Notice of Alteration Form

Manitoba

File No. : 3487.00	Environment Act Licence No. : 1599 R

Legal name of the Licensee: Rural Municipality of Macdonald

Name of the development: RM of Macdonald Water Treatment Plant Upgrades

Category and Type of development per Classes of Development Regulation:

Water Development and Control — Withdrawal of water 200 dam³ - 10,000 dam³ per

Licensee Contact Person: Daryl Hrehirchuk
Mailing address of the Licensee: P.O. Box: 100
City: Sanford Province: MB Postal Code: R0G 2J0
Phone Number: (204) 736-2255 Fax: (204) 736-4335 Email: Daryl@rmofmacdonald.com

Name of proponent contact person for purposes of the environmental assessment (e.g. consultant):
Ken Anderson, P. Eng.

Phone: (204) 942-6391 Fax:	Mailing address: 410 - 5 Donald Street, Winnipeg , MB R3L 2T4

Email address: andersonk@ae.ca

Short Description of Alteration *(max 90 characters):*
Upgrades to the RM of Macdonald WTP to increase capacity.

Alteration fee attached: Yes: ☐ No: ☑

If No, please explain: Once submitted, arrangements for credit card payment will take place.

Date: 2024-10-03

Signature: [redacted]

Printed name: Ken Anderson, P. Eng.

A complete Notice of Alteration **(NoA)** consists of the following components:

- ☑ **Cover letter**
- ☑ **Notice of Alteration Form**
- ☑ **1 electronic copy of the NoA detailed report** (see "Information Bulletin - Alteration to Developments with Environment Act Licences")
- ☐ **$500 Application fee, if applicable** (Cheque, payable to the Minister of Finance)

Submit the complete NoA to:
Director, Environmental Approvals Branch
Environment and Climate Change
Box 35, 14 Fultz Blvd
Winnipeg MB R3Y 0L6
EABDirector@gov.mb.ca
For more information:
Toll-Free: 1-800-282-8069
Phone: 204-945-8321 Fax: 204-945-5229
https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/ licence/index.html

Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an Environment Act Proposal Form (see "Information Bulletin – Environment Act Proposal Report Guidelines")

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

Associated Engineering (Sask.) Ltd.
410 - 5 Donald Street
Winnipeg, MB R3L 2T4 Canada
www.ae.ca

TEL: 204.942.6391

October 3, 2024
File: 22.4728.01

Agnes Wittmann
Director, Environmental Approvals Branch
Environment and Climate Change
Box 35, 14 Fultz Boulevard
Winnipeg, MB R3Y 0L6

Re: RURAL MUNICIPALITY OF MACDONALD WATER TREATMENT PLANT UPGRADES NOTICE OF ALTERATION

Dear Agnes Wittmann:

On behalf of the Rural Municipality of Macdonald, please find enclosed the Notice of Alteration request for upgrades to the Rural Municipality of Macdonald's Water Treatment Plant, under Licence Number 1599 R. This notice requests alteration to the existing Licence for upgrades to the existing Water Treatment Plant.

We trust that the enclosed application contains sufficient information to conduct the review and approvals process in a timely and efficient manner. Should the enclosed application require any additional information or require any clarifications, please do not hesitate to reach out. If you have any questions or would like to discuss, please contact the undersigned at andersonk@ae.ca or 204-942-6391.

Yours truly,

[redacted]

Ken Anderson, P.Eng.
Manager, Water

KA/rg

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

Associated Engineering (Sask.) Ltd.
410 - 5 Donald Street
Winnipeg, MB R3L 2T4 Canada
www.ae.ca

TEL: 204.942.6391

October 2, 2024
File: 22.4728.01

Agnes Wittmann
Director, Environmental Approvals Branch
Environment and Climate Change
Box 35, 14 Fultz Boulevard
Winnipeg MB R3Y 0L6
EABDirector@gov.mb.ca

Re: RURAL MUNICIPALITY OF MACDONALD WATER TREATMENT PLANT UPGRADES NOTICE OF ALTERATION

Dear Agnes Wittmann:

In accordance with the Environment Act, this submission is a request for upgrades to the Rural Municipality of Macdonald Water Treatment Plant (WTP) under Licence Number 1599 R, for the Rural Municipality (RM) of Macdonald.

1 PROJECT DESCRIPTION

These upgrades have been triggered largely due to continued increases in community demands. With notable growth in the RM communities of Oak Bluff and La Salle, the current plant production rate hampered the RM's ability to keep up with peak demands in the summer. It was noted by the RM that in past years, they had a period where they struggled to maintain 40% capacity of their treated storage reservoir. The plant could not catch up enough at night to catch up. As a result, water restrictions were imposed. This lack of capacity at the plant would result in a slow down of development in the RM when there is not enough treatment capacity to keep up with demands. The RM requires this plant expansion to continue to support growth in their communities. These upgrades are also an opportunity to make improvements to operations and try to better control maintenance costs and efforts. Site plans and process flow diagrams are attached in Appendix A.

This Notice of Alteration includes the existing Raw Water Cell #5, designed and constructed by a different consultant. For the purpose of this Notice of Alteration, construction activities for this pond project have been summarized. Construction for this pond began in 2021 and the pond construction was completed in 2022. Record drawings of Raw Water Cell #5 are attached in Appendix B. Currently Raw Water Cell #5 is in use for Water Plant Operations. Environmental Effects relevant to the new cell construction would have been similar to those listed in this Notice of Alteration. It has also been assumed that mitigation measures, and other best practice construction methods were used for the construction of this new raw water cell. All new construction and existing ponds and structures are located on RM property. Land titles are attached in Appendix C for reference.

1.1 BACKGROUND INFORMATION

The RM of Macdonald's WTP is located in the community of Sanford, MB, approximately 13 km SW of Winnipeg. The WTP was originally constructed in 1988, as a 20 L/s lime softening plant on the La Salle River. In 1996, the plant was expanded to 50 L/s with a second lime softening train and a building expansion to the north. In 2010, the plant went through additional upgrading. This upgrade included a complete replacement of the treatment process from conventional lime softening to Ultrafiltration (UF), and Reverse Osmosis (RO) membranes to treat the La Salle River water source. The upgrades in 2010 included a small building expansion east and increased plant capacity to 70 L/s.

Current operations include pumping the raw water from the river intake at the La Salle River to raw water ponds and then to the WTP. The water passes into a raw water chamber, then through the current treatment process where the water is treated, and then stored in the reservoirs under the WTP. Following the treatment and storage, the water is distributed to the community. The current treatment process uses Ultrafiltration for pathogen removal and RO/Nanofiltration for softening and organics removal.

1.2 WATER TREATMENT PLANT EXPANSION

This project is a plant expansion that increases capacity from 70 L/s to 120 L/s with the addition of a new 2,500,000 L cast in place concrete reservoir, along with a new 1000 square metre pre-engineered super structure above. This new expansion will connect to the west wall of the existing 1988 plant. This new building expansion will house four new UF membranes, two greensand pressure filters, new raw water strainers upstream of the UF membranes, and a new chemical storage handling area. Two new RO trains will be installed in the original 1996 plant area. This includes a new RO Clean in Place package. The existing two RO trains will be maintained as part of the upgrades, but the existing CIP will be replaced with new. The small 2010 reservoir (below the expansion) will be converted into a raw water contact cell. This would consist of capping intercell piping and coring new penetrations in the intercell walls. The existing process waste tank in the 1988 plant, will be converted back to a raw water transfer cell. This will involve upgrades to the raw water piping from the La Salle River and new raw water pond fill lines. Civil works include twinning a portion of the Raw Water pipeline on the WTP site with new 400 mm pipe. Approximately 150 m of raw water pipeline will be twinned from the raw water transfer cell to the WTP property limit.

Under this project, the non-DFO complaint intake screen will be removed and replaced with a new DFO complaint TEE screen.

The existing two UF membrane skids in the original 1988 plant area will be demolished once the new UF membranes are commissioned and operational. Various existing plant equipment will be maintained as part of the new upgrades, including but not limited to; distribution pumps and header in the 1988 plant area, staff and office areas, two RO trains in 1996 plant area, two UF/RO FRP break tanks in 2010 expansion and two UF feed pumps in 2010 expansion.

2 ENVIRONMENTAL EFFECTS

The specifications, limits, terms and conditions listed in Licence No. 1599 R for general construction and pipeline installation will be followed, this Licence is attached in Appendix D for reference. Within the Licence, construction guidelines and environmental mitigation measures are specified as outlined by the Environmental Approvals Branch. All relevant specifications, limits, terms and conditions will be followed during construction and operations, along with best construction practices. Effects that could result directly from the construction activities onsite or the operation of the upgraded facility are included in this Section.

2.1 ENVIRONMENTAL EFFECTS DURING CONSTRUCTION

2.1.1 Atmospheric Impacts

Construction activities can create dust and emissions from construction machinery. Dust control will be used to reduce the dust potential and suppress it if it does occur. Air quality effects due to dust will be localized to construction sites (water plant property) and are considered to be temporary. Emissions from construction equipment will temporarily affect the air quality in the area when machines are running. This is reduced by ensuring that machines are in good working condition and are outfitted with appropriate mufflers to reduce emissions. Spills on site can affect air quality. Adherence to environmental protection practices will reduce the effects of spills on air quality.

2.1.2 Terrestrial Impacts

During construction, there is a risk for fuel and chemical spills and/or leaks of lubricants from equipment and activities on site that may affect the soils. These spills may occur due to poorly kept equipment or unsafe handling procedures. To reduce risk, the storage of fuel, other petroleum products and lubricants will not be permitted near any water supply (e.g. raw water ponds, La Salle River). The risk of occurrence is low, and standard construction best practices for managing clean-up and removal following any incidents will be followed to prevent impacts.

Construction activities will disturb the vegetation along pipeline installation route and in the WTP expansion footprint. Pond construction activities also would have disturbed the vegetation within the pond footprint and within working areas. Currently these areas are grassed or covered in traffic gravel for access to the west side of the existing WTP.

2.1.3 Aquatic Impacts

Potential environmental impacts to surface water, fish and fish habitat are expected to be negligible during construction. The majority of work will take place at least 250 m from the nearest water body, the La Salle River. No major work will be taking place in or near the water. The raw water intake screen will be removed and replaced with a larger capacity screen (120 L/s) that is DFO-compliant. Standard construction best

management practices for sediment and erosion control will be implemented during construction to reduce impacts to downstream potential aquatic life in ditches and drains. This project does not include any ground water works, and therefore the potential for adverse effects to groundwater (quality and level) is very low.

2.2 ENVIRONMENTAL MITIGATION DURING CONSTRUCTION

2.2.1 Atmospheric Impacts

Dust control during construction using water or approved dust suppressants will limit the impacts of dust to the air quality in the area. Prompt re-vegetation following construction and covering stockpiles will also reduce the impacts of dust. Emissions during construction will be reduced by encouraging all equipment is in good working condition, and that unnecessary transportation and idling are reduced.

2.2.2 Terrestrial Impacts

During construction, the preparation and implementation of an Emergency Spill Response Plan to mitigate potential impacts to soil will reduce negative impacts. On-site spill clean-up equipment and materials will be available and used if a spill does occur. To reduce the likelihood of a spill, equipment will be properly maintained, in good working condition and monitored when fueling. Once construction is completed, the disturbed areas will be revegetated using topsoil and seed to restore suitable ground cover. Standard seeding will be used in appropriate areas. This will limit wind and water erosion. Minimal ground disturbance outside the Project footprint is anticipated during the construction phase by setting limits on the site area.

2.2.3 Aquatic Impacts

Best management practices will be used during construction to minimize impacts to surface water. Mitigation of surface water issues will be achieved by redirecting surface water runoff, pumping accumulated water to adjacent ditches, and providing erosion control practices as required. The Project areas will be revegetated as soon as the Project is completed to reduce run-off and minimize erosion.

In the event of a spill, an Emergency Response Plan will be implemented by the contractor. In the event of a reportable spill Authorities Having Jurisdiction (e.g. Manitoba Environment and Climate Change, the RM of Macdonald) will be notified through the emergency response line. Appropriate remediation measures will be taken according to local requirements.

During operation, the instantaneous flow from the River to the Ponds is increased from 60 L/s to 75 L/s (outside of the spring freshet period). However, there will be no change in the volume of water diverted in one year. The total quantity of water diverted in any one year shall not exceed 1109.00 cubic decameters. The increase in instantaneous flow is reflected in the new Water Rights Licence.

2.2.4 Socioeconomic Impacts

There are no known negative socioeconomic impacts form the proposed Project. It will provide continued safe and reliable drinking water to enhance quality of life and economic potential for the community. Socioeconomic interactions during construction are expected to be minor as construction is short-term. Opportunities for economic activity will likely take place since construction personnel on site will use local facilities (e.g. gas stations, restaurants).

2.3 ENVIRONMENTAL EFFECTS DURING OPERATION

2.3.1 Atmospheric Impacts

Similar to the existing operations, it is expected that during operation of the WTP there are no significant atmospheric impacts. Contributions from operations to greenhouse gas emissions are also not expected to be above background levels and are unlikely to contribute significantly to overall greenhouse gas emissions.

2.3.2 Terrestrial Impacts

During operation there will be little to no impact on the soils. All chemical deliveries that are brought to site will be delivered using standard protection measures to avoid spills and minimal fuel trucks will be brought to site.

2.3.3 Aquatic Impacts

During upgraded operation, aligning with current operations and the Environment Act Licence, the WTP will continue to discharge process waste to settling ponds north of the WTP and then ultimately to the La Salle River. The concentrations of the effluent will be similar to that which is being released currently. Impacts to water quality from the continued release of this effluent are expected to be negligible. The volume of effluent that will be released will increase as the population of the RM of Macdonald increases, however this is not expected to happen immediately and will be gradual. There are no anticipated effects at the raw water intake location, or in-stream works.

2.3.4 Socioeconomic

There are no known negative socioeconomic impacts from the proposed Project. It will provide continued safe and reliable drinking water to enhance quality of life and economic potential for the community.

