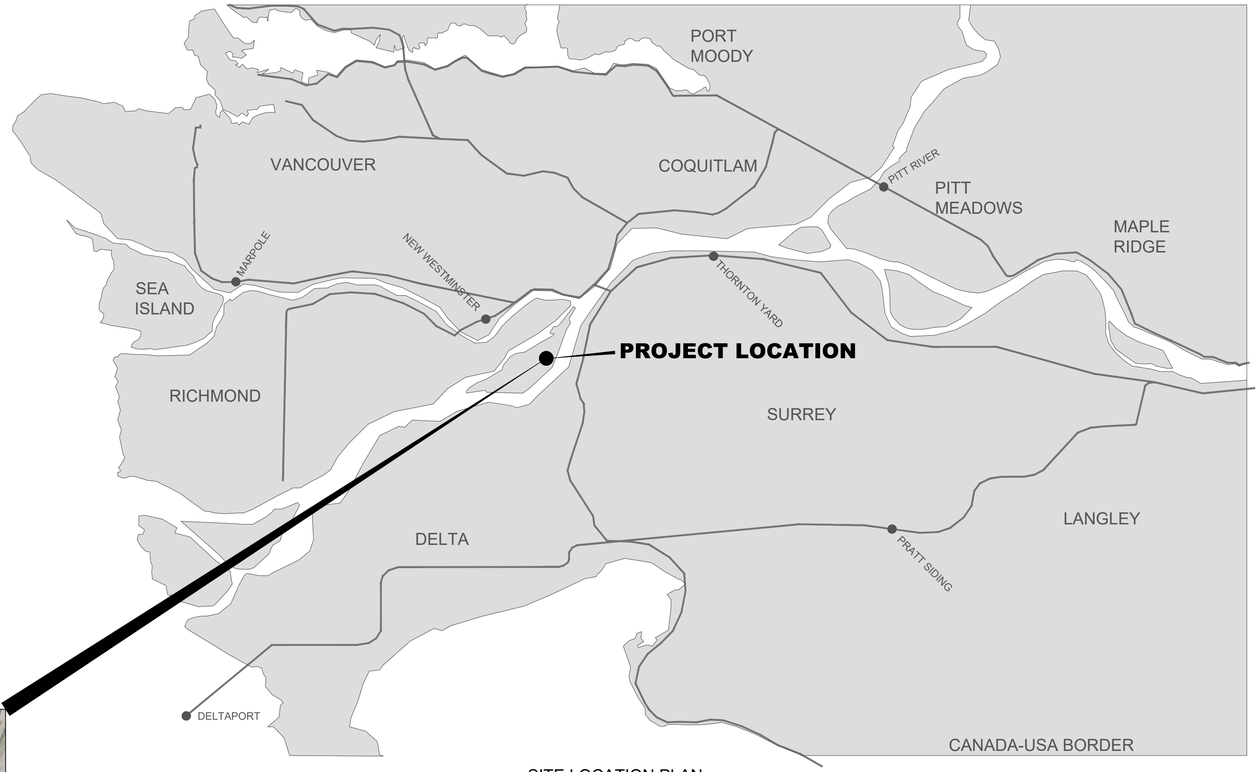
M

M

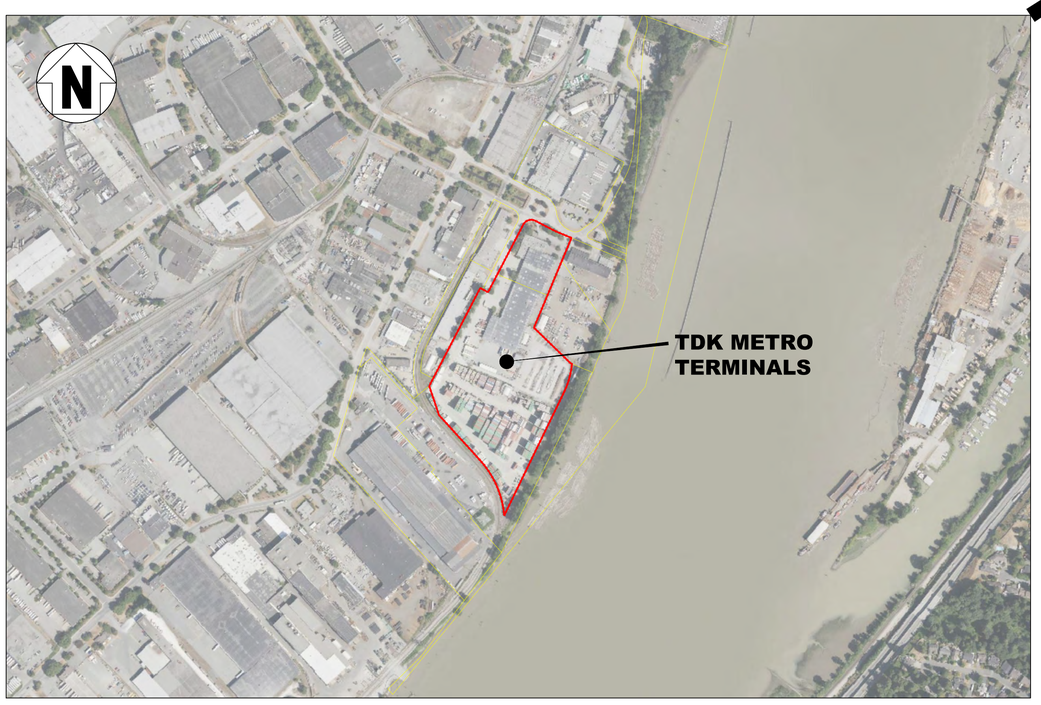
MOTT MACDONALD

MOTT MACDONALD
Suite 1888, Bentall 5
550 Burrard Street
Vancouver, BC, V6C 2B5

VFPA PROJECT NO. 21-098
MMD PROJECT NO. 514100592
ISSUED FOR PERMIT
DATE: 2023-JUNE-30



SITE LOCATION PLAN
NOT TO SCALE



SATELLITE VIEW
SCALE 1:5000

50 m 0 1:5000 250 m

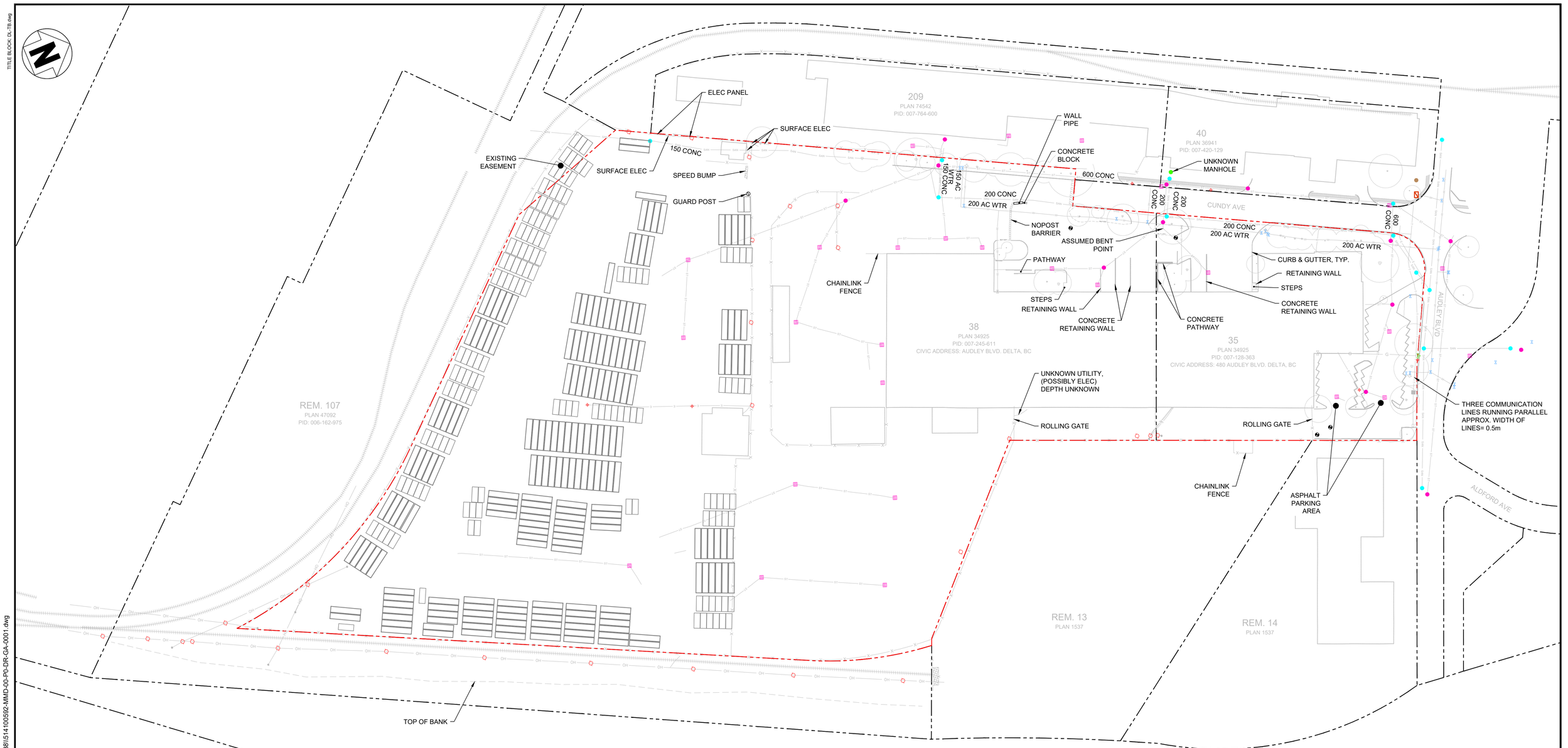
TDK METRO Terminals

PORT of vancouver
Vancouver Fraser Port Authority

VANCOUVER FRASER PORT AUTHORITHY
300 LOW LEVEL ROAD,
NORTH VANCOUVER

DRAWING NO.:
21-098-GA-000 Rev C

TITLE BLOCK: DL-TB.dwg



LEGEND:

- VFPA LEGAL PROPERTY LIMIT
- PROPERTY LIMIT
- EX. STORM PIPE
- EX. ELECTRICAL LINE
- EX. GAS LINE
- EX. SANITARY
- EX. WATER LINE
- EX. COMM LINE
- EX. OVERHEAD UTILITY
- EX. GUY WIRE LINE
- EX. SURFACE ELEC
- UNKNOWN UTILITY
- EX. FENCE
- EX. RAILWAY CENTRE LINE
- EX. STORM MANHOLE
- EX. SANITARY MANHOLE
- EX. TELECOM MANHOLE
- EX. POWER POLE
- EX. LAMP STANDARD
- EX. FIRE HYDRANT
- EX. CATCH BASIN
- EX. MONITORING WELL
- EX. WATER VALVE
- EX. GAS VALVE
- EX. GUARD POST
- EX. GUY WIRE
- EX. BUILDING
- EX. SHIPPING CONTAINERS
- EX. TREE

10 m 0 1:750 40 m

FOR PERMITTING

NOT FOR CONSTRUCTION

Ref. No.	REFERENCE

MOTT MACDONALD
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550 Burrard Street
Vancouver, BC, V6C 2B5
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T 604.681.4400
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ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-GA-0001

