TOWN OF DRAYTON VALLEY

DRAYTON VALLEY

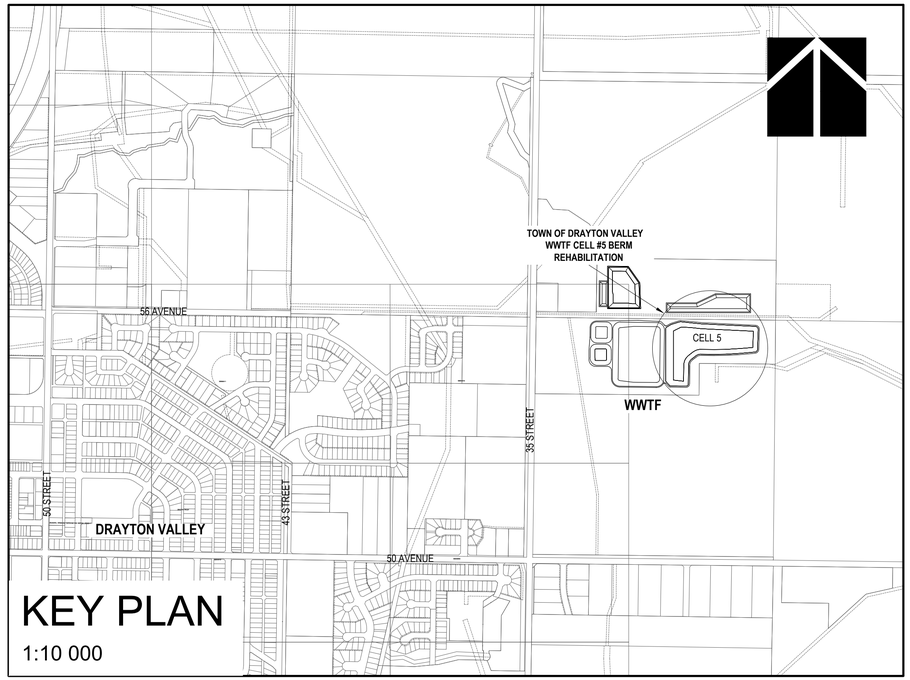
CONTRACT DRAWINGS
for

CELL #5
BERM REHABILITATION

May 2021

TENDER PHASE

ISL Engineering and Land Services



KEY PLAN
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3	CELL #5 SITE PLAN AND TYPICAL DETAILS	15886-SW02
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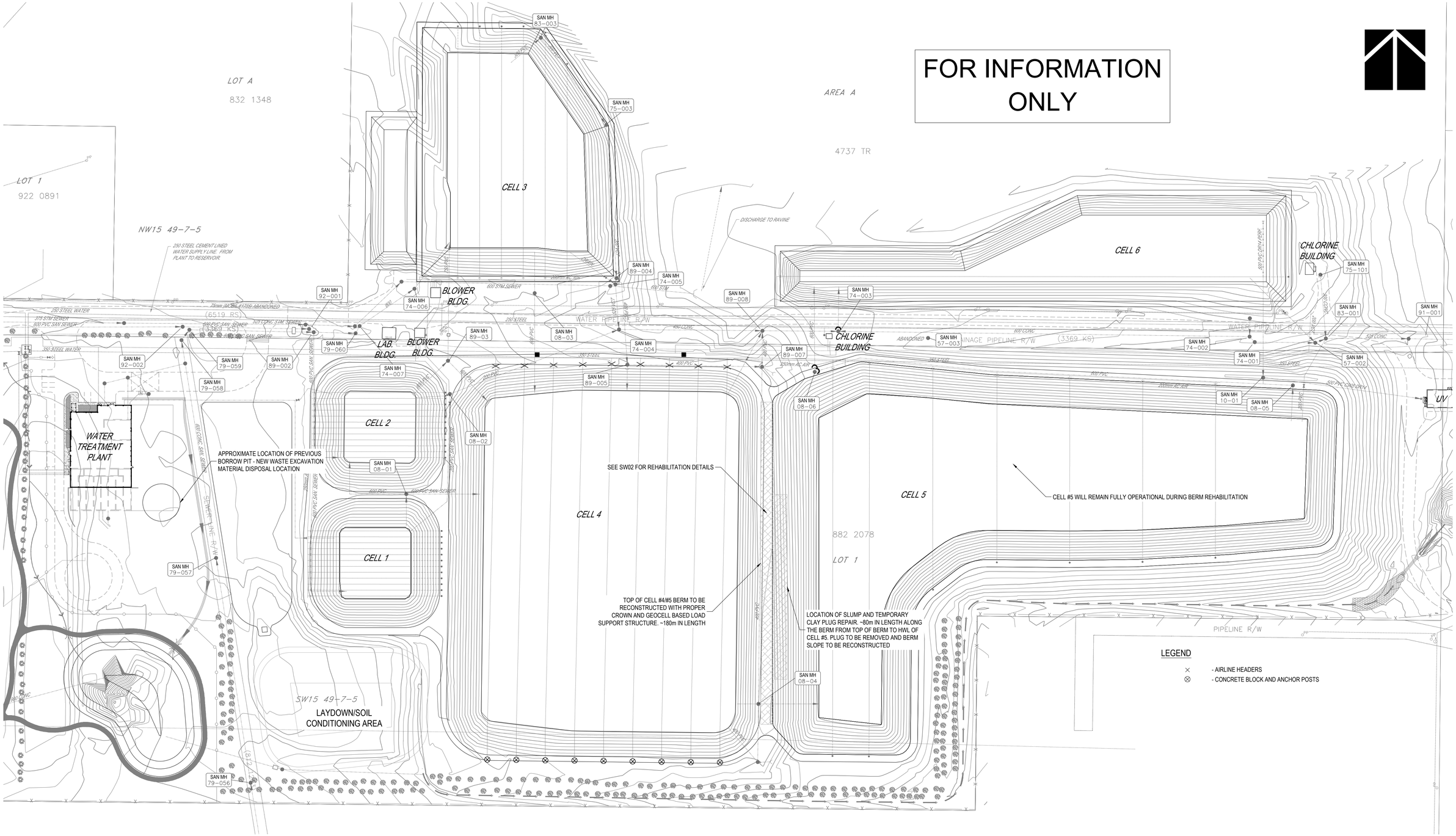

NOTE: THIS DRAWING IS HALF SCALE WHEN PRINTED TO 11" x 17" FORMAT

TENDER PHASE

No.	DESCRIPTION	BY	DATE
1	ISSUED FOR TENDER	JRK	27/05/2021

REVISIONS

PROFESSIONAL ENGINEER JASON KOPAN ALBERTA
71183 May. 27, 2021

PERMIT TO PRACTICE
ISL Engineering and Land Services Ltd.
RM Signature:
RM APEGA ID: 81770
Date: 2021-05-27
PERMIT NUMBER: P 4741
The Association of Professional Engineers and Geoscientists of Alberta

