

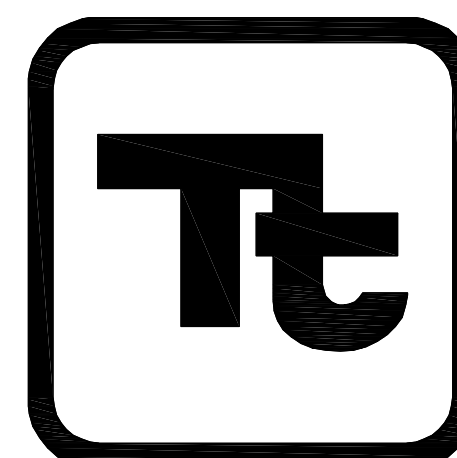
LOCATION MAP  
(N.T.S.)

# SUMMIT

## EARTHWORKS

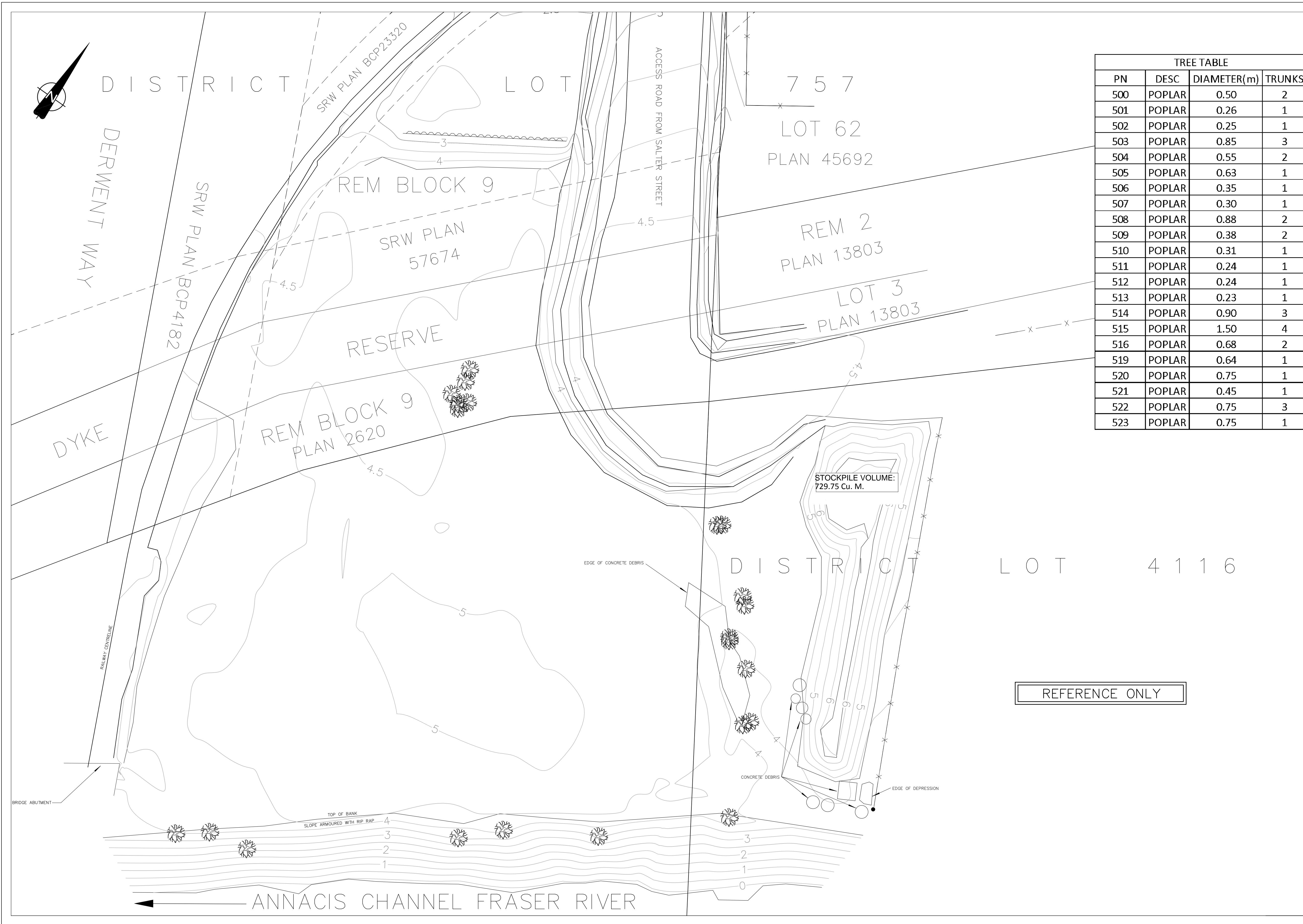
### DERWENT WAY TRANSFER STATION LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602 NEW WESTMINSTER, BC ISSUED FOR PERMIT

DRAWING INDEX				
#	DESCRIPTION	STATUS	DATE	REVISION
n/a	PROJECT COVER SHEET	n/a	n/a	n/a
T00006D	TOPOGRAPHIC PLAN (BY HIGHMARK SURVEY AND ENGINEERING LTD.)	FOR REFERENCE ONLY		
03082-LA100	LEASE AREA PLAN	ISSUED FOR PERMIT	2019.07.18	E
03082-01	GENERAL NOTES FOR CIVIL WORKS	ISSUED FOR PERMIT	2019.07.18	F
03082-02	TESTHOLE LOCATION PLAN	ISSUED FOR PERMIT	2019.07.18	F
03082-03	TOPSOIL STRIPPING AND GRUBBING PLAN	ISSUED FOR PERMIT	2019.07.18	G
03082-04	GENERAL ARRANGEMENT - SITE PLAN	ISSUED FOR PERMIT	2019.07.18	F
03082-05	GRADING PLAN - FINISHED GRADE	ISSUED FOR PERMIT	2019.07.18	F
03082-06	SITE PROFILES AND SECTIONS	ISSUED FOR PERMIT	2019.07.18	F
03082-07	RETAINING WALL DETAILS	ISSUED FOR PERMIT	2019.07.18	F
03085-08	STORM PIPE DRAINAGE PLAN	ISSUED FOR PERMIT	2019.07.18	F
03085-10	VEHICLE ROUTING - SITE ENTRY / EXIT	ISSUED FOR PERMIT	2019.07.18	F
03085-12	LANDSCAPING PLAN	ISSUED FOR PERMIT	2019.07.18	G
03085-13	SURVEY MONITORING POINT PLAN	ISSUED FOR PERMIT	2019.07.18	F
03085-100	BARGE LOADING MARINE FACILITY PLAN - GENERAL ARRANGEMENT	ISSUED FOR PERMIT	2019.07.18	D
03085-101	OPERATIONAL LOADING - GENERAL ARRANGEMENT	ISSUED FOR PERMIT	2019.07.18	B
03085-102	BARGE LOADING MARINE FACILITY - OPERATIONAL GEOMETRY	ISSUED FOR PERMIT	2019.07.18	D
03085-103	BARGE LOADING MARINE FACILITY - MARINE DOLPHIN DETAILS	ISSUED FOR PERMIT	2019.07.18	D
03085-104	BARGE LOADING MARINE FACILITY - CONVEYOR TRUSS & SUPPORT DETAILS	ISSUED FOR PERMIT	2019.07.18	D



**TETRA TECH**  
VGEO03082-01





TREE TABLE			
PN	DESC	DIAMETER(m)	TRUNKS
500	POPLAR	0.50	2
501	POPLAR	0.26	1
502	POPLAR	0.25	1
503	POPLAR	0.85	3
504	POPLAR	0.55	2
505	POPLAR	0.63	1
506	POPLAR	0.35	1
507	POPLAR	0.30	1
508	POPLAR	0.88	2
509	POPLAR	0.38	2
510	POPLAR	0.31	1
511	POPLAR	0.24	1
512	POPLAR	0.24	1
513	POPLAR	0.23	1
514	POPLAR	0.90	3
515	POPLAR	1.50	4
516	POPLAR	0.68	2
519	POPLAR	0.64	1
520	POPLAR	0.75	1
521	POPLAR	0.45	1
522	POPLAR	0.75	3
523	POPLAR	0.75	1

BCGS 92G.016 PID NO.: N/A  
 CIVIC ADDRESS : N/A  
 CHARGES, LIENS AND INTERESTS: N/A  
 THIS PLAN LIES WITHIN GREATER VANCOUVER REGIONAL DISTRICT  
 NOTES:  
 1. ALL COORDINATES, DISTANCES AND ELEVATIONS ARE IN METRES.  
 2. COORDINATES ARE GROUND SCALED BASED ON MONUMENT 89H6025 IN INTEGRATED SURVEY AREA (ISA) NO. 49, NEW WESTMINSTER, NAD83 (CSRS).  
 3. BEARINGS ARE GRID AND ARE DERIVED FROM PLAN EPP4663.  
 4. ELEVATIONS ARE ORTHOMETRIC AND ARE BASED ON ISA MONUMENT 89H6025.  
 5. CONTOURS ARE PLOTTED AT 0.5 METRE INTERVALS.  
 6. FIELD WORK WAS COMPLETED OCT 28, 2015

- LEGEND:**
- ROAD EDGE
  - TREE LINE
  - CREST
  - TOE
  - BREAKLINE
  - EDGE OF WATER
  - FENCE (CHAIN LINK)
  - FOUND IRON PIN
  - DECIDUOUS TREE
  - DENOTES SPOT ELEVATION AT DECIMAL POINT EXCEPT WHERE INDICATED

REFERENCE ONLY

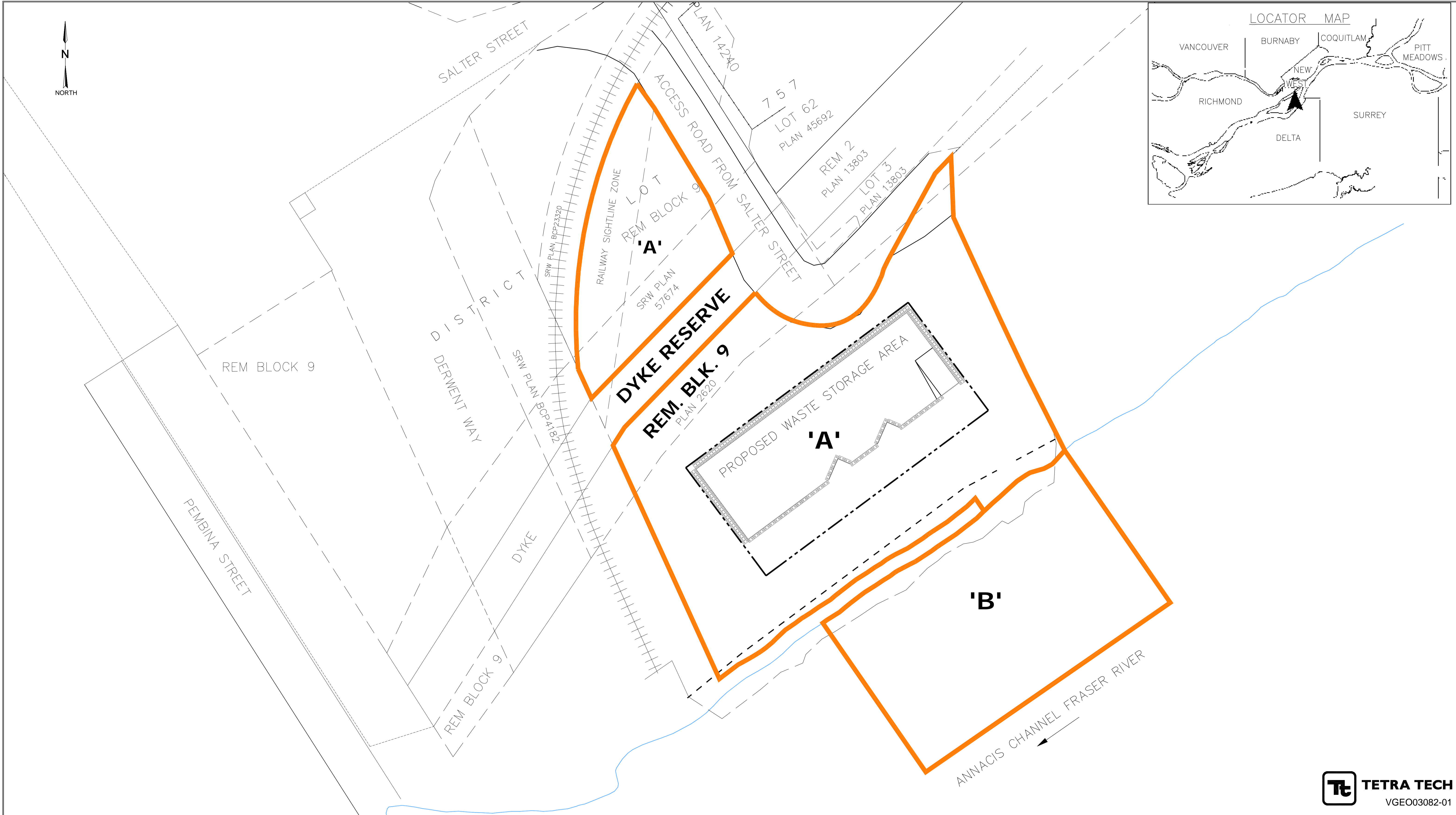
THIS PLAN IS FOR DESIGN PURPOSES ONLY AND IS NOT TO BE USED FOR THE LOCATION OF PROPERTY LINES OR ANY OTHER USE WHATSOEVER. THE SIGNATORY ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR ANY DAMAGES THAT MAY BE SUFFERED BY A THIRD PARTY AS A RESULT OF ANY DECISIONS MADE, OR ACTIONS TAKEN BASED ON THIS DOCUMENT.  
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HIGHMARK SURVEY AND ENGINEERING LTD.  
 Phone: 604-966-3733 Email: info@hmse.ca  
 Web: www.hmse.ca

REV	DESCRIPTION	DATE	DRAWN

**TOPOGRAPHIC PLAN**  
 OF AREA FRONTING LOT 3, PLAN 13803 AND BLOCK 9, PLAN 2620, ALL OF DL 757, Gp 1, NWD

SCALE	SHEET NO.	JOB	SHEET	FILE
1:250	ANSI D	J15010	1 OF 1	T00006D




REFERENCE DRAWINGS		REVISIONS						
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D
		A	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT
		B	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT
		C	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT
		D	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT
		E	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT

NOTES


**PARCEL AREAS**  
 PCL. 'A' (LAND) = 7,014m<sup>2</sup> (75,498ft<sup>2</sup>)  
 PCL. 'B' (WATER) = 2,819m<sup>2</sup> (30,343ft<sup>2</sup>)  
 TOTAL AREA = 9,833m<sup>2</sup>

ORIGINAL SHEET SIZE 'ANSI D'  
 1:400 0 5 10m  
 PRINTED SHEET SIZE 17"x11"  
 1:800 0 5 10m

PERMIT AND ENGINEER STAMP



**TETRA TECH**  
 VGEO03082-01



**SUMMIT**  
 EARTHWORKS

LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 LEASE AREA PLAN

CADFILE	03082-LA100	DRAWING NO.	03082-LA100	REV.	E
SCALE	1:400				



GENERAL NOTES FOR CIVIL WORKS:

I. GENERAL

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL REFERENCED DRAWINGS AND DOCUMENTS.
- ALL MATERIALS AND CONSTRUCTION PROCEDURES SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE FOLLOWING CODES, STANDARDS, SPECIFICATIONS, INCLUDING ALL SUPPLEMENTS:
  - PROVINCE OF BRITISH COLUMBIA OCCUPATIONAL HEALTH AND SAFETY REGULATIONS
  - CSA A23.1 CONCRETE MATERIALS AND METHODS OF CONSTRUCTION
  - CSA A23.3 DESIGN OF CONCRETE STRUCTURES
  - THE AMERICAN SOCIETY OF TESTING MATERIALS--ASTM D698, D1556, D1557, C136
  - NATIONAL BUILDING CODE OF CANADA
- THE CONSTRUCTION DESIGN DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELATED PIPING, MECHANICAL, AND ELECTRICAL DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS AND EXISTING SITE CONDITIONS INCLUDING ANY UNDERGROUND INTERFERENCES BEFORE EXCAVATION OR CONSTRUCTION BEGINS. THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND INTERFERENCES.
- THE CONTRACTOR SHALL PROVIDE AND TAKE RESPONSIBILITIES FOR ALL DEWATERING, SHORING AND TEMPORARY BRACING NECESSARY TO UNDERTAKE THE WORK IN A SAFE MANNER TO PROTECT LIFE, PROPERTY AND THE WORK AND ENSURE THAT ALL EXCAVATION ARE KEPT FREE OF WATER.
- NOTWITHSTANDING THE USE OF APPROVED MATERIALS INDICATED ON THE DRAWINGS, ENGINEERS MAY AT ANY TIME REQUIRE THE CONTRACTOR TO PRODUCE CERTIFICATION BY AN INDEPENDENT TESTING AUTHORITY THAT THE MATERIALS USED CONFORM TO THE SPECIFIED STANDARDS.

II. SITE PREPARATION AND EARTHWORKS

- ALL TOPSOIL, ORGANICS, VEGETATION AND OTHER DELETERIOUS MATERIALS SHOULD BE STRIPPED OFF FROM THE PROPOSED TRANSLOAD SITE AREA PRIOR TO CONSTRUCTION.
- IF THE EXISTING SUBGRADE SURFACES AND/OR THE EXPOSED SUBGRADE SURFACES AFTER THE REQUIRED CUT ARE LESS THAN 0.6m BELOW THE DESIGN SUBGRADE SURFACE, THEY SHOULD BE SUB-EXCAVATED TO A DEPTH OF 0.6m BELOW THE DESIGN SUBGRADE SURFACE.
- THE EXPOSED SURFACES SHOULD THEN BE BLADED, BACKFILLED AND COMPACTED USING SUITABLE MATERIALS. THE BACKFILL MATERIALS SHOULD BE PLACED IN LIFTS OF 0.3m, AND COMPACTED TO THE MINIMUM OF 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD), WITH THE EXCEPTION OF THE UPPER 0.3m WHICH SHOULD BE COMPACTED TO 100% SPMDD IN 0.3m LIFTS.
- ANY BORROW MATERIAL REQUIRED AS ADDITIONAL FILL MUST CONSIST OF GRANULAR MATERIAL, PROVIDED IT IS FREE FROM ORGANICS, RUBBLE, SNOW, ICE, FROZEN LUMPS AND STONES GREATER THAN 150mm IN DIAMETER AND IS COMPACTED TO AT LEAST 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD) WITHIN 2% OF OPTIMUM MOISTURE CONTENT (OMC), WITH THE EXCEPTION OF THE UPPER 0.3m WHICH SHOULD BE COMPACTED TO 100% SPMDD.
- FINISHED GRADE ELEVATIONS AS INDICATED ON THE CONSTRUCTION DRAWINGS REPRESENT THE TOP OF SURFACE AGGREGATE.
- THE CONTRACTOR SHALL GRADE TO THE LEVELS, ELEVATIONS, CONTOURS AND MAKE NATURAL CHANGES TO BLEND SLOPES INTO LEVEL AREAS AS INDICATED ON THE CONSTRUCTION DRAWINGS.
- PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UNDERGROUND SERVICES IN THE SURROUNDING AREA. HYDROVAC OR HAND EXCAVATION METHODS SHALL BE CARRIED OUT FOR FOUNDATIONS, PIPES, DUCTS & NEW STRUCTURES IN SUCH A MANNER AS TO PREVENT ANY DAMAGE TO THE EXISTING UNDERGROUND SERVICES. THESE ARE TO BE PROTECTED FROM LOADS IMPOSED DURING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATION AT ALL TIMES AND SHALL ADHERE TO GEOTECHNICAL RECOMMENDATIONS, AND BRITISH COLUMBIA OCCUPATIONAL HEALTH AND SAFETY ACT REGULATIONS.
- EXCAVATED MATERIALS WHICH ARE SUITABLE FOR FILL MATERIALS SHALL BE STOCKPILED IN DESIGNATED AREAS. CONTRACTOR SHALL ENSURE THAT THE SITE DRAINAGE PATTERNS ARE AS SHOWN ON THE CONSTRUCTION DRAWINGS AND ARE NOT TO BE ALTERED BY SUCH STOCKPILES.
- ENSURE ADEQUATE RUN-OFF AND EROSION CONTROLS ARE IN PLACE TO PREVENT SILTATION OR ANY CONTAMINATION TO THE WATERSHED.
- UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE DRAWINGS, SITE FILL SHALL BE APPROVED IMPORTED FROST STABLE GRANULAR FILL SUBJECT TO TESTING BY AN INDEPENDENT GEOTECHNICAL TESTING LABORATORY AND TO THE SATISFACTION OF ENGINEER.

