



July 20, 2016

Director, Environmental Approvals Branch  
Manitoba Conservation and Water Stewardship  
Suite 160, 123 Main Street  
Winnipeg, MB R3C 1A5

**Reference: Notice of Alteration Report  
Domestic Wastewater Lagoon  
Municipality of Glenella-Lansdowne, MB**

Dear Director,

Burns Maendel Consulting Engineers Ltd. would like to submit a Notice of Alteration Report for the proposed Domestic Wastewater Lagoon in the Municipality of Glenella-Lansdowne on behalf of New Rosedale Colony. This Domestic Wastewater Lagoon was previously proposed to be constructed on SE 21-18-11 WPM, a restricted area according to the RM zoning bylaw. Therefore, BMCE is proposing to relocate the lagoon to NW 16-18-11 WPM.

All of the information relating to the Notice of Alteration has been compiled in the attached document. Four (4) hard copies of our notice have been included, as well as one (1) electronic copy. If you have any questions or comments, please don't hesitate to contact the undersigned.

Regards,  
BURNS MAENDEL CONSULTING ENGINEERS LTD.



Daniel Burns, P.Eng.

Director, Environmental Assessment and Licensing Branch  
Manitoba Conservation  
Suite 160, 123 Main Street  
Winnipeg, MB R3C 1A5

**Notice of Alteration Report**  
Domestic Wastewater Lagoon  
Municipality of Glenella-Lansdowne, MB

Submitted by:

Burns Maendel Consulting Engineers Ltd.  
1331 Princess Ave.  
Brandon, MB R7A 0R4  
Tel: 204.728.7364  
Fax: 204.728.4418

On behalf of:

James Maendel  
New Rosedale Holding Co. Ltd.  
Box 460  
Portage La Prairie, MB R0K 3B7  
Tel: 204.252.2053

July 20, 2016



## **Standard Limitations**

This report was prepared by Burns Maendel Consulting Engineers Ltd. (BMCE) for the account of the New Rosedale Holding Co. Ltd. (the Client). The disclosure of any information contained in this report is the sole responsibility of the Client. The material in this report reflects BMCE's best judgment in light of the information available to it at the time of preparation. Should this report be used by a third party, any reliance or decisions made based on this report are the responsibility of such third party. BMCE accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report. BMCE makes no representation concerning the legal significance of the findings or the information contained within this report.

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## **1. Introduction and Background**

New Rosedale Colony (legal title New Rosedale Colony Holding Co. Ltd.) retained BMCE to aid in the site planning for a daughter colony, yet to be established. This includes the design of a new domestic wastewater lagoon and corresponding environmental approvals.

Following the generation and submission of an Environment Act Proposal for the new lagoon, prior to approval, BMCE noted that the proposed location for the lagoon, SE 21-18-11 WPM, is designated AR2 – Restricted Agricultural Zone, denying lagoon construction in this area. This was confirmed with comments from the Environmental Approvals Branch on July 18, 2016.

After discussions with the Colony, BMCE proposes to relocate the lagoon to NW 16-18-11 WPM, closer to the proposed daughter colony site. The new location is zoned AG – Agricultural General Zone according to the RM of Glenella Zoning By-Law No. 6-2004.

## **2. Description of Proposed Changes**

The following is a summary of the lagoon components affected by the proposed relocation. For description of the wastewater collection system, water source, sealed drawings, sizing parameters, geomembrane liner details, facility operations, and seasonal maintenance, please refer to the Environment Act Proposal submitted by BMCE dated April 14, 2016.

### **2.1. Certificate of Title**

Refer to Appendix B. The legal landowner is New Rosedale Colony Holding Co. Ltd.

### **2.2. Legal Land Description, Map of Proposed Development**

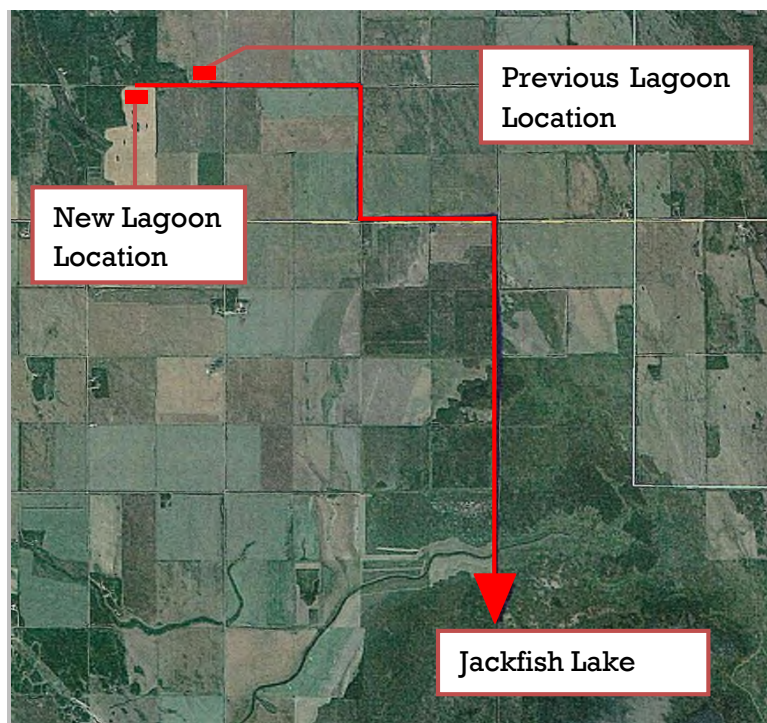
The legal land description where the domestic wastewater lagoon is proposed to be relocated is NW 16-18-11 WPM. For the map of the proposed development including the previous lagoon location and preliminary layout of the colony site, refer to Appendix A.

### **2.3. Discharge Route**

The relocated lagoon is to be constructed adjacent to Road 104 N on the north side of the quarter section. The new proposed discharge point is into the south side road ditch.

The relocated lagoon would extend the discharge route 0.8 km to the west along Road 104 N. Effluent will continue to be conveyed east along the grid road ditch, connecting to the Alonsa Drain and Jackfish Lake, as previously planned.

Figure 1: Discharge Route



### 3. Description of Pre-Development Environment

#### 3.1. Land Use

The current land use is cultivated farmland. New Rosedale Colony is actively using this land to grow crops. Zoning is currently designated as Agricultural General Zone (AG), in which a lagoon is a permitted use.

