



January 22, 2016

Project No: 141-21811-00

Mr. Asit Dey, P.Eng.

Environmental Engineer

MANITOBA CONSERVATION AND WATER STEWARDSHIP

160-123 Main Street

Winnipeg, MB R3C 1A5

Dear Mr. Dey:

**RE: R.M. OF MACDONALD - COMMUNITY OF SANFORD
WASTEWATER STABILIZATION POND EXPANSION
ENVIRONMENT ACT PROPOSAL – FILE No: 1921.10**

Thank you for providing us with the comments received during the initial review period for the Environment Act Proposal (EAP) regarding the expansion of the R.M. of Macdonald - Community of Sanford Wastewater Stabilization Pond from the Technical Advisory Committee (TAC). This letter intends to address and respond to the comments and requests for additional information following submission of the EAP. Comments were received from the following branches and sections within Manitoba Conservation and Water Stewardship (CWS): Environmental Compliance and Enforcement Branch, and the Approvals Branch.

1. Request for Additional Information on the Petroleum-Impacted Soil from Manitoba Conservation and Water Stewardship – Environmental Compliance and Enforcement.

A letter dated December 23, 2015 from Ms. Yvonne Hawryliuk, Environment Officer to Mr. Grant Baker, Manager of Public Works for the R.M. of Macdonald, summarized the information on the quality of the petroleum-impacted soils, which is located on the lands where the expanded lagoon cell will be conducted and concluded that further treatment, sampling and testing is required on these soils for PHC Fraction F2. This letter has been attached for your reference.

The R.M. of Macdonald will continue to treat the petroleum-impacted soils during the spring of 2016 and will sample and test the soils before the construction of the new lagoon cell. Once the additional treatment, sampling and testing of the soils are completed, the R.M. of Macdonald will submit the results to CWS. If the results indicate that these soils meet the applicable CCME guidelines the R.M. will reapply to utilize these soils as cover in the adjacent waste disposal grounds. The R.M. of Macdonald will continue to treat the soil until these soils meet the CCME guidelines.

Ultimately, this should not impact the construction of the expanded lagoon, as there is a sufficient amount of time to continue to treat, sample and test the soils before construction of the expanded lagoon, which is expected to take place during the summer/fall of 2016. The upper 600 mm of soil within the soil treatment area will still be stripped prior to the construction of the new secondary cell.

2. Request for Additional Information from Manitoba Conservation and Water Stewardship – Approvals Branch

A. Decommissioning Plan for Existing Truck Dump Ramp

The condition of the clay liner around and underneath the existing truck dump ramp is unknown at this time. From the review conducted by WSP during the spring of 2015, the dyke slope around the truck dump ramp is partially eroded and therefore the clay liner is potentially eroded as well. We propose the following actions to decommission the existing truck dump ramp and to satisfy the requirement of a 1 m clay liner.

During the construction of the expanded lagoon, the existing primary cell will be lowered, exposing the area around the truck dump ramp. At that time, the truck dump ramp and all associated material will be removed and disposed and the existing clay liner will be reviewed to determine the depth of this liner. The partially eroded dyke slope will then be repaired to a 4H:1V slope utilizing the high-plasticity clay.

The attached engineering drawings C02-ISS2 and C03-ISS2 have been updated with the location of the existing truck dump ramp, as well as the liner information for the existing primary and secondary cells.

B. Sludge Management Plan for the Existing Primary Cell

The Sanford Lagoon has been in service for the past 35 years and has only received domestic wastewater over its lifespan. At the time when the EAP was submitted, there was no indication from the R.M. of Macdonald and from the site reviews done by WSP that there was a significant amount (greater than the dead storage depth of 0.3 m) of sludge build-up within the existing primary cell. Consequently, no sludge depth survey was conducted on the primary cell to calculate the amount of sludge within the cell. Without properly quantifying the amount of sludge in the cell, an appropriate sludge management plan cannot be enacted. Thus, we propose the following plan to identify and measure the sludge in the existing primary cell.

With the construction of a new secondary cell and the conversion of the existing secondary cell to a primary cell, this will allow the existing primary cell to be properly lowered and drained as much as possible. Once this cell has been drained, a proper sludge depth survey can take place to identify the depth and quantity of sludge. After the quantity and depth of sludge is identified, an appropriate sludge management plan can be enacted.