No.	Date	REVISION	Dr'n	Ch'd
A	2023/01/31	ISSUED FOR PERMIT	KW	AL

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

SITE PLAN - EXISTING CONDITION

SIZE	DWG.	SHEET	REV.
D	21-098-GA-001	1 of 1	A

DATE: 2023/01/27 - 9:10am
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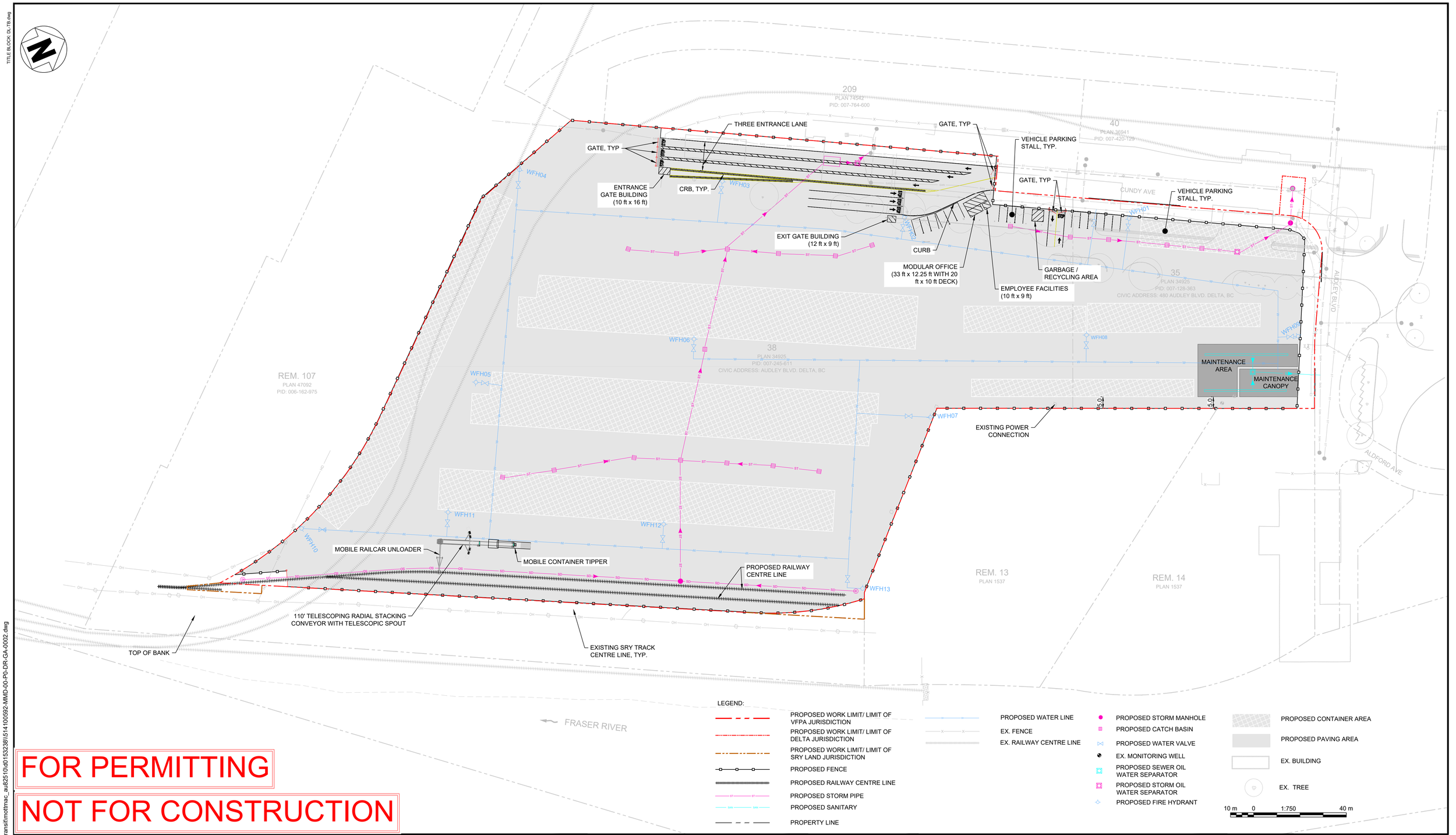

LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- PROPOSED FENCE
- PROPOSED RAILWAY CENTRE LINE
- PROPOSED STORM PIPE
- PROPOSED SANITARY
- PROPERTY LINE
- PROPOSED WATER LINE
- EX. FENCE
- EX. RAILWAY CENTRE LINE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED WATER VALVE
- EX. MONITORING WELL
- PROPOSED SEWER OIL WATER SEPARATOR
- PROPOSED STORM OIL WATER SEPARATOR
- PROPOSED FIRE HYDRANT
- PROPOSED CONTAINER AREA
- PROPOSED PAVING AREA
- EX. BUILDING
- EX. TREE

10 m 0 1:750 40 m

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NOT FOR CONSTRUCTION

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514100592-MMD-00-P0-DR-GA-0002

No.	Date	REVISION	Dr'n	Ch'd
C	2023/06/30	ISSUED FOR PERMIT	CA	AL
B	2023/03/10	ISSUED FOR PERMIT	KW	AL
A	2023/01/31	ISSUED FOR PERMIT	KW	AL

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

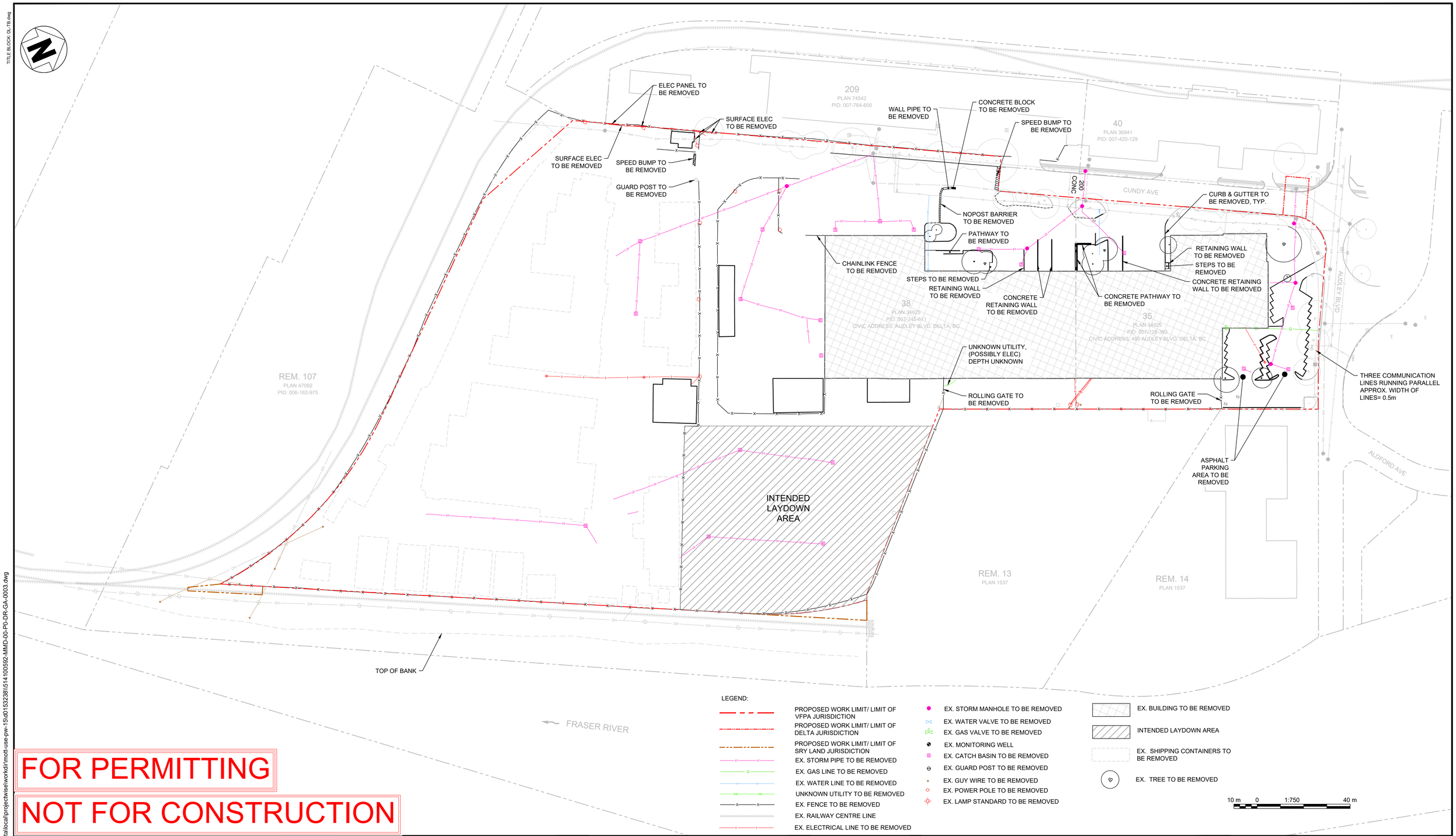
DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

PROPOSED SITE PLAN

SIZE	DWG.	SHEET	REV.
D	21-098-GA-002	1 of 1	C

TITLE BLOCK DL-TB.dwg



LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- EX. STORM PIPE TO BE REMOVED
- EX. GAS LINE TO BE REMOVED
- EX. WATER LINE TO BE REMOVED
- UNKNOWN UTILITY TO BE REMOVED
- EX. FENCE TO BE REMOVED
- EX. RAILWAY CENTRE LINE
- EX. ELECTRICAL LINE TO BE REMOVED
- EX. STORM MANHOLE TO BE REMOVED
- EX. WATER VALVE TO BE REMOVED
- EX. GAS VALVE TO BE REMOVED
- EX. MONITORING WELL
- EX. CATCH BASIN TO BE REMOVED
- EX. GUARD POST TO BE REMOVED
- EX. GUY WIRE TO BE REMOVED
- EX. POWER POLE TO BE REMOVED
- EX. LAMP STANDARD TO BE REMOVED
- EX. BUILDING TO BE REMOVED
- INTENDED LAYDOWN AREA
- EX. SHIPPING CONTAINERS TO BE REMOVED
- EX. TREE TO BE REMOVED

10 m 0 1:750 40 m

FOR PERMITTING

NOT FOR CONSTRUCTION

DATE: 2023/01/27 - 9:20am
PATH: C:\users\wu97920\appdata\local\projectwise\workdir\mott-use-pw-15\d0153238\514100592-MMD-00-P0-DR-GA-0003.dwg

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ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-GA-0003

