build your water storage reservoir.

If you have any questions or concerns, please do not hesitate to contact me.

Best Regards,

Marsha Hagen
Account Manager

*Called Marsha
she will come into
SASKATOON week
of May 25th*



SaskWater

The Quality Advantage

September 9, 2008

(306) 694-7740

Attention: Gary Gaudet
Greenbryre Golf & Country Club
Box 8766
SASKATOON SK S7K 6S5

File: Greenbryre Golf & Country Club

Dear Mr. Gaudet:

Re: Potable Water Supply to Greenbryre Golf & Country Club

Thank-you for your request dated June 17, 2008 requesting potable water for your proposed development in the RM of Corman Park, at Greenbryre Golf & Country Club.

An investigation has been completed to determine the viability of establishing SaskWater service at your location. As previously discussed, SaskWater's engineering department has provided some preliminary information in an initial assessment of water for your development. As a result of the planned upgrades by the City of Saskatoon and SaskWater, in 2009, to the Clarence Avenue pump station, SaskWater is confident that a cost effective solution to your water supply needs can be delivered by 2010. To be clear, any delay in upgrades by the City will potentially delay water delivery by SaskWater. We will be certain, however, to keep you apprised of progress on this project.

At this time, it is anticipated that SaskWater would propose the current Saskatoon service area rate, to Greenbryre Golf & Country Club, plus a connection charge. SaskWater's service area rates are available on our website at www.saskwater.com. The anticipated connection charge is undetermined at this time. However, it will be based on the cost of taking pipeline from SaskWater's existing steel main pipeline to the point of delivery on the customer's site. Should you choose to build the pipeline yourself, in order to connect to SaskWater's main pipeline, the standard manhole charge would apply (see website).

If you have any questions or concerns, please do not hesitate to contact me.

Yours truly,

Marsha Hagen
Account Manager

GARY

From: Deanna Parley [deanna.parley@sasktel.sk.ca] on behalf of SKTNSIG Accounts [SKTNSIG.Accounts@sasktel.sk.ca]
Sent: December 2, 2010 10:10 AM
To: g.gaudet@sasktel.net
Cc: Trung Ly
Subject: Phase 1 Expansion at Greenbryre - NFR 2010-22214

Good morning Gary. I received notification from the engineer in relation to what is required of SaskTel in regards to your proposed expansion. Based on 2010 rates, the cost to abandon the existing cables in NE 12-36-05 W3rd and bottle cables would be \$60,016.36.

If this price is agreed upon, then the engineer will send a Price Quoted Agreement form. Once this form is signed, a Construction Job will be issued to complete the work required.

I have spoken to the engineer, and if you need more detailed information please feel free to either email him at trung.ly@sasktel.sk.ca or call him at 931-5770.

Thank you,

Deanna

NOTICE: This confidential e-mail message is only for the intended recipients. If you are not the intended recipient, be advised that disclosing, copying, distributing, or any other use of this message, is strictly prohibited. In such case, please destroy this message and notify the sender.

NOTICE: This confidential e-mail message is only for the intended recipients. If you are not the intended recipient, be advised that disclosing, copying, distributing, or any other use of this message, is strictly prohibited. In such case, please destroy this message and notify the sender.

02/12/2010

5th Floor
140 1st. Ave. N.
Saskatoon, Saskatchewan
S7K 1W8

July 30, 2010
FILE: SASKATOON-EWC .200

g.gaudet@sasktel.net

RE: **GreenBryre Development NE12-36-5W3**

Dear Gary

This is in response to your request for servicing of the above mentioned lots.

SaskTel no longer charges to service rural subdivisions. However, rural service connection charges will be the responsibility of service applicants and are not covered by this contract. Information regarding rural service connection charges is available from SaskTel's Business Office at 1-800-214-7906.

In your proposed development there are SaskTel facilities which may need relocation. These costs are your responsibility. Please call myself to discuss and offer quotes.

We ask that easements, as required, be granted to provide service to your development.

Installation of the distribution cable for the rural residential subdivision as noted herein is provided pursuant to the terms and conditions of SaskTel's General Tariff which is incorporated by reference in this letter of agreement.

If any further information is required please contact Terry Haney at (306) 931-5442, or fax (306) 931-5122.

