

Sheet List Table

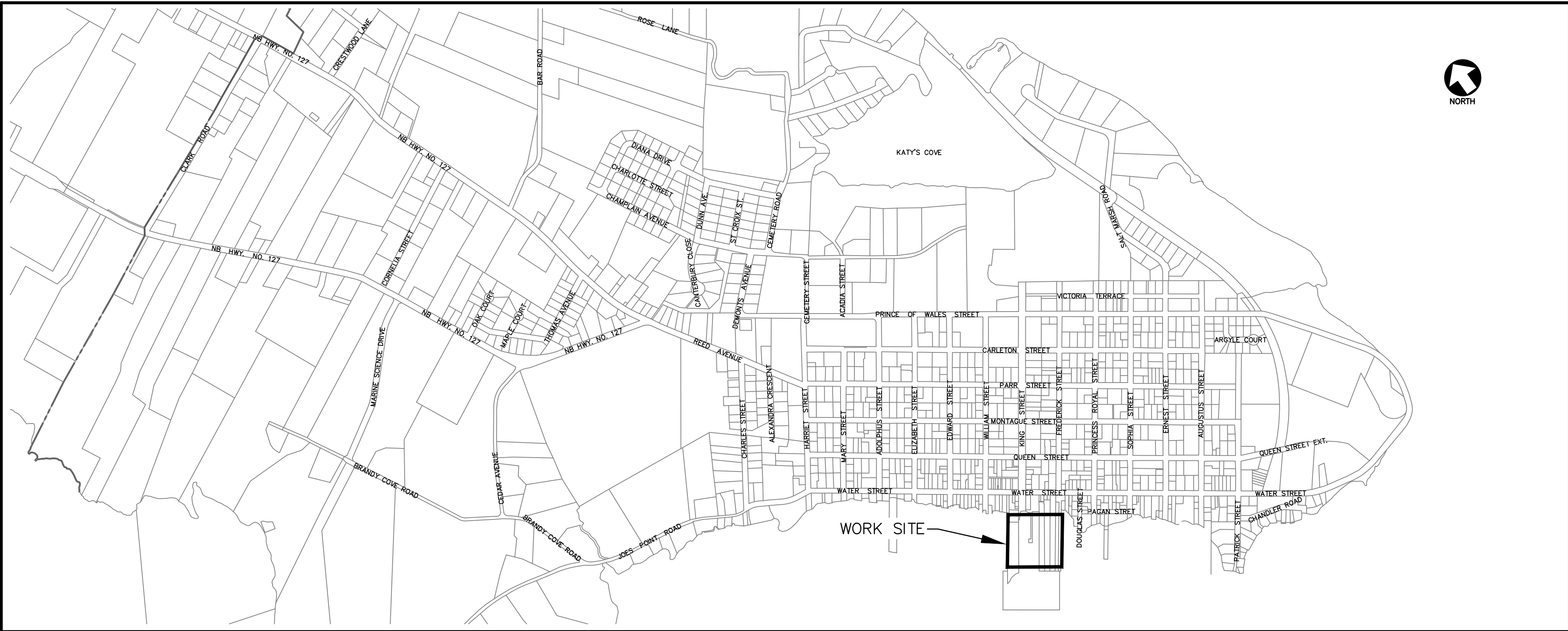
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000	COVER SHEET
STRUCTURAL	
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M02	Borehole Logs
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TOWN OF SAINT ANDREWS

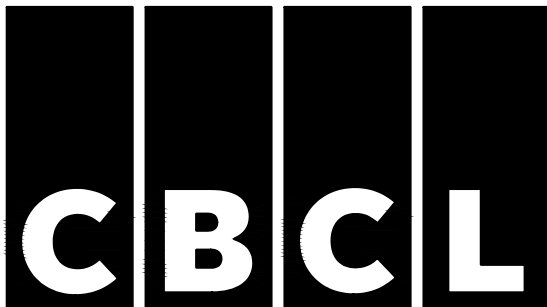


Town of Saint Andrews
New Brunswick, Canada

TSA WHARF APPROACH
REPLACEMENT



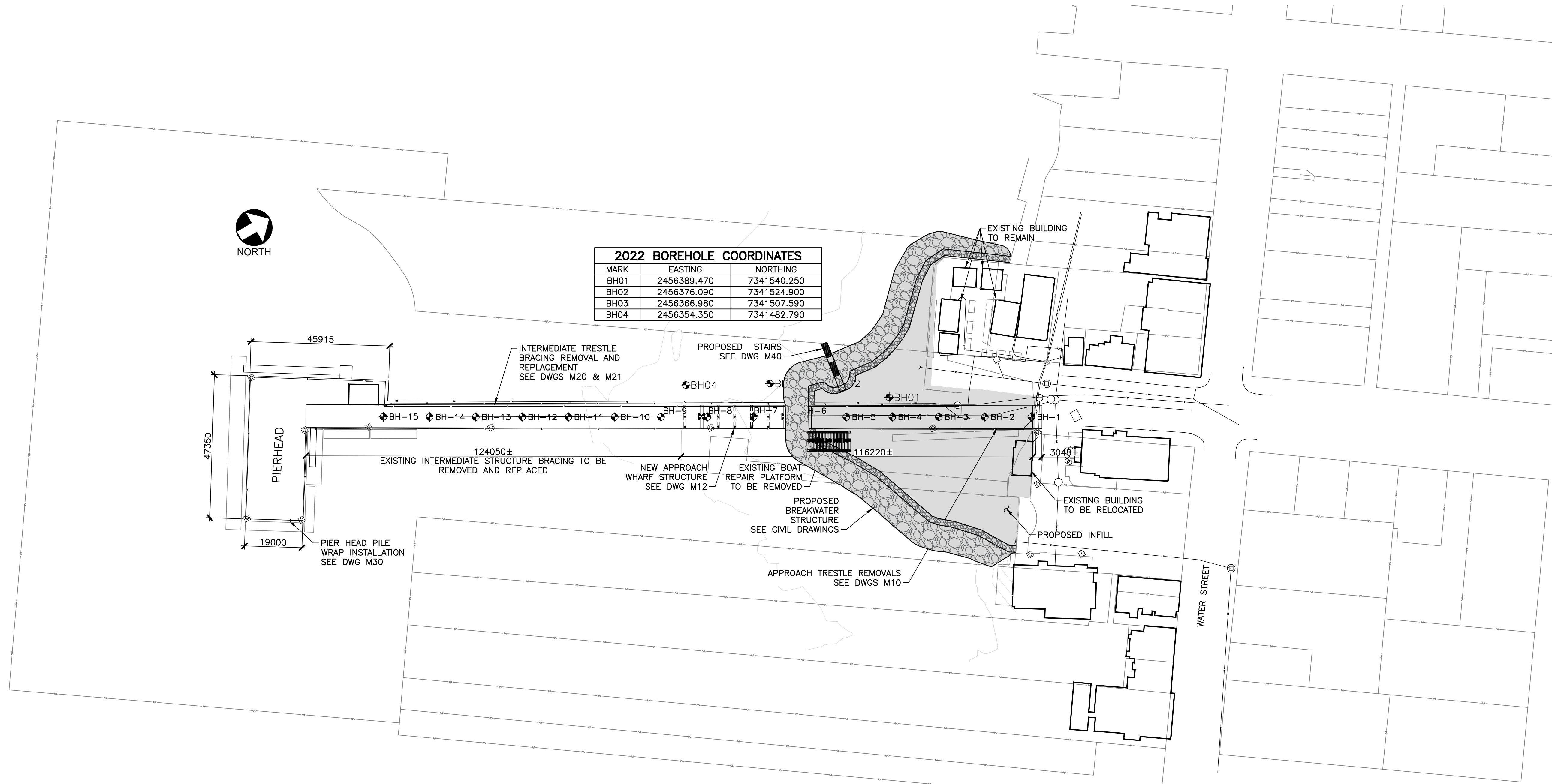
KEY PLAN
1:10,000



Client Contract No. TSA 2024-03

ISSUED FOR
TENDER

AUGUST 14, 2025



SITE PLAN WHARF RECONSTRUCTION AND INFILL AREA
1:750

GENERAL NOTES:

- REFER TO PROJECT SPECIFICATION DOCUMENT FOR OTHER APPLICABLE CODES, STANDARDS, MATERIALS, AND EXECUTION REQUIREMENTS.
- ALL WORK AND MATERIALS TO CONFORM TO THE REQUIREMENTS OF THE NATIONAL BUILDING CODE OF CANADA, LATEST EDITION.
- DETAILS, DIMENSIONS, AND ELEVATIONS OF THE EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON INFORMATION OBTAINED FROM HISTORICAL DATA PROVIDED BY THE CLIENT AND SITE SURVEYS. THE CONTRACTOR MUST FIELD VERIFY ALL SUCH DETAILS, DIMENSIONS, AND ELEVATIONS PRIOR TO FABRICATION OR ERECTION OF WORK AND REPORT DISCREPANCIES TO THE ENGINEER.
- NO ALTERATIONS TO STRUCTURAL DETAILS TO BE MADE WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. CONSTRUCTION ERRORS ARE TO BE DOCUMENTED AND REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH SUBSEQUENT WORK.
- PERIODIC AND DISCRETIONARY SITE OBSERVATIONS ARE MADE AT THE JOB SITE BY THE ENGINEER AND ARE NECESSARILY LIMITED IN SCOPE TO OBSERVATION OF WORK IN PROGRESS AT THE TIME OF THE SITE OBSERVATION. THESE SITE OBSERVATIONS DO NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO PROVIDE CONTINUOUS ON-SITE SUPERVISION OF ALL STRUCTURAL WORK TO ENSURE THAT BOTH THE INTENT AND DETAILS OF THE DRAWINGS AND SPECIFICATIONS ARE BEING FOLLOWED.
- THE HORIZONTAL DATUM UTILIZED IN NAD83 (CSRS) NEW BRUNSWICK DOUBLE STEREOGRAPHIC PROJECTION.
- ALL ELEVATIONS ARE IN GEODETIC METRES AND REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1928 (CGVD28).
- CONTRACTOR TO BE RESPONSIBLE FOR STABILITY OF ALL STRUCTURE DURING REPAIRS AND CONSTRUCTION OF NEW STRUCTURE.

REINFORCED CONCRETE NOTES:

- ALL CONCRETE, CONCRETE MATERIALS, FORMS, WORKING PROCEDURES AND THE LIKE TO CONFORM TO CSA A23.1, LATEST EDITION, UNLESS NOTED OTHERWISE.
- MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AND CLASS OF EXPOSURE SHALL BE AS FOLLOWS:
 - ROCK SOCKETS..... 40 MPa AT 28 DAYS/C-3 WITH S-3 EXPOSURE REQUIREMENTS.
 - CONCRETE DECK, PRECAST PANEL, PILE CAP AND RETAINING WALLS..... 35 MPa AT 56 DAYS/C-1 WITH S-3 EXPOSURE REQUIREMENTS.
- CONCRETE PROTECTIVE COVER TO REINFORCING STEEL TO BE 75 mm UNLESS NOTED OTHERWISE ON DRAWINGS.
- ALL REINFORCING BARS MUST BE ACCURATELY SUPPORTED ON PLASTIC COATED STEEL HIGH CHAIRS TO MAINTAIN EXACT CONCRETE COVER.
- CONSTRUCTION JOINTS TO BE LOCATED AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE. LOCATIONS TO BE AS SHOWN ON THE DRAWINGS OR CONTRACTOR IS TO SUBMIT PROPOSED CONSTRUCTION JOINTS FOR THE ENGINEERS APPROVAL. CONSTRUCTION JOINTS TO BE KEYED AND REINFORCEMENT TO NOT BE INTERRUPTING.
- ALL REINFORCING STEEL TO HAVE A MINIMUM YIELD POINT STRENGTH OF 400MPa (WELDABLE) AND TO CONFORM TO CSA G30.18.
- REINFORCING STEEL TO BE PROVIDED WITH A 'CLASS B' TENSION LAP TO CSA A23.3, LATEST EDITION AT ALL SPLICE LOCATIONS, UNLESS NOTED OTHERWISE.
- REINFORCING STEEL IS TO BE CONTINUOUS AT ALL CORNERS, UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL NOTES:

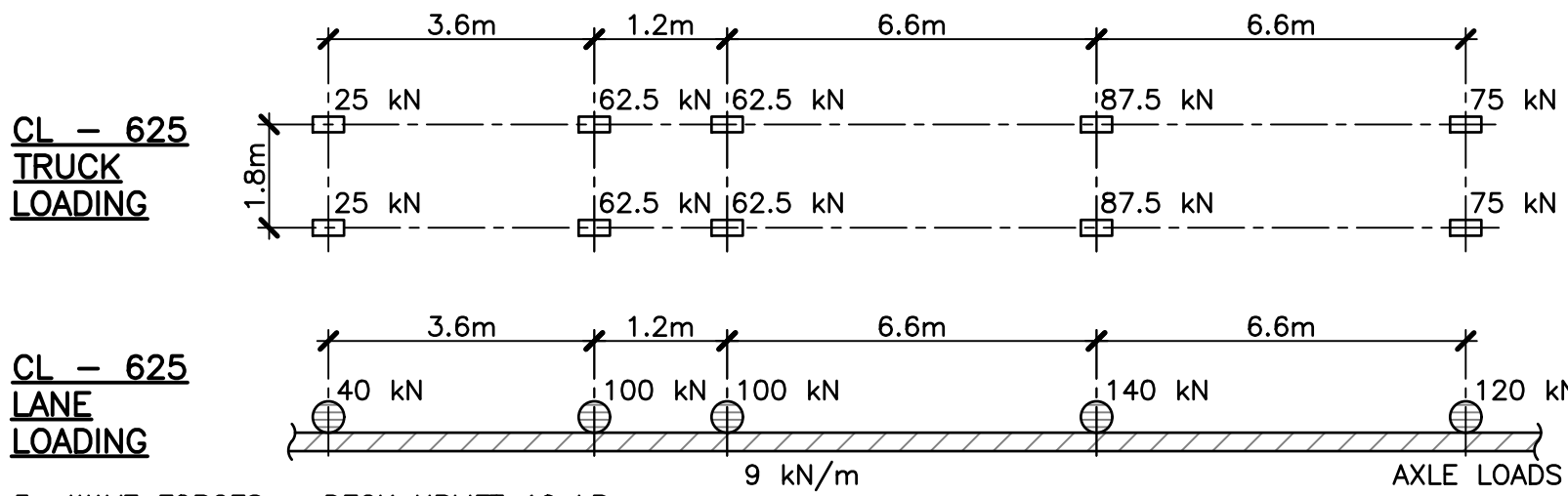
- STRUCTURAL STEEL SHALL CONFORM TO FOLLOWING CSA STANDARDS AND ASTM STANDARDS:
 - PIPE PILE ASTM A572 GRADE 50 (345 MPa YIELD STRENGTH) or EQUIVALENT.
 - ANGLES, CHANNELS AND MISCELLANEOUS PLATES..... 300 W OR EQUIVALENT.
- ALL WELDING SHALL BE IN ACCORDANCE WITH CSA STANDARD W59, LATEST EDITION.
- FABRICATE, DELIVER TO SITE AND ERECT STEELWORK IN ACCORDANCE WITH CAN/CSA-S16, LATEST EDITION.

TIMBER NOTES:

- TIMBER MATERIALS:
 - TIMBER BRACING: GRADED AND STAMPED TO NATIONAL LUMBER GRADING AUTHORITY (NLGA) NO.1 STRUCTURAL. EASTERN HEMLOCK, WESTERN HELMLOCK, OR DOUGLAS FIR SPECIES ONLY WILL BE USED.
 - ROUND WOOD PILES: DOUGLAS FIR, OR SOUTHERN YELLOW PINE.
- TIMBER TO BE TREATED TO CAN/CSA-080 SERIES-15 FOR MARINE CONSTRUCTION COASTAL WATERS, UNLESS NOTED OTHERWISE.
- GALVANIZE ALL HARDWARE TO ASTM A123, MINIMUM ZINC COATING OF 705g/m2, UNLESS NOTED OTHERWISE.
- GALVANIZED ANCHORS SHALL NOT BE IN DIRECT CONTACT WITH REBAR.

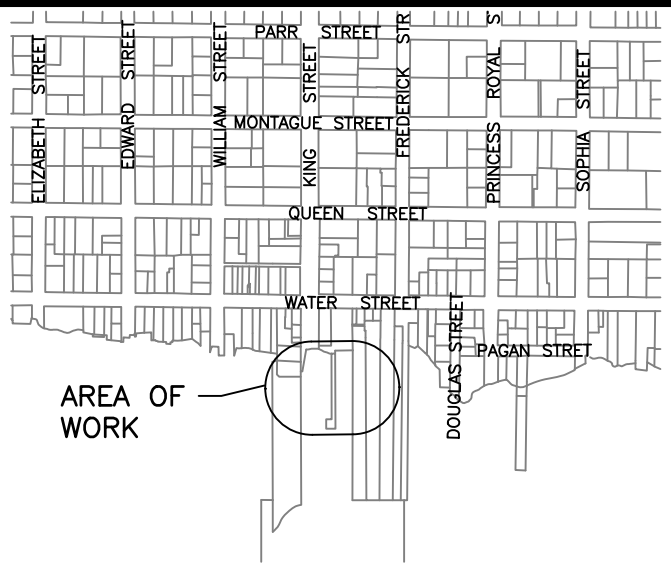
DESIGN LOADING:

- LOADING AND GENERAL DESIGN TO UFC 4-152- 01 (2017) (UNIFIED FACILITIES CRITERIA - DESIGN: PIERS AND WHARVES) AND CSA S6-19, NBCC 2020.
- LIVE LOADS (NEW APPROACH STRUCTURE):
 - UNIFORMLY DISTRIBUTED LOAD..... 15 kPa.
 - CL-625 AS PER CSA S6-19



- WAVE FORCES - DECK UPLIFT 10 kPa.
- SEISMIC HAZARD ACCORDING TO NBCC 2020 FOR 2% PROBABILITY OF EXCEEDANCE IN 50 YEARS. SITE DESIGNATION FALLS IN SITE CLASS C.
- NEW STEEL PIPE SUPPORTED CONCRETE DECK STRUCTURE FALLS IN SEISMIC CATEGORY 3 AND OTHER BRIDGES ACCORDING TO CSA S6-19. SEISMIC DESIGN PERFORMED ACCORDING TO CSA S6-19 AND ASCE 61-14 FOR NEW STRUCTURE.
- INTERMEDIATE TRESTLE UNIFORM LIVE LOAD IS TO BE REDUCED FROM THE EXISTING 15kPa TO 10kPa.
- INTERMEDIATE TRESTLE TRUCK LOADING: MS 200 TRUCK LOADING.

Sa(0.2)	Sa(0.5)	Sa(1.0)	Sa(2.0)
1.13	0.634	0.306	0.124



KEY PLAN
1:10000

LEGEND:

- BH## - DENOTES 2022 BOREHOLE - SEE DRAWINGS M02 FOR BOREHOLE LOGS.
- BH-## - DENOTES 1995 BOREHOLE - SEE DRAWINGS M02 FOR BOREHOLE LOGS.

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG. 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

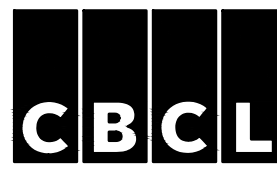
Revision or Issue

TOWN OF SAINT ANDREWS

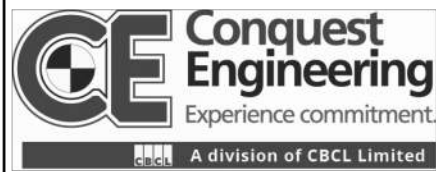
TSA WHARF APPROACH REPLACEMENT

STRUCTURAL

SITE PLAN AND BOREHOLE LOCATION PLAN



CBCL No 242835-00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
Designed MK	Drawn LL	Checked KM	Approved
Sheet No 1	of 19	Drawing No M01	

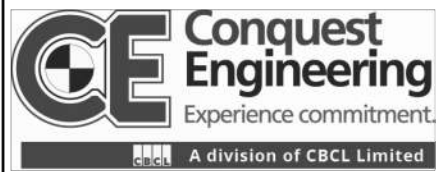


BOREHOLE RECORD

Project Name: Market Wharf Approach Trestle
Project Number: 222828.00
Client: Town of Saint Andrews
Location: Saint Andrews, NB
Water Level: Tidal

BH - 01
Date Drilled: February 25, 2022
Page: 1 of 1
Datum: Chart
Water Level Date: N.A

Depth (m)	Water Level (m)	Sample Type	Sample Number	N Value or RQD %	Recovery (mm) or %	Symbols	SOIL AND/OR ROCK DESCRIPTION	Elevation (m)	SPT N-Value (Blows/300mm)	Undrained Shear Strength (kPa)	Moisture Content / Atterberg Limits
0								5.0	20 40 60 80		
1		SS	1	SSR	200		Dense brown SAND with gravel - some cobbles shells	3.8			
2		HQ	2	17%	100%		Very severely fractured to sound red SANDSTONE				
3		HQ	3	58%	80%						
4		HQ	4	57%	100%						
5		HQ	5	50%	93%						
6		HQ	6	80%	100%						
7		HQ	7	88%	100%						
8											
9											
10							End of Borehole at 9.3 m	-4.3			

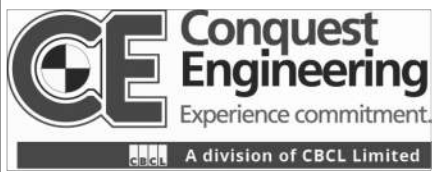


BOREHOLE RECORD

Project Name: Market Wharf Approach Trestle
Project Number: 222828.00
Client: Town of Saint Andrews
Location: Saint Andrews, NB
Water Level: Tidal

BH - 02
Date Drilled: February 25, 2022
Page: 1 of 1
Datum: Chart
Water Level Date: N.A

Depth (m)	Water Level (m)	Sample Type	Sample Number	N Value or RQD %	Recovery (mm) or %	Symbols	SOIL AND/OR ROCK DESCRIPTION	Elevation (m)	SPT N-Value (Blows/300mm)	Undrained Shear Strength (kPa)	Moisture Content / Atterberg Limits
0								4.0	20 40 60 80		
1		SS	1	21	375		Compact brown to black silty SAND with gravel - some shells	3.4			
2							End of Borehole at 0.6 m - SPLIT SPOON REFUSAL ON INFERRED BEDROCK				
3											
4											
5											
6											
7											
8											
9											
10											



BOREHOLE RECORD

Project Name: Market Wharf Approach Trestle
Project Number: 222828.00
Client: Town of Saint Andrews
Location: Saint Andrews, NB
Water Level: Tidal

BH - 03
Date Drilled: February 25, 2022
Page: 1 of 1
Datum: Chart
Water Level Date: N.A

Depth (m)	Water Level (m)	Sample Type	Sample Number	N Value or RQD %	Recovery (mm) or %	Symbols	SOIL AND/OR ROCK DESCRIPTION	Elevation (m)	SPT N-Value (Blows/300mm)	Undrained Shear Strength (kPa)	Moisture Content / Atterberg Limits
0								3.7	20 40 60 80		
1		SS	1	17	400		Compact brown to black silty SAND with gravel - some shells	3.1			
2							End of Borehole at 0.6 m - SPLIT SPOON REFUSAL ON INFERRED BEDROCK				
3											
4											
5											
6											
7											
8											
9											
10											

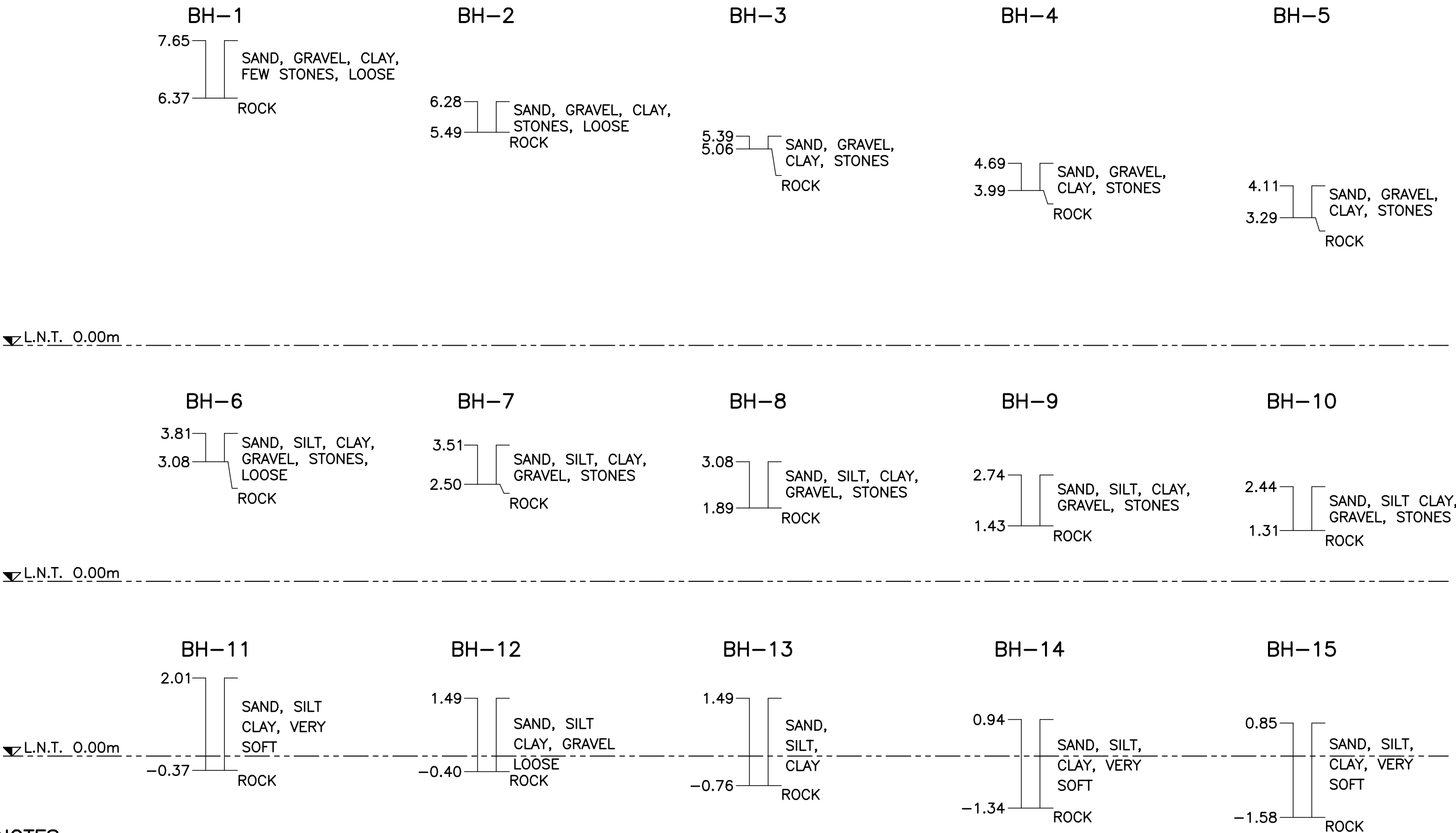


BOREHOLE RECORD

Project Name: Market Wharf Approach Trestle
Project Number: 222828.00
Client: Town of Saint Andrews
Location: Saint Andrews, NB
Water Level: Tidal

BH - 04
Date Drilled: February 25, 2022
Page: 1 of 1
Datum: Chart
Water Level Date: N.A

Depth (m)	Water Level (m)	Sample Type	Sample Number	N Value or RQD %	Recovery (mm) or %	Symbols	SOIL AND/OR ROCK DESCRIPTION	Elevation (m)	SPT N-Value (Blows/300mm)	Undrained Shear Strength (kPa)	Moisture Content / Atterberg Limits
0								3.2	20 40 60 80		
1		SS	1	7	300		Loose to compact brown to reddish brown SAND with gravel to silty SAND with gravel - some shells				
2		SS	2	11	400						
3		SS	3	SSR	25		Severely fractured red SANDSTONE	1.5			
4		HQ	4	47%	100%						
5		HQ	5	40%	100%						
6											
7											
8											
9											
10							End of Borehole at 4.7 m	-1.5			

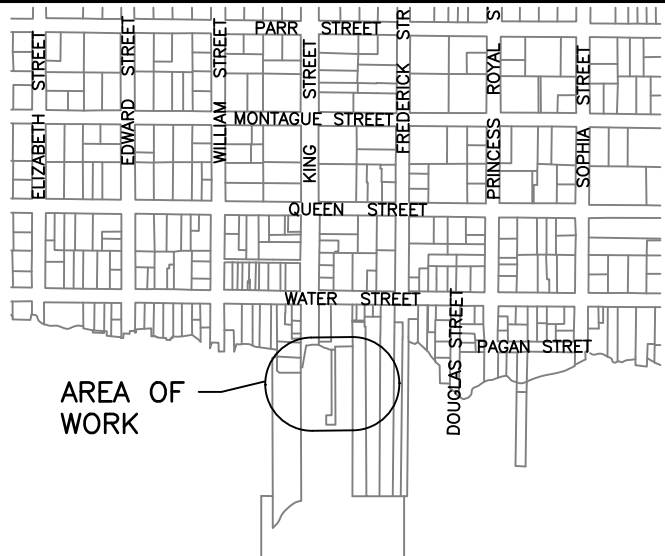


NOTES:

- BOREHOLES DONE BY PUBLIC WORKS OF CANADA IN MARCH, 1955.
- ANY INFORMATION PERTAINING TO SOILS AND ALL BOREHOLE DATA ARE FURNISHED BY THE ENGINEER AS A MATTER OF INFORMATION ONLY. BOREHOLE DATA IS NOT TO BE INTERPRETED AS DESCRIPTIVE OF CONDITIONS AT LOCATIONS OTHER THAN THOSE DESCRIBED BY THE BOREHOLES THEMSELVES.
- CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO START OF WORK.