III. MATERIALS

- SUBJECT TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER, THE ON-SITE EXCAVATED SUBSOIL INORGANIC MATERIAL MAY BE SUITABLE FOR GENERAL BACKFILLING PROVIDED IT IS KEPT FREE OF ANY ORGANIC CONTENT, FROZEN MATERIALS AND ANY OTHER DELETERIOUS SUBSTANCE.
- ALL MATERIALS SHALL BE FREE FROM LUMPS, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATER.
- COARSE SAND FOR BEDDING AND DRAINAGE SHALL CONFORM TO THE FOLLOWING GRADING:

SIEVE SIZE (mm) (SQUARE OPENING)	% PASSING (BY WEIGHT)
10	100
5	95-100
2.5	80-100
1.25	50-90
0.630	25-65
0.315	10-35
0.160	2-10
0.080	0-4

\* SAND SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 300mm TO 98% OF SPMDD.

- THE PIT RUN GRAVEL AND FILL SAND SHALL BE OF SOUND, HARD FREE FROM FLAKES ORGANIC MATTER OR OTHER DELETERIOUS MATERIAL IN ACCORDANCE WITH THE SPECIFICATION AND THE SOIL REPORT AND SHALL MEET THE FOLLOWING REQUIREMENTS:

% PASSING BY WEIGHT

SIEVE SIZE (mm)	PIT RUN GRAVEL	FILL SAND
75.0	100	---
25	--	100
5.0	20-50	75-100
0.630	--	45-80
0.080	2-8	2-10

\* PIT RUN GRAVEL SHALL BE PLACED IN COMPACTED LIFTS NOT EXCEEDING 300mm AND COMPACTED TO 100% OF SPMDD.

- CRUSHED GRAVEL SHALL BE OF SOUND HARD PARTICLES, FREE FROM FLAKY PARTICLES, SOFT SHALE, ORGANIC OR ANY OTHER DELETERIOUS MATERIAL IN ACCORDANCE WITH SPECIFICATION EARTH WORK, THE SOIL REPORT, AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

% PASSING BY WEIGHT

SIEVE SIZE (mm)	20mm CRUSH	40mm CRUSH
40	--	100
25	--	70-94
20	100	--
16	84-94	55-85
10	63-86	44-74
5.0	40-67	32-62
1.25	20-43	17-43
0.630	14-34	12-34
0.315	9-26	8-26
0.160	5-18	5-18
0.080	2-10	2-10

\* 20mm MINUS CRUSHED GRAVEL SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 300mm TO 100% SPMDD.

IV. ROCK RIPRAP

- MATERIAL FOR ROCK RIPRAP SHALL BE SOUND AND DURABLE FIELD STONE, OR ROUGH UNHEWN QUARRY STONE AS NEARLY RECTANGULAR AS PRACTICABLE, CONFORMING TO THE REQUIREMENTS OF THE FOLLOWING GRADATION:
  - 100% SMALLER THAN 450mm
  - AT LEAST 50% LARGER THAN 250mm
  - AT LEAST 90% LARGER THAN 150mm
- THE ROCK RIPRAP SHALL BE WELL GRADED BETWEEN THE DIMENSIONS SPECIFIED ABOVE.

V. GRAVEL AND ASPHALT ROAD MATERIALS:

- ROADS SHALL BE CONSTRUCTED TO LINES, GRADES, ELEVATIONS AND CROSS SECTIONS AS SHOWN ON CONSTRUCTION DRAWINGS.
- ALL GRAVEL MATERIAL SHALL CONFORM TO THE GRADATION NOTES AND TABLES AS INDICATED IN SECTION III.
- PAVED ROADS AS SPECIFIED ON THE CONSTRUCTION DRAWINGS SHALL BE PAVED WITH HOT LAID PLANT MIXED ASPHALT TO THE SPECIFIED THICKNESS SHOWN ON THE DRAWINGS. ALL MATERIALS, COMPOSITION AND PROPORTIONING, PAVING PLANT REQUIREMENTS, CONSTRUCTION METHODS, COMPACTION AND TESTING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AS NOTED ON THE CONSTRUCTION DRAWINGS.

VI. SEWER APPURTENANCES, DRAINS AND CLEANOUTS:

- LOCATIONS, INVERT ELEVATION (INV. EL.), RIM ELEVATION (RIM EL.), BOTTOM OF BOX (B.O.B.) ELEVATIONS, HEIGHT (HT) & DIAMETERS (DIA.) OF SEWER APPURTENANCES (MANHOLE, CATCH BASIN, JUNCTION BOX, ETC.) SHALL BE BUILT AS INDICATED ON THE CONSTRUCTION DRAWINGS.
- LOCATIONS, SIZES AND INVERT ELEVATIONS OF DRAINS AND CLEAN-OUTS SHALL BE BUILT AS INDICATED ON CONSTRUCTION DRAWINGS.
- ALL SEWER APPURTENANCES SHALL BE SUPPORTED ON A MINIMUM 200mm CRUSHED GRAVEL OR SAND AS SPECIFIED IN THE CONSTRUCTION DRAWINGS.
- BACKFILL AROUND SEWER APPURTENANCES BE FROST STABLE MATERIAL AS SPECIFIED IN THE CONSTRUCTION DRAWINGS.
- ALL SEWER APPURTENANCES INCLUDING COVERS AND FRAMES SHALL BE ADEQUATE FOR CSW 600 WHEEL LOADING AS PER CSA S6 (SECONDARY ROADS) UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS AND SHALL BE DESIGNED ON THE BASIS OF GROUND WATER TABLE AT GROUND SURFACE.
- STEEL CORRUGATED PIPE (CSP) SIZES AND COVER - SEE TABLE, ASSUMED NORMAL SITE CONDITION, PH > 6-8. MINIMUM RESISTIVITY > 9677 Ω-m.

CULVERT SIZE ID (mm)	CULVERT SIZE ID (IN)	MIN COVER (mm)
609	24	600
762	30	600
914	36	760
1066	42	760

Date and Time Saved: 2019-07-17 10:17 AM

PLOTTED: 2019-07-17 10:42:16 AM. BY: MICHAEL  
LAST SAVED: 2019-07-17 10:17:40 AM BY: MICHAEL

REFERENCE DRAWINGS		REVISIONS								NOTES	PERMIT AND ENGINEER STAMP
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		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT			
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT			
		D	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT			
		E	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT			
		F	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT			

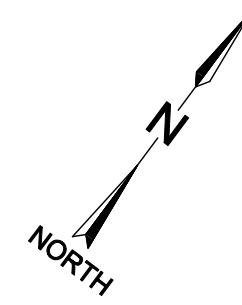


LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
DERWENT WAY TRANSFER STATION  
GENERAL NOTES FOR CIVIL WORKS

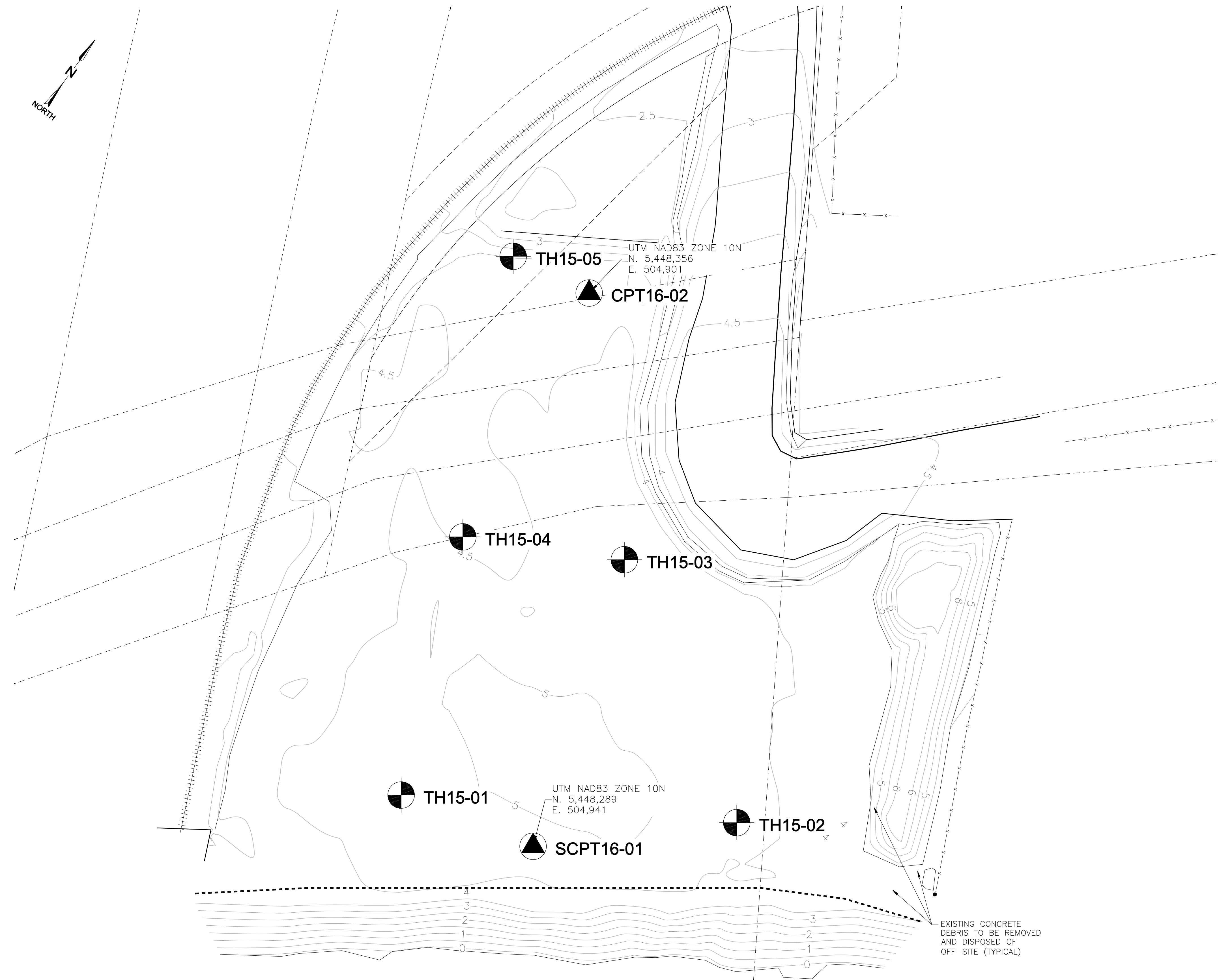
CADFILE	03082-01	DRAWING NO.	03082-01	REV.	F
SCALE	N/A				





**LEGEND:**

- LEGAL PLAN RIGHT OF WAYS (R/W)
- +++++++ EXISTING CENTERLINE OF RAIL
- x-x- EXISTING FENCELINE
- ⊗ EXISTING TREES
- EXISTING CONTOURS (0.5m INTERVALS)
- ⊗ TH15-XX TESTHOLE LOCATION c/w NUMBER  
(FOR TESTHOLE LOGS REFER TO THE GEOTECHNICAL REPORT PREPARED BY TETRA TECH)
- ▲ SCPT16-XX CPT/SCPT LOCATION



**SUMMIT**  
 EARTHWORKS

LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 TESTHOLE LOCATION PLAN

CADFILE	03082-02	DRAWING NO.	03082-02	REV.	F
SCALE	1:300				

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		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT
		D	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT
		E	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT
		F	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT

NOTES

ORIGINAL SHEET SIZE 'ANSI D'  
 1:300 0 5 10m  
 PRINTED SHEET SIZE 17"x11"  
 1:600 0 5 10m

PERMIT AND ENGINEER STAMP





**NOTES:**

1. GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING Q3082-01
2. ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.
3. TOPOGRAPHY DATA IS DERIVED FROM HIGHMARK SURVEY AND ENGINEERING LTD. OCT. 2015. DRAWING NUMBER: T00006D.
3. BEARINGS ARE GRID AND ARE DERIVED FROM PLAN EPP4663. ELEVATIONS ARE ORTHOMETRIC AND ARE BASED ON ISA MONUMENT 89H6025.

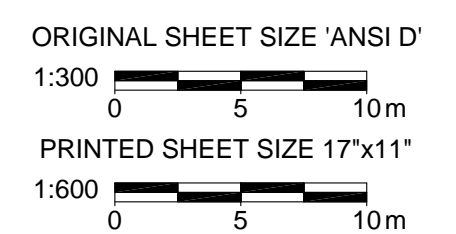
SITE BENCHMARKS AND COORDINATES			
DESCRIPTION	ID.	NORTHING	EASTING
SITE BENCHMARK #1	T.B.D.	T.B.D.	T.B.D.
SITE BENCHMARK #2	T.B.D.	T.B.D.	T.B.D.

**LEGEND:**

- STRIPPING AND GRUBBING BOUNDARY EXTENTS
- LIMITS OF STRIPPING AND GRABBING AREAS
- LEGAL PLAN RIGHT OF WAYS (R/W)
- EXISTING CENTERLINE OF RAIL
- EXISTING FENCELINE
- EXISTING DECIDUOUS TREES ON EMBANKMENT TO REMAIN
- EXISTING TREES TO BE REMOVED
- EXISTING TREE AREA TO REMAIN (ALONG RIVER EMBANKMENT AND WITHIN 10m OF HIGHWATER MARK)
- EXISTING CONTOURS (0.5m INTERVALS)

QUANTITIES TABLE		
DESCRIPTION	2D AREA (m <sup>2</sup> )	VOLUME (m <sup>3</sup> )
TOPSOIL STRIPPING AREA #1 (AVERAGE DEPTH OF TOPSOIL = 200mm)	4386	877
TOPSOIL STRIPPING AREA #2 (EXISTING STOCKPILE)	650	800

REFERENCE DRAWINGS		REVISIONS							NOTES	PERMIT AND ENGINEER STAMP
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D		
		A	ISSUED FOR 50% DESIGN	2017.AUG.15	MOH	CT	DM	CT		
		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT		
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT		
		D	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT		
		E	ISSUED FOR PERMIT	2018.OCT.05	MOH	CT	DM	CT		
		F	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT		
		G	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT		