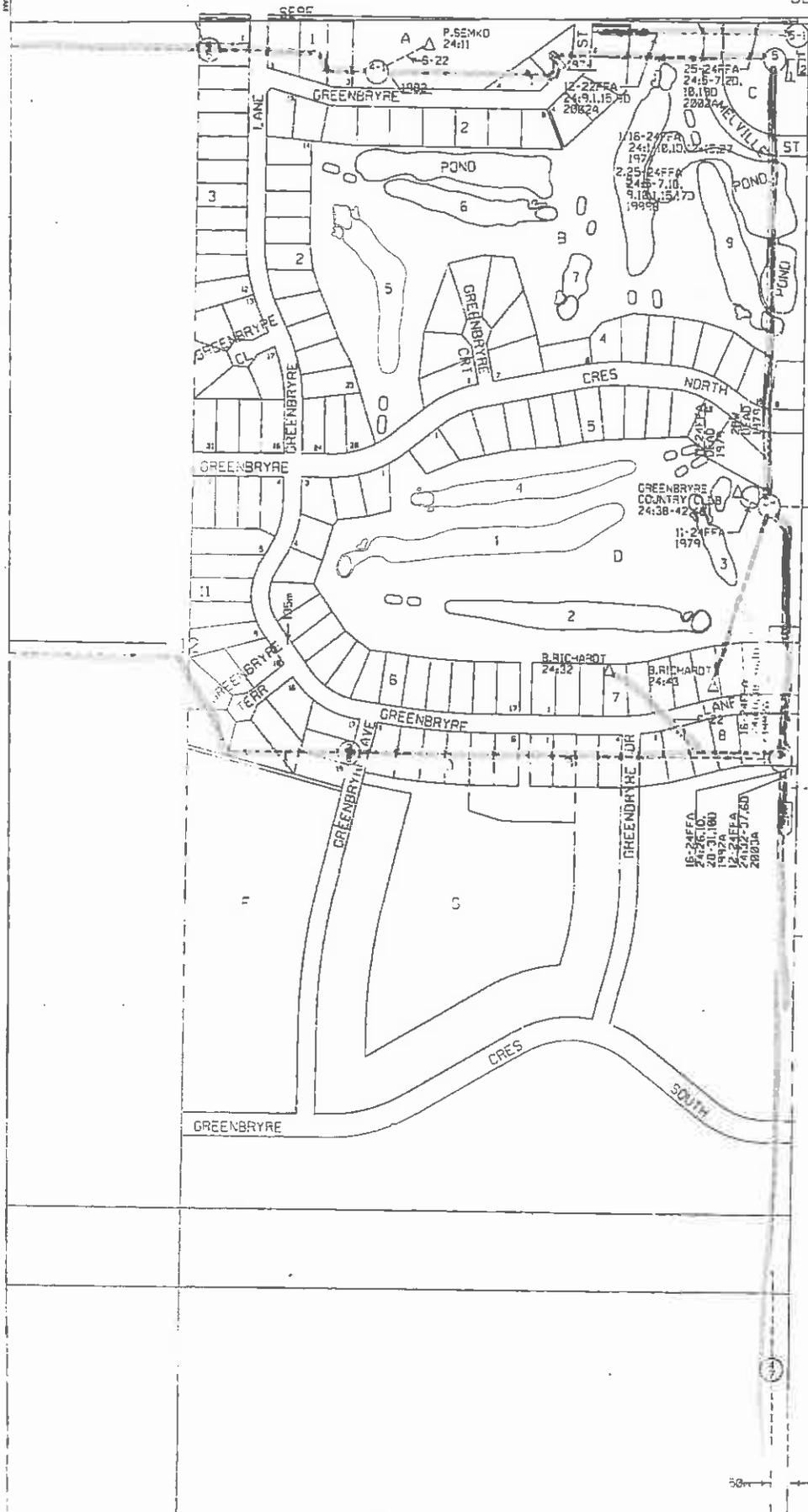
Yours truly,

Terry Haney
Facilities Designer
Technology Development & Engineering
Terry.Haney@sasktel.sk.ca

RCE.5 W3M

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TP.36

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18N282

GARY

From: GARY [g.gaudet@sasktel.net]
Sent: July 27, 2010 2:46 PM
To: dfarthing@saskenergy.com
Subject: FW: GREENBRYRE DEVELOPMENT

As per our phone conversation, here is the plan and proposed subdivision for Greenbryre. Projected start date for servicing is June - July 2011. If you have any questions I can be reached on my cell at 306-222-9899, or the office at 306-955-0181 or by fax at 306-955-3887.

I look forward to receiving your quote for this project.

Gary

[GARY] -----Original Message-----

From: Gerry Heskett [mailto:gah@PetersSurveys.ca]
Sent: July 27, 2010 1:07 PM
To: newconnectionsaskatoon@saskpower.com
Cc: GAUDET/Gary
Subject: GREENBRYRE DEVELOPMENT

29/07/2010

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ENVIROTEC
SERVICES INCORPORATED

Letter of Confirmation – Septic Service

December 3, 2010

Mr. Gaudet,

Please consider this letter as confirmation stating that Envirotec Services will have no problem moving forward in providing regular septic service for the 148 future lots which are currently in the planning stages at this time. Once Envirotec can gain a rough estimate in respect to septic tank locations and capacities we will be able to provide you and the home owners a price matrix for the required septic service. All sewage waste recovered from these homes will be transported to the City of Saskatoon Waste Water Treatment Facility on Whiteswan Drive (Licensed Facility) unless otherwise stated (i.e. onsite lagoon which has been approved by Sask. Environment).

Envirotec Services will ensure each individual home is set up on the proper service rotation and that a schedule is set in place to ensure each person can go about their daily lives without worrying about this main component at their home.

Envirotec Services also provides a 24/7 Emergency Service to ensure no one person will be put in a situation as to where their septic system would overflow, thus ensuring damages to their home do not happen. Envirotec also has several contacts in the event a client requires immediate maintenance on their "Septic Pump" and/or "Holding Tank".

If you have any immediate questions and/or concerns with this letter of confirmation please do not hesitate to contact me direct.

Sincerely,

Ray Poppl - Manager, Industrial Services

Envirotec Services Incorporated

PO Box 25055 – 100 Cory Place
Saskatoon, Saskatchewan S7K 8B7
Tel.: (306) 244-9500 Fax: (306) 244-9501

PO Box 27063
Regina, Saskatchewan S4R 0J0
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Appendix "G"
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**SUPPLEMENTARY RECOMMENDATIONS
GEOTECHNICAL INVESTIGATION
PROPOSED RESIDENTIAL DEVELOPMENT
GREENBRYRE GOLF COURSE
SASKATOON, SASKATCHEWAN
PMEL FILE NO. S08-6064
AUGUST 17, 2010**

PREPARED FOR:

**MINI MANSION HOMES
C/O CATTERALL AND WRIGHT
1221-8TH STREET EAST
SASKATOON, SASKATCHEWAN
S7H 0S5**

ATTENTION: MR. BILL WRIGHT, P.ENG.

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1.0 INTRODUCTION

The following supplementary report has been prepared to present foundation design recommendations for residential development at the Greenbryre Golf Course, located near Saskatoon, Saskatchewan.

The report has been prepared on the basis of the soil conditions encountered during a previous investigation at the Greenbryre Golf Course and follow-up groundwater level monitoring. The result of the previous geotechnical investigation was reported in P. Machibroda Engineering Ltd. (PMEL) Report No. S08-6064 dated December 12, 2008. The follow-up groundwater level monitoring was conducted on August 16, 2010.

2.0 FIELD INVESTIGATION

2.1 Field Drilling Program

Eight test holes, located as shown on the Site Plan, Drawing No. S08-6064-1, were dry drilled in 2008 using our truck-mounted, continuous flight, solid stem auger drill rig. The Test Holes were 150 mm in diameter and extended to a depth of 9.0 metres below existing ground surface.

Test hole drill logs were compiled during test drilling to record the soil stratification, the groundwater conditions, the position of unstable sloughing soils and the depths at which cobblestones and/or boulders were encountered. Disturbed samples of auger cuttings, collected during test drilling, were sealed in plastic bags to minimize moisture loss. The soil samples were taken to our laboratory for analysis.

Open standpipe piezometers (slotted, 50 mm diameter PVC pipe) were installed in each Test Hole for groundwater monitoring purposes.

Standard penetration tests (N-index), utilizing a safety hammer with automatic trip, were performed during test drilling.

2.2 Piezocone Penetration Testing

Four piezocone penetration tests (CPTu) were conducted in 2008 to depths of 16.7 to 21.2 metres below existing grade, at which point practical tip refusal was encountered. The CPTu test locations have been shown on the Site Plan, Drawing No. S08-6064-1.

The piezocone penetration test consisted of pushing a cone, on the end of a series of rods, into the ground at a constant rate and continuous measurements were made of the resistance to penetration of the cone. Local side friction resistance measurements were also made on a friction sleeve during penetration. Pore-water pressure increases or decreases generated from the advancement of the cone into the soil were measured via a pore pressure filter located directly behind the cone tip. The piezocone tip had an apex angle of 60° and a 10 cm² base area. The friction sleeve had a perimeter area of 150 cm².

The equipment and procedures for conducting the cone penetration testing were undertaken in accordance with ASTM D-5778, "Standard Test Method for Performing Electronic Friction Cone and Piezocone Testing of Soils".

Test plots recorded during the cone soundings have been presented in Appendix B.

