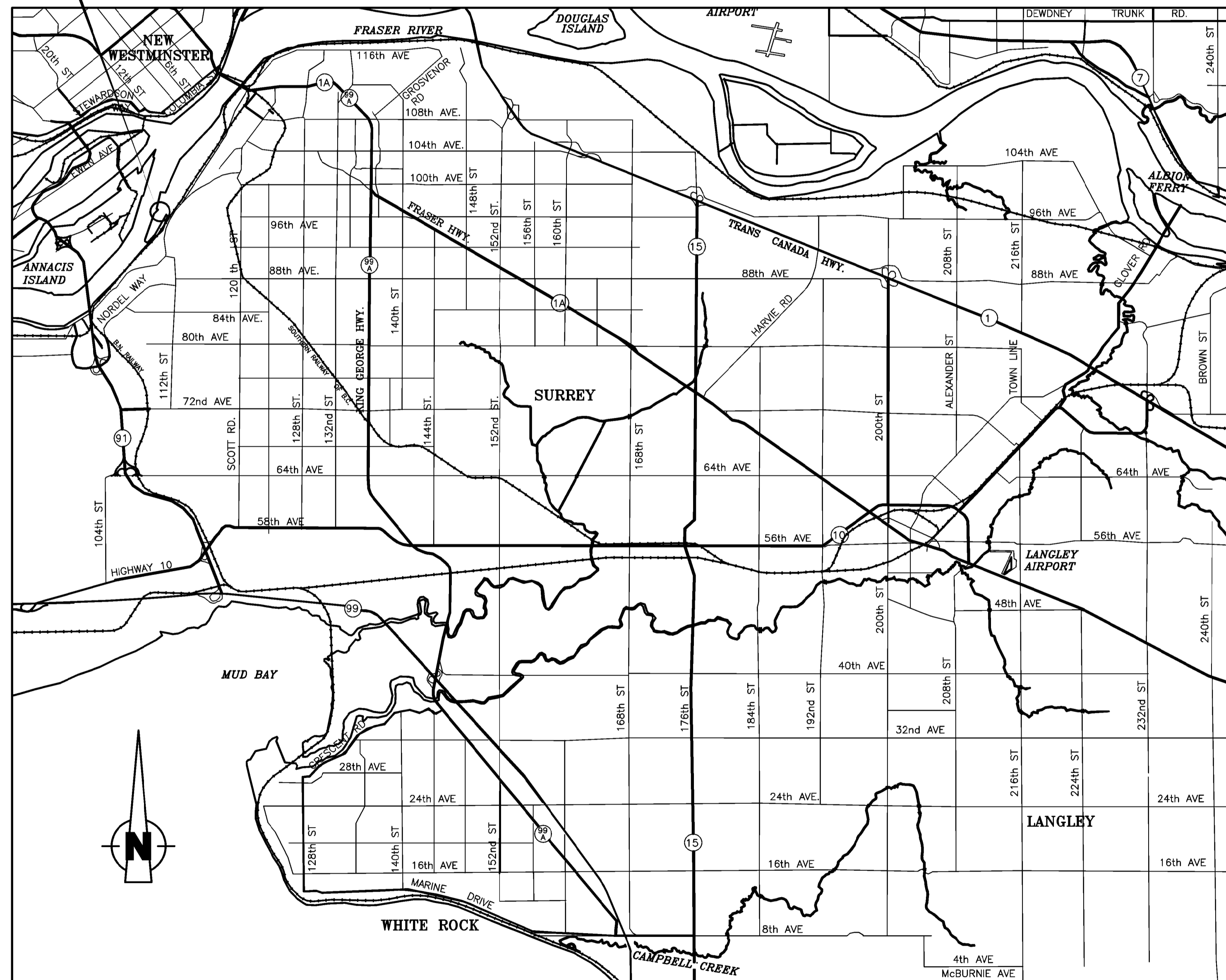


# FRASER GRAIN TERMINAL

11041 ELEVATOR ROAD, SURREY

PROJECT LOCATION



SITE LOCATION PLAN

SCALE: NTS

## DRAWING SCHEDULE

DRAWING	SHEET NUMBER	DRAWING TITLE
32022-C-01	1 OF 19	COVER SHEET AND GENERAL NOTES
32022-C-02	2 OF 19	NORTH GRADING PLAN
32022-C-03	3 OF 19	SOUTH GRADING PLAN
32022-C-04	4 OF 19	NORTH CUT/FILL PLAN
32022-C-05	5 OF 19	SOUTH CUT/FILL PLAN
32022-C-06	6 OF 19	NORTH DRAINAGE PLAN
32022-C-07	7 OF 19	SOUTH DRAINAGE PLAN
32022-C-08	8 OF 19	STORM WATER MANAGEMENT PLAN
32022-C-08A	9 OF 19	EXISTING IMPERVIOUS AREA
32022-C-08B	10 OF 19	PROPOSED IMPERVIOUS AREA
32022-C-09	11 OF 19	NORTH SANITARY & WATERMAIN PLAN
32022-C-10	12 OF 19	SOUTH SANITARY & WATERMAIN PLAN
32022-C-11	13 OF 19	MISCELLANEOUS DETAILS 1
32022-C-12	14 OF 19	MISCELLANEOUS DETAILS 2
32022-C-13	15 OF 19	NORTH EROSION & SEDIMENT CONTROL PLAN
32022-C-14	16 OF 19	SOUTH EROSION & SEDIMENT CONTROL PLAN
32022-C-15	17 OF 19	ESC DETAILS
32022-C-16	18 OF 19	EMERGENCY ACCESS ROUTING
32022-C-17	19 OF 19	SIGNAGE AND PAVEMENT MARKING PLAN

### GENERAL NOTES APPLICABLE TO ALL CIVIL WORK

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH:
  - THE LATEST EDITION OF THE BRITISH COLUMBIA BUILDING CODE AND THE BC PLUMBING CODE.
  - THE MASTER MUNICIPAL CONSTRUCTION DOCUMENT AND STANDARD DETAIL DRAWINGS, LATEST EDITION (PLATINUM EDITION) AND CITY OF SURREY 2016 SUPPLEMENTARY SPECIFICATIONS AND DETAILED DRAWINGS UNLESS OTHERWISE NOTED.
  - CONSTRUCTION PLANS, ACCEPTED AND SIGNED BY THE CITY OF SURREY;
  - APPLICABLE CONTRACT DOCUMENTS AND ALL SPECIFICATIONS REFERENCED THEREIN;
  - MINISTRY OF ENVIRONMENT AND/OR FEDERAL DEPARTMENT OF FISHERIES AND OCEANS;
  - MINISTRY OF TRANSPORTATION "BC TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS", LATEST EDITION; AND
  - WORKSAFEBC, LATEST EDITION.

THE CONTRACTOR SHALL MAINTAIN ON SITE COPIES OF THE ABOVE DOCUMENTS AND SHALL ENSURE THAT ALL SUB CONTRACTORS ARE THOROUGHLY FAMILIAR WITH THE APPLICABLE SECTIONS OF THE DOCUMENTS. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. ALL EXCEPTIONS TO THE ABOVE STANDARDS SHALL BE APPROVED IN WRITING BY THE ENGINEER.