3 SCHEDULE OF CONSTRUCTION

The design and construction of this project will be funded in part by the Government of Manitoba, through the Manitoba Water Services Board and the RM of Macdonald. At this time, it is anticipated that construction will take place in the fall of 2024, but tendering of the project will not occur until the Environment Act

Proposal and Notice of Alteration are approved. Based on these timelines, our best estimate that the site Civil Works to move piping from expansion construction area will occur in Fall 2024 and the anticipated start of concrete foundation construction is Spring 2025. The anticipated substantial completion date is November 2026. Construction for Raw Water Pond #5 began in 2021 and the pond construction was completed in 2022, currently this pond is in use at the Water Treatment Plant.

4 CLOSURE

This Notice of Alteration was prepared for the Environmental Approvals Branch on behalf of the RM of Macdonald. This Notice of Alteration relates to Environment Act Licence No. 1599 R dated May 3, 2011 and includes the information relevant to the Upgrades taking place at the Rural Municipality of Macdonald's WTP.

The services provided by Associated Engineering (Sask.) Ltd. in the preparation of this Notice were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty expressed or implied is made.

If you have any questions or would like to discuss, please contact the undersigned at andersonk@ae.ca or 204-942-6391.

Yours truly,

[redacted]

[redacted]

Ken Anderson, P.Eng.
Manager, Water

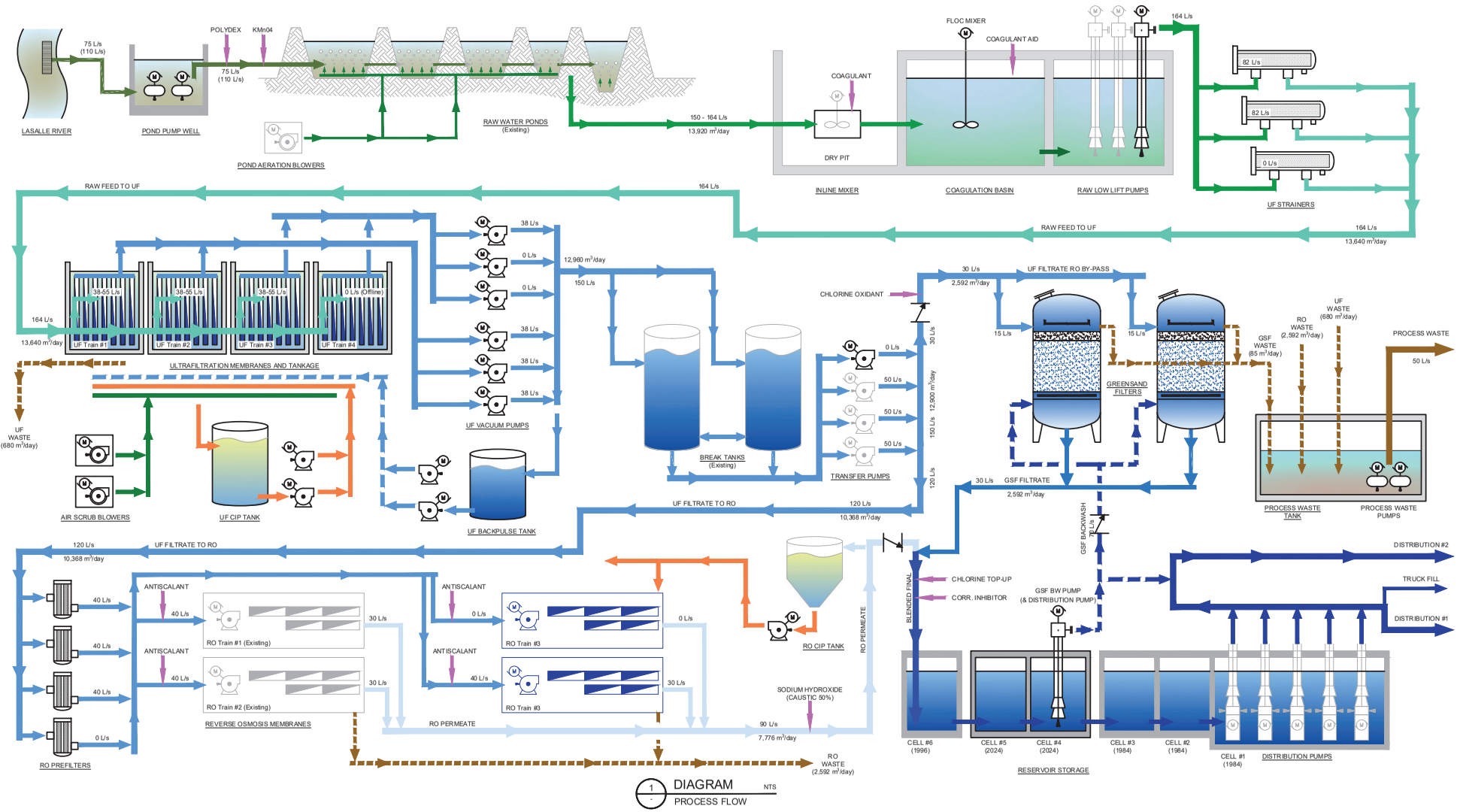
KA/rg

[redacted]

APPENDIX A –DESIGN DRAWINGS & PROCESS FLOW DIAGRAMS

IF NOT 50 mm ADJUST SCALES
50 mm

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22X34) SIZE DRAWINGS, TABLOID (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE



1 DIAGRAM NTS
PROCESS FLOW

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Associated Engineering

MWSB

PRELIMINARY/ FOR DISCUSSION
NOT FOR CONSTRUCTION
DRAFT

REV	DATE	DESIGN	DRAWN	DESCRIPTION
A	2024JUL05	K. ANDERSON	C. HENDRICKS	ISSUED FOR PRE-QUALIFICATION

RURAL MUNICIPALITY OF MACDONALD
MANITOBA WATER SERVICES BOARD

WATER TREATMENT PLANT UPGRADES
AND ASSOCIATED WORKS
M.W.S.B. #1716RFPQ
20224728-01

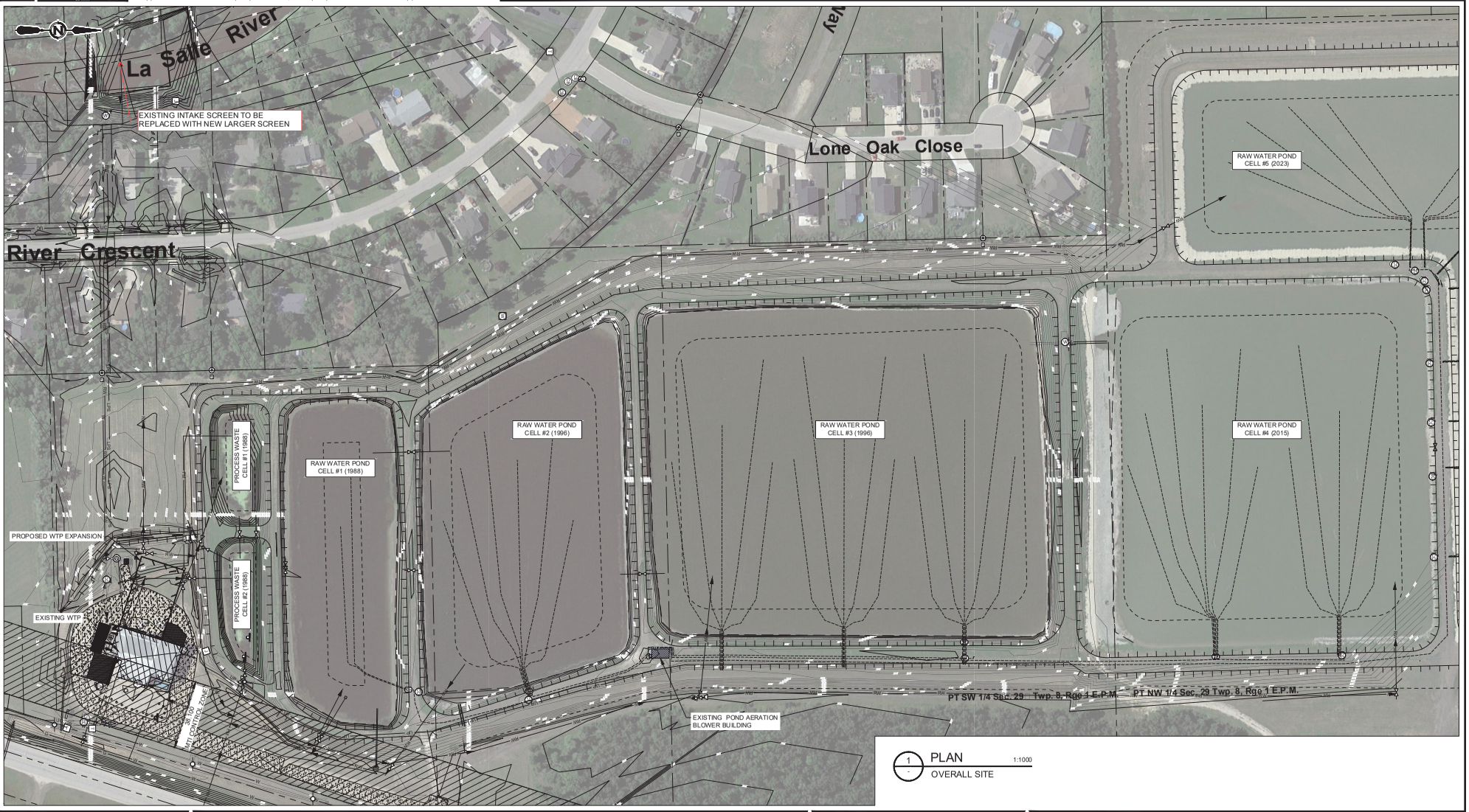
SCALE: AS SHOWN

PROCESS
PROCESS FLOW DIAGRAM

DRAWING	REVISION	SHEET
4728-01-D-011	A	28

IF NOT 50 mm ADJUST SCALES
50 mm

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22X34) SIZE DRAWINGS, TABLOID (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE



1 PLAN 1:1000
OVERALL SITE

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DWG PATH: q:\2022-4728-01\civil\pre-qualification-package\4728-01-c-101-104.dwg

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Platinum member

MWSB

PRELIMINARY/
FOR DISCUSSION
NOT FOR CONSTRUCTION
DRAFT

REV	DATE	DESIGN	DRAWN	DESCRIPTION
A	2024.JUL.05	K. ANDERSON	C. HENDRICKS	ISSUED FOR PRE-QUALIFICATION

RURAL MUNICIPALITY OF MACDONALD
MANITOBA WATER SERVICES BOARD

WATER TREATMENT PLANT UPGRADES
AND ASSOCIATED WORKS
M.W.S.B. #1716RFPQ
20224728-01

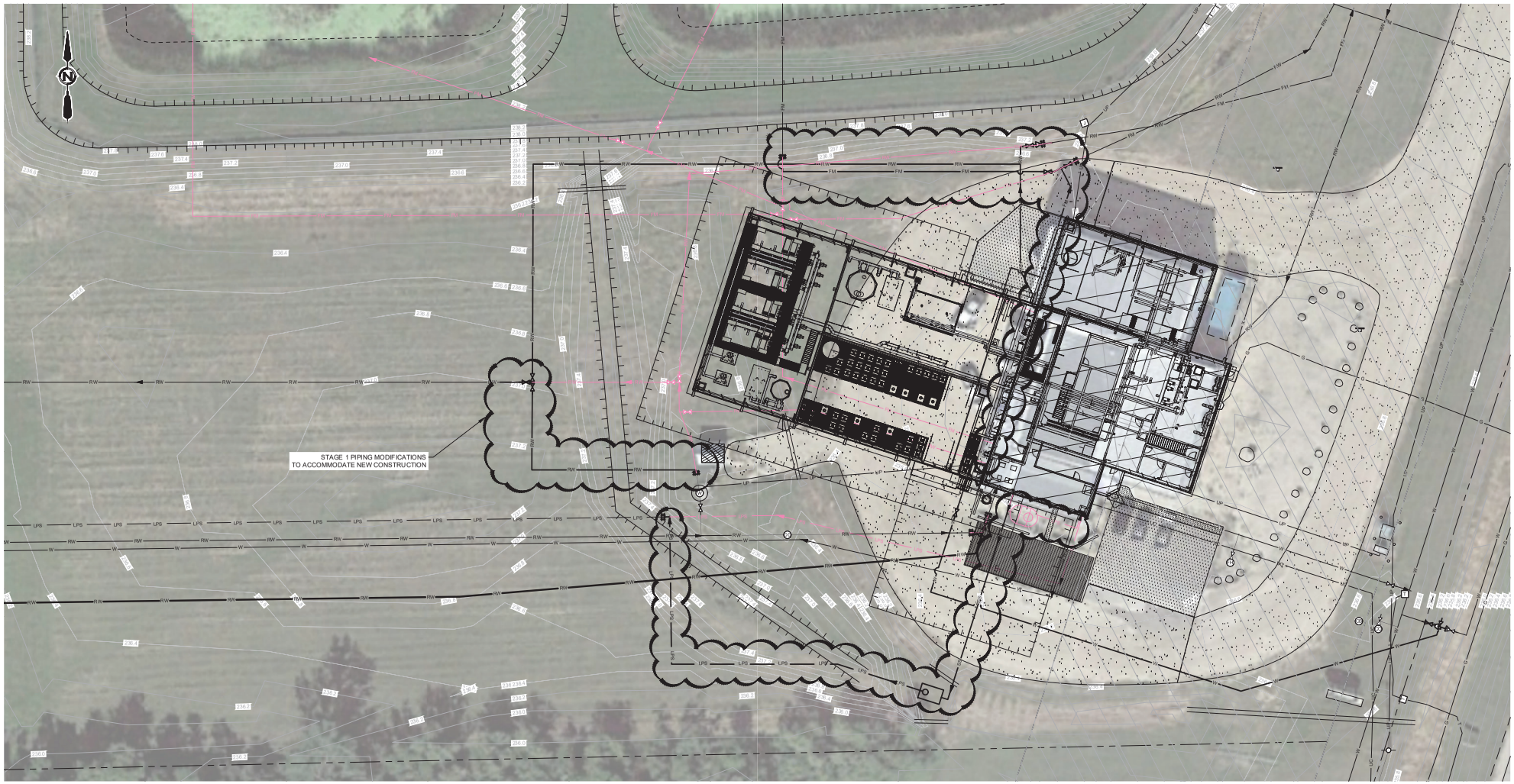
CIVIL
OVERALL SITE PLAN

SCALE: AS SHOWN

DRAWING	REVISION	SHEET
4728-01-C-101	A	3

IF NOT 50 mm ADJUST SCALES
50 mm

SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22X34) SIZE DRAWINGS, TABLOID (11X17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE



1 PLAN 1:250
SITE SERVICES

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NOT FOR CONSTRUCTION

DRAFT

REV	DATE	DESIGN	DRAWN	DESCRIPTION
A	2024JUL05	K. ANDERSON	C. HENDRICKS	ISSUED FOR PRE-QUALIFICATION

RURAL MUNICIPALITY OF MACDONALD
MANITOBA WATER SERVICES BOARD

WATER TREATMENT PLANT UPGRADES
AND ASSOCIATED WORKS
M.W.S.B. #1716RFPQ
20224728-01

SCALE: AS SHOWN

CIVIL
SITE SERVICES PLAN
STAGING OF CIVIL WORKS FOR CONSTRUCTION

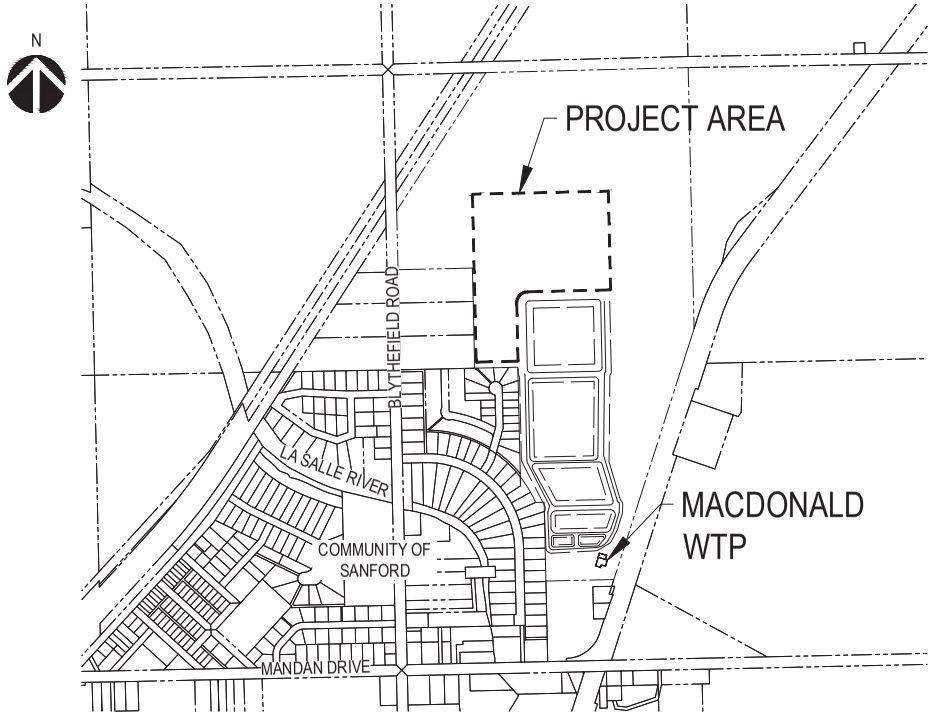
DRAWING	REVISION	SHEET
4728-01-C-104	A	6

APPENDIX B –RAW WATER POND #5 RECORD DRAWINGS

Rural Municipality of Macdonald

MACDONALD WTP RAW WATER STORAGE CELL EXPANSION

SANFORD, MANITOBA



RECORD DRAWINGS

WSP Project No: 211-02711-00
Date: AUGUST 20, 2021

RECORD DRAWING
DATE 2024/09/25 BY B.E.L.
REVIEWED BY D.T.G.B.

DRAWING INDEX:

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1 OVERALL SITE PLAN
SCALE: 1:2000

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2. DESCRIPTION OF PROPERTY LIMITS, AND EXISTING AND/OR PROPOSED FEATURES RELATIVE TO THESE LIMITS AS SHOWN ON THIS DRAWING DO NOT REPRESENT A LEGAL SURVEY. WSP MAKES NO REPRESENTATION OR GUARANTEE THAT THE PROPERTY LIMIT INFORMATION IS ACCURATE. WSP ACCEPTS NO RESPONSIBILITY FOR DAMAGES, IF ANY, SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS OR ACTIONS BASED ON THIS DRAWING.
3. DRAWING IS IN METRIC. WHOLE NUMBERS INDICATE MILLIMETRES, AND DECIMALIZED NUMBERS INDICATE METRES.
4. LOCAL GEODETIC BENCHMARK - 238.055m . BRASS CAP ON NORTH-EAST WING WALL OF PTH #3 BRIDGE OVER LA SALLE RIVER.

RECORD DRAWING
DATE 2024/09/25 BY B.E.L.
REVIEWED BY D.T.G.B.

EXISTING	LEGEND-PLAN	PROPOSED
150 WM	WATER MAIN	150 WM
300 LDS	LAND DRAINAGE SEWER	
250 WWS	WASTE WATER SEWER	
250 FM	FORCEMAIN	
	EDGE OF ROAD / DYKE	
	DYKE TOE	
	APPROX. PROPERTY LINE	
	FENCE	
	TREE OR SHRUB LINE	
	FLOW DIRECTION	
	DITCH/SWALE	
59.367	GROUND ELEVATION	
(00.00)	ROAD ELEVATION	
(00.00)	DYKE ELEVATION	00.00
(00.00)	DITCH ELEVATION	
	SIGN / SURVEY BAR	
	TEST HOLE/TEST PIT	
	GUY WIRE / HYDRO POLE	
	CURB STOP / PLUG	
	VALVE / HYDRANT	
	MANHOLE / CLEANOUT	
	RIP RAP	
	CONCRETE	

REV	DATE	DESCRIPTION	BY
1	2024/09/25	RECORD DRAWINGS	BEL
0	2021/08/20	ISSUED FOR TENDER	DTGB

SEAL:
ORIGINAL DRAWING SEALED BY D.T.G BREDIN AND DATED 2021-08-20

ORIGINAL SCALE: AS SHOWN
DATE: 2021/08/09
DESIGNED BY: D.T.G.B.
ASSISTED BY: V.A.A.
DRAWN BY: V.A.A.
MODIFIED BY: -
APPROVED BY: D.T.G.B.
DISCIPLINE: INFRASTRUCTURE

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

wsp
WSP Canada Inc.
1600 Buffalo Place, Winnipeg, Manitoba R3T 6B8
T 204-477-6650 | www.wsp.com

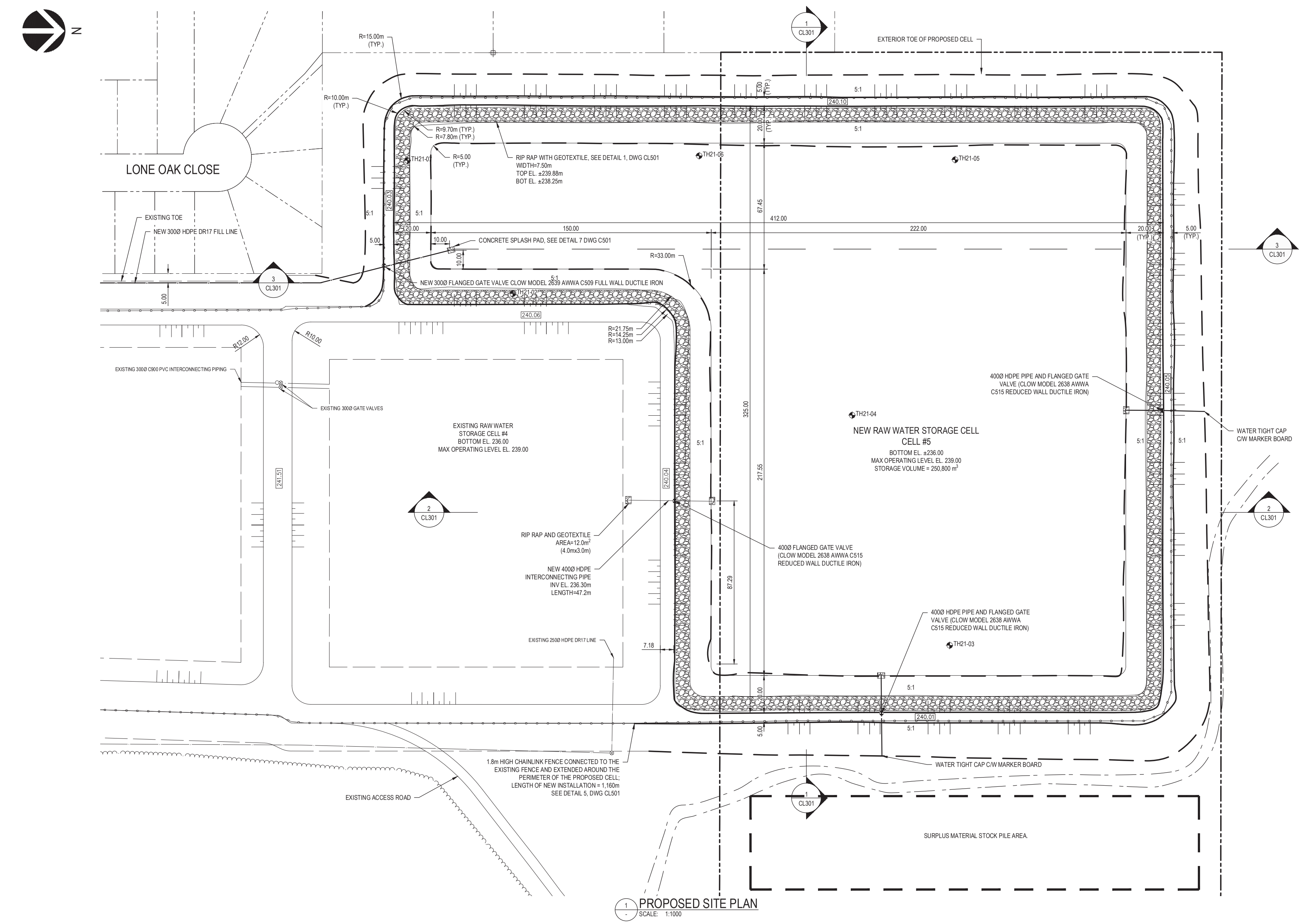
PROJECT NUMBER: 211-02711-00

CLIENT: RURAL MUNICIPALITY OF MACDONALD
CLIENT REF. #: -

TITLE: OVERALL SITE PLAN

PROJECT: MACDONALD WTP RAW WATER STORAGE POND EXPANSION

DRAWING NUMBER: CL101
REV.: 0



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RECORD DRAWING
DATE 2022/04/25 BY B.E.L
REVIEWED BY D.T.G.B.

EXISTING	LEGEND-PLAN	PROPOSED
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59.367	GROUND ELEVATION	
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	TEST HOLE/TEST PIT	
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	CURB STOP / PLUG	
	VALVE / HYDRANT	
	MANHOLE / CLEANOUT	
	RIP RAP	
	CONCRETE	

REV	DATE	DESCRIPTION	BY
1	2024/09/25	RECORD DRAWINGS	BEL
0	2021/08/20	ISSUED FOR TENDER	DTGB

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ORIGINAL SCALE: AS SHOWN
DATE: 2021/08/09
DESIGNED BY: D.T.G.B.
ASSISTED BY: V.A.A.
DRAWN BY: V.A.A.
MODIFIED BY: -
APPROVED BY: D.T.G.B.
DISCIPLINE: INFRASTRUCTURE

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25mm

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PROJECT NUMBER: 211-02711-00

CLIENT: RURAL MUNICIPALITY OF MACDONALD
CLIENT REF #: -

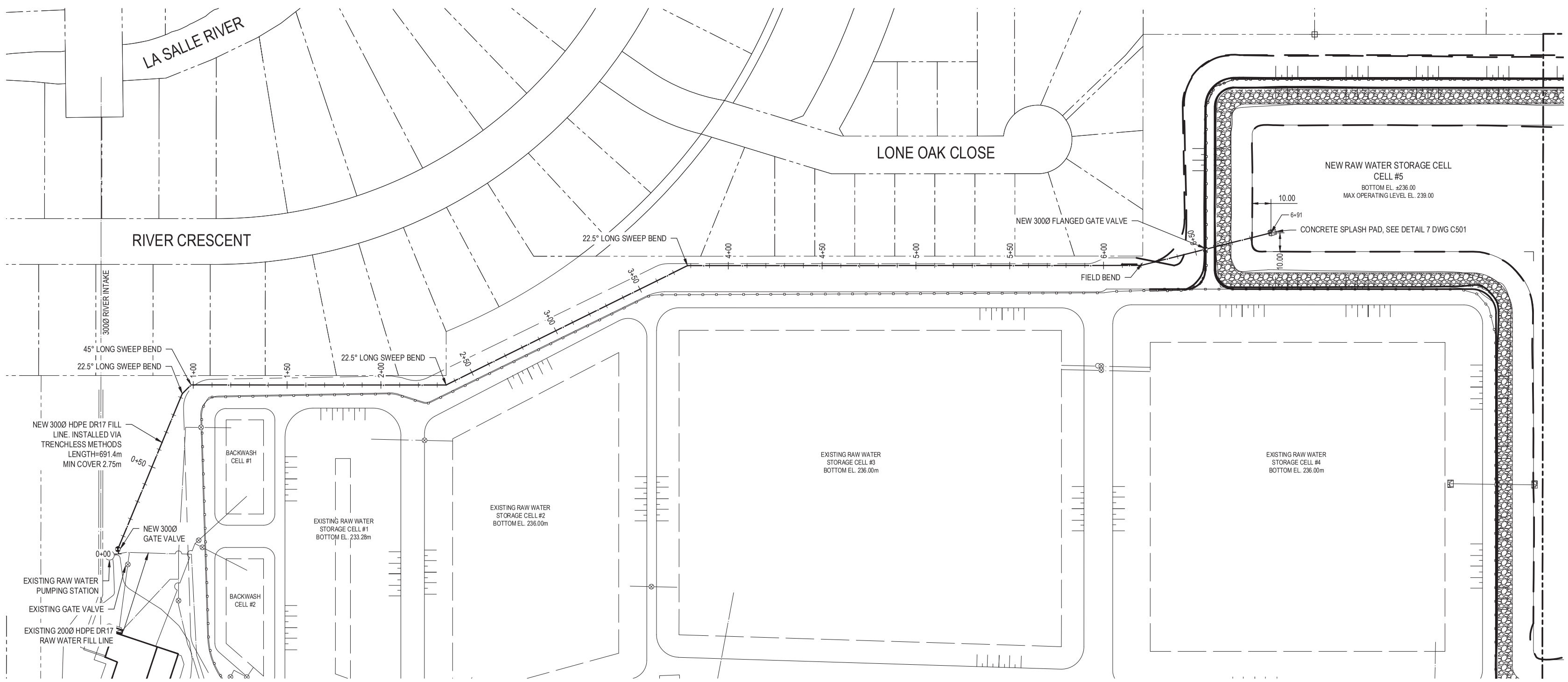
TITLE: PROPOSED SITE PLAN

PROJECT: MACDONALD WTP RAW WATER STORAGE POND EXPANSION

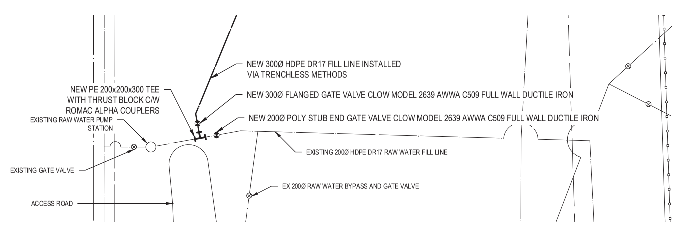
DRAWING NUMBER: CL102
REV. 0

GENERAL DRAWING NOTES:

1. LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
2. DESCRIPTION OF PROPERTY LIMITS, AND EXISTING AND/OR PROPOSED FEATURES RELATIVE TO THESE LIMITS AS SHOWN ON THIS DRAWING DO NOT REPRESENT A LEGAL SURVEY. WSP MAKES NO REPRESENTATION OR GUARANTEE THAT THE PROPERTY LIMIT INFORMATION IS ACCURATE. WSP ACCEPTS NO RESPONSIBILITY FOR DAMAGES, IF ANY, SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS OR ACTIONS BASED ON THIS DRAWING.
3. DRAWING IS IN METRIC. WHOLE NUMBERS INDICATE MILLIMETRES, AND DECIMALIZED NUMBERS INDICATE METRES.
4. BENCHMARK - 238.055m . BRASS CAP ON NORTH-EAST WING WALL OF PTH #3 BRIDGE OVER LA SALLE RIVER.



1 PROPOSED FILL LINE PLAN
SCALE: 1:1250



2 PROPOSED FILL LINE CONNECTION
SCALE: 1:250

RECORD DRAWING
DATE 2024/09/25 BY B.E.L.
REVIEWED BY D.T.G.B.

EXISTING	LEGEND-PLAN	PROPOSED
150 WM	WATER MAIN	150 WM
300 LDS	LAND DRAINAGE SEWER	
250 WWS	WASTE WATER SEWER	
250 FM	FORCEMAIN	
	EDGE OF ROAD / DYKE	
	DYKE TOE	
	APPROX. PROPERTY LINE	
	FENCE	
	TREE OR SHRUB LINE	
	FLOW DIRECTION	
	DITCH/SWALE	
59.367	GROUND ELEVATION	
(00.00)	ROAD ELEVATION	
(00.00)	DYKE ELEVATION	00.00
(00.00)	DITCH ELEVATION	
	SIGN / SURVEY BAR	
	TEST HOLE/TEST PIT	
	GUY WIRE / HYDRO POLE	
	CURB STOP / PLUG	
	VALVE / HYDRANT	
	MANHOLE / CLEANOUT	
	RIP RAP	
	CONCRETE	

REV	DATE	DESCRIPTION	BY
1	2024/09/25	RECORD DRAWINGS	BEL
0	2021/08/20	ISSUED FOR TENDER	DTGB

SEAL:
ORIGINAL DRAWING SEALED BY D.T.G BREDIN AND DATED 2021-08-20

ORIGINAL SCALE: AS SHOWN
DATE: 2021/08/09
DESIGNED BY: D.T.G.B.
ASSISTED BY: V.A.A.
DRAWN BY: V.A.A.
MODIFIED BY: -
APPROVED BY: D.T.G.B.
DISCIPLINE: INFRASTRUCTURE

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

wsp
WSP Canada Inc.
1600 Buffalo Place, Winnipeg, Manitoba R3T 6B8
T 204-477-6650 | www.wsp.com
PROJECT NUMBER: 211-02711-00

CLIENT:
RURAL MUNICIPALITY OF MACDONALD
CLIENT REF. #: -

TITLE:
PROPOSED FILL LINE PLAN

PROJECT:
MACDONALD WTP RAW WATER STORAGE POND EXPANSION

DRAWING NUMBER: CL103
REV.: 0

GENERAL DRAWING NOTES:

1. LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
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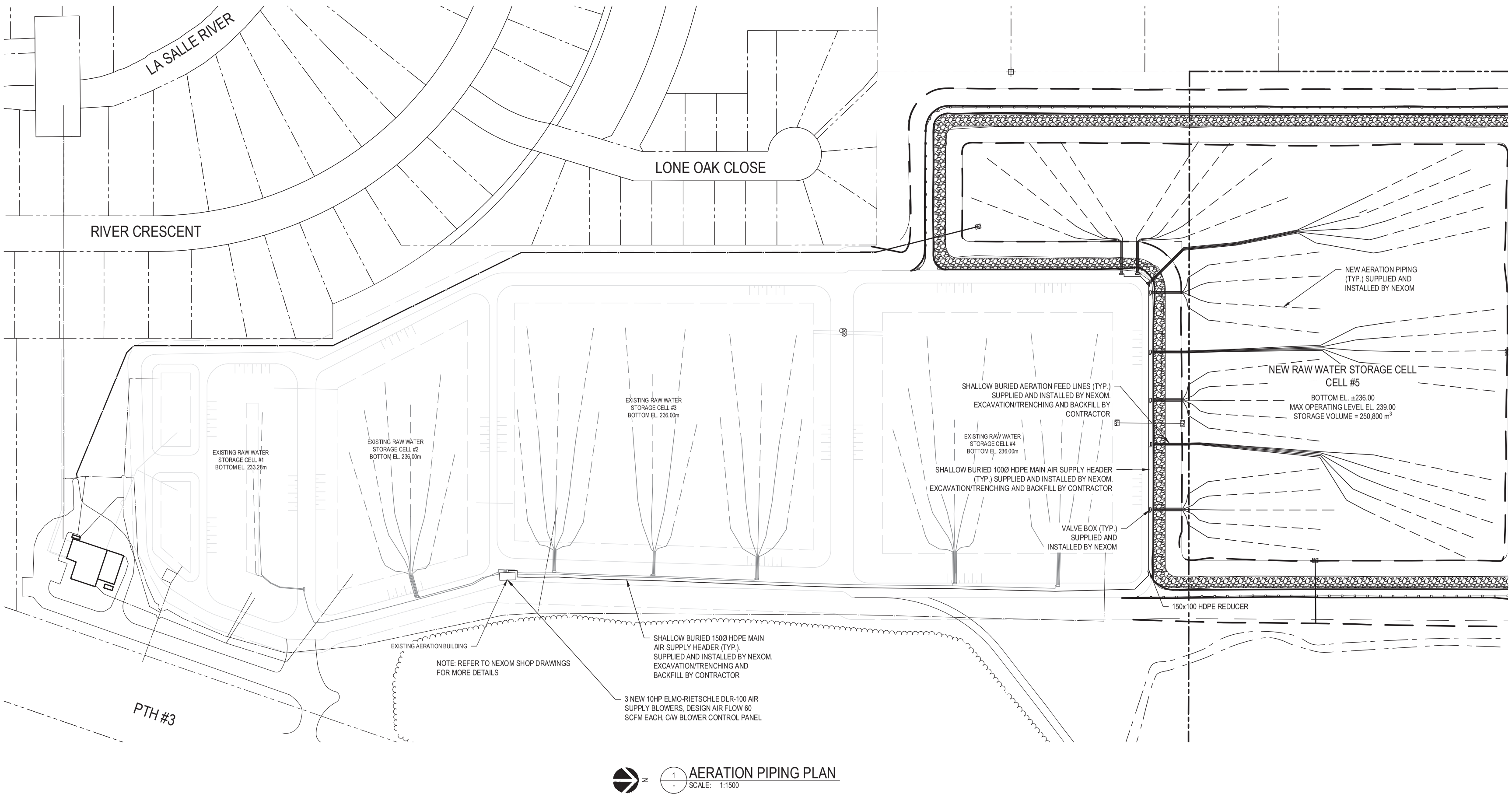
4. BENCHMARK - 238.055m . BRASS CAP ON NORTH-EAST WING WALL OF PTH #3 BRIDGE OVER LA SALLE RIVER.



AERATION PIPING PLAN
SCALE: 1:1500

RECORD DRAWING
DATE 2024/09/25 BY B.E.L.
REVIEWED BY D.T.G.B.

EXISTING	LEGEND-PLAN	PROPOSED
150 WM	WATER MAIN	150 WM
300 LDS	LAND DRAINAGE SEWER	
250 WWS	WASTE WATER SEWER	
250 FM	FORCEMAIN	
	EDGE OF ROAD / DYKE	
	DYKE TOE	
	APPROX. PROPERTY LINE	
	FENCE	
	TREE OR SHRUB LINE	
	FLOW DIRECTION	
	DITCH/SWALE	
59.367	GROUND ELEVATION	
(00.00)	ROAD ELEVATION	
(00.00)	DYKE ELEVATION	00.00
(00.00)	DITCH ELEVATION	
	SIGN / SURVEY BAR	
	TEST HOLE/TEST PIT	
	GUY WIRE / HYDRO POLE	
	CURB STOP / PLUG	
	VALVE / HYDRANT	
	MANHOLE / CLEANOUT	
	RIP RAP	
	CONCRETE	

REV	DATE	DESCRIPTION	BY
1	2024/09/25	RECORD DRAWINGS	BEL
0	2021/08/20	ISSUED FOR TENDER	DTGB

SEAL: ORIGINAL DRAWING SEALED BY D.T.G BREDIN AND DATED 2021-08-20

ORIGINAL SCALE: AS SHOWN
DATE: 2021/08/09
DESIGNED BY: D.T.G.B.
ASSISTED BY: V.A.A.
DRAWN BY: V.A.A.
MODIFIED BY: -
APPROVED BY: D.T.G.B.
DISCIPLINE: INFRASTRUCTURE

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25mm

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PROJECT NUMBER: 211-02711-00

CLIENT: RURAL MUNICIPALITY OF MACDONALD
CLIENT REF. #: -

TITLE: AERATION PIPING PLAN

PROJECT: MACDONALD WTP RAW WATER STORAGE POND EXPANSION

DRAWING NUMBER: CL104
REV. 0

GENERAL DRAWING NOTES:

1. LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
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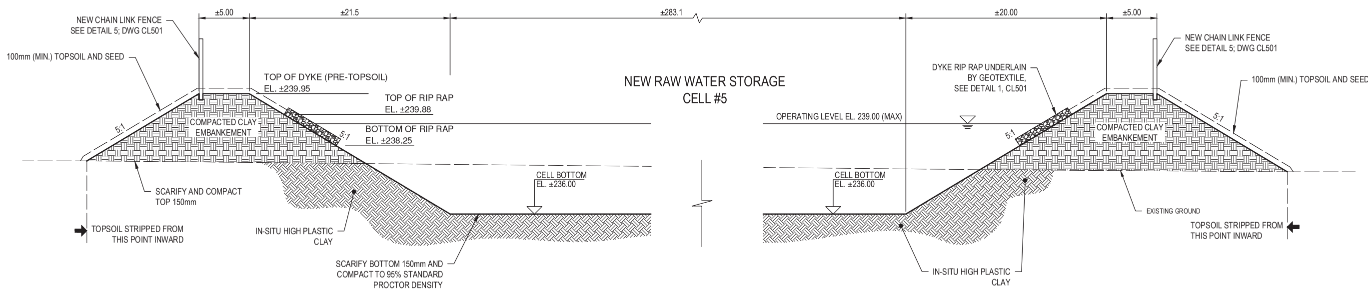
3. DRAWING IS IN METRIC. WHOLE NUMBERS INDICATE MILLIMETRES, AND DECIMALIZED NUMBERS INDICATE METRES.
4. BENCHMARK - 238.055m . BRASS CAP ON NORTH-EAST WING WALL OF PTH #3 BRIDGE OVER LA SALLE RIVER.