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Scale

ISL Engineering and Land Services

TOWN OF DRAYTON VALLEY

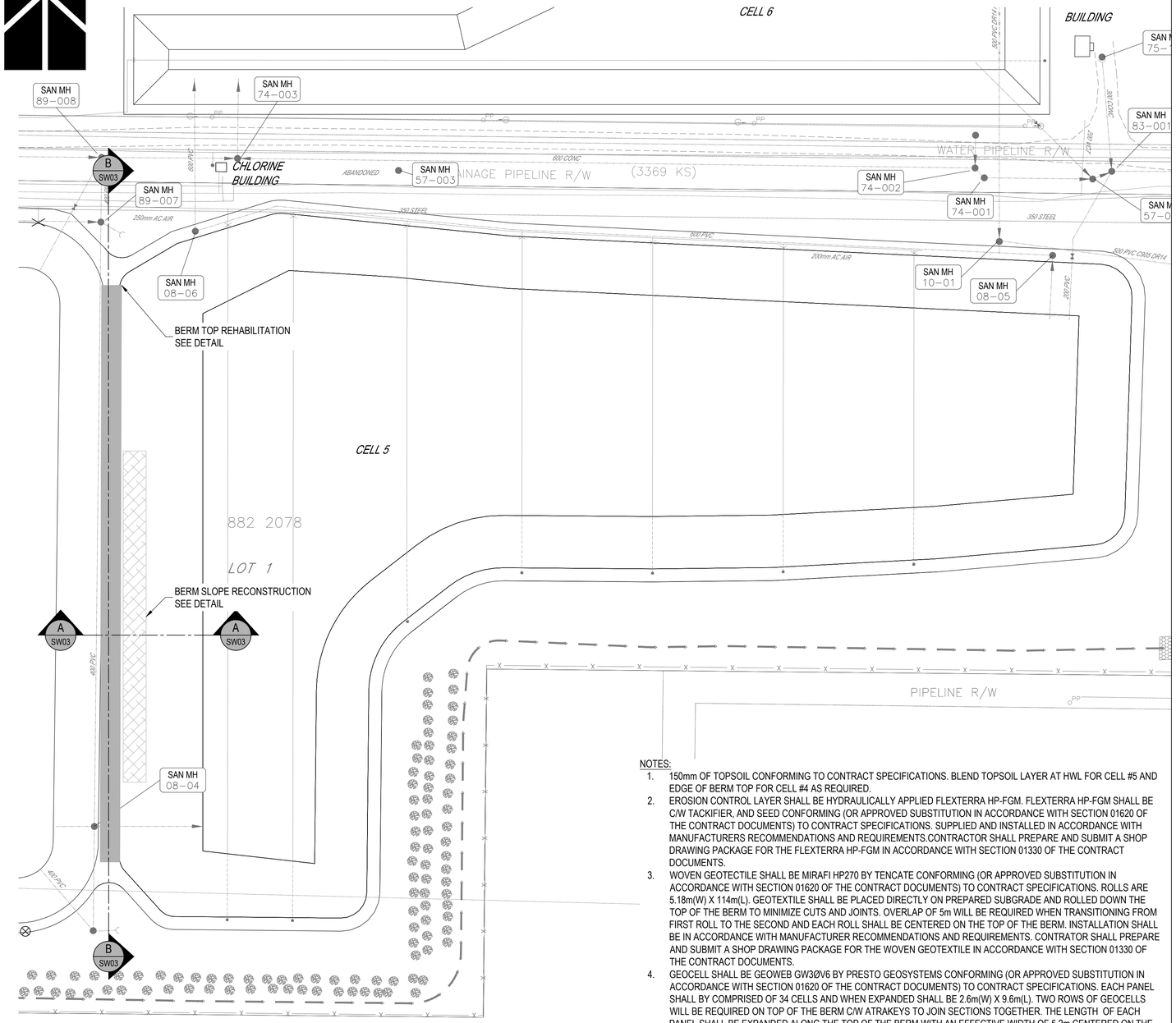
CELL #5
BERM REHABILITATION

Drawn: ZM | Design Checked: JRK | Date: 27/05/2021
Designed: JRK | Discipline Review: WMC | Date: 27/05/2021

OVERALL SITE PLAN

Drawing No. 15886 SW 01
Sheet No. 2

Zechariah Mascaluk / May. 27, 21 / G:\Projects\15000\15800\15886_WWTF_Cell_5__Cell_6_Rehabilitation\02_CADD\20_Drafting\203_DWG\15886-SW01.dwg