- ALL ELEVATIONS SHOWN ARE GEODETIC.
- ALL EXISTING UTILITIES ARE SHOWN ACCORDING TO AVAILABLE RECORD DRAWINGS. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE CITY OF SURREY OR ISL ENGINEERING AND LAND SERVICES AS TO AS FOUND LOCATION, ACCURACY OR OMISSIONS. THE CONTRACTOR SHALL CONTACT THE VARIOUS COMPANIES DIRECTLY FOR INFORMATION AS TO ACTUAL LINE AND SERVICE CONNECTION LOCATIONS. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION, INCLUDING UNDERGROUND POWER AND TELEPHONE SERVICE DUCTS AND SHALL NOTIFY THE ENGINEER OF RECORD A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION OF ANY CONFLICTS. ANY ADDITIONAL WORK REQUIRED AS A RESULT OF FAILING TO PRE-LOCATE KNOWN OR POTENTIAL CONFLICTS WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE.
- RESTORATION OF EXISTING DRIVEWAYS, CURBS AND WALKWAYS TO CONFORM TO CITY SPECIFICATIONS.
- EVERY EFFORT IS TO BE MADE TO SAVE EXISTING LANDSCAPING WITHIN THE ROAD R.O.W. LANDSCAPING IS TO BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION.
- THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING STRUCTURES OR SURFACE FEATURES TO ORIGINAL CONDITION OR BETTER FOLLOWING CONSTRUCTION.
- MANHOLE, CATCH BASIN AND LAWN BASIN RIM ELEVATIONS SHALL BE SET TO MATCH FINISHED GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CITY PERMITS AND TRAFFIC ACCOMMODATIONS FOR WORK WITHIN THE CITY ROAD ALLOWANCE.
- CIVIL WORK TO BE COORDINATED WITH ALL OTHER DISCIPLINES AS REQUIRED. THE CONTRACTOR SHALL COORDINATE WITH GEOTECHNICAL ENGINEER REVIEW AND APPROVE.
  - NATIVE SUBGRADE PRIOR TO FILL PLACEMENT.
  - FILL MATERIAL PRIOR TO USE.
  - BACKFILL MATERIAL.
  - PAVEMENT STRUCTURE INCLUDING ROAD BASE AND ASPHALT SURFACE
- ALL PROPOSED GRADING SHALL MEET EXISTING GROUND ELEVATIONS AT ADJOINING PROPERTY LINES UNLESS OTHERWISE NOTED.
- CONTRACTOR TO CONTACT ISL ENGINEERING AND LAND SERVICES (604.371.0091) A MINIMUM 24 HOURS IN ADVANCE TO ARRANGE FOR INSPECTION PRIOR TO BACKFILLING INSTALLED WORKS.