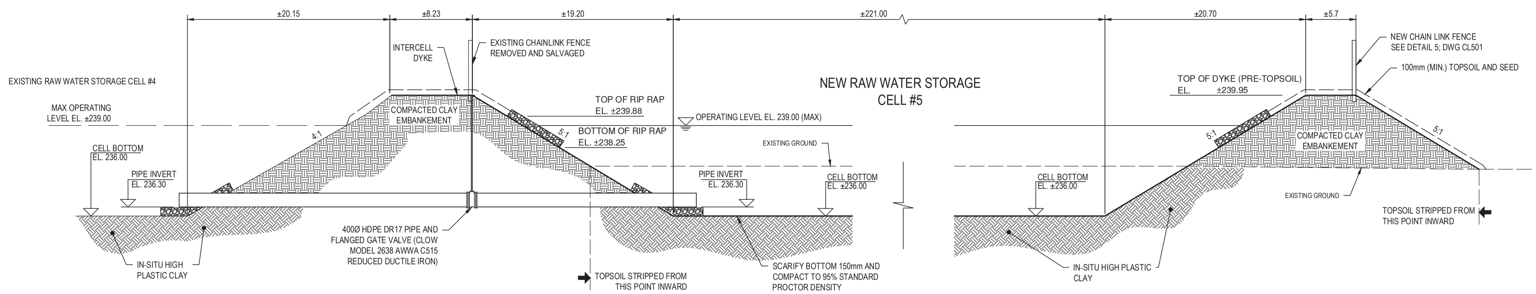
IN SITU MATERIAL

COMPACTED CLAY EMBANKEMENT

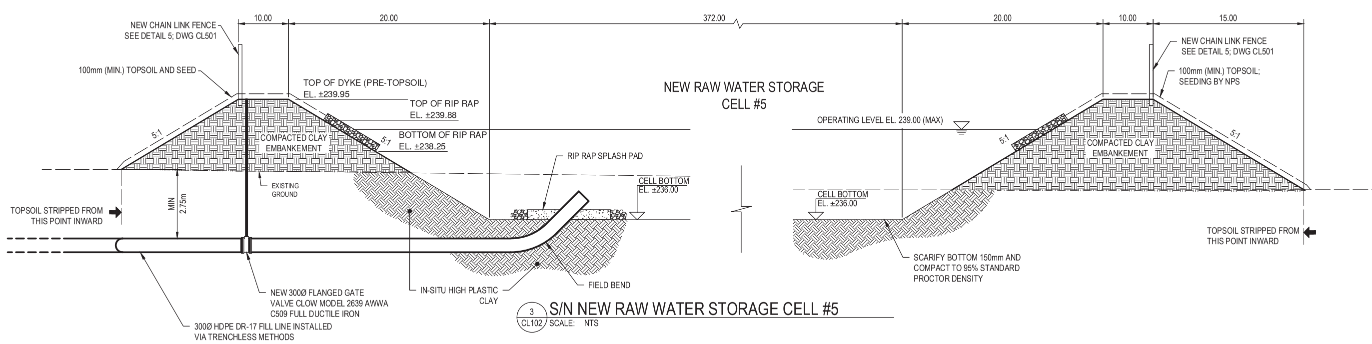
RIP RAP



1 CL102 W/E NEW RAW WATER STORAGE CELL #5
SCALE: NTS



2 CL102 S/N NEW RAW WATER STORAGE CELL #5 AND EXISTING CELL #4 SECTION
SCALE: NTS



3 CL102 S/N NEW RAW WATER STORAGE CELL #5
SCALE: NTS

RECORD DRAWING
DATE 2024/09/25 BY B.E.L.
REVIEWED BY D.T.G.B.

REV	DATE	DESCRIPTION	BY
1	2024/09/25	RECORD DRAWINGS	BEL
0	2021/08/20	ISSUED FOR TENDER	DTGB

SEAL:
ORIGINAL DRAWING SEALED BY D.T.G BREDIN AND DATED 2021-08-20

ORIGINAL SCALE: AS SHOWN
DATE: 2021/08/09
DESIGNED BY: D.T.G.B.
ASSISTED BY: V.A.A.
DRAWN BY: V.A.A.
MODIFIED BY: -
APPROVED BY: D.T.G.B.
DISCIPLINE: INFRASTRUCTURE

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25mm

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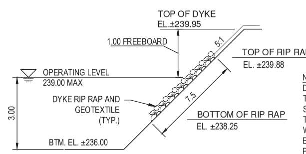
PROJECT NUMBER: 211-02711-00

CLIENT: RURAL MUNICIPALITY OF MACDONALD
CLIENT REF. #: -

TITLE: LAGOON SECTIONS

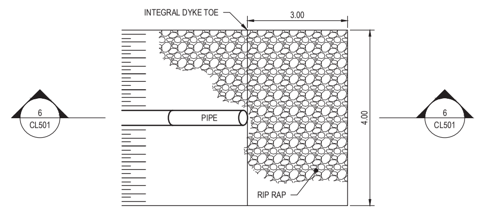
PROJECT: MACDONALD WTP RAW WATER STORAGE POND EXPANSION

DRAWING NUMBER: CL301
REV. 0

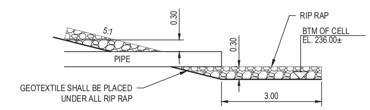


NOTE:
DYKE RIP RAP PLACED FROM EL. 238.25 TO EL. 239.88. AT A 5:1 INTERIOR DYKE SLOPE THIS CORRESCELLS TO A TOTAL WIDTH OF 7.5 METRES. THE WIDTH OF THE RIP RAP WILL BE EXTENDED IN THE CELL CORNERS TO PROVIDE THE NECESSARY COVERAGE.

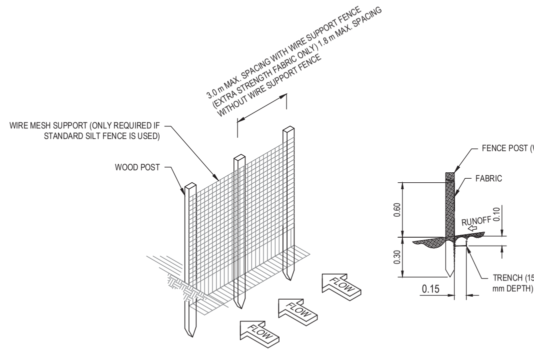
1 / CL102 DYKE RIP RAP AND GEOTEXTILE
SCALE: NTS



3 / - PIPING RIP RAP DETAIL
SCALE: NTS

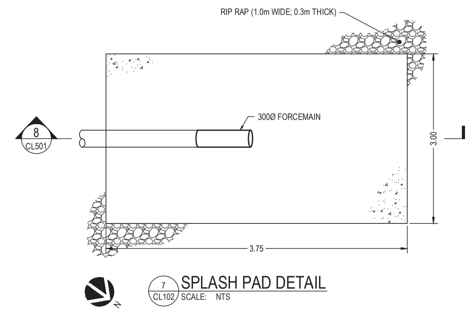


6 / - CELL BOTTOM PIPING AND RIP RAP SECTION
SCALE: NTS

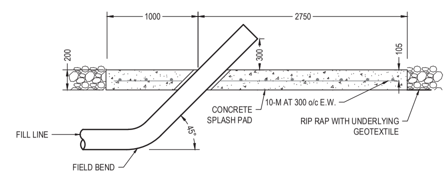


NOTES:
1. POSTS SHALL BE SPACED 3.0 m (MAX.) APART AND DRIVEN 0.3 m (MIN.) INTO THE GROUND. INSTALL ALL POST ON THE DOWNSTREAM SIDE OF THE FENCE.
2. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 150 mm WIDE AND 100 mm DEEP ALONG THE LINE OF POSTS AND ON THE UPSTREAM SIDE.
3. WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSTREAM SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES USING 25 mm (MIN.) LONG STAPLES. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 50 mm AND SHALL NOT EXTEND MORE THAN 0.7 m ABOVE THE ORIGINAL GROUND SURFACE.
4. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 200 mm OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 0.7 m ABOVE THE ORIGINAL GROUND SURFACE
5. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
6. SILT FENCING TO BE POLYPROPYLENE SYNTHETIC FIBRE (UV STABILIZED). WOOD POSTS TO BE 38 mm x 89 mm (2" x 4") AND POINTED AT ONE END.
7. INSPECT AND REPAIR FENCING REGULARLY AND AFTER EACH STORM EVENT.

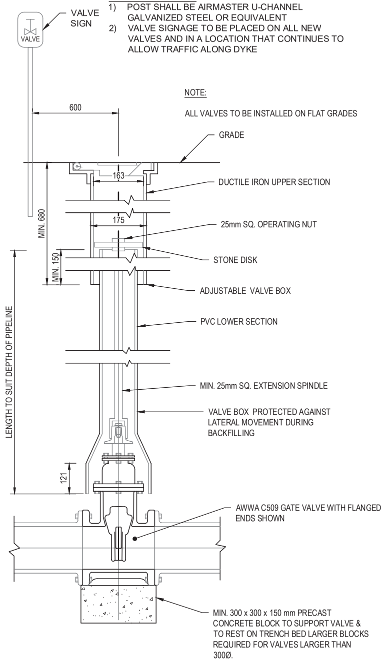
4 / - SILT FENCE DETAIL
SCALE: NTS



7 / CL102 SPLASH PAD DETAIL
SCALE: NTS



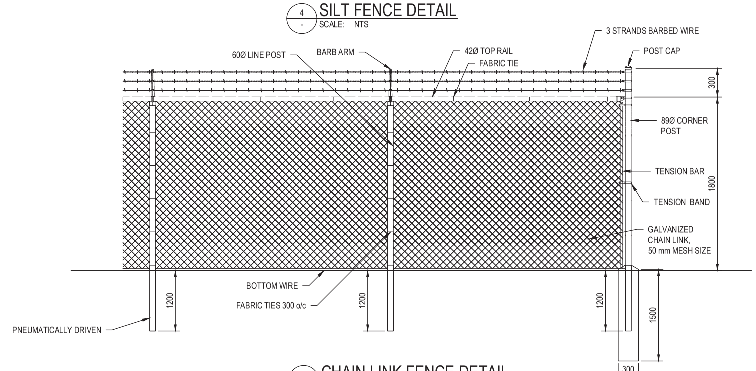
8 / - SPLASH PAD SECTION
SCALE: NTS



VALVE SIGN NOTES:
1) POST SHALL BE AIRMASTER U-CHANNEL GALVANIZED STEEL OR EQUIVALENT
2) VALVE SIGNAGE TO BE PLACED ON ALL NEW VALVES AND IN A LOCATION THAT CONTINUES TO ALLOW TRAFFIC ALONG DYKE

NOTE:
ALL VALVES TO BE INSTALLED ON FLAT GRADES

2 / - GATE VALVE INSTALLATION DETAIL
SCALE: NTS



5 / - CHAIN LINK FENCE DETAIL
SCALE: NTS

RECORD DRAWING
DATE 2024/09/25 BY B.E.L.
REVIEWED BY D.T.G.B.

REV	DATE	DESCRIPTION	BY
1	2024/09/25	RECORD DRAWINGS	BEL
0	2021/08/20	ISSUED FOR TENDER	DTGB

SEAL:
ORIGINAL DRAWING SEALED BY D.T.G BREDIN AND DATED 2021-08-20

ORIGINAL SCALE: AS SHOWN
DATE: 2021/08/09
DESIGNED BY: D.T.G.B.
ASSISTED BY: V.A.A.
DRAWN BY: V.A.A.
MODIFIED BY: -
APPROVED BY: D.T.G.B.
DISCIPLINE: INFRASTRUCTURE

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25mm

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PROJECT NUMBER: 211-02711-00

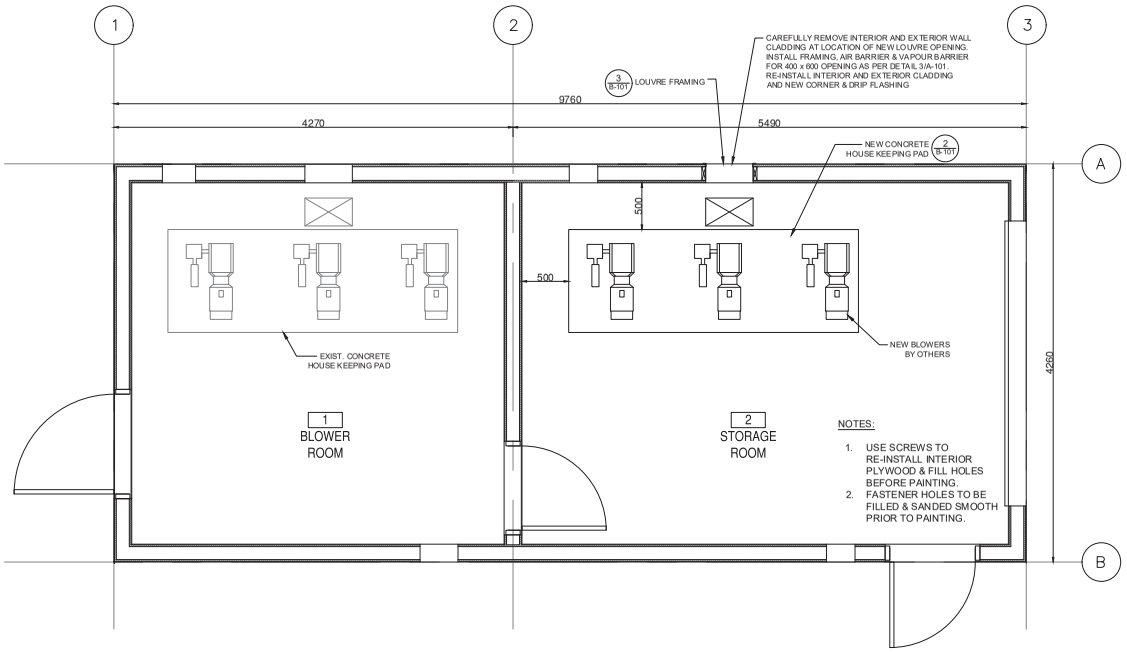
CLIENT:
RURAL MUNICIPALITY OF MACDONALD
CLIENT REF. #: -

TITLE:
MISCELLANEOUS DETAILS

PROJECT:
MACDONALD WTP RAW WATER STORAGE POND EXPANSION

DRAWING NUMBER: CL501
REV.: 0

FILE: c:\users\ca\...\macdonalds wtp raw pond expansion\project files\1.0 civil 3d\as builts\2711-c101-c501-sheet.dwg
PLOTTED: 2024-09-25 - 3:03 PM
CTB: wsp-c3d-black-full.ctb



1 MAIN FLOOR PLAN
1:25

GENERAL NOTES:

1. SITE CONFIRM DIMENSIONS. REPORT ANY DISCREPANCIES TO ENGINEER.

REINFORCING STEEL NOTES:

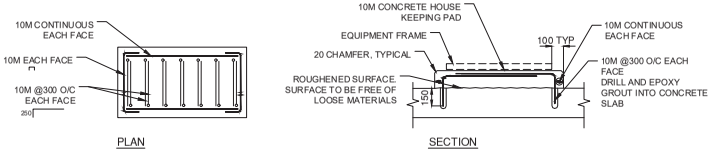
1. ALL REINFORCING STEEL TO BE CSA G30.18M GRADE 400R DEFORMED BARS. ALL REINFORCING IS TO BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE RSIC DETAILING MANUAL, UNLESS NOTED OTHERWISE.
2. ALL REINFORCING TO BE PLAIN BLACK STEEL.
3. ALL COVER TO BE 50 mm CLEAR UNLESS NOTED OTHERWISE.
4. ENSURE COVER TO REINFORCEMENT IS MAINTAINED DURING CONCRETE POUR.
5. ALL REINFORCING TO BE HELD IN PLACE, AND TIED BY THE USE OF PROPER ACCESSORIES , SUCH AS HI-CHAIRS, SPACERS, ETC. TO BE SUPPLIED BY THE CONTRACTOR.
6. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW.
7. DO NOT FIELD BEND REINFORCEMENT UNLESS AUTHORIZED IN WRITING BY ENGINEER.
8. REINFORCING TO BE CLEAN AND FREE FROM LOOSE MATERIAL LIKE SCALE, MUD, OIL, OR OTHER BOND REDUCING COATINGS.