No.	Date	REVISION	Dr'n	Ch'd
A	2023/01/31	ISSUED FOR PERMIT	KW	AL

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

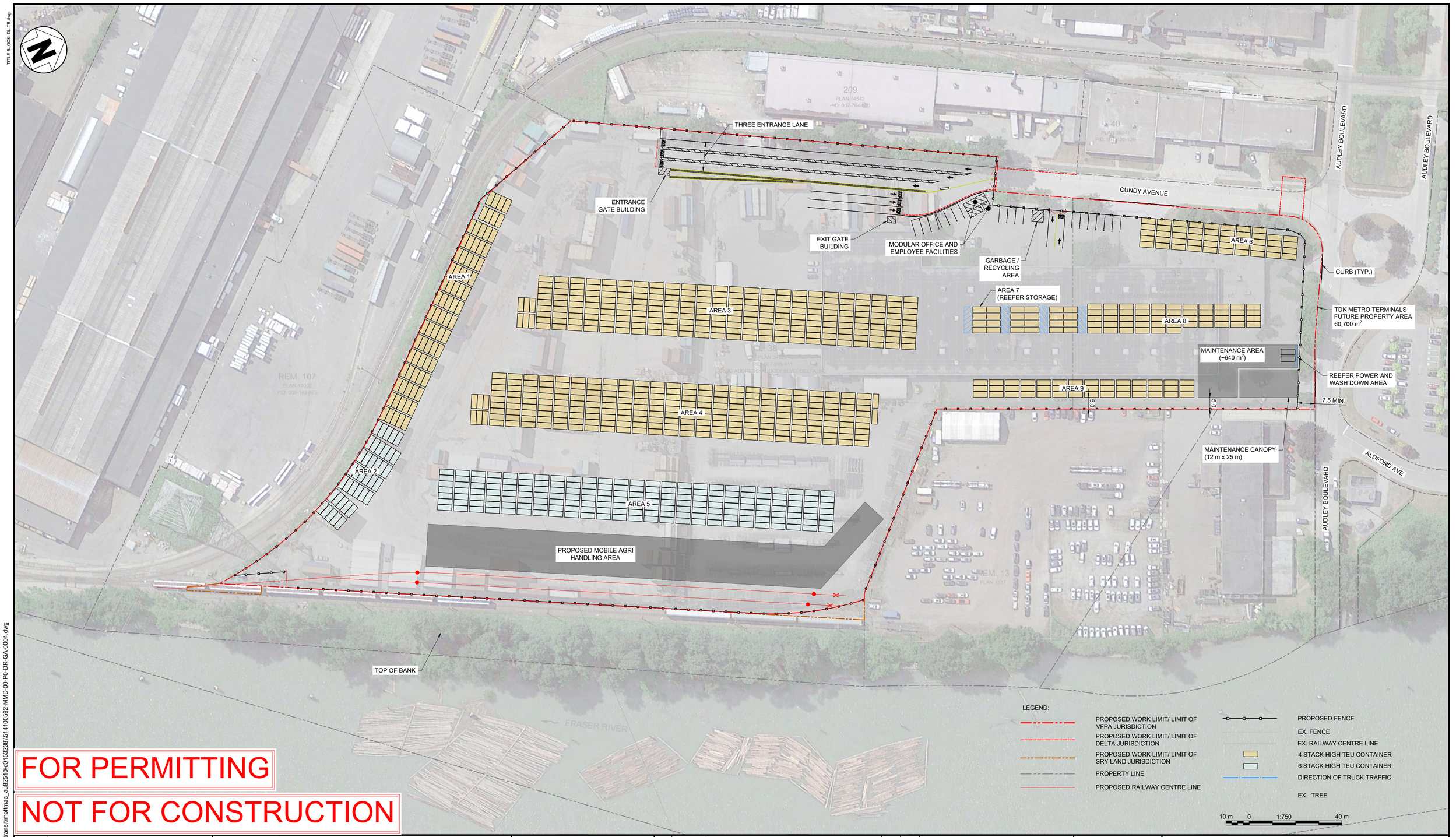
DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

DEMOLITION PLAN

SIZE	DWG.	SHEET	REV.
D	21-098-GA-003	1 of 1	A

TITLE BLOCK: DL-TB.dwg



FOR PERMITTING

NOT FOR CONSTRUCTION

DATE: 2023/06/30 - 3:26pm
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Ref. No.	REFERENCE

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ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-GA-0004

No.	Date	REVISION	Dr'n	Ch'd
B	2023/06/30	ISSUED FOR PERMIT	CA	AL
A	2023/01/31	ISSUED FOR PERMIT	CA	AL

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

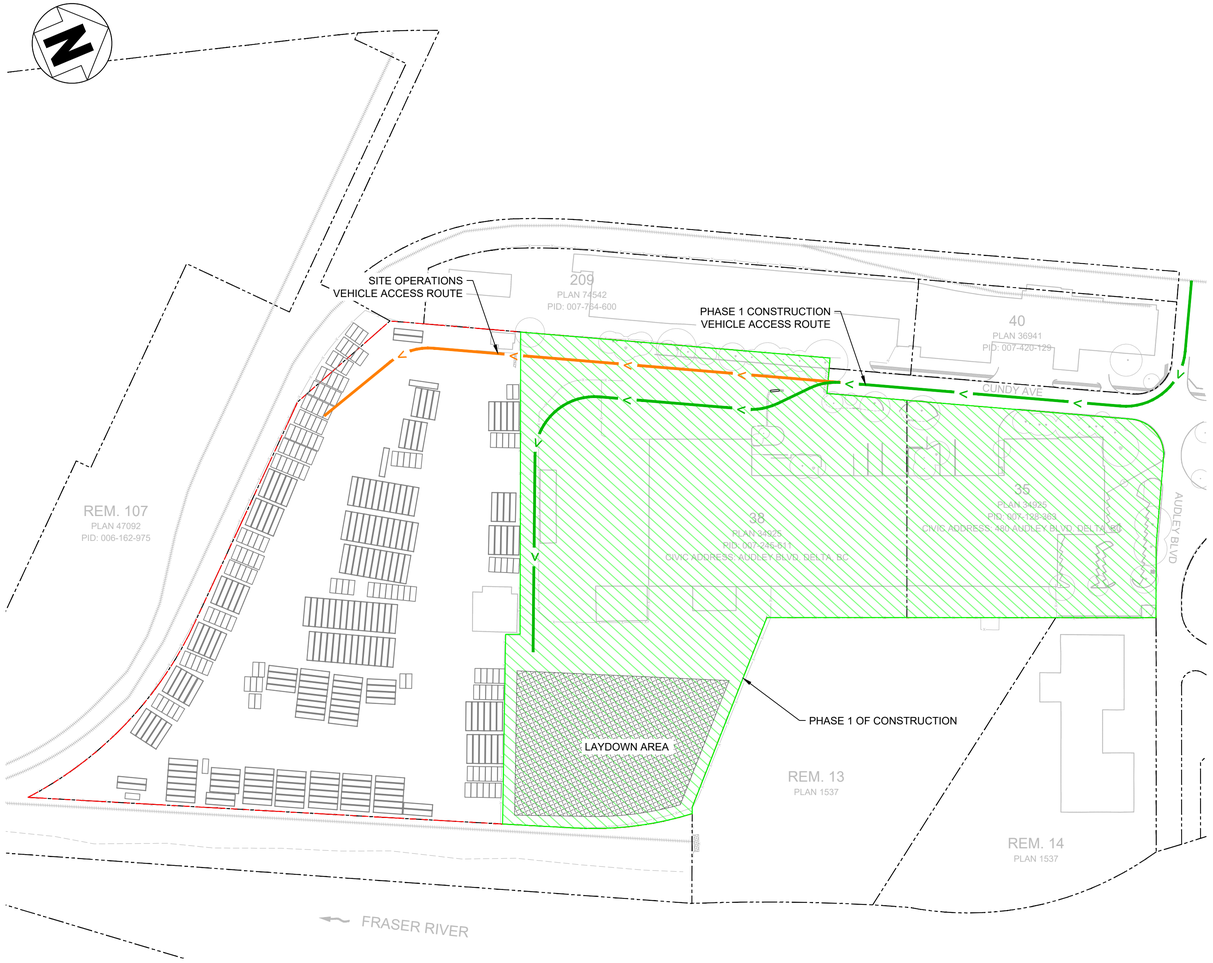
DESIGN BY	C. A.
DRAWN BY	C. A.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

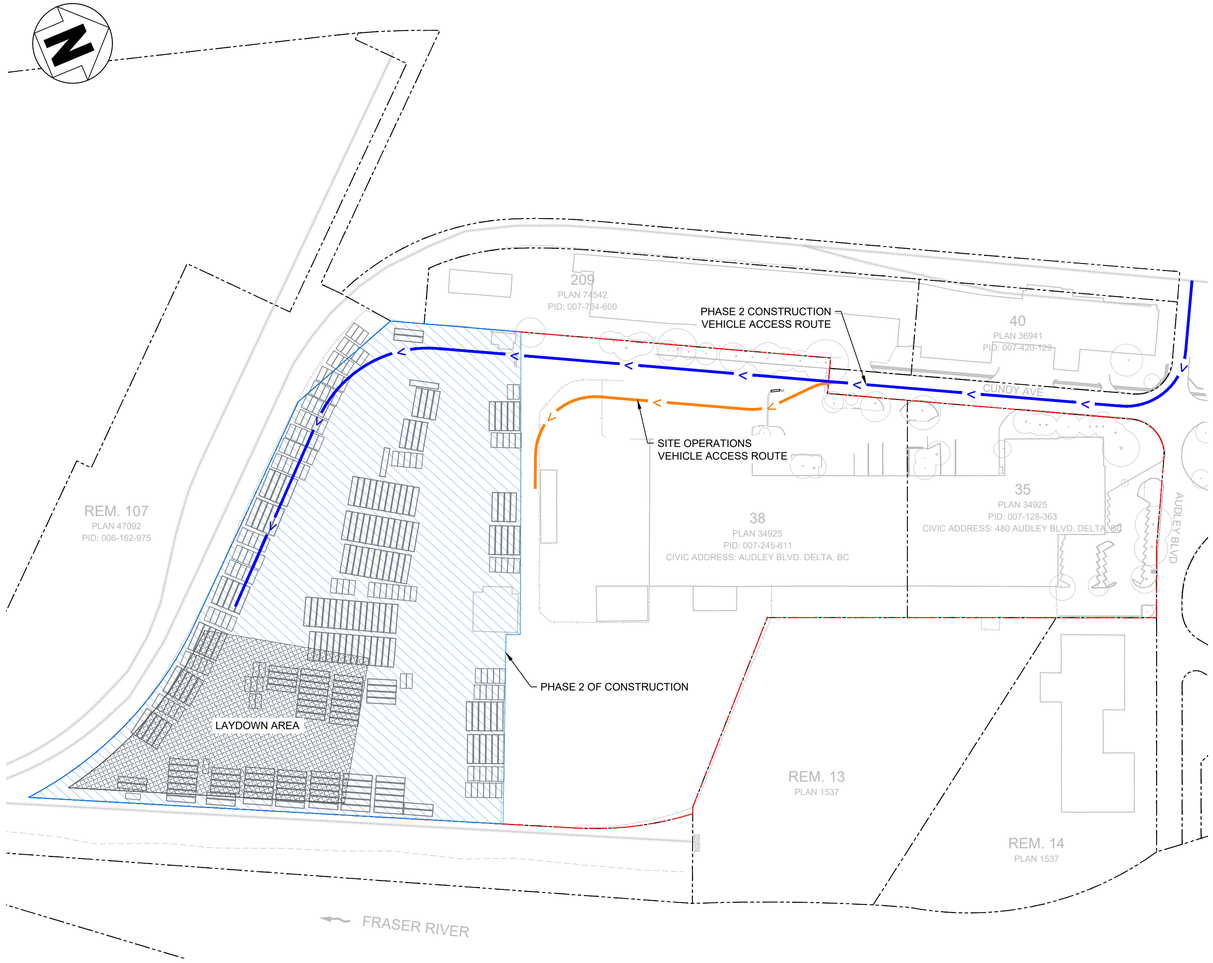
PROPOSED CONTAINER ARRANGEMENT

SIZE	DWG.	SHEET	REV.
D	21-098-GA-004	1 of 1	B

TITLE BLOCK DL-TB.dwg



PHASE 1 OF CONSTRUCTION



PHASE 2 OF CONSTRUCTION

LEGEND:

- VFPA LEGAL PROPERTY LIMIT
- PROPERTY LIMIT
- EX. RAILWAY CENTRE LINE
- EX. SHIPPING CONTAINERS
- PHASE 1 CONSTRUCTION VEHICLE ACCESS ROUTE
- PHASE 2 CONSTRUCTION VEHICLE ACCESS ROUTE
- SITE OPERATIONS VEHICLE ACCESS ROUTE

10 m 0 1:1250 50 m

FOR PERMITTING

NOT FOR CONSTRUCTION

Ref. No.	REFERENCE

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ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-GA-0005

No.	Date	REVISION	Dr'n	Ch'd
A	2023/03/10	ISSUED FOR PERMIT	CA	AW

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

DESIGN BY	A. L.
DRAWN BY	C.A.
APPROVED	A.W.
DATE	2023-MAR-10
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION
TDK CONSTRUCTION PHASING
VEHICLE ACCESS & LAYDOWN AREAS

SIZE	DWG.	SHEET	REV.
D	21-098-GA-005	1 of 1	A

DATE: 2023/03/07 - 9:38am
PATH: C:\pw\working\mmm\all_trans\mottmac_au82510\d0153238\I514100592-MMD-00-P0-DR-GA-0005.dwg

RAIL CAR
5 WELL CARS

BOTTOM DUMP HOPPER
RAIL CAR

MOBILE CONVEYOR

REACH STACKER

LOADED ROTAINER STORAGE
4 HIGH IN MOST LOCATIONS
6 HIGH MAX IN SOME LOCATIONS

LOADING VIA
CONTAINER TIPPER

REACH STACKER

REACH STACKER

TRUCK
ENTRANCE GATE CHECK-IN

REACH STACKER

TRUCK
LOADING FROM REACH STACKER

TRUCK
ENTRANCE GATE QUEUING

TRUCK
ENTRANCE GATE CHECK-IN

TRUCK
EXIT GATE CHECK-IN

TRUCK
ENTRANCE GATE CHECK-IN

REACH STACKER

TRUCK
LOADING FROM REACH STACKER

TRUCK
FROM ROAD NETWORK

TRUCK
LEAVING TERMINAL

EMPTY CONTAINER STORAGE
4 HIGH IN MOST LOCATIONS
6 HIGH MAX IN SOME LOCATIONS

REACH STACKER

LOADED CONTAINER PATH
EMPTY CONTAINER PATH
TRUCK PATH
TERMINAL GROUND
RAIL YARD

Ref. No.	REFERENCE

MOTT MACDONALD
Suite 1888, Bentall 5
550 Burrard Street
Vancouver, BC, V6C 2B5
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ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-RW-0001

No.	Date	REVISION	Dr'n	Ch'd
B	2023/03/14	ISSUED FOR DISCUSSION	HK	SR
A	2022/10/11	ISSUED FOR DISCUSSION	HK	SR

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

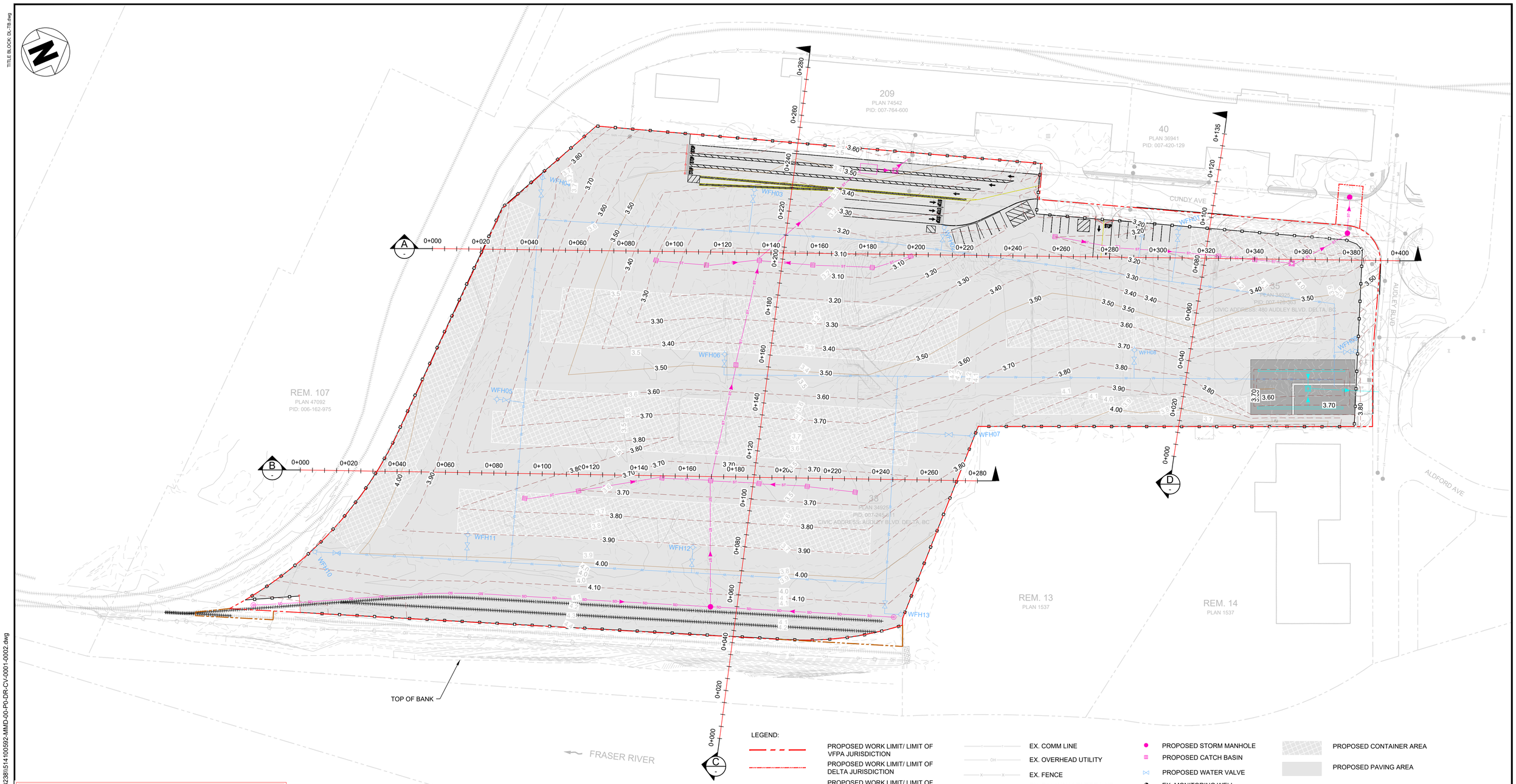
DESIGN BY	C. A.
DRAWN BY	C. A.
APPROVED	A. W.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

FLOW DIAGRAM

SIZE	DWG.	SHEET	REV.
D	21-098-GA-006	1 of 1	B

TITLE BLOCK: DL-TB.dwg



LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- PROPOSED STORM PIPE
- PROPOSED SANITARY
- PROPOSED WATER LINE
- PROPOSED FENCE
- PROPOSED RAILWAY CENTRE LINE
- EX. COMM LINE
- EX. OVERHEAD UTILITY
- EX. FENCE
- EX. RAILWAY CENTRE LINE
- PROPOSED MAJOR CONTOUR (0.5m INERVAL)
- PROPOSED MINOR CONTOUR (0.1m INERVAL)
- EX. MAJOR CONTOUR (0.5m INERVAL)
- EX. MINOR MAJOR (0.1m INERVAL)
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED WATER VALVE
- EX. MONITORING WELL
- PROPOSED SEWER OIL WATER SEPARATOR
- PROPOSED STORM OIL WATER SEPARATOR
- PROPOSED CONTAINER AREA
- PROPOSED PAVING AREA

10 m 0 1:750 40 m

FOR PERMITTING

NOT FOR CONSTRUCTION

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ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-CV-0001

No.	Date	REVISION	Dr'n	Ch'd
B	2023/06/30	ISSUED FOR PERMIT	CA	AL
A	2023/01/31	ISSUED FOR PERMIT	KW	AL

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

GRADING PLAN

SIZE	DWG.	SHEET	REV.
D	21-098-CI-001	1 of 1	B

DATE: 2023/06/30 - 2:26pm
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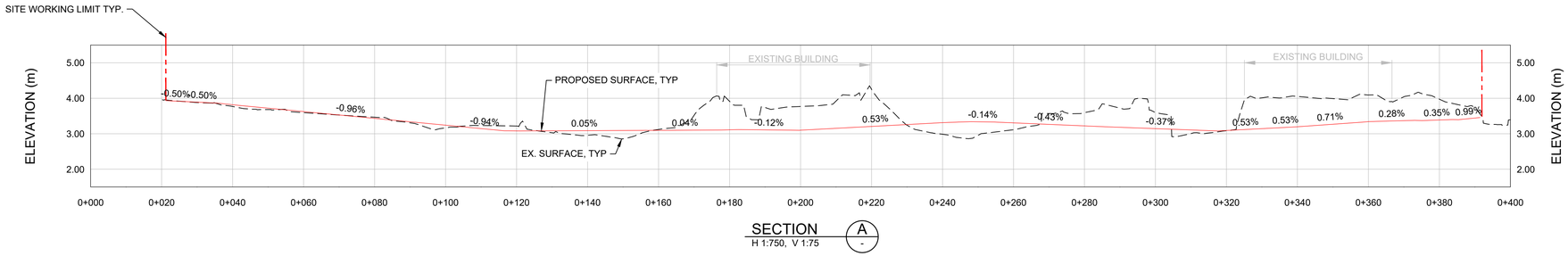

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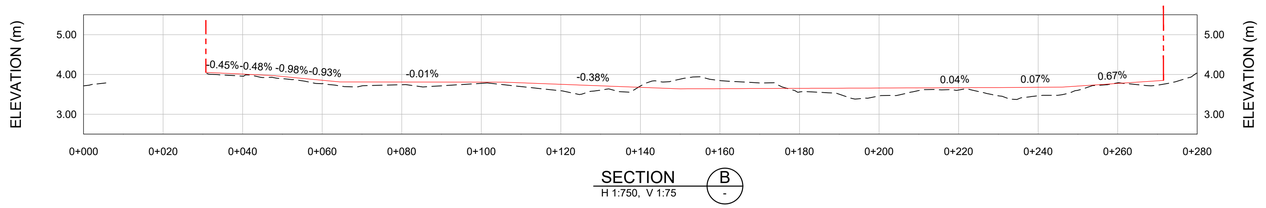