**PAVEMENT LEGEND**

	<b>TYPICAL PAVEMENT AREA</b> 85mm - HOT MIX ASPHALT CONCRETE 100mm - 19mm MINUS CRUSHED GRAVEL BASE COURSE 300mm - 75mm MINUS SAND AND GRAVEL SUB-BASE NOTE: FOR MORE DETAILS, SEE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY GEOPACIFIC DATED DECEMBER, 2017.
	<b>HEAVY LOAD PAVEMENT AREA</b> 175mm - HOT MIX ASPHALT CONCRETE 300mm - 25mm MINUS GRANULAR BASE COURSE 150mm - 75mm MINUS GRANULAR SUB-BASE NOTE: TO BE CONFIRMED BY GEOTECHNICAL ENGINEER
	EXISTING PAVEMENT AREA
	PROPOSED GRAVEL AREA

**LEGEND**

	SURFACE FLOW DIRECTION
	GRADE
	EX. ELEVATION
	PR. ELEVATION
	WALL TOP ELEV.
	WALL BOTTOM ELEV.
	SWALE
	RIDGE LINE
	RETAINING WALL
	CATCHBASIN
	LAWN BASIN
	MANHOLE LID

No.	DESCRIPTION	BY	DATE
7	RE-ISSUED FOR DP AMENDMENT	DWF	AUG20/18
6	PROPOSED IMPERVIOUS AREA CALC ADDED	DWF	AUG08/18
5	UPDATE PROJECT TITLE FOR DP AMENDMENT	DWF	MAY29/18
4	RE-ISSUED FOR DP AMENDMENT	DWF	MAY11/18
3	ISSUED FOR DP AMENDMENT	DWF	MAY03/18
2	REVISED CONCEPT DESIGN	DWF	APR17/18

REVISIONS

**ISL Engineering and Land Services**  
 #201, 8506 - 200 STREET  
 Langley, B.C. V2Y 0M1  
 Office: (604) 371-0091  
 Fax: (604) 371-0098  
 www.islengineering.com

**FRASER GRAIN TERMINAL**  
**NEW GRAIN EXPORT FACILITY**  
 11041 ELEVATOR ROAD, SURREY

Drawn: DWF Design Checked: **SJV** Date: **MAR 2018**  
 Designed: DWF Discipline Review: **SJV** Date: **MAR 2018**