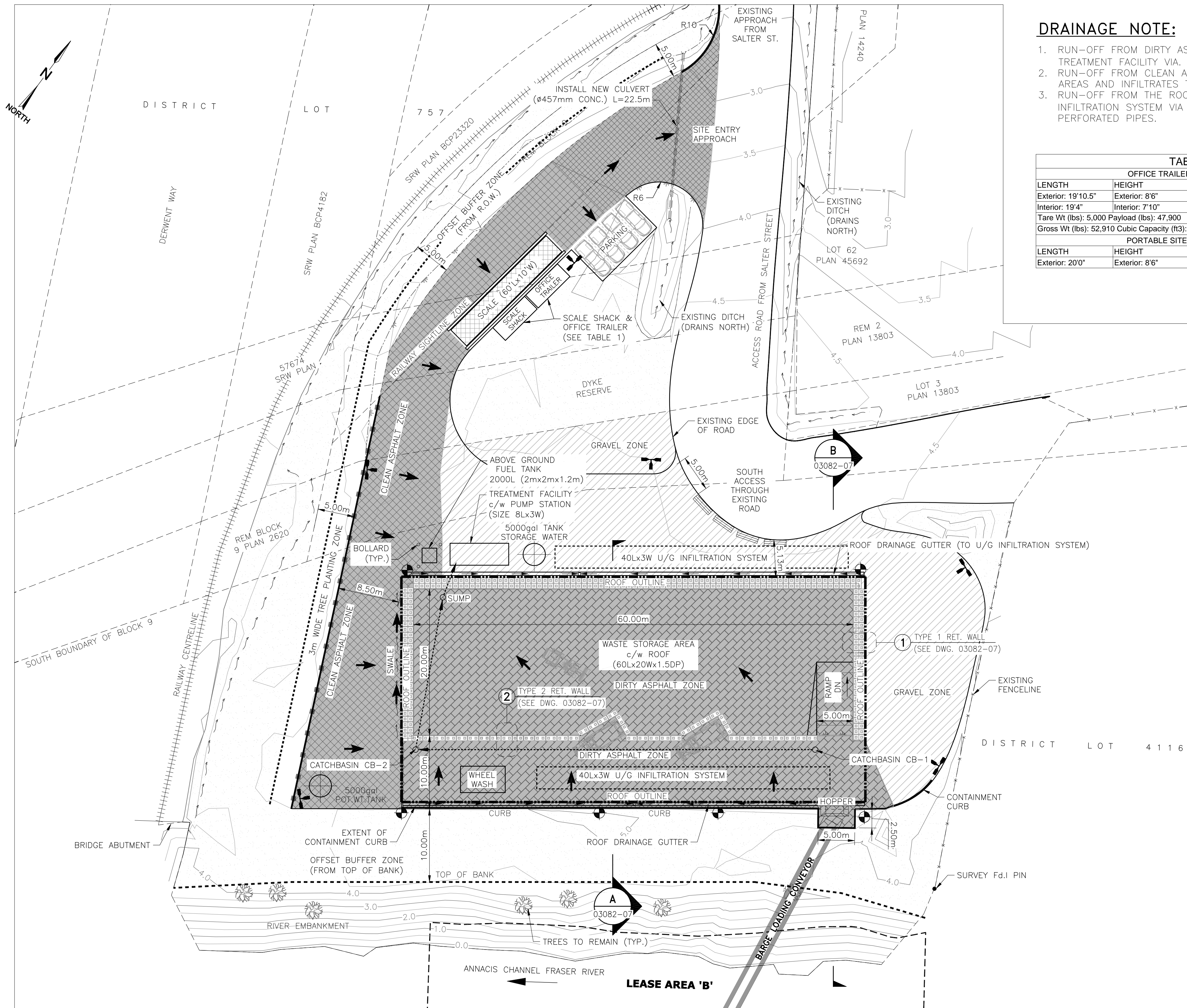


LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 SITE CLEARING, STRIPPING AND GRUBBING PLAN

CADFILE	03082-03	DRAWING NO.	03082-03	REV.	G
SCALE	1:300				





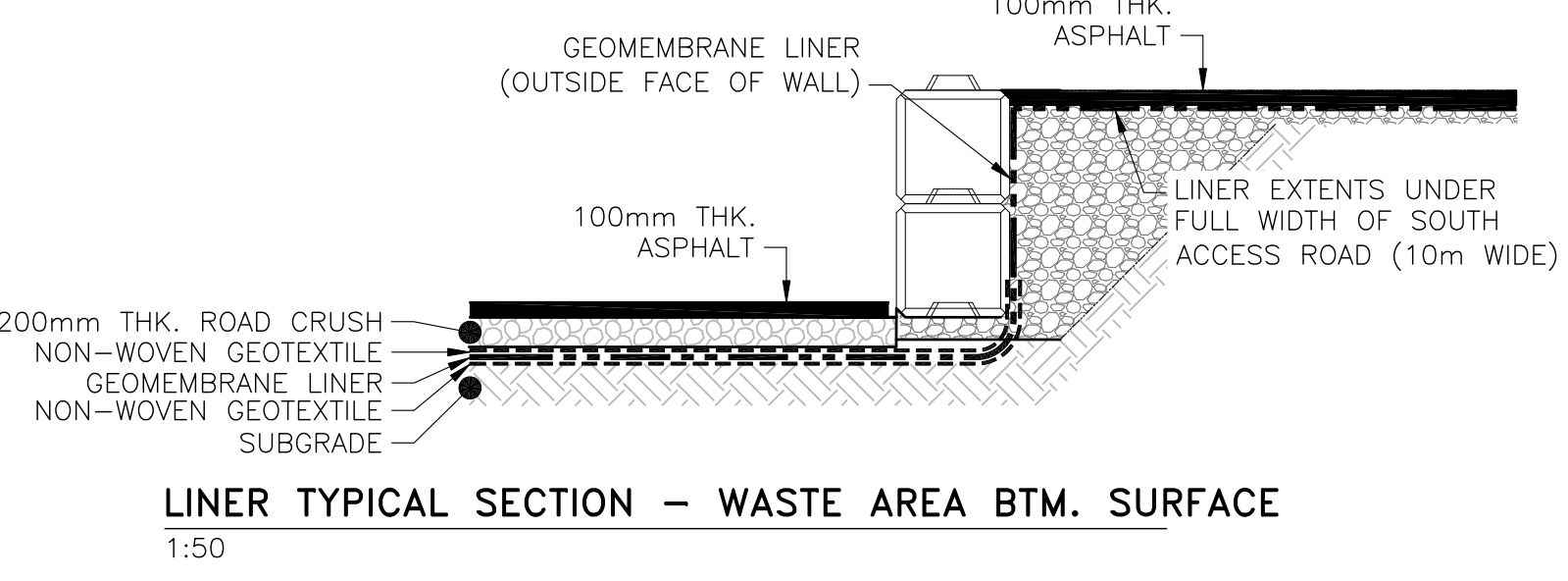
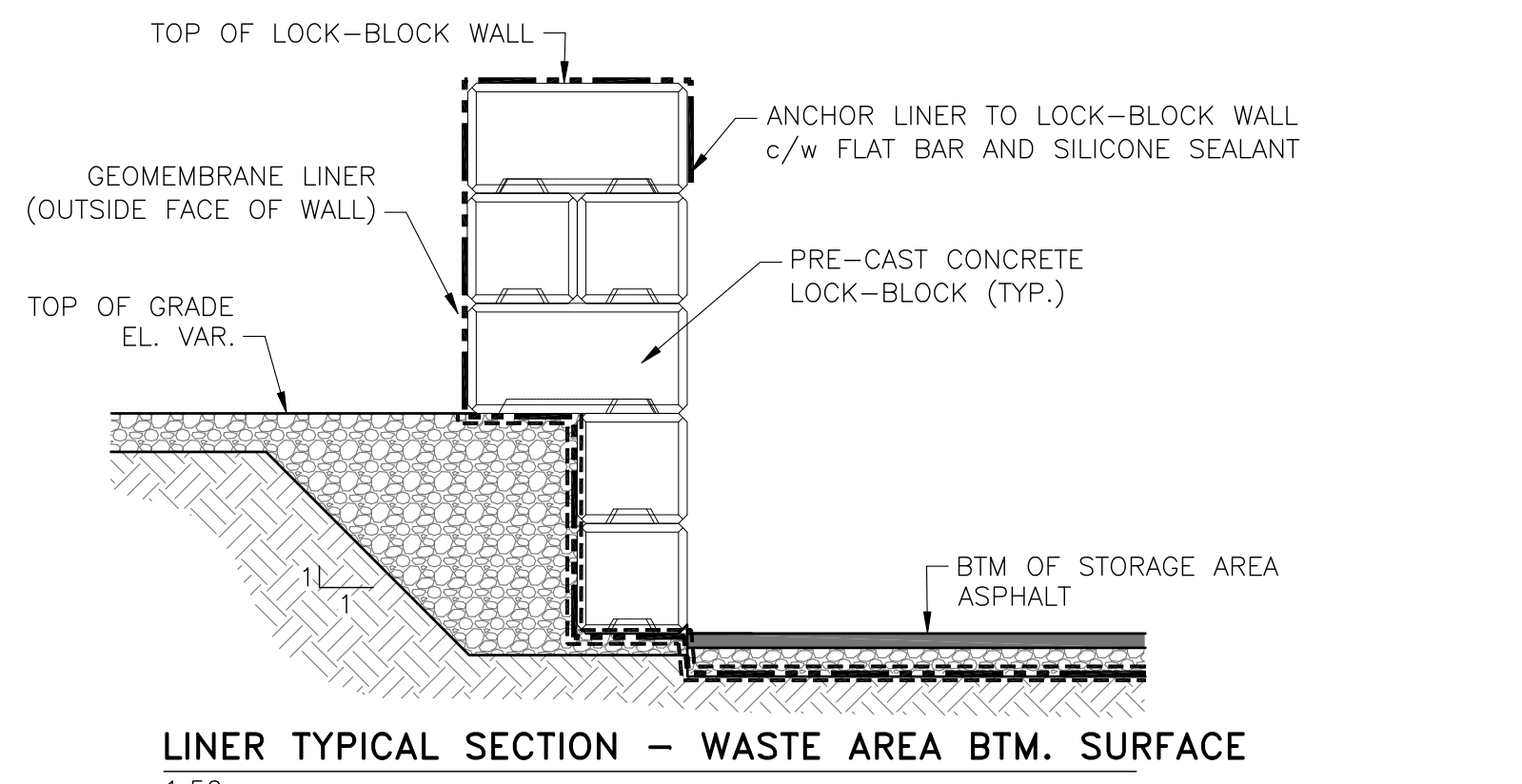
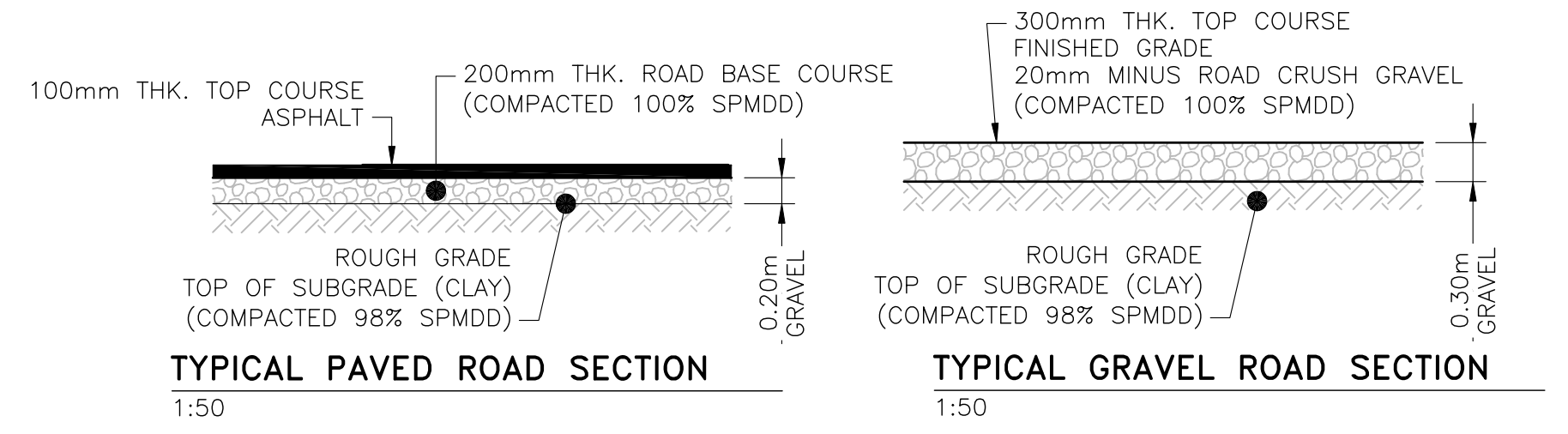
**DRAINAGE NOTE:**

1. RUN-OFF FROM DIRTY ASPHALT DRAINS TO THE TREATMENT FACILITY VIA CATCHBASINS & U/G PIPES.
2. RUN-OFF FROM CLEAN ASPHALT SLOPES TO GRAVEL AREAS AND INFILTRATES THROUGH THE GRAVEL.
3. RUN-OFF FROM THE ROOF DRAINS TO THE BURIED INFILTRATION SYSTEM VIA GUTTER, DOWNSPOUTS & U/G PERFORATED PIPES.

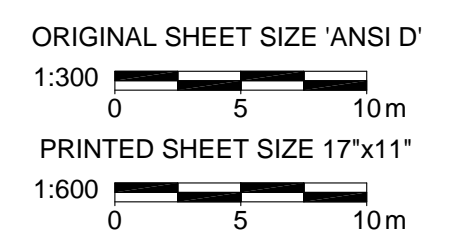
TABLE 1 OFFICE TRAILER / SCALE SHACK			
LENGTH	HEIGHT	WIDTH	DOOR OPEN
Exterior: 19'10.5"	Exterior: 8'6"	Exterior: 8'0"	Width: 7'8.5"
Interior: 19'4"	Interior: 7'10"	Interior: 7'8.5"	Height: 7'6"
Tare Wt (lbs): 5,000 Payload (lbs): 47,900 Gross Wt (lbs): 52,910 Cubic Capacity (ft3): 986			
PORTABLE SITE OFFICE TRAILER			
LENGTH	HEIGHT	WIDTH	
Exterior: 20'0"	Exterior: 8'6"	Exterior: 8'0"	

**LEGEND:**

- LOCK-BLOCK RETAINING WALLS
- LEGAL PLAN RIGHT OF WAYS (R/W)
- DRAINAGE DITCH/SWALE c/w DIRECTION ARROW
- LEAK DETECTION MONITORING WELL
- CONTOUR LINE (0.5m INTERVALS)
- EXISTING CENTERLINE OF RAIL
- EXISTING FENCELINE
- NOISE BARRIER & TREE PLANTING ZONE
- OVERLAND FLOW (ASPHALT SURFACE) - DRAINAGE DIRECTION
- NEW U/G DRAINAGE CULVERT
- LIGHT POLE
- CLEAN ASPHALT PAVED SURFACE
- DIRTY ASPHALT PAVED SURFACE
- GRAVEL SURFACE
- VEGETATED AREAS (GRASS/PLANTS)
- CONCRETE JERSEY BARRIER
- DRAINAGE CATCHBASIN c/w BURIED PVC PIPE



- NOTES**
1. GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING 03082-01
  2. ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.
  3. TOPOGRAPHY DATA IS DERIVED FROM HIGHMARK SURVEY AND ENGINEERING LTD. NOV. 2015. DRAWING NUMBER: T00006D



REFERENCE DRAWINGS		REVISIONS						
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D
03082-07	RETAINING WALL DETAILS	A	ISSUED FOR 50% DESIGN	2017.AUG.15	MOH	CT	DM	CT
		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT
		D	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT
		E	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT
		F	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT

PERMIT AND ENGINEER STAMP

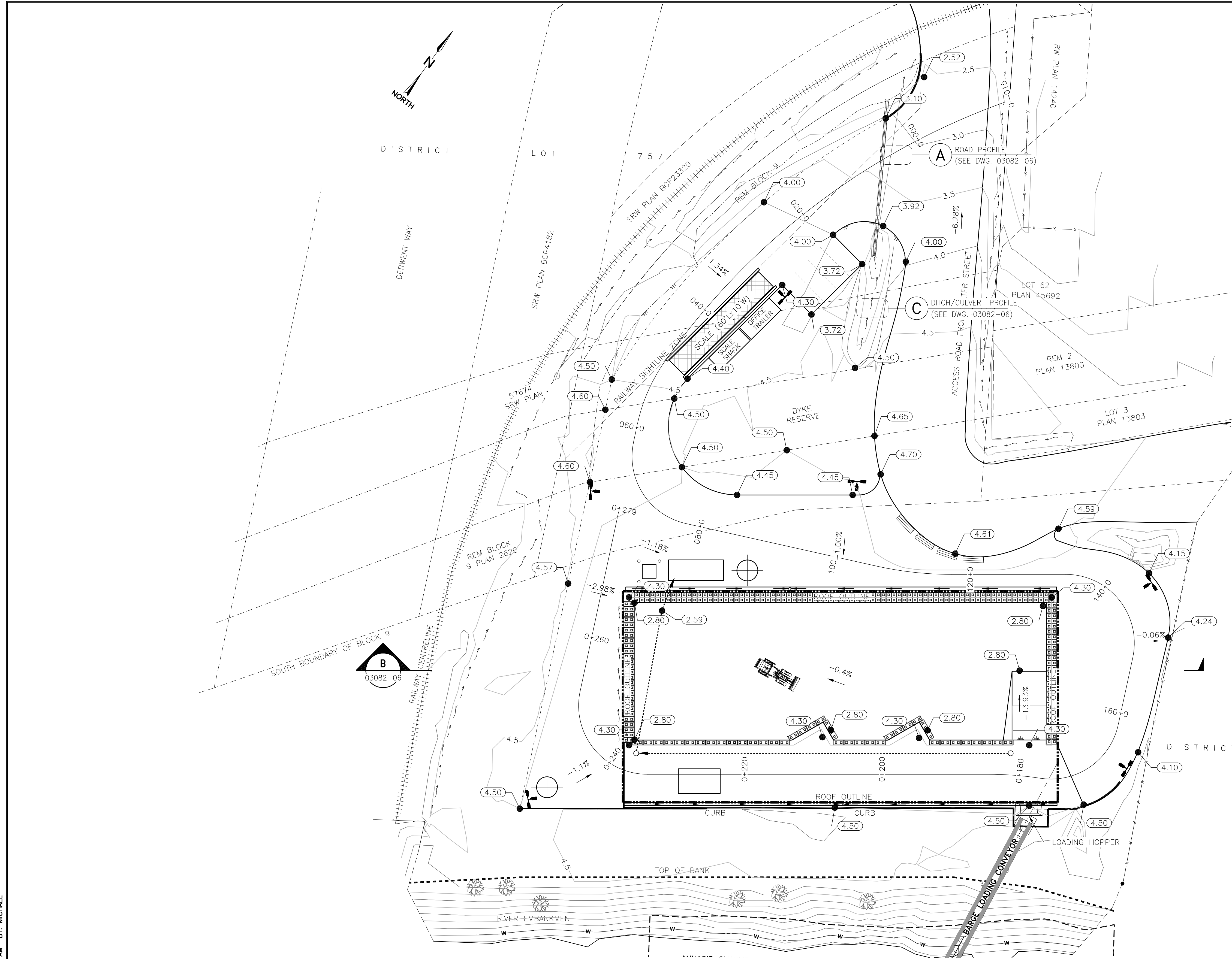


LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 GENERAL ARRANGEMENT - SITE PLAN

CADFILE	03082-04	DRAWING NO.	03082-04	REV.	F
SCALE	1:300				





- NOTES:**
1. GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING 03082-01
  2. ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.
  3. TOPOGRAPHY DATA IS DERIVED FROM HIGHMARK SURVEY AND ENGINEERING LTD. NOV. 2015. DRAWING NUMBER: T0006D

- LEGEND:**
- [Symbol] LOCK-BLOCK RETAINING WALLS
  - [Symbol] FINISHED GRADE ELEVATION POINT
  - [Symbol] CONTOURS (0.5m INTERVALS)
  - [Symbol] DRAINAGE DITCH/SWALE c/w DIRECTION ARROW
  - [Symbol] EXISTING CENTERLINE OF RAIL
  - [Symbol] EXISTING FENCELINE
  - [Symbol] NEW U/G DRAINAGE CULVERT (CONCRETE)
  - [Symbol] LIGHT POLE
  - [Symbol] DRAINAGE CATCHBASIN c/w BURIED PVC PIPE (TO TREATMENT FACILITY)

QUANTITIES TABLE		
DESCRIPTION	2D AREA (m <sup>2</sup> )	VOLUME (m <sup>3</sup> )
TOPSOIL STRIPPING AREA #1 (AVERAGE DEPTH OF TOPSOIL = 200mm)	4550	910
TOPSOIL STRIPPING AREA #2 (EXISTING STOCKPILE)	650	800

EARTHWORKS QUANTITIES - ROUGH GRADE CUT / FILL	
DESCRIPTION	VOLUME (m <sup>3</sup> )
EARTHWORKS CUT	3,975
EARTHWORKS FILL (PLACED AND COMPACTED)	475

NOTE: AVERAGE ELEVATION DIFFERENCE BETWEEN FINISHED GRADE VS. ROUGH GRADE IS 300mm. IMPORTED GRAVELS AND TOP COURSE OF ASPHALT IS ADDED TO ROUGH GRADE TO GET FINISHED GRADE.

REFERENCE DRAWINGS		REVISIONS						
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D
		A	ISSUED FOR 50% DESIGN	2017.AUG.15	MOH	CT	DM	CT
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		E	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT
		F	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT

NOTES

ORIGINAL SHEET SIZE 'ANSI D'  
 1:300 0 5 10m  
 PRINTED SHEET SIZE 17"x11"  
 1:600 0 5 10m

PERMIT AND ENGINEER STAMP



**SUMMIT**  
 EARTHWORKS

LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

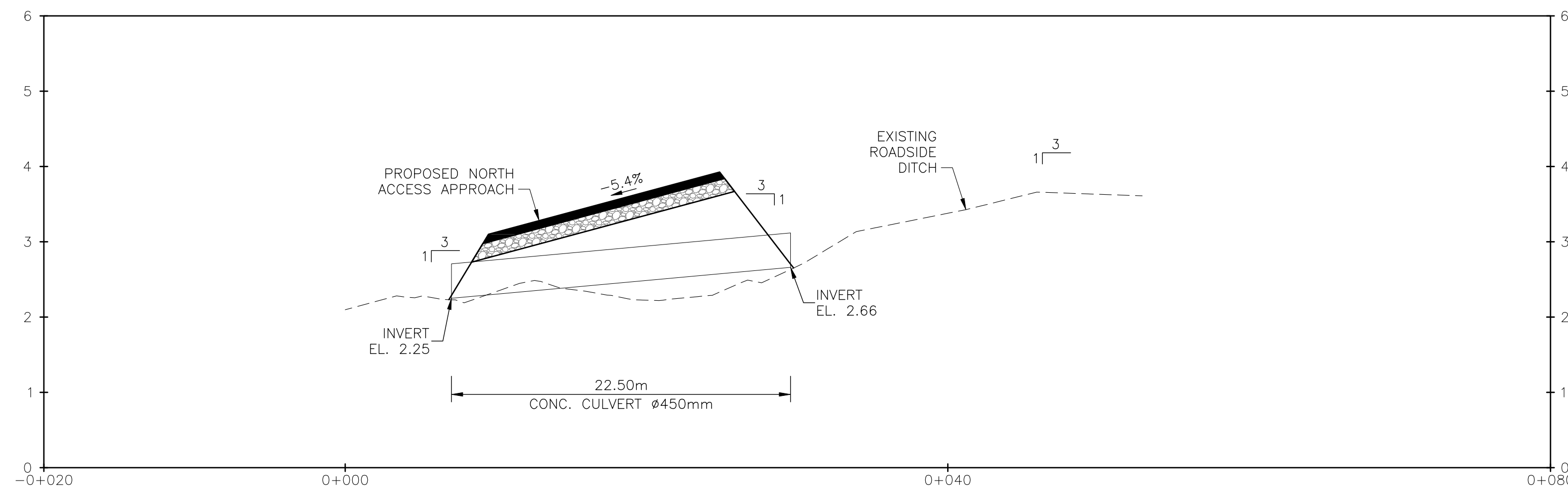
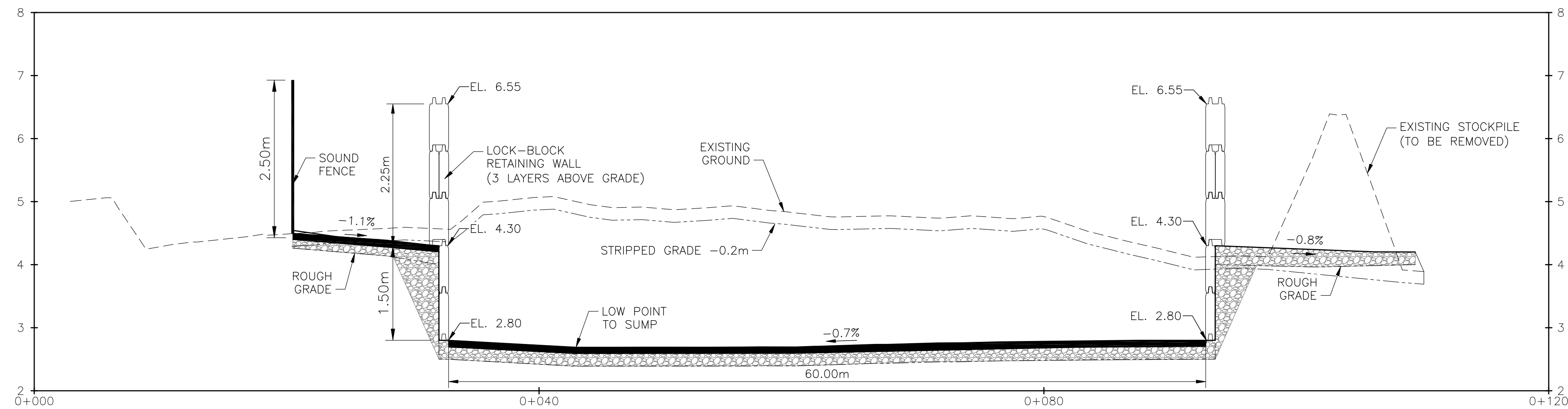
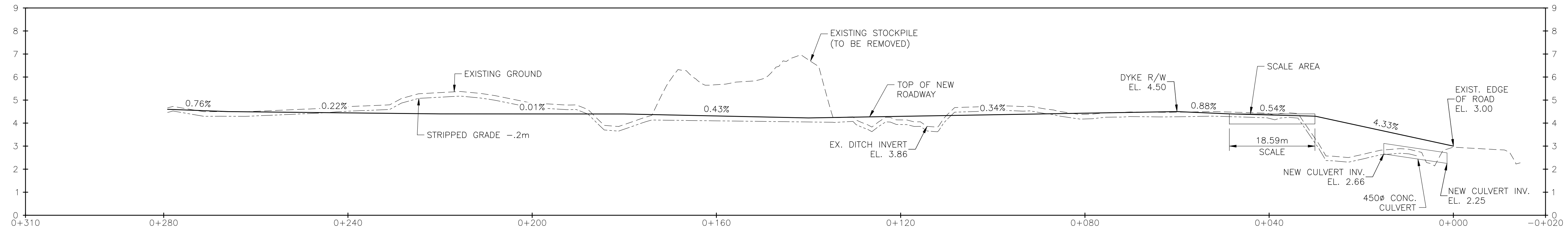
NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 GRADING PLAN - FINISHED GRADE

CADFILE	03082-05	DRAWING NO.	03082-05	REV.	F
SCALE	1:300				



**NOTES:**

1. GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING Q3082-01
2. ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.



LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 SITE PROFILES AND SECTIONS

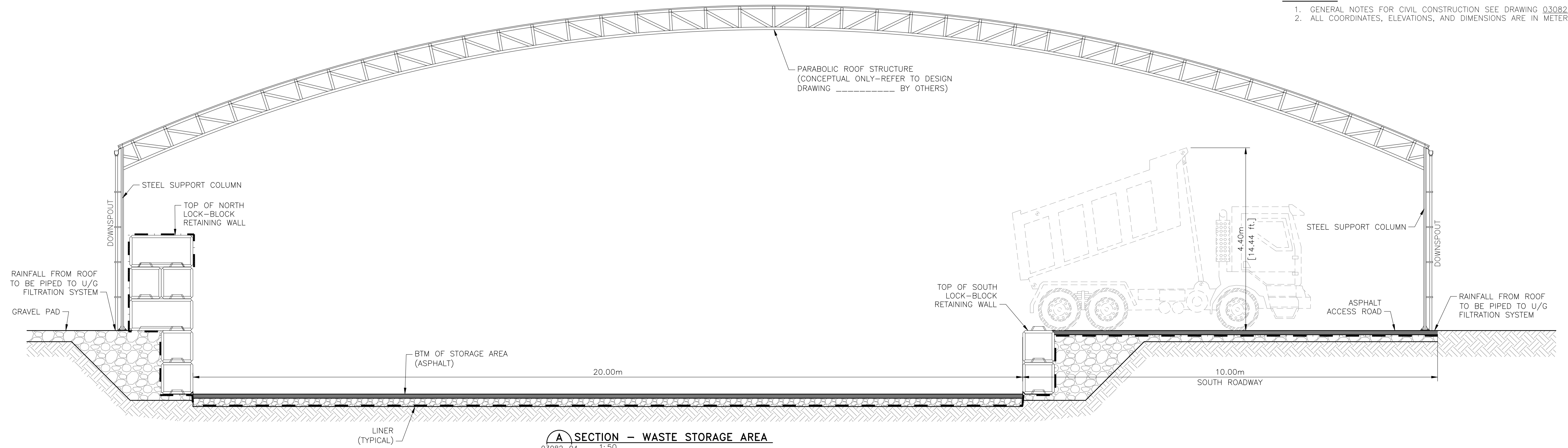
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SCALE	AS NOTED				

REFERENCE DRAWINGS		REVISIONS							NOTES	PERMIT AND ENGINEER STAMP
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		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT		
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT		
		D	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT		
		E	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT		
		F	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT		

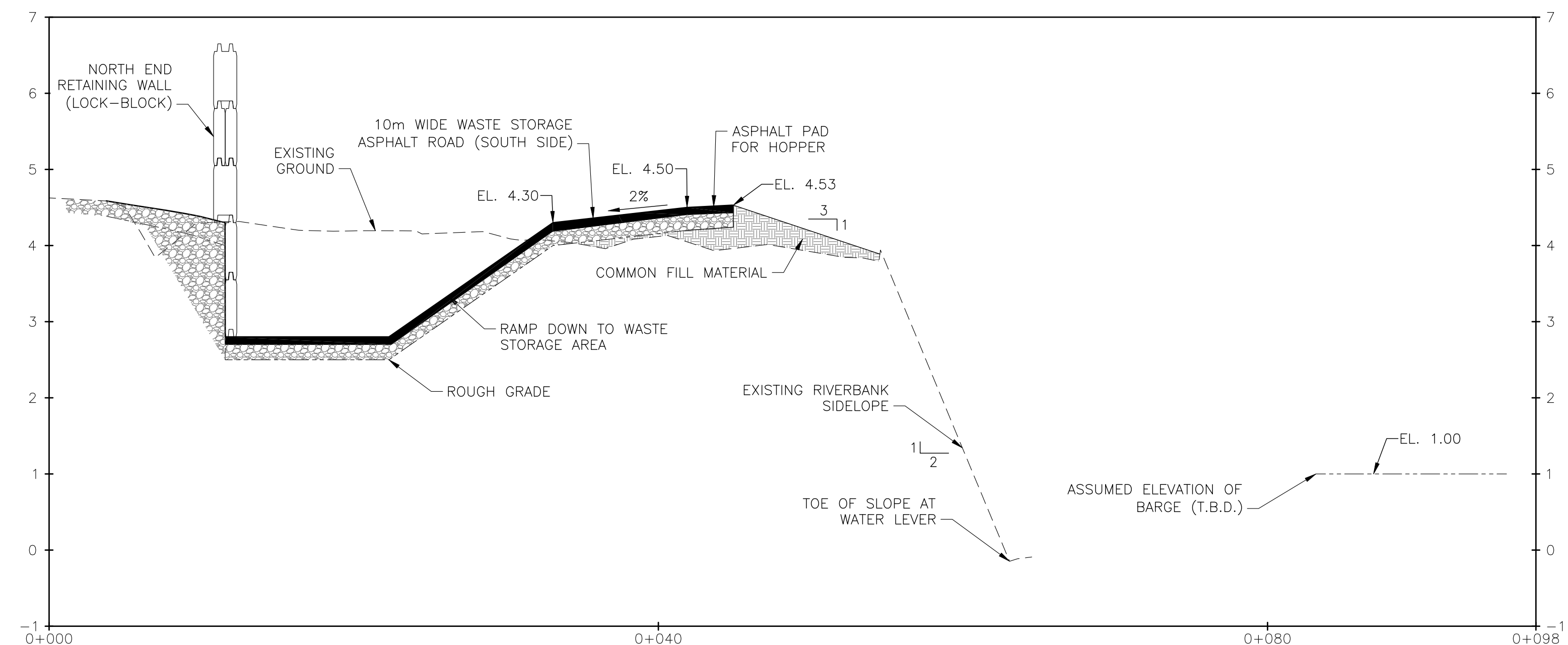


**NOTES:**

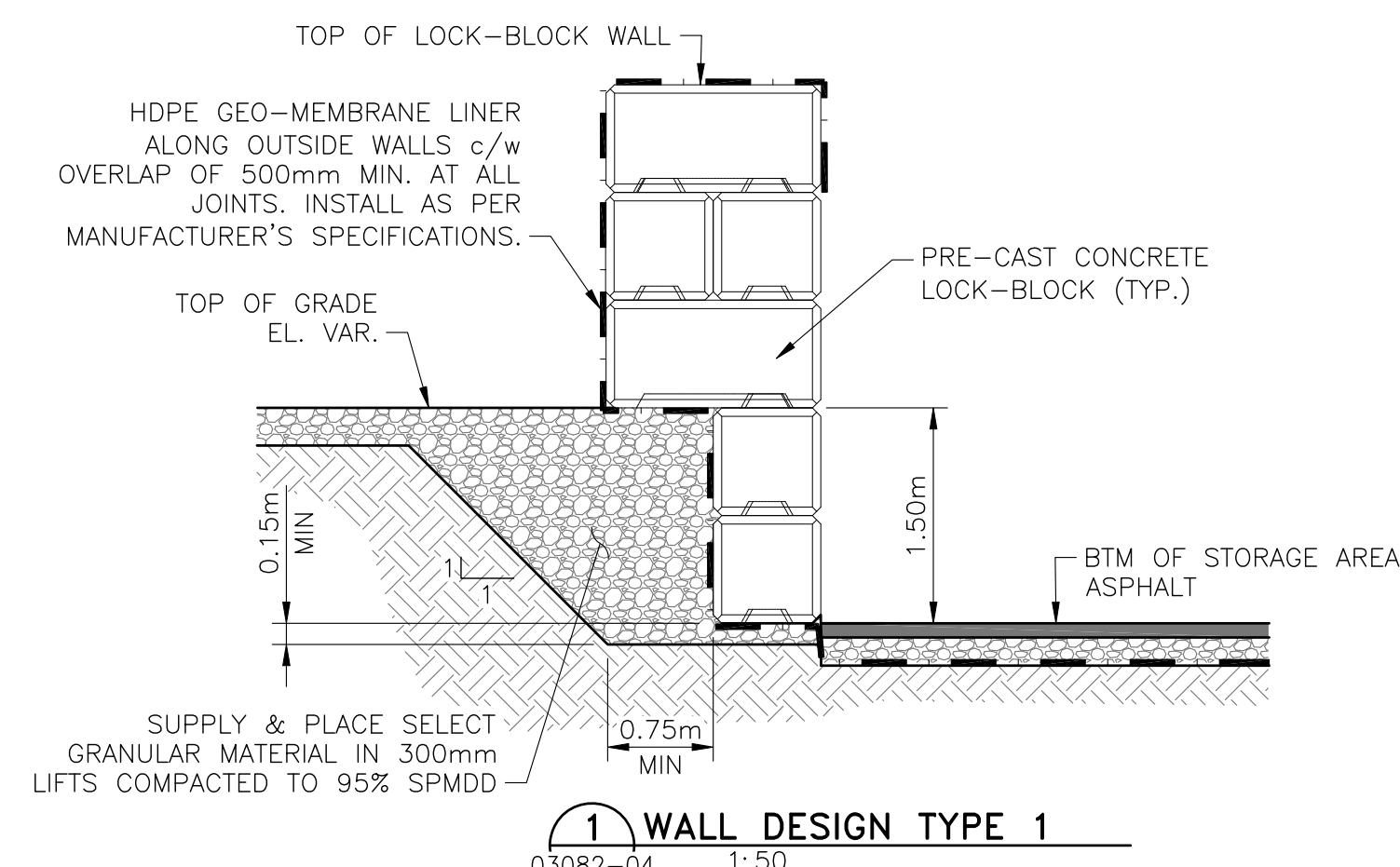
1. GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING 03082-01
2. ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.



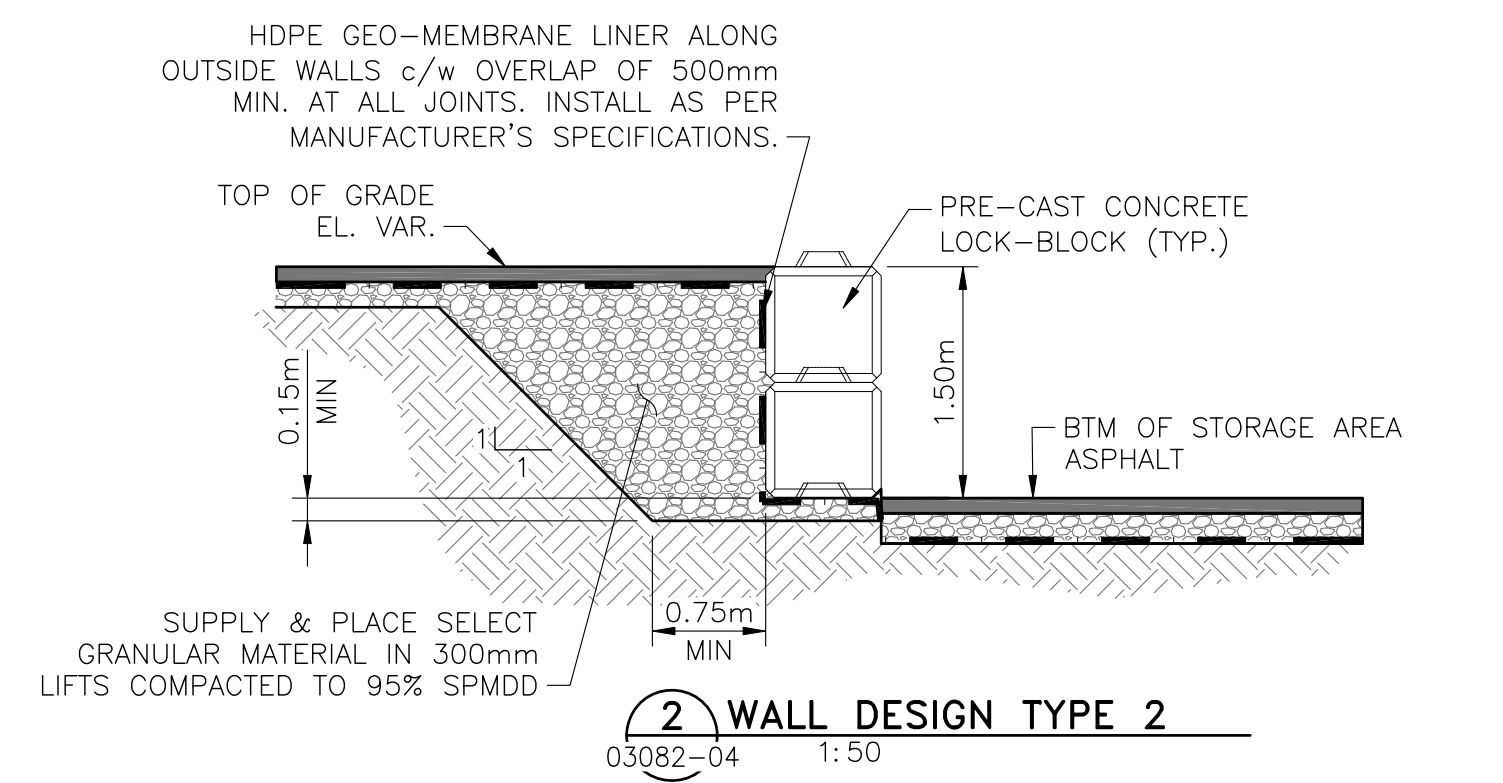
**A SECTION - WASTE STORAGE AREA**  
 03082-04 1:50