#### 3.2. Topography

The location of the lagoon will be on the north side of the quarter section, to the east of a forested area. The land is relatively flat, with a gradual slope to the east. This will help ensure storm water runoff is drained away from the lagoon.

#### 3.3. Soil Conditions

The soil stratigraphy in the upper 4.7 m within or close to the proposed relocated lagoon was classified as topsoil followed by glacial till until auger refusal. For detailed information on soil types and layers, refer to the Environment Act Proposal submitted by BMCE on April 14, 2016. Which contains borehole logs for the proposed location as well as the previous location.

### **3.4. Groundwater**

No ground water was observed during drilling.

### **3.5. Protected or Endangered Species**

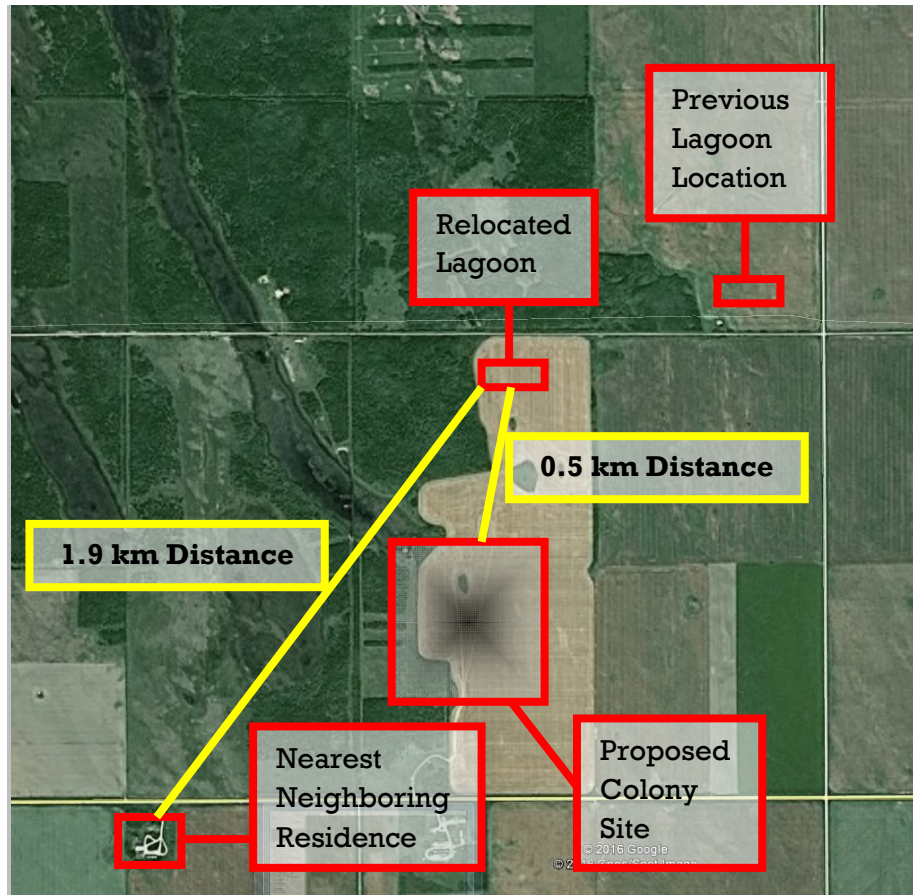
The Manitoba Conservation Data Center was contacted to ensure that there were no protected or endangered species observed in the vicinity of the previously proposed construction site. Manitoba conservations confirmed that no occurrences of rare or endangered species have been noted in the project area. Due to the relatively close proximity of the proposed relocated lagoon to the previous location (approximately 800 m), effects to protected and endangered species are considered to be the same.

### **3.6. Socioeconomic Environment**

The socioeconomic environment is not largely affected by the relocation of the lagoon, as the lagoon is still being constructed over active crop land. The forested area to the east will act as a natural boundary to separate the lagoon from the colony. New Rosedale Colony will be 0.5 km from the lagoon, while the nearest neighbouring residence not associated with the colony is approximately 1.9 km away, as per Figure 2.



Figure 2: Nearest Neighbouring Residences



## 4. Changes to Environmental Effects

### 4.1. Fish Habitat

As the first 12.2 km of road ditch is not fish habitat, no changes affecting aquatic life are expected.

### 4.2. Atmospheric Effects

As no processes or construction changes are being made, apart from the relocation of the lagoon, no significant climate change impacts are expected.

## 5. Changes to Human Health Effects

Although the lagoon is being moved closer to the proposed colony site, it is still 500 m away which is greater than the minimum 300 m setback requirement in the *Manitoba Conservation Design Objectives for Wastewater Treatment Lagoons*.

All safety features outlined for the previous lagoon location will remain to prevent unauthorized access.

The effluent discharge route consists of a road ditch for the initial discharge distance route of 12.2 km prior to release into Jackfish Lake. No risk is anticipated on public users by extending the discharge route, and as such there is no anticipated impact on human health and safety.

## **6. Mitigation Measures for Proposed Changes**

The relocated lagoon is not expected to make changes to human safety and health or the environment, therefore, no new mitigation measures will be implemented for the relocated lagoon. For details of current mitigation measures, please refer to the Environment Act Proposal submitted by BMCE on April 14, 2016.



## Appendix A – Drawings



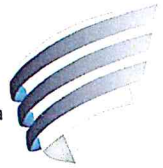
## Appendix B – Land Title Certificate

# STATUS OF TITLE

Title Number **2772341/3**  
Title Status **Accepted**  
Client File **2014-166**

## The Property Registry

A Service Provider for the Province of Manitoba



### 1. REGISTERED OWNERS, TENANCY AND LAND DESCRIPTION

NEW ROSEDALE HOLDING CO. LTD.

IS REGISTERED OWNER, SUBJECT TO SUCH ENTRIES RECORDED  
HEREON IN THE FOLLOWING DESCRIBED LAND:

THE W 1/2 OF SECTION 16-18-11 WPM  
SUBJECT TO THE RESERVATIONS CONTAINED IN THE CROWN LANDS ACT

The land in this title is, unless the contrary is expressly declared, deemed to be subject to the reservations and restrictions set out in section 58 of *The Real Property Act*.