3.0 FIELD DRILL LOGS

The field drill logs recorded during test drilling have been shown plotted on Drawing Nos. S08-6064-2 to 9, inclusive. The ground surface elevations at the Test Hole locations were provided by Catterall and Wright Consulting Engineers Ltd.

3.1 Soil Profile

The soil stratigraphy at the subject site consisted of variable lacustrine deposits of clay and silt, which based on the CPTu interpretation presented on the plots for CPTu 08-1 to 08-4, inclusive, extended to a depth of approximately 15 metres below ground surface. The above soils were underlain by glacial till (inferred) extending to a depth of at least 21.2 metres below grade, the maximum depth penetrated with our cone soundings.

3.2 Groundwater Conditions, Sloughing

Groundwater seepage and sloughing conditions were encountered during test drilling in 2008. The depths at which groundwater seepage and sloughing conditions were encountered have been shown on Drawing Nos. S08-6064-2 to 9, inclusive. A summary of the measured groundwater elevations recorded during the previous investigation and from August 16, 2010 are presented in Table I.

TABLE I. RECORDED GROUNDWATER LEVELS

Test Hole No.	Piezometer Rim Elevation (metres)	Ground Surface Elevation (metres)	Recorded Groundwater Elevation (metres)	
			Dec. 9, 2008	Aug. 16, 2010
08-1	511.4	510.4	507.3	509.4
08-2	509.8	508.8	507.6	508.6
08-3	510.1	509.1	508.2	508.8
08-4	511.4	510.4	507.6	508.6
08-5	510.4	509.3	507.1	508.9
08-6	513.0	512.1	505.5	509.2
08-7	512.6	511.6	507.7	511.4
08-8	510.8	509.8	508.0	509.6

An examination of Table I revealed that the depth to groundwater on August 16, 2010 varied between 0.2 to 3.0 metres below grade.

3.3 Cobblestones and Boulders

Cobblestones and boulders were not encountered test drilling during the original investigation.

4.0 LABORATORY ANALYSIS

The soil classification and index tests performed during the original investigation consisted of a visual classification of the soil, water contents, Atterberg limits and grain size distribution analysis.

The results of the soil classification and index tests conducted on representative samples of soil have been plotted on the drill logs alongside the corresponding depths at which the samples were recovered, as shown on Drawing Nos. S08-6064-2 to 9, inclusive.

The results of the grain size distribution analyses have been plotted on Drawing No. S08-6064-10 to 13, inclusive.

5.0 DESIGN RECOMMENDATIONS

Based on the foregoing outline of soil test results, the following supplementary foundation design considerations and recommendations have been presented.

5.1 Design Considerations

The subsurface soil conditions at the Greenbryre Golf Course site consisted of variable deposits of clay and silt which extended to a depth of approximately 15 metres below grade. The above soils were underlain by glacial till (inferred) extending to a depth of at least 21.2 metres below grade, the maximum depth penetrated with our cone soundings.

The groundwater levels on August 16, 2010 were recorded at 0.2 to 3.0 metres below grade. In light of the shallow groundwater conditions (i.e., near grade), basement structures are not recommended. The high groundwater conditions encountered will also affect the trafficability of the subgrade soils during construction.

A deep foundation system consisting of drilled, cast-in-place concrete piles should perform satisfactorily for support of at-grade residences, garages and/or decks. As an alternative, helical screw piles could be installed.

Recommendations have been prepared for site preparation; excavations and de-watering; drilled cast-in-place concrete piles; helical screw piles; floor slabs; foundation walls; foundation concrete; grade beams and subdivision roads and parking structures.

5.2 Site Preparation

All topsoil, organic soil, loose fill and other deleterious materials should be removed from the development areas. The surface of the subgrade should be levelled and compacted to the following minimum density requirements.

- | | |
|-----------------|---|
| Building Areas | - 96 percent of standard Proctor density at optimum moisture content; |
| Roadway Areas | - 96 percent of standard Proctor density at optimum moisture content; |
| Landscape Areas | - 90 percent of standard Proctor density at optimum moisture content. |

Subgrade fill, if required, should preferably consist of granular material or locally available clay soils. The fill should be placed in thin lifts (maximum 150 mm loose) and compacted to 96 percent of standard Proctor density at optimum moisture content. The subgrade fill should be approved by the Geotechnical Consultant prior to placement. The site should be graded to ensure positive site drainage away from all Structures.

The groundwater level was recorded at 0.2 to 3.0 metres below grade on August 16, 2010. In roadway areas, the use of high-strength geotextile/geogrid is recommended to provide soil stabilization and separation. Depending on the design subgrade elevations, over-excavation and replacement with granular fill may be required.

5.3 Excavating and Dewatering

It is anticipated that the proposed excavations at this site will be completed with unbraced, sloped side walls. The long-term stability of the excavation walls will be affected by wetting and drying of the exposed excavation walls, the length of time that the excavation remains open and the consistency and structure (degree of fracturing, slickensiding, etc.) of the subgrade soils. The recommended minimum sideslopes for the excavations at this site have been presented in Table II.

TABLE II. RECOMMENDED MINIMUM EXCAVATION SIDESLOPES

Soil Type	*Minimum Safe Sideslope	
	Horizontal	Vertical
Clay and/or Silt	3	1

Dewatering of the excavations will be required where the excavation extends below the static groundwater table. Groundwater seepage and precipitation runoff should be collected in a drainage system at the base of the excavation. The drainage system should drain positively to a collection sump equipped with a sump pump.

5.4 Drilled, Cast-In-Place Concrete Piles and/or Caissons

Drilled, straight shaft, cast-in-place, reinforced concrete piles may be designed on the basis of skin friction only. The allowable skin friction bearing pressures of the undisturbed soil are as follows:

TABLE III. SKIN FRICTION BEARING PRESSURES (DRILLED PILES)

Zone (metres)	Allowable Skin Friction Bearing Pressure (kPa)
0 to 2	0
Below 2	15

Notes:

1. To minimize frost heave potential, skin friction piles should be extended to and reinforced to a minimum depth of 6 metres below finished ground surface. The use of a sono-tube form for the uppermost 2 metres of the pile shaft is recommended, as it would significantly reduce the potential for frost-heaving of the straight shaft concrete piles. The sono-tube should be at least 50 mm in diameter smaller than the drilled hole.
2. Piles should be reinforced.
3. A minimum pile diameter of 300 mm is recommended for the primary structural loads.
4. The pile holes should be filled with concrete as soon as practical after drilling.
5. Groundwater seepage and sloughing conditions were encountered during test drilling. Casing will be required where groundwater seepage and sloughing conditions are encountered to maintain the pile holes open for placing of the reinforcing steel and concrete. The annular space between the casing and drilled hole must be filled with concrete. As casing is extracted, concrete in casing must have adequate head to displace all water in the annular space.
6. A minimum centre-to-centre pile spacing of not less than three pile diameters is recommended.
7. A representative of the Geotechnical Consultant should inspect and document the installation of the drilled, cast-in-place concrete piles.