**B RAMP SECTION**  
 03082-04 1:250 HOR. 1:50 VERT.



**1 WALL DESIGN TYPE 1**  
 03082-04 1:50



**2 WALL DESIGN TYPE 2**  
 03082-04 1:50



REFERENCE DRAWINGS		REVISIONS							NOTES	PERMIT AND ENGINEER STAMP
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D		
03082-04	GENERAL ARRANGEMENT - SITE PLAN	A	ISSUED FOR 50% DESIGN	2017.AUG.15	MOH	CT	DM	CT		
		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT		
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT		
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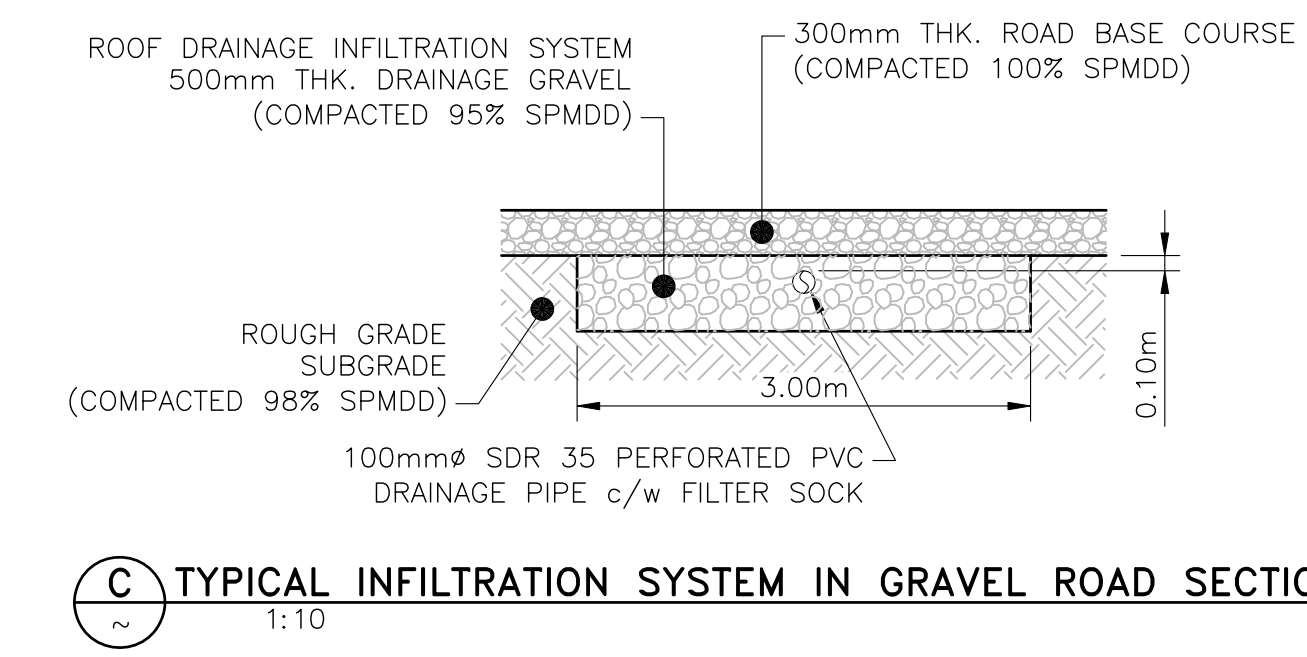
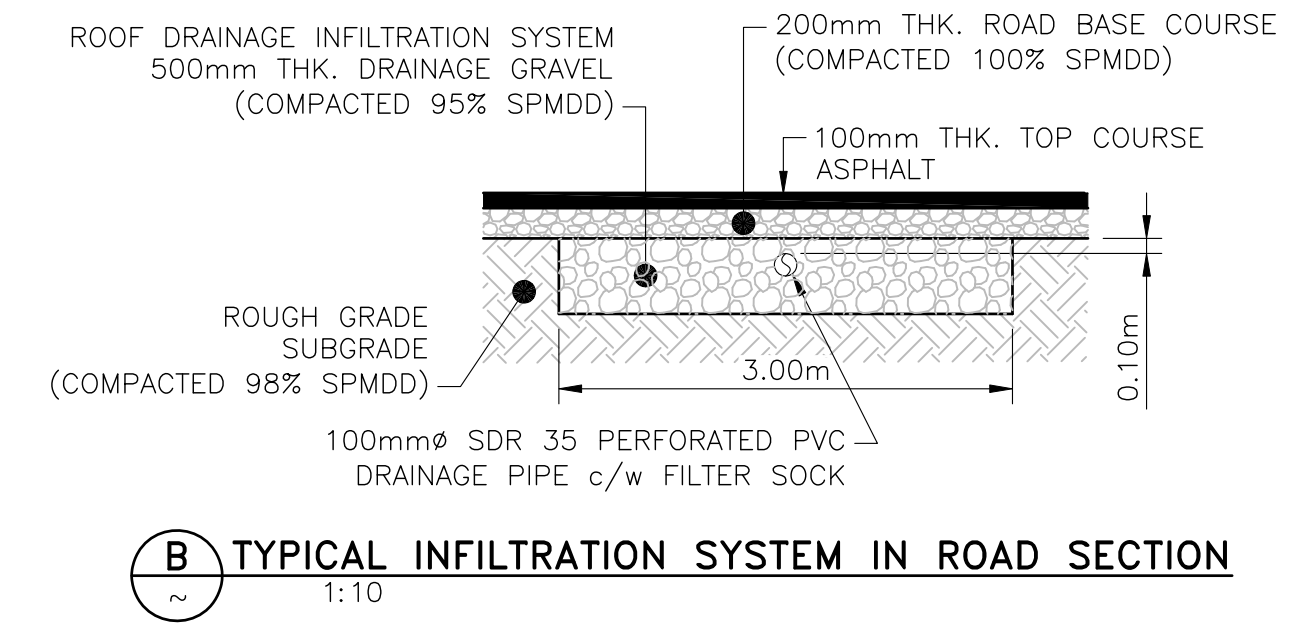
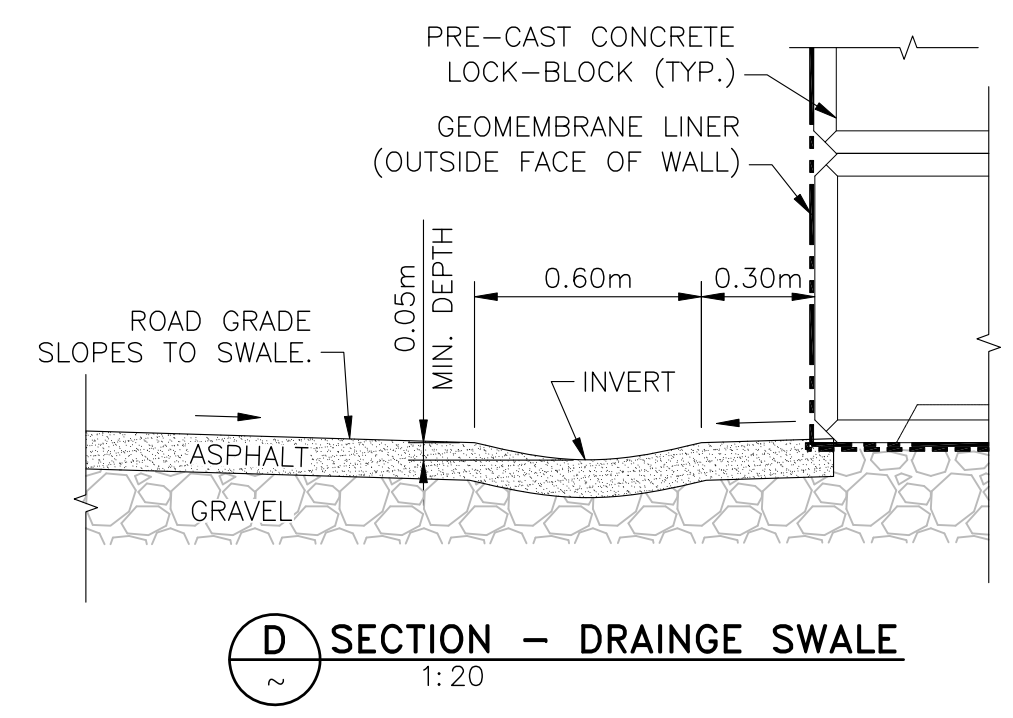
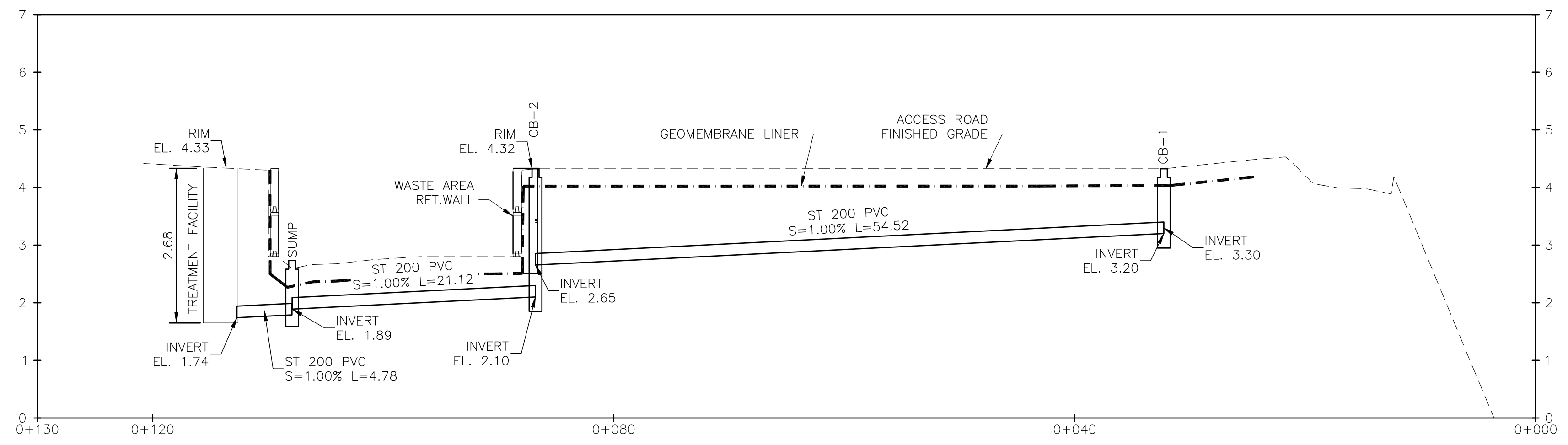
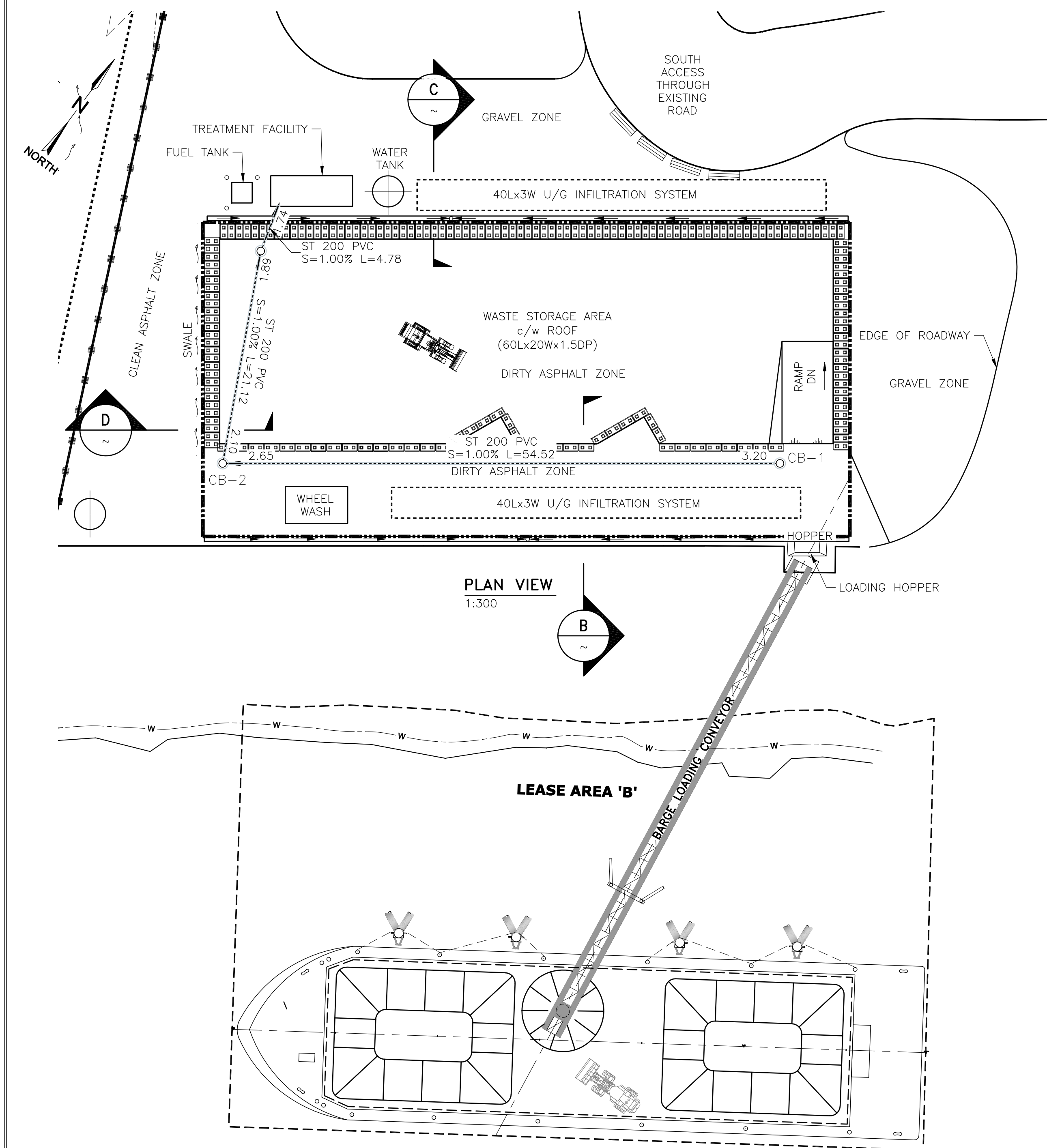
**SUMMIT EARTHWORKS**

LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 RETAINING WALL DETAILS

CADFILE	03082-07	DRAWING NO.	03082-07	REV.	F
SCALE	AS NOTED				



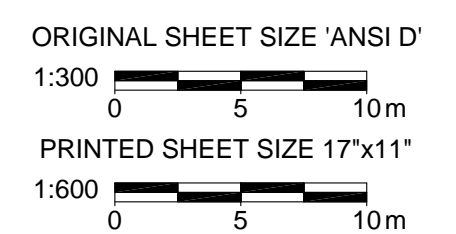


- LEGEND:**
- LOCK-BLOCK RETAINING WALLS
  - DRAINAGE DITCH/SWALE c/w DIRECTION ARROW
  - LEAK DETECTION MONITORING WELL
  - DRAINAGE CATCHBASIN c/w BURIED PVC PIPE

**NOTES:**

- GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING 03082-01
- ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.

REFERENCE DRAWINGS		REVISIONS							
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D	
		A	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT	
		B	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT	
		C	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT	
		D	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT	
		E	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT	



NOTES PERMIT AND ENGINEER STAMP

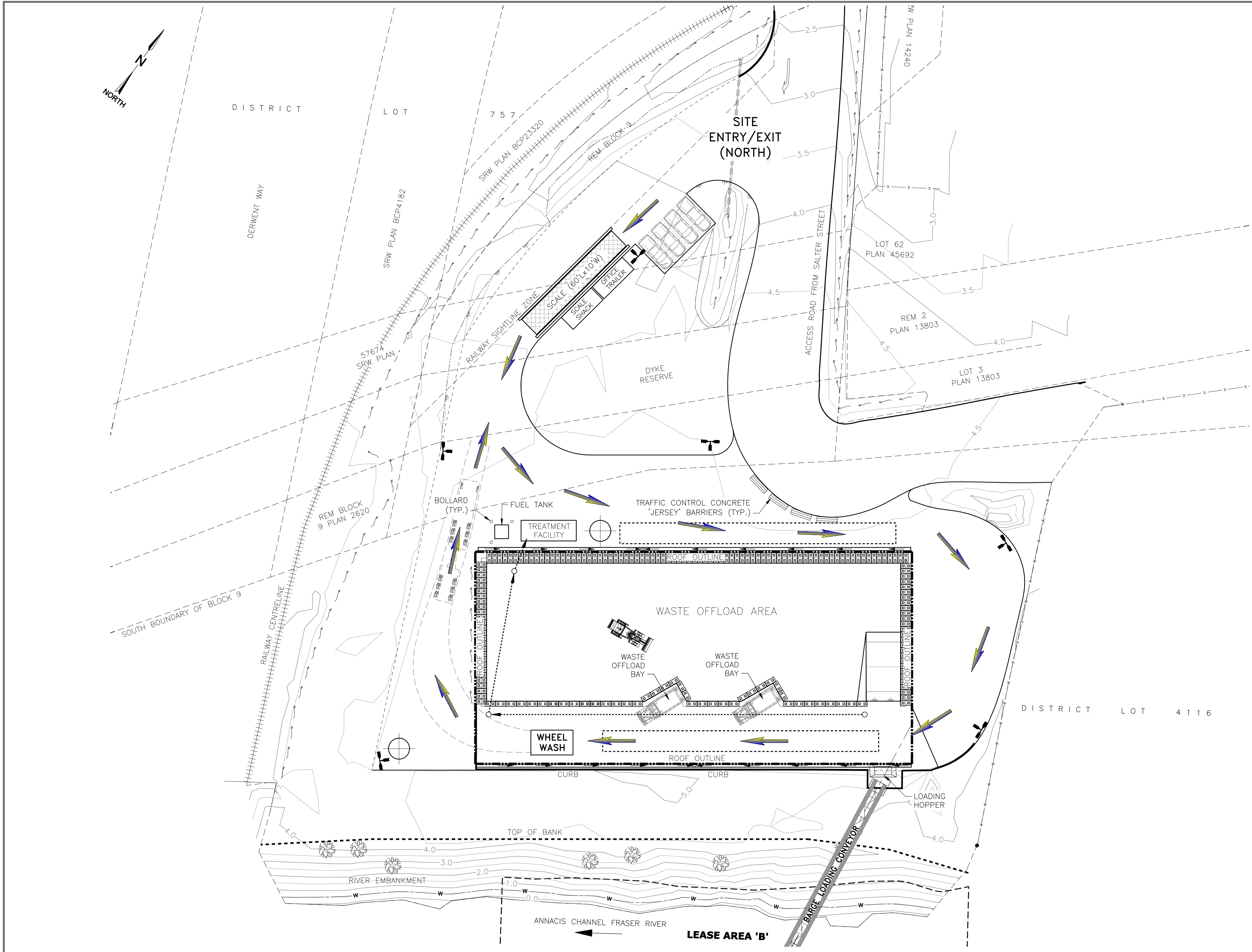


LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 STORM PIPE DRAINAGE PLAN

CADFILE	03082-08	DRAWING NO.	03082-08	REV.	E
SCALE	AS NOTED				

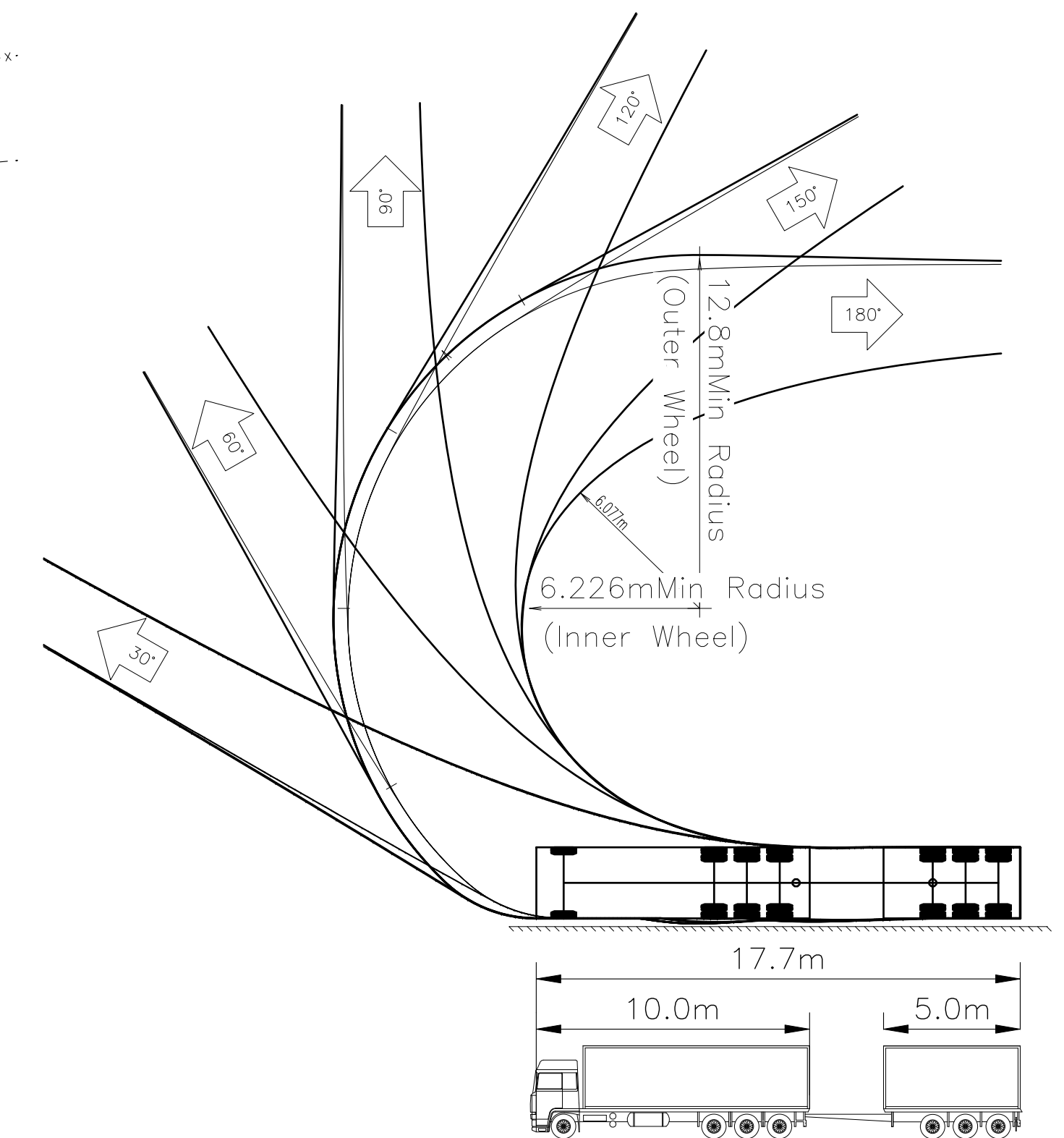




**LEGEND:**

**DIRECTION OF TRUCK TRAFFIC TO WASTE OFFLOADING BAYS**

TRUCK ENTERS THE SITE AT THE NORTH END, IS WEIGHED AT THE SCALE; CONTINUES AROUND THE SITE TO THE WASTE OFFLOAD BAYS TO DUMP CONTAMINATED WASTE INTO THE WASTE STORAGE AREA. EMPTY TRUCKS HEAD OUT THROUGH THE WHEEL WASH AND RETURN BACK TO THE SCALE TO BE RE-WEIGHED. THE EMPTY TRUCK WILL LEAVE THE SITE OUT THROUGH THE NORTH EXIT.