SECTION B
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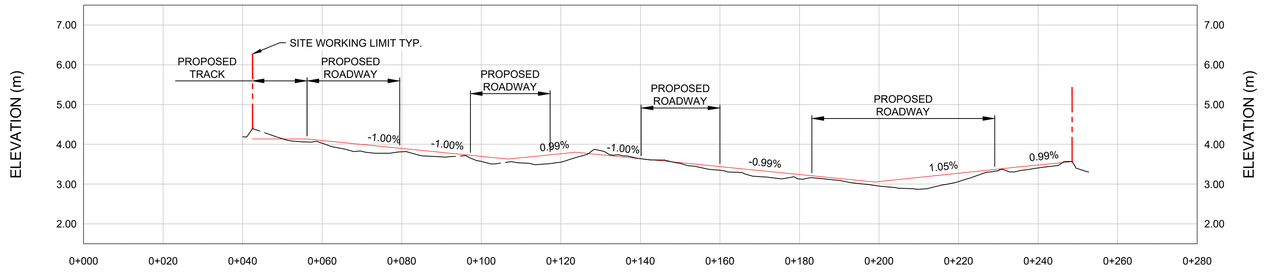

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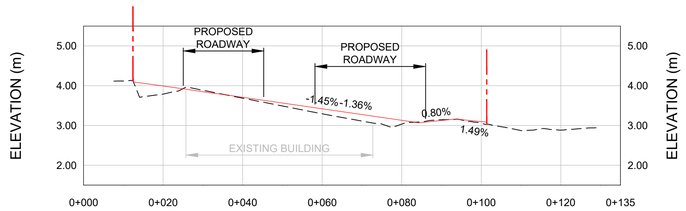
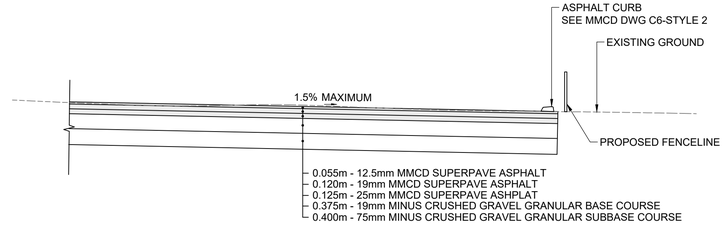


SECTION D
H 1:750, V 1:75



TYPICAL SECTION - PROPOSED PAVEMENT
SCALE: 1:75

FOR PERMITTING

NOT FOR CONSTRUCTION

1 m 0 1:75 4 m

10 m 0 1:750 40 m

Ref. No.	REFERENCE

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No.	Date	REVISION	Dr'n	Ch'd
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PORT of vancouver
Vancouver Fraser Port Authority
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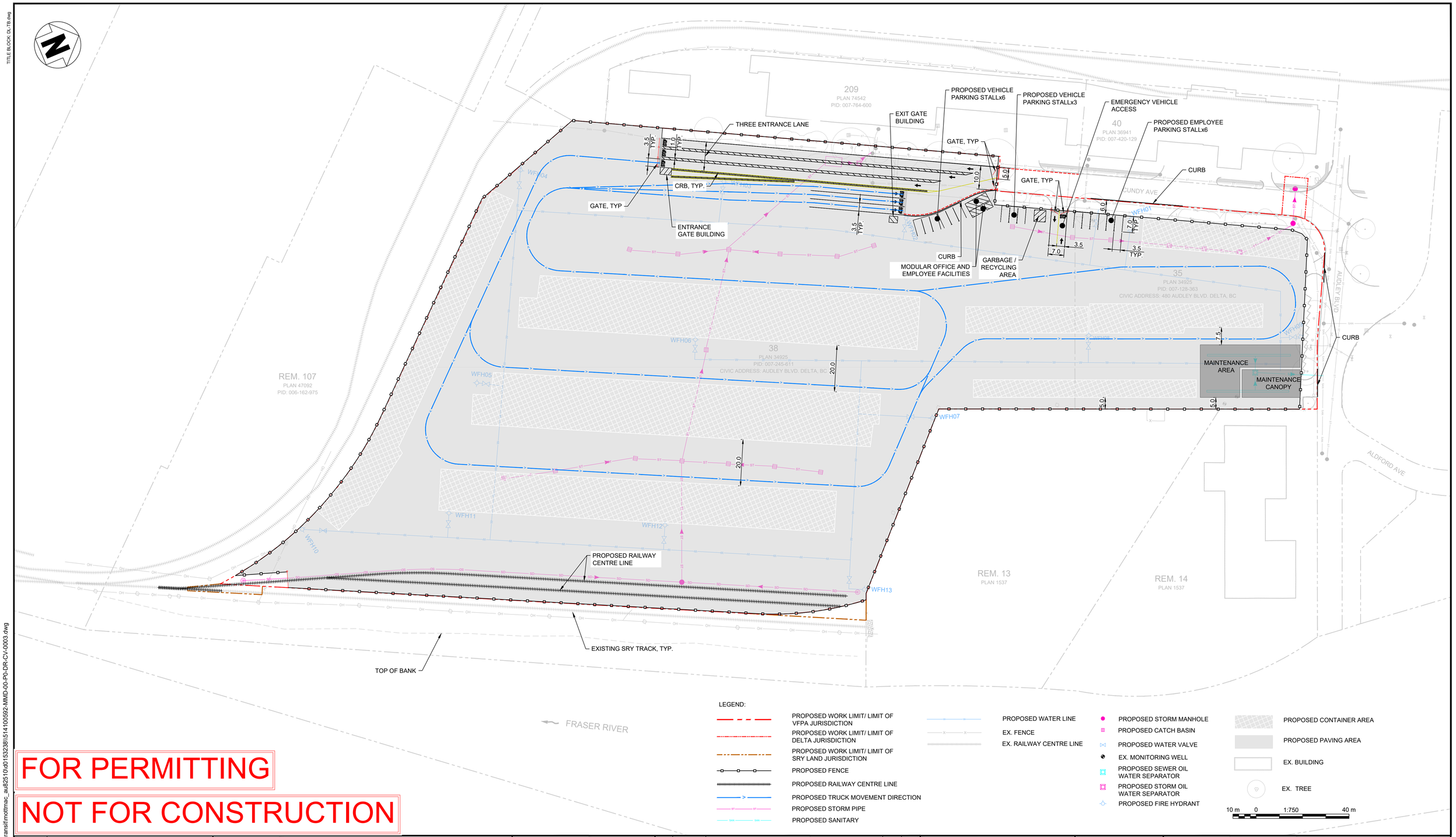
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

GRADING SECTIONS

SIZE	DWG.	SHEET	REV.
D	21-098-CI-002	1 of 1	A

TITLE BLOCK: DL-TB.dwg



LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- PROPOSED FENCE
- PROPOSED RAILWAY CENTRE LINE
- PROPOSED TRUCK MOVEMENT DIRECTION
- PROPOSED STORM PIPE
- PROPOSED SANITARY
- PROPOSED WATER LINE
- EX. FENCE
- EX. RAILWAY CENTRE LINE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED WATER VALVE
- EX. MONITORING WELL
- PROPOSED SEWER OIL WATER SEPARATOR
- PROPOSED STORM OIL WATER SEPARATOR
- PROPOSED FIRE HYDRANT
- PROPOSED CONTAINER AREA
- PROPOSED PAVING AREA
- EX. BUILDING
- EX. TREE

10 m 0 1:750 40 m

FOR PERMITTING

NOT FOR CONSTRUCTION

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A	2023/01/31	ISSUED FOR PERMIT	KW	AL

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

PROPOSED PARKING AND ACCESS PLAN

SIZE	DWG.	SHEET	REV.
D	21-098-CI-003	1 of 1	B

DATE: 2023/06/30 - 2:35pm
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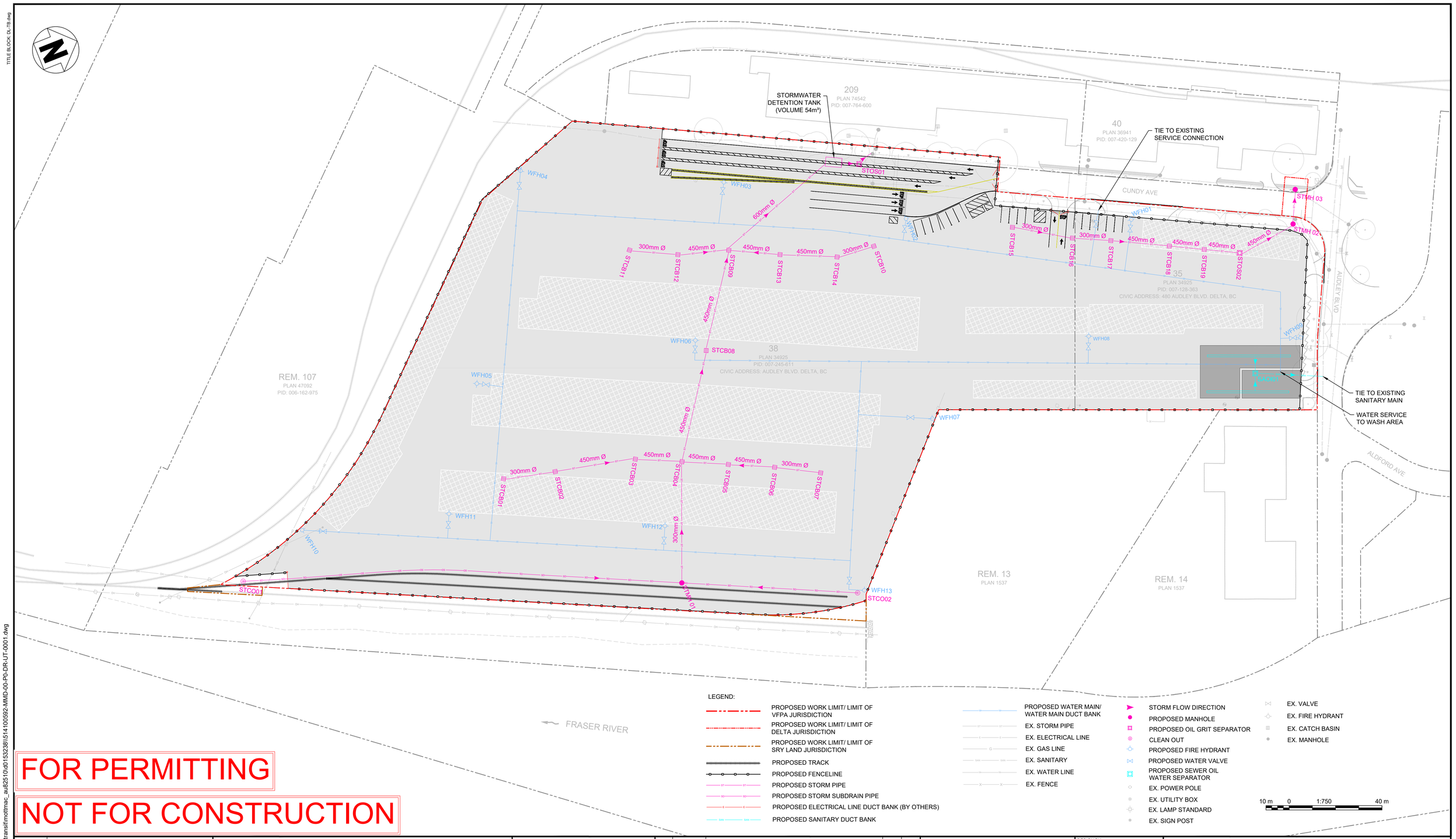


LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- PROPOSED TRACK
- PROPOSED FENCELINE
- PROPOSED STORM PIPE
- PROPOSED STORM SUBDRAIN PIPE
- PROPOSED ELECTRICAL LINE DUCT BANK (BY OTHERS)
- PROPOSED SANITARY DUCT BANK
- PROPOSED WATER MAIN/ WATER MAIN DUCT BANK
- EX. STORM PIPE
- EX. ELECTRICAL LINE
- EX. GAS LINE
- EX. SANITARY
- EX. WATER LINE
- EX. FENCE
- STORM FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED OIL GRIT SEPARATOR
- CLEAN OUT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED SEWER OIL WATER SEPARATOR
- EX. POWER POLE
- EX. UTILITY BOX
- EX. LAMP STANDARD
- EX. SIGN POST
- EX. VALVE
- EX. FIRE HYDRANT
- EX. CATCH BASIN
- EX. MANHOLE

10 m 0 1:750 40 m

FOR PERMITTING

NOT FOR CONSTRUCTION

Ref. No.	REFERENCE

MOTT MACDONALD
Suite 1888, Bentall 5
550 Burrard Street
Vancouver, BC, V6C 2B5
Canada
T 604.681.4400
W www.mottmac.com

ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-UT-0001

No.	Date	REVISION	Dr'n	Ch'd
B	2023/06/30	ISSUED FOR PERMIT	CA	AL
A	2023/01/31	ISSUED FOR PERMIT	ML	AK

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

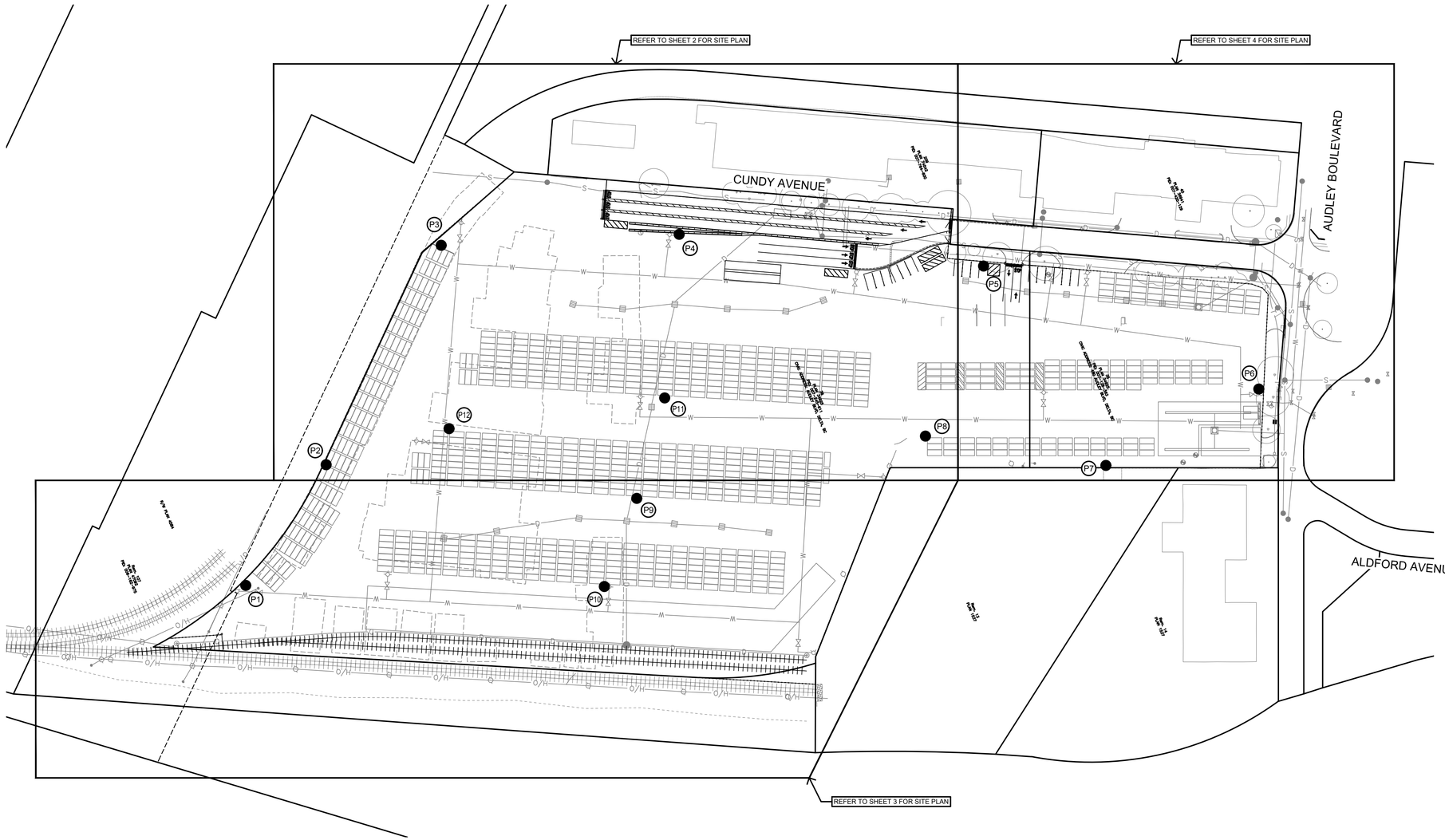
DESIGN BY	M. L.
DRAWN BY	M. L.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

PROPOSED UTILITIES PLAN

SIZE	DWG.	SHEET	REV.
D	21-098-UT-001	1 of 1	B

DATE: 2023/06/30 - 2:47pm
PATH: C:\pwworking\mmiail_transit\mottmac_au82510\d0153238\$14100592-MMD-00-P0-DR-UT-0001.dwg



SITE PLAN

0 1:1000 40

NOTES

1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH MASTER THE MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) PLATINUM EDITION AND CANADIAN ELECTRICAL CODE.
2. ALL CONDUCTORS SHALL BE RW90 STRANDED COPPER (UNLESS OTHERWISE NOTED). LIGHTING AND FEEDER CONDUCTORS SHALL RUN CONTINUOUS WITH NO SPLICES.
3. CONTRACTOR SHALL GAIN APPROVAL FROM LIGHTING SUPPLIER'S GEOTECHNICAL ENGINEER PRIOR TO FOUNDATION INSTALLATION. BACK FILL SHALL MEET THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
4. CONDUITS SHALL BE BURIED A MIN. 1000mm DEEP (UNLESS OTHERWISE NOTED). A 'BURIED CABLE' MARKER TAPE SHALL BE INSTALLED IN ALL TRENCHES.
5. CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL LOCATE AND AVOID ALL UNDERGROUND SERVICES.
7. THE CONTRACTOR SHALL REPLACE ALL ASPHALT, CONCRETE SIDEWALK PANELS, CURB & GUTTER, LANDSCAPE, ETC. REMOVED OR DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER.
8. CONDUITS SHALL BE RIGID P.V.C. MANUFACTURED IN ACCORDANCE WITH C.S.A. C22.2 No. 211.2. (NOT DB2) (UNLESS OTHERWISE NOTED). ABOVE GROUND CONDUIT SHALL BE RIGID METAL.
9. ALL EQUIPMENT SHALL BE BONDED IN COMPLIANCE WITH THE CANADIAN ELECTRICAL CODE.
10. CONTRACTOR SHALL ENSURE ALL LOADS ARE BALANCED
11. SEE B.C. HYDRO REGULATIONS FOR SERVICE CONNECTION DETAILS.
12. CONTRACTOR TO COORDINATE DE-ENERGIZATION OF EXISTING SERVICE AND ENERGIZATION OF NEW SERVICE TO MINIMIZE DOWNTIME OF EXISTING YARD.

LEGEND

- 30.5m HIGH MAST LIGHTING, C/W PILE CAP SPREAD FOOT FOUNDATION. CONTACT MARK PACKER 604-353-4500 (DESIGN No. 223686A) (TYP.)
- LARGE ROUND JUNCTION BOX (MOTI SPEC) 2 SECTIONS DEEP C/W BOTTOM SECTION AND BONDED GALVANIZED STEEL SECURITY LID MARKED 'ELEC'.
- V 480V CONCRETE VAULT (MANHOLE COVER)
- TYPE 4040 SERVICE VAULT WITH MANHOLE COVER MARKED "ELEC"
- UNDERGROUND RPVC ELECTRICAL CONDUIT (277/480 UNLESS OTHERWISE NOTED) (SIZE AS SHOWN)
- UNDERGROUND RPVC COMMUNICATIONS CONDUIT (SIZE AS SHOWN)
- (X) LIGHTING POLE NUMBER
- EXISTING OVERHEAD UTILITY POLE
- CONDUIT STUB

LIGHTING DESIGN CRITERIA		
ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED **
LOCATION	TDK METRO TERMINALS	
FIELD TYPE	CARGO HANDLING FACILITY	
EQUIPMENT TYPE	TLC-LED-900 (890 MAX)	
MAINTAINED ILLUMINANCE LEVEL (AVG.)	38.0 LUX*	54.6 LUX
ILLUMINANCE UNIFORMITY RATIO (MAX.:MIN.)	6.0:1*	6.0:1

* BASED ON IES RP-40-19 PORT LIGHTING, CARGO HANDLING FACILITY

** FOR SPILL LIGHTING CALCULATIONS ON WATER SIDE OF THE PROJECT REFER TO SUPPLIERS LIGHTING LAYOUT

12.5kV

277/480V

120/208V

PERMIT TO PRACTICE
NUMBER: 1000771
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA

NOT FOR CONSTRUCTION
2023-01-27

DMD & Associates
Electrical Consultants Ltd.
#12-17358 104A Avenue
Surrey, BC, Canada V4N 5M3
www.dmdeng.com 604/589-9010
office@dmdeng.com Fax 604/589-9012

DESIGNED	MARTIN STERLING
DRAWN	ED KITTSON
CHECKED	DONATO SPEIDEL
E.O.R.	MARTIN STERLING
DATE	JANUARY 18, 2023
SCALE:	1:1000

SEAL

OVERHEAD POWER LINE CONFLICTS

CONTRACTOR SHALL CONFIRM ON SITE PRIOR TO CONSTRUCTION THAT POLES & EQUIPMENT WILL MEET WorkSafeBC CLEARANCE REQUIREMENTS FOR OVERHEAD PRIMARY AND SECONDARY LINES. CONTRACTOR TO REPORT ANY CONFLICTS OR DISCREPANCIES TO DMD & ASSOCIATES PRIOR TO ORDERING POLES AND INSTALLING CONCRETE BASES.