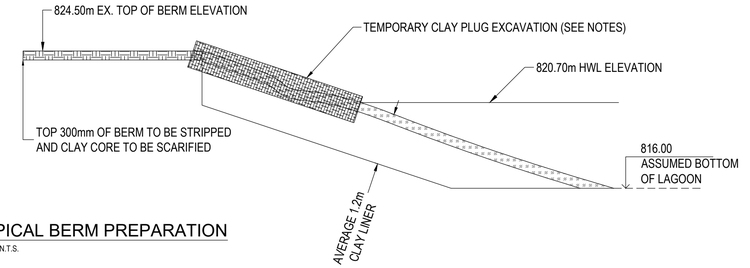


NOTE:
1. CONTRACTOR SHALL PROTECT ALL ELECTRICAL PANELS, AIR LINE HEADERS, AIR LINE CONCRETE BLOCKS AND ANCHOR POSTS AND ALL EXISTING VAULTS

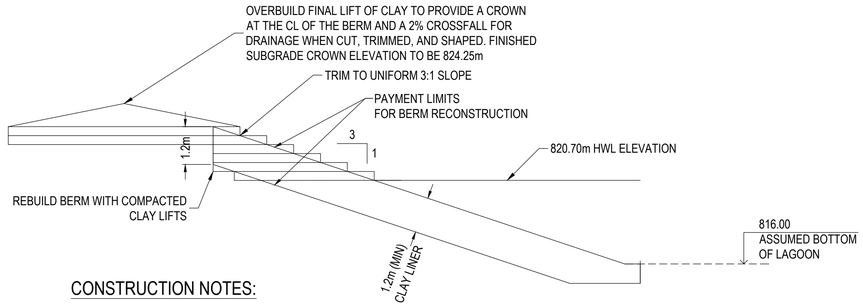
NOTES:
1. 150mm OF TOPSOIL CONFORMING TO CONTRACT SPECIFICATIONS. BLEND TOPSOIL LAYER AT HWL FOR CELL #5 AND EDGE OF BERM TOP FOR CELL #4 AS REQUIRED.
2. EROSION CONTROL LAYER SHALL BE HYDRAULICALLY APPLIED FLEXTERRA HP-FGM. FLEXTERRA HP-FGM SHALL BE C/W TACKIFIER, AND SEED CONFORMING (OR APPROVED SUBSTITUTION IN ACCORDANCE WITH SECTION 01620 OF THE CONTRACT DOCUMENTS) TO CONTRACT SPECIFICATIONS. SUPPLIED AND INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS.CONTRACTOR SHALL PREPARE AND SUBMIT A SHOP DRAWING PACKAGE FOR THE FLEXTERRA HP-FGM IN ACCORDANCE WITH SECTION 01330 OF THE CONTRACT DOCUMENTS.
3. WOVEN GEOTECTILE SHALL BE MIRAFI HP270 BY TENCATE CONFORMING (OR APPROVED SUBSTITUTION IN ACCORDANCE WITH SECTION 01620 OF THE CONTRACT DOCUMENTS) TO CONTRACT SPECIFICATIONS. ROLLS ARE 5.18m(W) X 114m(L). GEOTEXTILE SHALL BE PLACED DIRECTLY ON PREPARED SUBGRADE AND ROLLED DOWN THE TOP OF THE BERM TO MINIMIZE CUTS AND JOINTS. OVERLAP OF 5m WILL BE REQUIRED WHEN TRANSITIONING FROM FIRST ROLL TO THE SECOND AND EACH ROLL SHALL BE CENTERED ON THE TOP OF THE BERM. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS. CONTRATOR SHALL PREPARE AND SUBMIT A SHOP DRAWING PACKAGE FOR THE WOVEN GEOTEXTILE IN ACCORDANCE WITH SECTION 01330 OF THE CONTRACT DOCUMENTS.
4. GEOCELL SHALL BE GEOWEB GW3Ø6 BY PRESTO GEOSYSTEMS CONFORMING (OR APPROVED SUBSTITUTION IN ACCORDANCE WITH SECTION 01620 OF THE CONTRACT DOCUMENTS) TO CONTRACT SPECIFICATIONS. EACH PANEL SHALL BY COMPRISED OF 34 CELLS AND WHEN EXPANDED SHALL BE 2.6m(W) X 9.6m(L). TWO ROWS OF GEOCELLS WILL BE REQUIRED ON TOP OF THE BERM C/W ATRAKEYS TO JOIN SECTIONS TOGETHER. THE LENGTH OF EACH PANEL SHALL BE EXPANDED ALONG THE TOP OF THE BERM WITH AN EFFECTIVE WIDTH OF 5.2m CENTERED ON THE BERM. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS. CONTRACTOR SHALL PREPARE AND SUBMIT A SHOP DRAWING PACKAGE FOR THE GEOCELL IN ACCORDANCE WITH SECTION 01330 OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL ALSO INCLUDE FOR MANUFACTURER/SUPPLIER ON-SITE INSTALLATION TRAINING AND SUPPORT TO ENSURE THAT THE GEOCELL PRODUCT IS INSTALLED CORRECTLY TO ACHIEVE THE DESIRED REHABILITATION RESULTS.
5. ENTIRE CELL DEPTH OF 150mm SHALL BE FILLED WITH DESIGNATION 2, CLASS 25 GRANULAR ROCK (25mm ROAD CRUSH) WITH LESS THAN 10% FINES CONFORMING TO CONTRACT SPECIFICATIONS. AGGREGATE SHALL BE COMPACTED WITH 4 LIGHT ROLLER OR PLATE TAMPER TO 95% SPD WITHOUT DAMAGING THE GEOCELLS. POST COMPACTION, PROVIDE AN ADDITIONAL 50mm OF AGGREGATE AS A WEAR SURFACE ON FINISHED BERM TOP.