Waste Disposal Truck  
 Tridem Axle with Trailer  
 Overall Length 17.7m  
 Overall Width 2.6m  
 Turning Radius 12.8m

REFERENCE DRAWINGS		REVISIONS							
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D	
		A	ISSUED FOR 50% DESIGN	2017.AUG.15	MOH	CT	DM	CT	
		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT	
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT	
		D	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT	
		E	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT	
		F	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT	DM	CT	

NOTES

ORIGINAL SHEET SIZE 'ANSI D'  
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 PRINTED SHEET SIZE 17"x11"  
 1:600 0 5 10m

PERMIT AND ENGINEER STAMP

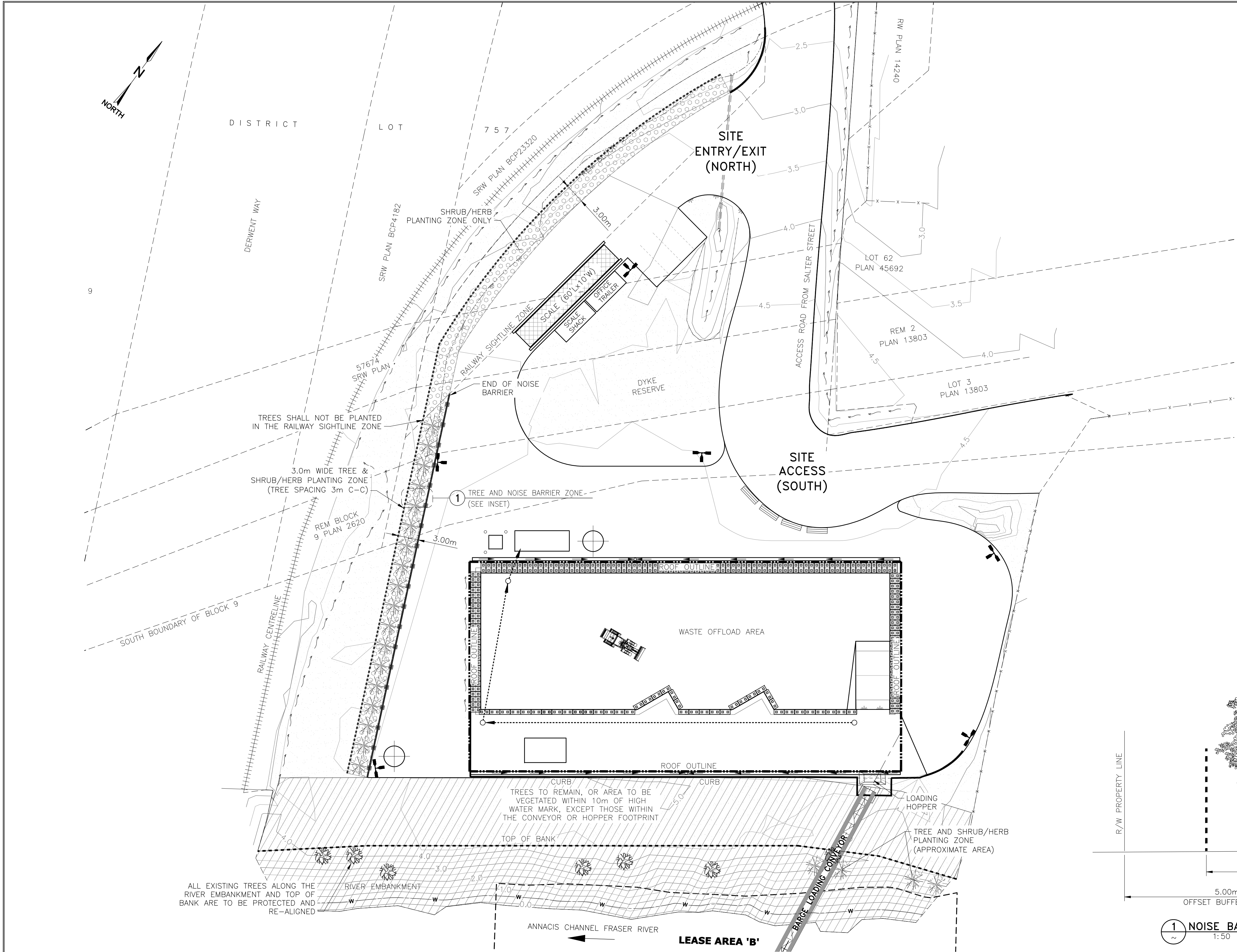


LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 VEHICLE ROUTING - SITE ENTRY / EXIT

CADFILE	03082-10	DRAWING NO.	03082-10	REV.	F
SCALE	1:300				



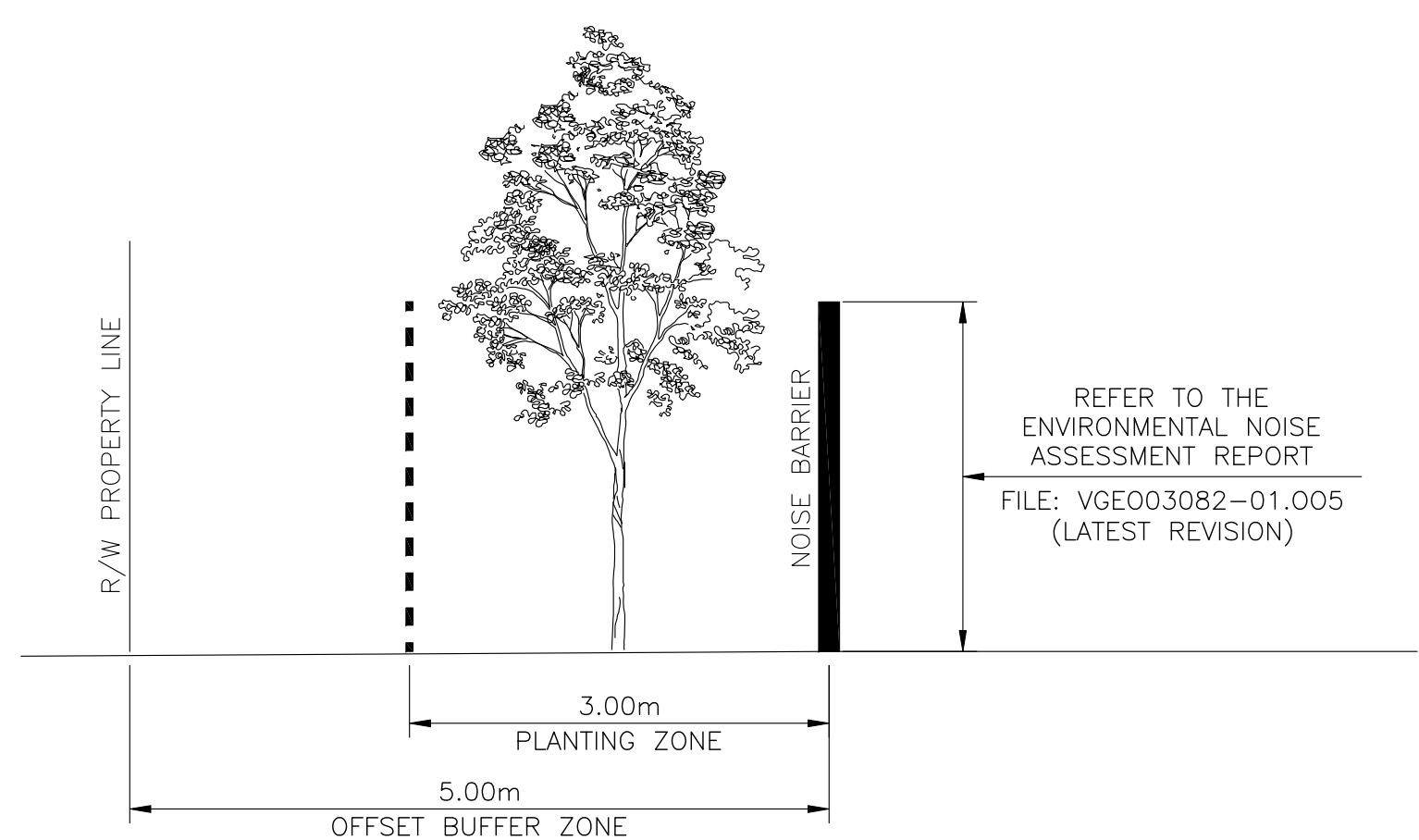


**NOTES:**

1. GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING 03082-01
2. ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.
3. TOPOGRAPHY DATA IS DERIVED FROM HIGHMARK SURVEY AND ENGINEERING LTD. NOV. 2015. DRAWING NUMBER: T00006D

**LEGEND:**

- LOCK-BLOCK RETAINING WALLS
- DRAINAGE DITCH c/w DIRECTION ARROW
- EXISTING CENTERLINE OF RAIL
- EXISTING FENCELINE
- NOISE BARRIER & TREE PLANTING ZONE
- NEW U/G DRAINAGE CULVERT (CONCRETE)
- LIGHT POLE
- VEGETATED AREAS (GRASS/PLANTS)
- SHRUB/HERB PLANTING AREAS
- EXISTING TREES TO REMAIN (ALONG RIVER EMBANKMENT AND WITHIN 10m OF HIGHWATER MARK)
- TREES AND SHRUB/HERB PLANTING AREAS (CONCEPTUAL OUTLINE)
- DRAINAGE CATCHBASIN c/w BURIED PVC PIPE



**1 NOISE BARRIER AND PLANTING ZONE**  
 1:50

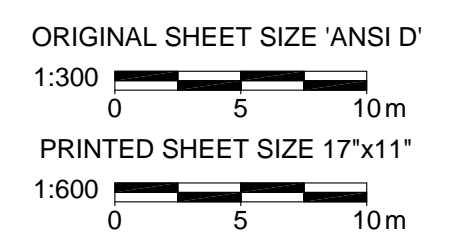


LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

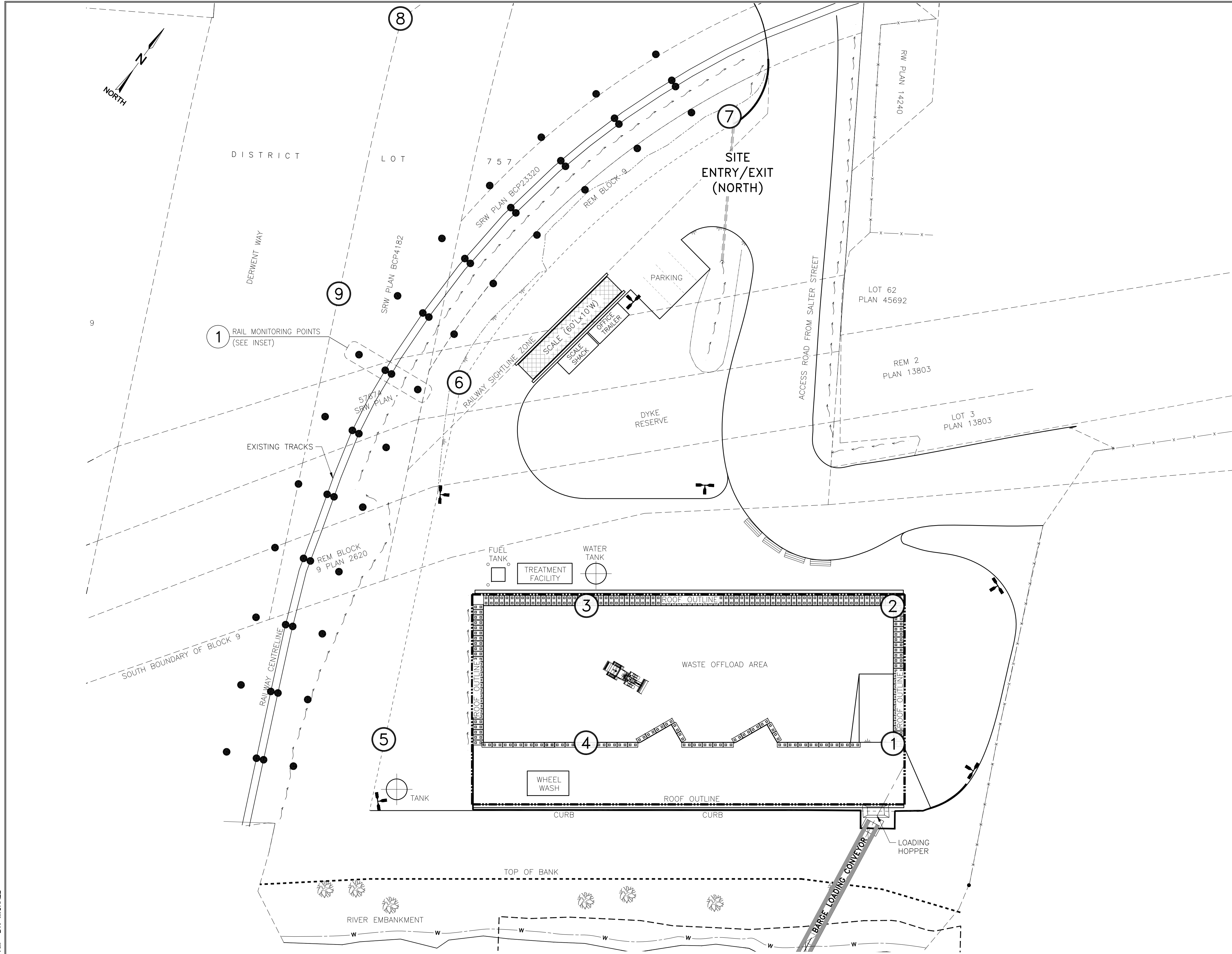
NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 LANDSCAPING PLAN

CADFILE	03082-12	DRAWING NO.	03082-12	REV.	G
SCALE	1:300				

REFERENCE DRAWINGS		REVISIONS							NOTES
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D	
		A	ISSUED FOR 50% DESIGN	2017.AUG.15	MOH	CT	DM	CT	
		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT	
		C	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT	DM	CT	
		D	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT	DM	CT	
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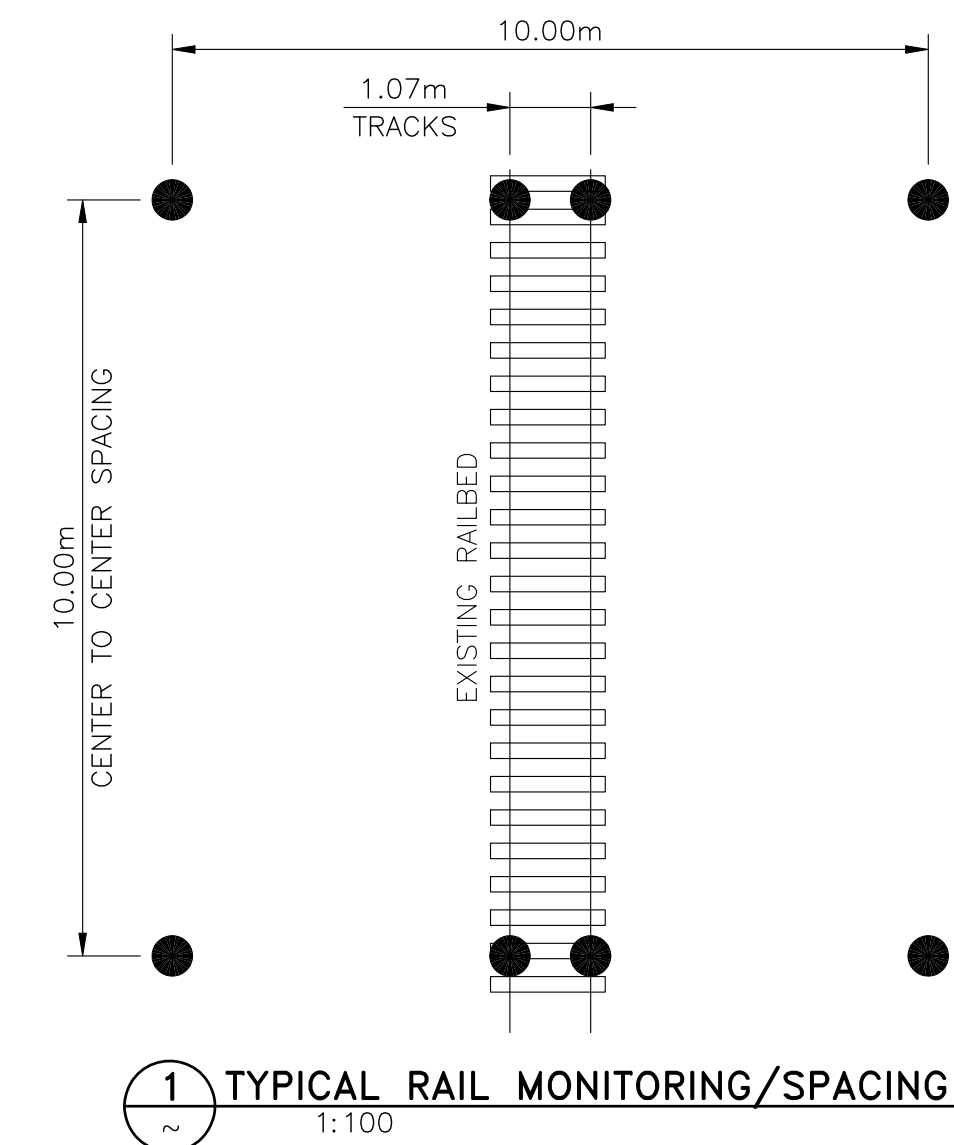


**NOTES:**

1. GENERAL NOTES FOR CIVIL CONSTRUCTION SEE DRAWING Q3082-01
2. ALL COORDINATES, ELEVATIONS, AND DIMENSIONS ARE IN METERS, U.N.O.
3. TOPOGRAPHY DATA IS DERIVED FROM HIGHMARK SURVEY AND ENGINEERING LTD. NOV. 2015. DRAWING NUMBER: T00006D

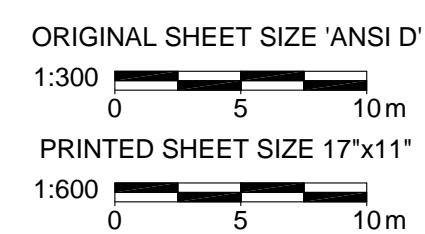
**LEGEND:**

- - - DRAINAGE DITCH c/w DIRECTION ARROW
- x - x - EXISTING FENCELINE
- = = = NEW U/G DRAINAGE CULVERT (CONCRETE)
- ⊕ / ● SURVEY / RAIL MONITORING POINT



NOTE: SURVEY POINTS ON BOTH RAIL LINES EMBEDDED INTO THE GROUND AT 5-10m INTERVALS PERPENDICULAR AND PARALLEL TO THE RAIL LINE AS INDICATED.