If the quantity and depth of sludge is found to be significant (greater than 0.3 m depth), this cell can be removed from service, as the remaining two cells can easily accommodate the wastewater generation from the current population of Sanford. With this cell removed from service, it can be appropriately de-sludged.

C. Decommissioning Plan for the Existing Discharge Pipe and Gate Valve at the South End of the Existing Secondary Cell

The existing south discharge pipe will be capped on both ends of the pipe and the valve will remain in a closed position. Drawings C02-ISS2 and C03-ISS2 have been updated accordingly.

D. Splash Pad Details

Drawings C02-ISS2 and C03-ISS2 have been updated accordingly.

E. Thrust Block Details

All new gate valves are supported by a 600 mm x 600 mm x 150 mm concrete block. Drawings C02-ISS2 and C03-ISS2 have been updated accordingly.

F. Installation of Inter-Cell Pipes

The new inter-cell pipe connection will be installed similarly to any new pipe installation. A trench shall be excavated and the bottom of the excavation shall be maintained in a condition to permit the proper installation of the pipe. Once the piping and gate valve are installed to specification, clay bentonite is placed and compacted a minimum of 150 mm around the new piping where it passes through the 1 m clay liner, and the trench is backfilled with clay material and compacted in 150 mm lifts to 95% Standard Proctor dry density. Drawings C02-ISS2 and C03-ISS2 have been updated accordingly.

Best regards,

WSP Canada Inc.



Dana Bredin, P.Eng.
Geotechnical / Civil Engineer

cc: Mr. Daryl Hrehirchuk – CAO, R.M. of Macdonald
Mr. Grant Baker – Public Works, R.M. of Macdonald



Conservation and Water Stewardship

Environmental Compliance and Enforcement Branch
1007 Century Street
Winnipeg, Manitoba R3H 0W4
T 204-945-5305 F 204-948-3833
www.gov.mb.ca/conservation/ece

December 23, 2015

Permit 36777

Grant Baker, Manager, Public Works
Rural Municipality of Macdonald
Box 100
Sanford, MB R0G 2J0

Dear Mr Baker:

Re: Approval Request for Soil Disposal at the Sanford Landfill, Rural Municipality of Macdonald, Manitoba

This will acknowledge receipt of a letter from Stantec Consulting Ltd, sent on behalf of the R.M. of Macdonald, dated November 30, 2015 requesting disposal of contaminated soil from the former Sanford Soil Treatment Facility.

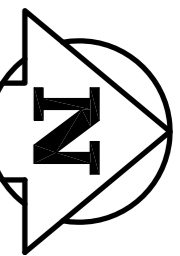
Manitoba Conservation and Water Stewardship (CWS) has reviewed the information provided. In summary, the March 2015 soil sampling program conducted by Stantec Consulting Ltd. found that of the 18 composite soil samples tested for PHC Fraction F2, nine (9) samples contained concentrations that ranged between 1.5 to 6.2 times the applicable CCME guideline of 260 mg/kg. These samples do not meet the acceptance criteria as outlined in the CCME Canadian Environmental Quality Guidelines (CCME 1999-2013) and the Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil (CCME 2008) for fine grained surface soil for industrial land use sites. CWS will not grant permission at this time to use this soil as daily cover at the Sanford Waste Disposal Ground until further treatment and sampling has taken place.

Should you have questions, please feel free to contact me at (204) 945-5305.

Sincerely,

Yvonne Hawryliuk, M.Sc
Environment Officer, Regional Supervisor
Environmental Compliance and Enforcement Branch

- c. Alvin Dyck, Environmental Compliance and Enforcement
Scott Chapman, M.Eng., Stantec Consulting Ltd.



EXISTING 600 Ø CSP
E. INV. = 235.79 m
W. INV. = 235.64 m

EXISTING 150 Ø FORCEMAIN (UNKNOWN LOCATION)

REMOVE AND DISPOSE OLD FENCE SEGMENT
EXTEND NEW FENCE AROUND NEW CELL PERIMETER

NEW 600 Ø CSP
E. INV. = 236.65 m
W. INV. = 236.59 m

NEW ACCESS ROAD
E. INV. = 236.65 m
W. INV. = 236.75 m

PRELIMINARY
NOT FOR CONSTRUCTION

WSP
1800 BRIFAUD PLACE
WINNIPEG, MANITOBA
R2S 2T6
PHONE: 204-477-6650 FAX: 204-474-2864
WWW.WSPGROUP.COM

ORIGINAL DRAWING
SEALED BY
D.T.G. BREIDEN
AND DATED
June 9, 2015



R.M. OF MACDONALD

CLIENT REF. #
PROJECT:
COMMUNITY OF SANFORD
WASTEWATER STABILIZATION POND
EXPANSION

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ISSUED FOR - REVISION	DATE	DESCRIPTION
2	2016/01/22	TAC RESPONSE
1	2015/06/09	EAP SUBMISSION