**NORTH GRADING PLAN**

Drawing No. **32022 C-02**  
 Sheet No. **02**

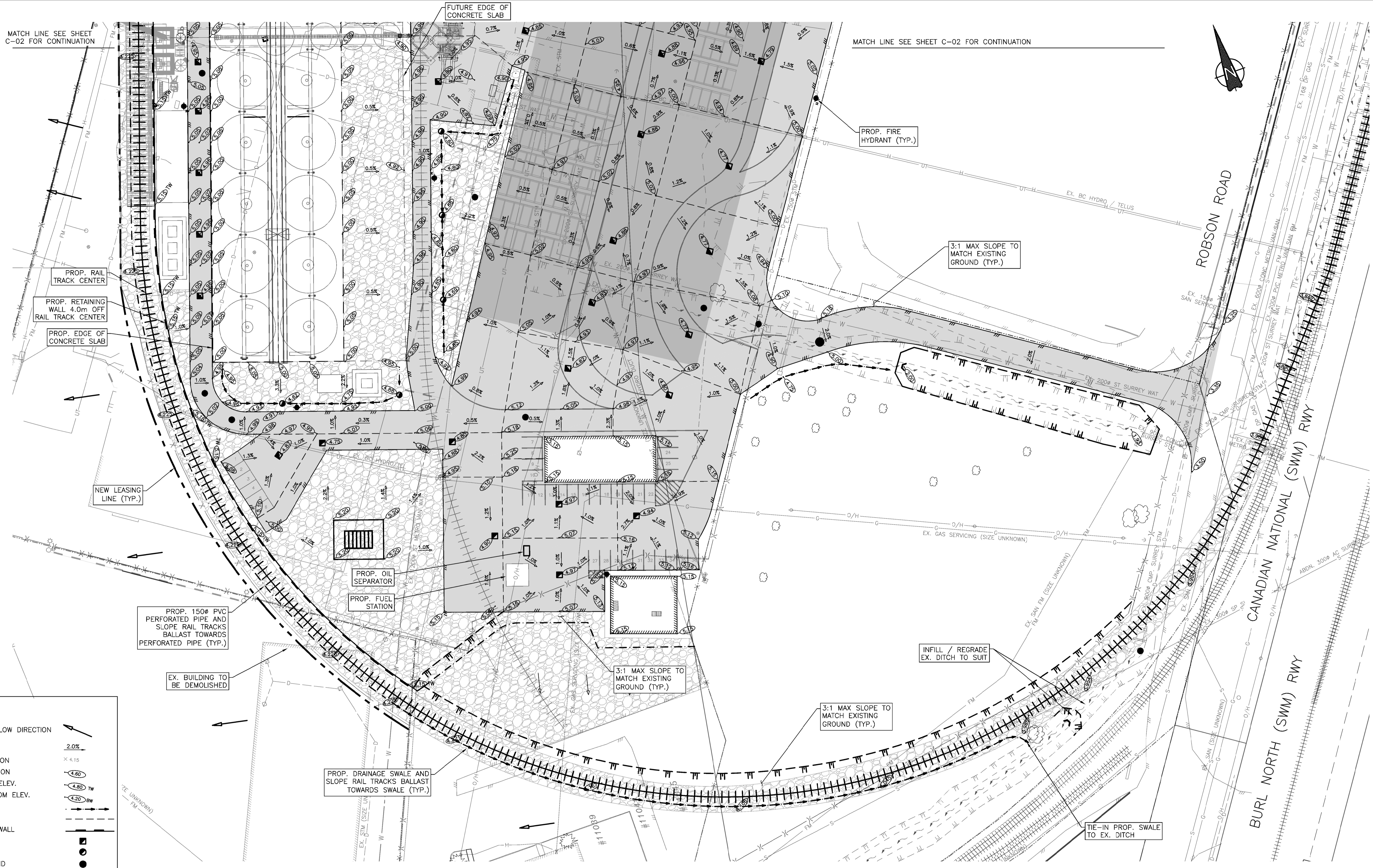
P.Eng.

Scale: **1:500**



MATCH LINE SEE SHEET C-02 FOR CONTINUATION

MATCH LINE SEE SHEET C-02 FOR CONTINUATION



LEGEND	
SURFACE FLOW DIRECTION	
GRADE	2.0%
EX. ELEVATION	x 4.15
PR. ELEVATION	4.60
WALL TOP ELEV.	4.80 TW
WALL BOTTOM ELEV.	4.20 BW
SWALE	
RIDGE LINE	
RETAINING WALL	
CATCHBASIN	
LAWN BASIN	
MANHOLE LID	

PAVEMENT LEGEND	
	TYPICAL PAVEMENT AREA
	85mm - HOT MIX ASPHALT CONCRETE
	100mm - 19mm MINUS CRUSHED GRAVEL
	BASE COURSE
	300mm - 75mm MINUS SAND AND GRAVEL
	SUB-BASE
	NOTE: FOR MORE DETAILS, SEE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY GEOPACIFIC DATED DECEMBER, 2017.
	HEAVY LOAD PAVEMENT AREA
	175mm - HOT MIX ASPHALT CONCRETE
	300mm - 25mm MINUS GRANULAR BASE COURSE
	150mm - 75mm MINUS GRANULAR SUB-BASE
	NOTE: TO BE CONFIRMED BY GEOTECHNICAL ENGINEER
	EXISTING PAVEMENT AREA
	PROPOSED GRAVEL AREA