### 2. ACTIVE INSTRUMENTS

Instrument Type:	<b>Mortgage</b>
Registration Number:	<b>1174162/3</b>
Instrument Status:	<b>Accepted</b>
Registration Date:	2015-04-02
From/By:	NEW ROSEDALE HOLDING CO. LTD.
To:	RONALD POST AND LORRAINE POST
Amount:	\$400,000.00
Notes:	No notes
Description:	MORTGAGEES ARE JOINT TENANTS

### 3. ADDRESSES FOR SERVICE

NEW ROSEDALE HOLDING CO. LTD.  
BOX 460  
PORTAGE LA PRAIRIE MB  
R1N 3B7

### 4. TITLE NOTES

No title notes

### 5. LAND TITLES DISTRICT

Portage la Prairie

<b>6. DUPLICATE TITLE INFORMATION</b>
Duplicate not produced
<b>7. FROM TITLE NUMBERS</b>
1836414/3          All
<b>8. REAL PROPERTY APPLICATION / CROWN GRANT NUMBERS</b>
No real property application or grant information
<b>9. ORIGINATING INSTRUMENTS</b>
Instrument Type: <b>Transfer Of Land</b>
Registration Number: <b>1174161/3</b>
Registration Date:         2015-04-02
From/By:                    RONALD WALTER POST
To:                            NEW ROSEDALE HOLDING CO. LTD.
Consideration:             \$576,000.00
<b>10. LAND INDEX</b>
NW 16-18-11W EXC RES
SW 16-18-11W EXC RES

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA STORAGE SYSTEM OF TITLE NUMBER 2772341/3

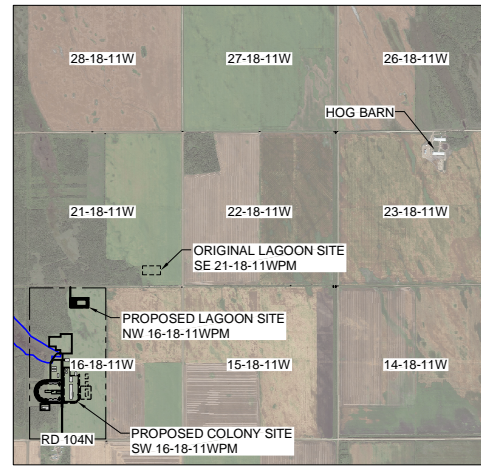
**BURNS MAENDEL**  
CONSULTING ENGINEERS LTD.

1331 Princess Ave.  
Brandon, Manitoba  
R7A 0R4  
Tel: (204) 728-7364  
Fax: (204) 728-4418



**NEW ROSEDALE COLONY  
LAGOON DESIGN  
NW 16-18-11 WPM**

CIVIL DRAWINGS		
DWG NO.	DRAWING NAME	REV
C1.1	LAGOON LOCATION PLAN	5
C1.2	LAGOON PLAN VIEW	4
C3.1	LAGOON CROSS SECTIONS	3
C3.2	SECTIONS & DETAILS	3
C3.3	FENCE, SIGNAGE & ROAD DETAILS	2
BUILDING DRAWINGS		
DWG NO.	DRAWING NAME	REV
STRUCTURAL DRAWINGS		
DWG NO.	DRAWING NAME	REV
PROJECT DESCRIPTION		
DATE	PROJECT NO:	
JULY 21, 2016	BMCE14-166-36	