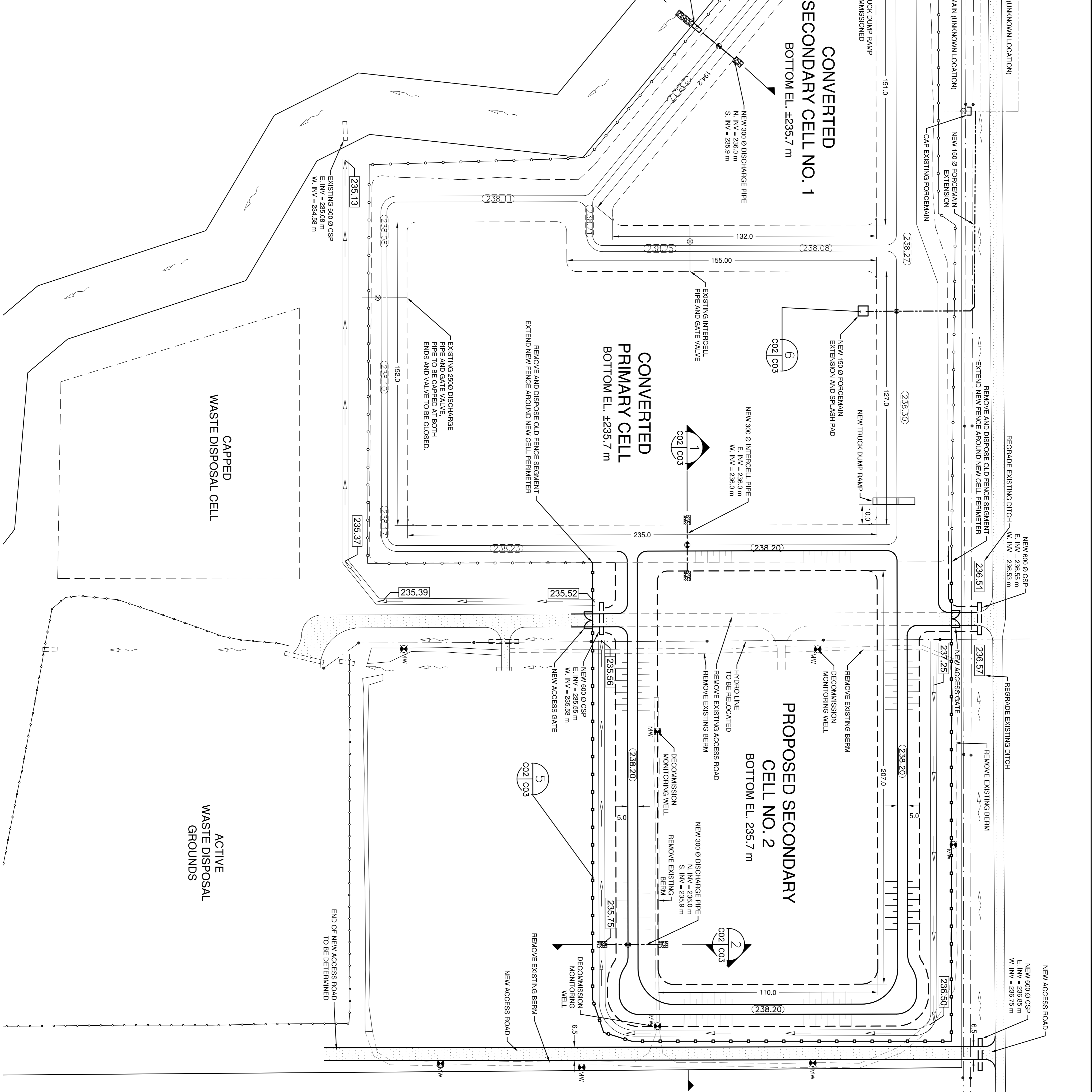
PROJECT NO.	141-21811-00	DATE	2015/06/09
ORIGINAL SCALE	1:1000	DESIGNED BY	D.T.G.
		DRAWN BY	D.T.G.
		CHECKED BY	J.S.B./R.W.W.
		DATE	2015/06/09