1995 BOREHOLE LOGS

SCALE: 1:100



KEY PLAN

1:10000

0	ISSUED FOR TENDER	AUG 14/25 GKP
8	ISSUED FOR 100% REVIEW	MAY 07/25 GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24 GKP
No.	Description	Date By

Revision or Issue

TOWN OF SAINT ANDREWS

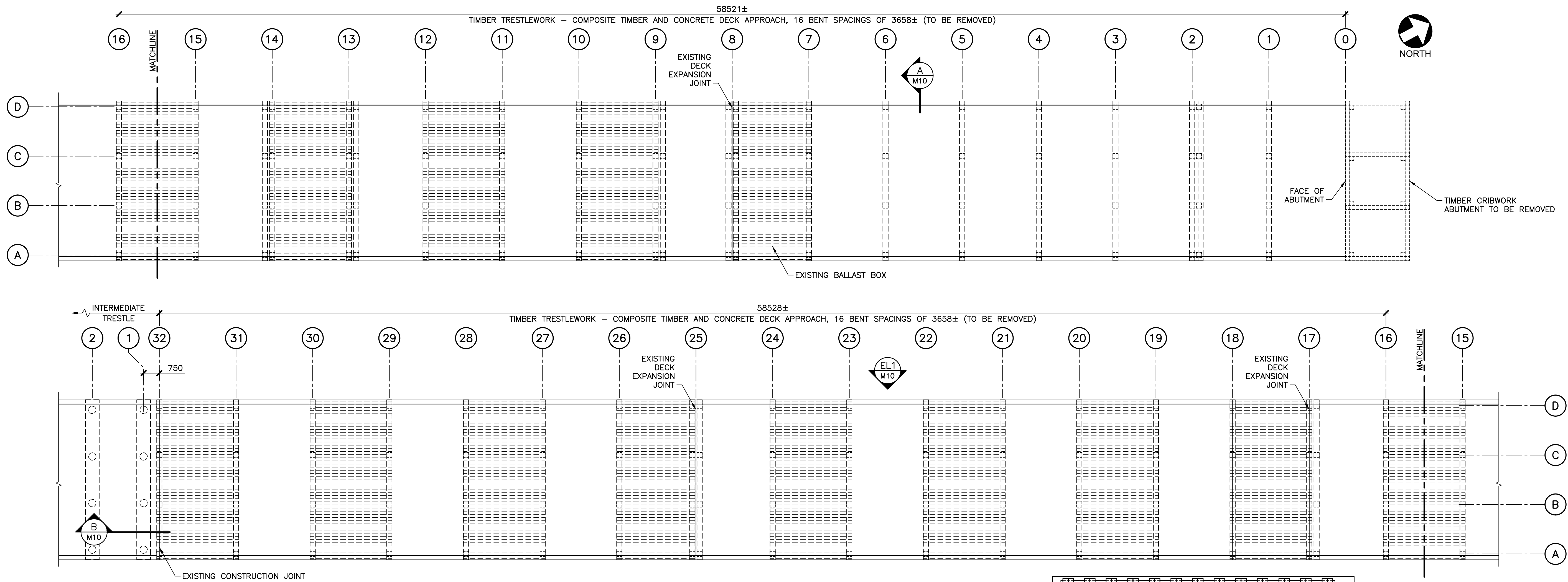
TSA WHARF APPROACH REPLACEMENT

STRUCTURAL

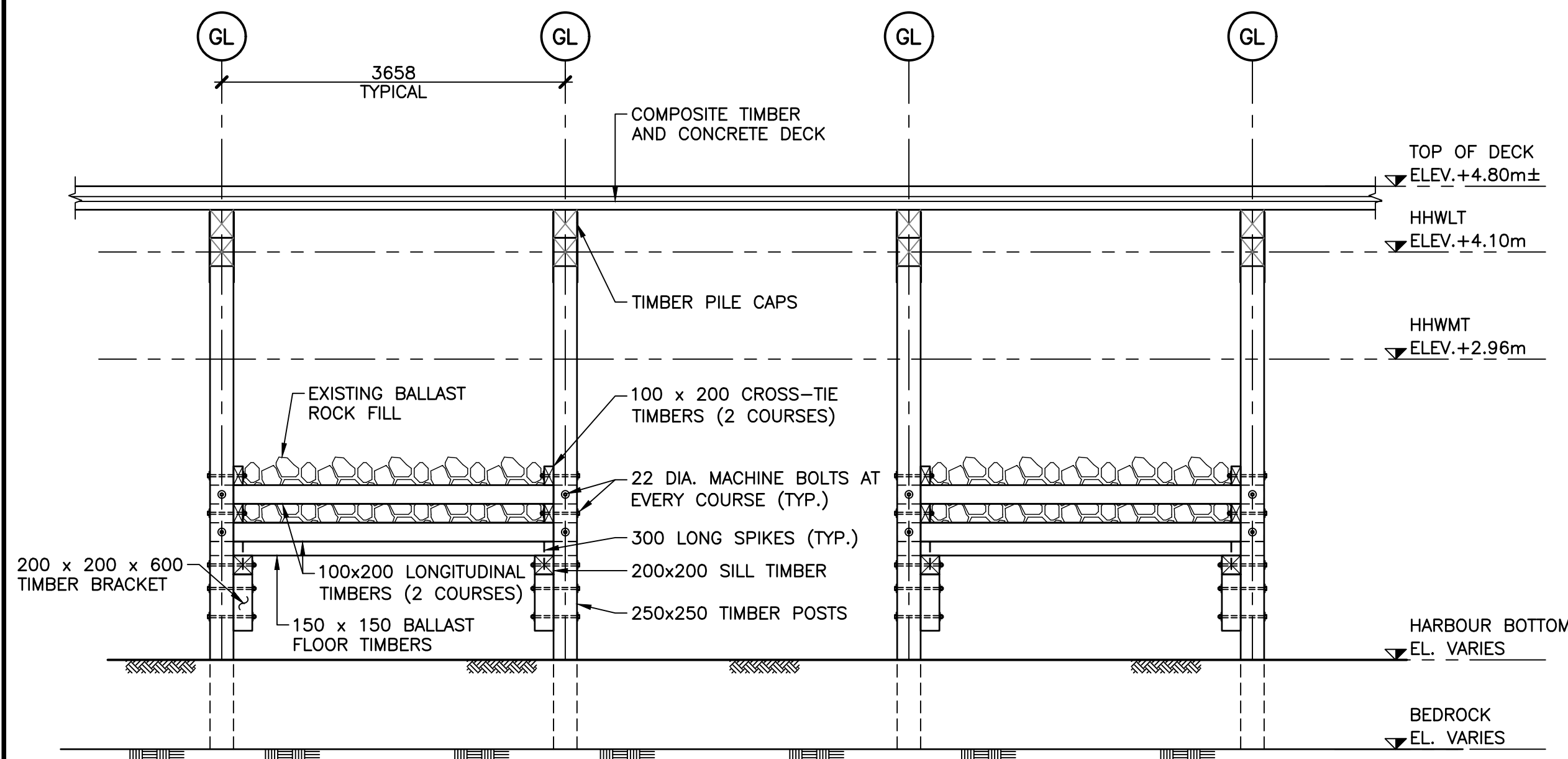
BOREHOLE LOGS



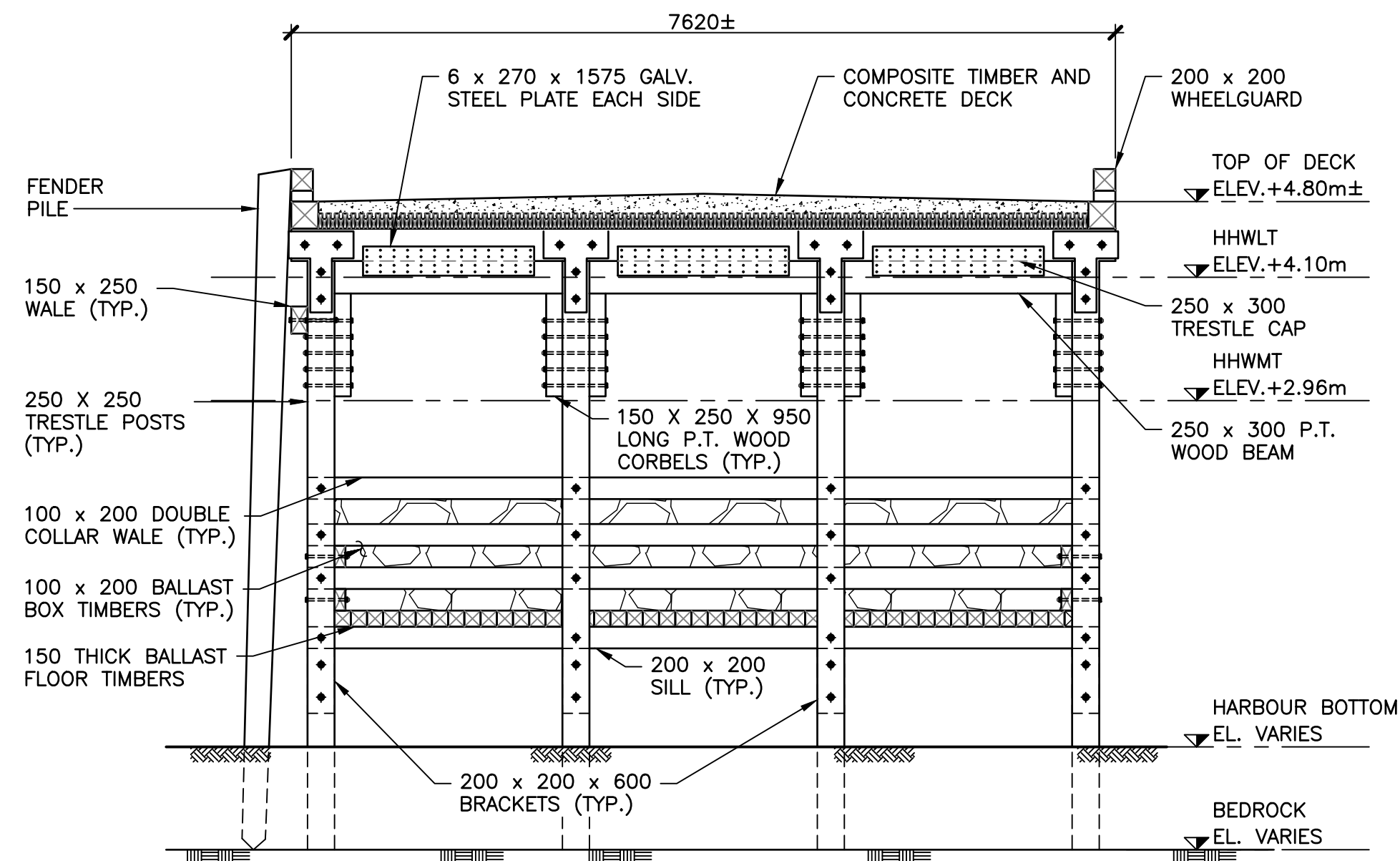
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Licensed Professional Engineer Province of New Brunswick	Designed MK	Drawn LL	
Checked KM	Approved ----		
Sheet No 2	of 19		
Drawing No M02			



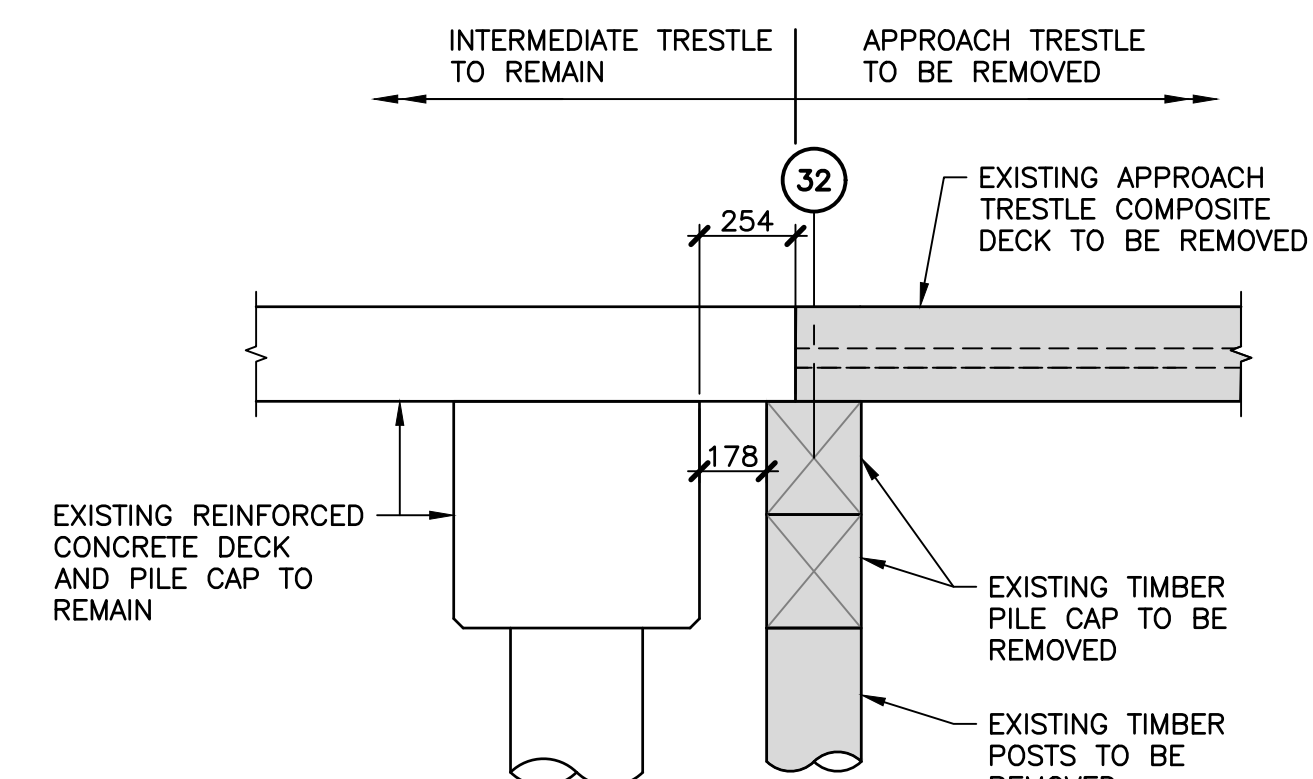
PLAN EXISTING APPROACH TRESTLE REMOVALS
1:100



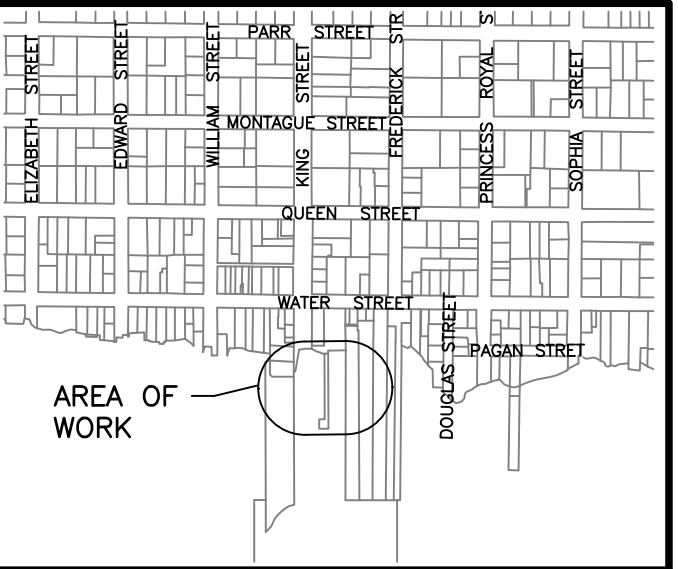
EL1 ELEVATION - REMOVAL TRESTLE
M10 1:50



A SECTION BENTS TO BE REMOVED
M10 1:50



B SECTION APPROACH TO INTERMEDIATE TRESTLE
M10 1:20



KEY PLAN

1:10000

NOTES:

- ORIGINAL AS-BUILT DRAWINGS OF THE APPROACH TRESTLE ARE PROVIDED IN THE APPENDIX OF THE SPECIFICATIONS.
- ALL EXISTING TIMBER PILES DESIGNATED FOR REMOVAL ARE TO BE COMPLETELY REMOVED FROM HARBOUR BOTTOM BY EXTRACTION. IF EXTRACTION IS NOT POSSIBLE, CUT PILE FLUSH WITH HARBOUR BOTTOM.

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

TOWN OF SAINT ANDREWS

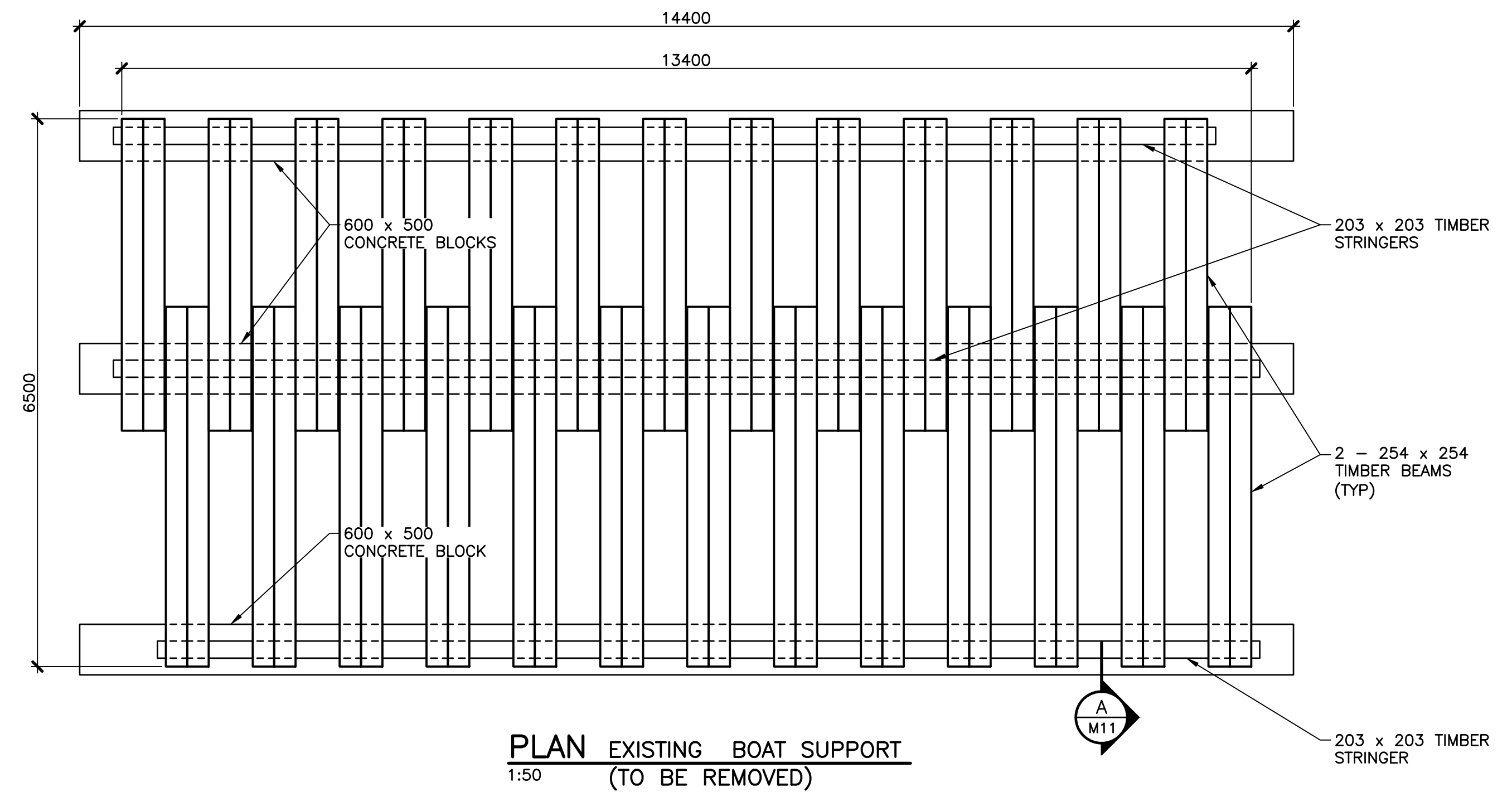
TSA WHARF APPROACH
REPLACEMENT

STRUCTURAL

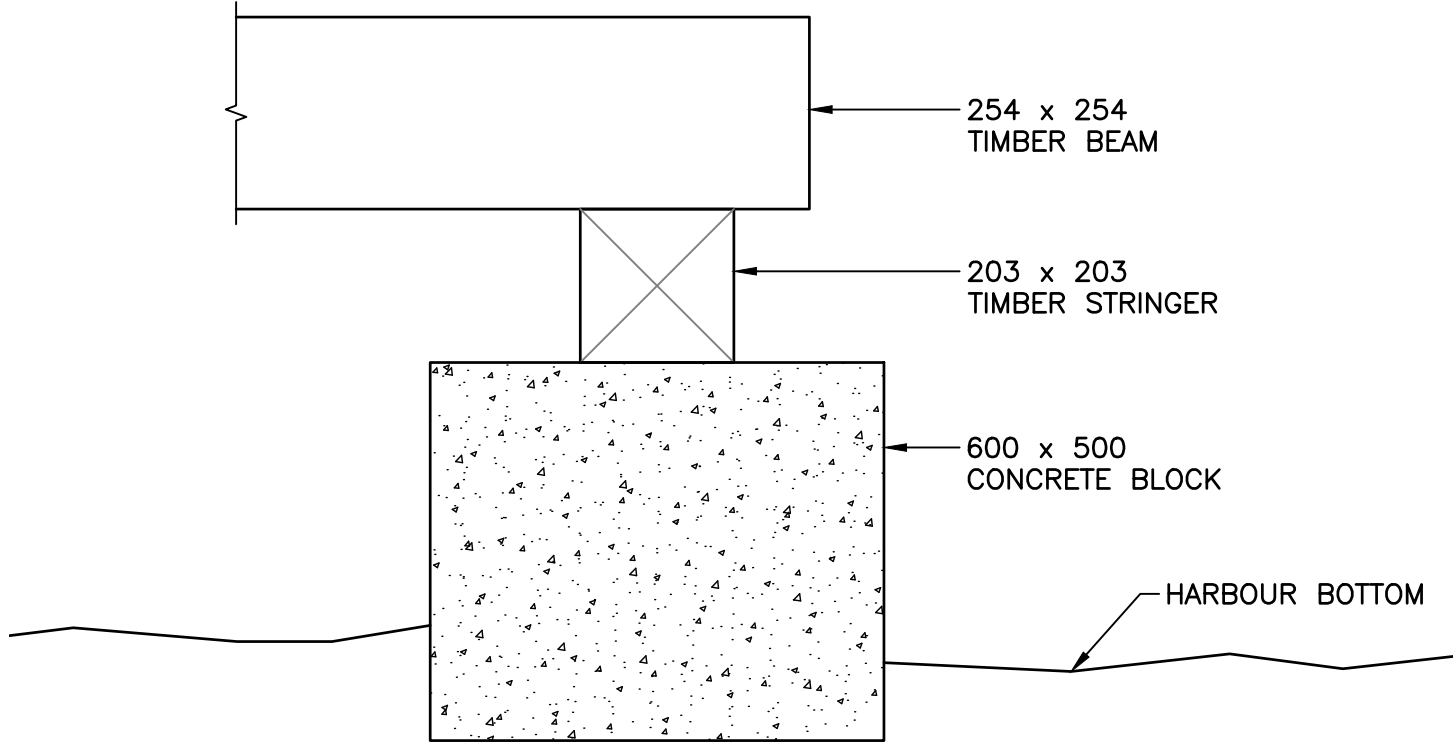
APPROACH TRESTLE -
EXISTING CONDITIONS
AND REMOVALS



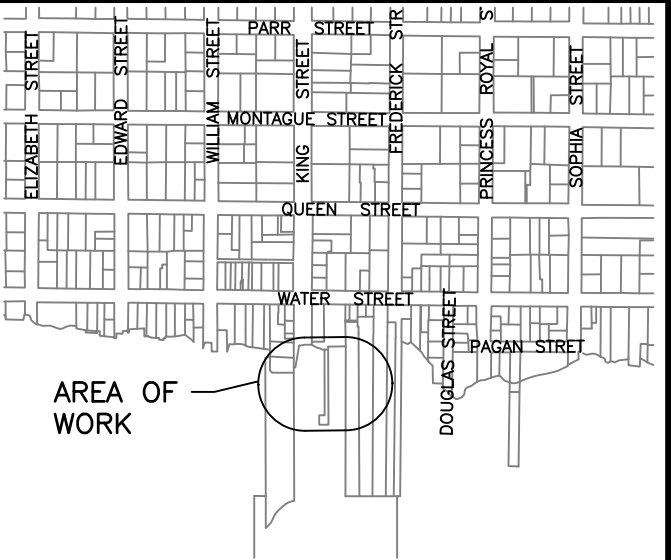
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LICENCED PROFESSIONAL ENGINEER Province of New Brunswick		Designed MK	Drawn LL
Checked KM		Approved	
Sheet No 3 of 19		Drawing No M10	
Date AUGUST 14, 2025		INGENIEUR TITULAIRE DE PERMIS Province du Nouveau-Brunswick	



PLAN EXISTING BOAT SUPPORT
1:50 (TO BE REMOVED)



A
M11
SECTION EXISTING BOAT SUPPORT
1:10 (TO BE REMOVED)



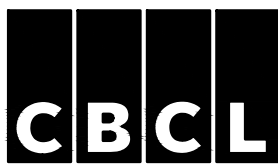
KEY PLAN
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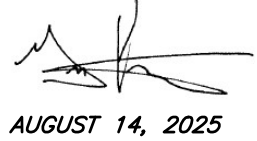
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B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP
No.	Description	Date	By

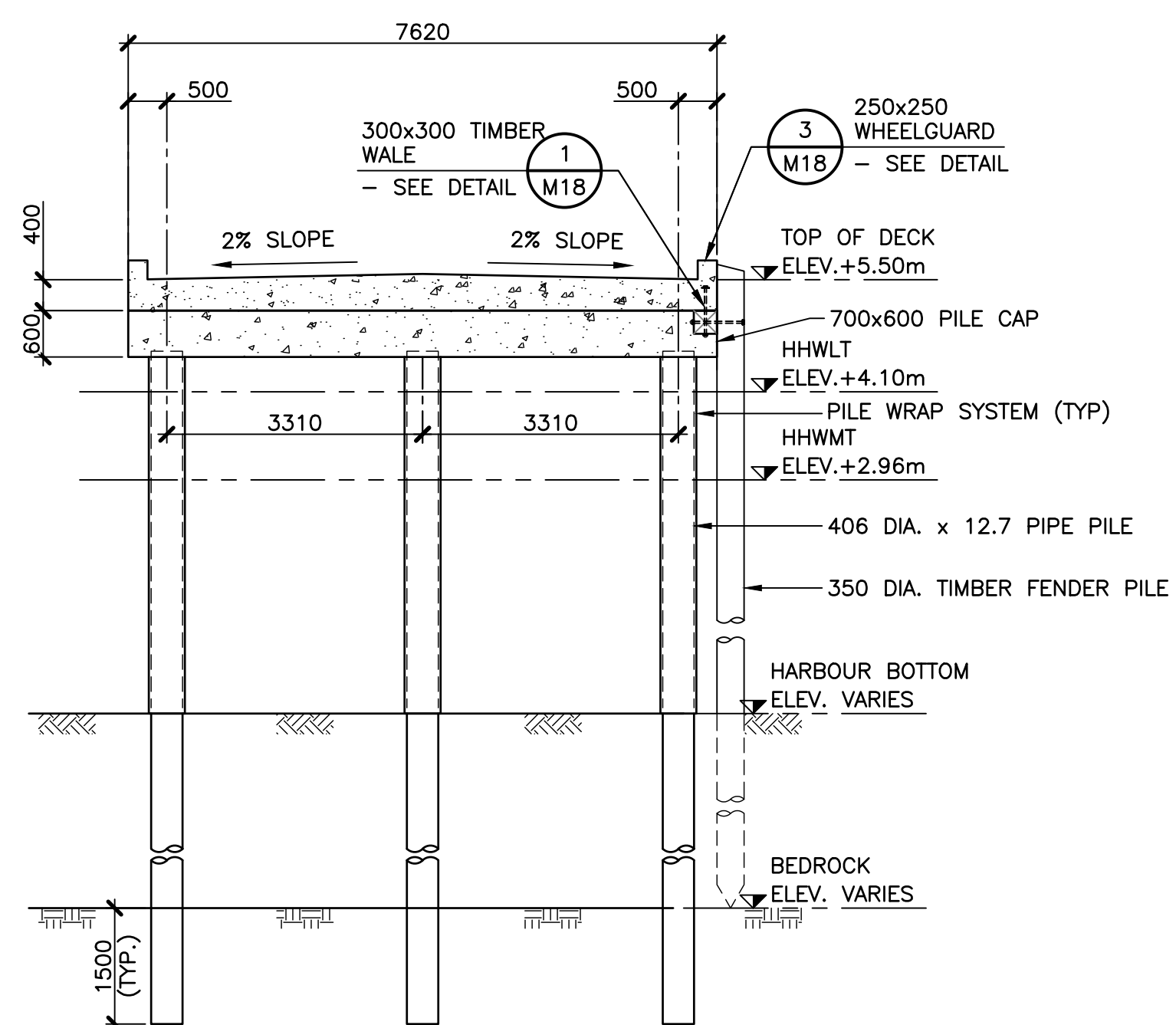
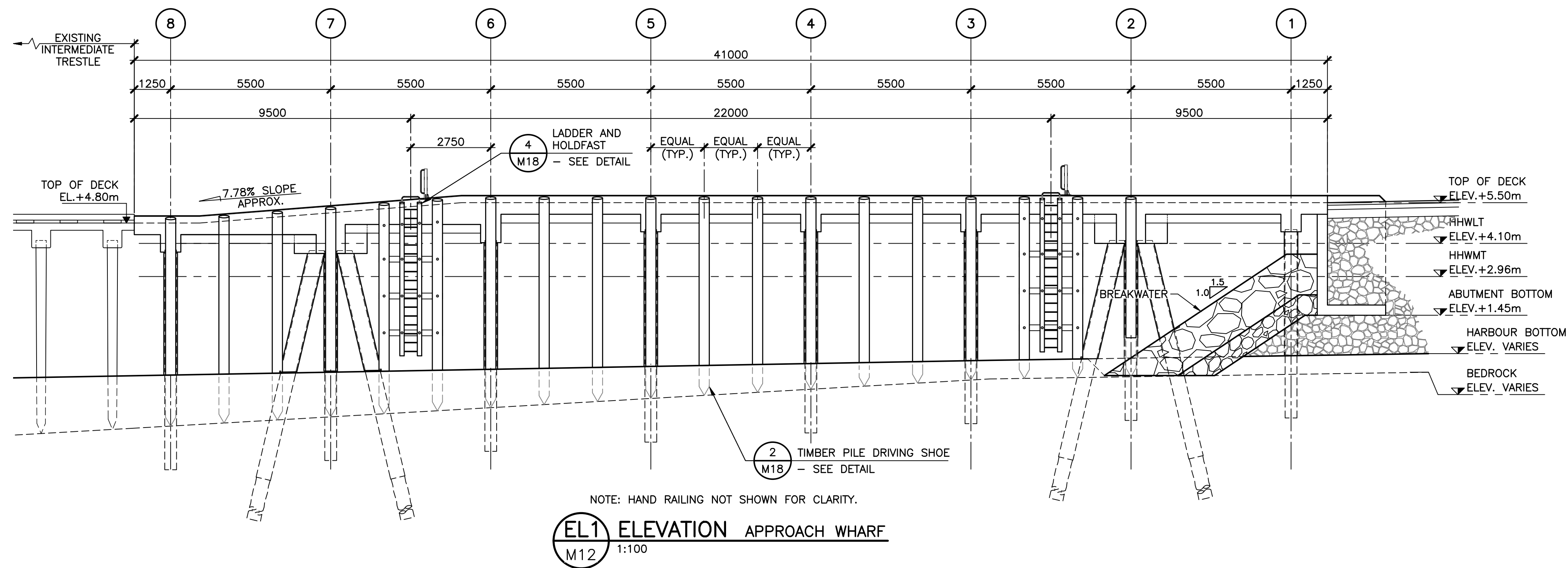
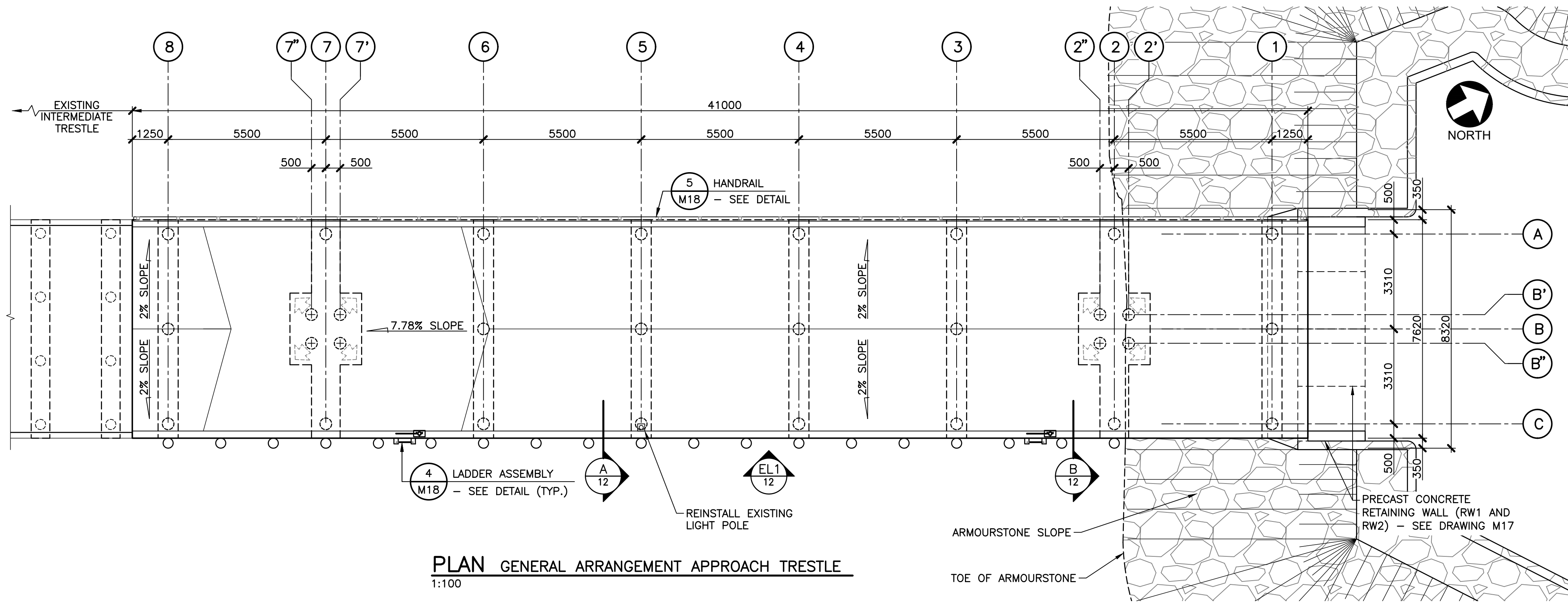
Revision or Issue

TOWN OF SAINT ANDREWS
TSA WHARF APPROACH
REPLACEMENT

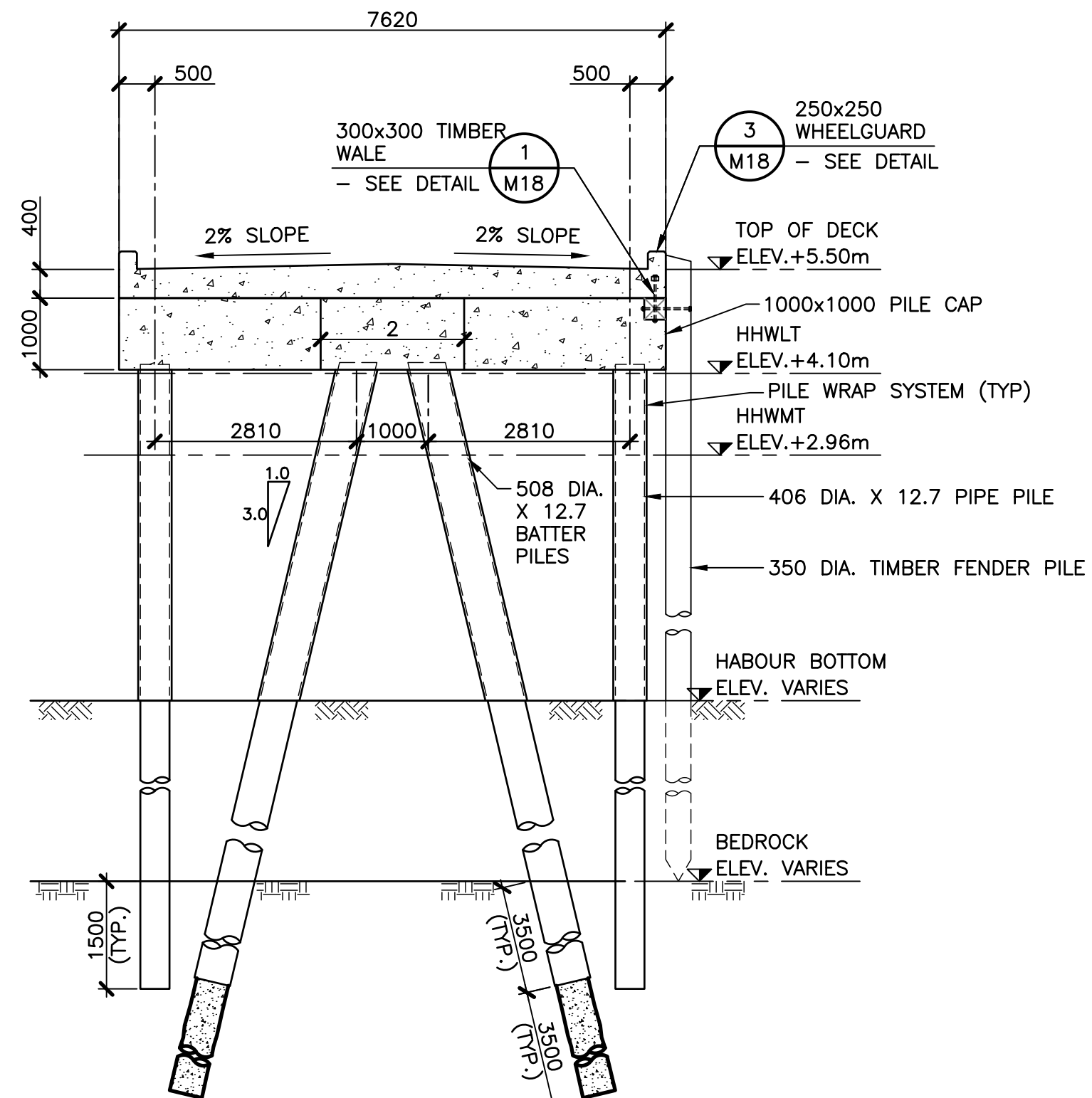
STRUCTURAL
APPROACH TRESTLE -
EXISTING CONDITIONS AND
REMOVALS SECTIONS



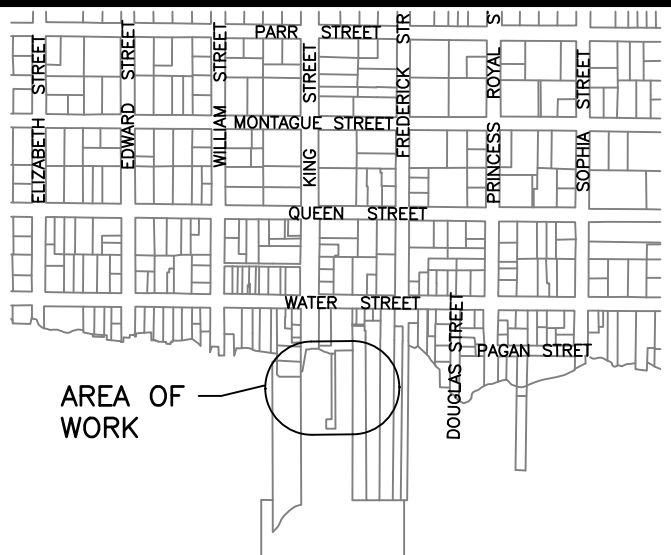
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LICENCED PROFESSIONAL ENGINEER Province of New Brunswick	Designed MK	Drawn LL	
 AUGUST 14, 2025 Date	Checked KM	Approved	
INGENIEUR TITULAIRE DE PERMIS Province du Nouveau-Brunswick	Sheet No 4 of 19	Drawing No	M11