5.5 Helical Screw Piles

Helical screw piles are installed by rotating a steel pipe, equipped with one or more helix flightings, into the ground. For single helix screw piles, pile capacity is derived from shearing resistance along the pile shaft (i.e., skin friction) as well as end bearing capacity of the helix.

For multi-helix screw piles, cylindrical shear theory or individual plate bearing theory may be utilized to derive pile capacity. Cylindrical shear theory assumes that pile capacity is derived from shearing resistance along the pile shaft and shearing resistance along the cylindrical soil surface between the helixes (i.e., soil shear strength), as well as end bearing capacity of the lowest helix. Individual plate bearing theory assumes that pile capacity is derived from shearing resistance along the pile shaft and the sum of the end bearing capacities of each helix. The actual capacity of multi-helix screw piles and the most appropriate design method (i.e. cylindrical shear or individual plate bearing) depends on many factors, primarily helix spacing and surrounding soil conditions. For multi-helix screw piles, the pile capacity should be determined using both methods and the lower capacity should be used for design (i.e., limiting case).

The allowable shear resistance parameters and end bearing pressures for design of screw piles have been presented below.

TABLE IV. SHEAR RESISTANCE PARAMETERS (SCREW PILES)

Zone (metres)	Allowable Skin Friction Bearing Pressure Along Pile Shaft (kPa)	Allowable Soil Shear Strength Along Cylindrical Soil Surface (kPa)
0 to 2	0	0
Below 2	15	18

TABLE V. END BEARING PRESSURE (SCREW PILES)

Depth (metres)	Allowable End Bearing Pressure (kPa)
Below 4.5	185

*Screw piles must achieve a minimum installation torque to confirm penetration into suitable bearing strata (i.e., clay).

1. The screw piles should be extended to a minimum depth of 4.5 metres.
2. For determination of skin friction capacity, the effective shaft length may be taken as the depth of embedment of the pile shaft (to the top of the uppermost helix) minus the diameter of the uppermost helix.
3. When using cylindrical shear theory for multi-helix screw piles, the shear capacity of the cylindrical soil surface between the helixes can be calculated on the basis of the projected surface area of the soil column between the helixes and the allowable soil shear strength values presented in Table III.
4. End bearing capacity may be calculated utilizing the effective soil contact area of the helix (i.e., overall cross-sectional area for the lowest helix, helix area minus shaft area for upper helixes).
5. The helical plate shall be normal to the central shaft (within 3 degrees) over its entire length. Multiple helixes (if applicable) should be spaced at increments of the helix pitch to ensure that all helixes travel the same path during installation.
6. Continuous monitoring of the installation torque should be undertaken during installation to determine whether the screw pile has been damaged during installation and to monitor the consistency of the subsurface soils.
7. Screw piles should be designed on the basis of appropriate Geotechnical Engineering principals pertaining to helical pile foundations.
8. A representative of the Geotechnical Consultant should inspect and document the installation of each screw pile on a continuous basis.

5.6 Floor Slabs

The following minimum provisions should be incorporated into the design of a heated grade-supported, cast-in-place, concrete slab subject to light floor loading.

1. Prepare the site in accordance with Section 5.2, Site Preparation. For floor slabs constructed at existing grade, over-excavate as required to allow for a minimum of 450 mm of granular fill below the floor slab. The upper 150 mm should consist of granular base coarse.
2. Excavate soft subgrade areas and replace with suitable, non-expansive fill, placed and compacted to 96 percent of standard Proctor density.
3. Subgrade fill, if required, should preferably consist of granular soil or locally available clay soils, placed in thin lifts (maximum 150 mm loose) and compacted to at least 96 percent of standard Proctor density at optimum moisture content.
4. All granular fill placed above the subgrade elevation should be compacted to a minimum of 98 percent of standard Proctor density at optimum moisture content.
5. Separate the slab from the fill by means of a polyethylene vapour barrier.
6. Provide positive site drainage away from the Residence.
7. Floor slabs should not be constructed on desiccated, wet, or frozen subgrade soil, fill or base.
8. Frost should not be allowed to penetrate beneath the floor slab just prior to, during or after construction.

The above recommended floor system should perform satisfactorily if some floor movements resulting in cracking is deemed tolerable. Partition walls, staircases and any other structural elements resting on the floor slab should be designed to accommodate differential movements without imparting stresses on the upper levels of the Residence.

In unheated structures (i.e., garage), frost heaving is a common cause of differential slab movement and cracking. Heating the area to about +5 ° C with adequate air circulation would minimize the depth of frost penetration below the slab. Alternately, strategically placed rigid polystyrene insulation could be utilized to limit frost penetration below floor slabs.

5.7 Foundation Concrete

Water soluble sulphate salts (gypsum crystals) exist in the geologic deposits in this region. Sulphate resistant cement is recommended for all foundation concrete in contact with the soil. All concrete at this site should be manufactured in accordance with current CSA standards.

It should be recognized that water soluble sulphate salts combined with moist soil conditions or low pH soils, could render the soil highly corrosive to some types of metal water lines, elbows, connectors, etc., in contact with the soil.

5.8 Grade Beams

The grade beams should be reinforced at both top and bottom throughout their entire length. Grade beams should be constructed to allow for a minimum of 100 mm of net void space between the underside of the grade beam and the subgrade soil.

5.9 Subdivision Roads and Parking Structures

It is anticipated that the subdivision roads and parking areas will be subject to predominantly passenger car and light truck traffic and infrequent heavy truck traffic. As a subgrade support, the California Bearing Ratio (CBR) rating of the compacted subgrade soil should be in the order of 2 to 3.

Based on the CBR rating, the following pavement and granular surfacing structures have been presented.

TABLE VI. THICKNESS DESIGN FOR ACCESS ROADS

Pavement/Granular Structure	Heavy Truck Traffic Wheel Loading (5,400 kg) (mm)		Light Truck/Passenger Vehicle Traffic Wheel Loading (1,830 kg) (mm)	
Surfacing Gravel	-	50	-	50
Asphalt Concrete	100	-	65	-
Granular Base (Min CBR = 65)	150	150	150	150
Granular Sub-Base (Min. CBR = 20)	300	400	150	200
Prepared Subgrade	(150)	(150)	(150)	(150)
Geotextile/Geogrid	Required	Required	Required	Required
Total Thickness	550	600	360	400

*Geogrid (with underlying separation layer of non-woven geotextile) or high-strength (1,300 Newtons minimum), permeable, woven geotextile is recommended.

All granular fill placed above the subgrade elevation should be placed in thin lifts (150 mm loose, maximum) and compacted to 98 percent of standard Proctor density.

The granular base, sub-base course and surfacing material should meet the following aggregate gradation requirements.