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C A U T I O N !
EXCAVATION NEAR OVERHEAD UTILITY POLE

ANY UNDERGROUND EXCAVATION WITHIN SOIL FOUNDATION INTERACTION AREA REQUIRES TEMPORARY UTILITY POLE SUPPORT. REFER TO ES55 E3-04 GUIDE FOR CIVIL EXCAVATION NEAR DISTRIBUTION POLES FOR DETAILS. REFER TO BC HYDRO WORK ON WOOD POLES MANUAL (ON SAFEHUB) AND BC HYDRO 2017-1-F POLE HOLDING REQUIREMENTS FOR APPROVED TEMPORARY POLE SUPPORT METHODS. FOR MORE INFORMATION CONTACT workmethods@bchydro.com

No.	DATE	BY	CHK'D	REVISION
.	2023-01-27	EK	MGDS	PRELIMINARY LIGHTING LAYOUT - ISSUE FOR PERMIT

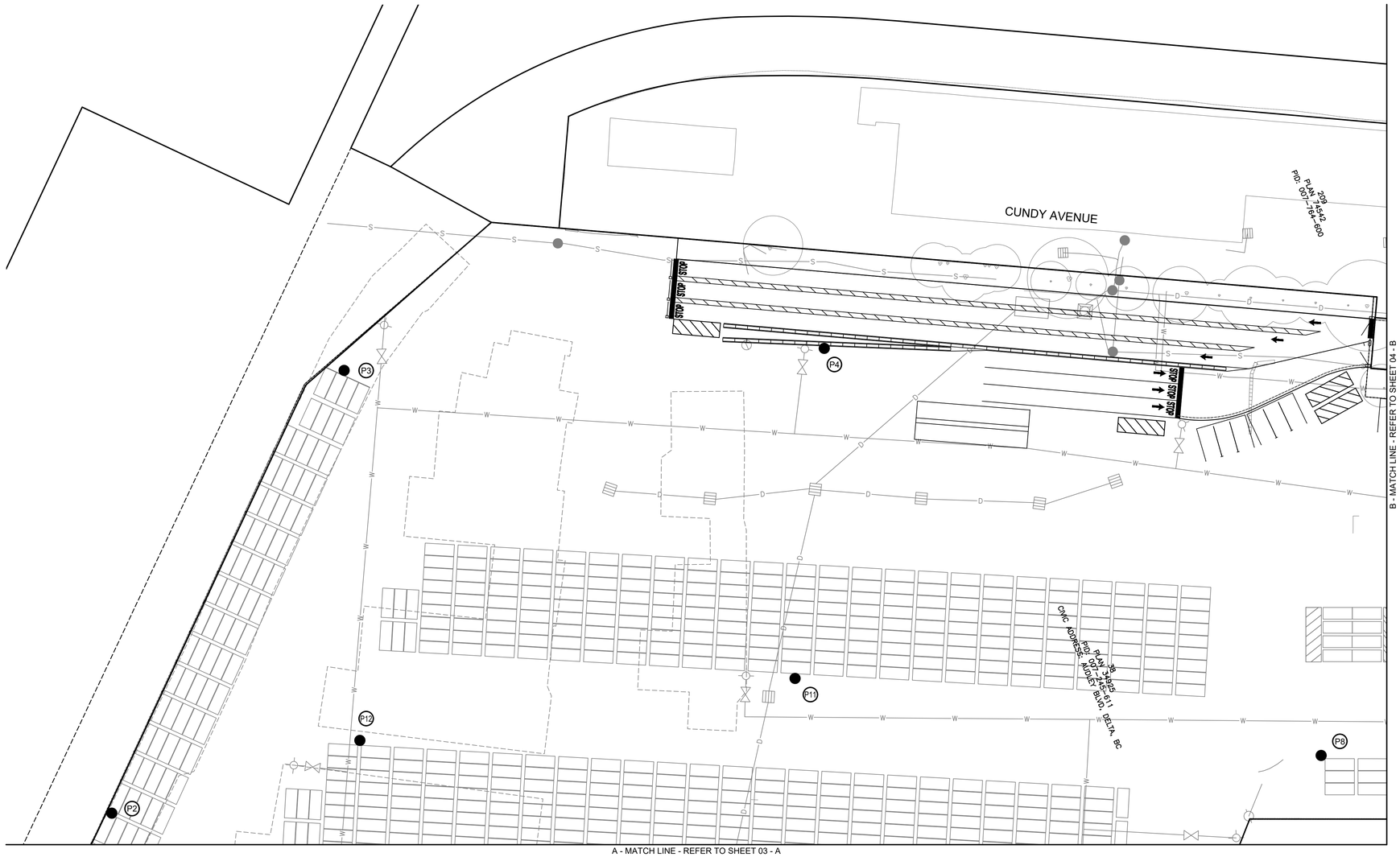
Mott MacDonald
550 Burrard Street, Suite 1888, Vancouver, BC V6C2B5 TEL: 604 681 4400

TDK METRO TERMINALS EXPANSION
KEY PLAN, LEGEND, & NOTES
480 AUDLEY BLVD #10
DELTA, B.C.

PROJECT No.	SHEET No.	REVISION
7737-22-01 of 04	1 of 4	.

CANCEL PRINTS BEARING PREVIOUS LETTER

DMD (2019)



SITE PLAN

0 1:500 25

12.5kV

277/480V

120/240V

PERMIT TO PRACTICE
NUMBER: 1000771
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA

NOT FOR CONSTRUCTION
2023-01-27

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DESIGNED	MARTIN STERLING
DRAWN	ED KITTSON
CHECKED	DONATO SPEIDEL
E.O.R.	MARTIN STERLING
DATE	JANUARY 18, 2023

SCALE: 1:500

SEAL

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.	2023-01-27	EK	MGDS	PRELIMINARY LIGHTING LAYOUT - ISSUE FOR PERMIT

Mott MacDonald
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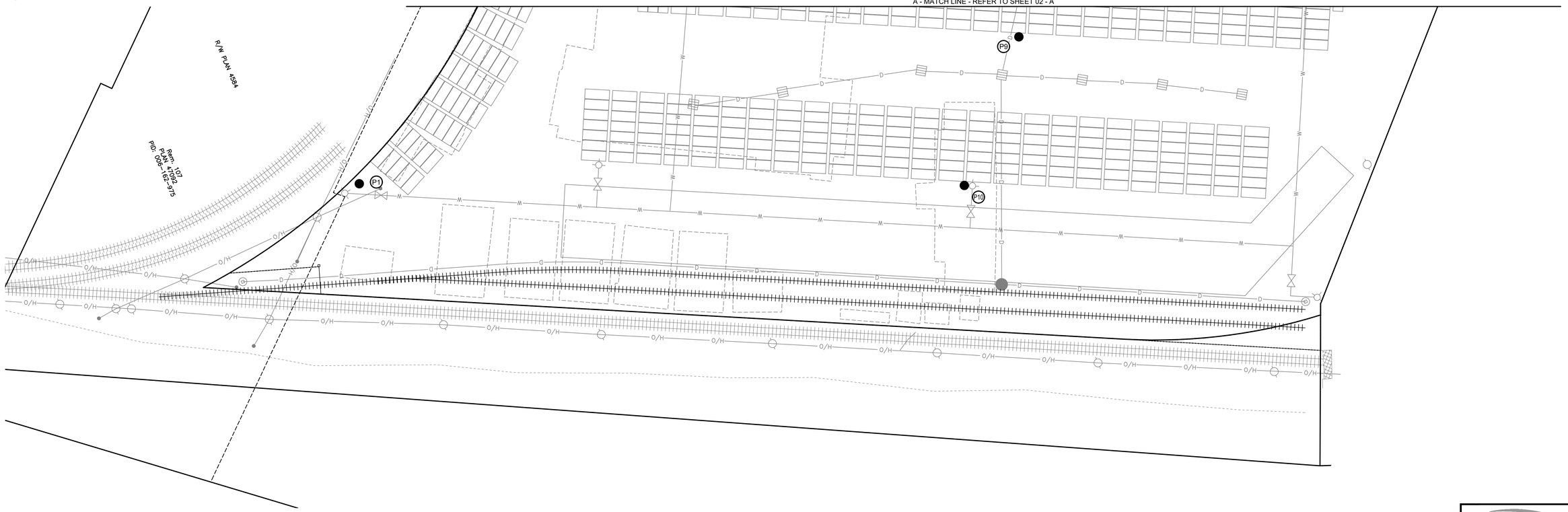
TDK METRO TERMINALS EXPANSION
SITE PLAN
480 AUDLEY BLVD #10
DELTA, B.C.

PROJECT No.	SHEET No.	REVISION
7737-22-02 of 04	2 of 4	.

CANCEL PRINTS BEARING PREVIOUS LETTER

DMD (2010)

A - MATCH LINE - REFER TO SHEET 02 - A



SITE PLAN
0 1:500 25

12.5kV

277/480V

120/240V

PERMIT TO PRACTICE
NUMBER: 1000771
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA

NOT FOR CONSTRUCTION
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DRAWN	ED KITTSON
CHECKED	DONATO SPEIDEL
E.O.R.	MARTIN STERLING
DATE	JANUARY 18, 2023

SCALE: 1:500

SEAL

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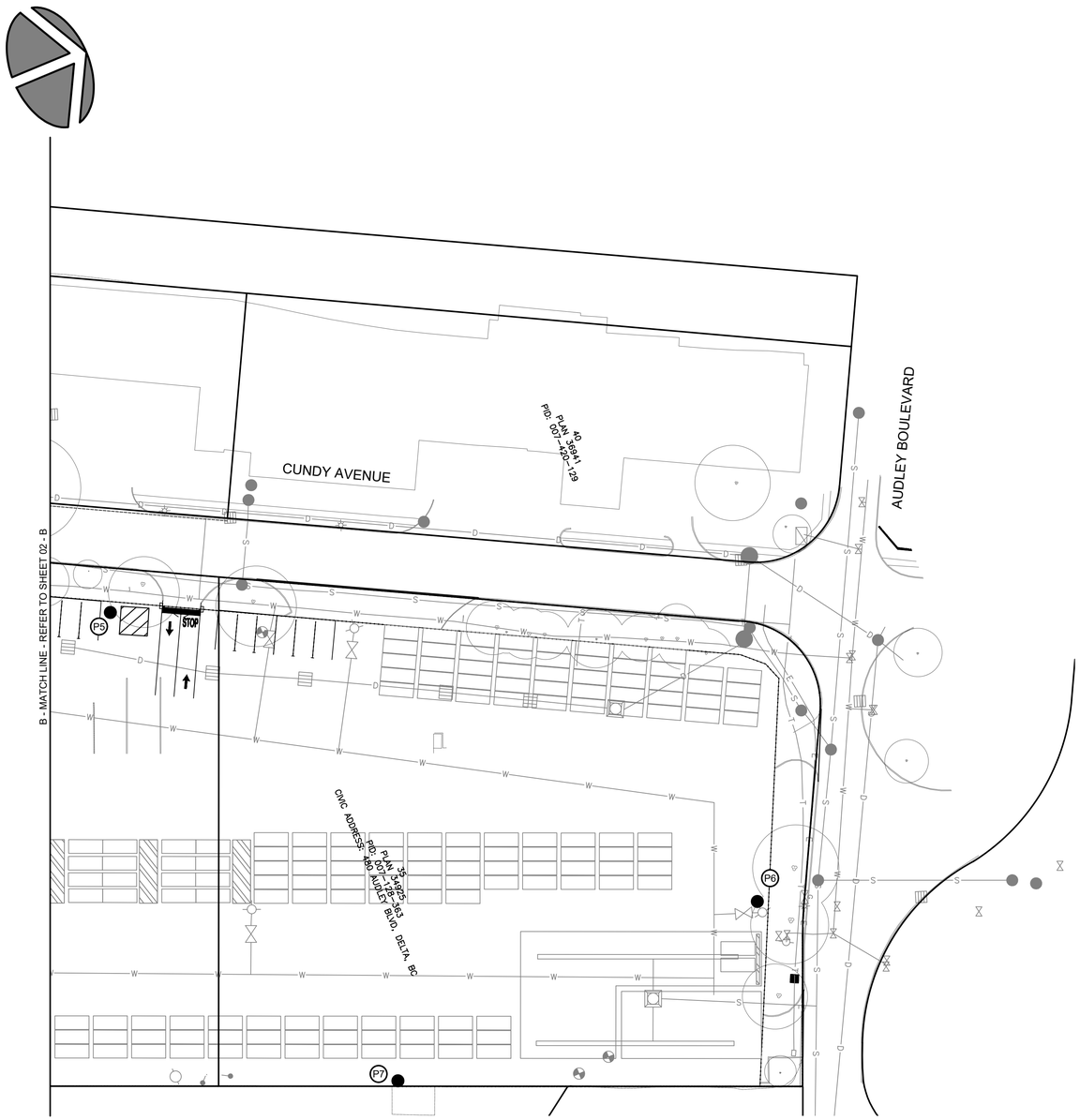
TDK METRO TERMINALS EXPANSION
SITE PLAN
480 AUDLEY BLVD #10
DELTA, B.C.