A SECTION TYPICAL VERTICAL PILE BENT
M12 1:75



B SECTION TYPICAL CLUSTER PILE BENT
M12 1:75



KEY PLAN
1:10000

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
C	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
B	ISSUED FOR 70% REVIEW	MAY 6/24	GKP
A	ISSUED FOR ENVIRONMENTAL PERMITTING	MAY 6/24	GKP

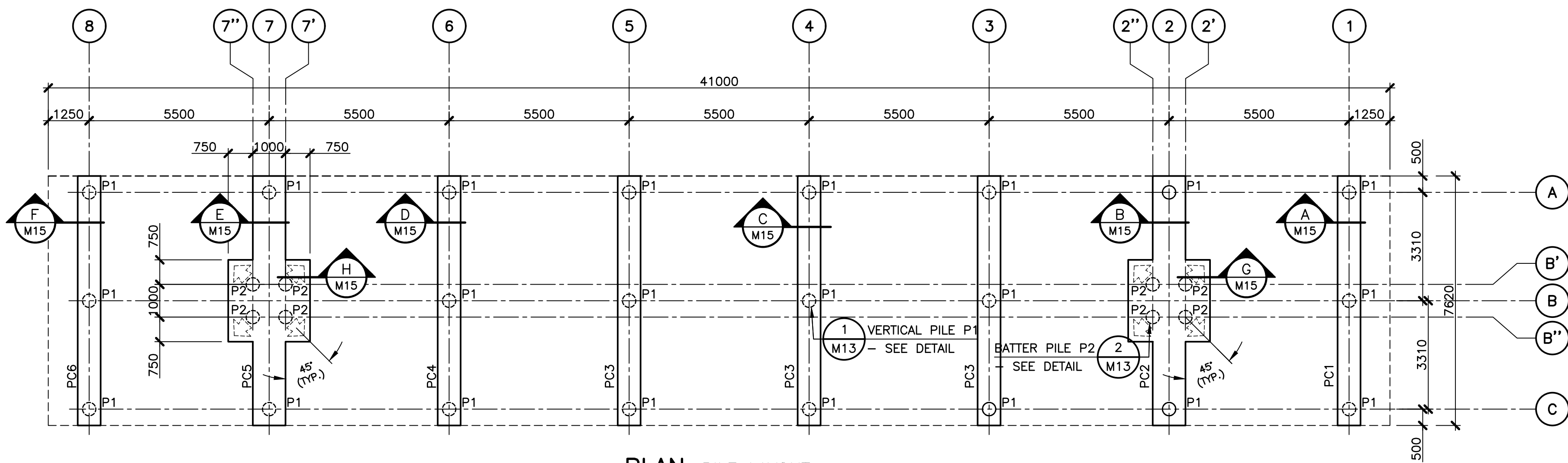
Revision or Issue

TOWN OF SAINT ANDREWS
TSA WHARF APPROACH
REPLACEMENT

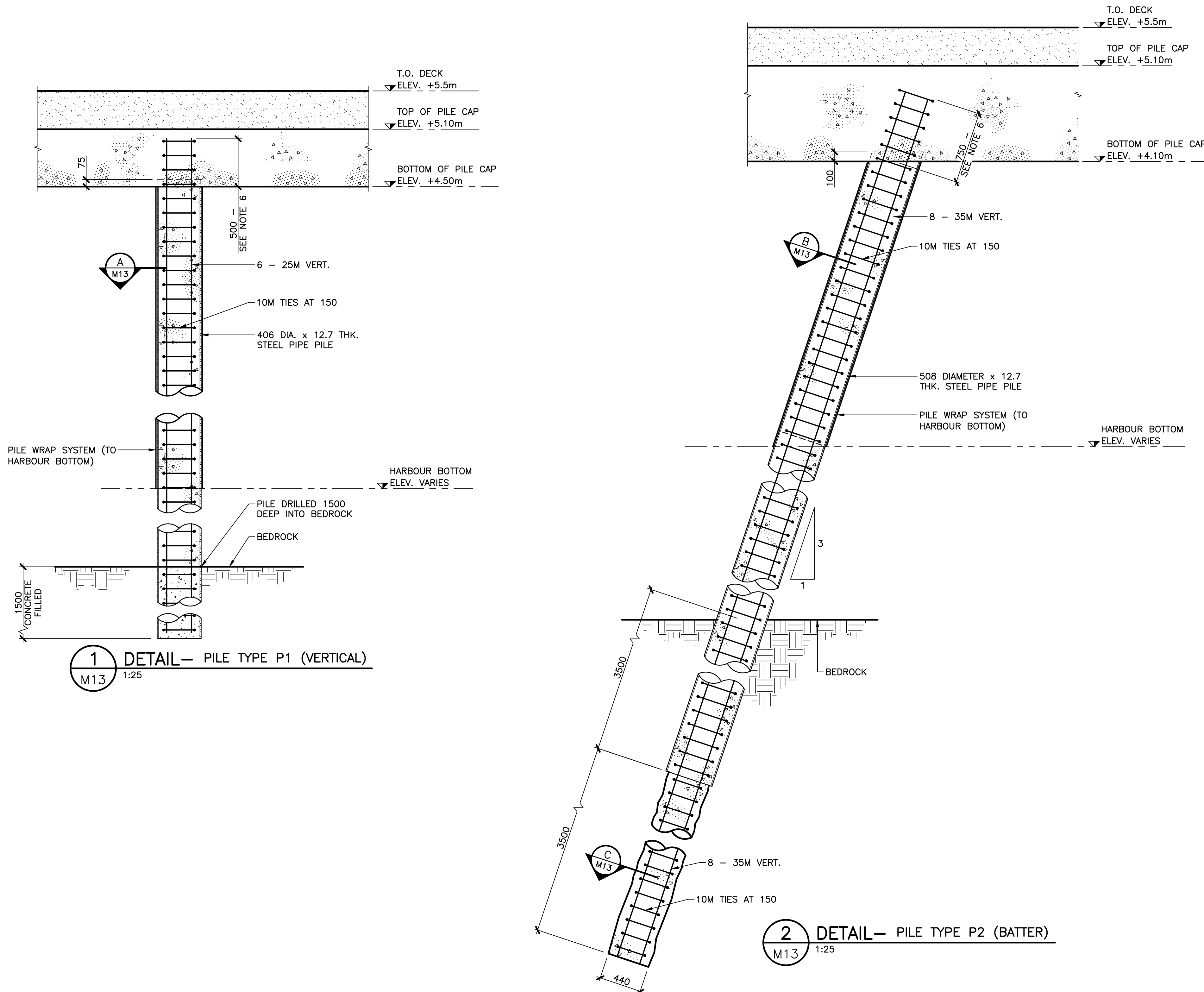
STRUCTURAL
APPROACH TRESTLE -
GENERAL ARRANGEMENT,
ELEVATION AND SECTIONS



CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
Licensed PROFESSIONAL ENGINEER Province of New Brunswick	Designed MK	Drawn LL	
Checked KM	Approved		
Sheet No 5	of 19		
Drawing No M12			



PLAN PILE LAYOUT
1:100



STEEL PIPE PILE SCHEDULE – ESTIMATED DESIGN LENGTHS (m)

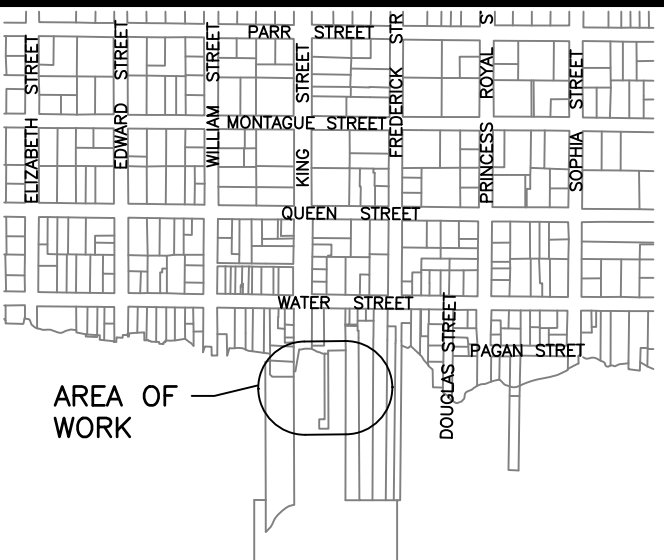
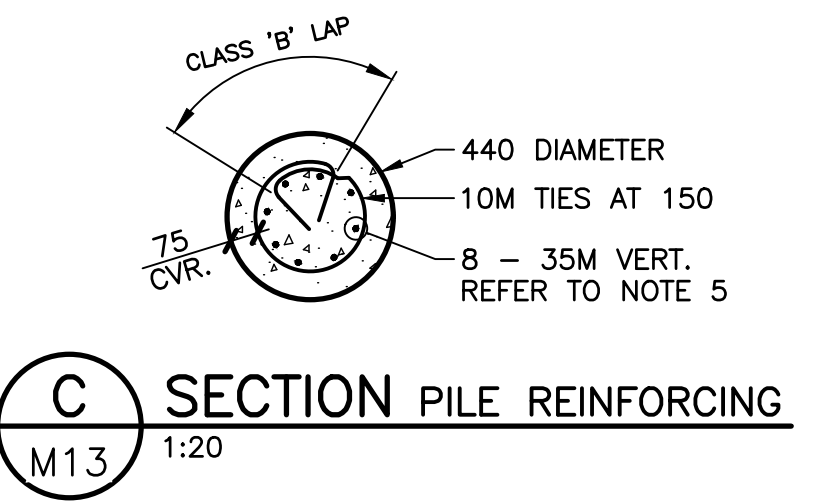
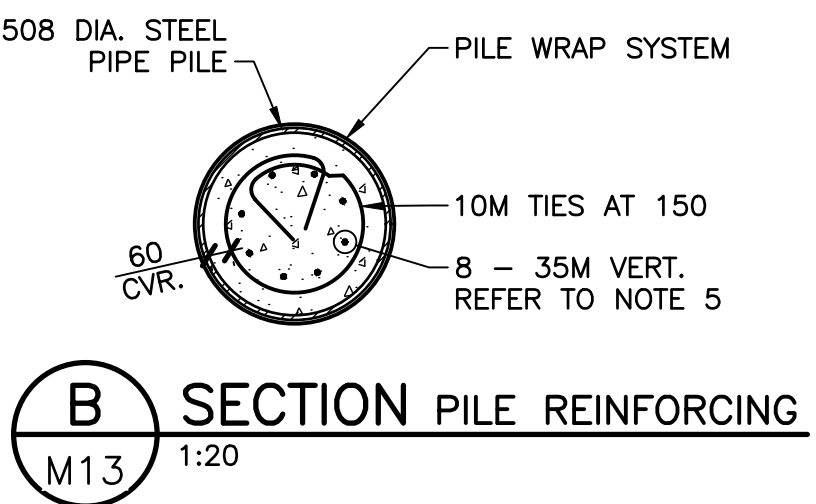
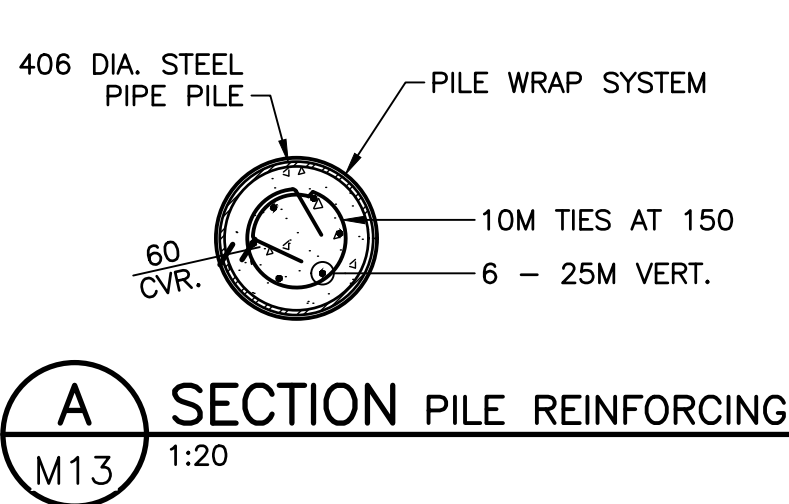
GRIDLINE	ESTIMATED LENGTH (m)					MIN. SUPPLY LENGTH	AS-BUILT LENGTH (m)				
	A	B	B'	B''	C		A	B	B'	B''	C
1	6.8	6.8			6.8	7.8					
2	6.9				6.9	7.9					
2'			9.3	9.3		7.3					
2''			9.3	9.3		7.3					
3	6.6	6.6			6.6	7.6					
4	7.3	7.3			7.3	8.3					
5	7.6	7.6			7.6	8.6					
6	7.6	7.6			7.6	8.6					
7	7.9				7.9	8.9					
7'			10.4	10.4		11.4					
7''			10.4	10.4		11.4					
8	7.9	7.9			7.9	8.9					

NOTES:

- ESTIMATED DESIGN PILE LENGTHS SHOWN ARE BASED ON THEORETICAL IN PLACE CONDITIONS, ASSUMING 1500mm PENETRATION INTO BEDROCK FOR VERTICAL PILES AND 3500mm PENETRATION INTO BEDROCK FOR BATTER PILES. MINIMUM SUPPLY LENGTH IS TO ACCOUNT FOR GEOTECHNICAL VARIANCES. CONTRACTOR IS TO ALLOW FOR INSTALLATION AND CUTOFF REQUIREMENTS AS NECESSARY TO COMPLETE WORK.
- CONTRACTOR TO KEEP DETAILED DRIVING RECORDS AND SUMMARIZE AS-BUILT PILE LENGTHS ON THE TABLE PROVIDED ON THIS DRAWING.
- ALL REINFORCING STEEL TO HAVE A MINIMUM YIELD POINT STRENGTH OF 400 MPa (WELDABLE) AND TO CONFORM TO CSA G30.18.
- UPON COMPLETION OF PILE CAPS, ALL PILES ARE TO BE WRAPPED WITH A CORROSION PROTECTION SYSTEM FROM THE UNDERSIDE OF CONCRETE (ELEVATION VARIES) TO HARBOUR BOTTOM.
– ACCEPTABLE PRODUCT:
RETROWRAP STD (STANDARD) AS MANUFACTURED BY CORROSION CONTROL INTERNATIONAL, OR SINGLE PLY CCS WRAP AS MANUFACTURED BY CARMEL CORROSION SYSTEMS, COMPLETE WITH STAINLESS STEEL HARDWARE AND SEAWING COLLAR INSTALLED AT THE INTERFACE BETWEEN THE TOP OF THE WRAP AND THE UNDERSIDE OF PILE CAP IS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTION.
- SPLICING OF LONGITUDINAL REINFORCEMENT OF SECTION B TO SECTION C, SHALL BE EXECUTED INSIDE THE STEEL PIPE AND IS NOT ALLOWED IN THE ROCK SOCKET.
- CONTRACTOR TO COORDINATE ORIENTATION OF REBAR TO AVOID CONFLICTS WITH PILE CAP REBAR PLACEMENT.

PILE WRAP SCHEDULE (m)

GRIDLINE	ESTIMATED ENTH (m)					INSTALLED LENGTH (m)				
	A	B	B'	B''	C	A	B	B'	B''	C
1	4.7	4.7			4.7					
2	4.7				4.7					
2'			5.0	5.0						
2''			5.0	5.0						
3	4.4	4.4			4.4					
4	4.9	4.9			4.9					
5	5.0	5.0			5.0					
6	4.7	4.7			4.7					
7	4.8				4.8					
7'			5.1	5.1						
7''			5.1	5.1						
8	4.6	4.6			4.6					



KEY PLAN

1:100000

LEGEND:

PC# - DENOTES PILE CAP TYPE #.

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

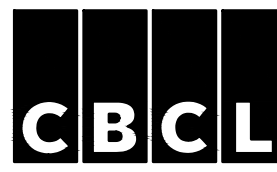
Revision or Issue

TOWN OF SAINT ANDREWS

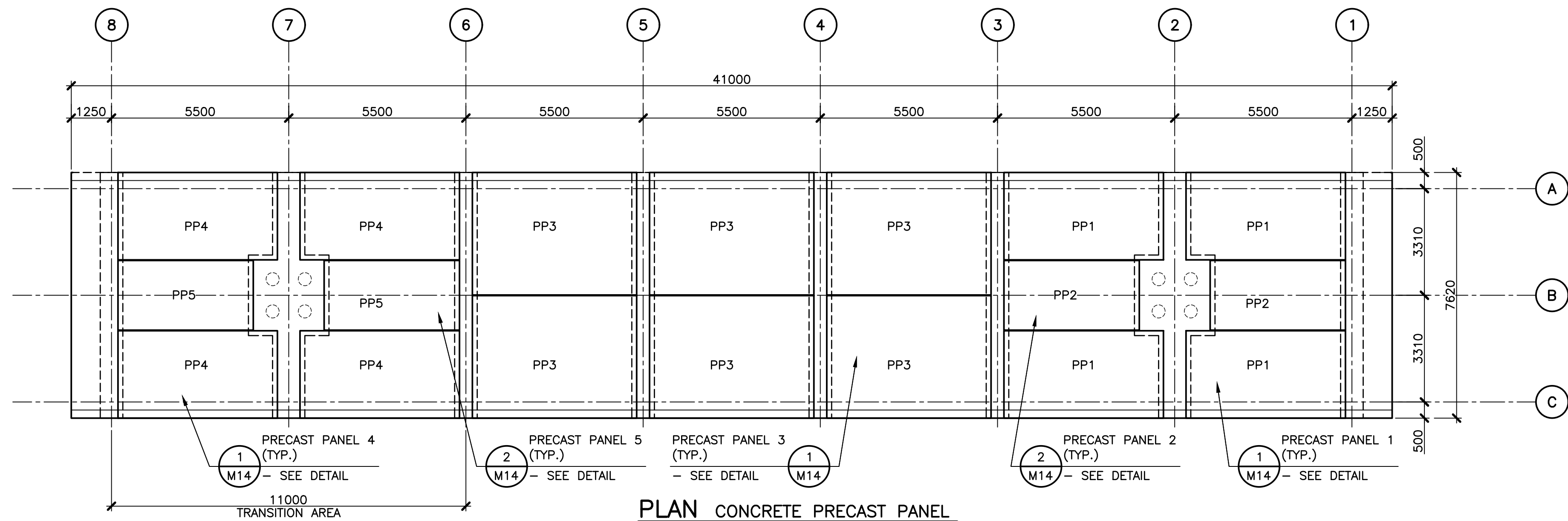
TSA WHARF APPROACH
REPLACEMENT

STRUCTURAL

APPROACH TRESTLE -
PILE LAYOUT PLAN,
SECTIONS AND DETAILS



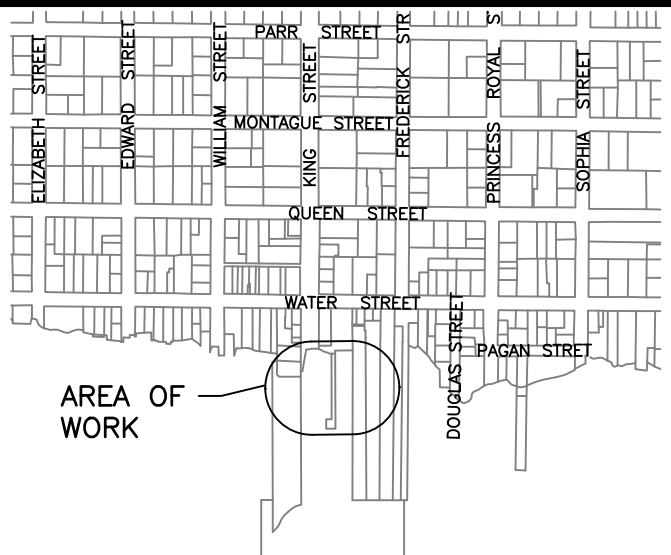
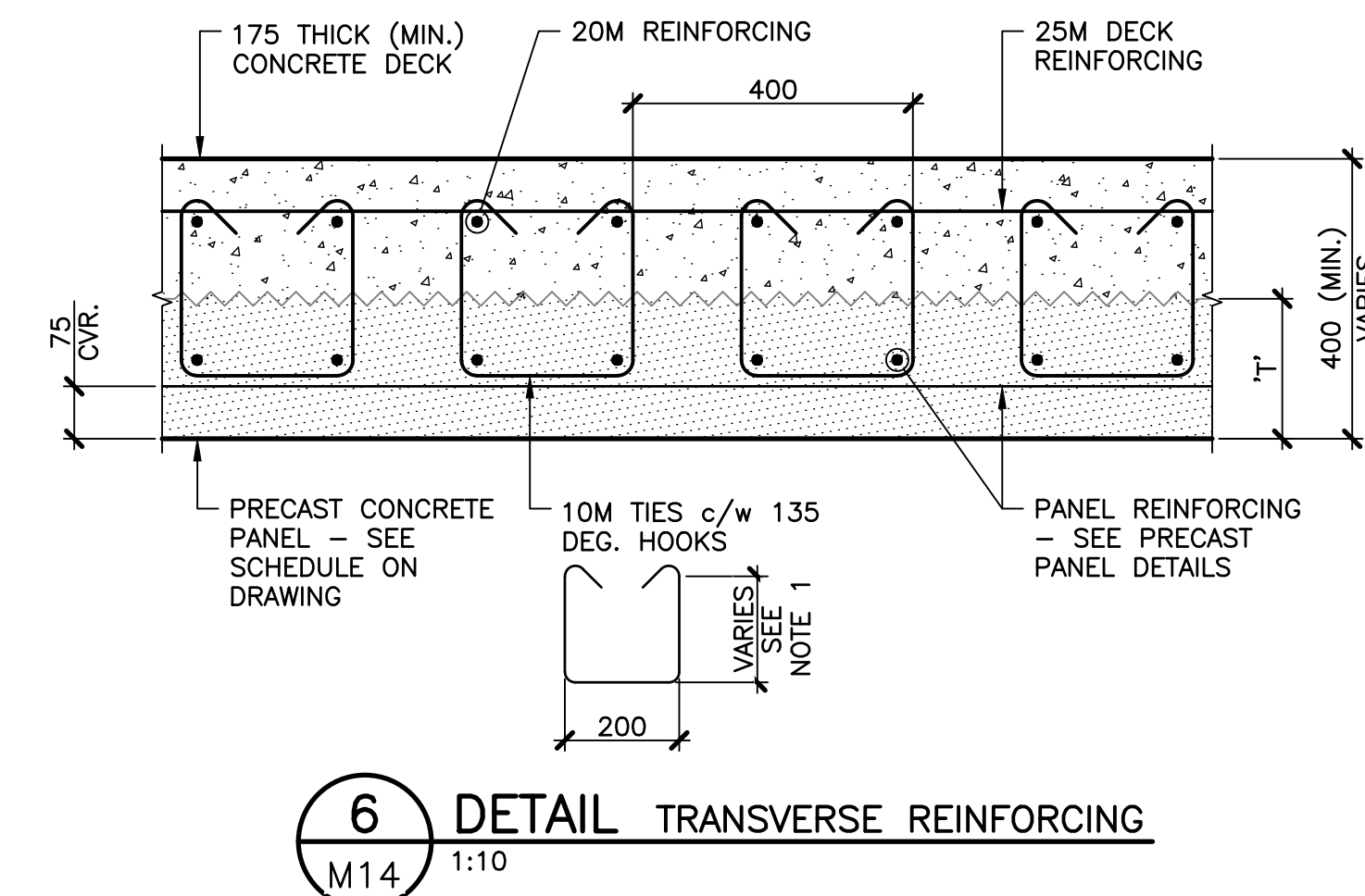
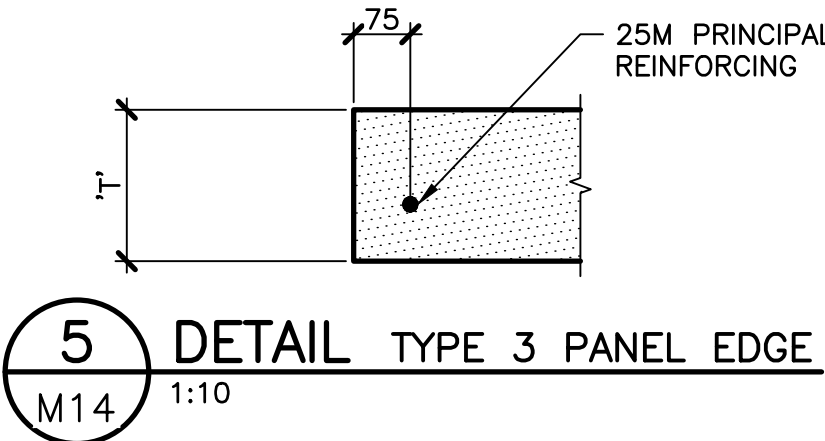
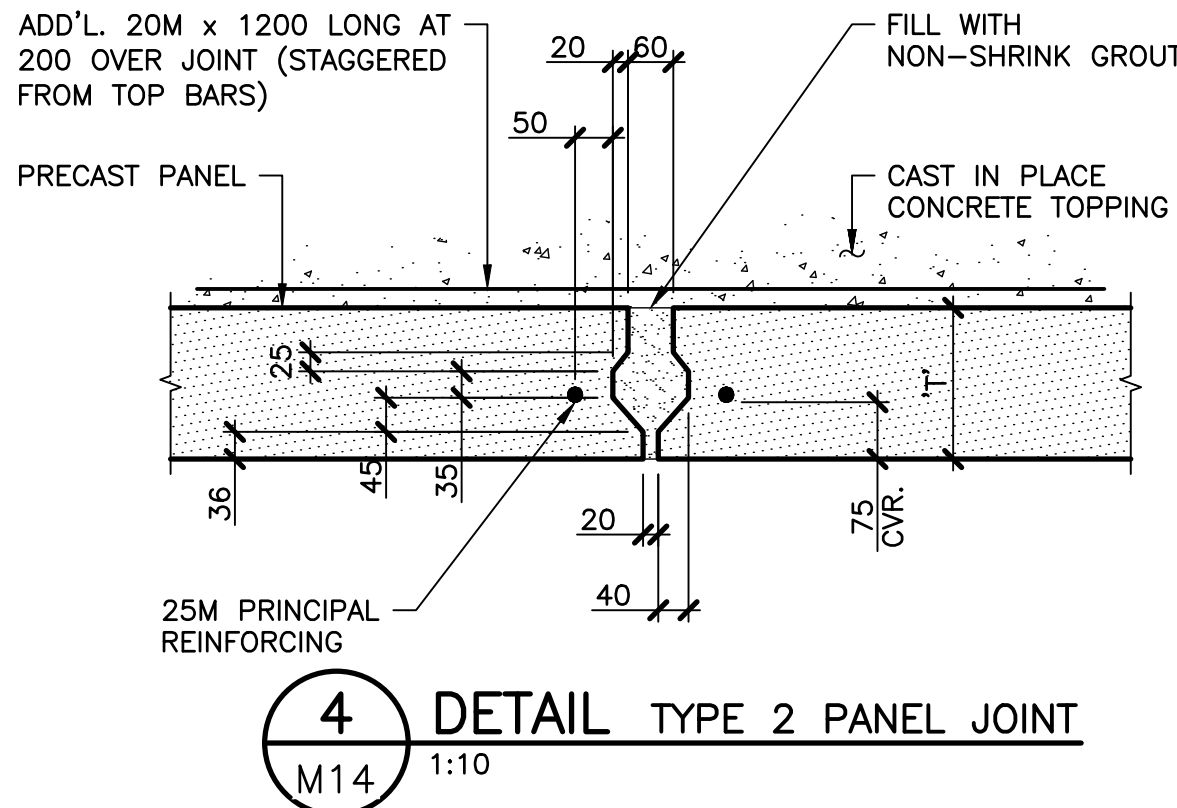
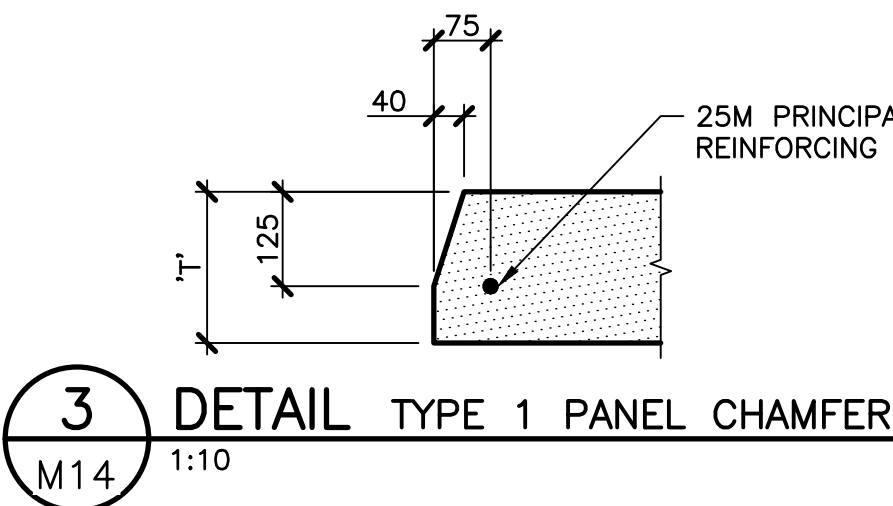
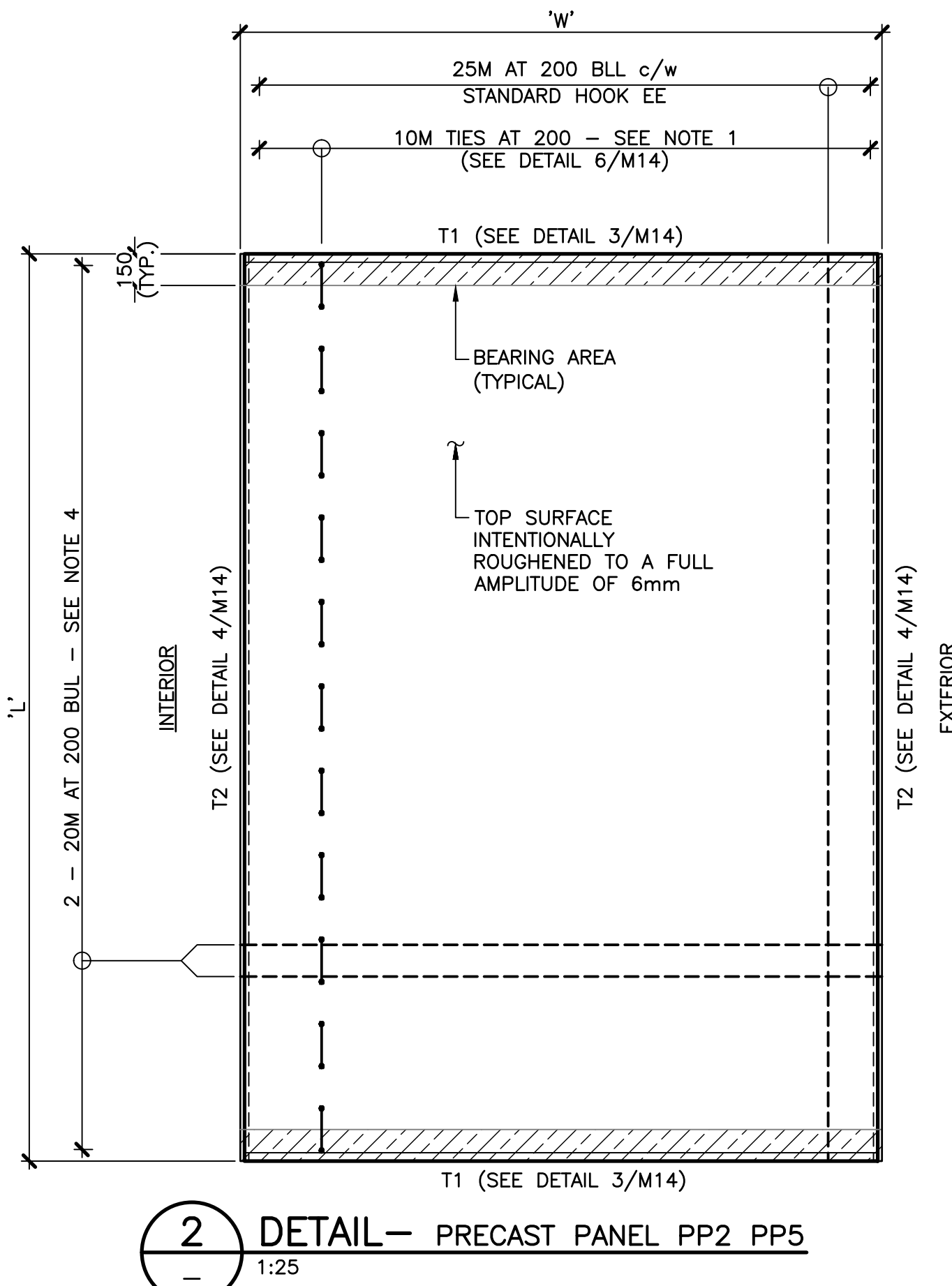
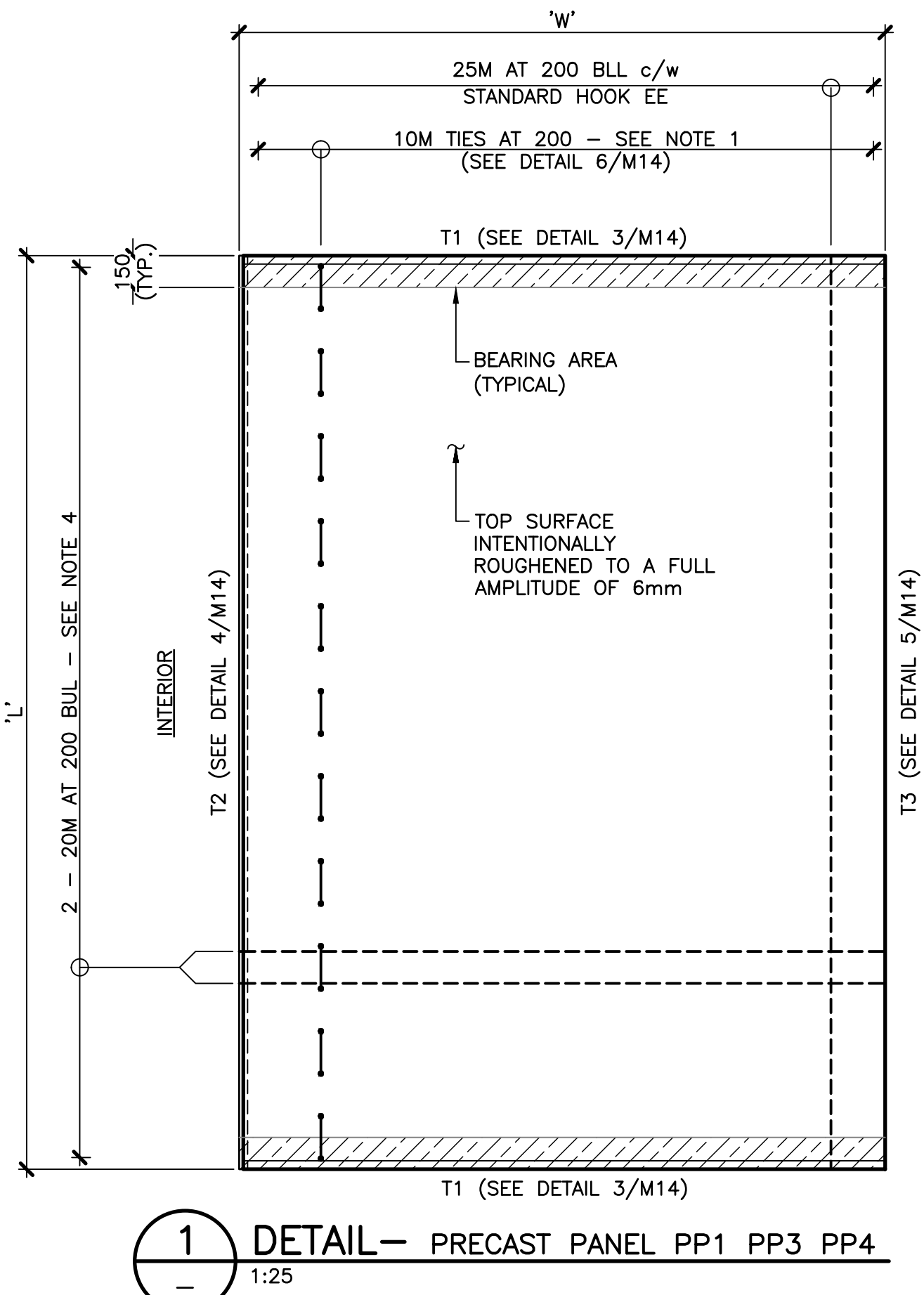
CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
Licensed PROFESSIONAL ENGINEER Province of New Brunswick	Designed MK	Drawn LL	Approved KM
Sheet No 6 of 19	Drawing No M13		