REHABILITATION NOTES:

1. LIMITS FOR EXCAVATION TO BE DETERMINED ON SITE BY THE GEOTECHNICAL MATERIALS ENGINEER.
2. IN PLACE VOLUME TO BE CALCULATED BY PRE AND POST EXCAVATION SURVEY.
3. TEMPORARY CLAY PLUG AND BERM TOP MATERIAL TO BE USED TO FILL EXISTING BORROW PIT LOCATED SOUTH-EAST OF WTP.
4. REHABILITATION OF SLUMP FAILURE SHALL OCCUR FIRST. MEDIUM TO HIGH PLASTIC CLAY BORROW MATERIAL SHALL BE BROUGHT TO SITE FROM IDENTIFIED BORROW SUPPLY IN SUFFICIENT VOLUMES AND PROPERLY CONDITIONED PRIOR TO REMOVING THE SLUMPED MATERIAL FROM THE BERM. THE BORROW MATERIAL NEEDS TO BE READY TO REHABILITATE THE BERM SHORTLY AFTER FAILED MATERIAL IS REMOVED TO LIMIT ENVIRONMENTAL EXPOSURE AND DESSICATION OF THE IN-SITU CLAY LINER WHICH WOULD BE PROBLEMATIC.
5. REHABILITATION WORK SHALL NOT BE DONE IN COLD/WET CONDITIONS WHICH WILL HAMPER THE ABILITY OF THE CONTRACTOR TO ACHIEVE THE REQUIRED COMPACTION SPECIFICATIONS. IT IS HIGHLY RECOMMENDED THAT THE REPAIR WORK BE COMPLETED DURING A PERIOD OF FAVORABLE WEATHER AND PLANNED AS SUCH ACCORDINGLY. REHABILITATION WORK SHALL BE PLANNED OUT IN ADVANCE AND DETAILS OF THE WORK PROVIDED TO THE CONSULTANT AND THE GEOTECHNICAL ENGINEER IN ADVANCE FOR REVIEW AND COMMENT.
6. REHABILITATION WORK FOR THE TOP OF THE BERM SHALL ONLY OCCUR ONCE THE SLUMP FAILURE HAS BEEN REHABILITATED AND TESTED TO ENSURE THAT THE WORK MEETS THE REQUIRED SPECIFICATIONS. THE BERM SLOPE REPAIR AREA NEEDS TO PROTECTED WITH THE TOPSOIL LAYER AS A MINIMUM PRIOR TO BEGINNING THE EXCAVATION WORK FOR THE TOP OF THE BERM