PROJECT No.	SHEET No.	REVISION
7737-22-03 of 04	3 of 4	.

CANCEL PRINTS BEARING PREVIOUS LETTER

DMD (2019)



SITE PLAN

0 1:500 25

12.5kV

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ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA

NOT FOR CONSTRUCTION
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SCALE: 1:500

SEAL

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TDK METRO TERMINALS EXPANSION
SITE PLAN
480 AUDLEY BLVD #10
DELTA, B.C.

PROJECT No.	SHEET No.	REVISION
7737-22-04 of 04	4 of 4	.

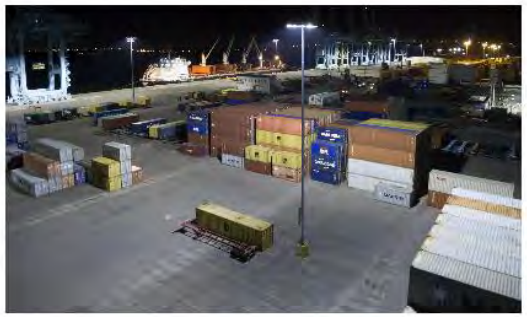
CANCEL PRINTS BEARING PREVIOUS LETTER

DMD (2019)

TDK Metro Container Terminal

Delta,BC

We Make It Happen®



Lighting System

Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Avg Load	Max Load	Circuit
P1-P3, P7, P11	30.5	30.5	3	TLC-LED-900	2.40 kW	2.67 kW	A
P4	30.5	30.5	7	TLC-LED-900	5.61 kW	6.23 kW	A
P5, P8	30.5	30.5	4	TLC-LED-900	3.20 kW	3.56 kW	A
P6	30.5	30.5	2	TLC-LED-900	1.60 kW	1.78 kW	A
P9, P12	30.5	30.5	5	TLC-LED-900	4.01 kW	4.45 kW	A
P10	30.5	30.5	6	TLC-LED-900	4.81 kW	5.34 kW	A
12			***48***		***38.45 kW***	***42.72 kW***	

Circuit Summary

Circuit	Description	Avg Load	Max Load	Fixture Qty
A	Container Terminal	38.45 kW	42.72 kW	48

Fixture Type Summary

Type	Source	Avg Wattage	Max Wattage	Constant Lumens	Application	Quantity
TLC-LED-900	LED 5700K - 75 CRI	801W	890W	76,160	100K	48

Single Luminaire Amperage Draw Chart

Driver (.90 min power factor)	Max Line Amperage Per Luminaire						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9	2.3

Light Level Summary

Calculation Grid Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
45 Meter Spill Grid	Horizontal Illuminance	0.06	0	0.61	0.00		A	48
45 Meter Spill Grid	Max Candela (by Fixture)	1589	0	4980	0.00		A	48
45 Meter Spill Grid	Max Vert Illuminance (by Light Bank)	0.18	0	1.31	0.00		A	48
Container W Blockage	Horizontal	42.2	3.3	117	35.25	12.8	A	48
Container W/O Blockage	Horizontal	54.6	14.1	117	8.31	3.86	A	48

musco Lighting

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EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
5	P1-P3, P7 P11	30.5m	-	30.5m	TLC-LED-900	3	3	0
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*	7	0
1	P5	30.5m	-	30.5m	TLC-LED-900	4	4	0
1	P6	30.5m	-	30.5m	TLC-LED-900	2	2	0
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*	4	0
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*	5	0
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*	6	0
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*	5	0
12	TOTALS					48	48	0

* This structure utilizes a back-to-back mounting configuration

SCALE 1: 2250

0 23m 45m

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: A.Hibler · File #223886B · 11-Jan-23

TDK Metro Container Terminal

Delta,BC

GRID SUMMARY

Name:	**Container W/O Blockage**
Size:	0.0m x 0.0m
Spacing:	10.0m x 10.0m
Height:	0.0m above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL LUX

	Entire Grid
Scan Average:	**54.56**
Maximum:	117.35
Minimum:	14.12
Avg / Min:	3.86
Max / Min:	**8.31**
UG (adjacent pts):	3.04
CU:	0.93
No. of Points:	596

LUMINAIRE INFORMATION

Applied Circuits:	A
Design Usage Hours:	100,000
No. of Luminaires:	**48**
Avg Load:	38.45 kW
Max Load:	42.72 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

musco Lighting
We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
5	P1-P3, P7 P11	30.5m	-	30.5m	TLC-LED-900	3	3	0
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*	7	0
1	P5	30.5m	-	30.5m	TLC-LED-900	4	4	0
1	P6	30.5m	-	30.5m	TLC-LED-900	2	2	0
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*	4	0
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*	5	0
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*	6	0
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*	5	0
12	TOTALS					48	48	0

* This structure utilizes a back-to-back mounting configuration

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0 23m 45m

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: A.Hibler · File #223886B · 11-Jan-23

TDK Metro Container Terminal

Delta,BC

GRID SUMMARY

Name:	**Container W Blockage**
Size:	0.0m x 0.0m
Spacing:	10.0m x 10.0m
Height:	0.0m above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL LUX

	Entire Grid
Scan Average:	**42.25**
Maximum:	116.31
Minimum:	3.30
Avg / Min:	12.80
Max / Min:	**35.25**
UG (adjacent pts):	23.84
CU:	0.58
No. of Points:	478

LUMINAIRE INFORMATION

Applied Circuits:	A
Design Usage Hours:	100,000
No. of Luminaires:	**48**
Avg Load:	38.45 kW
Max Load:	42.72 kW

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5	P1-P3, P7 P11	30.5m	-	30.5m	TLC-LED-900	3	3	0
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*	7	0
1	P5	30.5m	-	30.5m	TLC-LED-900	4	4	0
1	P6	30.5m	-	30.5m	TLC-LED-900	2	2	0
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*	4	0
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*	5	0
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*	6	0
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*	5	0
12	TOTALS					48	48	0

* This structure utilizes a back-to-back mounting configuration

SCALE 1: 3000

0 30m 60m

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

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TDK Metro Container Terminal

Delta,BC

GRID SUMMARY

Name:	**45 Meter Spill Grid**
Spacing:	10.0m
Height:	1.5m above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

	Entire Grid
Scan Average:	1588.7081
Maximum:	4979.7612
Minimum:	0.0000
No. of Points:	171

LUMINAIRE INFORMATION

Applied Circuits:	A
Design Usage Hours:	100,000
No. of Luminaires:	**48**
Avg Load:	38.45 kW
Max Load:	42.72 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen.

TDK Metro Container Terminal

Delta,BC

EQUIPMENT LAYOUT

INCLUDES:

· Container Terminal

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

	Pole			Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
5	P1-P3, P7 P11	30.5m	-	30.5m	TLC-LED-900	3
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*
1	P5	30.5m	-	30.5m	TLC-LED-900	4
1	P6	30.5m	-	30.5m	TLC-LED-900	2
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*
12	TOTALS					48

* This structure utilizes a back-to-back mounting configuration

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Driver (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9	2.3

SCALE 1: 3000

0 30m 60m

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: A.Hibler · File #223886B · 11-Jan-23

AS 140 / LINE B

AS 320

AS 350

AS 420

PROPOSED STORM UTILITIES

PROPOSED MOBILE AGRI HANDLING AREA

27.058

4.572

TRACK 1 - CAPACITY FOR
2x 5 ARTICULATED WELL CARS
OR
9x 60 FT GRAIN RAILCARS

R249.637
(7 DEGS)

CN No.8 RH TURNOUT

BC

EC

BC

EC

R3492.762
(0.5 DEGS)

5.400

AS 280

CN No.8 LH TURNOUT

PROPOSED GATE

PROPOSED DERAIL
LOCATION

TRACK 2 - CAPACITY FOR
1x 5 ARTICULATED WELL CARS
AND 1 x 3 ARTICULATED WELL CARS
OR
9x 60 FT GRAIN RAILCARS

ADDITIONAL LEASE AREA TO
BE DISCUSSED WITH SRY

NOTES:

1. FOR OVERALL SITE, REFER TO DRAWING 21-098-GA-004.
2. CONCEPTUAL DESIGN ONLY, NOT FOR CONSTRUCTION.
3. PROPOSED TRACK LAYOUT REQUIRES CONTAINER HANDLER THAT CAN REACH OVER TWO STACKS.
4. WESTERN CLEARANCE POINTS BASED ON 14 FEET TRACK CENTERS
5. EASTERN CLEARANCE POINTS (FOR BUMPING POSTS) BASED ON CN STANDARD

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- PROPOSED FENCELINE
- PARCEL LINES
- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- CLEAR POINT
- BUMPING POST
- POINT OF SWITCH
- CONTAINER STACKING AREA

5 m 0 1:500 25 m

PLAN
SCALE 1:500

FOR PERMITTING

NOT FOR CONSTRUCTION

Ref. No.	REFERENCE

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PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-RW-0001

No.	Date	REVISION	Dr'n	Ch'd
A	2023/01/31	ISSUED FOR PERMIT	CA	AW

PORT of vancouver
Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

DESIGN BY	C. A.
DRAWN BY	C. A.
APPROVED	A. W.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY
TDK METRO TERMINALS EXPANSION

RAIL PLAN

SIZE	DWG.	SHEET	REV.
D	21-098-RL-001	1 of 1	A