PRECAST DECK PANEL SCHEDULE						
PANEL ID	QTY.	'T' (mm)	'L' (mm)	'W' (mm)	EST. WEIGHT (Kg)	- SEE DETAIL
PP1	4	225	4950	2710	7250	1/M14
PP2	2	225	4200	2160	4900	2/M14
PP3	6	225	5100	3800	10500	1/M14
PP4	4	250	4950	2710	8050	1/M14
PP5	2	250	4200	2160	5450	2/M14

- NOTES:**
- HEIGHT OF 10M TIES TO VARY ACROSS PANEL TO MAINTAIN 75mm COVER IN THE TOPPING SLAB.
 - PANEL LIFTING HARDWARE, PROCEDURES AND ANALYSIS BY CONTRACTOR.
 - LIFTING INSERTS AND LOCATION BY CONTRACTOR.
 - PLACE TRANSVERSE REINFORCING IN CORNERS OF 10M TIES WHERE POSSIBLE.
 - MAXIMUM CONSTRUCTION LOAD EQUAL TO 1 KPa.

- LEGEND:**
- PP## - DENOTES PRECAST CONCRETE PANEL.
- T1 - DENOTES TYPE 1 EDGE - CHAMFER - SEE DETAIL 3.
- T2 - DENOTES TYPE 2 EDGE - JOINT - SEE DETAIL 4.
- T3 - DENOTES TYPE 3 EDGE - EDGE - SEE DETAIL 5.



KEY PLAN

1:10000

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
8	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

TOWN OF SAINT ANDREWS

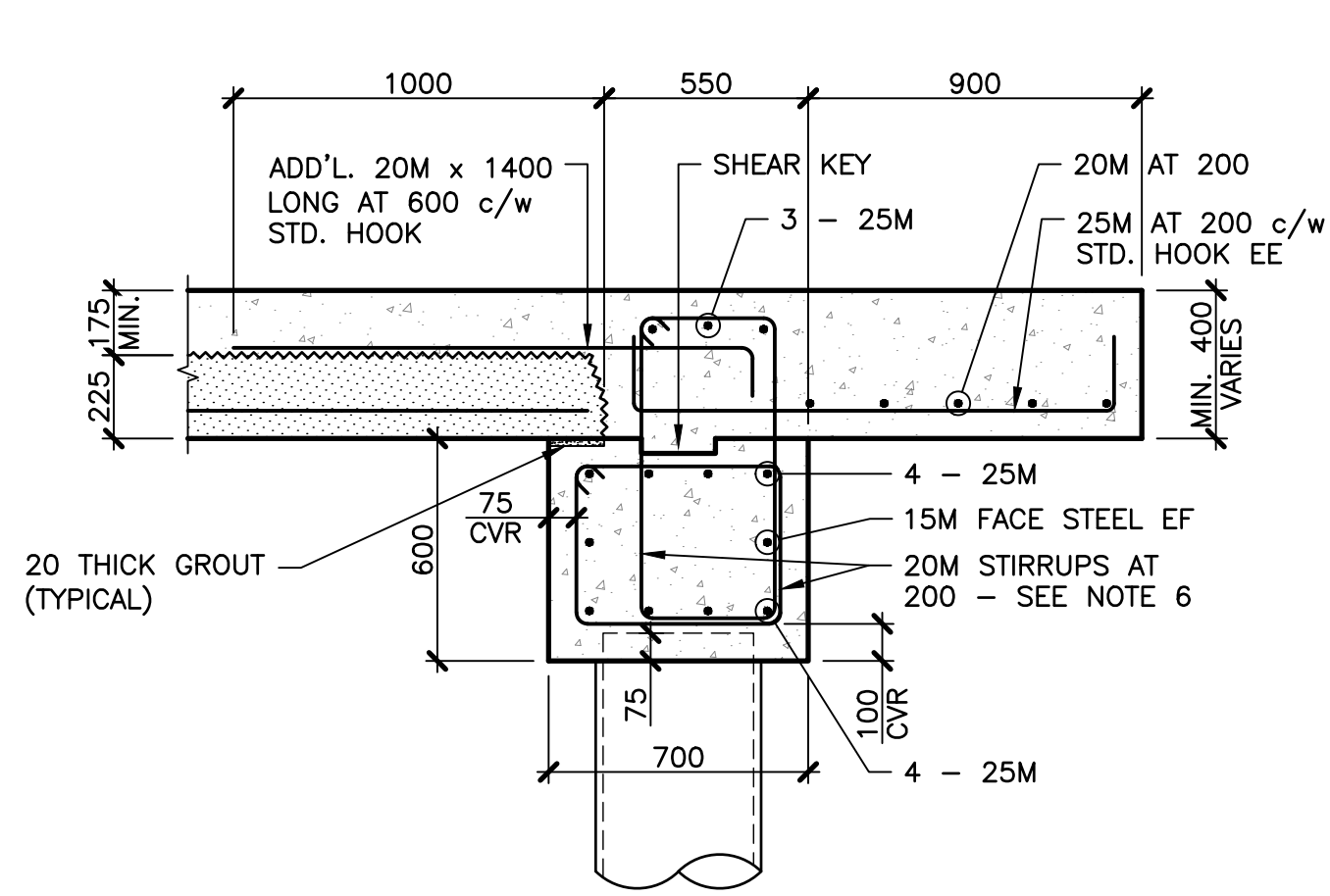
TSA WHARF APPROACH REPLACEMENT

STRUCTURAL

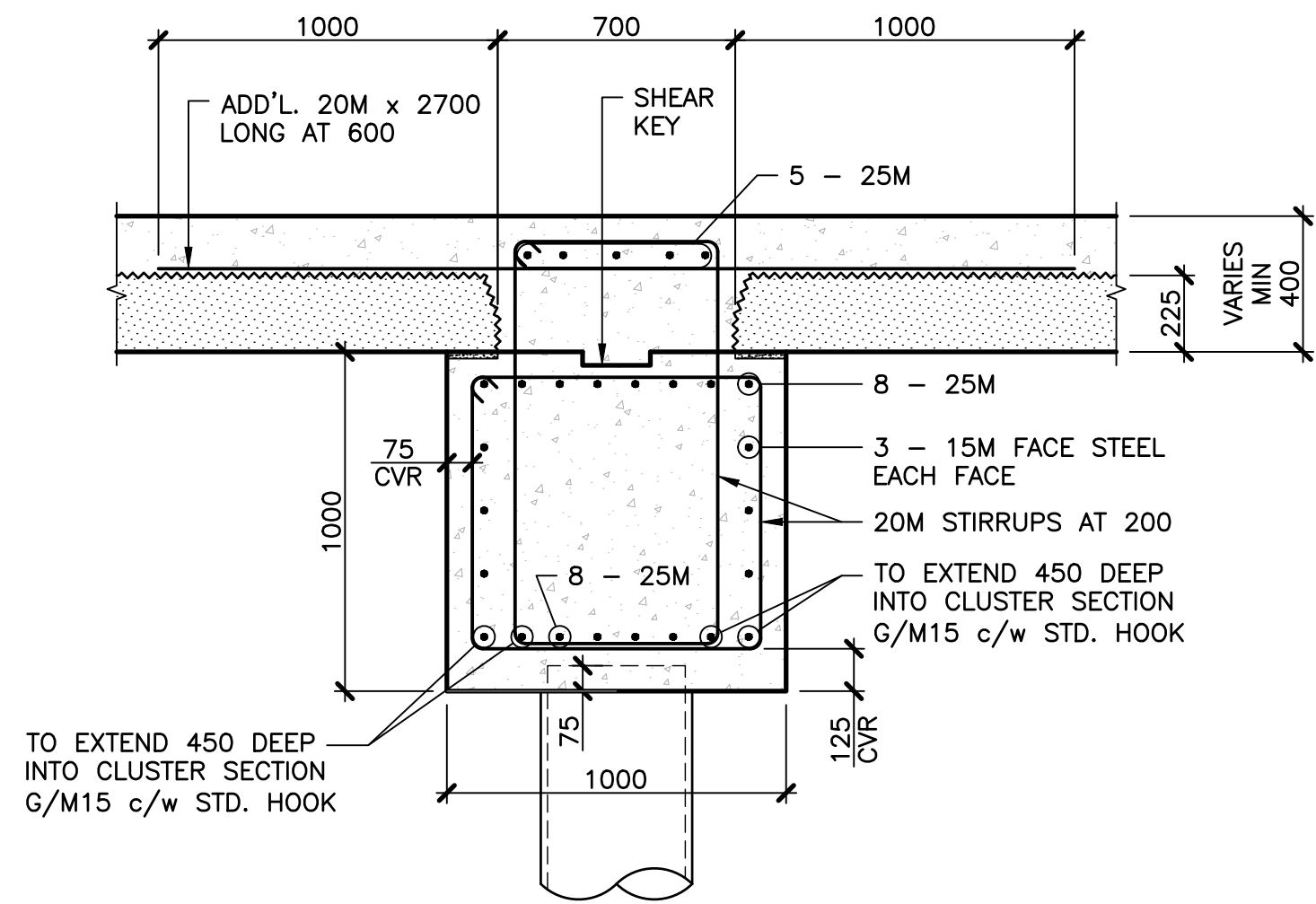
APPROACH TRESTLE - CONCRETE PRECAST PANEL PLAN AND DETAILS



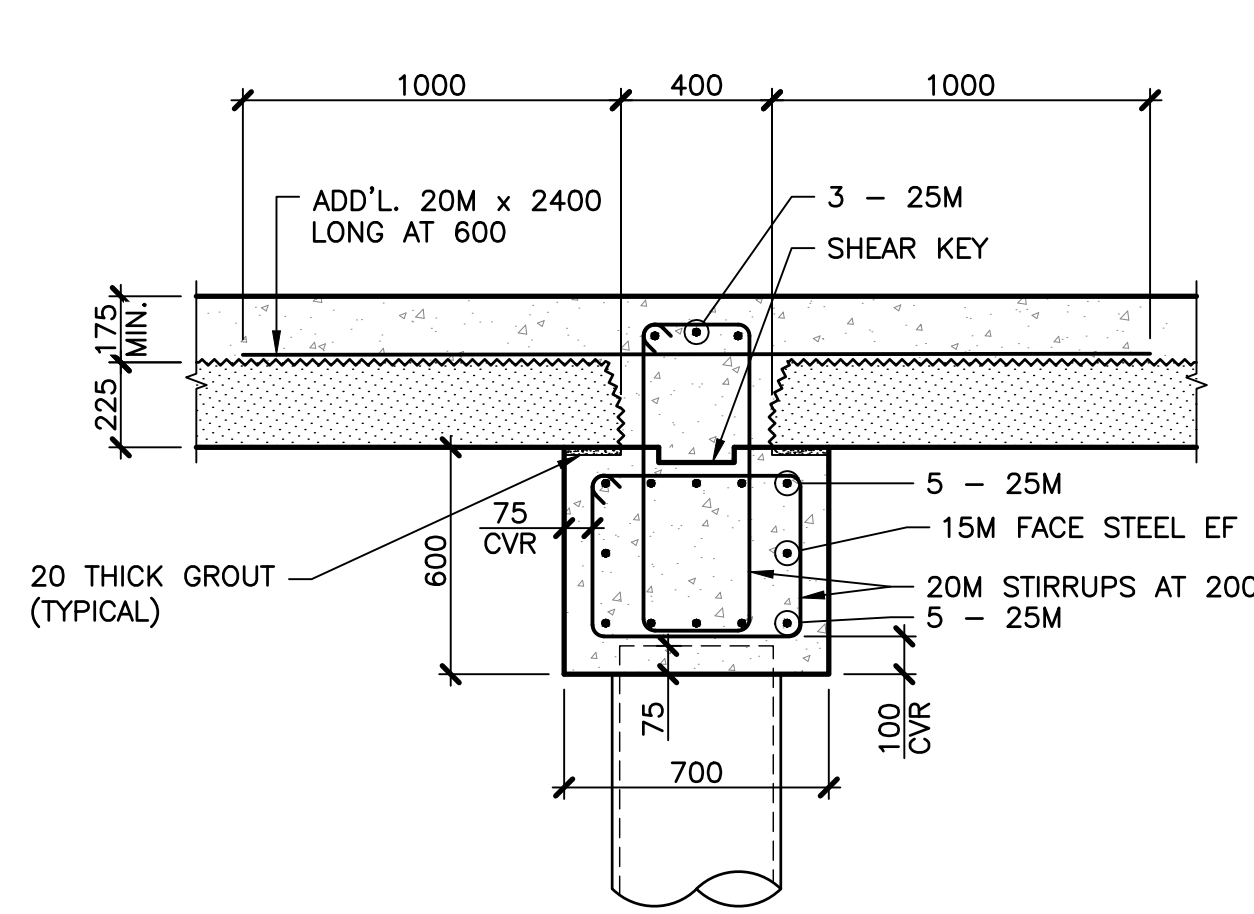
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Designed MK	Drawn LL	Checked KM	Approved
Sheet No 7	of 19	Drawing No	
M14			



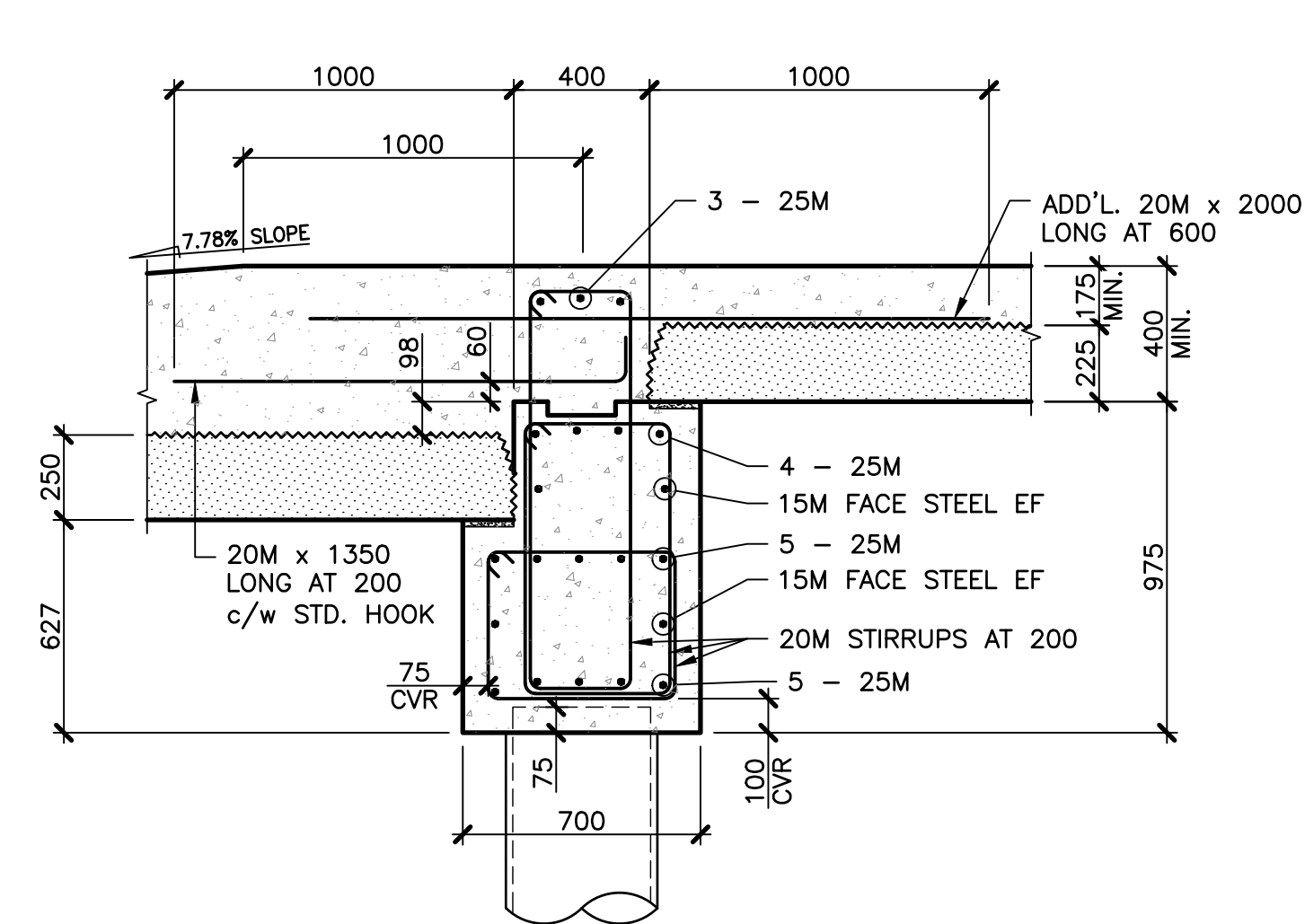
A SECTION PILE CAP REINFORCING TYPE 1
M13 1:20



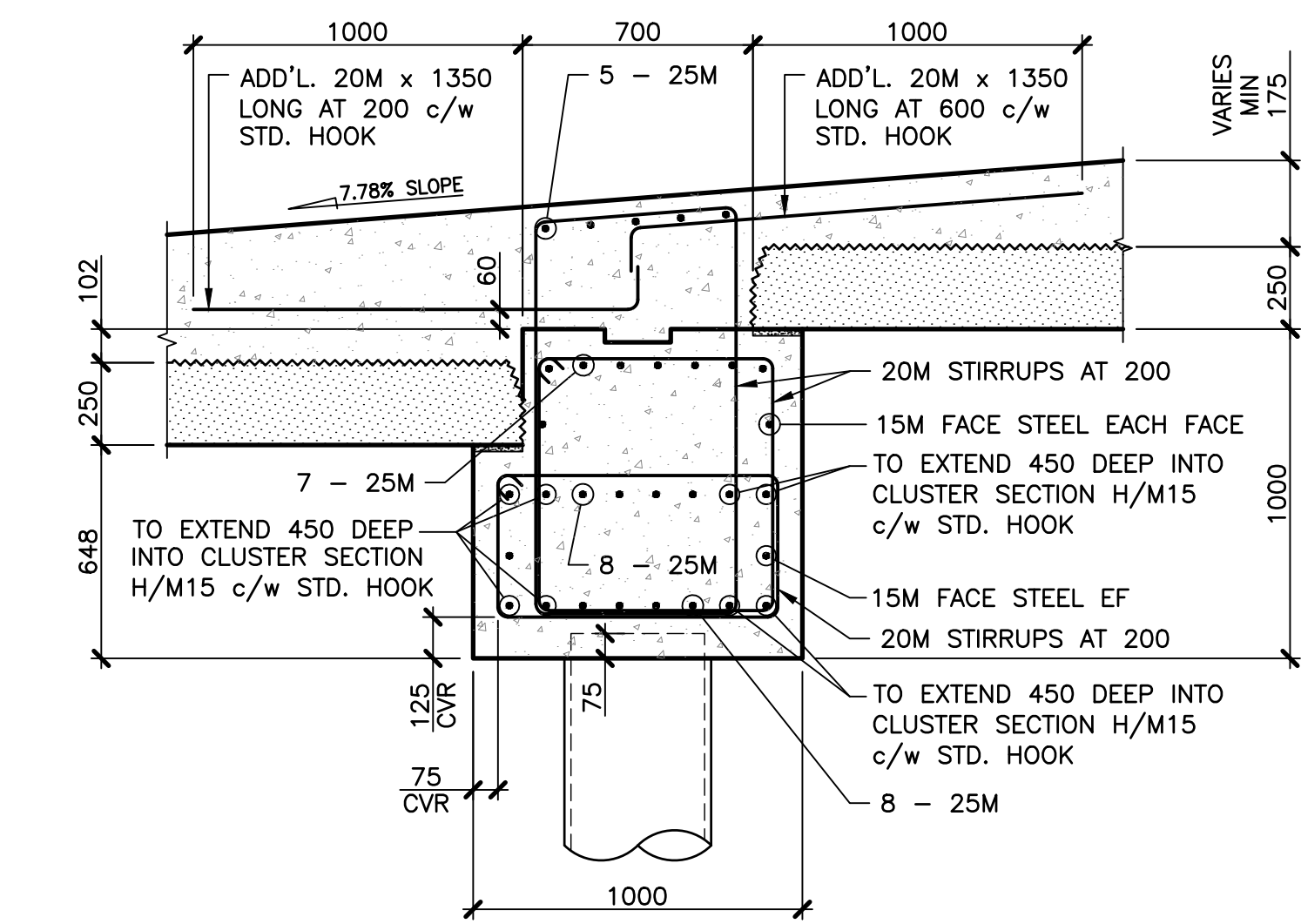
B SECTION PILE CAP REINFORCING TYPE 2
M13 1:20



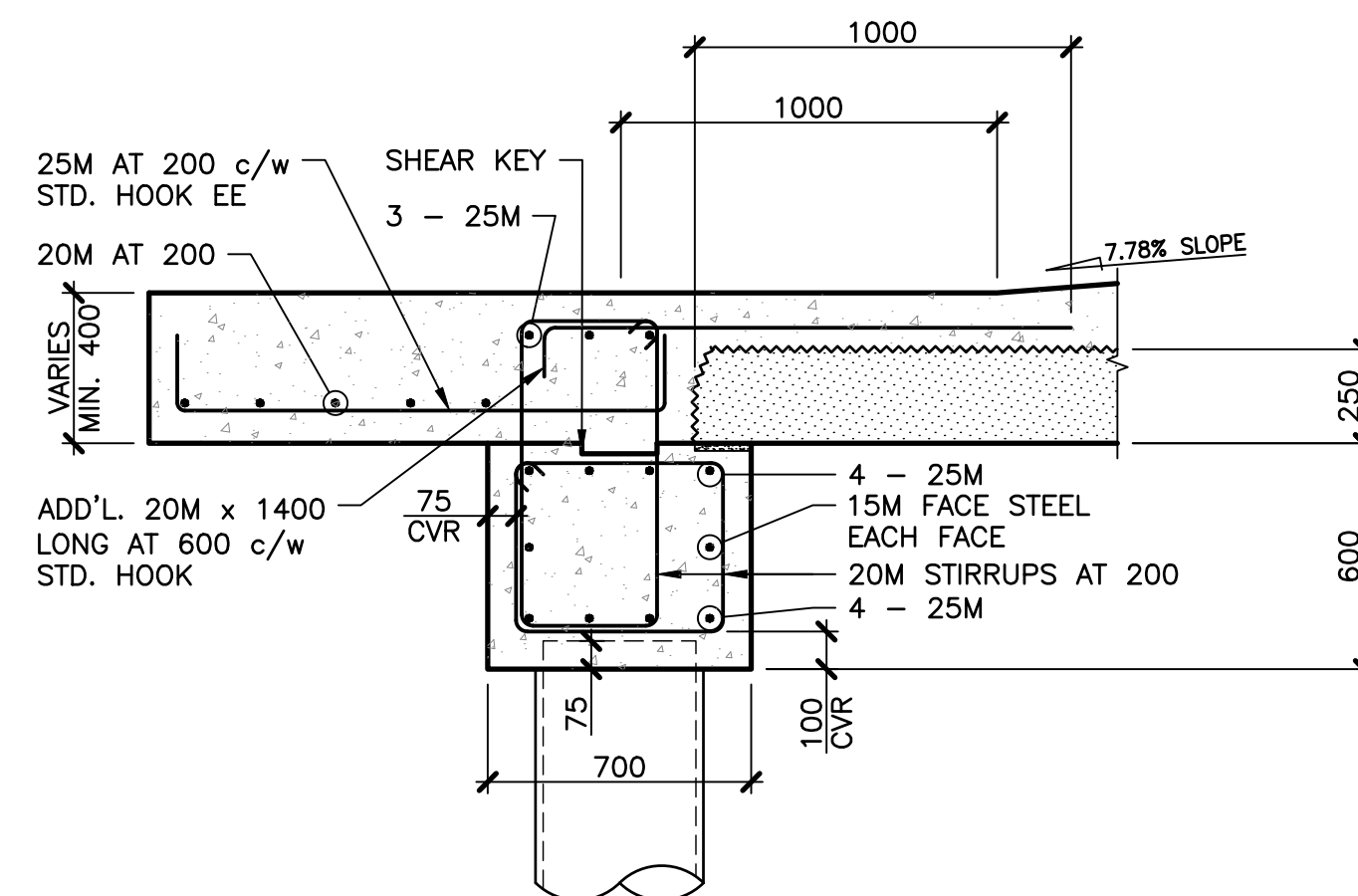
C SECTION PILE CAP REINFORCING TYPE 3
M13 1:20



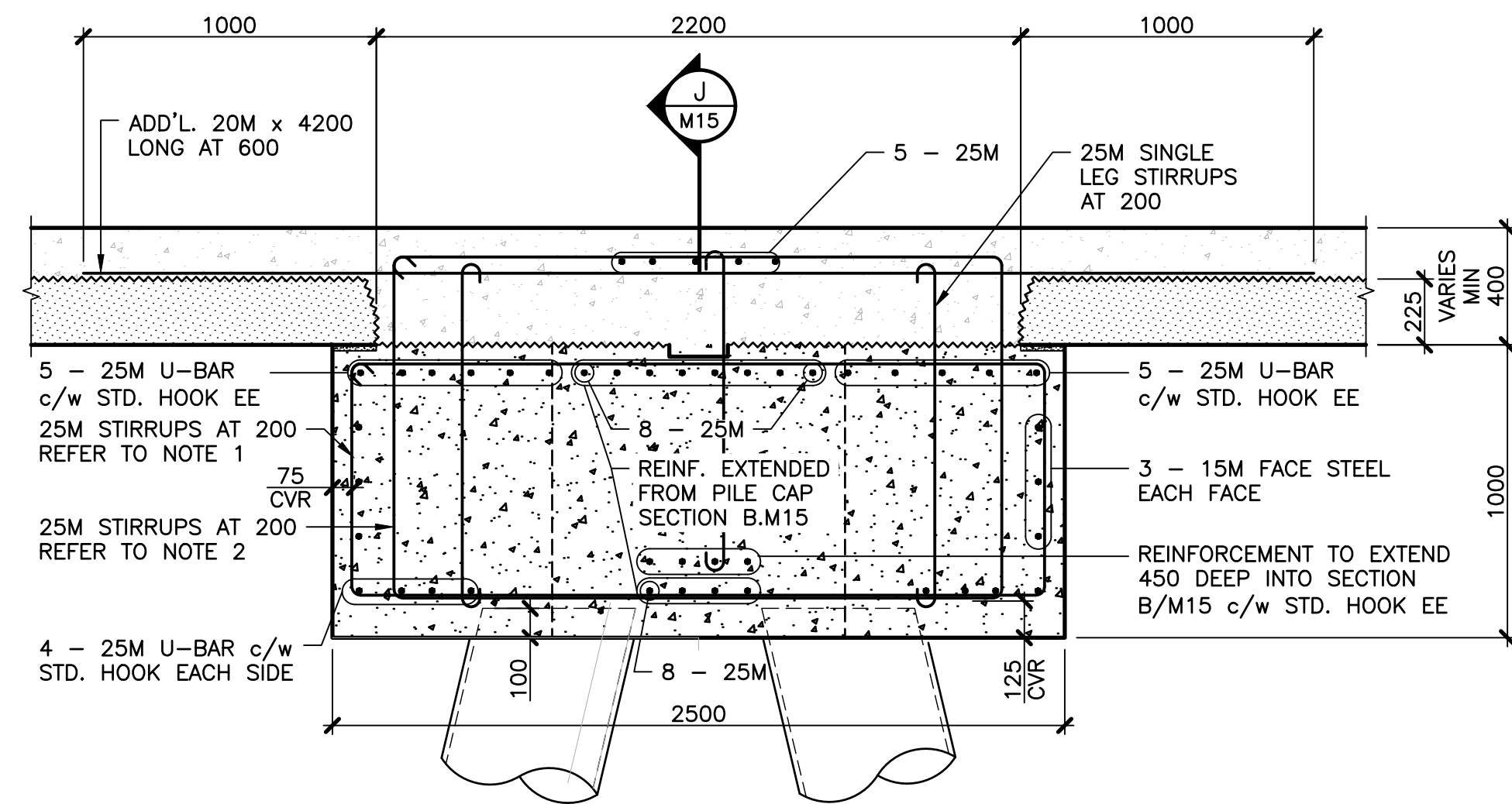
D SECTION PILE CAP REINFORCING TYPE 4
M13 1:20