REFERENCE DRAWINGS		REVISIONS							NOTES
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D	
		A	ISSUED FOR 50% DESIGN	2017.AUG.15	MOH	CT	DM	CT	
		B	ISSUED FOR 90% DESIGN	2017.NOV.10	MOH	CT	DM	CT	
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		E	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT	DM	CT	
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PERMIT AND ENGINEER STAMP

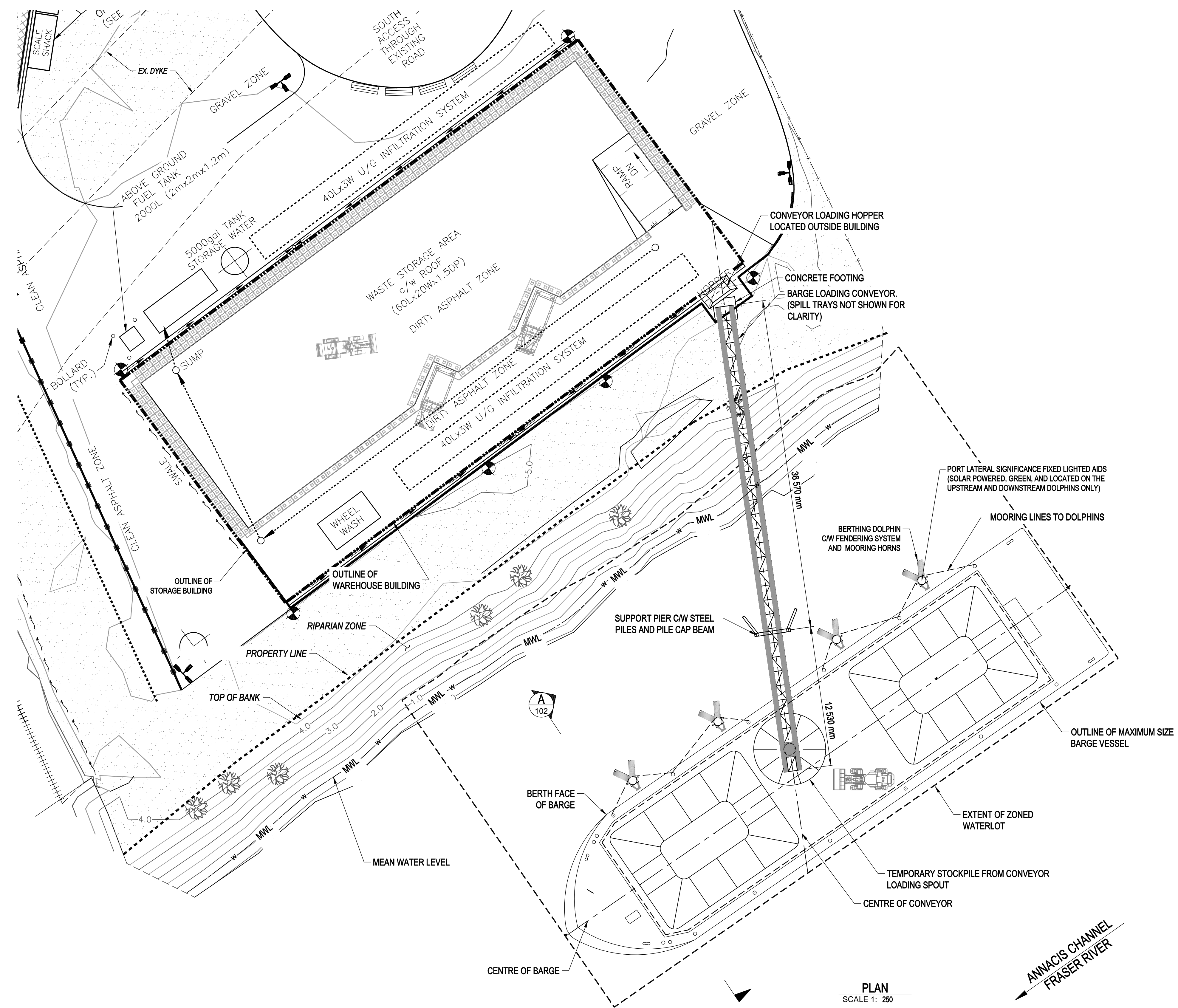
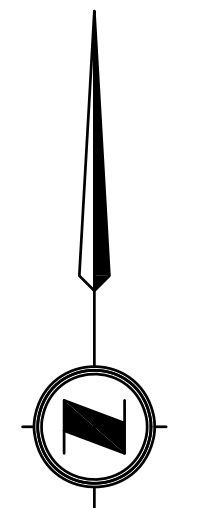


LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

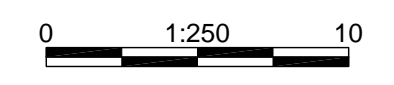
NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 SURVEY MONITORING POINT PLAN

CADFILE	03082-13	DRAWING NO.	03082-13	REV.	F
SCALE	1:300				





PLAN  
SCALE 1: 250



- GENERAL NOTES:**
- GENERAL
    - DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ELEVATIONS ARE IN METRES AND ARE REFERENCED TO GEODETIC ELEVATION.
    - GEOTECHNICAL DESIGN IS BASED ON INFORMATION PROVIDED BY TETRA TECH LTD.
  - WATER LEVELS
 

DESIGN RIVER ELEVATIONS AT THE SITE ARE AS FOLLOWS (DFO):

EXTREME HIGH WATER LEVEL (EHWL)	+2.9 m
HIGHER HIGH WATER LEVEL (HHWL)	+1.8 m
LOWER LOW WATER LEVEL (LLWL)	-1.8 m
  - MAXIMUM BARGE SIZE DIMENSIONS
 

BARGE DWT = 3 100 TONNES  
 HULL LENGTH = 67.0 m  
 HULL WIDTH = 17.0 m  
 HULL LOADED DRAFT = 1.62 m
  - DESIGN CODE
    - CANADIAN HIGHWAY BRIDGE DESIGN CODE (CAN/CSA S6-14)
    - WORKSAFE BC OCCUPATIONAL HEALTH AND SAFETY STANDARDS
    - BRITISH STANDARD BS639-4
    - UNIFIED FACILITIES CRITERIA (UFC) – DESIGN: PIERS AND WHARVES (UFC 4-152-01)
    - PIANC (WORLD ASSOCIATION FOR WATERBORNE TRANSPORT INFRASTRUCTURE)
  - DESIGN LOADS
    - SELF-WEIGHT OF STRUCTURE COMPONENTS
    - MAINTENANCE ACCESS LOADS AS PER CL 3.8.10 OF CSA S6-14.
    - CONVEYOR MECHANICAL COMPONENTS
    - WIND LOADING TO CAN/CSA S6-14
    - SEISMIC DESIGN FOR THE ONSHORE TERMINAL WORKS ONLY. SEISMIC DESIGN HAS NOT BEEN CONSIDERED FOR THE MARINE STRUCTURES DESIGN (BERTHING DOLPHINS AND CONVEYOR SUPPORT PIER).
    - BERTHING LOADS
      - LARGEST VESSEL FULLY LADEN DISPLACEMENT = 3100 TONNES AT MAXIMUM BERTHING SPEED OF 0.33 m/s
    - MOORING LOADS
      - MOORING LOADS FROM WIND ARE BASED ON NOTE 5.4
      - MOORING LOADS FROM RIVER CURRENT ARE BASED ON MAXIMUM ANNUAL FRASER RIVER CURRENTS NOT INCLUDING ANNUAL FRESHET EVENTS.
  - MATERIALS
    - STEEL PIPE PILES TO BE ASTM A252 GRADE 3
    - ALL STEEL TO BE CSA G40.21M GRADE 350W
    - CAST-IN PLACE CONCRETE TO BE CSA A23.1 EXPOSURE CLASS C1,  $f_c = 35 \text{ MPa}$  AT 28 DAYS.
    - REINFORCING STEEL TO BE CSA G30.18M GRADE 400R

**McElhanney**  
McElhanney Consulting Services Ltd.

**TETRA TECH**  
VGEO03082-01

REFERENCE DRAWINGS		REVISIONS						
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		A	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT		CT
		B	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT		CT
		C	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT		CT
		D	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT		CT

NOTES

PERMIT AND ENGINEER STAMP

**SUMMIT**  
EARTHWORKS

LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

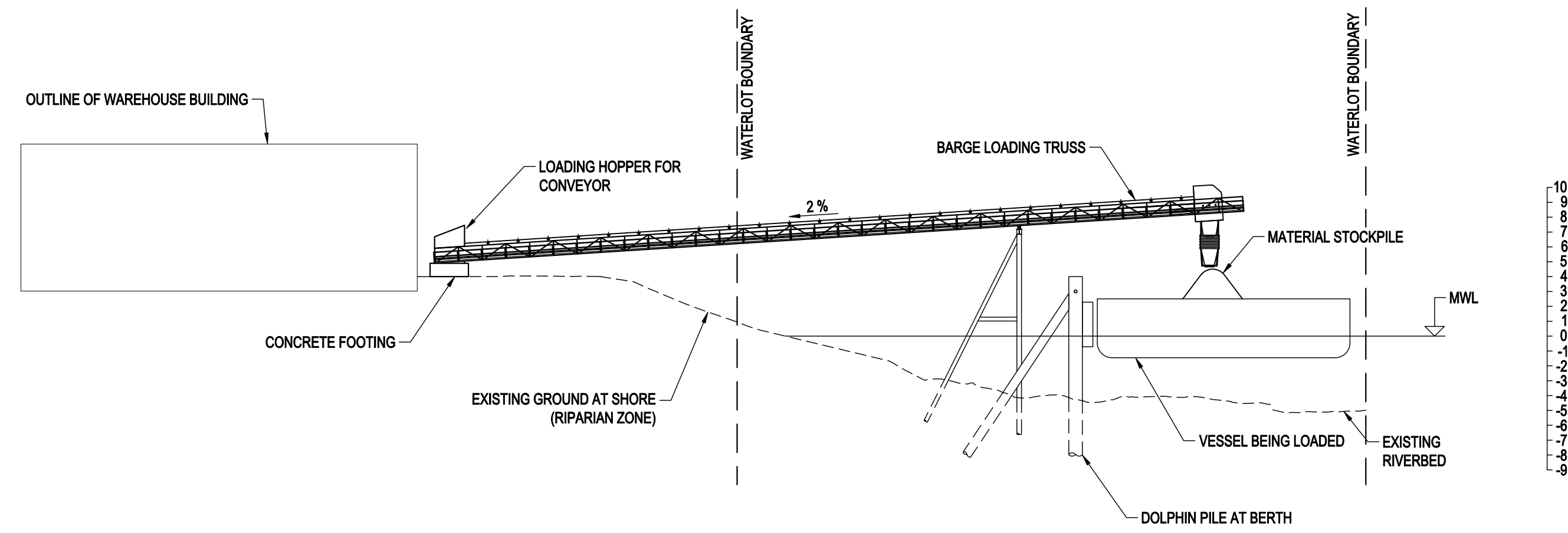
NEW WESTMINSTER, BC  
 DERWENT WAY TRANSFER STATION  
 BARGE LOADING MARINE FACILITY – GENERAL ARRANGEMENT

CADFILE	03082-100	DRAWING NO.	03082-100	REV.	D
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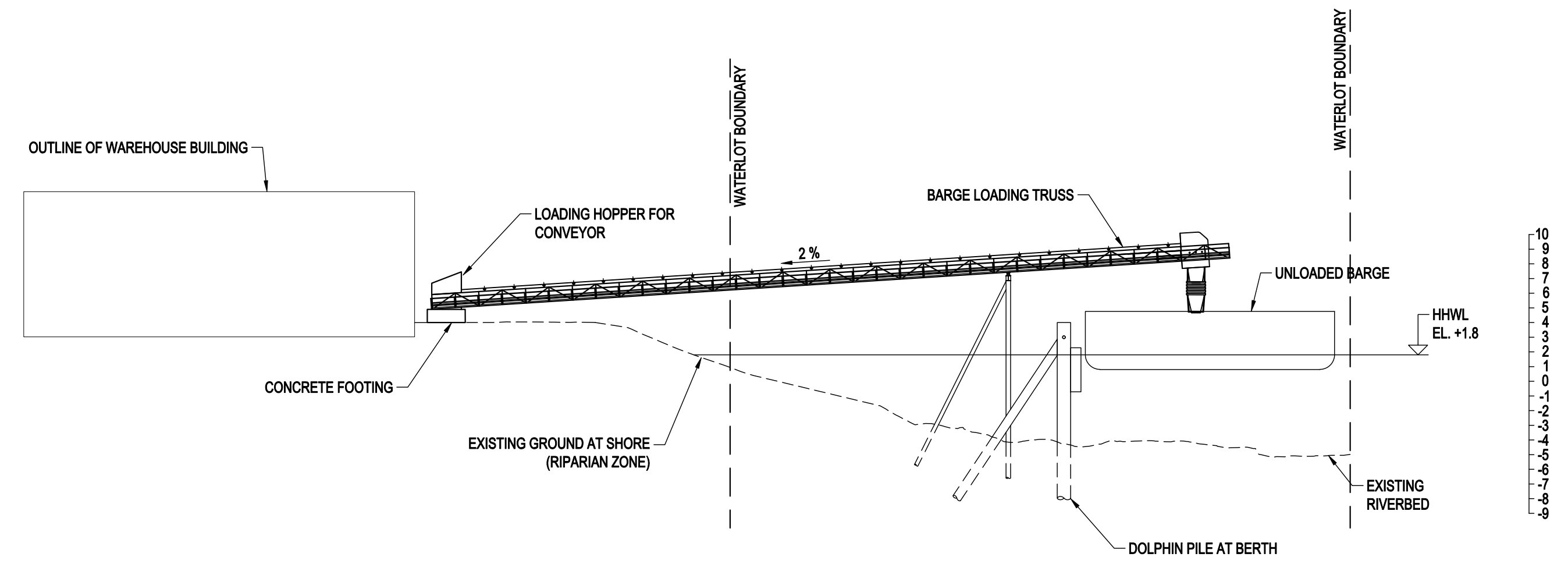




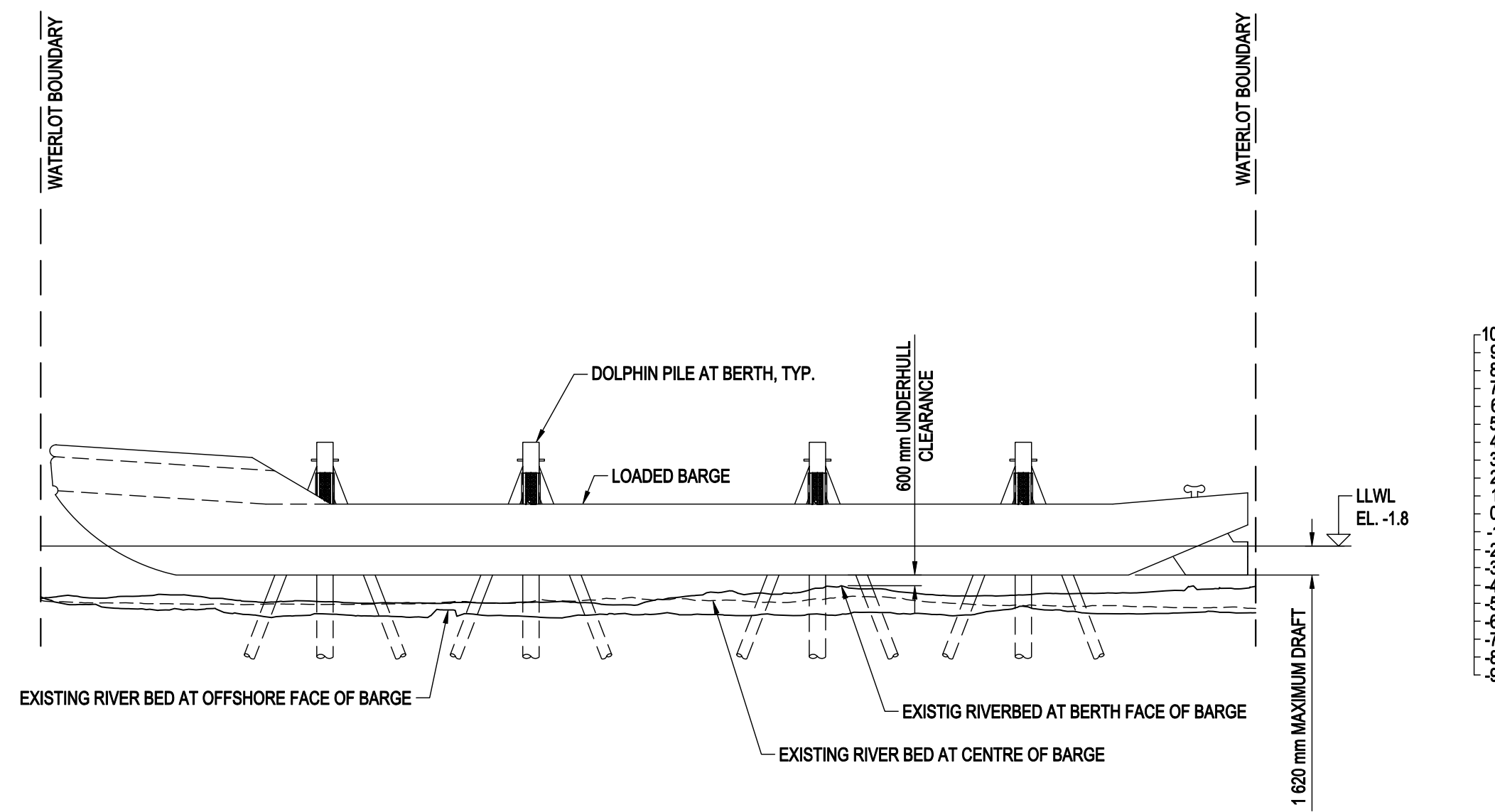




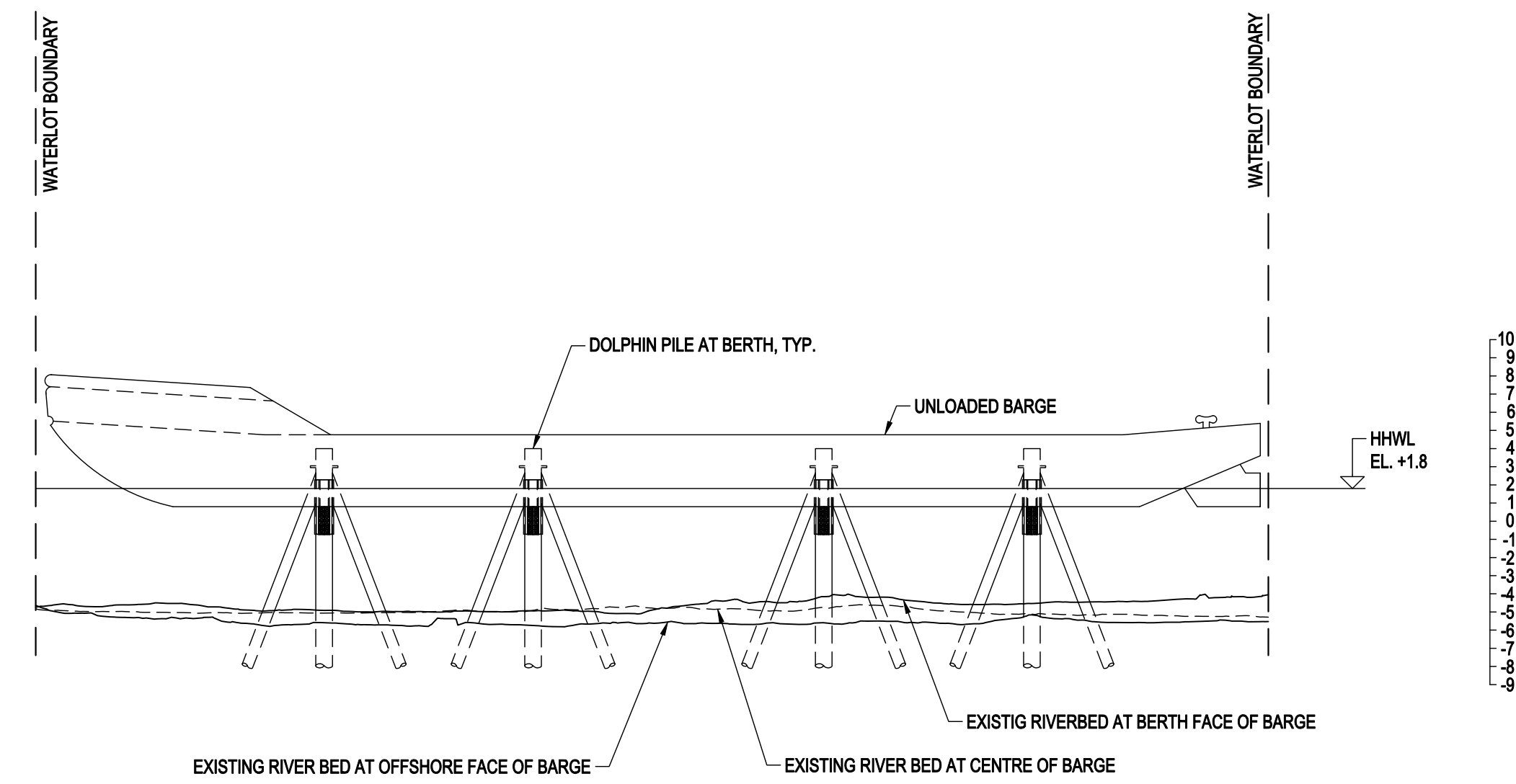
PROFILE AT CENTRE OF CONVEYOR - LOADED BARGE  
SCALE 1: 300



PROFILE AT CENTRE OF CONVEYOR - UNLOADED BARGE  
SCALE 1: 300



PROFILE AT CENTRE OF BARGE - LOADED BARGE  
SCALE 1: 300



PROFILE AT CENTRE OF BARGE - UNLOADED BARGE  
SCALE 1: 300

REFERENCE DRAWINGS		REVISIONS						
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D
		A	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT		CT
		B	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT		CT
		C	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT		CT
		D	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT		CT