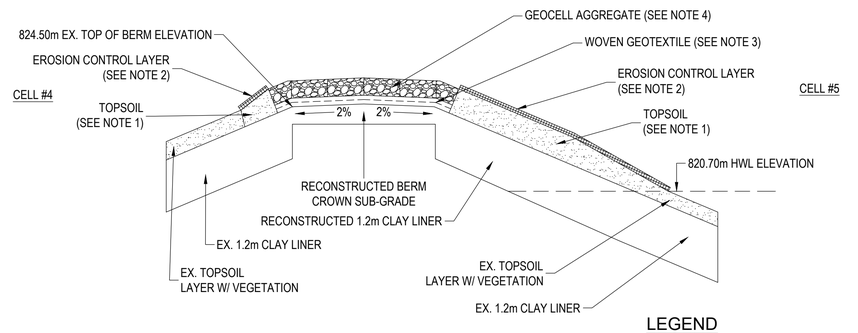
TYPICAL BERM PREPARATION
SCALE: N.T.S.



CONSTRUCTION NOTES:

1. CLAY SHOULD BE PLACED IN MAXIMUM 150mm THICK LIFTS AND COMPACTED TO A MINIMUM 98% AT A MINIMUM 1% OVER OPTIMUM MOISTURE CONTENT.
2. LINES AND GRADES TO BE ESTABLISHED BY THE CONSULTANT.

TYPICAL BERM CLAY SUBGRADE/LINER RECONSTRUCTION & REHABILITATION
SCALE: N.T.S.



TYPICAL BERM GEOCELL LOAD SUPPORT STRUCTURE AND BERM SLOPE FINISH DETAIL
SCALE: N.T.S.