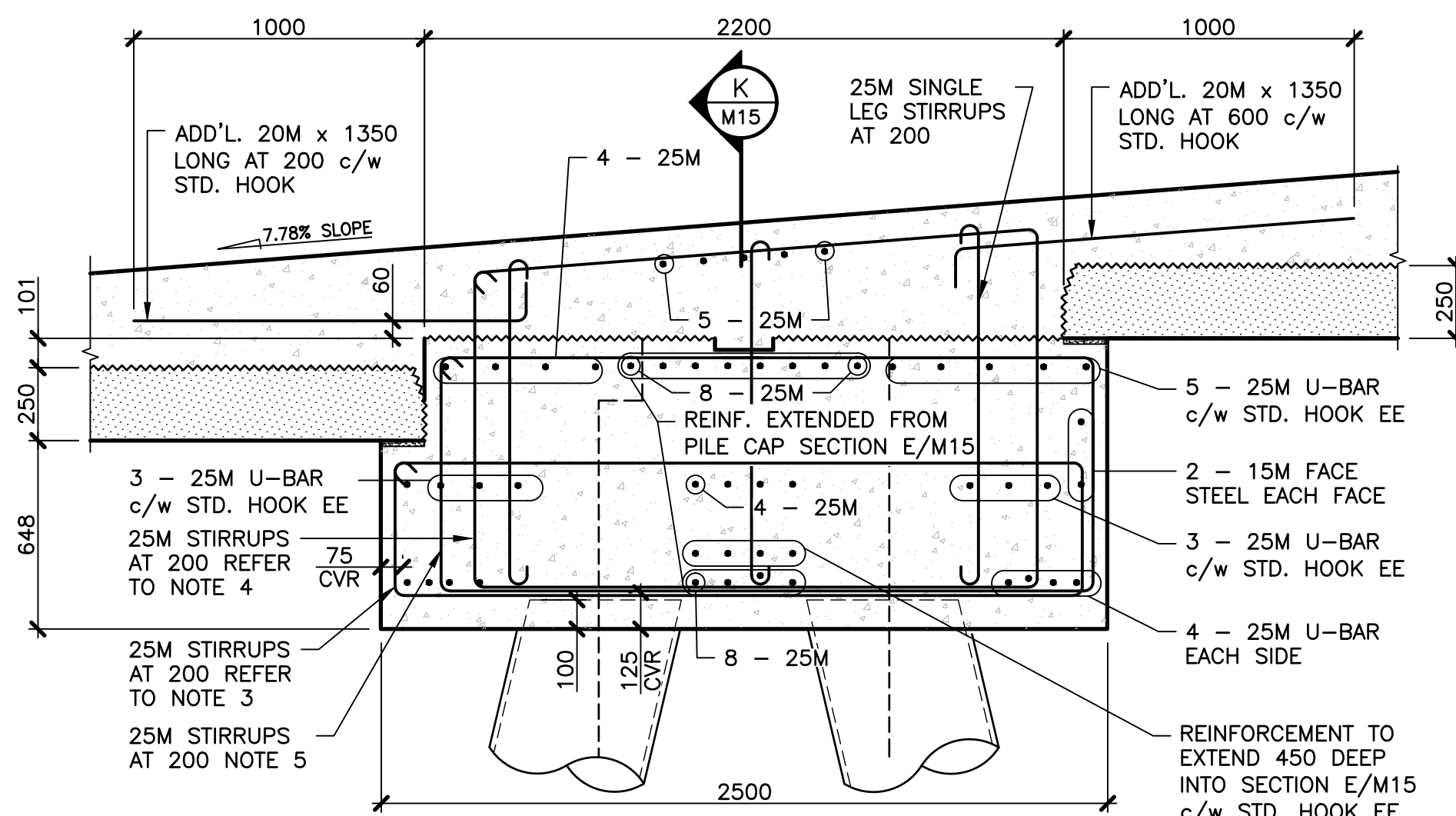
E SECTION PILE CAP REINFORCING TYPE 5
M13 1:20



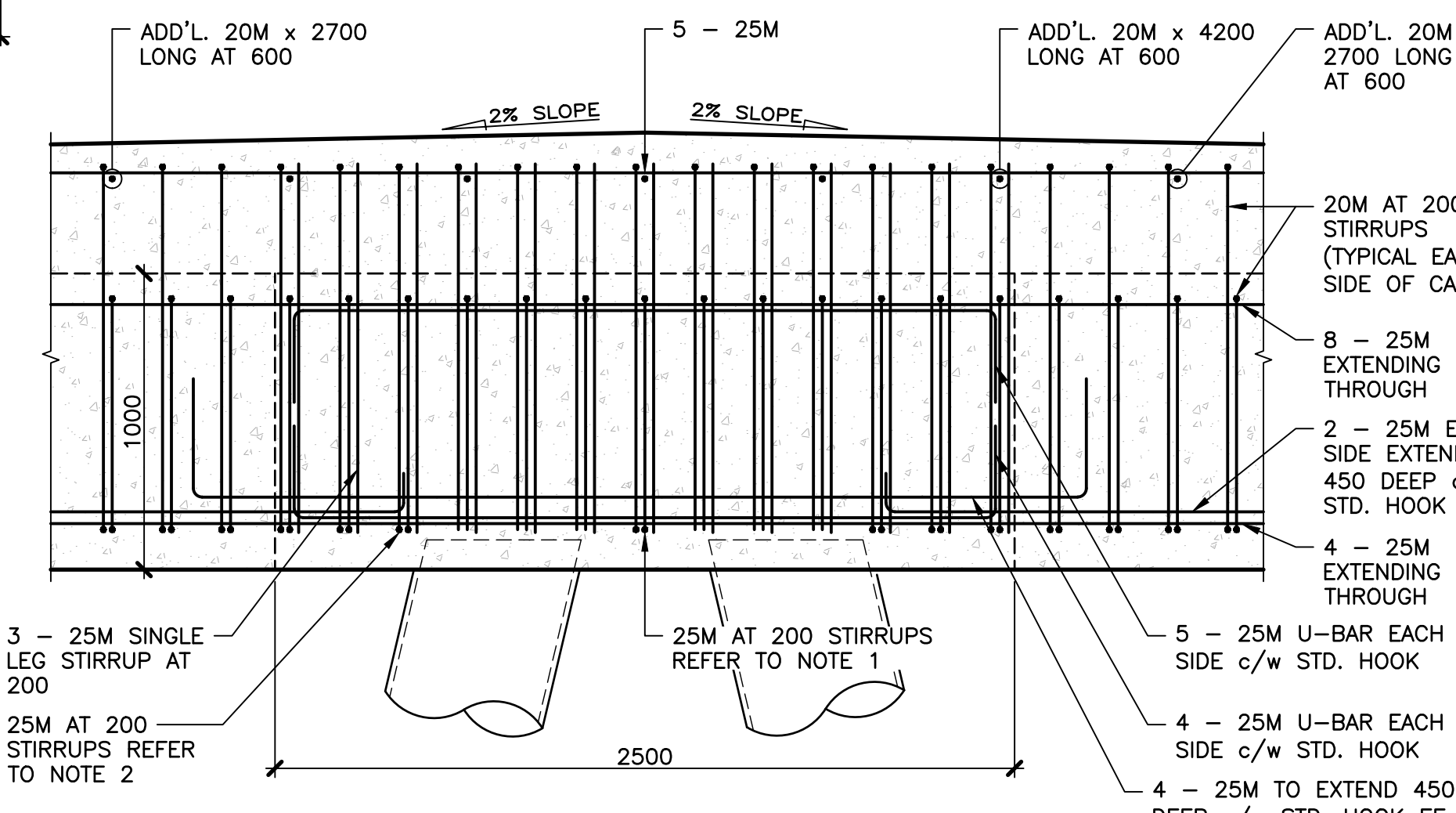
F SECTION PILE CAP REINFORCING TYPE 6
M13 1:20



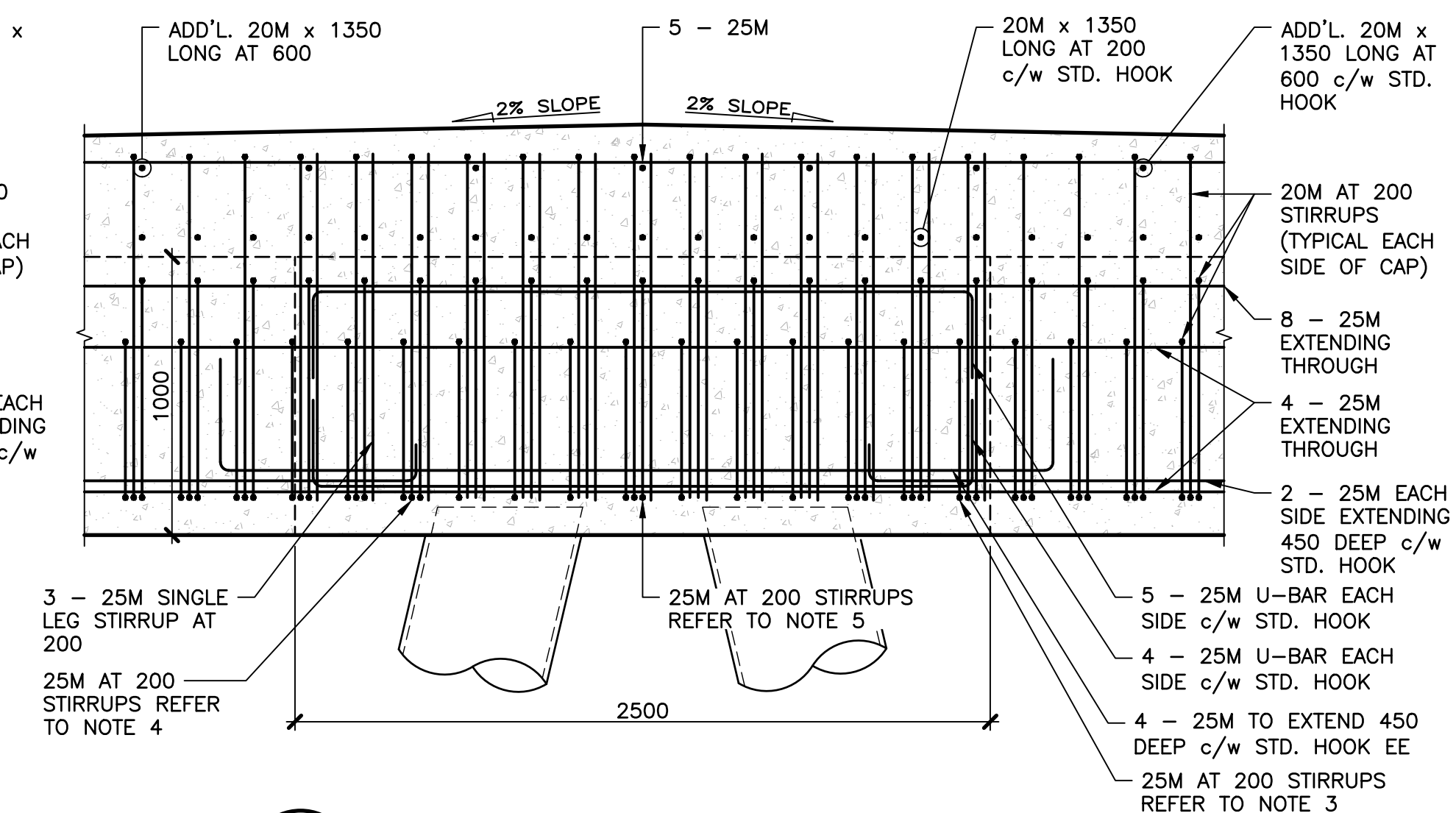
G SECTION PILE CAP CLUSTER REINFORCING TYPE 1
M13 1:20



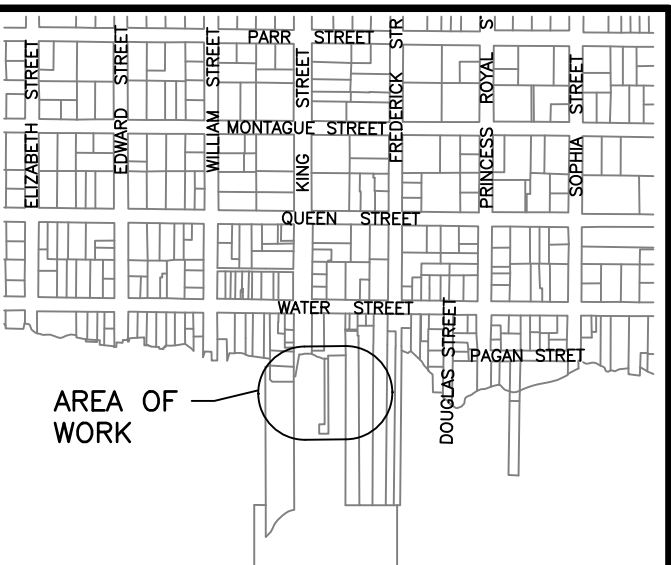
H SECTION PILE CAP CLUSTER REINFORCING TYPE 1
M13 1:20



J SECTION PILE CAP CLUSTER REINFORCING TYPE 1
M13 1:20



K SECTION PILE CAP CLUSTER REINFORCING TYPE 1
M13 1:20



KEY PLAN

1:10000

NOTE:

- ABOVE PILES CHANGE TO 25M U-BAR c/w STD HOOK EE.
2370
790 790
- ABOVE PILES CHANGE TO 25M U-BAR c/w STD HOOK EE.
2080
1160 1160
- ABOVE PILES CHANGE TO 25M U-BAR c/w STD HOOK EE.
2370
460 460
- ABOVE PILES CHANGE TO 25M U-BAR c/w STD HOOK EE.
1910
1160 1190
- ABOVE PILES CHANGE TO 25M U-BAR c/w STD HOOK EE.
2210
790 790
- ROUGHEN ALL PILE CAP SURFACES TO 5mm AMPLITUDE.
- PRECAST AND CAST IN PLACE SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
8	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

TOWN OF SAINT ANDREWS

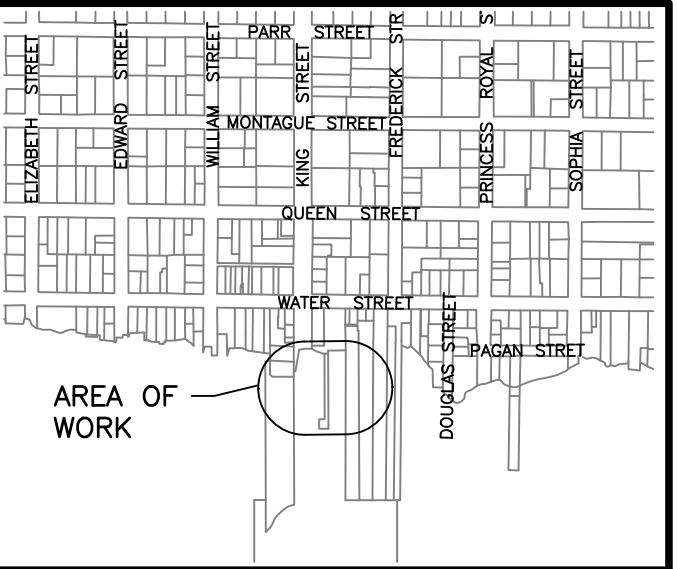
TSA WHARF APPROACH REPLACEMENT

STRUCTURAL

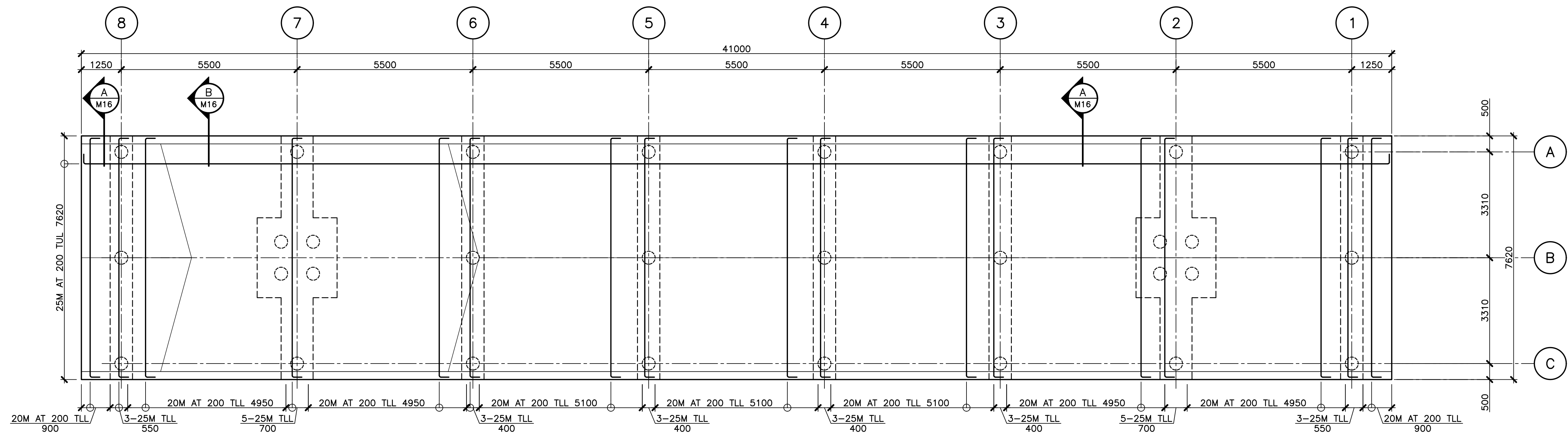
APPROACH TRESTLE - PILE CAP AND PRECAST PANEL SECTIONS



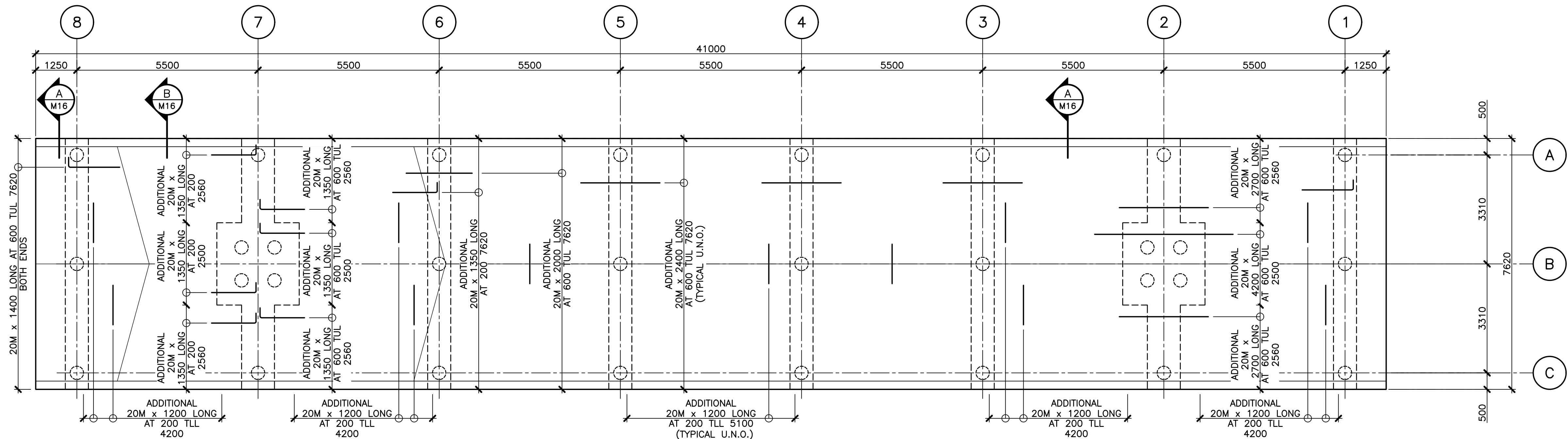
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Designed MK	Checked KM	Drawn LL	Approved
Sheet No 8 of 19		Drawing No M15	



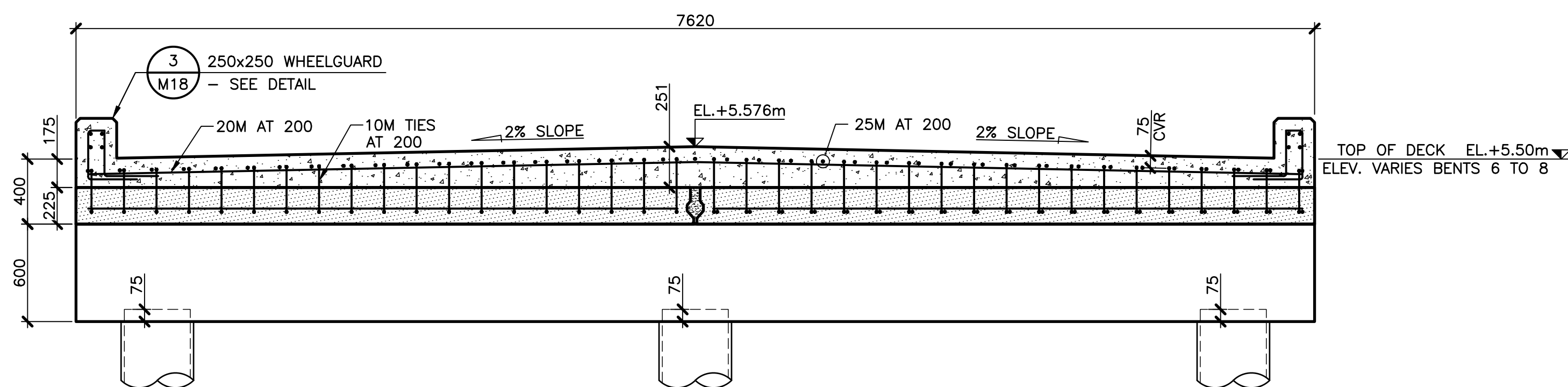
KEY PLAN
1:10000



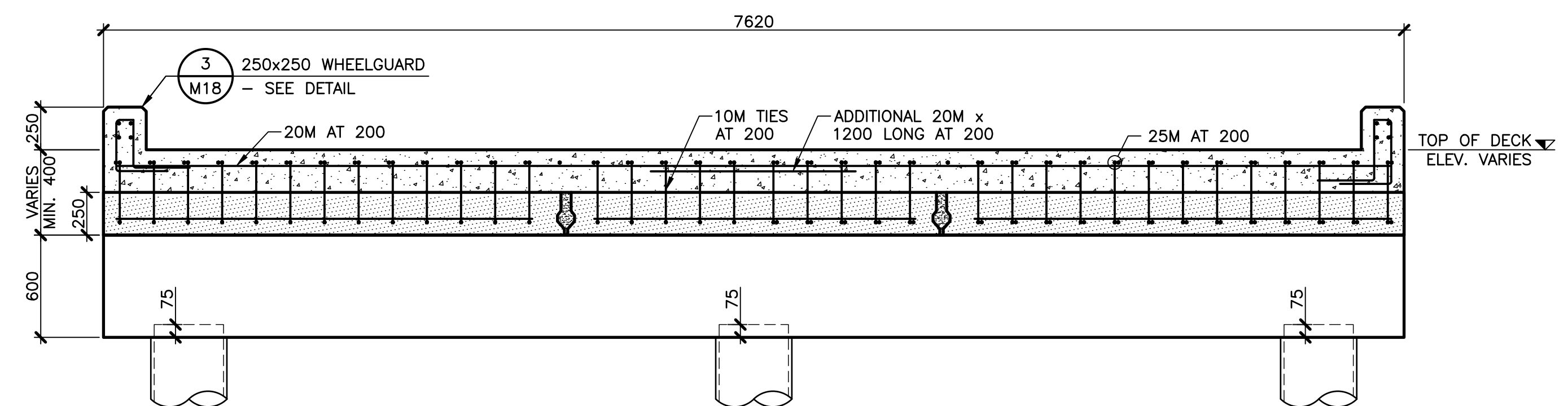
PLAN CAST-IN-PLACE CONCRETE DECK TOP LAYER LAYOUT
1:75



PLAN CAST-IN-PLACE CONCRETE DECK TOP LAYER ADDITIONAL REBAR LAYOUT
1:75



A SECTION CAST-IN-PLACE DECK REINFORCING BETWEEN BENTS 1 AND 6 AND CANTILEVER AFTER BENT 8
M16 1:25



B SECTION CAST-IN-PLACE DECK REINFORCING BETWEEN BENTS 6 AND 8
M16 1:25

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

TOWN OF SAINT ANDREWS

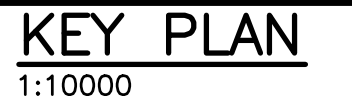
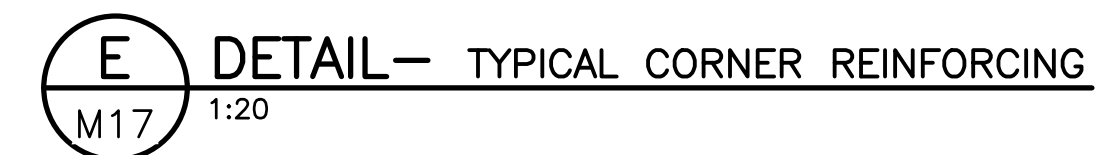
TSA WHARF APPROACH
REPLACEMENT

STRUCTURAL

APPROACH TRESTLE -
CONCRETE DECK PLAN
AND SECTIONS



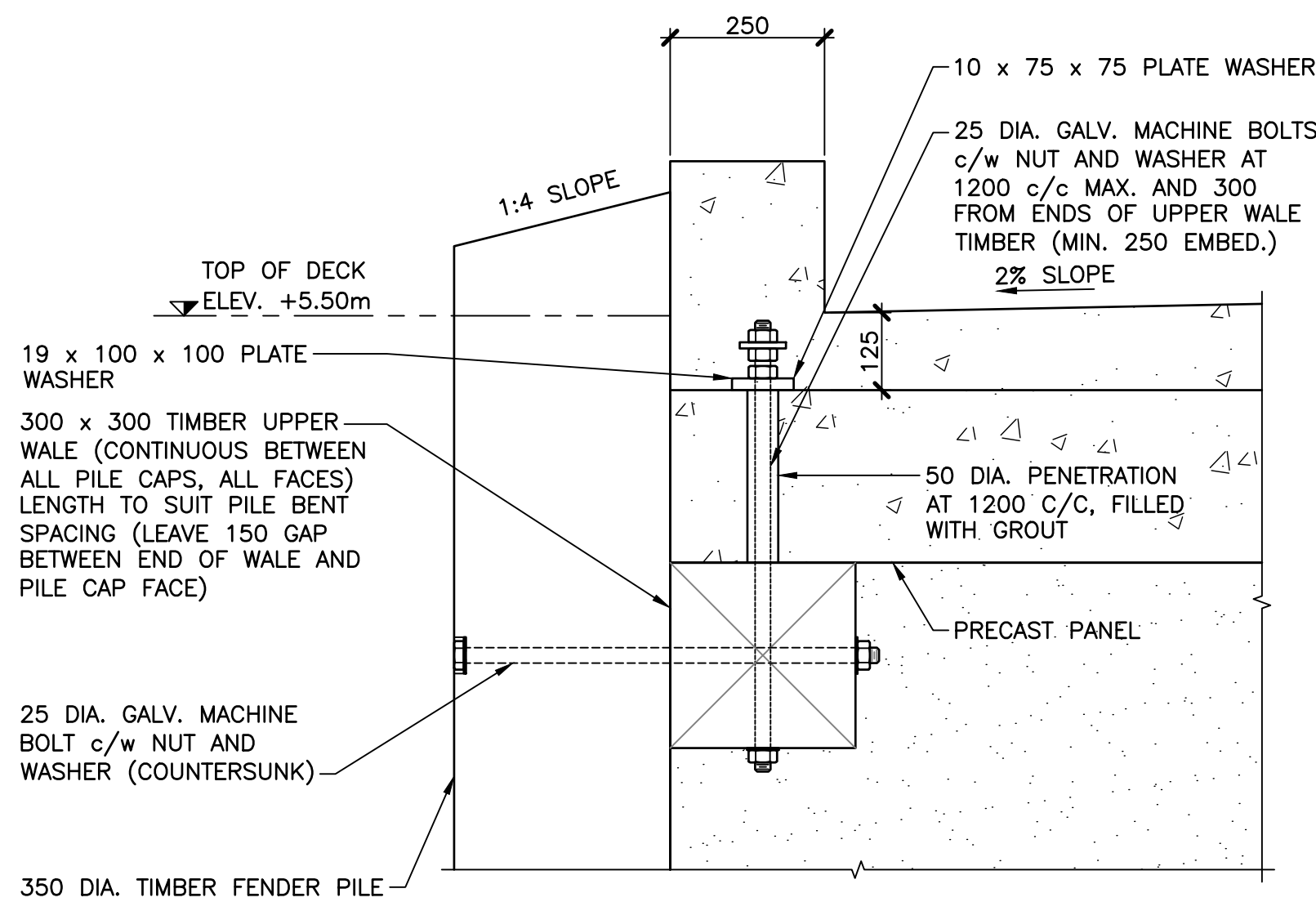
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Designed MK	Checked KM	Drawn LL	Approved
Sheet No 9 of 19		Drawing No M16	



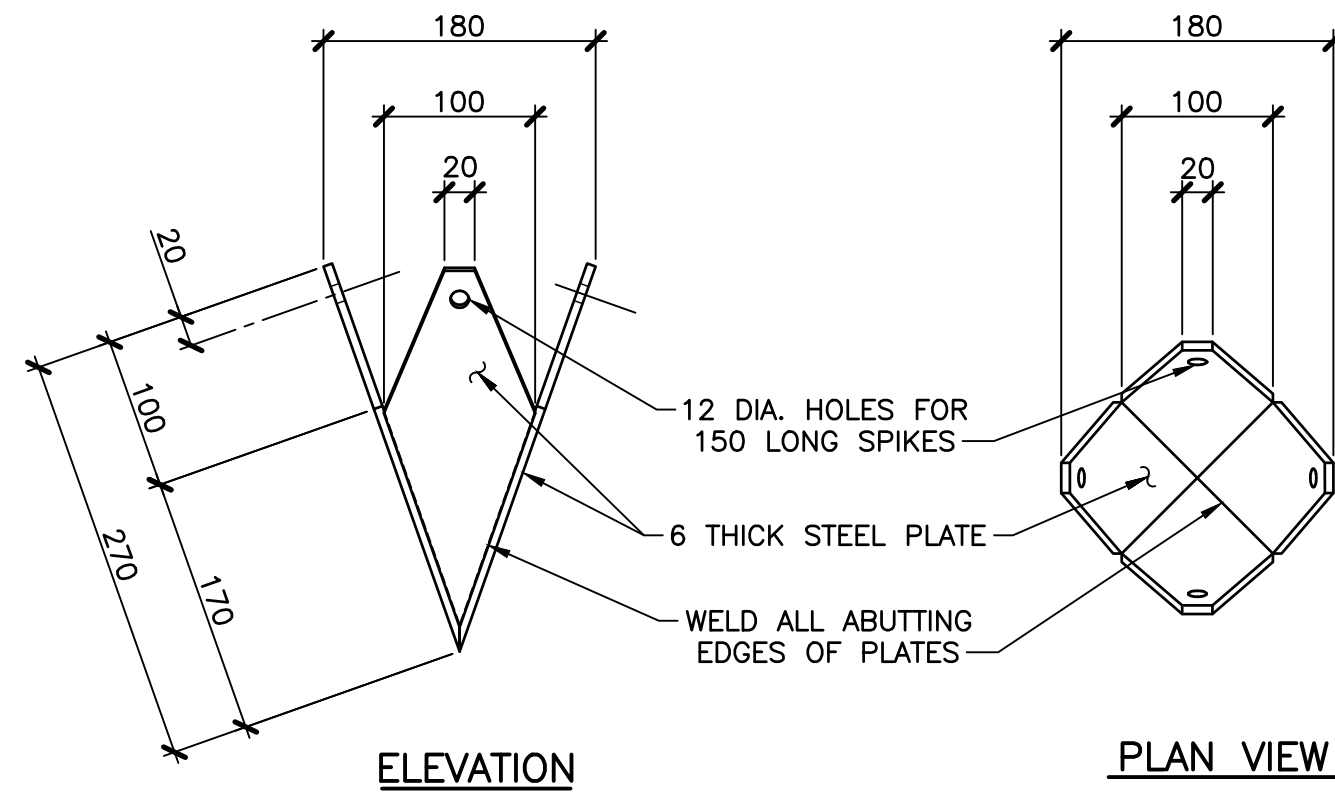
A SECTION APPROACH ABUTMENT RETAINING WALL
M17 1:50



M17

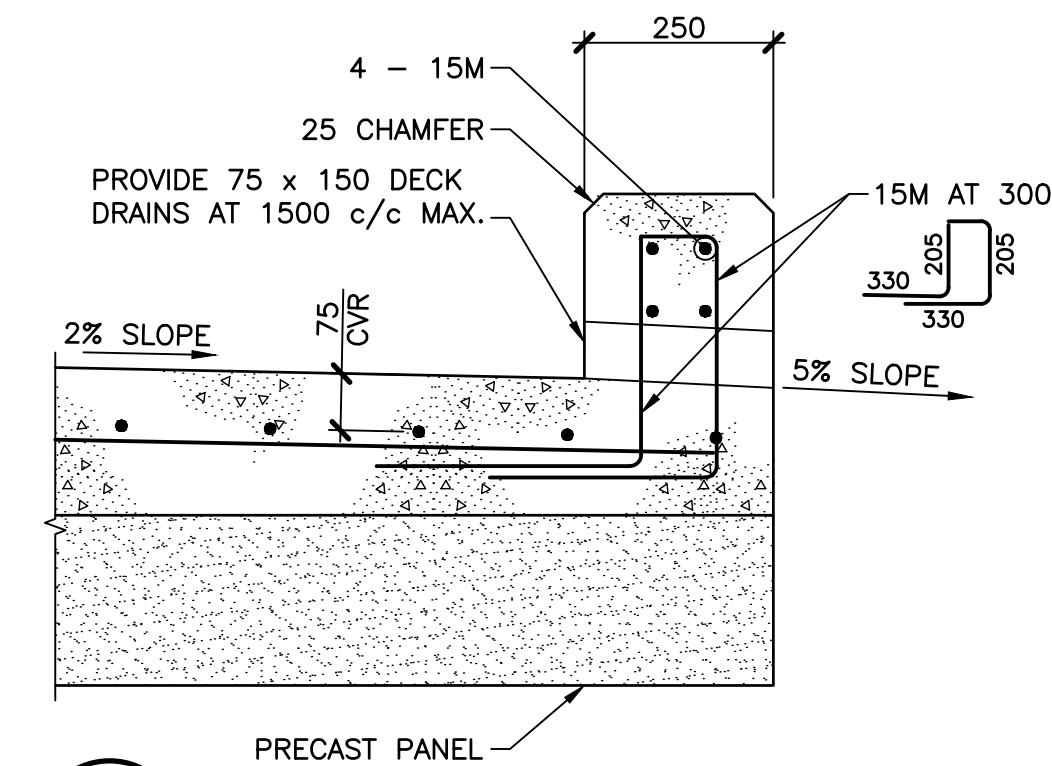


1 DETAIL FENDER PILE CONNECTION BETWEEN PILECAPS
M12 1:10

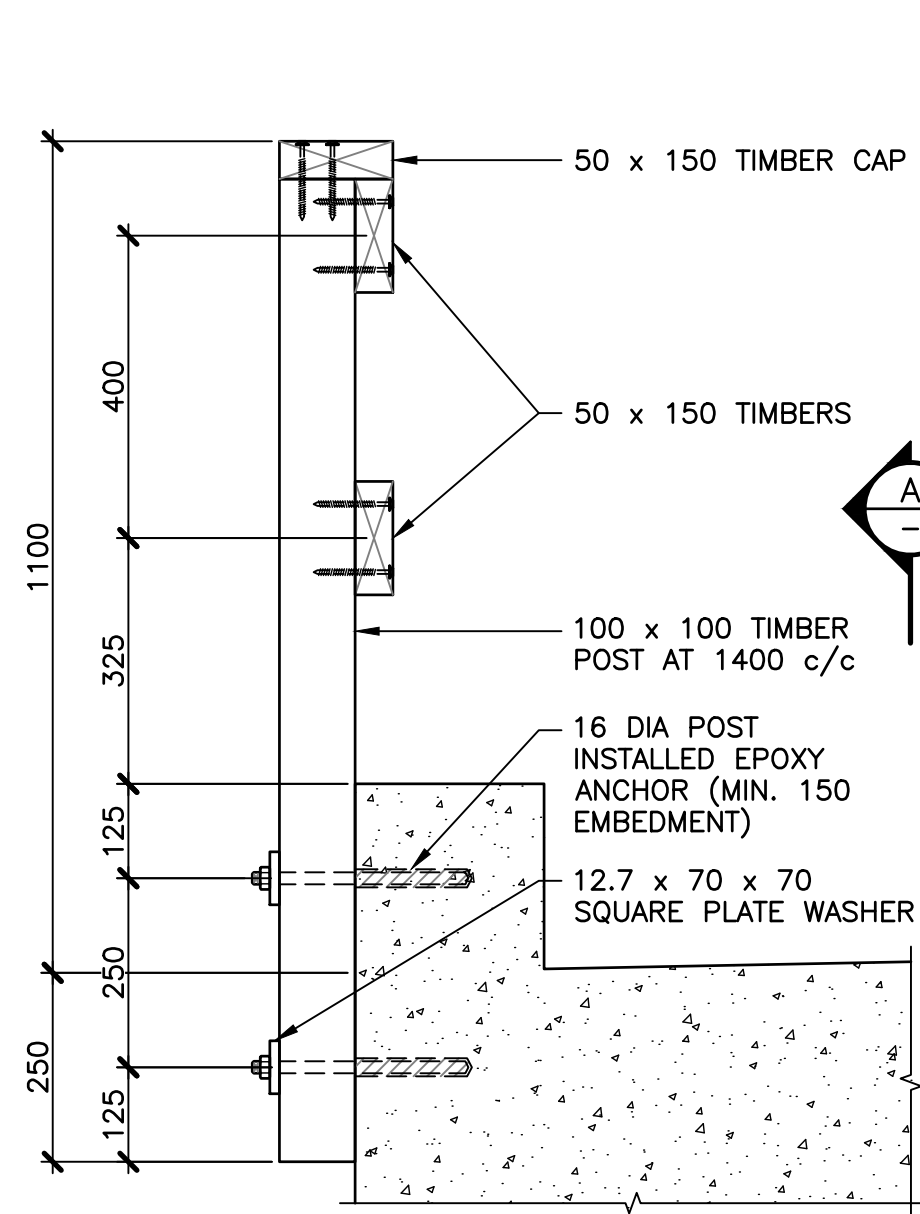


- NOTES:**
1. PILE SHOE REQUIRED AT ALL FENDER PILES.
 2. SHAPE BOTTOM OF TIMBER SO THAT SHOE WILL HAVE FULL BEARING PRIOR TO DRIVING.
 3. CONTRACTOR MAY PRODUCE ALTERNATIVE PILE TIP PROTECTION DETAIL TO DEPARTMENTAL REPRESENTATIVE FOR CONSIDERATION.