NOTES

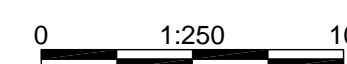
PERMIT AND ENGINEER STAMP

**SUMMIT**  
EARTHWORKS

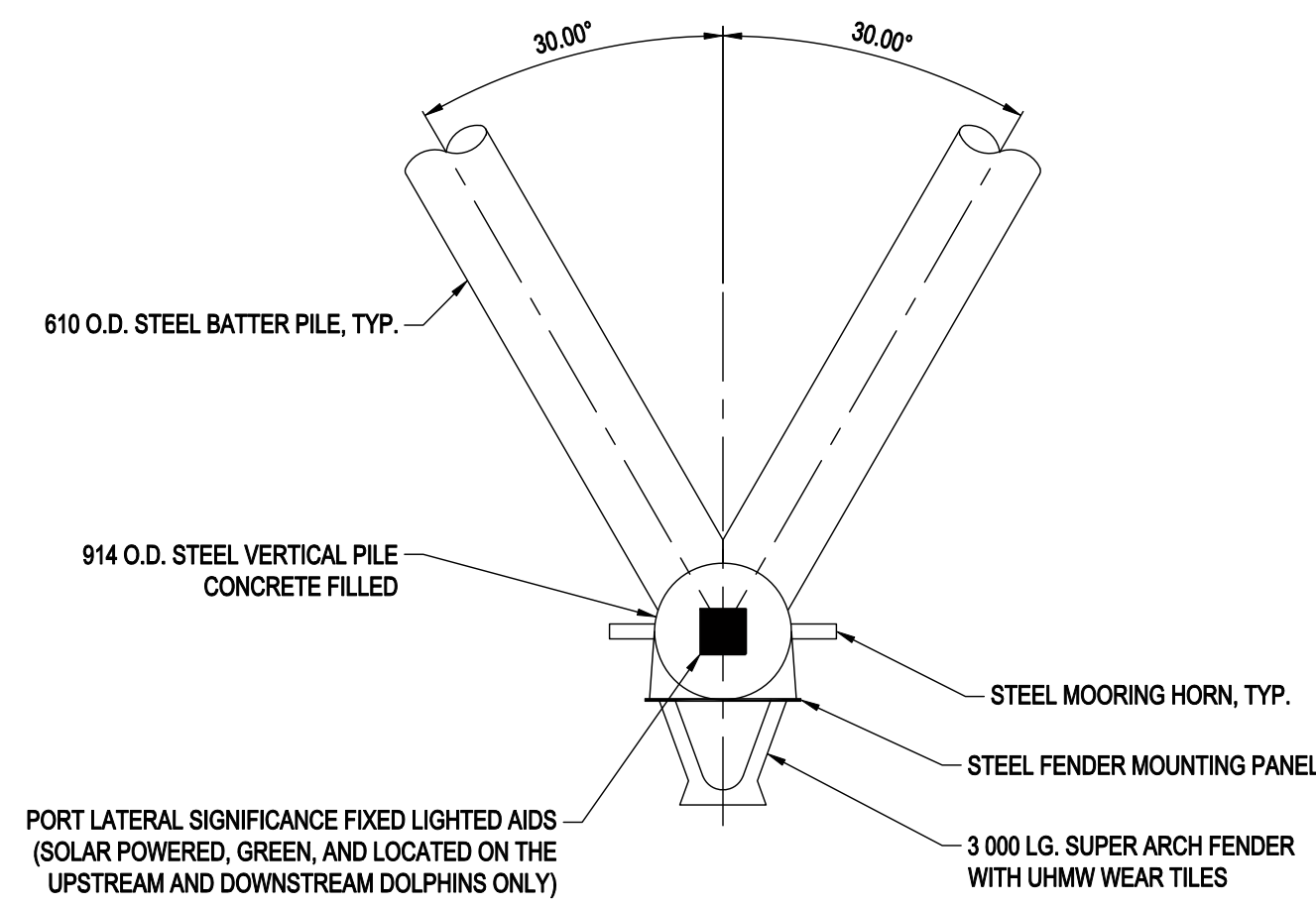
LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
BARGE LOADING MARINE FACILITY  
OPERATIONAL GEOMETRY

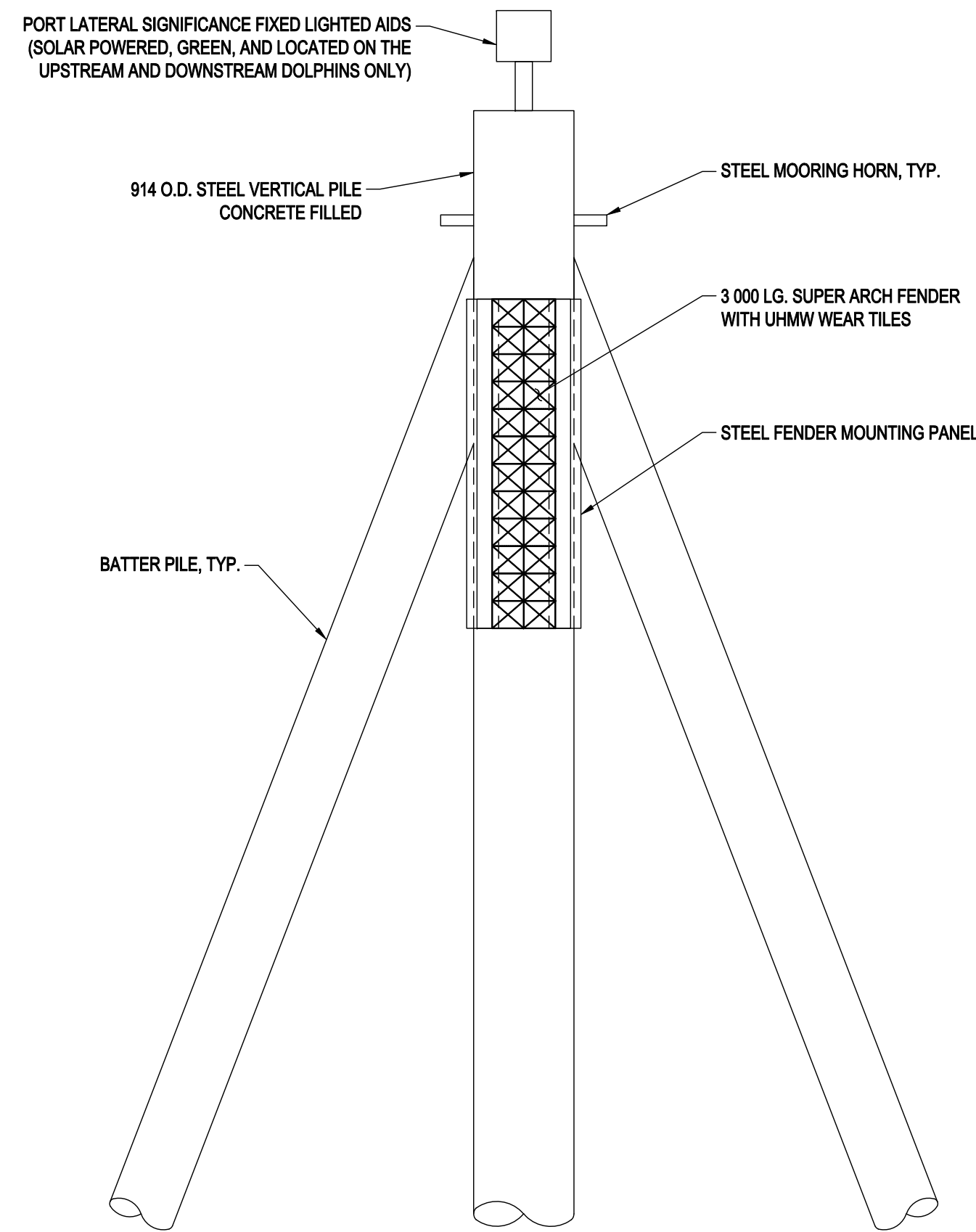
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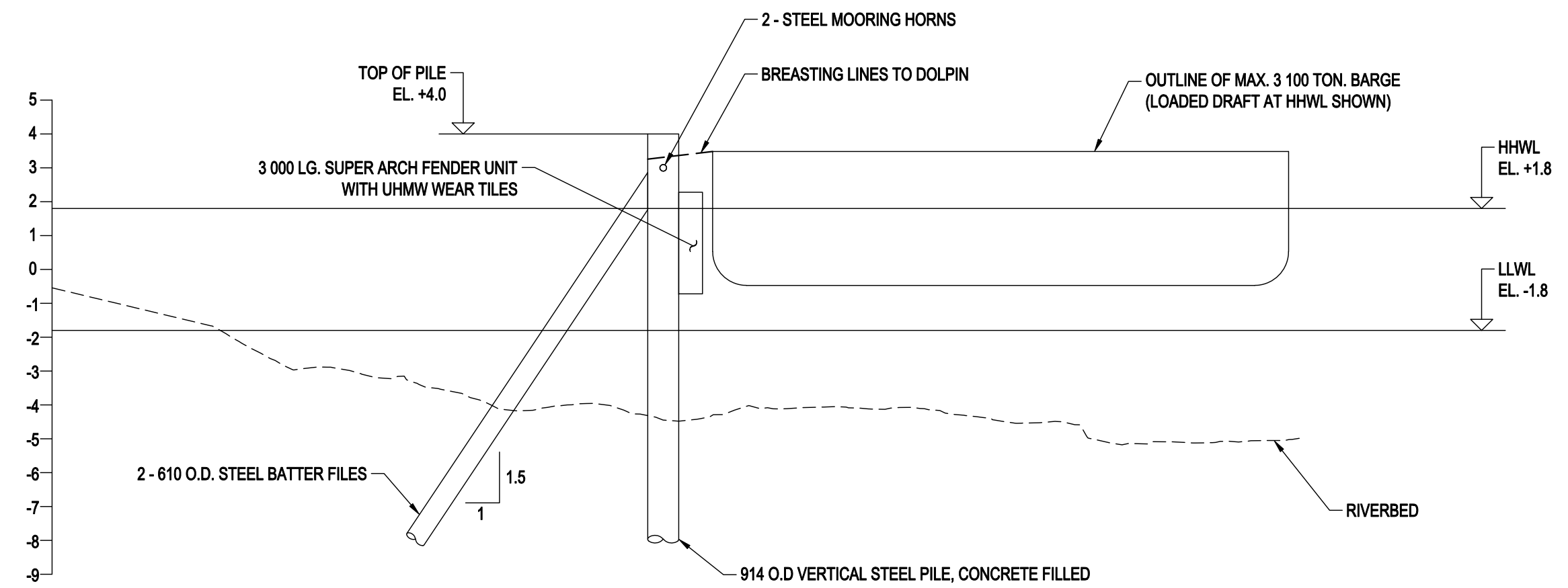




**PLAN - TYPICAL DOLPHIN**  
SCALE 1: 50



**ELEVATION - TYPICAL DOLPHIN**  
SCALE 1: 50



**SECTION A**  
SCALE 1: 150

REFERENCE DRAWINGS		REVISIONS						
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D
		A	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT		CT
		B	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT		CT
		C	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT		CT
		D	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT		CT

NOTES
1. PILES TO BE INSTALLED OPEN-ENDED BY COMBINATION OF VIBRATORY HAMMER AND IMPACT HAMMER PILE DRIVING METHODS
2. TOTAL PILE EMBEDMENT IS ANTICIPATED TO BE 15 M.

PERMIT AND ENGINEER STAMP

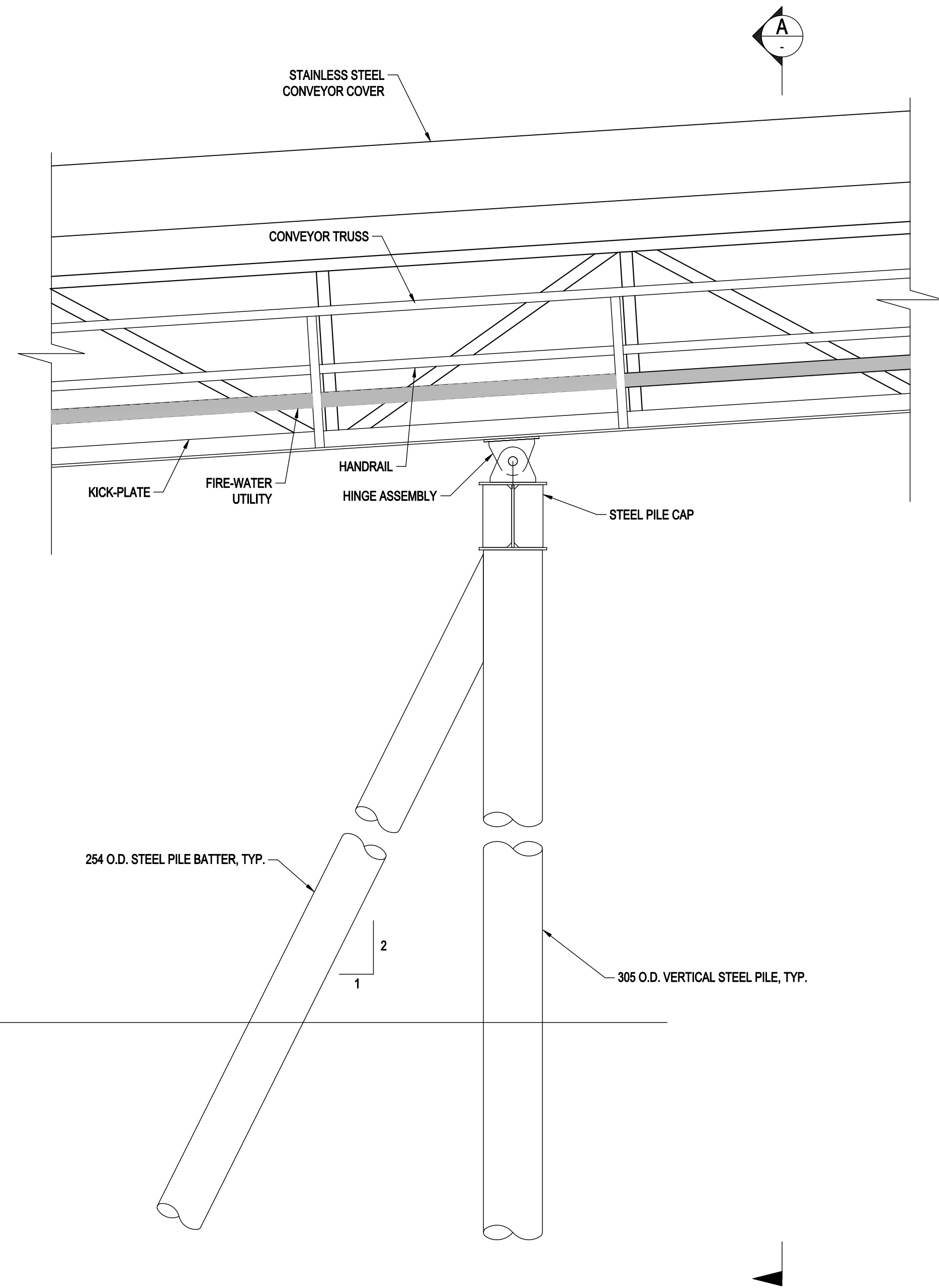
**SUMMIT**  
EARTHWORKS

LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

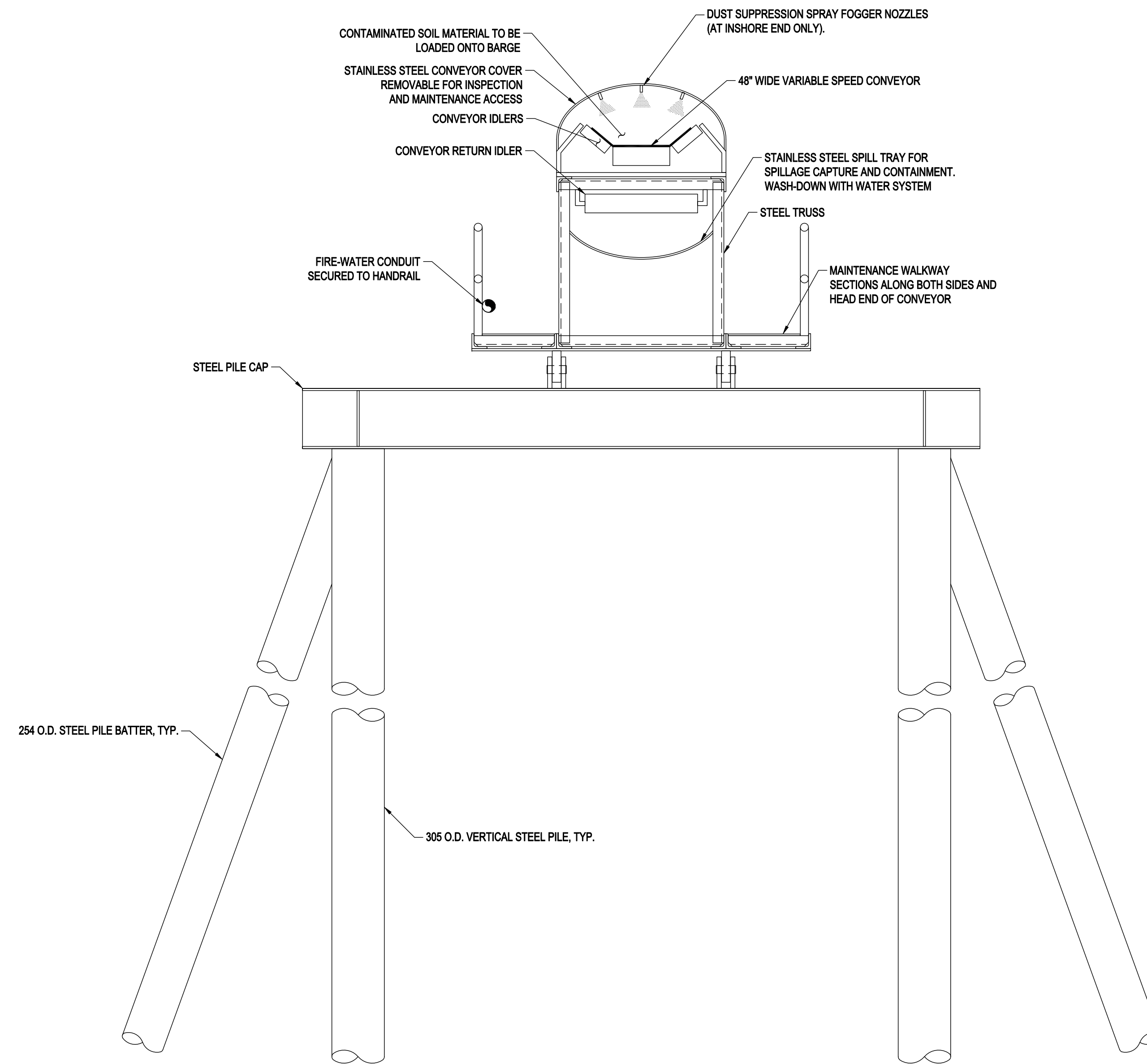
NEW WESTMINSTER, BC  
BARGE LOADING MARINE FACILITY  
MARINE DOLPHIN - DETAILS

CADFILE	03082-103	DRAWING NO.	REV.
SCALE	AS NOTED	03082-103	D

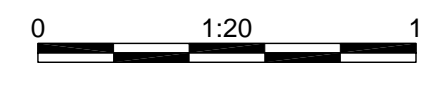




ELEVATION VIEW  
SCALE 1: 20



SECTION A  
SCALE 1: 20



REFERENCE DRAWINGS		REVISIONS						
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D
		A	ISSUED FOR PERMIT	2018.MAY.29	MOH	CT		CT
		B	ISSUED FOR PERMIT	2018.JUN.15	MOH	CT		CT
		C	ISSUED FOR PERMIT	2019.JAN.09	MOH	CT		CT
		D	ISSUED FOR PERMIT	2019.JUL.18	MOH	CT		CT

NOTES

PERMIT AND ENGINEER STAMP

**SUMMIT**  
EARTHWORKS

LOT 3, PLAN 13803 & BLOCK 9, PLAN 2602

NEW WESTMINSTER, BC  
BARGE LOADING MARINE FACILITY  
CONVEYOR TRUSS AND SUPPORT - DETAILS

CADFILE	03082-104	DRAWING NO.	03082-104	REV.	D
SCALE	1:20				