LEGEND
BERM RECONSTRUCTION
BERM REHABILITATION

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REVISIONS

71183 May. 27, 2021

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Scale 1:750

ISL Engineering and Land Services

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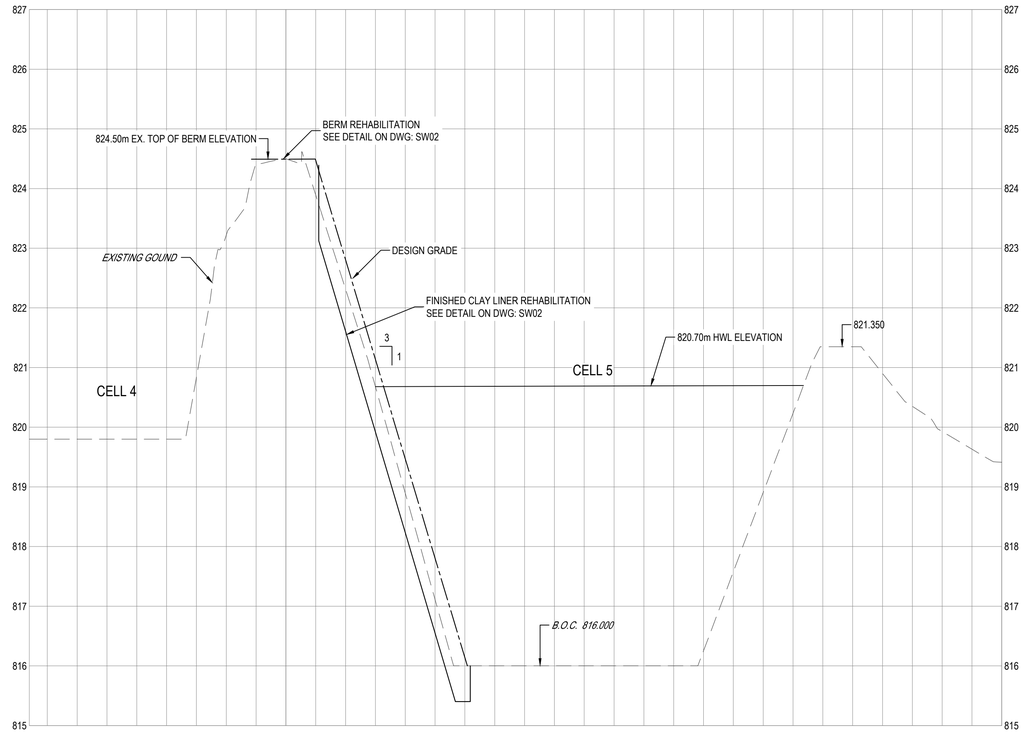
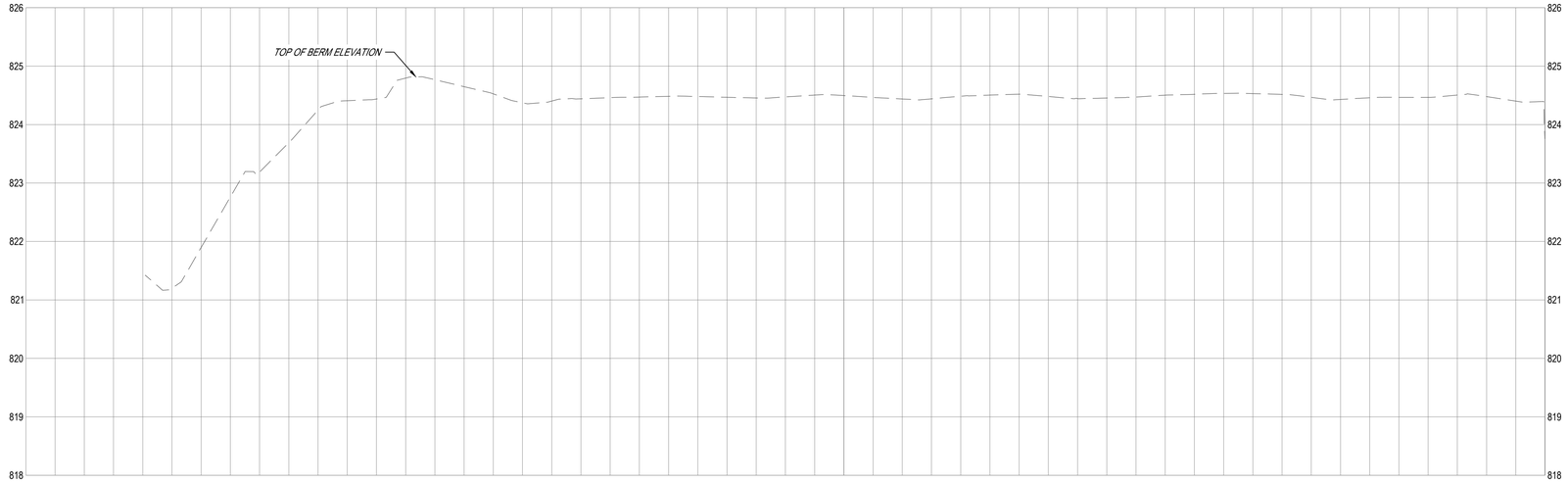
CELL #5 SITE PLAN AND TYPICAL DETAILS

Drawing No. 15886 SW 02
Sheet No. 3

Zechariah Mascaluk / May 27, 21 / G:\Projects\15000\15800\15886_WWTF_Cell_5_Cell_6_Rehabilitation\02_CAD\D2D_Drafting\203_DWG\15886-SW02.dwg



A SW02 **SECTION**
AS SHOWN



B SW02 **SECTION**
AS SHOWN

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REVISIONS

PROFESSIONAL ENGINEER ALBERTA JASON KOHAN 71183

71183 May. 27, 2021

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Designed: JRK	Discipline Review: WMC	Date: 27/05/2021

CELL #5 BERM REHABILITATION SECTIONS

Drawing No. 15886 SW 03

Sheet No. 4

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