**LOCATION PLAN**  
SCALE: N.T.S.

LEGEND	
PROPERTY LINE	---
CONTOUR	—
EXISTING ELEVATION	•

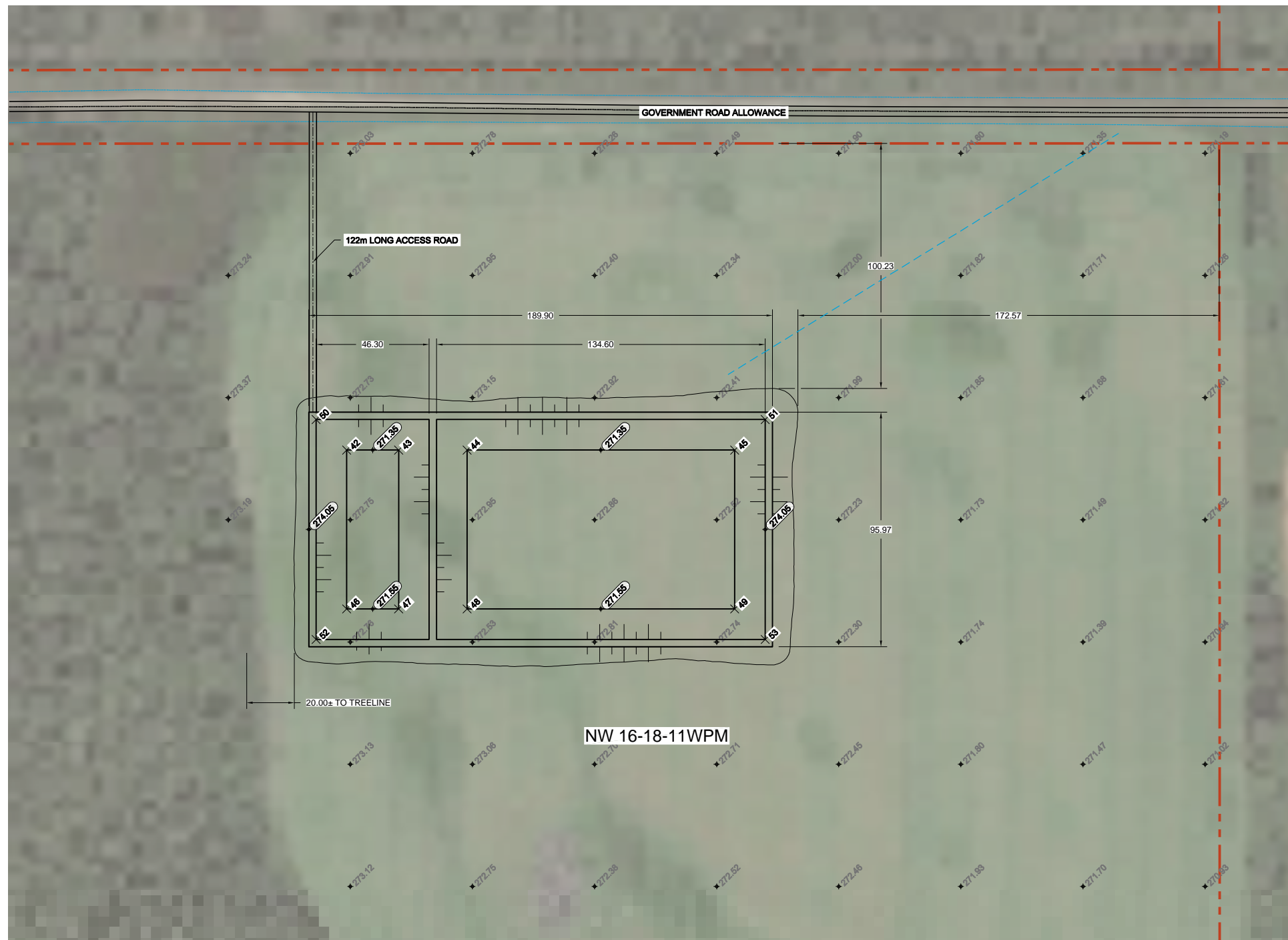


POINT TABLE			
POINT #	ELEVATION	NORTHING	EASTING
42	271.35	5599655.70	504779.05
43	271.35	5599655.70	504800.35
44	271.35	5599655.70	504828.35
45	271.35	5599655.70	504937.95
46	271.55	5599590.70	504779.05
47	271.55	5599590.70	504800.35
48	271.55	5599590.70	504828.35
49	271.55	5599590.70	504937.95
50	274.05	5599668.20	504766.55
51	274.05	5599668.20	504950.45
52	274.05	5599578.20	504766.55
53	274.05	5599578.20	504950.45

ORIGINAL EARTHWORK QUANTITIES		
MATERIAL	CUT MATERIAL	FILL MATERIAL
TOPSOIL STRIPPING	4983m³	N/A
COMMON EXCAVATION	9493m³	7307m³
SAND COVER	N/A	2552m³
TOPSOIL PLACEMENT	N/A	499m³
SEEDING	4992m²	N/A

NEW EARTHWORK QUANTITIES		
MATERIAL	CUT MATERIAL	FILL MATERIAL
TOPSOIL STRIPPING	3814m³	N/A
COMMON EXCAVATION	10526m³	8040m³
SAND COVER	N/A	2552m³
TOPSOIL PLACEMENT	N/A	461m³
SEEDING	4619m²	N/A

NOTE: ALL QUANTITIES ARE BASED ON IN SITU CONDITIONS



ID	DATE	APP.	BY	DESCRIPTION
3	JULY 21, 2016	D.B.	J.K.	REISSUED FOR PERMIT
1	JULY 13, 2016	D.B.	J.K.	REVISED LAGOON SITE LOCATION AND ELEVATION. ISSUED FOR REVIEW
3	JUNE 16, 2016	D.B.	J.K.	REVISED LAGOON LOCATION/ELEVATION
2	MAY 25, 2016	D.B.	J.K.	REVISED ACCESS ROAD, FORCEMAIN STUB
1	APR 14, 2016	D.B.	J.K.	REVISIONS AS PER MB CONSERVATION COMMENTS
7	FEB 18, 2016	D.B.	J.K.	ISSUED WITH ENVIRONMENTAL ACT PROPOSAL
3	FEB 2, 2016	JA	J.K.	ISSUED FOR CLIENT REVIEW AND COMMENT
REVISIONS				

**APECM**  
Certificate of Authorization  
Burns Maendel Consulting  
Engineers Ltd.  
No. 4559 Expiry: April 30, 2017

DESIGNED BY: C1.1  
REVIEWED BY: D.B.  
DRAWN BY: J.K.  
PROJECT START DATE: NOV 2015  
PLOT SIZE: A1 (594x841)  
SCALE: 1:1000

PROJECT NAME:  
**NEW ROSEDALE COLONY  
LAGOON DESIGN  
NW-16-18-11 WPM**

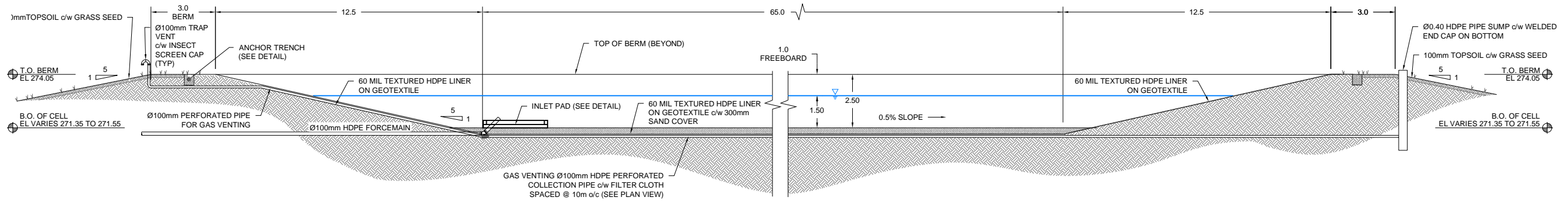
**BURNS MAENDEL  
CONSULTING ENGINEERS LTD.**  
1331 Princess Ave.  
Brandon, Manitoba  
R7A 0R4  
Tel: (204) 728-7364  
Fax: (204) 728-4418

DRAWING TITLE:  
**LAGOON LOCATION PLAN**

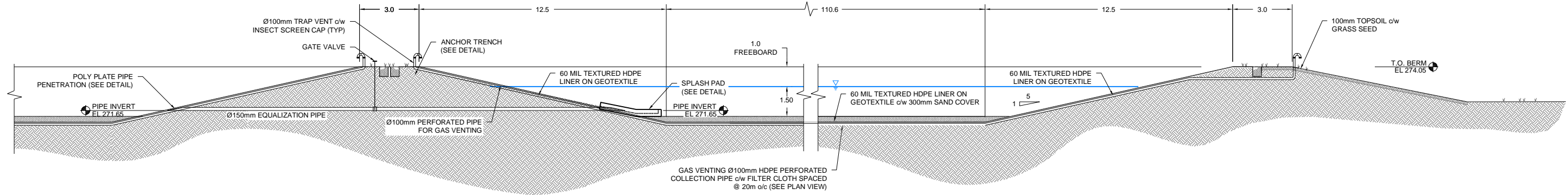
PROJECT NUMBER: **BMCE14-166-36**  
DRAWING NO: **C1.1**