FORMWORK NOTES:

1. VERIFY LINES, LEVELS AND CENTERS BEFORE PROCEEDING WITH FRAMEWORK/FALSEWORK AND ENSURE DIMENSIONS AGREE WITH DRAWINGS.
2. INSPECT FORMWORK PRIOR TO PLACING CONCRETE TO ENSURE THAT IT IS PROPERLY PLACED, SUFFICIENTLY RIGID AND TIGHT, THOROUGHLY CLEANED, PROPERLY SURFACE TREATED AND FREE FROM SNOW, ICE, WATER, OR OTHER FOREIGN MATERIALS.

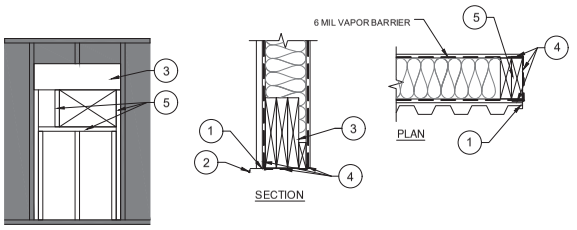
CONCRETE NOTES:

1. ALL CONCRETE IS TO BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF CAN/CSA-A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" AND CAN3-CSA A23.2 "TEST METHODS AND STANDARD PRACTICES FOR CONCRETE."
2. PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1, ALTERNATIVE 1 TO GIVE FOLLOWING QUALITY FOR ALL CONCRETE:
   2.1. CEMENT: TYPE GU OR GUb PORTLAND CEMENT.
   2.2. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 30MPa.
   2.3. AIR ENTRAINMENT: NONE REQUIRED
3. SUBMIT CONCRETE MIX DESIGN TO THE ENGINEER FOR REVIEW.
4. FINISH CONCRETE SLAB AS STEEL TROWELED FINISH WITHOUT HARDNER.
5. ALL VERTICAL EXPOSED SURFACE SHALL HAVE A SMOOTH - FORMED FINISH.
6. ALL EXPOSED EDGES TO BE 20 mm CHAMFERED.
7. SAWCUT 25 mm DEEP CONTRACTION JOINT AT LOCATIONS SHOWN.



NOTE:
CONTRACTOR TO COORDINATE LOCATION, DIMENSIONS AND EQUIPMENT ANCHORAGE FOR HOUSEKEEPING PADS.

2 DETAIL
1:20



3 DETAIL
N.T.S

KEY NOTES:

1. 32x41 GALVANIZED METAL CORNER FLASHING
2. PRE-FINISHED GALVANIZED DRIP FLASHING
3. LINTEL: 3-38X235
4. LAP AND SEAL AIR BARRIER & VAPOUR BARRIER TO PROVIDE CONTINUOUS AIR TIGHT SEAL AT ALL OPENINGS. TYPICAL.
5. 38x140 EACH SIDE OF OPENING

RECORD DRAWING
DATE 2024/09/25 BY B.E.L.
REVIEWED BY D.T.G.B.

IS	RE	DATE	DESCRIPTION
1	0	2024-09-25	RECORD DRAWINGS
1	0	2021-08-27	ISSUED FOR ADDENDUM

SEAL:

CLIENT: RURAL MUNICIPALITY OF MACDONALD
CLIENT REF. #:

PROJECT: MACDONALD WTP RAW WATER STORAGE POND EXPANSION
PROJECT NO: 211-02711-00
DATE: 2021-08-27

wsp
1600 BUFFALO PLACE
WINNIPEG, MANITOBA
CANADA R3T 0B8
PHONE: 204-477-6650 FAX: 204-474-2864
WWW.WSP.COM

ORIGINAL SCALE: AS NOTED

TITLE: EXISTING BLOWER BUILDING MAIN FLOOR PLAN, NEW HOUSE KEEPING PAD AND LOUVRE OPENING

SHEET NUMBER: B-101

DESIGNED BY: AK
DRAWN BY: IFD
CHECKED BY: AK
DISCIPLINE: BUILDINGS
ISSUE: ISSUED FOR ADDENDUM
REV #: 0
DATE OF: 2024-09-25

FIXED LOUVRES - ALUMINUM:

1. TAGS: IL-3
   - .1 Depth 100mm (4 Inches)
   - .2 Frame Style: Channel Frame
   - .3 Frame Thickness: 0.081" 6063-T5 Extruded Aluminum
   - .4 Blade Thickness: 0.081" 6063-T5 Extruded Aluminum
   - .5 Blade Centres: 89 mm (3 1/2 Inches)
   - .6 Blade Angle: 35 Degrees
   - .7 Minimum Free Area Percentage: 68 Percent
   - .8 Insect Screen: 18 x 14 Mesh
   - .9 Paint Color: supply standard color sample to client
   - .10 Size: TAG Dimensions
     IL-3 500x300 mm (20"x12")
   - .11 Approved Manufactures:
     - .1 Ventex
     - .2 WestVent
     - .3 Ruskin

.2 INSTALLATION
- .1 Install where indicated.
- .2 In accordance with manufacturer's and SMACNA recommendations.
- .3 Reinforce and brace as indicated.
- .4 Anchor securely into opening. Seal with caulking around to ensure weather tightness.

GALVANIZED STEEL DUCT:
- .1 Lock forming quality: to ASTM A653, Z90 zinc coating.
- .2 Thickness, fabrication and reinforcement: to ASHRAE.
- .3 Joints: to ASHRAE proprietary manufactured duct joint.

DUCT INSULATION:
- .1 Mineral fibre: as specified includes glass fibre, rock wool, slag wool.
- .2 Thermal conductivity ("k" factor) not to exceed specified values at 24 °C mean temperature when tested in accordance with ASTM C335.
- .3 TIAC Code C-1: Rigid mineral fibre board to ASTM C612, with factory applied vapour retarder jacket to CGSB 51-GP-52MA (as scheduled in PART 3 of this section).
- .4 TIAC Code C-2: Mineral fibre blanket to ASTM C553 faced with factory applied vapour retarder jacket to CGSB 51-GP-52MA (as scheduled in PART 3 of this section).
  - .1 Mineral fibre: to ASTM C553.
  - .2 Jacket: to CGSB 51-GP-52MA.
  - .3 Maximum "k" factor: to ASTM C553.

DUCT JACKETS:
- .1 Canvas: on concealed and exposed duct located in the building interior.
  - .1 220 gm/m2 cotton, plain weave, treated with dilute fire retardant lagging adhesive to ASTM C921.
- .2 Lagging adhesive: Compatible with insulation.
- .3 Aluminum: on duct located on building exterior.
  - .1 To ADTM B209 with moisture barrier as scheduled in PART 3 of this section.
  - .2 Thickness: 0.50 mm sheet.
  - .3 Finish: Stucco embossed.
  - .4 Jacket banding and mechanical seals: 19 mm wide, 0.5 mm thick stainless steel.

DUCT INSULATION ACCESSORIES:
- .1 Vapor retarder lap adhesive:
  - .1 Water based, fire retardant type, compatible with insulation.
- .2 Indoor Vapor Retarder Finish:
  - .1 Vinyl emulsion type acrylic, compatible with insulation.
- .3 Insulating Cement: hydraulic setting on mineral wool, to ASTM C449.
- .4 Outdoor Vapour Retarder Mastic:
  - .1 Vinyl emulsion type acrylic, compatible with insulation.
  - .2 Reinforcing fabric: Fibrous glass, untreated 305 g/m2.
- .5 Tape: self-adhesive, aluminum, reinforced, 50 mm wide minimum.
- .6 Contact adhesive: quick-setting.
- .7 Canvas adhesive: washable.
- .8 Tie wire: 1.5 mm stainless steel.
- .9 Banding: 12 mm wide, 0.5 mm thick stainless steel.
- .10 Facing: 25 mm stainless steel hexagonal wire mesh stitched on one face of insulation.
- .11 Fasteners: 4 mm diameter pins with 35 diameter clips, length to suit thickness of insulation.

ACCESS DOORS IN DUCTS
- .1 Non-Insulated Ducts: sandwich construction of same material as duct, one sheet metal thickness heavier, minimum 0.6 mm thick complete with sheet metal angle frame.
- .2 Insulated Ducts: sandwich construction of same material as duct, one sheet metal thickness heavier, minimum 0.6 mm thick complete with sheet metal angle frame and 25 mm thick rigid glass fibre insulation.
- .3 Gasket: neoprene.
- .4 Hardware:
  - .1 Up to 300 x 300 mm: two sash locks.
  - .2 301 to 450 mm: four sash locks.
  - .3 451 to 100 mm: piano hinge and minimum two sash locks.
  - .4 Doors over 1000 mm: piano hinge and two handles operable from both sides.
  - .5 Hold open devices.

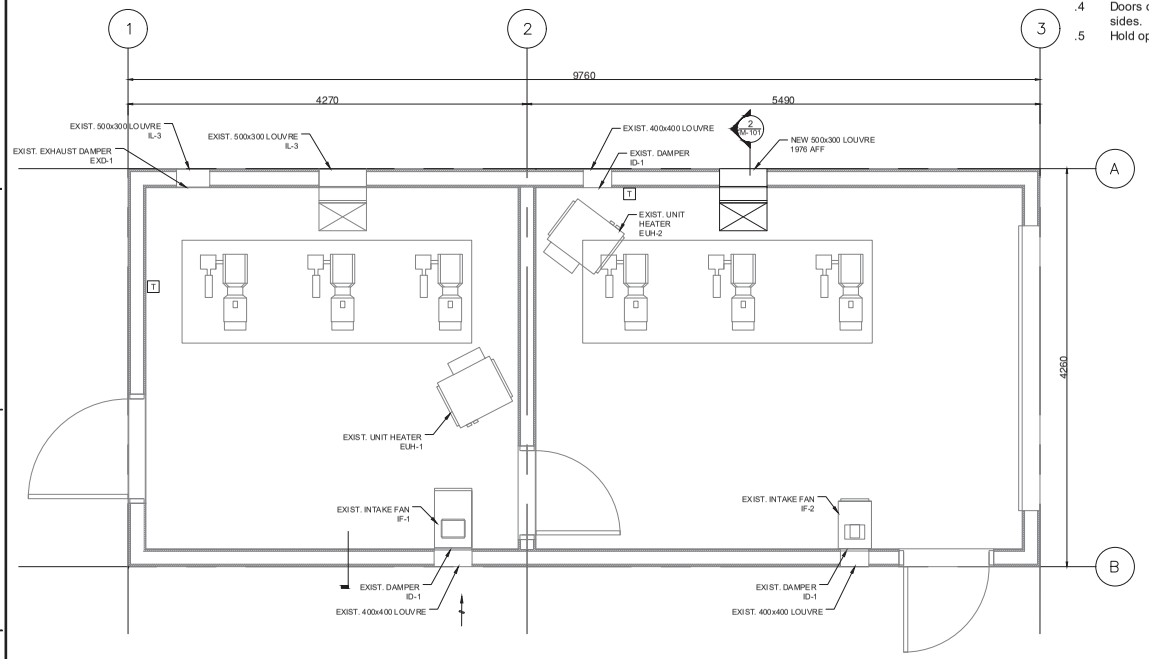
DUCT INSULATION INSTALLATION:
- .1 Install in accordance with TIAC National Standards.
- .2 Apply materials in accordance with manufacture's instructions and as indicated.
- .3 Use two layers with staggered joints when required nominal thickness exceeds 75 mm.
- .4 Maintain uninterrupted continuity and integrity of vapour retarder jacket and finishes.
  - .1 Hangers, supports to be outside vapour retarder jacket.
- .5 Supports, Hangers in accordance with Section 23 05 29 - Hangers and Supports for HVAC Piping and Equipment.
  - .1 Apply high compressive strength insulation where insulation may be compressed by weight of ductwork.
- .6 Fasteners: At 300 mm oc in horizontal and vertical directions, minimum two rows each side.

DUCTWORK INSULATION SCHEDULE
- .1 Insulation types and thicknesses: Conform to following table:

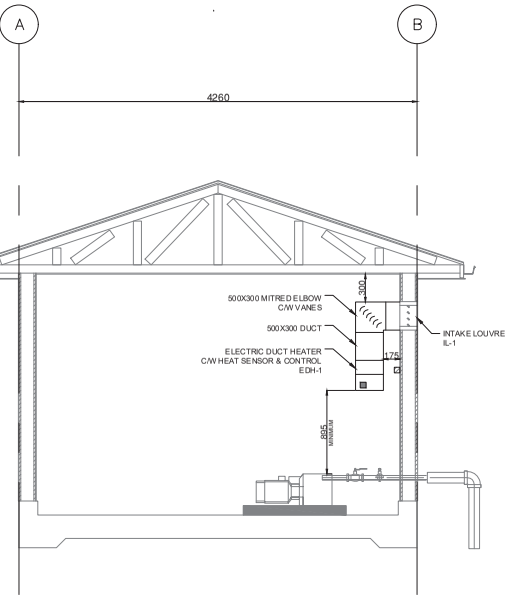
	TIAC Code	Vapour Retarder	Thickness (mm)
Rectangular cold and dual temperature supply air ducts	C-1	Yes	50
Exhaust duct between dampers and louvres	C-1	No	25

- .2 Exposed round ducts 600mm and larger, smaller sizes where subject to abuse:
  - .1 Use TIAC code C-1 insulation, scored to suit diameter of duct.
    - .1 Finishes: Conform to following table:

	TIAC Code	
	Rectangular	Round
Indoor, exposed within mechanical room	CRF/1	CRD/2



1 MAIN FLOOR PLAN
1:25



2 SECTION
1:25

RECORD DRAWING
DATE 2024/09/25 BY B.E.L
REVIEWED BY D.T.G.B.