TITLE:
ENVIRONMENTAL INFRASTRUCTURE
PROPOSED SITE PLAN

SHEET NUMBER:	C02
ISSUE:	2 OF 3
TAC RESPONSE	0
DATE OF: 2016/01/22	

- NOTES:
1. LOCATION OF UNDERGROUND STRUCTURES AS SHOWN IS BASED ON THE BEST INFORMATION AVAILABLE. BUT 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 UTILITIES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE CONSULTANT OF ANY ERROR OR OMISSION IN THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWING.
 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. WHOLE NUMBERS INDICATE MILLIMETRES; DECIMALIZED NUMBERS INDICATE METRES.

EXISTING	LEGEND	PROPOSED
WWS	WASTEWATER	WWS
LPS	LOW PRESSURE SEWER	LPS
FM	FORCEMAIN	FM
○	GATE VALVE	○
○	MANHOLE	○
○	HYDRANT	○
○	UTILITY POLE	○
—	GUY WIRE	—
⊠	MONITORING WELL	⊠
⊠	TESTHOLE LOCATION	⊠
⊠	HYDRO TOWER	⊠
⊠	SIGN	⊠
⊠	MIS PEDDESTAL	⊠
⊠	SURVEY BAR	⊠
⊠	CLEAN OUT	⊠
—	CULVERT	—
—	DITCH / SWALE	—
—	TREE OR SHRUB LINE	—
—	FENCE LINE	—
—	HYDRO	—
—	GAS MAIN	—
—	MIS	—
—	DIRECTION OF FLOW	—
—	WICK DRAIN	—
—	RIP RAP	—
—	GROUND ELEVATION	99.000
—	DITCH ELEVATION	(99.000)
—	ROAD/DYKE ELEVATION	(99.000)
—	DYKE	—