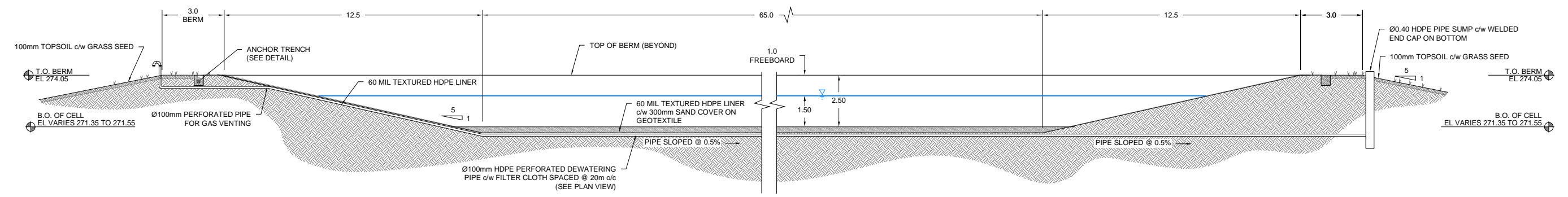




**1 PRIMARY CELL SECTION**  
**C1.2** SCALE: 1:100



**2 DEWATERING SYSTEM**  
**C1.2** SCALE: 1:100



**3 SECONDARY CELL SECTION**  
**C1.2** SCALE: 1:100

ID	DATE	APP.	BY	DESCRIPTION
3	JULY 21, 2016	D.B.	J.K.	REVISED LAGOON FOR NEW LOCATION
2	JUNE 16, 2016	D.B.	J.K.	REVISED LAGOON ELEVATION AND PIPING
1	APR 14, 2016	D.B.	J.K.	REVISIONS AS PER MB CONSERVATION COMMENTS
0	FEB 18, 2016	D.B.	J.K.	ISSUED WITH ENVIRONMENTAL ACT PROPOSAL

**APECM**  
 Certificate of Authorization  
 Burns Maendel Consulting  
 Engineers Ltd.  
 No. 4559 Expiry: April 30, 2017



DESIGNED BY: J.A.  
 REVIEWED BY: D.B.  
 DRAWN BY: J.K.  
 PROJECT START DATE: DEC 2015  
 PLOT SIZE: A1 (594x841)  
 SCALE: AS NOTED

PROJECT NAME:  
**NEW ROSEDALE COLONY  
 LAGOON DESIGN  
 NW 16-18-11 WPM**

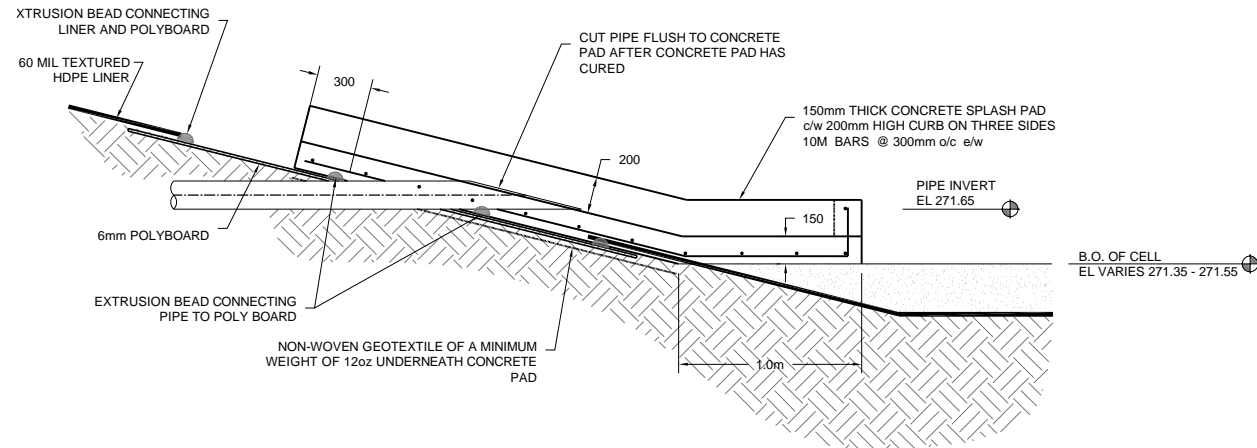
**BURNS MAENDEL  
 CONSULTING ENGINEERS LTD.**  
 1331 Princess Ave.  
 Brandon, Manitoba  
 R7A 0R4  
 Tel: (204) 728-7364  
 Fax: (204) 728-4418

DRAWING TITLE:  
**LAGOON CROSS SECTIONS**

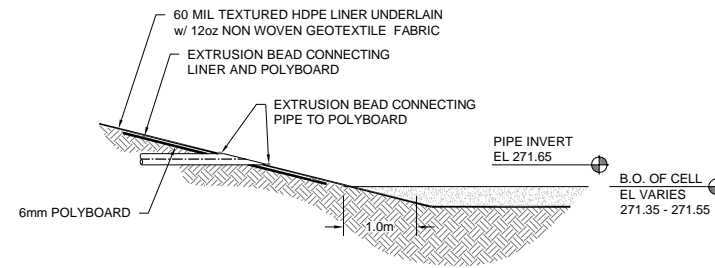
PROJECT NUMBER: **BMCE14-166-36**  
 DRAWING NO: **C3.1**