IS	RE	DATE	DESCRIPTION
1	0	2024-09-25	RECORD DRAWINGS
1	0	2021-08-27	ISSUED FOR ADDENDUM

SEAL:

CLIENT: RURAL MUNICIPALITY OF MACDONALD
CLIENT REF.#:

PROJECT: MACDONALD WTP RAW WATER STORAGE POND EXPANSION
PROJECT NO: 211-02711-00
DATE: 2021-08-27

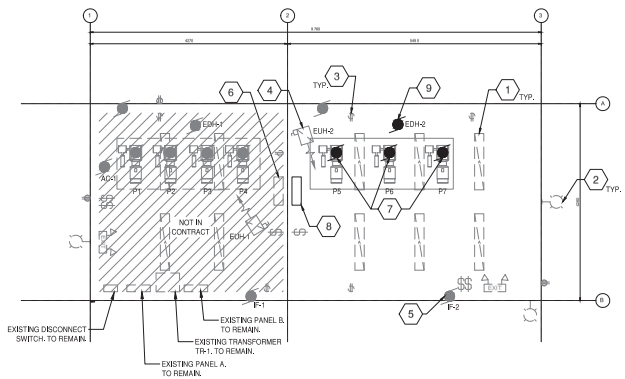
wsp
1600 BUFFALO PLACE
WINNIPEG, MANITOBA
CANADA R3T 6B8
PHONE 204-477-6650 FAX 204-474-7664
WWW.WSP.COM

ORIGINAL SCALE: AS NOTED

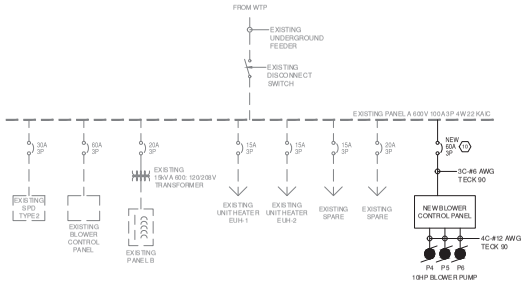
TITLE: EXISTING BLOWER BUILDING MECHANICAL PLAN & SECTION

SHEET NUMBER: M-101

DESIGNED BY: AK
DRAWN BY: IFD
CHECKED BY: AK
DISCIPLINE: BUILDINGS
ISSUE: RECORD DRAWINGS
REV.#: 0
DATE OF: 2024-09-25



1 MAIN FLOOR PLAN
SCALE: 1:50



2 SINGLE LINE DIAGRAM
NTS

KEYNOTES:

1. EXISTING INTERIOR LIGHTS TO REMAIN. CONTRACTOR TO PROVIDE PROTECTION DURING CONSTRUCTION.
2. EXISTING EXTERIOR LIGHTS TO REMAIN. CONTRACTOR TO PROVIDE PROTECTION DURING CONSTRUCTION.
3. EXISTING POWER TO REMAIN. CONTRACTOR TO PROVIDE PROTECTION DURING CONSTRUCTION.
4. EXISTING UNIT HEATER TO REMAIN. CONTRACTOR TO PROVIDE PROTECTION DURING CONSTRUCTION.
5. EXISTING INTAKE FAN TO REMAIN. CONTRACTOR TO PROVIDE PROTECTION DURING CONSTRUCTION.
6. EXISTING CONTROL PANEL FOR THE EXISTING BLOWER PUMP 1 TO 3.
7. NEW THREE (3) 10HP BLOWER PUMPS C/W HOUSE KEEPING PAD. WIRE AND CONNECT TO THE NEW CONTROL PANEL, COORDINATE WITH THE PUMP AND CONTROL PANEL SUPPLIER FOR THE WIRING AND CONTROLS.
8. NEW CONTROL PANEL, WIRE AND CONNECT TO EXISTING PANEL A. COORDINATE WITH CONTROL PANEL SUPPLIER FOR THE POWER AND CONTROL REQUIREMENTS FOR THE BLOWER PUMPS.
9. NEW ELECTRIC DUCT HEATER, WIRE AND CONNECT TO PANEL B CIRCUIT NO. 9-14,16,18. NEW ELECTRIC DUCT HEATER TO BE THE SAME AS THE EXISTING DUCT HEATER. COORDINATE WITH SUPPLIER FOR THE REQUIRED POWER AND CONTROL WIRE CONNECTION.
10. REPLACE EXISTING SPARE 30A 3P BREAKER WITH 60A 3P BREAKER. NEW BREAKER SHALL MATCH THE KAIC RATING OF THE EXISTING BREAKERS.
11. REPLACE EXISTING THREE (3) SPARE 15A-1P BREAKER WITH 20A-3P BREAKER. NEW BREAKER SHALL MATCH THE KAIC RATING OF THE EXISTING BREAKERS.

GENERAL NOTES:

1. THE DRAWINGS ONLY SHOWN A GENERAL SCHEMATIC OF NEW SYSTEMS. ROUTING OF CONDUITS OR CABLES AND LOCATION. ACTUAL SITE CONDITIONS MIGHT HAVE CHANGED THE INTENDED ROUTING AND ADJUSTMENTS WERE NECESSARY. THE MODIFICATIONS COMPLIED WITH LATEST EDITION OF CEC AND LOCAL REGULATION.
2. DO NOT SCALE DRAWINGS. CONTRACTOR VERIFIED ALL DIMENSIONS PRIOR TO ELECTRICAL INSTALLATION. REPORTED ANY DISCREPANCY TO THE ENGINEER PRIOR TO ROUGH-IN.
3. DRAWINGS FOR ELECTRICAL WORK WAS DIAGRAMMATIC AND WAS INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
4. INSTALLED ALL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
5. PROVIDED ALL MATERIAL, EQUIPMENT AND PERFORMED ALL LABOUR REQUIRED TO INSTALLED COMPLETED AND OPERABLE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS, TO THE APPROVAL OF ALL LOCAL AND PROVINCIAL CODES, REGULATIONS AND THE LOCAL INSPECTORS.
6. COORDINATED CONSTRUCTION OF ALL ELECTRICAL WORK WITH MECHANICAL PROCESSING, ARCHITECTURAL, STRUCTURAL, CIVIL WORK ETC WHERE APPLICABLE.
7. THE CONTRACTOR GUARANTEED ALL WORK AND EQUIPMENT UNDER THIS CONTRACT FOR A PERIOD OF 12 MONTHS AFTER FINAL PERFORMANCE OF CONTRACT IS ISSUED AND HAND IN OVER TO OWNER.
8. WHERE 'TYPICAL' WAS USED, IT APPLIED TO ALL SIMILAR DEVICES ALSO INDICATED ON PLANS.
9. ALL MATERIALS AND METHODS SHALL BE SUITABLE FOR A DAMP, HUMID ENVIRONMENT AND LONG TERM EXPOSURE TO A MILDLY CORROSIVE ATMOSPHERE.
10. CONTRACTOR AND SYSTEM INTEGRATOR WERE ALLOW FOR COORDINATION WITH FILTER SYSTEM MANUFACTURER, I/O, COMMUNICATIONS, AND WIRING.
11. CONTRACTOR AND SYSTEM INTEGRATOR WERE ALLOW FOR COORDINATION WITH TRADES AND EQUIPMENT SUPPLIERS.
12. CONTRACTOR TO PROVIDE PROTECTION ON ALL EXISTING DEVICES/EQUIPMENTS THAT WILL REMAIN.
13. IF EXISTING SYSTEM/DEVICE'S/EQUIPMENT IS DAMAGED DUE TO DEMOLITION AND CONSTRUCTION, CONTRACTOR TO MAKE FULL REPAIRS WITHOUT EXTRA COST TO SATISFACTION OF THE ENGINEER.

LEGEND:

- EXISTING INTERIOR LIGHTS
- EXISTING EXTERIOR LIGHTS
- EXISTING EMERGENCY LIGHTS
- EXISTING LIGHT SWITCH
- EXISTING POWER
- EXISTING MOTOR
- EXISTING ELECTRICAL PANEL
- EXISTING UNIT HEATER
- NEW BLOWER MOTOR
- NEW BLOWER MOTOR CONTROL PANEL

PANEL A (EXISTING) LOCATION BLOWER ROOM MOUNTING SURFACE DOOR ✓ LOCK ✓
CIRCUITS 24 BUS 100A VOLTS 347/600 PHASE 3 WIRE 4
MAIN BKR. MAIN LUGS ONLY INTERRUPTING CAPACITY 22KAIC

SERVICE	LOAD WATTS	BRK. AMP POLE	CIRCUIT		BRK. AMP POLE	LOAD WATTS	SERVICE
			A	B C			
EXISTING CONTROL PANEL		60A 3P	1	2	30A 3P		SPARE
			3	4			
			5	6			
NEW CONTROL PANEL		60A 3P	7	8	20A 3P		SPARE
			9	10			
			11	12			
EXISTING TRANSFORMER SUB PANEL B		20A 3P	13	14	15A 3P		STORAGE ROOM EXISTING ELECTRIC UNIT HEATER
			15	16			
			17	18			
SPARE		15A 3P	19	20	15A 3P		PUMP ROOM EXISTING ELECTRIC UNIT HEATER
			21	22			
			23	24			

NOTE:
1. PANEL c/w BOLT-ON CIRCUIT BREAKERS AS SCHEDULED AND ADDITIONAL GROUND BAR FOR ISOLATED GROUND CIRCUITS.
2. CIRCUIT BREAKER TO BE THERMAL MAGNETIC MOULDED CASE TYPE.

PANEL B (EXISTING) LOCATION BLOWER ROOM MOUNTING SURFACE DOOR ✓ LOCK ✓
CIRCUITS 24 BUS 100A VOLTS 120/208 PHASE 3 WIRE 4
MAIN BKR. MAIN LUGS ONLY INTERRUPTING CAPACITY 22KAIC

SERVICE	LOAD WATTS	BRK. AMP POLE	CIRCUIT		BRK. AMP POLE	LOAD WATTS	SERVICE
			A	B C			
EXISTING PUMP ROOM LIGHTS		15A 1P	1	2	15A 1P		EXISTING STORAGE ROOM LIGHTS
EXISTING EAST PUMP ROOM PLUGS		15A 1P	3	4	15A 1P		EXISTING PUMP RM WEST & SOUTH PLUGS
EXISTING STORAGE EAST & SOUTH PLUGS		15A 1P	5	6	15A 1P		EXISTING STORAGE WEST PLUGS
EXISTING SOUTH GFI AND EXTERIOR LIGHTS		15A 1P	7	8	15A 1P		EXISTING NORTH & EAST EXTERIOR LIGHTS
EXISTING EAST SOUTH EXHAUST FAN		20A 1P	9	10	15A 1P		SPARE
SPARE		15A 1P	11	12	20A 1P		EXISTING EAST NORTH EXHAUST FAN
EXISTING ELECTRIC DUCT HEATER (EDH-1) BLOWER ROOM		20A 3P	13	14	15A 1P		SPARE
			15	16	15A 1P		SPARE
			17	18	15A 1P		SPARE
NEW ELECTRIC DUCT HEATER (EDH-2) STORAGE ROOM (A)		20A 3P	19	20	15A 1P		SPARE
			21	22	20A 1P		EXISTING AIR CONDITION
			23	24			

NOTE:
1. PANEL c/w BOLT-ON CIRCUIT BREAKERS AS SCHEDULED AND ADDITIONAL GROUND BAR FOR ISOLATED GROUND CIRCUITS.
2. CIRCUIT BREAKER TO BE THERMAL MAGNETIC MOULDED CASE TYPE.

RECORD DRAWING
DATE 2024/09/25 BY B.E.L
REVIEWED BY D.T.G.B.

IS	RE	DATE	DESCRIPTION
1	0	2024/09/25	RECORD DRAWINGS
1	0	2021/08/27	ISSUED FOR TENDER ADDENDUM 1

SEAL:

CLIENT: RURAL MUNICIPALITY OF MACDONALD
CLIENT REF. #:

PROJECT: MACDONALD WTP RAW WATER STORAGE POND EXPANSION
PROJECT NO: 211-027711-00
DATE: 2021-08-23

wsp
1600 BUFFALO PLACE
WINNIPEG, MANITOBA
CANADA R3T 6B8
PHONE: 204-477-6650 FAX: 204-474-2864
WWW.WSP.COM

ORIGINAL SCALE: AS NOTED

TITLE: EXISTING BLOWER BUILDING MAIN FLOOR PLAN, SINGLE LINE DIAGRAM, PANEL SCHEDULE, NOTES AND LEGEND

SHEET NUMBER: E-101

DESIGNED BY: AE
DRAWN BY: AE
CHECKED BY: ES
DISCIPLINE: ELECTRICAL
ISSUE: RECORD DRAWINGS
DATE OF: 2024-09-25
REV.#: 0

APPENDIX C –RECORDS OF TITLE

RECORD OF TITLE

Title Number **1299328/1**
Title Status **Accepted**
Client File RM of Macdonald - RW Pond

Manitoba Land Titles Registry

1. REGISTERED OWNERS, TENANCY AND LAND DESCRIPTION

THE RURAL MUNICIPALITY OF MACDONALD

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

PARCEL 1: PUBLIC WORKS PLAN 24564 WLTO
IN SW 29-8-1EPM

PARCEL 2: LOT 1 PLAN 29367 WLTO
IN SW 29-8-1 EPM

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. INSTRUMENTS

Registration Number	Effect on Title	Affecting Instrument	Instrument Type	Status	Notes
4237731/1	Active		BL	Accepted	

3. ADDRESSES FOR SERVICE

Active
R.M. OF MACDONALD
BOX 100
SANFORD MB
R0G 2J0

4. TITLE NOTES

No title notes

5. LAND TITLES DISTRICT

Winnipeg

6. DUPLICATE TITLE INFORMATION

Duplicate Produced for: MONK, GOODWIN
800-444 ST. MARY AVE.
WPG., MAN.
R3C 3T1

7. FROM TITLE NUMBERS

1293696/1	All
1274330/1	All

8. REAL PROPERTY APPLICATION / CROWN GRANT NUMBERS

No real property application or grant information

9. ORIGINATING INSTRUMENTS

Instrument Type:	**Request To Issue Title**
Registration Number:	**1658026/1**
Registration Date:	1993-03-26
From/By:	THE RURAL MUNICIPALITY OF MACDONALD
To:	
Amount:	

10. LAND INDEX

Plan 24564

Lot 1 Plan 29367

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA STORAGE SYSTEM OF TITLE NUMBER 1299328/1

RECORD OF TITLE

Title Number **1857417/1**
Title Status **Accepted**
Client File RM of Macdonald - RW

Manitoba Land Titles Registry

1. REGISTERED OWNERS, TENANCY AND LAND DESCRIPTION

THE RURAL MUNICIPALITY OF MACDONALD

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

PARCEL 1: LOT 1 PLAN 40340 WLTO
IN NW 1/4 29-8-1 EPM.