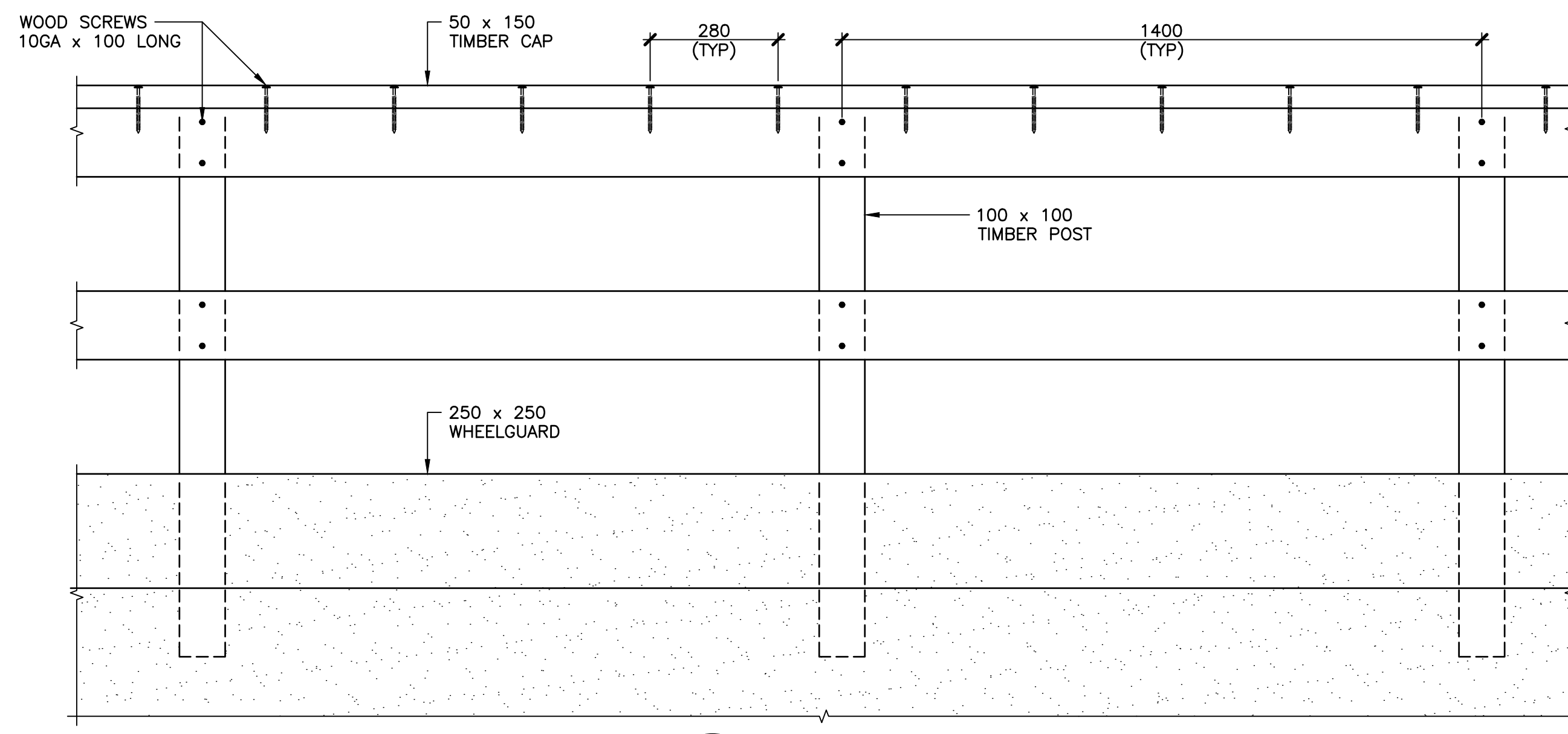
2 DETAIL TIMBER PILE DRIVING SHOE
M12 1:5



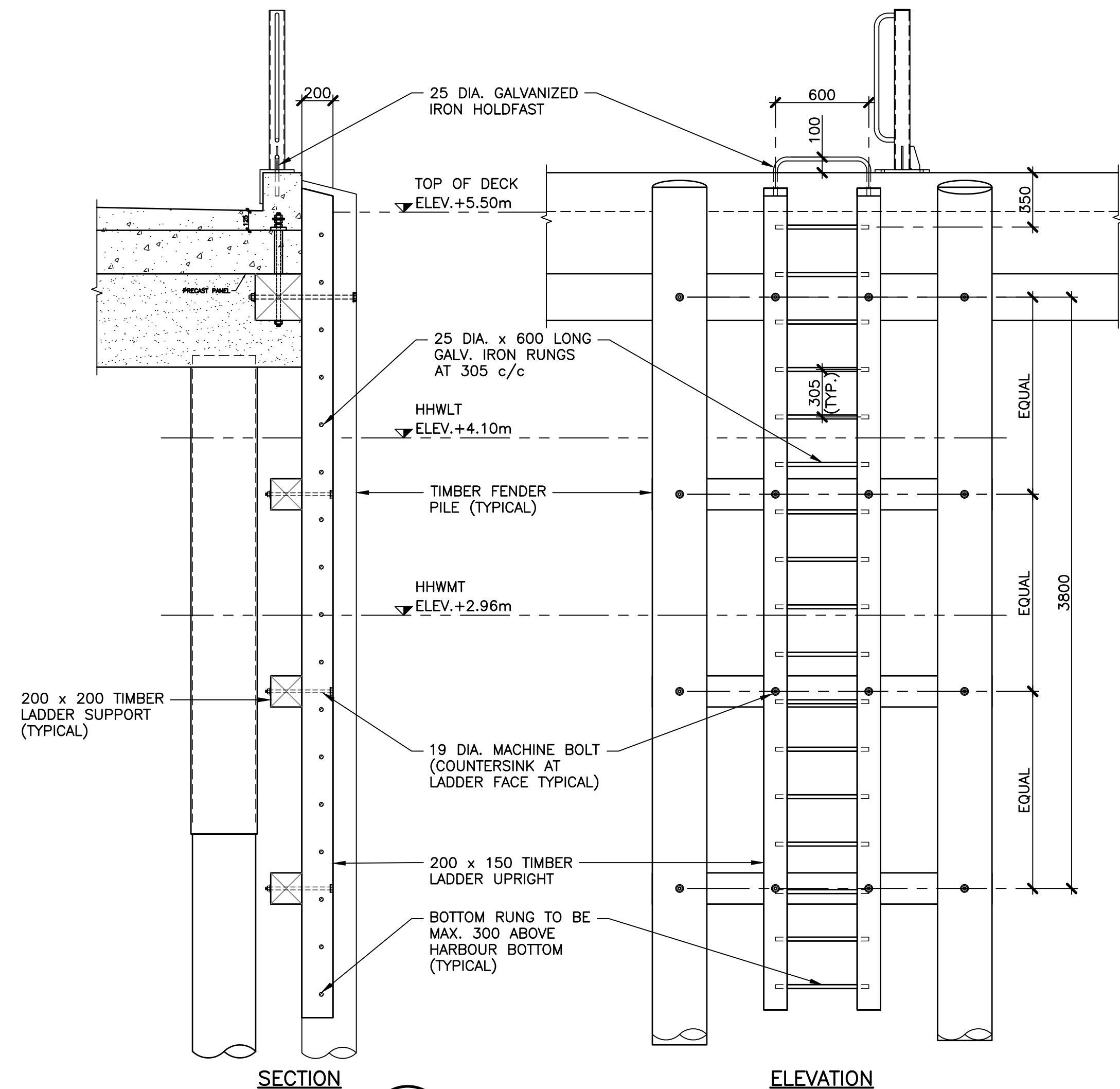
3 DETAIL CONCRETE WHEELGUARD
M12 1:10



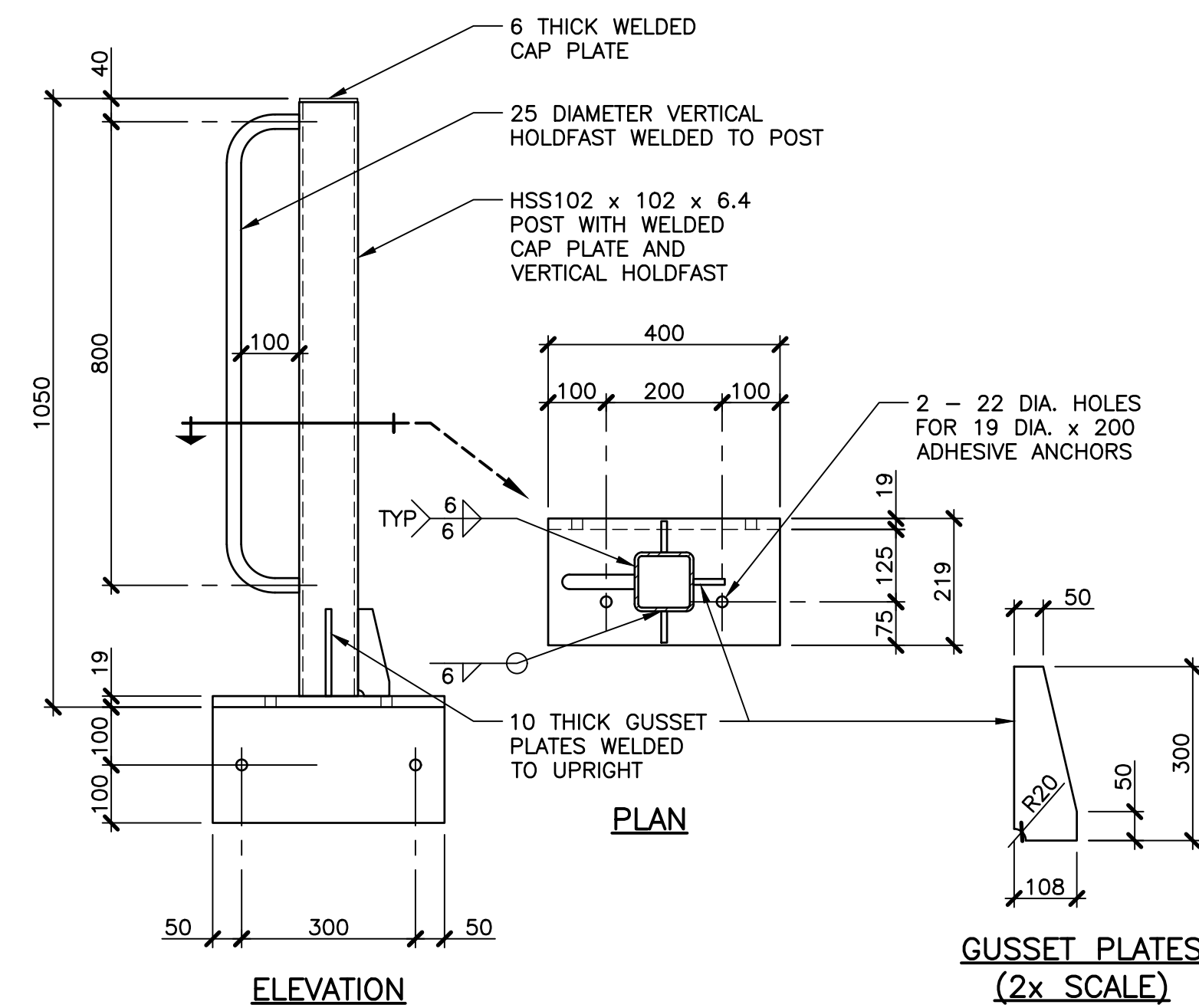
5 DETAIL HANDRAIL
M12 1:10



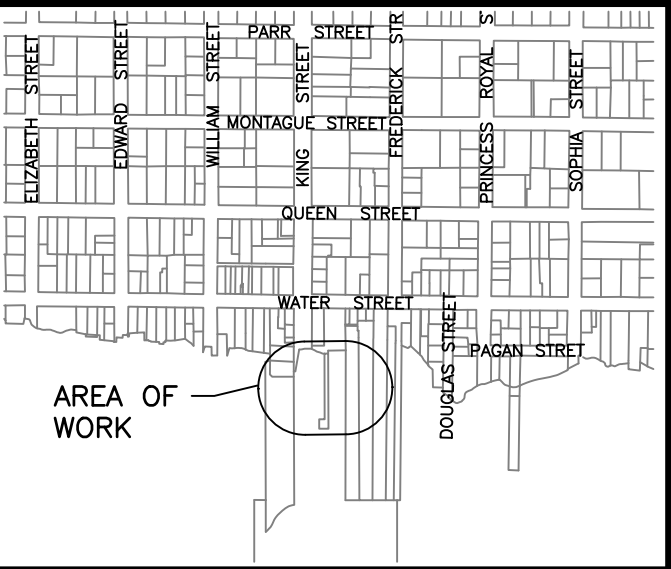
A SECTION HANDRAIL
M13 1:10



4 DETAIL LADDER ASSEMBLY
M12 1:25



6 DETAIL VERTICAL HOLDFAST ASSEMBLY
M12 1:10



KEY PLAN
1:10000

No.	Description	Date	By
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B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

TOWN OF SAINT ANDREWS

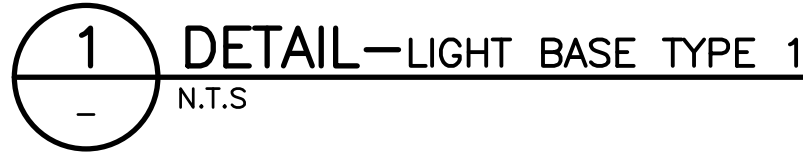
TSA WHARF APPROACH REPLACEMENT

STRUCTURAL

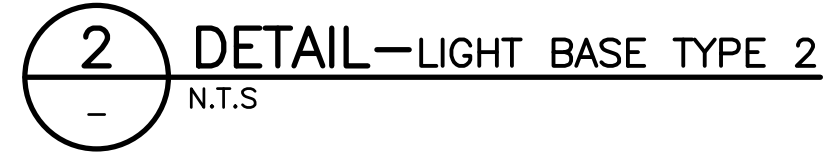
APPROACH TRESTLE - MISCELLANEOUS DETAILS



CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
Designed MK	Drawn LL	Checked KM	Approved
Sheet No 11	of 19	Drawing No	
M18			



1. SEE ELECTRICAL PLANS FOR SIZE AND QUANTITY OF CONDUITS.

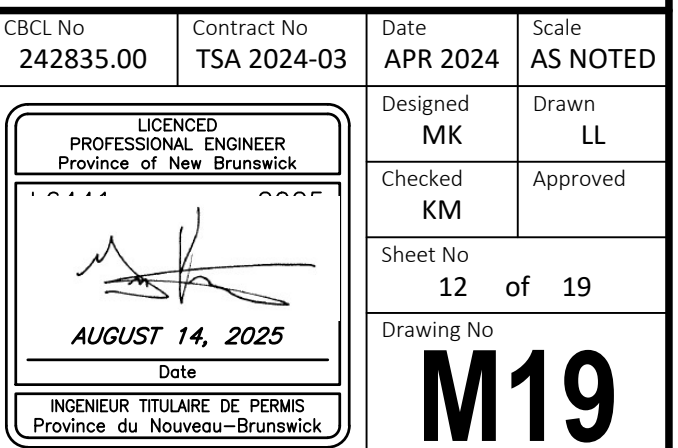
Revision or Issue

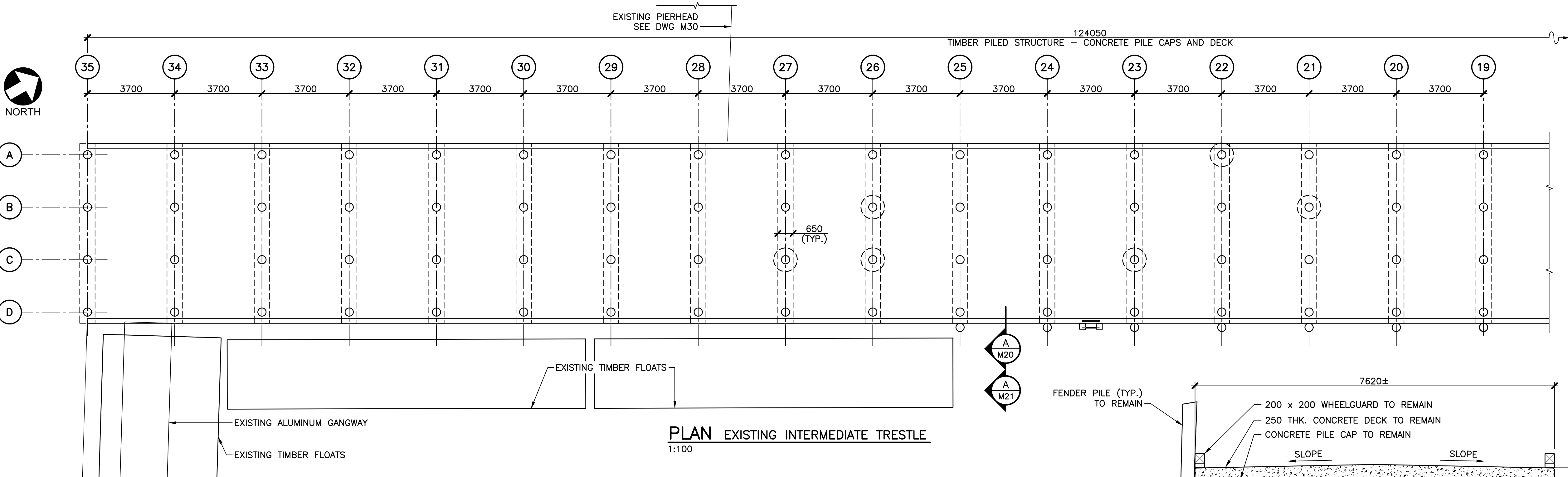
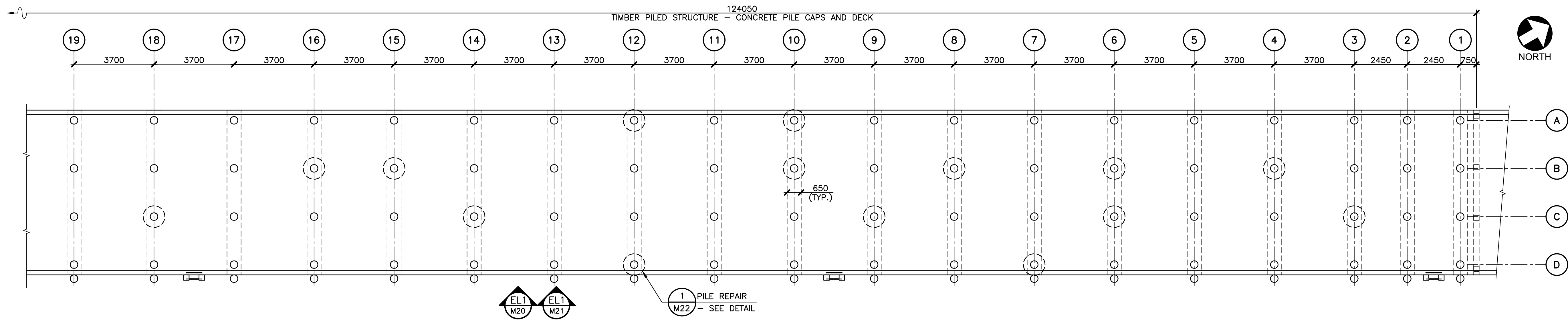
TOWN OF SAINT ANDREWS

TSA WHARF APPROACH
REPLACEMENT

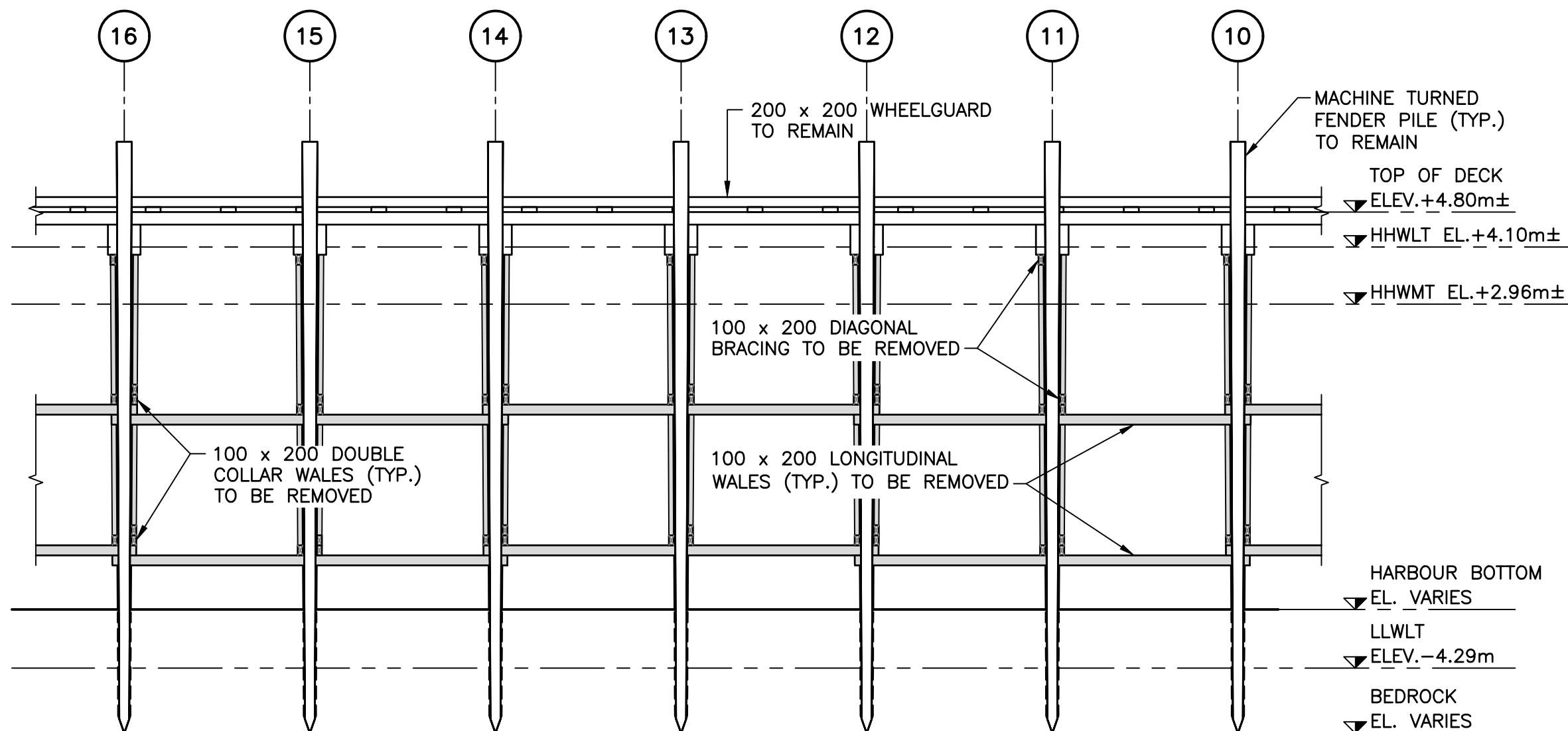
STRUCTURAL

APPROACH TRESTLE - MISCELLANEOUS DETAILS

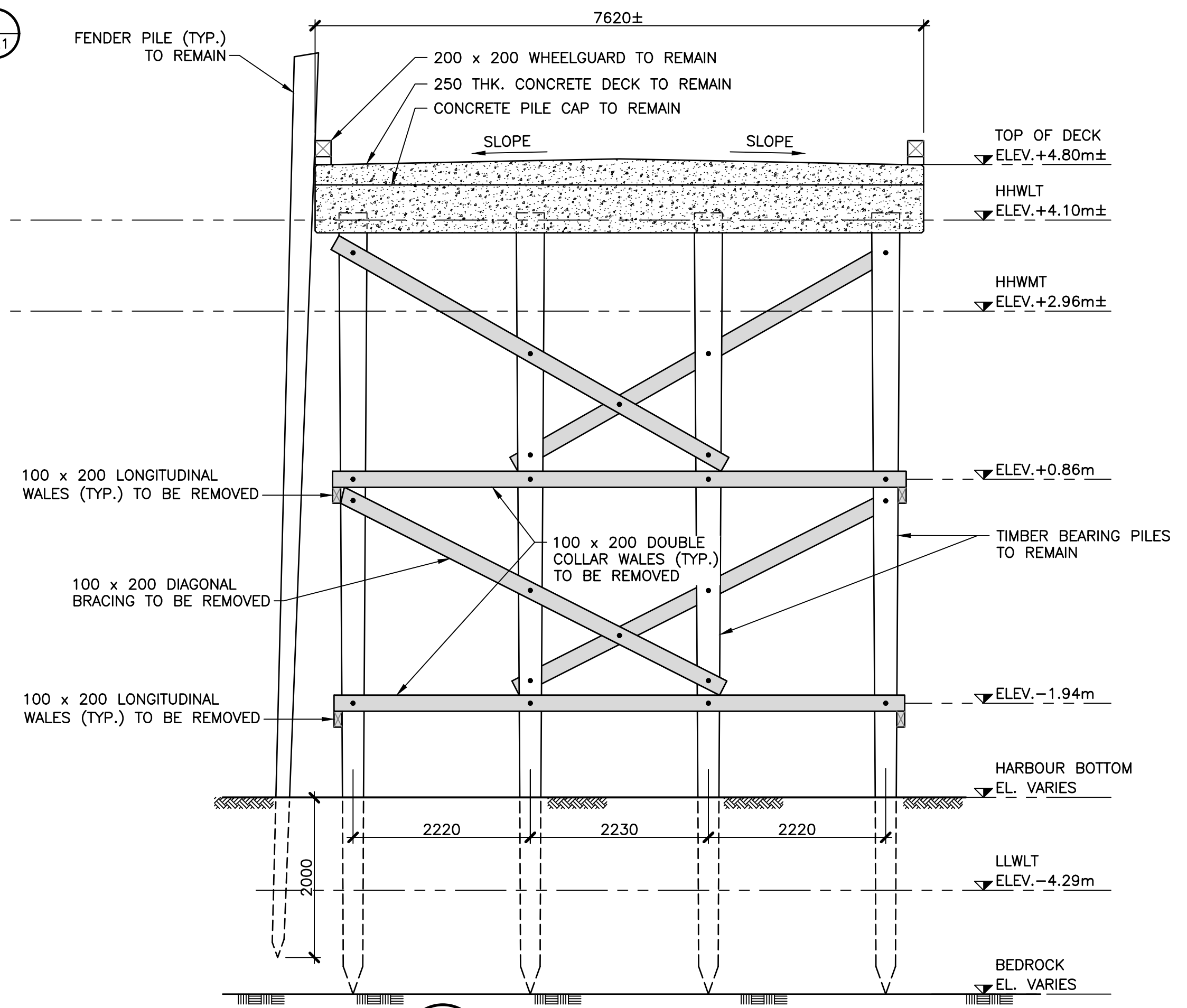




PLAN EXISTING INTERMEDIATE TRESTLE
1:100



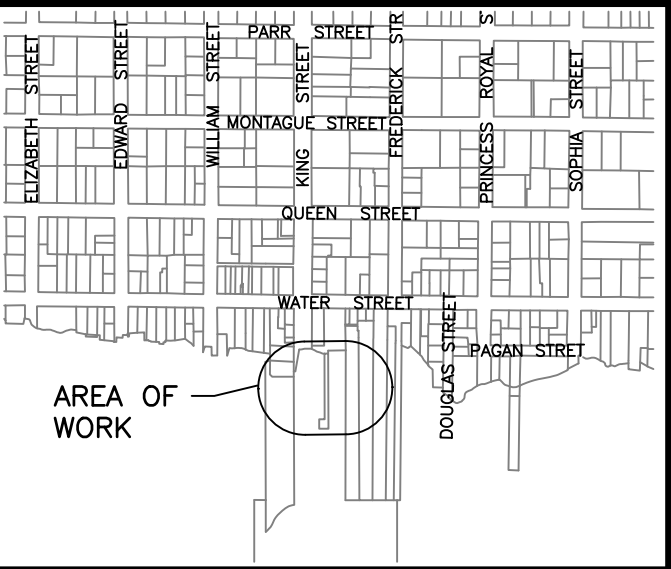
EL1 ELEVATION EXISTING PART TRESTLE ELEVATION
M20 1:100



A SECTION EXISTING CONDITIONS
M20 1:50

NOTES:

1. LONGITUDINAL WALES ARE NOT PRESENT BETWEEN BENT 5 AND BENT 6.
2. DOUBLE COLLAR WALES ARE NOT PRESENT ON BENT 26.
3. BRACING REMOVALS ARE TO BE LIMITED TO ONE BENT AT A TIME. CONTRACTOR NOT TO REMOVE BRACING ON ADJAVENT BENTS UNTIL NEW TIMBER BRACING IS FULLY INSTALLED.