**GENERAL NOTES**

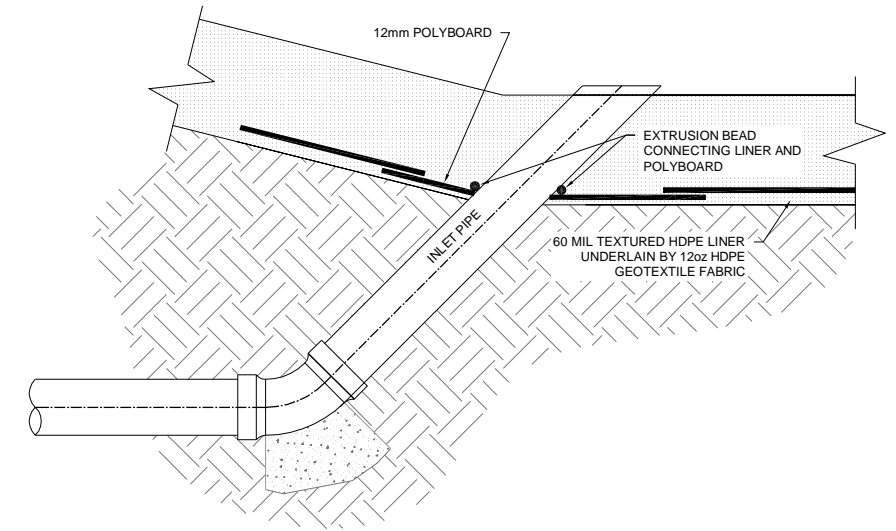
1. ALL HDPE LINER TO BE 60MIL SINGLE SIDED TEXTURED HDPE UNDERLAIN BY 12oz NON WOVEN GEOTEXTILE FABRIC.
2. ALL POLYBOARD SHALL BE MIN 6 mm IN THICKNESS U.N.O.
3. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST EDITION OF MANITOBA WATER STEWARDSHIP STANDARD CONSTRUCTION SPECIFICATIONS.



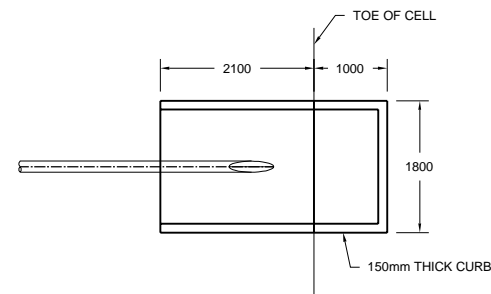
**POLY-PLATE PIPE PENETRATION w/ SPLASH PAD**  
SCALE: 1:50



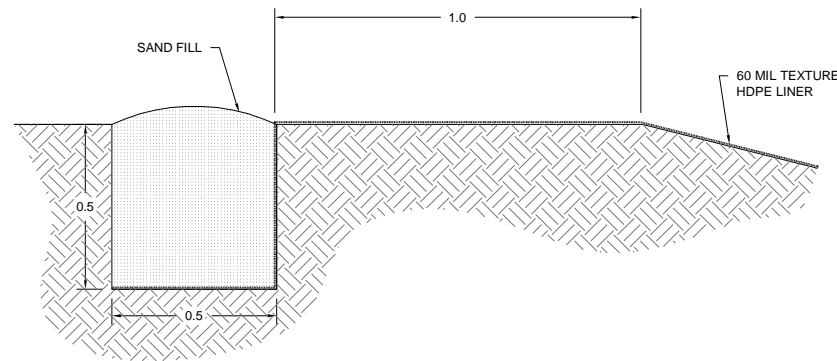
**POLY-PLATE PIPE PENETRATION**  
SCALE: 1:50



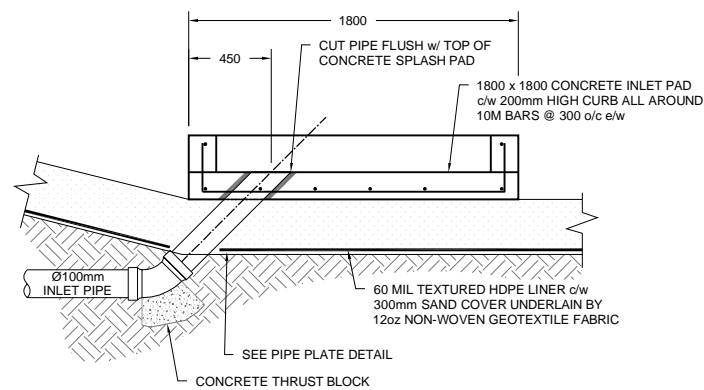
**PIPE PLATE DETAIL**  
SCALE: 1:10



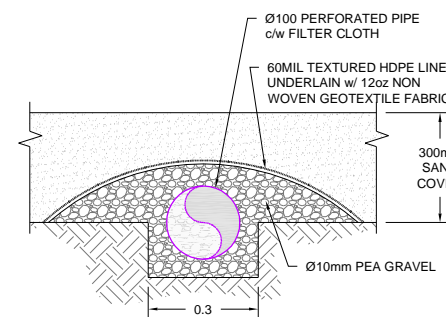
**TYPICAL SPLASH PAD - PLAN VIEW**  
SCALE: 1:50