PARCEL 2: LOT 2 PLAN 13944 WLTO
EXC OUT OF PARCEL 2, FIRSTLY: ALL THAT PORTION WHICH LIES TO THE WEST OF THE WESTERN LIMIT OF PLAN 22189 WLTO
SECONDLY: PUBLIC WORKS, PLAN 24564 WLTO, AND
THIRDLY: PLANS 22189, 25513 AND 29367 WLTO.
IN S 1/2 29-8-1 EPM.

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. INSTRUMENTS

No instruments

3. ADDRESSES FOR SERVICE

Active THE R.M. OF MACDONALD
161 MANDAN DRIVE
P.O. BOX 100
SANFORD, MB.
R0G 2J0

4. TITLE NOTES

No title notes

5. LAND TITLES DISTRICT

Winnipeg

6. DUPLICATE TITLE INFORMATION

Duplicate not produced

7. FROM TITLE NUMBERS

1282757/1	Part
1418999/1	All

8. REAL PROPERTY APPLICATION / CROWN GRANT NUMBERS

No real property application or grant information

9. ORIGINATING INSTRUMENTS

Instrument Type:	**Transfer Of Land**
Registration Number:	**2696663/1**
Registration Date:	2002-03-07
From/By:	GEORGE ALFRED JUNKIN
To:	THE RURAL MUNICIPALITY OF MACDONALD
Consideration:	$51,859.50

10. LAND INDEX

Lot 2 Plan 13944
EXC PLS 22189, 24564, 25513, 29367 & PT W OF PL 22189

Lot 1 Plan 40340

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA STORAGE SYSTEM OF TITLE NUMBER 1857417/1

APPENDIX D - EXISTING ENVIRONMENT ACT LICENCE

Manitoba

Conservation

Climate Change and Environmental Protection Division
Environmental Assessment and Licensing Branch
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5
T 204 945-7100 F 204 945-5229
www.gov.mb.ca/conservation/eal

CLIENT FILE NO.: 3487.00

May 3, 2011

W. Tom Raine, C.A.O.
R.M. of Macdonald
Box 100
Sanford, MB
R0G 2J0

Dear Mr. Raine:

Enclosed is revised **Environment Act Licence No. 1599 R** dated May 3, 2011 issued in accordance with The Environment Act to the **Rural Municipality of Macdonald** for the construction and operation of the Development being a regional water supply system, in accordance with the Proposal filed under The Environment Act dated July 22, 1992 and additional information dated October 20, 2010.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

For further information on the administration and application of the Licence, please feel free to contact Julie Froese, Environment Officer, at (204) 945-6817.

Pursuant to Section 27 of The Environment Act, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation within 30 days of the date of the Licence.

Yours truly,

[redacted]

Tracey Braun, M. Sc.
Director
Environment Act

Enc.
c: Don Labossiere, Director, Environmental Operations
Public Registries

NOTE: **Confirmation of Receipt of this Licence No. 1599 R *(by the Licencee only)* is required by the Director of Environmental Assessment and Licensing. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by May 13, 2011.**

_____ _____

Rural Municipality of Macdonald **Date**

****A COPY OF THE LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****

THE ENVIRONMENT ACT
LOI SUR L'ENVIRONNEMENT

LICENCE

Manitoba

Licence No. / Licence n° 1599 R

Issue Date / Date de délivrance October 9, 1992

Revised : May 3, 2011

In accordance with The Environment Act (C.C.S.M. c. E125) / Conformément à la Loi sur l'environnement (C.P.L.M. c. E125)

Pursuant to Section 11(1) and 14 (2) / Conformément au Paragraphe 11(1) et 14 (2)

THIS LICENCE IS ISSUED TO: / CETTE LICENCE EST DONNÉE À:

The Rural Municipality of Macdonald: "the Licencee"

for the construction and operation of the Development being a regional water supply system, in accordance with the Proposal filed under The Environment Act dated July 22, 1992 and additional information dated October 20, 2010, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"accredited laboratory" means an analytical facility accredited by the Standard Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director; and

"as constructed drawings" means engineering drawings complete with all dimensions which indicate all features of the Development as it has actually been built.

PROJECT SCOPE

1. The Development includes a water treatment plant and associated works in NW SW 29-8-1E adjacent to the Village of Sanford, and a water supply system serving portions of the Rural Municipality of MacDonald.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

2. The Licencee shall, upon the request of the Director:
   a) sample, monitor, analyse or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such duration and at such frequencies as may be specified;
   b) determine the environmental impact associated with the release of any pollutants from the said Development;
   c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
   d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, flow rate measurements and such other information as may from time to time be requested.

3. The Licencee shall collect and dispose of all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and operation of the Development in accordance with applicable Manitoba Conservation and legislation requirements.

4. The Licencee shall revegetate soil exposed during the construction of the Development with native or introduced grasses or legumes. Native species shall be used to revegetate areas where native species existed prior to construction. Revegetation is not required for pipelines installed by chain trenching or ploughing on previously disturbed ground including road allowances.

5. The Licencee shall, prior to the commencement of operation of new components of the Development, receive approval pursuant to The Drinking Water Safety Act for final plans for the new components of the Development.

6. The Licencee shall construct and operate the Development in accordance with Manitoba Regulations under the Drinking Water Safety Act, and all operating requirements as recommended by Manitoba Water Stewardship.

7. The Licencee shall not permit the interconnection of a private water supply system with the Development.

8. The Licencee shall:
   a) prepare "As Constructed" drawings for new components of the Development and shall label the drawings "As Constructed"; and

b) provide to the Director, within three months of the completion of construction of new components of the Development, two sets of "As Constructed" drawings.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Construction – General

9. The Licencee shall notify the Historic Resources Branch not less than one month prior to commencing construction of the Development in any year in which construction occurs, in compliance with the requirements of The Heritage Resources Act. The notification shall include pipeline route locations.

10. The Licencee shall notify the Central Regional Office of Manitoba Conservation in Winnipeg not less than two weeks prior to commencing construction of the Development in any year in which construction occurs. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.

11. The Licencee shall, during construction and operation of the Development:
    a) immediately report any reportable spills to Manitoba Conservation's Accident Reporting Line at (204) 944-4888; and
    b) provide a follow-up report to the Director on a reportable environmental accident outlining the cause(s) and proposing corrective action to prevent reoccurrence.

12. The Licencee shall, at all times during the construction of the Development, maintain materials to contain and recover spills of fuel and other fluids associated with construction machinery at construction sites.

13. The Licencee shall establish fuel storage and equipment servicing areas for the construction and operation of the Development:
    a) a minimum distance of 100 metres from any waterbody; and
    b) in compliance with the requirements of ***Manitoba Regulation 188/2001,*** or any future amendment thereof, respecting ***Storage and Handling of Petroleum Products and Allied Products.***

14. The Licencee shall not, during construction and operation of the Development, remove, destroy or disturb species listed as rare, endangered, or of special concern, or their habitats. These species are listed in ***Manitoba Regulation 25/98***, or any future amendment thereof, respecting ***Threatened, Endangered and Extirpated Species*** and in the federal Species at Risk Act.

15. The Licencee shall not construct the Development in areas likely to provide bird habitat before August 1 of any year. Construction in wetland areas and in riparian zones adjacent to rivers shall not occur before August 15 of any year.

16. The Licencee shall, during construction of the Development, implement all necessary measures to prevent the erosion of exposed soil into any waterbodies. Construction adjacent to waterbodies shall not occur during high rainfall events.

17. The Licencee shall, during construction or operation of the Development, dispose of non-reusable construction debris and accumulated sludge at a waste disposal ground operating under the authority of a permit issued under ***Manitoba Regulation 150/91***, or any future amendment thereof, respecting ***Waste Disposal Grounds,*** or a Licence issued pursuant to The Environment Act.

Construction - Pipelines

18. The Licencee shall, prior to commencing construction of new pipelines of the Development, obtain all necessary approvals from Manitoba Infrastructure and Transportation and the Highway Traffic Board prior to undertaking construction on or adjacent to highway rights-of-way.

19. The Licencee shall not release chlorinated water from pipeline testing and startup activities associated with the Development to a surface water body until chlorine level concentrations are equal to or less than 0.1 milligrams per litre. Releases of chlorinated water at higher concentrations may be made to vegetated land or dry waterways, provided that chlorine level concentrations have decayed to 0.1 milligrams per litre or less before the released water reaches any body of surface water.

20. The Licencee shall ensure that the design of buried pipelines associated with the Development minimizes impacts on land adjacent to the pipelines' routes. Previously disturbed publicly owned rights-of-way shall be followed where possible.

21. The Licencee shall construct waterway crossings on flowing waterways by augering, tunneling or boring. Open cut crossings on flowing waterways shall not be made unless prior consultation with Manitoba Water Stewardship and Department of Fisheries and Oceans staff has occurred and the prior written approval of the Director has been obtained. Dry or non-flowing (i.e. hydraulically unconnected to downstream flowing water) natural and artificial waterways may be crossed with open cut techniques where approval has been obtained where necessary from the authority responsible for the channel.

22. The Licencee shall, where open cut stream crossing techniques are used on intermittent waterways and artificial drainage channels, not construct open cut crossings associated with the Development between March 15 and June 15 of any year.

23. The Licencee shall construct open cut stream crossings associated with the Development in accordance with the methodologies described in the October, 2005 publication "Pipeline Associated Watercourse Crossings Third Edition",

published by the Canadian Pipeline Water Crossing Committee, and the May, 1996 publication "Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat", published by the Department of Fisheries and Oceans and Manitoba Natural Resources.

24. The Licencee shall, where open cut stream crossing techniques are used on intermittent waterways and artificial drainage channels, minimize disturbance to riparian areas and restore the bottom and banks of the waterways to their original elevations and shapes.

25. The Licencee shall not alter local drainage patterns by the construction of the Development, including inflows and outflows from small wetlands adjacent to the route of pipelines.

26. The Licencee shall separate and replace topsoil from backhoe and trenching operations associated with the Development in accordance with the methodology described in Figures 1, 2 and 3 attached to this Licence. This requirement is not applicable where the topsoil has been previously disturbed due to the construction of roads or drains.

Operation

27. The Licencee shall obtain and maintain classification of the Development pursuant to ***Manitoba Regulation 77/2003***, or any future amendment thereof, respecting ***Water and Wastewater Facility Operators*** and maintain compliance with all requirements of the regulation including, but not limited to, the preparation and maintenance of a Table of Organization, Emergency Response Plan and Standard Operating Procedures.

28. The Licencee shall carry out the operation of the Development with individuals properly certified to do so pursuant to ***Manitoba Regulation 77/2003***, or any future amendment thereof, respecting ***Water and Wastewater Facility Operators***.

29. The Licencee shall operate the Development with respect to the volume and rate of water diverted in accordance with a Water Rights Licence issued for the water treatment plant of the Development pursuant to the Water Rights Act.

30. The Licencee shall ensure that water intake works at the water treatment plant of the Development are constructed and operated in accordance with the Department of Fisheries and Oceans publication "Freshwater Intake End-of-Pipe Fish Screen Guideline" (March, 1995).

Monitoring – Water Treatment Plant

31. The Licencee shall conduct an effluent monitoring program at the upgraded Sanford water treatment plant as described in Clauses 32 to 35 of this Licence, for a period of two years commencing with the operation of this component of the Development. Following this period, the duration of the monitoring program may be extended by the Director if the results, in the opinion of the Director, indicate that a longer monitoring period is appropriate.

32. The Licencee shall, on a quarterly basis for the duration of the effluent monitoring program, collect grab samples at three locations approved by the Director. These locations shall in the effluent stream from the settling ponds, and in the La Salle River above and below the effluent discharge point.

33. The Licencee shall transport the grab samples collected pursuant to Clause 32 of this Licence to an accredited laboratory for analysis. The samples shall be stored and transported in accordance with procedures specified by Manitoba Water Stewardship to ensure that the samples are suitable for analysis.

34. The Licencee shall, at an accredited laboratory, have the samples collected pursuant to Clause 32 of this Licence analysed for the following parameters:
    a) pH;
    b) hardness;
    c) total dissolved solids;
    d) total suspended solids;
    e) calcium;
    f) magnesium;
    g) sodium;
    h) bicarbonate; and
    i) sulphate.

35. The Licencee shall, not more than 30 days after the results of each quarterly analysis are available, submit the results to the Director.

REVIEW AND REVOCATION

A. Environment Act Licence No. 1599 is hereby rescinded.

B. Environment Act Licence No. 2218 is hereby rescinded.

C. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.

D. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new proposal pursuant to Section 11 of The Environment Act.

[redacted]
Tracey Braun, M. Sc.
Director
Environment Act

Client File: 3487.00