TABLE VII. AGGREGATE GRADATION REQUIREMENTS

Grain Size (mm)	Percent Passing		
	Surfacing Gravel	Base Course	Sub-Base Course
50.0	--	--	100
25.0	100	100	85 – 100
18.0	--	87 – 100	80 – 100
12.5	--	72 – 93	70 – 100
5.0	45 – 80	45 – 77	50 – 85
2.0	25 – 60	26 – 56	35 – 75
0.900	--	18 – 39	25 – 50
0.400	0 – 30	13 – 26	15 – 35
0.160	--	7 – 16	8 – 22
0.071	--	6 – 11	0 – 13
Plasticity Index (%)	0 – 6	0 – 6	0 – 6
CBR (min.)	--	65	20
% Fracture (min.)	40	50	--

The following minimum general recommendations should be incorporated into the design of the proposed subdivision roads and parking structures.

1. Prepare the site in accordance with Section 5.2, Site Preparation.
2. Excavate soft subgrade areas and replace with suitable soil compacted to a minimum of 96 percent of standard Proctor density at optimum moisture content. Geogrid/Geotextile is recommended to reinforce and stabilize the subgrade soils.
3. All borrow material for the subject roadways and parking areas should be placed in thin lifts (maximum 150 mm loose) and compacted to at least 96 percent of standard Proctor density at optimum moisture content.

-
4. In cut areas, the subgrade should be scarified (to 150 in light traffic areas and 300 mm in heavy traffic areas) and re-compacted to 96 percent of standard Proctor density.
 5. All common borrow used for embankment construction should consist of imported granular material or locally available sand or clay soils.
 6. All granular fill should be placed in thin lifts (maximum 150 mm loose) and compacted to at least 98 percent of standard Proctor density.
 7. Positive surface drainage is recommended to minimize the potential for moisture infiltration into the subgrade soil. Ditches and culverts should be provided where necessary to provide adequate site drainage. Surface water should be prevented from seeping back under the outer edges of the road structure.
 8. Erosion protection is recommended for all embankment sideslopes. The slopes should be covered with topsoil and seeded to encourage vegetation growth. Alternately, erosion control blankets (North American Green S150 or equivalent) or hydromulch could be installed.
 9. Periodic maintenance of the granular/pavement surface will be required (i.e., grading of the gravel surface or crack sealing of the pavement surface). The final road grade should be elevated a minimum of 600 mm above the average terrain to minimize snow accumulation on the road.

6.0 LIMITATIONS

The presentation of the supplementary foundation design recommendations has been completed as authorized. The supplementary design recommendations are based on soil condition reported in PMEL Report No. S08-6064 dated December 12, 2008. Field drill logs and CPTu plots compiled as part of the original investigation are, we believe, representative of the subsurface conditions at the Test Hole locations at the time of test drilling.

Variations in the subsurface conditions from that shown on the drill logs and CPTu plots at locations other than the exact test locations should be anticipated. If conditions should differ from those reported here, then we should be notified immediately in order that we may examine the conditions in the field and reassess our recommendations in the light of any new findings.

No detectable evidence of environmentally sensitive materials such as hydrocarbon odour was detected during the actual time of the field test drilling program. If, on the basis of any knowledge, other than that formally communicated to us, there is reason to suspect that environmentally sensitive materials may exist, then additional test holes should be drilled and samples recovered for chemical analysis.

This report has been prepared for the exclusive use of Mini Mansion Homes, Catterall and Wright, and their agents for specific application to the proposed residential development at the Greenbryre Golf Course, located near Saskatoon, Saskatchewan. It has been prepared in accordance with generally accepted geotechnical engineering practices and no other warranty, express or implied, is made.

Any use which a Third Party makes of this report, or any reliance on decisions to be made based on it, are the responsibility of such Third Parties. PMEL accepts no responsibility for damages, if any, suffered by any Third Party as a result of decisions made or actions based on this report.

The acceptance of responsibility for the design/construction recommendations presented in this report are contingent on adequate and/or full time inspection (as required, based on site conditions at the time of construction) by a representative of the Geotechnical Consultant. PMEL will not accept any responsibility on this project for any unsatisfactory performance if adequate and/or full time inspection is not performed by a representative of PMEL.

If this report has been transmitted electronically, it has been digitally signed and secured with personal passwords to lock the document. Due to the possibility of digital modification, only originally signed reports and those reports sent directly by PMEL can be relied upon without fault.

We trust that this report fulfills your requirements for this project. Should you require additional information, please contact us.

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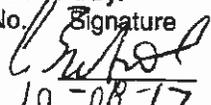


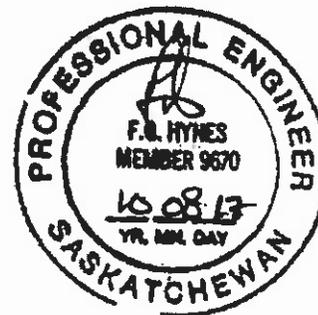
Frank Hynes, P.Eng., M.Eng.



Cory Zubrowski, P. Eng.

FH:CZ:zz

Association of Professional Engineers & Geoscientists of Saskatchewan		
CERTIFICATE OF AUTHORIZATION		
P. MACHIBRODA ENGINEERING LTD.		
Number 172		
Permission to Consult held by:		
Discipline	Sk. Reg. No.	Signature
Geotechnical	12138	
		10-08-17





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DRAWINGS



NOTE:

1. THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.
2. THIS DRAWING WAS COMPILED FROM PETER SURVEYS LTD. PROJECT: GREENBRYRE GOLF & COUNTRY ESTATES BY MIM MANSION HOMES LTD. DRAWING: CONCEPT PLAN, JUNE 19, 2008. FILE NAME: T070131-2-01-03- Presentation.
3. TEST HOLE ELEVATIONS TAKEN FROM SURVEY DATA RECEIVED FROM PETER SURVEYS LTD.

LEGEND

- PNEU. TEST HOLE (PIEZOMETER INSTALLED)
- PNEU. PIEZOCONE PENETRATION TEST

P. MACHIBRODA ENGINEERING LTD.



CONSULTING
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GEO TECHNICAL
ENGINEERS

808 - 48th STREET EAST
SASKATOON, SK
S7K 3T4

DRAWING TITLE:

SITE PLAN - TEST HOLE AND PIEZOCONE LOCATIONS

PROJECT:

PROPOSED STORM WATER PONDS GREENBRYRE GOLF COURSE, SASKATOON, SK

APPROVED BY:

F. HYNES

DRAWN BY:

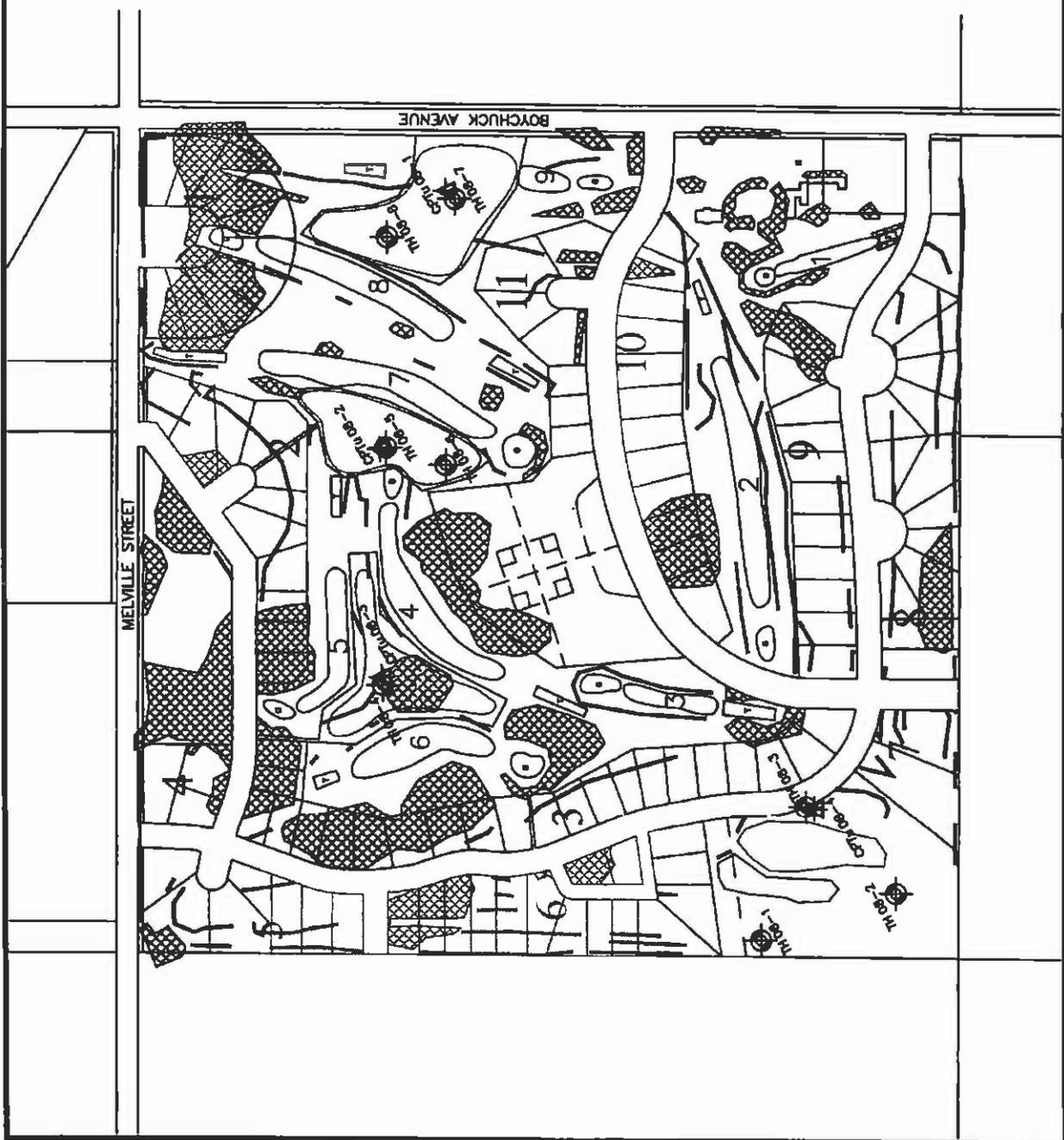
G. SOLTYS

DATE: DECEMBER, 2008

DRAWING NUMBER:

SO8-6084-1

SCALE: 1:4000

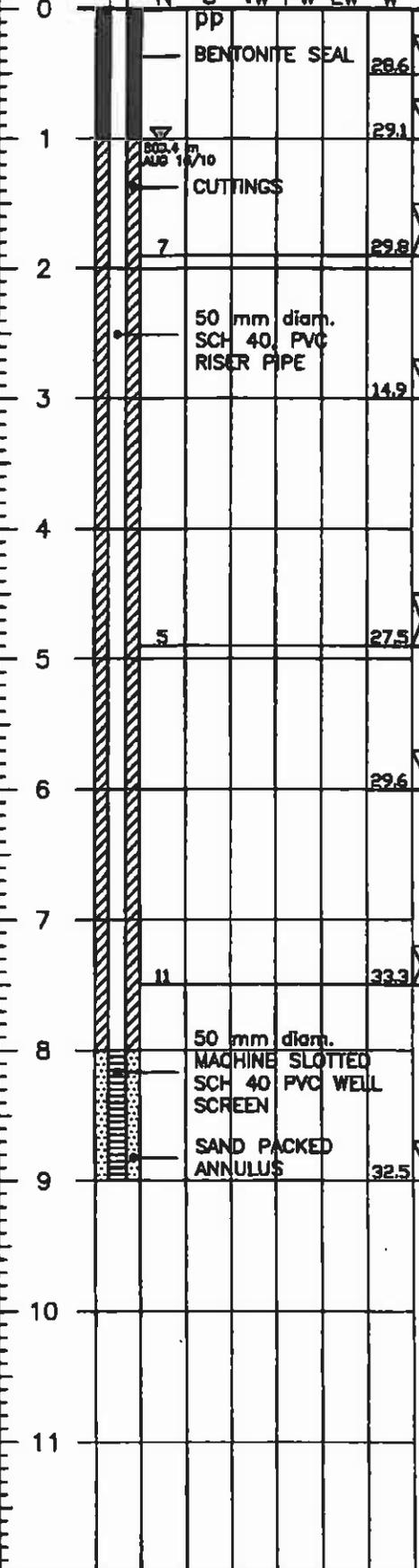


PIEZO. ELEV.= 511.4 m

TEST HOLE 08-1

DEPTH (m)

N U γ_w Pw Lw w ELEV: 510.4 m



TOPSOIL, organic, black, rootlets, frozen.
 CLAY, silty, firm to stiff, highly plastic, moist, brown, oxide stained.
 -sand lense at 800 mm.

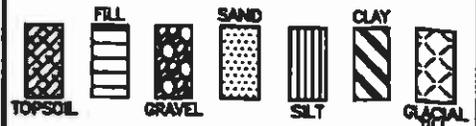
-seepage at 4.6 m.

-grey below 6.3 m.

-some silt below 6.7 m.

NOTE:
 1. Test Hole open to 9.0 m and dry I.A.D.