9 8 7 6 5 4 3 2 1 A B C D E F

SWP

PRELIMINARY
NOT FOR CONSTRUCTION

ORIGINAL DRAWING
SEALED BY
D.T.G. BREIDEN
AND DATED
June 9, 2015

Professional Engineer
No. 5790 Date: June 9, 2015

R.M. OF MACDONALD

COMMUNITY OF SANFORD
WASTEWATER STABILIZATION POND
EXPANSION

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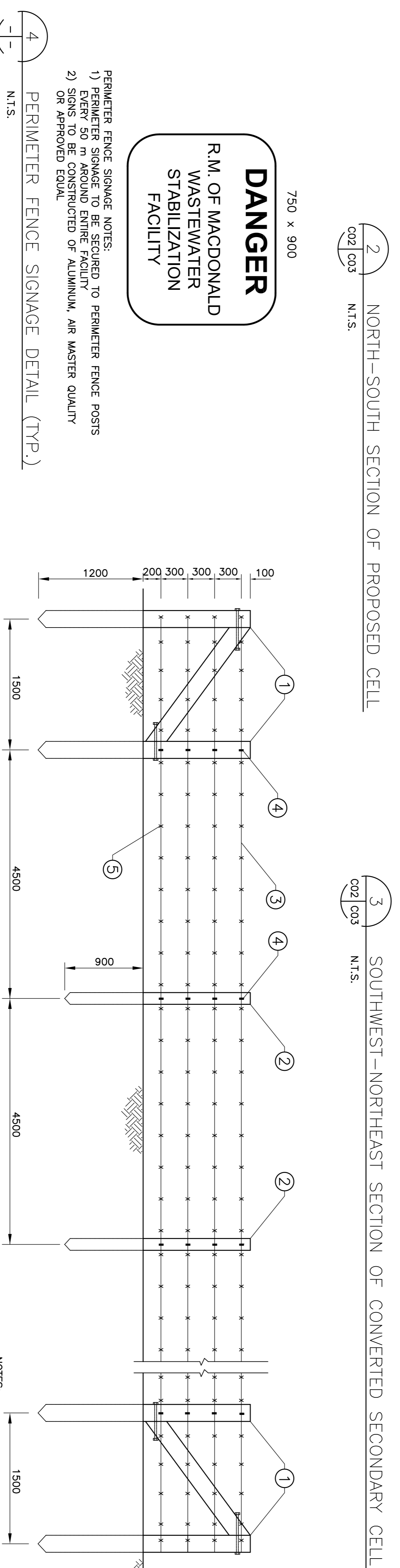
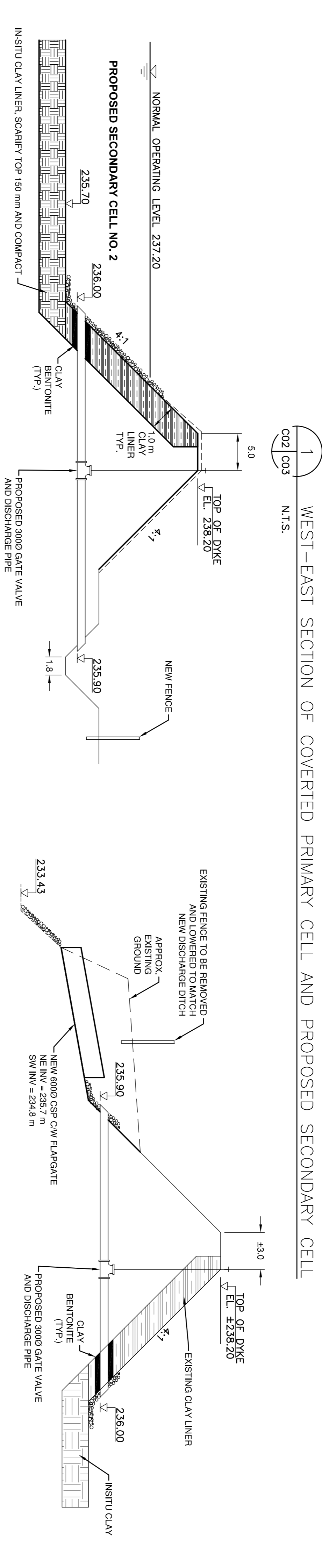
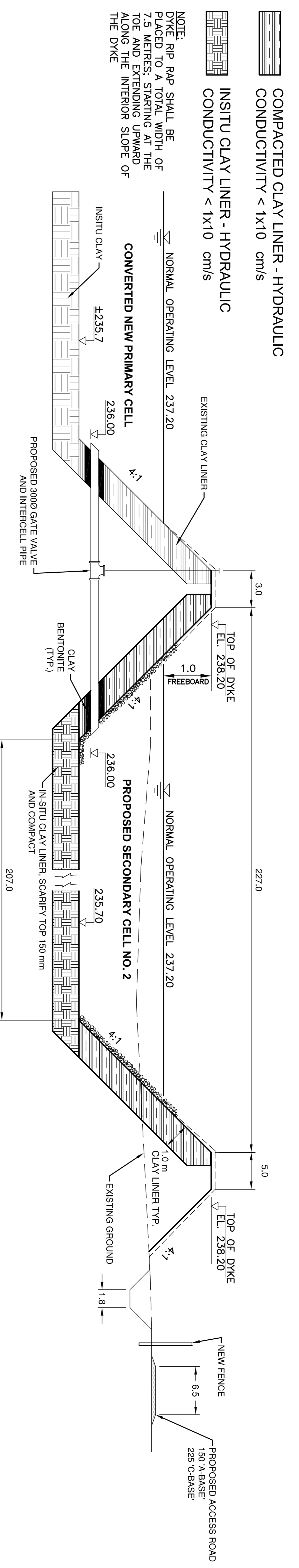
ISSUED FOR - REVISION

NO.	DATE	DESCRIPTION
1	2015/06/09	EAP SUBMISSION
2	2016/01/22	TAC RESPONSE

DESIGNED BY: N.T.S.
D.T.G.B.
DRAWN BY: D.T.G.B.
CHECKED BY: J.S.B./R.M.W.
DATE: 2015/06/09
ORIGINAL SCALE: 1:41-21811-00
AS SHOWN ON 2015/06/09
N.T.S.
ENVIRONMENTAL INFRASTRUCTURE

CROSS SECTIONS AND DETAILS

SHEET NUMBER: C03
SHEET # 3 OF 3
ISSUE: TAC RESPONSE
DATE OF: 2016/01/22



DANGER
750 x 900
R.M. OF MACDONALD
WASTEWATER
STABILIZATION
FACILITY

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

NOTES:
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