KEY PLAN

1:10000

○ - PILE REPAIR

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

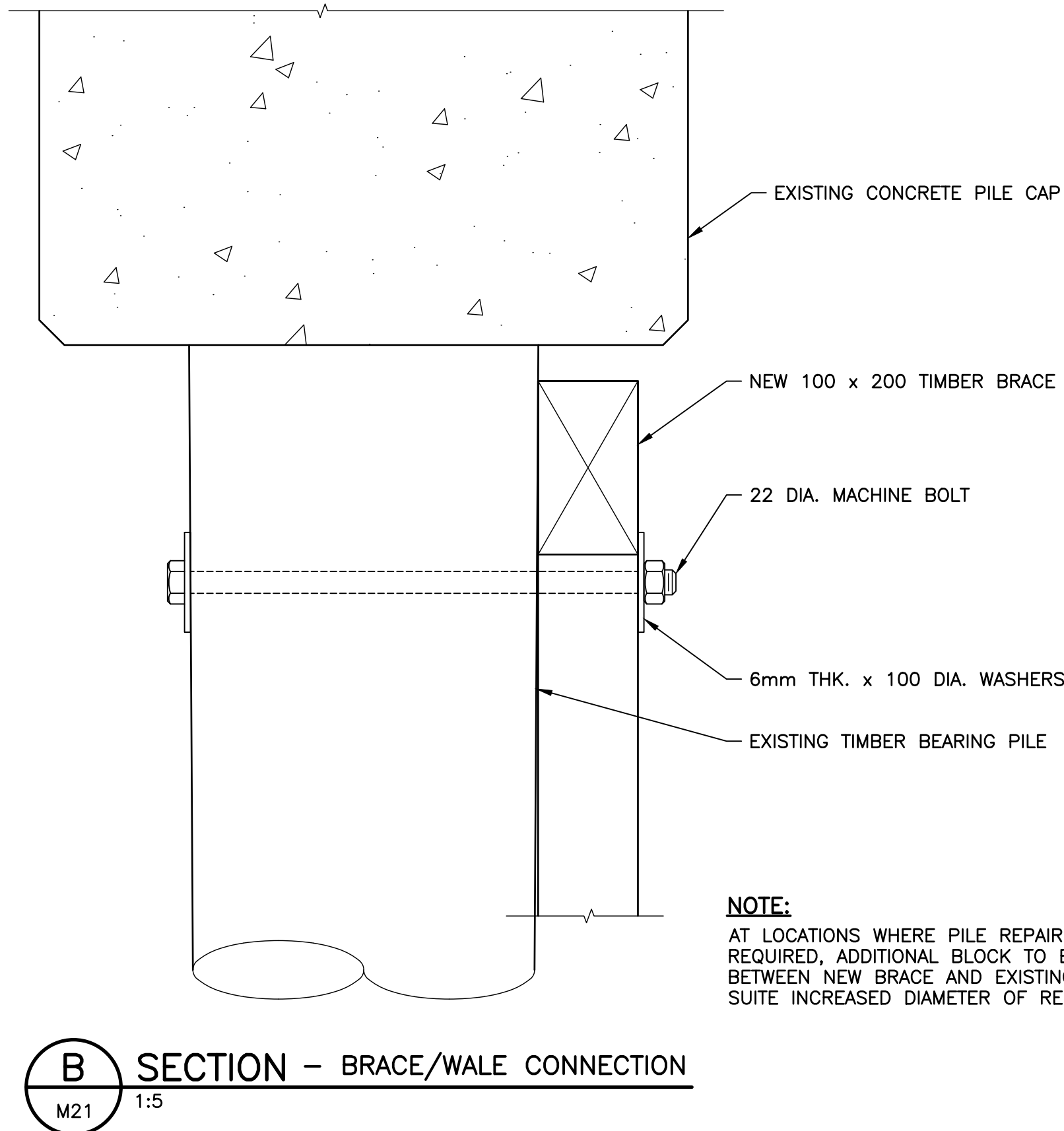
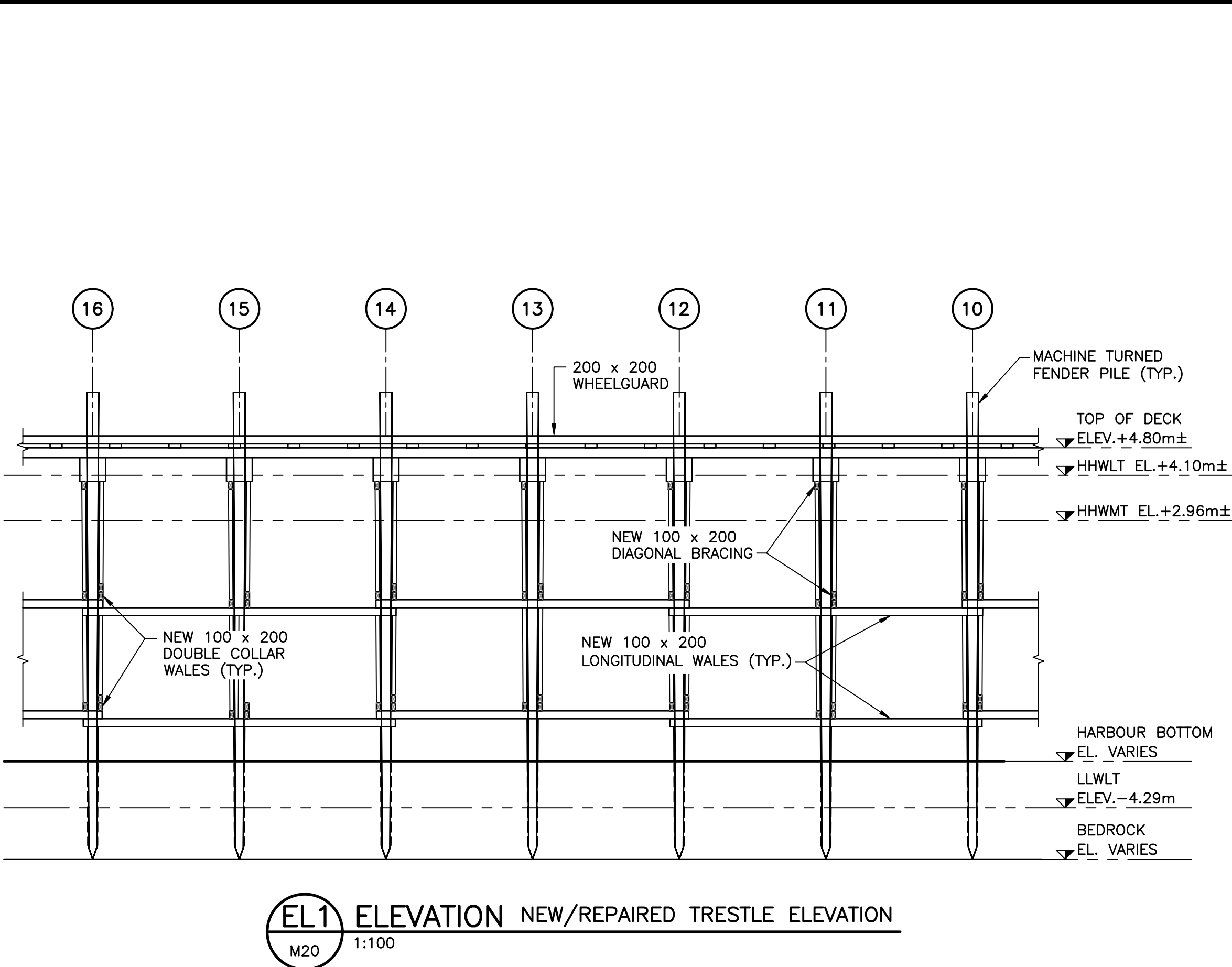
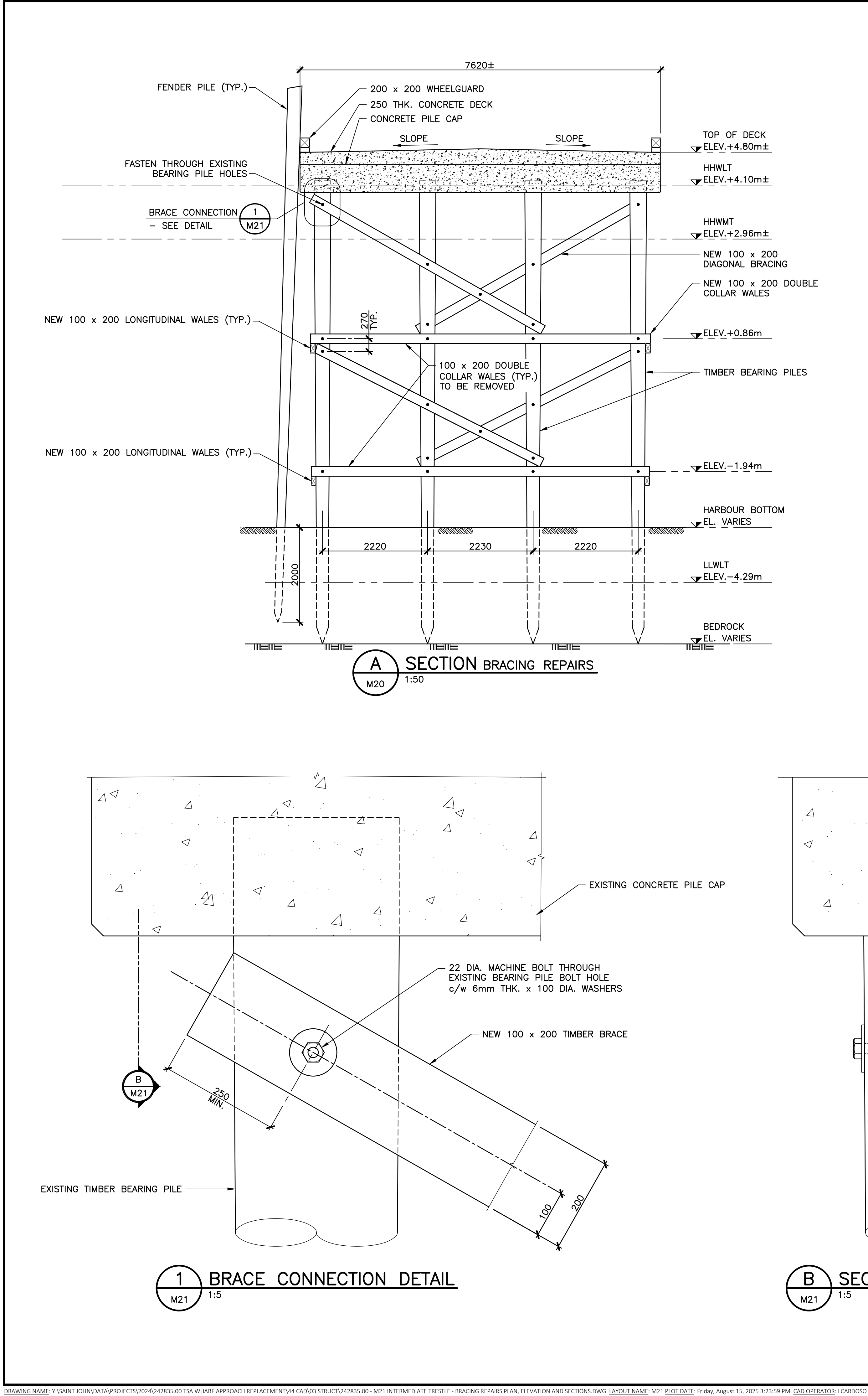
TOWN OF SAINT ANDREWS

TSA WHARF APPROACH
REPLACEMENT

STRUCTURAL
INTERMEDIATE TRESTLE -
EXISTING CONDITIONS AND
REMOVALS PLAN,
ELEVATION AND SECTIONS



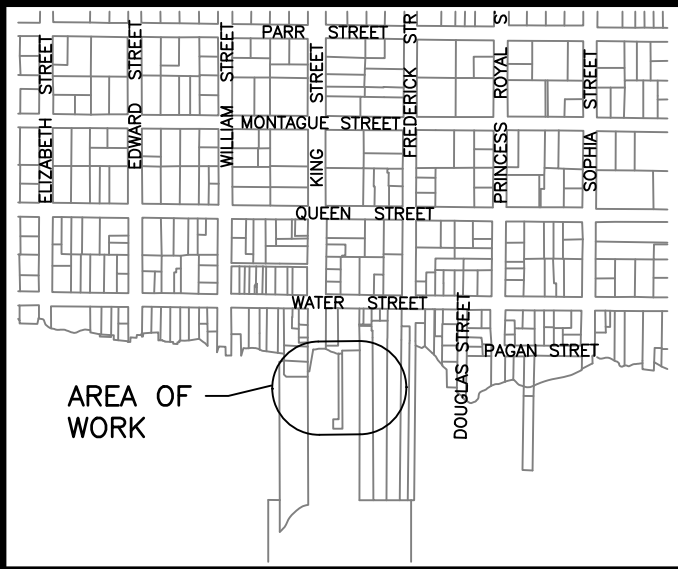
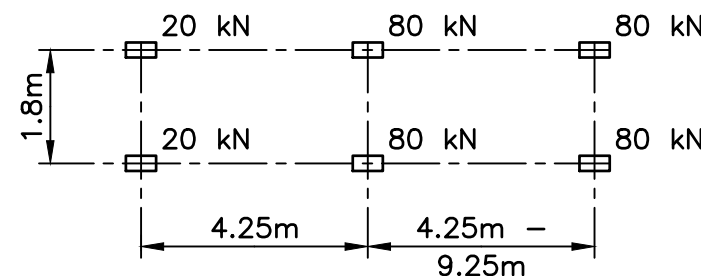
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Designed MK	Checked KM	Drawn LL	Approved
Sheet No 13 of 19		Drawing No M20	
Date AUGUST 14, 2025			
INGENIEUR TITULAIRE DE PERMIS Province du Nouveau-Brunswick			



DESIGN LOADING:

- INTERMEDIATE TRESTLE UNIFORM LIVE LOAD IS TO BE REDUCED FROM THE EXISTING 15kPa TO 10kPa.
- INTERMEDIATE TRESTLE TRUCK LOADING: MS 200 TRUCK LOADING.

MS200-77 TRUCKLOADING



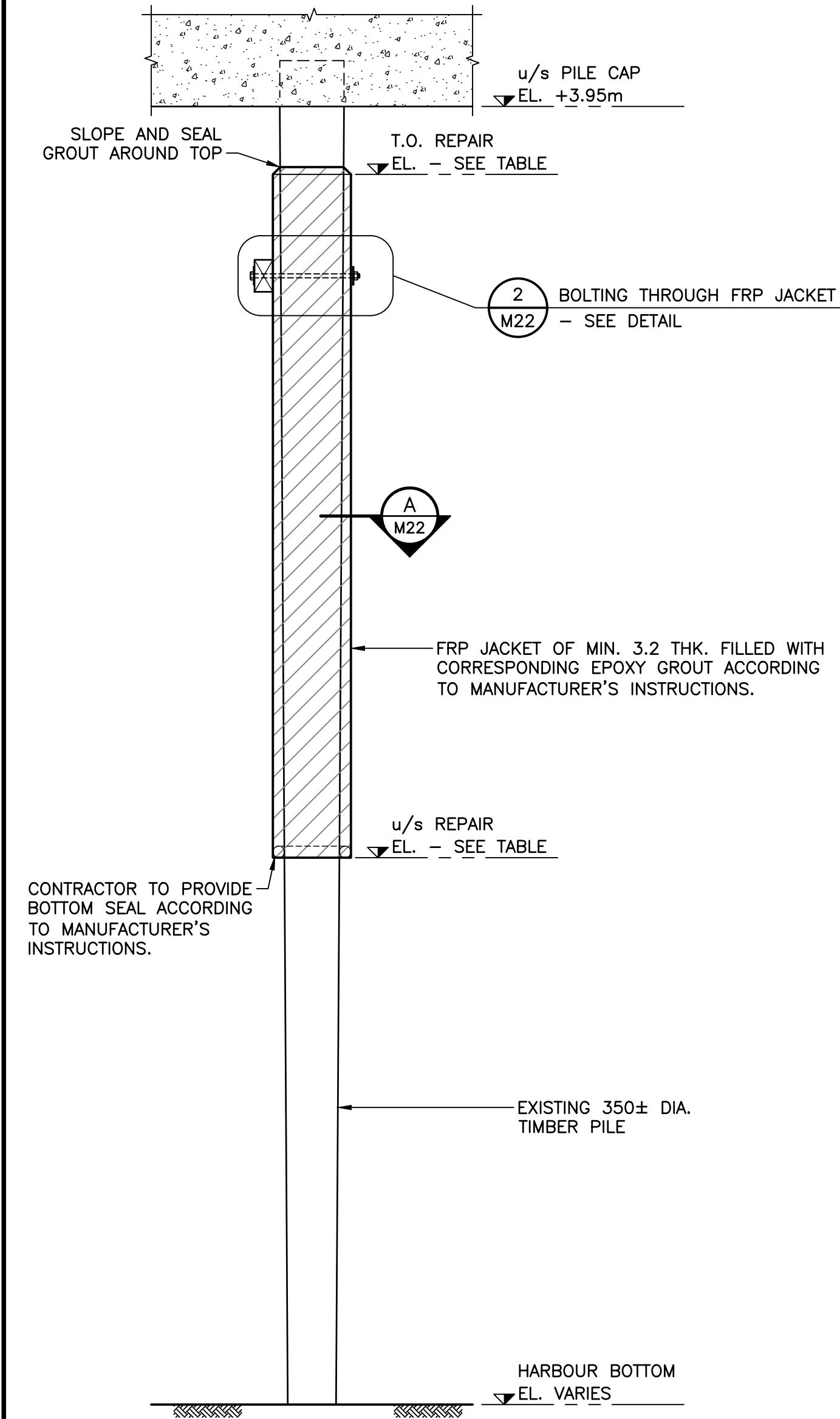
No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

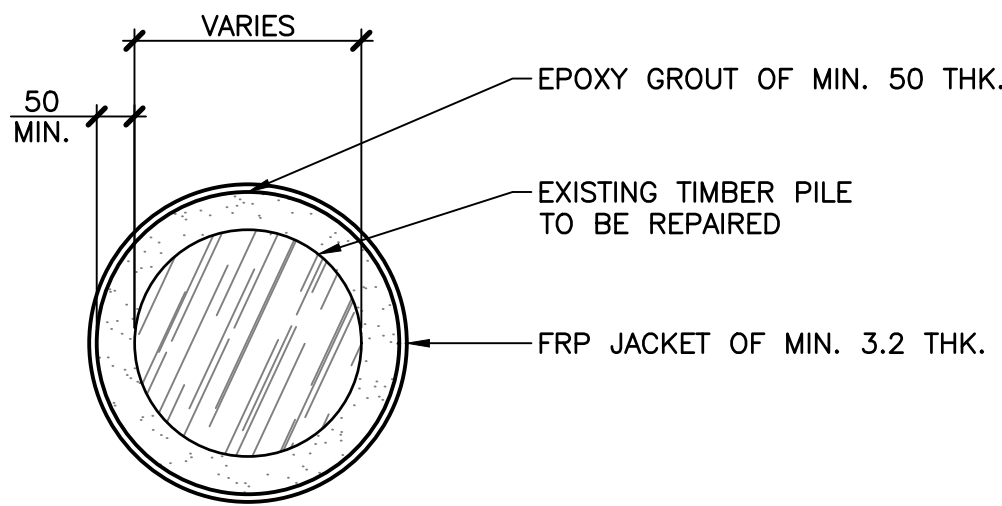
TOWN OF SAINT ANDREWS
TSA WHARF APPROACH REPLACEMENT
STRUCTURAL
INTERMEDIATE TRESTLE - BRACING REPAIRS PLAN, ELEVATION AND SECTIONS

CBCL

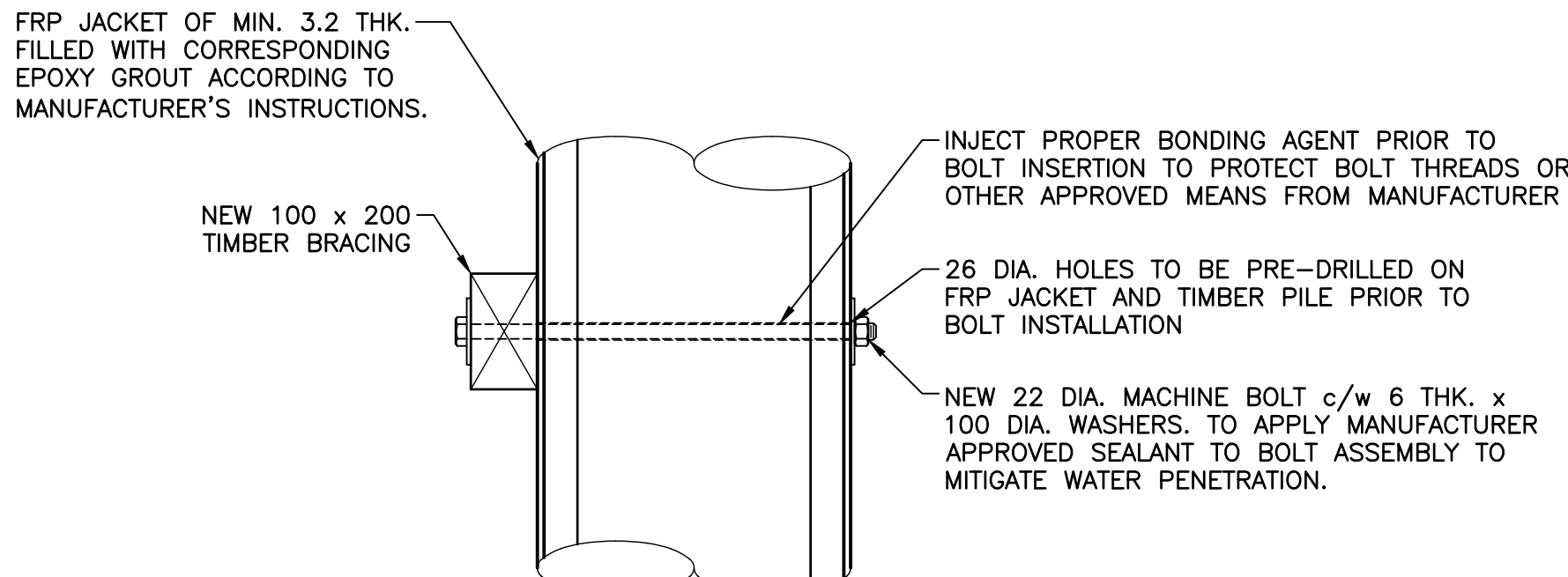
CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
LICENCED PROFESSIONAL ENGINEER Province of New Brunswick		Designed MK	Drawn LL
Checked KM		Approved	
Sheet No 14 of 19		Drawing No M21	
Date AUGUST 14, 2025			
INGENIEUR TITULAIRE DE PERMIS Province du Nouveau-Brunswick			



1 DETAIL— PILE REPAIR
M20 1:25



A SECTION— PILE REPAIR
M22 1:10

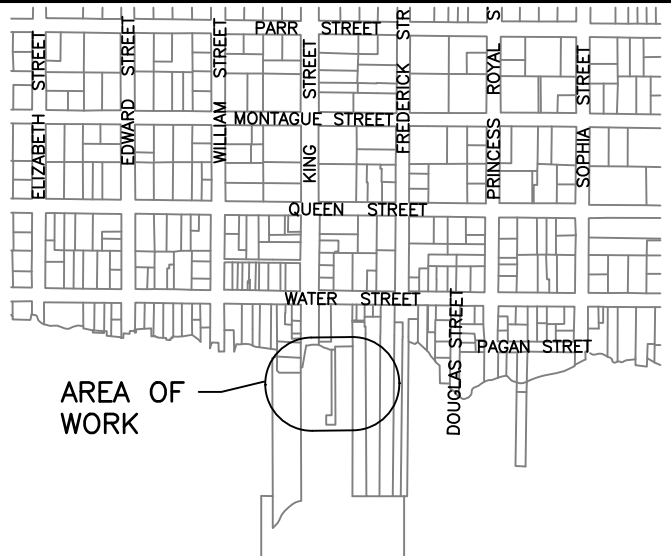


2 DETAIL – BOLTING FOR FRP JACKET
M22 1:10

- NOTE:**
- FRP WRAP AND EPOXY GROUT ARE TO BE APPLIED ACCORDING TO MANUFACTURER'S INSTRUCTIONS
 - FRP FORM CLOSURE IS TO BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS
 - PUMPING PORTS ARE TO BE INSTALLED AS REQUIRED BY MANUFACTURER'S INSTRUCTIONS

PILE REPAIR SCHEDULE			
PILE ID	T.O. REPAIR ELEV. (m)	u/s REPAIR ELEV. (m)	ESTIMATED REPAIR LENGTH (m)
3C	+1.86	SEA FLOOR	3.2
4B	+1.86	SEA FLOOR	3.2
6B	+1.86	SEA FLOOR	3.3
6C	+3.58	SEA FLOOR	5.0
7D	+1.86	SEA FLOOR	3.4
8B	+3.58	SEA FLOOR	5.2
9C	+3.58	-0.14	3.7
10A	TO BE VERIFIED*	TO BE VERIFIED*	4.2
10B	+1.86	SEA FLOOR	3.7
12A	TO BE VERIFIED*	TO BE VERIFIED*	4.2
12D	TO BE VERIFIED*	TO BE VERIFIED*	4.2
14C	+1.86	SEA FLOOR	4.2
15B	+1.86	SEA FLOOR	4.3
16B	+1.86	SEA FLOOR	4.4
18C	+1.86	SEA FLOOR	4.4
21B	+1.86	SEA FLOOR	4.6
22A	+1.86	SEA FLOOR	4.7
23C	+1.86	SEA FLOOR	4.8
26B	+1.86	SEA FLOOR	5.0
26C	+1.86	SEA FLOOR	5.0
27C	+1.86	SEA FLOOR	5.0

* CONTRACTOR TO INSPECT TIMBER PILE AND CONFIRM LOCATION OF DAMAGE IN THE PILE WITH ENGINEER PRIOR TO REPAIR.



KEY PLAN
1:10000

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

TOWN OF SAINT ANDREWS

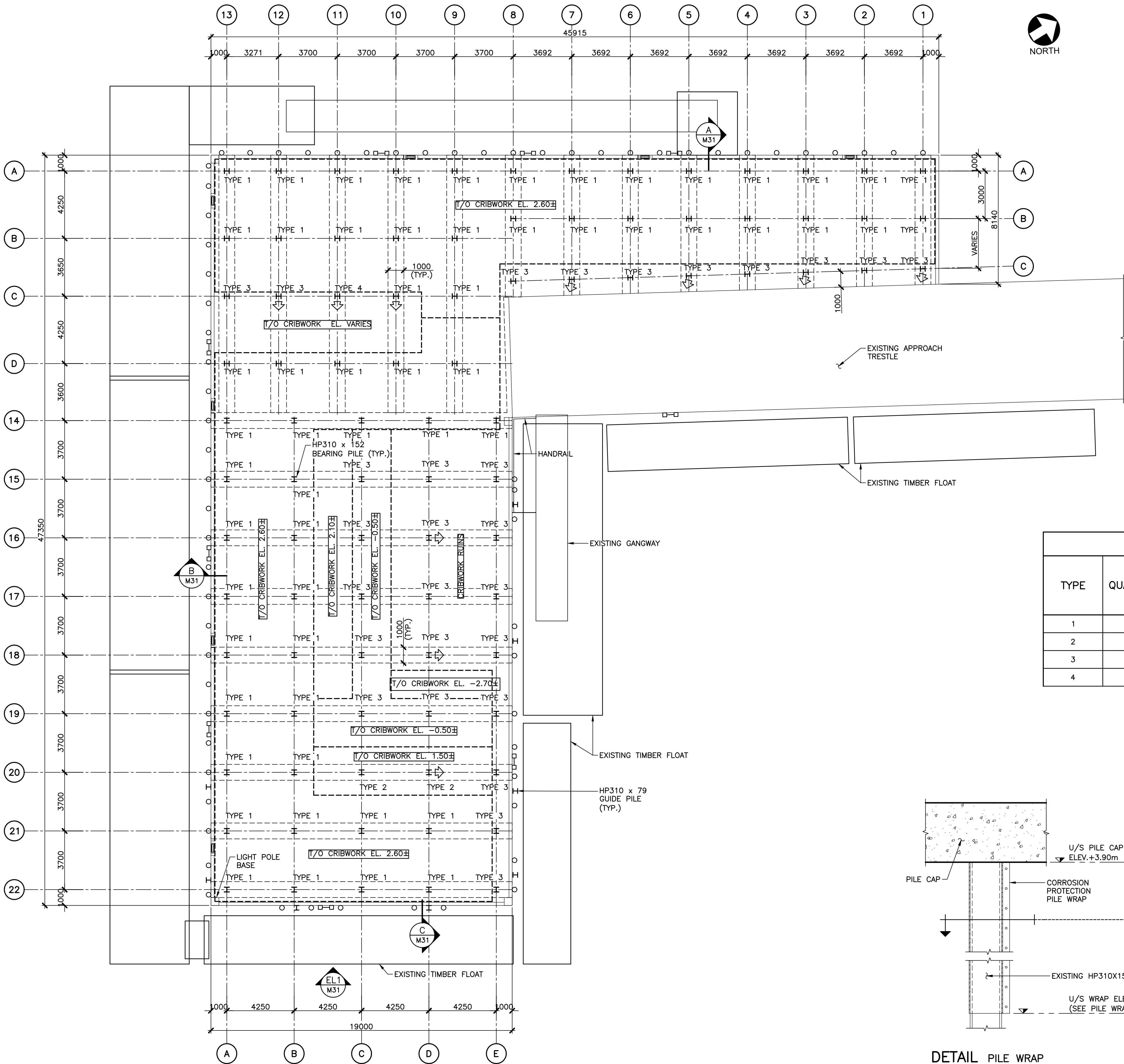
TSA WHARF APPROACH REPLACEMENT

STRUCTURAL

INTERMEDIATE TRESTLE – PILE REPAIR DETAILS



CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
LICENCED PROFESSIONAL ENGINEER Province of New Brunswick Checked KM Date AUGUST 14, 2025 INGENIEUR TITULAIRE DE PERMIS Province du Nouveau-Brunswick	Designed MK Drawn LL Approved	Sheet No 15 of 19	Drawing No M22

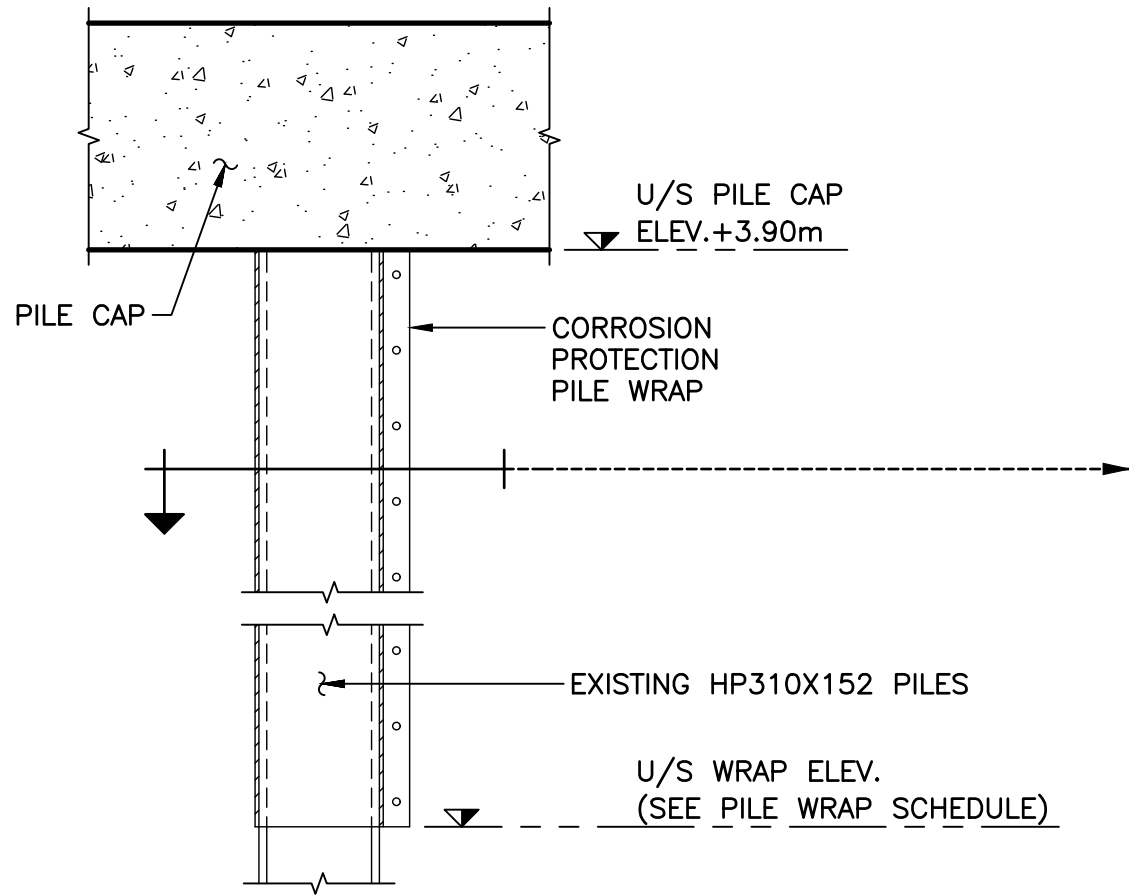


PLAN EXISTING PIERHEAD
1:125

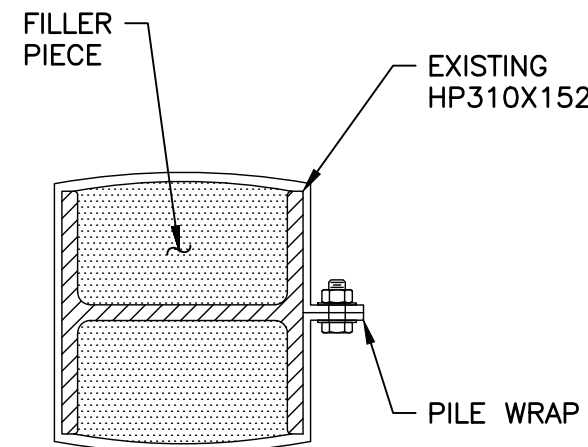
PILE PROTECTION NOTES:

- PRIOR TO INSTALLATION OF CORROSION PROTECTION SYSTEMS, A PILE INVESTIGATION ON THE EXISTING H-PILES WILL BE CONDUCTED TO DETERMINE IF REINFORCING IS REQUIRED PRIOR TO APPLICATION OF THE CORROSION PROTECTION SYSTEM. CONTRACTOR TO PROVIDE THE FOLLOWING TO ASSIST IN COMPLETION OF THE PILE INVESTIGATION.
 - ALL EXPOSED PORTION OF PILES TO BE THOROUGHLY CLEANED OF ALL MARINE GROWTH AND SCALE FROM THE UNDERSIDE OF PILE CAP TO THE BOTTOM ELEVATION OF THE CORROSION PROTECTION SYSTEM NOTED IN THE PILE WRAP SCHEDULE.
 - CONTRACTOR TO PROVIDE ADEQUATE ACCESS TO ALLOW ENGINEER TO COMPLETE A VISUAL INSPECTION ON THE PILES AND TO COMPLETE ULTRASONIC THICKNESS MEASUREMENTS.
 - ULTRASONIC THICKNESS MEASUREMENTS WILL BE TAKEN AT 300mm INCREMENTS ALONG THE LENGTH OF PILE THAT WILL RECEIVE THE CORROSION PROTECTION SYSTEM. THICKNESS MEASUREMENTS WILL CONSIST OF TWO (2) READINGS PER FLANGE, AND ONE (1) READING PER WEB, AT EACH INCREMENT ALONG THE LENGTH.
 - ENGINEER WILL USE THE INFORMATION GATHERED FROM THE PILE INVESTIGATION TO DETERMINE WHETHER FURTHER REINFORCING IS REQUIRED ON EACH H-PILE.
- ALL ELEVATIONS ARE IN GEODETIC METRES AND REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1928 (CGVD28).
- UPON COMPLETION OF THE PILE INVESTIGATION AND APPROVAL FROM ENGINEER TO PROCEED, CONTRACTOR TO INSTALL PILE CORROSION PROTECTION SYSTEMS FROM THE UNDERSIDE OF PILE CAP TO THE ELEVATION SHOWN IN THE PILE WRAP SCHEDULE. ACCEPTABLE PRODUCT – RETROWRAP H AS MANUFACTURED BY CORROSION CONTROL INTERNATIONAL (OR APPROVED EQUIVALENT). CORROSION PROTECTION SYSTEM, COMPLETE WITH STAINLESS STEEL HARDWARE, AND COLLAR INSTALLED AT THE INTERFACE BETWEEN THE TOP OF THE WRAP AND UNDERSIDE OF PILE CAP. CORROSION PROTECTION SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ELEVATIONS INDICATE MINIMUM ELEVATION THAT PILE WRAPS WILL BE INSTALLED TO. IN LOCATIONS WHERE TOP OF TIMBER CRIB IS AT A LOWER ELEVATION THAN SHOWN ON TABLE, PILE WRAPS TO BE INSTALLED TO TOP OF TIMBER CRIB REMAINS. CONTRACTOR TO CONFIRM EXPOSED PILE LENGTHS PRIOR TO MANUFACTURE AND INSTALLATION OF PILE WRAP SYSTEMS.
- AT LOCATIONS WHERE SACRIFICIAL ANODES ARE CURRENTLY INSTALLED, PILE WRAPS ARE TO BE INSTALLED TO AN ELEVATION 200mm ABOVE THE TOP CONNECTION OF SACRIFICIAL ANODE.