LEGEND:



- w.....WATER CONTENT (PERCENT OF DRY SOIL WEIGHT)
- Lw...LIQUID LIMIT
- Pw...PLASTIC LIMIT
- γ_w ...WET UNIT WEIGHT (kN/m³)
- U.....UNCONFINED COMPRESSIVE STRENGTH (kPa)
- pp...POCKET PENETROMETER (kg/cm²)
- N.....STANDARD PENETRATION TEST (SAFETY HAMMER w/AUTOMATIC TRIP) (50/125 = BLOWS/SAMPLER PENETRATION [mm])
- SO₄.....SULPHATE CONTENT (PERCENT OF DRY SOIL WEIGHT)
- P200...% PASSING No. 200 SIEVE
- I.A.D.....IMMEDIATELY AFTER DRILLING
- ▽...RECORDED WATER LEVEL (TEST HOLE I.A.D.)
- ▼...RECORDED WATER LEVEL (PIEZO)



LIMITATIONS: THE FIELD DRILL LOG IS A SUMMARY OF THE SUBSURFACE CONDITIONS ENCOUNTERED AT THE SPECIFIC TEST HOLE LOCATION AT THE TIME OF TEST DRILLING. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS OF THIS SITE AND, IN TIME, MAY CHANGE AT THIS SPECIFIC TEST HOLE LOCATION.



P. MACHIBRODA ENGINEERING LTD.

FIELD DRILL LOG AND SOIL TEST RESULTS

PROJECT:
 PROPOSED STORM WATER PONDS

LOCATION:
 GREENBRYRE GOLF COURSE
 SASKATOON, SK

NORTHING: **EASTING:**

DATE DRILLED: **DRAWING NUMBER:**
 DEC 1/08 S08-6064-2



**P. MACHIBRODA
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GEOTECHNICAL
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ENGINEERS AND
GEOSCIENTISTS

SASKATOON
2823 B FAITHFULL AVENUE
SASKATOON, SK
S7K 5W2

PHONE:
(306) 885-8444
FAX:
(306) 652-2092

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Member of the
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November 1, 2010

Mini Mansion Homes
C/O Catterall And Wright
1221-8th Street East
Saskatoon, Saskatchewan
S7H 0S5

Attention: Mr. Bill Wright, P.Eng.

Dear Sir:

**RE: SUPPLEMENTARY RECOMMENDATIONS
GEOTECHNICAL INVESTIGATION
PROPOSED RESIDENTIAL DEVELOPMENT
GREENBRYRE GOLF COURSE
SASKATOON, SASKATCHEWAN
PMEL FILE NO. S08-6064**

Further to our supplemental geotechnical report (PMEL Report No. S10-6064 dated August 17, 2010), this letter has been prepared to confirm that basement structures can be constructed at the above referenced site. Basement structures are not recommended in areas of the site where high groundwater conditions have been identified and/or are suspected, and in areas where it is not possible to provide adequate clearance between the floor slab and the groundwater table. (i.e., a minimum distance of 500 mm is recommended).

We trust that the above information meets your requirements at this time. Please call if additional information is required.

Yours very truly,

F Hynes, M. Eng., P. Eng.

FH:zz

Appendix "H"
School Division Response

Jim Walters

From: Karen LaPointe [karen.lapointe@spiritsd.ca]
Sent: November 12, 2010 11:44 AM
To: jwalters@crosbyhanna.ca
Subject: FW: Greenbryre Redevelopment

From: Karen LaPointe
Sent: November-12-10 11:41 AM
To: 'jwalters@crosbyhanna.ca'
Cc: Jim Shields
Subject: Greenbryre Redevelopment

Hi Jim,

Thank you for your communication with our school division about the possible redevelopment of Greenbrye area. This area does fall within the Clavet Attendance Area of our school division.

As we discussed, ongoing communication with the school division around projected student enrolment will be important to accommodate the needs of the families who relocate to this area. It will be crucial that we jointly plan for increased population growth to ensure school capacity. We do have a process by which we as a school division can request additional facility spaces and supports from the Ministry of Education. These requests are based on student numbers and space utilization.

I look forward to working with you in my new role as the Family of Schools Superintendent for the Clavet attendance area.

Once again, thank you for providing us with this information as you prepare for future developments of this area.

Karen

Karen LaPointe
Superintendent of Schools and Learning
Prairie Spirit School Division
(306) 683-2905 or 230-8204



Appendix "J"
Traffic Study

October 20, 2010

Gary Gaudet
 Greenbryre Country Club
 PO Box 4 RR5
 Saskatoon, SK S7K 3J8

Dear Mr. Gaudet:

Project No: 60164598

Regarding: Greenbryre Traffic Review

The Greenbryre Country Club retained AECOM to complete the *Greenbryre Traffic Review* in order to assess current and future traffic volumes on Melville Street and Boychuk Drive. The intent of the review is to determine if the existing road structure can accommodate the additional traffic anticipated from the 143 residential lot development proposed by Greenbryre.

Existing Traffic Operations

A 12-hour traffic count was completed at the intersection of Melville Street and Boychuk Drive from 7:00 a.m. to 7:00 p.m. on Wednesday, October 6th, 2010. A summary of the traffic count is presented in Figure 1.

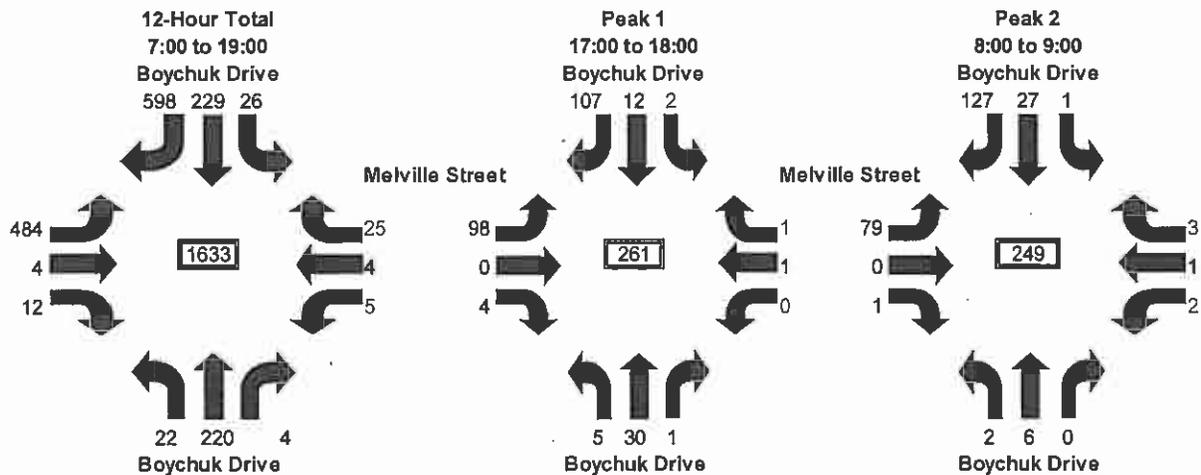


Figure 1 – 12-Hour Traffic Count Summary

The dominant movements at the intersection in its current operation primarily reflect the traffic demand associated with the developments on Melville Street, as shown by the larger southbound right-turn and corresponding eastbound left-turn movements. Secondary movements at the intersection include the northbound and southbound through vehicles, which are most likely related to the Greenbryre golf course with some small background grid road traffic.