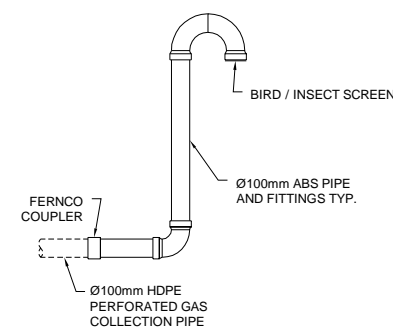
**LINER ANCHOR DETAIL**  
SCALE: 1:10



**INLET PAD DETAIL**  
SCALE: 1:20

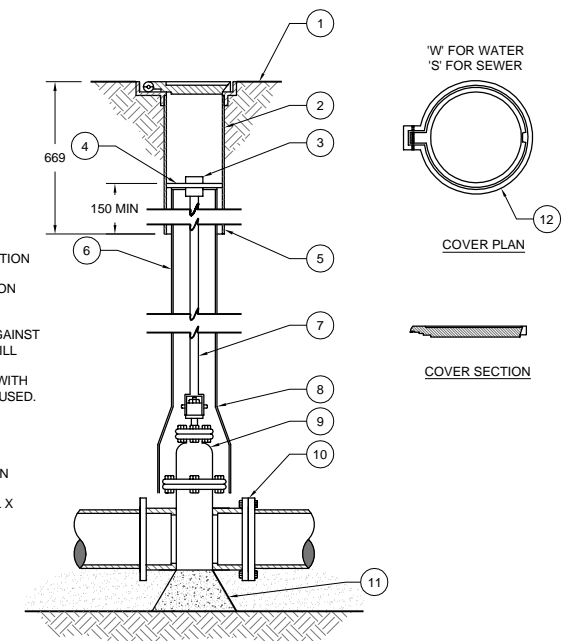


**VENTING / DEWATERING PIPE DETAIL**  
SCALE: 1:10



**TRAP VENT DETAIL**  
SCALE: 1:20

- (1) GRADE
- (2) DUCTILE IRON UPPER SECTION
- (3) 50mm SQUARE OPERATING NUT
- (4) STONE DISC.
- (5) ADJUSTABLE VALVE BOX
- (6) PVC or DUCTILE IRON LOWER SECTION
- (7) MINIMUM 50mm SQUARE EXTENSION SPINDLE
- (8) VALVE BOX TO BE PROTECTED AGAINST LATERAL MOVEMENT DURING BACKFILL
- (9) AWWA C500 or C509 GATE VALVE WITH JOINTS COMPATIBLE TO PIPE BEING USED. (FLANGED & PUSH ON ARE SHOWN)
- (10) GASKET
- (11) THRUST BLOCK SHALL BE CAST IN PLACE BETWEEN GATE VALVE AND UNDISTURBED SOIL. MIN 450W X 450L X 150H.
- (12) DUCTILE IRON COVER



**GATE VALVE DETAIL**  
SCALE: 1:10

ID	DATE	APP.	BY	DESCRIPTION
3	JULY 21, 2016	D.B.	J.K.	REVISED LAGOON ELEVATIONS
2	JUNE 16, 2016	D.B.	J.K.	REVISED LAGOON ELEVATIONS/ADDED VENT CAP DETAIL
1	APR 14, 2016	D.B.	J.K.	REVISIONS AS PER MB CONSERVATION COMMENTS
0	FEB 18, 2016	D.B.	J.K.	ISSUED WITH ENVIRONMENTAL ACT PROPOSAL

**APECM**  
Certificate of Authorization  
Burns Maendel Consulting  
Engineers Ltd.  
No. 4559 Expiry: April 30, 2017



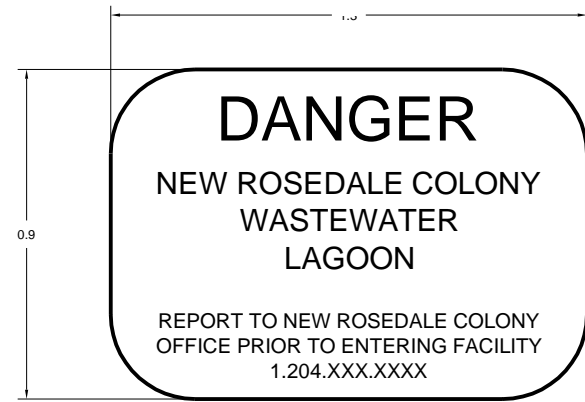
DESIGNED BY: J.A.  
REVIEWED BY: D.B.  
DRAWN BY: J.K.  
PROJECT START DATE: DEC 2015  
PLOT SIZE: A1 (594x841)  
SCALE: AS NOTED

PROJECT NAME:  
**NEW ROSEDALE COLONY  
LAGOON DESIGN  
NW 16-18-11 WPM**

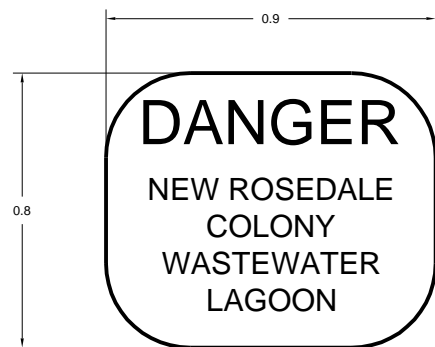
**BURNS MAENDEL  
CONSULTING ENGINEERS LTD.**  
1331 Princess Ave.  
Brandon, Manitoba  
R7A 0R4  
Tel: (204) 728-7364  
Fax: (204) 728-4418

DRAWING TITLE:  
**SECTIONS AND DETAILS**

PROJECT NUMBER: **BMCE14-166-36**  
DRAWING NO: **C3.2**

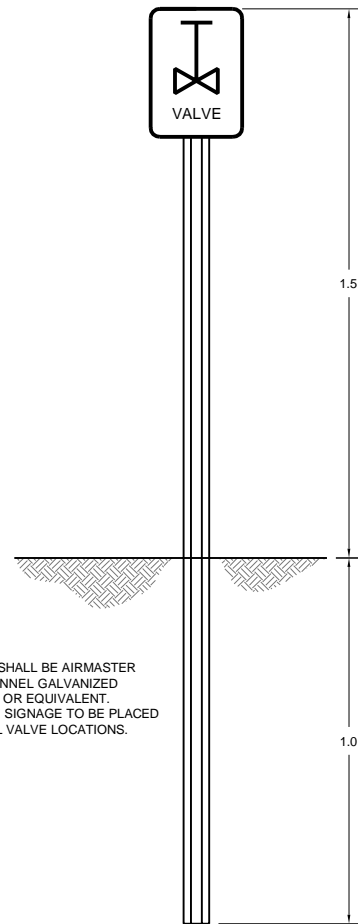


- NOTES:
- 1) MAIN ENTRANCE SIGNAGE TO BE ATTACHED AND INSTALLED WITH TWO 4x4 PRESSURE TREATED WOOD POSTS.
  - 2) SIGN TO BE CONSTRUCTED OF ALUMINUM AIR MASTER QUALITY OR APPROVED EQUAL.

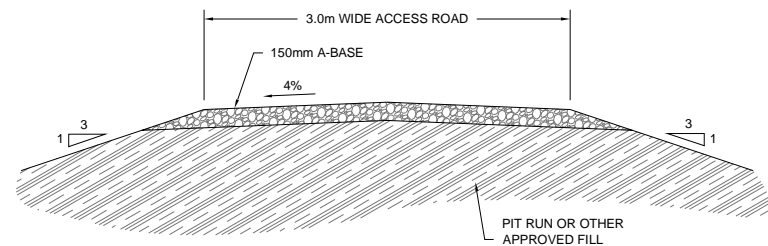


- NOTES:
- 1) PERIMETER SIGNAGE TO BE SECURED TO PERIMETER FENCE POSTS EVERY 50m AROUND ENTIRE FACILITY.
  - 2) SIGNS TO BE CONSTRUCTED OF ALUMINUM AIR MASTER QUALITY OR APPROVED EQUAL.