No.	DESCRIPTION	BY	DATE
7	RE-ISSUED FOR DP AMENDMENT	DWF	AUG20/18
6	PROPOSED IMPERVIOUS AREA CALC ADDED	DWF	AUG08/18
5	UPDATE PROJECT TITLE FOR DP AMENDMENT	DWF	MAY29/18
4	RE-ISSUED FOR DP AMENDMENT	DWF	MAY11/18
3	ISSUED FOR DP AMENDMENT	DWF	MAY03/18
2	REVISED CONCEPT DESIGN	DWF	APR17/18

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**SOUTH GRADING PLAN**

Drawing No.  
**32022 C-03**  
 Sheet No.  
**03**





MATCH LINE SEE SHEET C-05 FOR CONTINUATION

MATCH LINE SEE SHEET C-05 FOR CONTINUATION

CUT/FILL VOLUME		
CUT (m³)	FILL (m³)	NET (m³)
11,500	7000	4,500

- NOTE:**
- CUT/FILL VOLUME CALCULATION BASED ON THE FOLLOWING ASSUMPTIONS:
- CUT/FILL VOLUME IS CALCULATED FROM EXISTING GROUND SURFACE TO COMBINED SURFACE OF FINISHED GROUND AND PAVEMENT SUBGRADE.
  - TYPICAL PAVEMENT STRUCTURE DEPTH = 485mm AND HEAVY LOAD PAVEMENT STRUCTURE DEPTH = 625mm. SEE SHEET C-02 AND C-03 GRADING PLAN FOR PAVEMENT STRUCTURE DETAILS AND BOUNDARY.
  - CONCRETE SLAB AREA FOR BINS NOT INCLUDED INTO THIS CALCULATION.
  - CUT FACTOR=1 AND FILL FACTOR=1.

CUT/FILL ELEV TABLE			
NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR
1	-4.0	-2.0	■
2	-2.0	-1.0	■
3	-1.0	0.0	■
4	0.0	1.0	■
5	1.0	3.0	■

LEGEND	
GRADE	2.0%
EX. ELEVATION	× 4.15
PR. ELEVATION	○ 4.60
WALL TOP ELEV.	○ 4.80 TW
WALL BOTTOM ELEV.	○ 4.20 BW
SWALE	—
RIDGE LINE	—
RETAINING WALL	—
CATCHBASIN	□
LAWN BASIN	○
MANHOLE LID	●

No.	DESCRIPTION	BY	DATE
6	RE-ISSUED FOR DP AMENDMENT	DWF	AUG20/18
5	UPDATE PROJECT TITLE FOR DP AMENDMENT	DWF	MAY29/18
4	RE-ISSUED FOR DP AMENDMENT	DWF	MAY11/18
3	ISSUED FOR DP AMENDMENT	DWF	MAY03/18
2	REVISED CONCEPT DESIGN	DWF	APR17/18
1	CONCEPT DESIGN	DWF	MAR29/18