The primary peak hour of operation at the intersection occurs from 17:00 to 18:00 (i.e. afternoon peak hour), with a total of 261 entering vehicles. As noted with the 12-hour count summary, the majority of the movements are related to the developments located on Melville Street. A secondary peak hour of operation occurs from 8:00 to 9:00 (i.e. morning peak hour), with similar emphasis placed on Melville Street developments.

Forecast Traffic Demand

The proposed Greenbryre residential development will consist of 143 single-family (low density) residential lots and will remove nine holes from the golf course. It is anticipated that the removal of the nine holes will reduce the existing number of rounds by approximately half of the 40,000 rounds serviced per year. In order to determine the forecast corridor traffic, the additional trips generated by the residential will be added and the reduction in trips due to the decreased golf course operations subtracted from the existing traffic demand.

Utilizing the weekday trip generation rate for a single family detached-dwelling, as per the 8th Edition *Institute of Transportation Engineers (ITE) Trip Generation Manual*, a total of 1,730 new trips per day are anticipated from the residential development, consisting of a 50/50 entry/exit split. The proposed development will have two access points on Melville Street and two access points on Boychuk Drive. Assuming that each trip will utilize the shortest route to their destination, the following assignment is anticipated:

- 75 percent of the residential trips will utilize an access point on Boychuk Drive, resulting in 650 vehicles per day (vpd) inbound and 650 vpd outbound on Boychuk Drive south of Melville Street;
- The remaining (25 percent) of the residential trips will utilize the Melville Street accesses, resulting in 215 vpd inbound and 215 vpd outbound.

It is also anticipated that the northbound and southbound through movements at the intersection of Melville Street and Boychuk Drive will reduce by approximately half due to the reduced rounds serviced annually at the golf course.

The total forecast corridor volumes at full build-out of the residential development are summarized in Figure 2. The existing corridor volumes are also summarized in Figure 2 for comparison. For the analysis, the 12-hour traffic counts were assumed to comprise approximately 75 percent of the daily traffic volumes along Melville Street and Boychuk Drive.

The largest increase in corridor traffic volumes will occur on Boychuk Drive to the north of Melville Street, which will nearly double upon full build-out of the proposed residential development. Boychuk Drive to the south of Melville Street will increase by 1,000 vpd upon full build-out of the residential development, which is approximately 2.5 times the existing volume on this roadway.

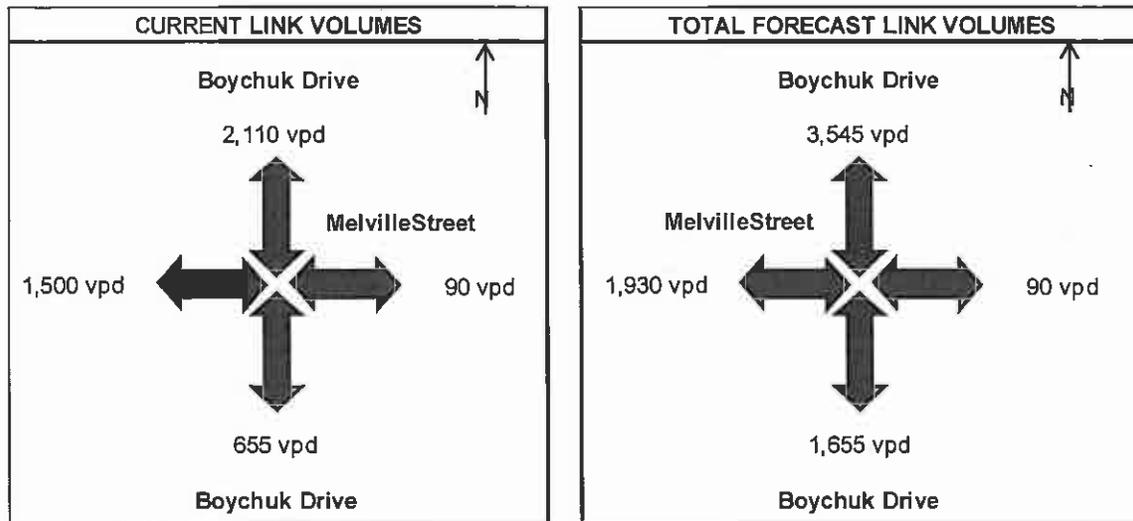


Figure 2 – Current and Total Forecast Link Volumes

Melville Street to the west of Boychuk Drive will increase by 430 vpd, which is approximately 25 percent more traffic on this roadway. Little to no growth is anticipated on Melville Street to the east of Boychuk Drive due to limited developments and restricted highway access.

Roadway Structural Analysis

Melville Street and Boychuk Drive accommodate the existing traffic with a compromised level of service. These roadways currently have a dust free surface adjacent to the Greenbryre golf course, however Boychuk Drive is a gravel surface south of the club house entrance.

The traffic volume in general is light weight traffic associated with adjacent uses (i.e. golf course, school, church, tennis courts and nursery). The condition of these roadways is likely tolerated as the activities that are accessed are generally of the user's choice.

Boychuk Drive between Highway No. 16 and Melville Street is in poor condition with a low standard surfacing structure and a low grade line. As a result of the low road standard, the road is in fair to poor condition. There is likely continual maintenance activities required on this section. The present road will not adequately accommodate the proposed increase in traffic.

Melville Street adjacent to Greenbryre is also in fair to poor condition and presently has a dust free surface. The roadway is a low standard road and there is likely continual maintenance required. The present road users and business owners along this roadway may perceive that the proposed development and resulting traffic volume increase is unacceptable for the existing structure. This may lead to complaints received by the RM of Corman Park if the road is not improved. The condition of the road will rapidly deteriorate with increased heavy-weighted traffic due to the construction of the residential development. However, Melville Street improvements should only be required to the access into the new subdivision and not necessarily beyond the west limits of Greenbryre.

Boychuk Drive south of Melville Street is also a very low standard road and provides a marginal level of service for the existing traffic. The proposed development will generate sufficient traffic volumes to justify an improvement to the road structure adjacent to the Greenbryre golf course. As a result, the improvement would only be required to be completed as far as the accesses into the new subdivision.

The minimum road standard that would be adequate for all of the sections of Melville Street and Boychuk Drive adjacent to Greenbryre would be as follows:

- Dust free surface with an 8 metre top width
- 4 to 1 sideslopes
- 60 km an hour design speed
- Minimum 30 metre wide right-of-way, with a minimum virtual 42 metre right-of-way (backslopes cut or sloped outside of the right-of-way).
- A 15-year design surfacing structure with a 40 mm asphalt mat or a double seal coat surface.

We trust that this letter report will assist the Greenbryre Country Club and RM of Corman Park in determining the appropriate structure for both Melville Street and Boychuk Drive adjacent to the golf course.

Please do not hesitate to contact me at (306) 657-8910 if you have any questions or concerns.

Sincerely,
AECOM Canada Ltd.



Nathan Gray, P.Eng., PTOE
Transportation Engineer
nathan.gray@aecom.com

NG:ll
Encl.
cc:

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