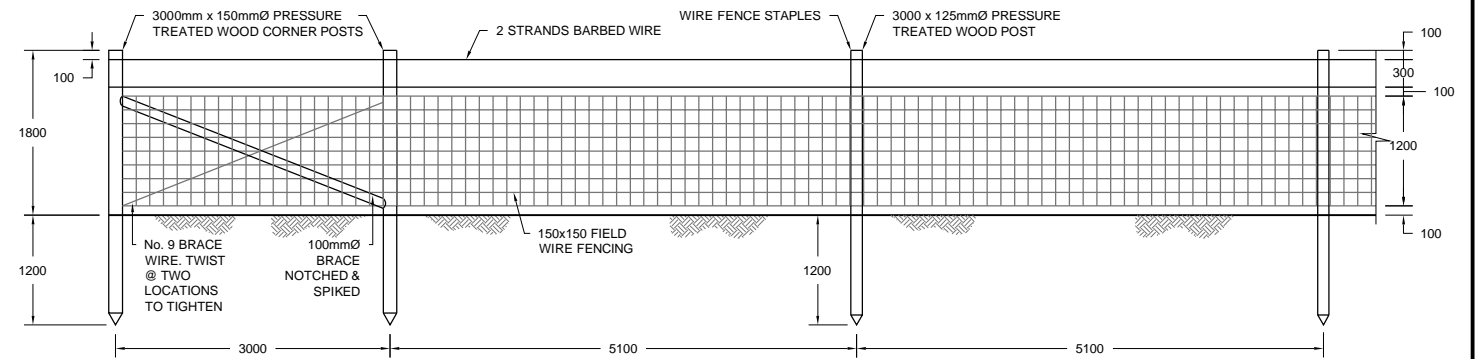
**SIGNAGE DETAILS**  
SCALE: 1:10



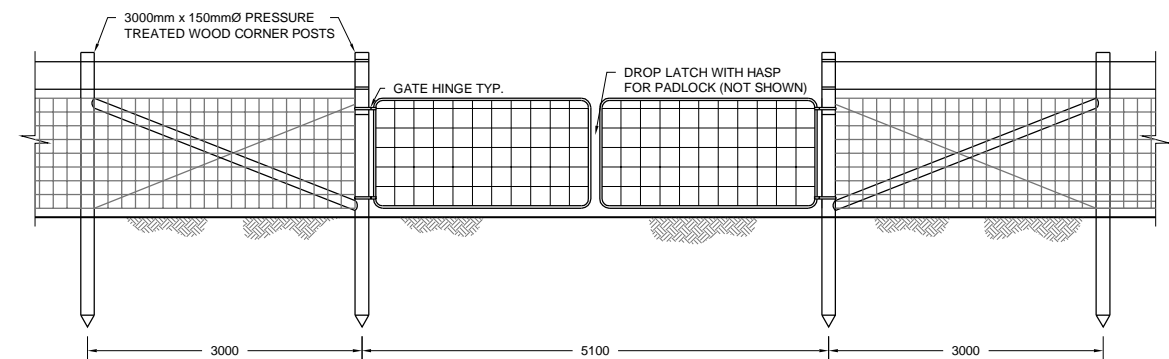
- NOTES:
- 1) POST SHALL BE AIRMASTER U-CHANNEL GALVANIZED STEEL OR EQUIVALENT.
  - 2) VALVE SIGNAGE TO BE PLACED AT ALL VALVE LOCATIONS.



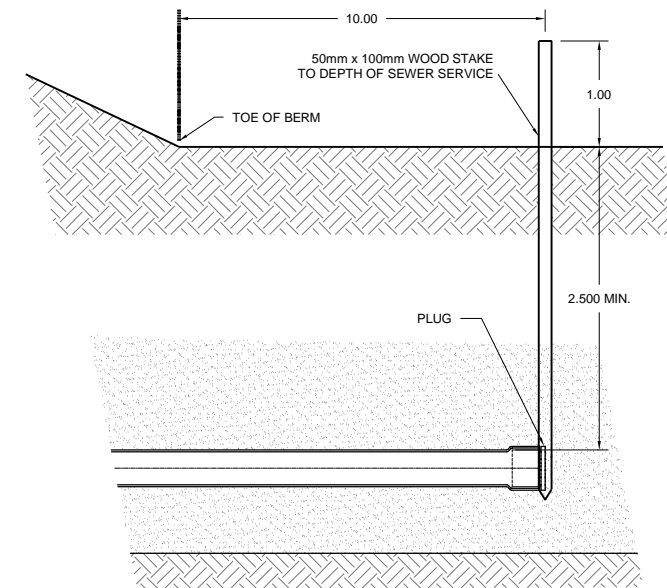
**TYPICAL ACCESS ROAD DETAIL**  
SCALE: 1:30



**PAGE WIRE FENCE DETAIL**  
SCALE: N.T.S.



**PAGE WIRE FENCE GATE DETAIL**  
SCALE: N.T.S.



**TYPICAL PIPE STUB DETAIL**  
SCALE: N.T.S.

NO.	DATE	APP.	BY	DESCRIPTION
2	MAY 25, 2016	D.B.	J.K.	REVISED ACCESS ROAD, FORCEMAIN STUB
1	APR 14, 2016	D.B.	J.K.	REVISIONS AS PER MB CONSERVATION COMMENTS
3	FEB 18, 2016	D.B.	J.K.	ISSUED WITH ENVIRONMENTAL ACT PROPOSAL
10:	DATE	APP.	BY	DESCRIPTION
REVISIONS				



DESIGNED BY: J.A.  
REVIEWED BY: D.B.  
DRAWN BY: J.K.  
PROJECT START DATE: DEC 2015  
PLOT SIZE: A1 (594x841)  
SCALE: AS NOTED

PROJECT NAME: NEW ROSEDALE COLONY LAGOON DESIGN NW 16-18-11 WPM  
1331 Princess Ave. Brandon, Manitoba R7A 0R4  
Tel: (204) 728-7364 Fax: (204) 728-4418  
**BURNS MAENDEL CONSULTING ENGINEERS LTD.**

DRAWING TITLE: FENCING, SIGNAGE AND ROAD DETAILS  
PROJECT NUMBER: BMCE14-166-36  
DRAWING NO: C3.3