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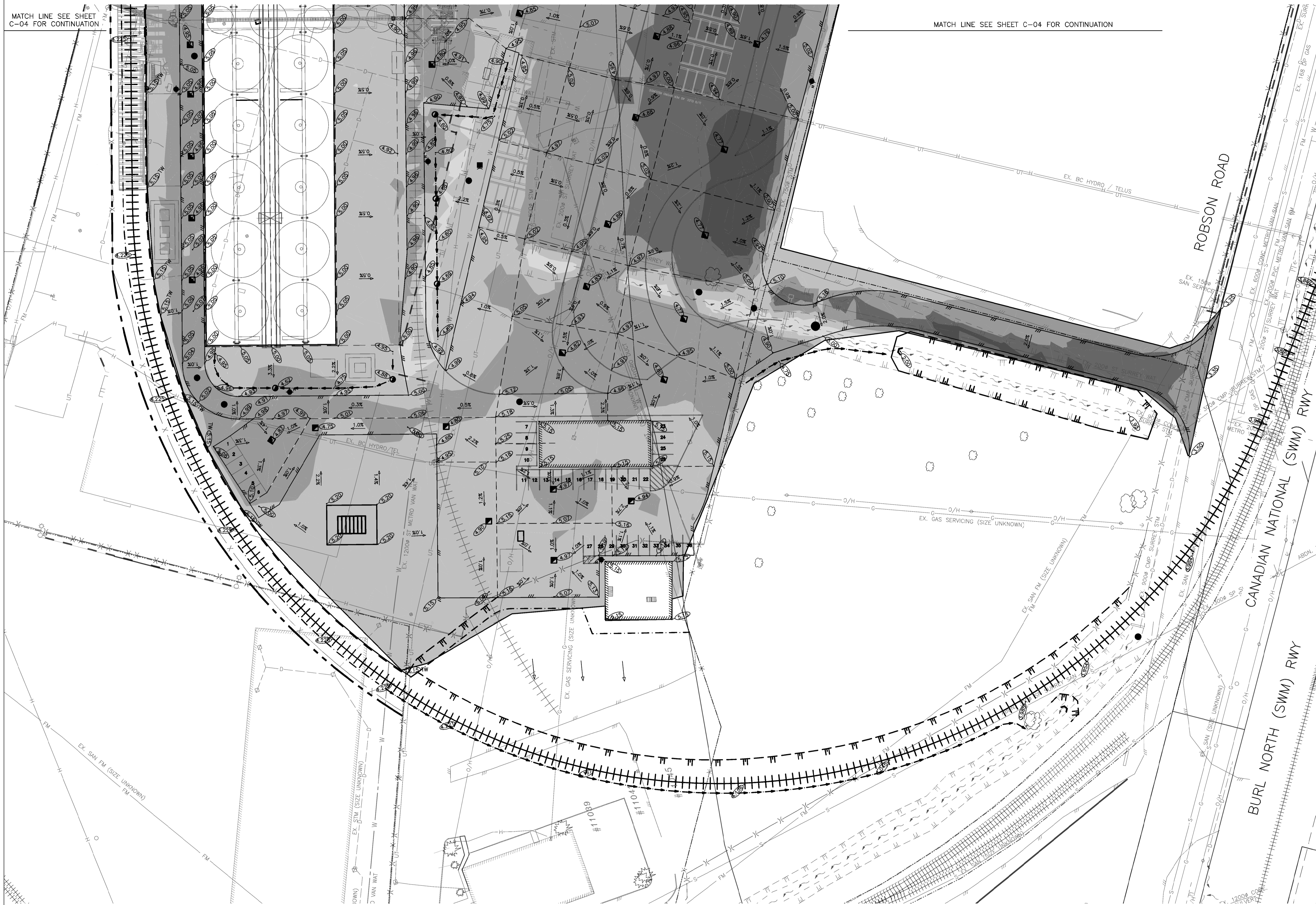
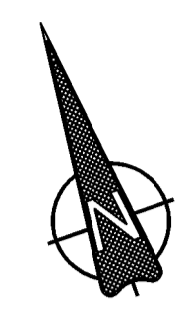
**NORTH**  
**CUT/FILL PLAN**

Drawing No.  
**32022**  
**C-04**  
 Sheet No.  
**04**



MATCH LINE SEE SHEET C-04 FOR CONTINUATION

MATCH LINE SEE SHEET C-04 FOR CONTINUATION



LEGEND	
GRADE	2.0%
EX. ELEVATION	× 4.15
PR. ELEVATION	○ 4.60
WALL TOP ELEV.	○ 4.80 TW
WALL BOTTOM ELEV.	○ 4.20 BW
SWALE	—
RIDGE LINE	—
RETAINING WALL	—
CATCHBASIN	■
LAWN BASIN	●
MANHOLE LID	●

NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR
1	-4.0	-2.0	■
2	-2.0	-1.0	■
3	-1.0	0.0	■
4	0.0	1.0	■
5	1.0	3.0	■

No.	DESCRIPTION	BY	DATE
6	RE-ISSUED FOR DP AMENDMENT	DWF	AUG20/18
5	UPDATE PROJECT TITLE FOR DP AMENDMENT	DWF	MAY29/18
4	RE-ISSUED FOR DP AMENDMENT	DWF	MAY11/18
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2	REVISED CONCEPT DESIGN	DWF	APR17/18
1	CONCEPT DESIGN	DWF	MAR29/18

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**SOUTH CUT/FILL PLAN**

Drawing No.  
**32022 C-05**  
 Sheet No.  
**05**

P.Eng.