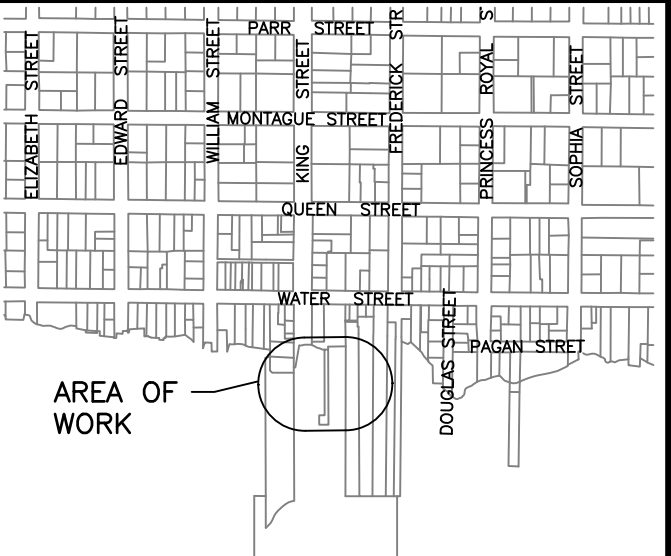
PILE WRAP SCHEDULE					
TYPE	QUANTITY	TOP ELEV.	ESTIMATED BOTTOM ELEV.	ESTIMATED LENGTH (m)	INSTALLED LENGTH (m)
1	58	+3.90	+2.60 (4,5)	1.30 (4,5)	
2	3	+3.90	+1.50 (4,5)	2.40 (4,5)	
3	28	+3.90	0.00	3.90	
4	1	+3.90	+0.85	3.05	



DETAIL PILE WRAP
1:20



SECTION PILE WRAP
1:10



KEY PLAN
1:10000


No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

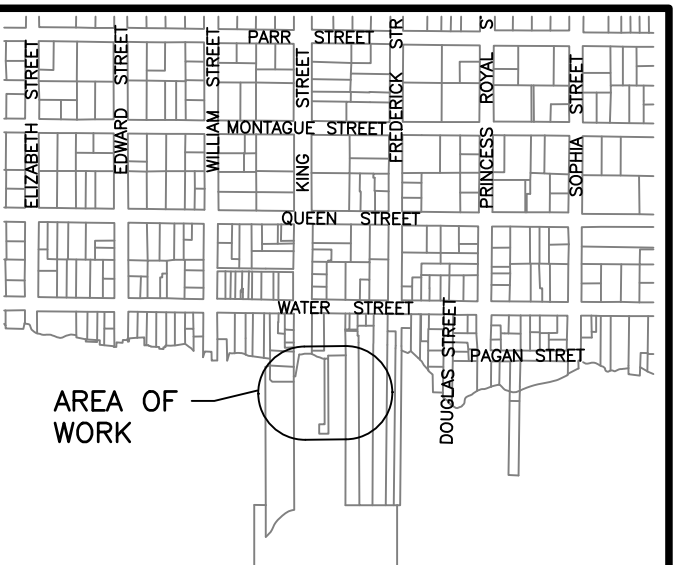
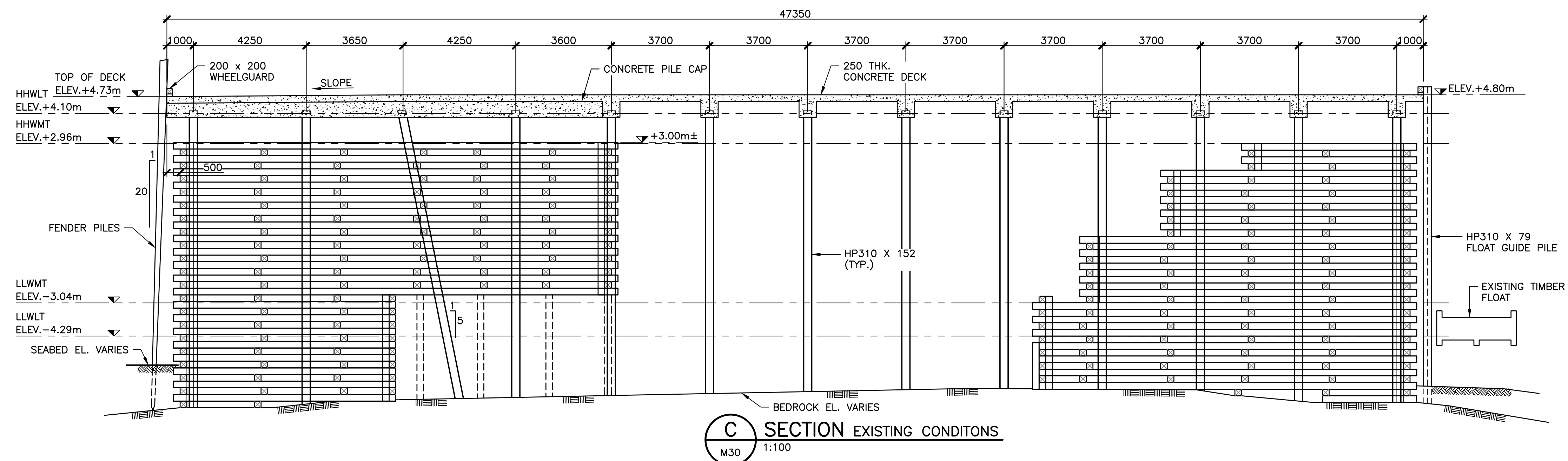
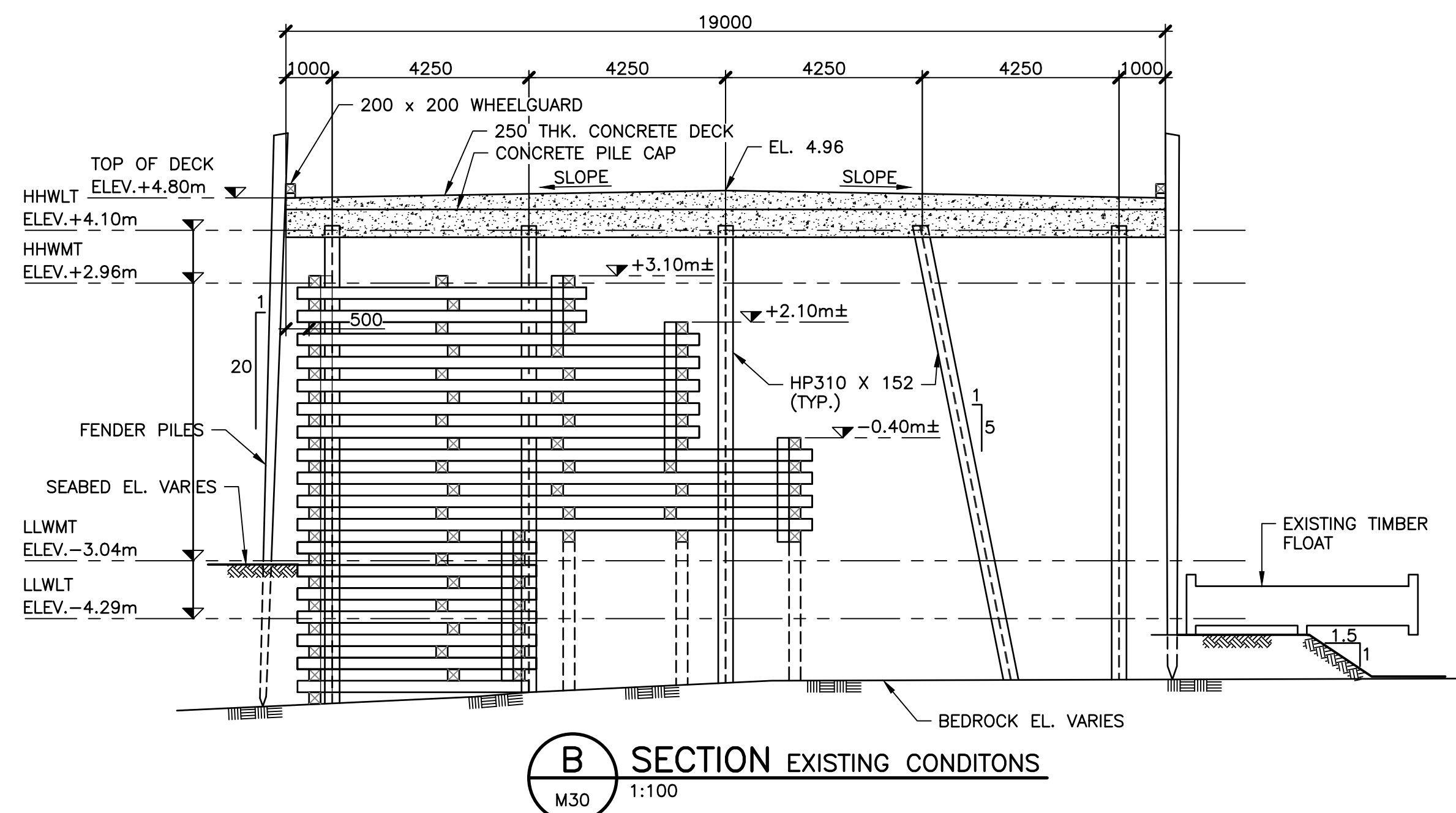
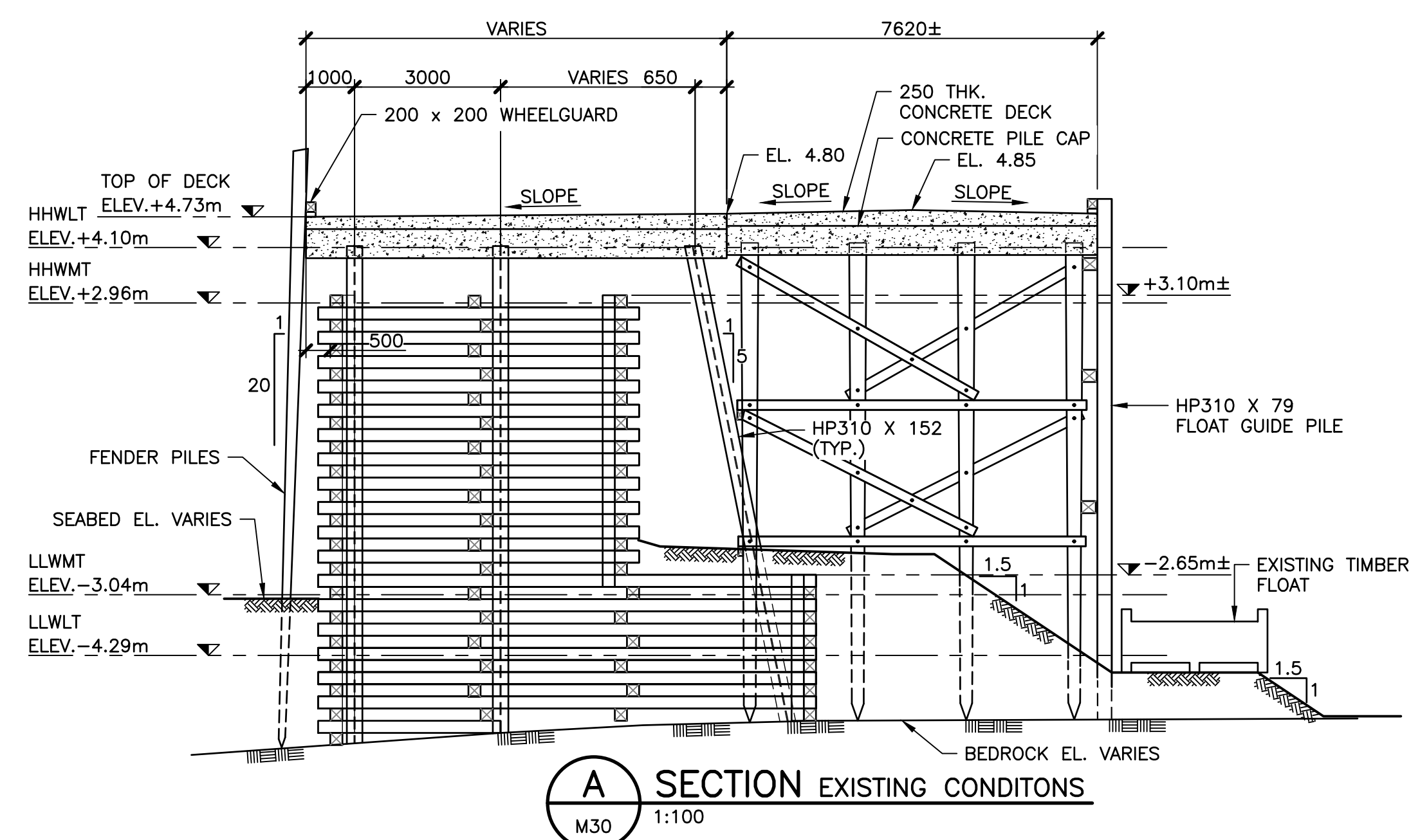
Revision or Issue

TOWN OF SAINT ANDREWS
TSA WHARF APPROACH
REPLACEMENT

STRUCTURAL
PIER HEAD – EXISTING
CONDITIONS PLAN,
ELEVATION AND SECTIONS



CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
<div>LICENCED PROFESSIONAL ENGINEER Province of New Brunswick</div> <div></div> <div>AUGUST 14, 2025</div> <div>Date</div> <div>INGENIEUR TITULAIRE DE PERMIS Province du Nouveau-Brunswick</div>		Designed MK	Drawn LL
		Checked KM	Approved
		Sheet No 16 of 19	
		Drawing No M30	



KEY PLAN
1:10000

0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP
No.	Description	Date	By

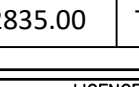
TOWN OF SAINT ANDREWS

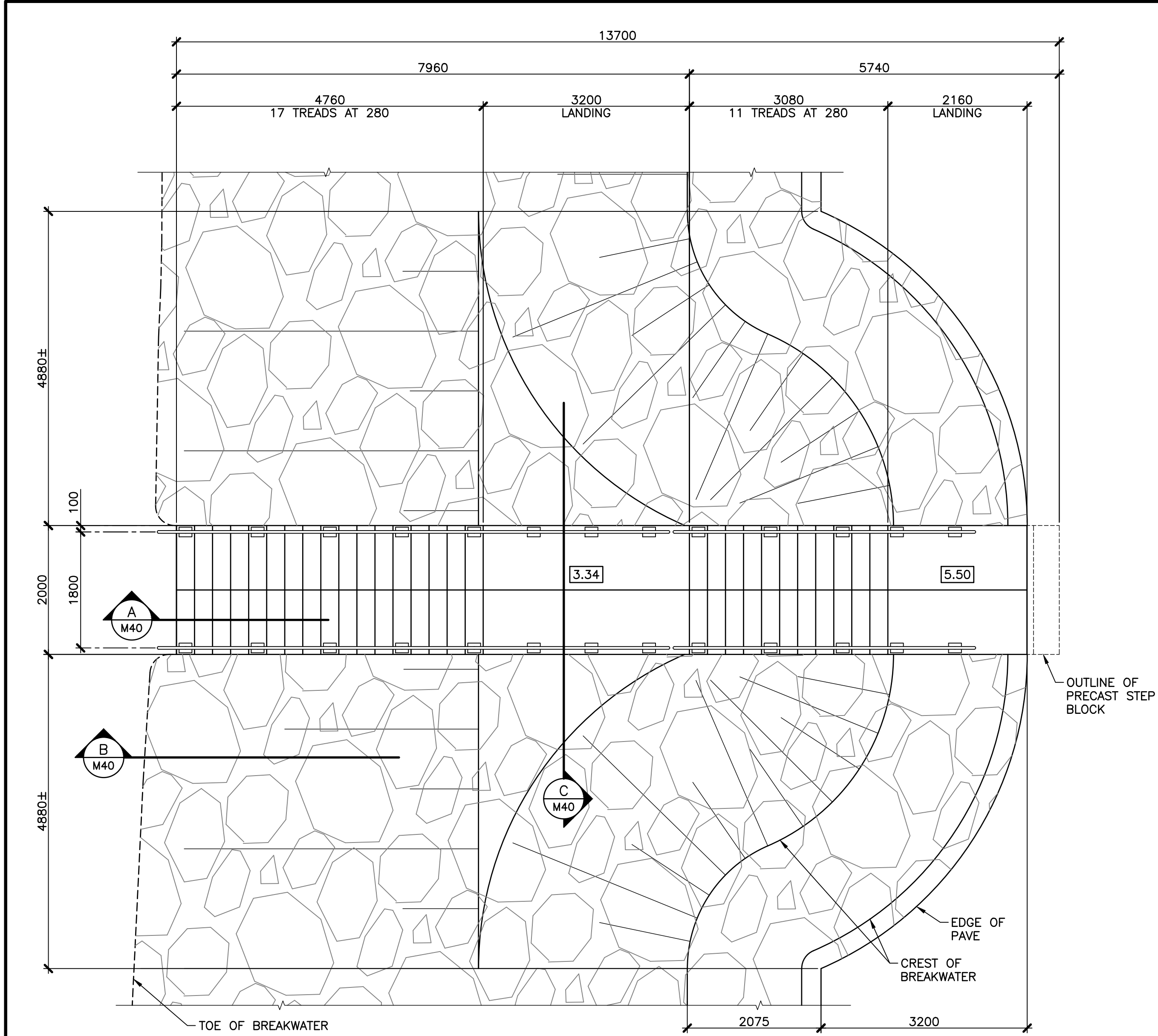
TSA WHARF APPROACH REPLACEMENT

STRUCTURAL

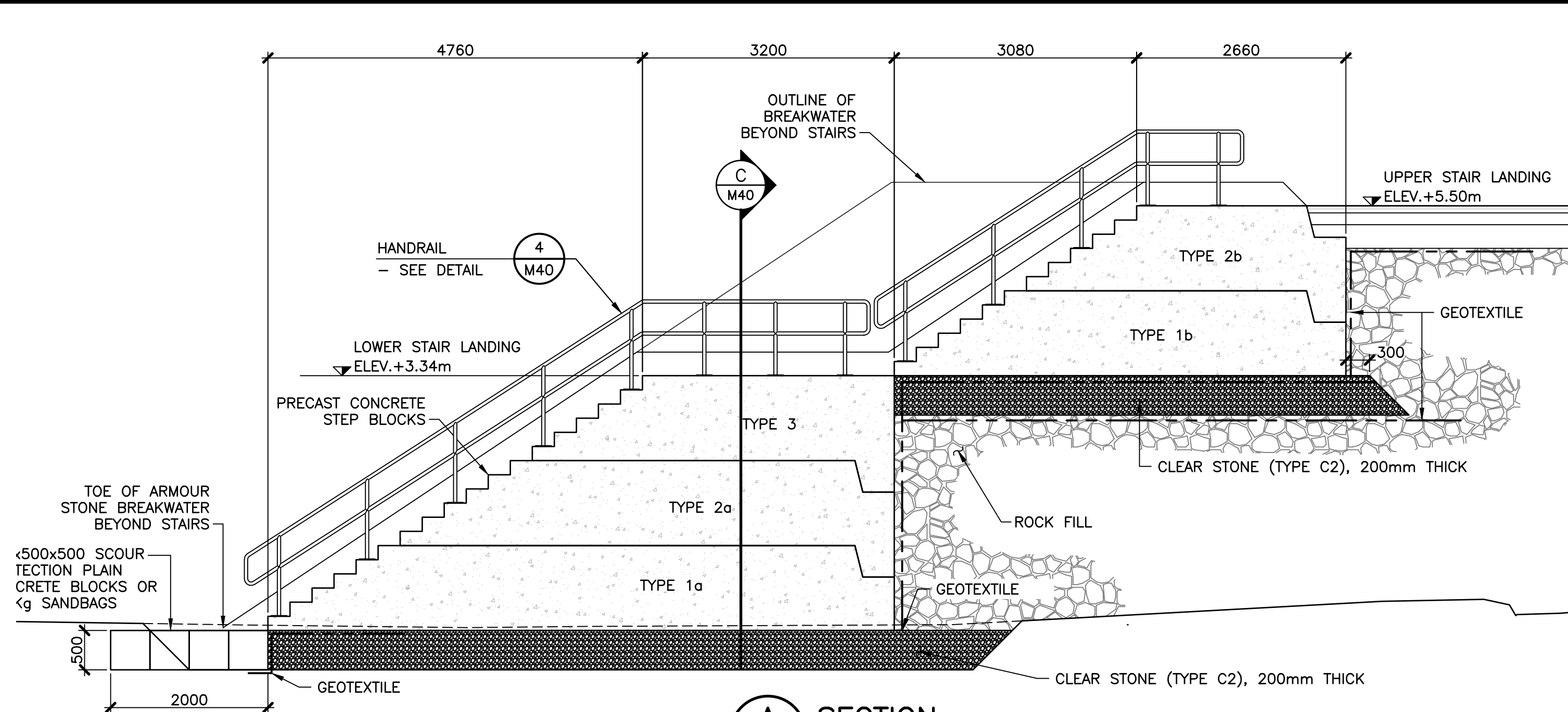
PIER HEAD – PILE WRAP PLAN AND SCHEDULES



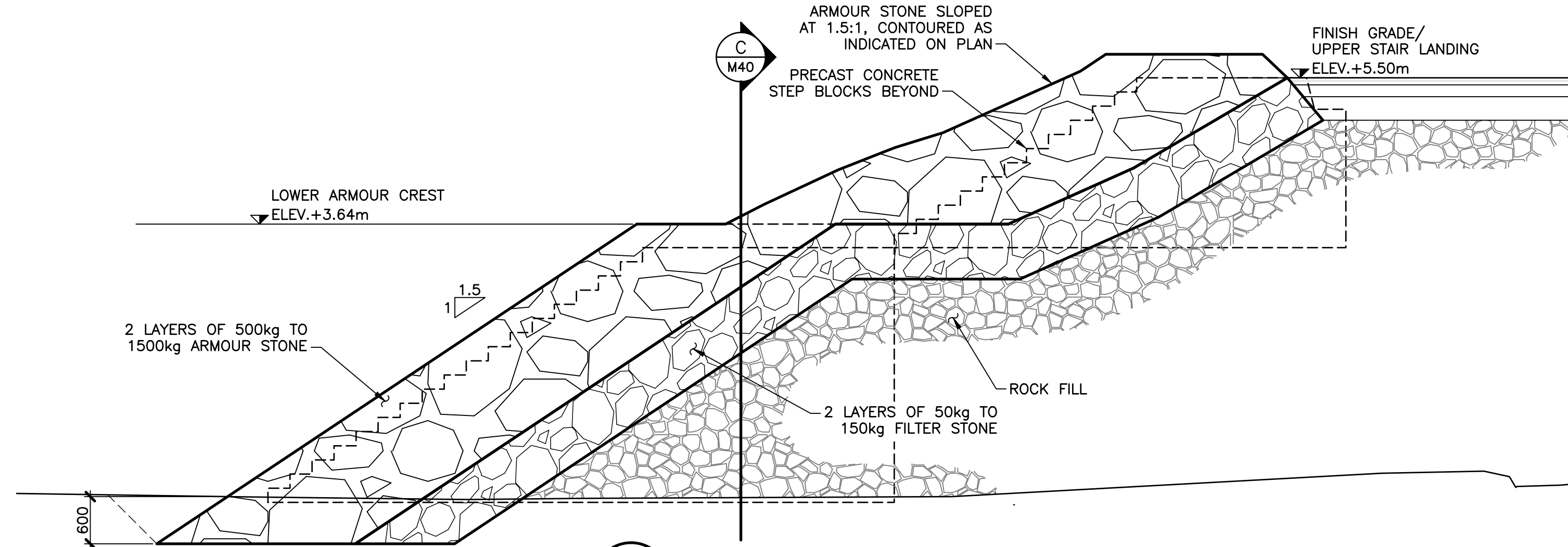
CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
		Designed MK	Drawn LL
		Checked KM	Approved
		Sheet No 17 of 19	
		Drawing No <div style="font-size: 2em; font-weight: bold;">M31</div>	
INGENIEUR TITULAIRE DE PERMIS Province du Nouveau-Brunswick			



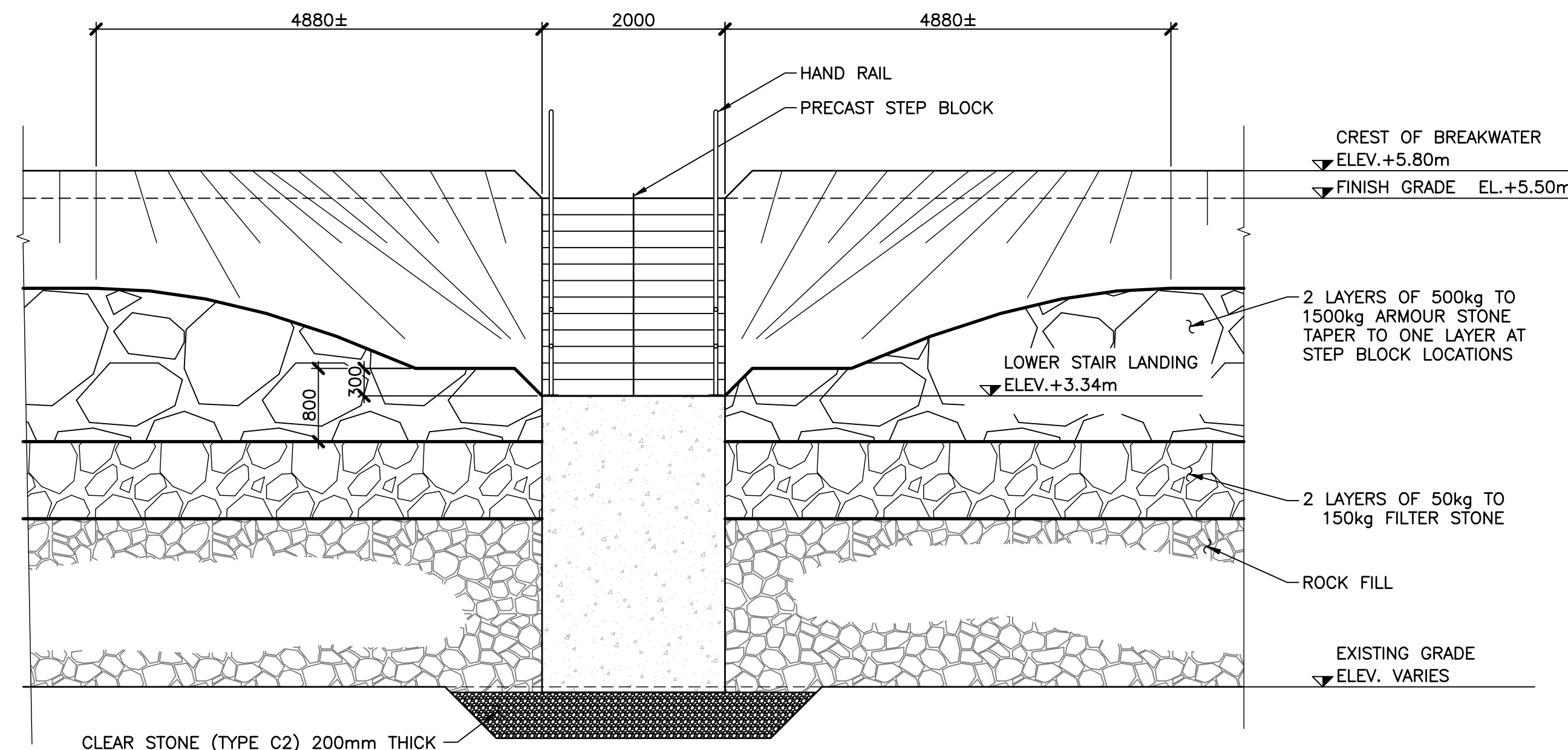
PLAN STAIRS AND ARMOUR STONE GRADING
1:100



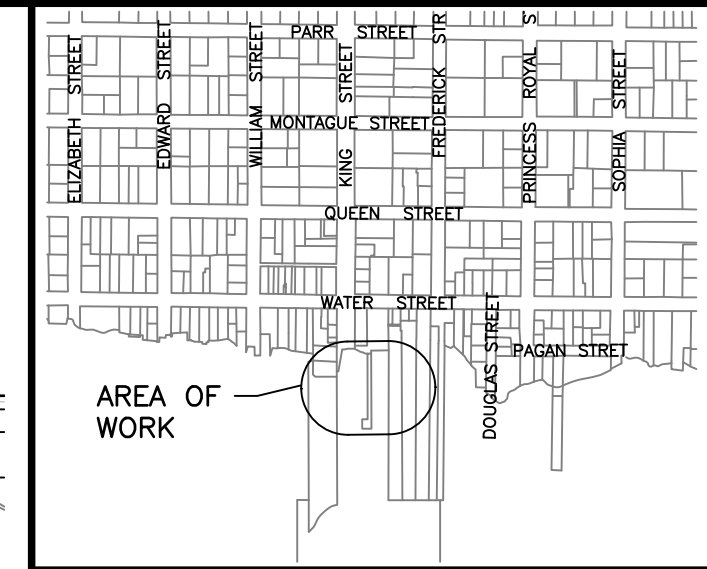
A SECTION PRECAST STAIRS
M40 1:50



B SECTION BREAKWATER TRANSITION AT STAIRS
M40 1:50



C SECTION BREAKWATER AND PRECAST STAIRS
M40 1:50



KEY PLAN
1:10000

No.	Description	Date	By
0	ISSUED FOR TENDER	AUG 14/25	GKP
B	ISSUED FOR 100% REVIEW	MAY 07/25	GKP
A	ISSUED FOR 70% REVIEW	MAY 6/24	GKP

Revision or Issue

TOWN OF SAINT ANDREWS

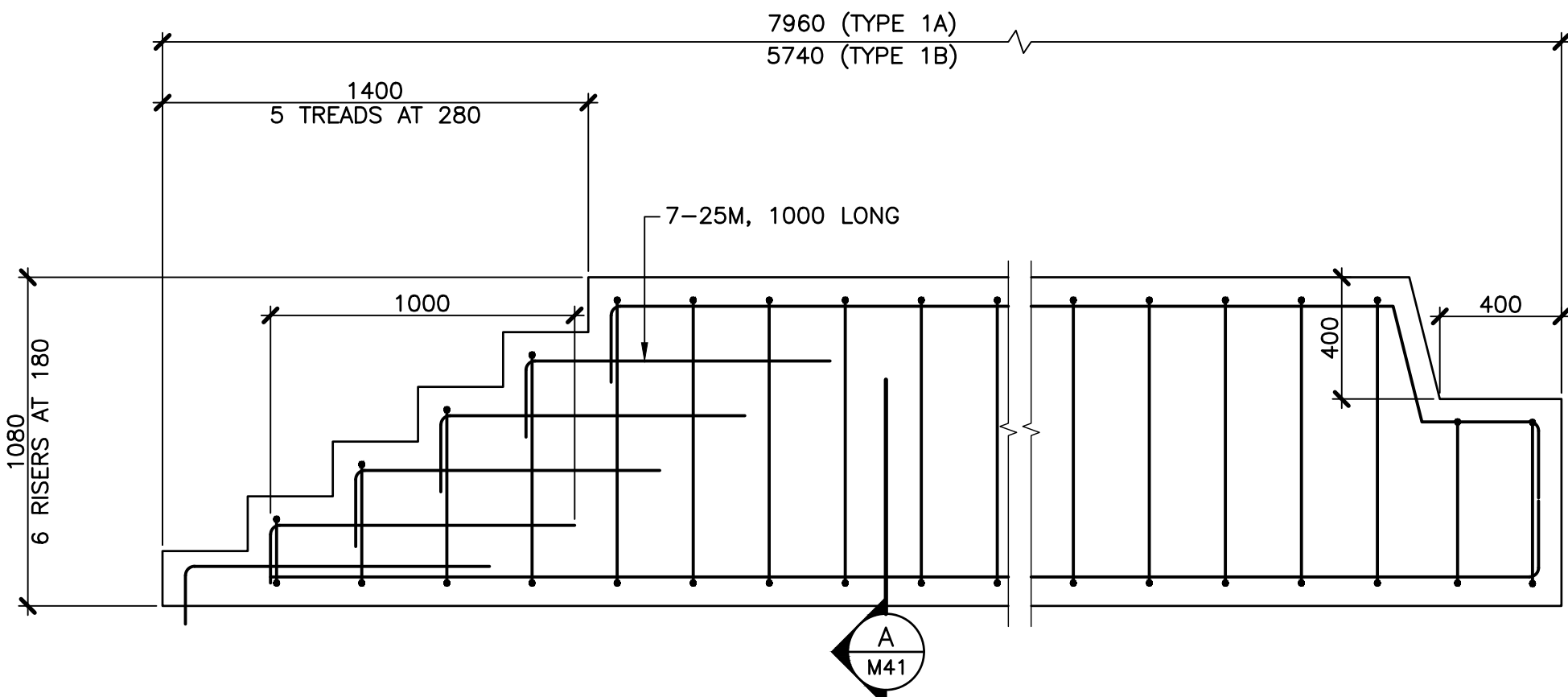
TSA WHARF APPROACH
REPLACEMENT

STRUCTURAL

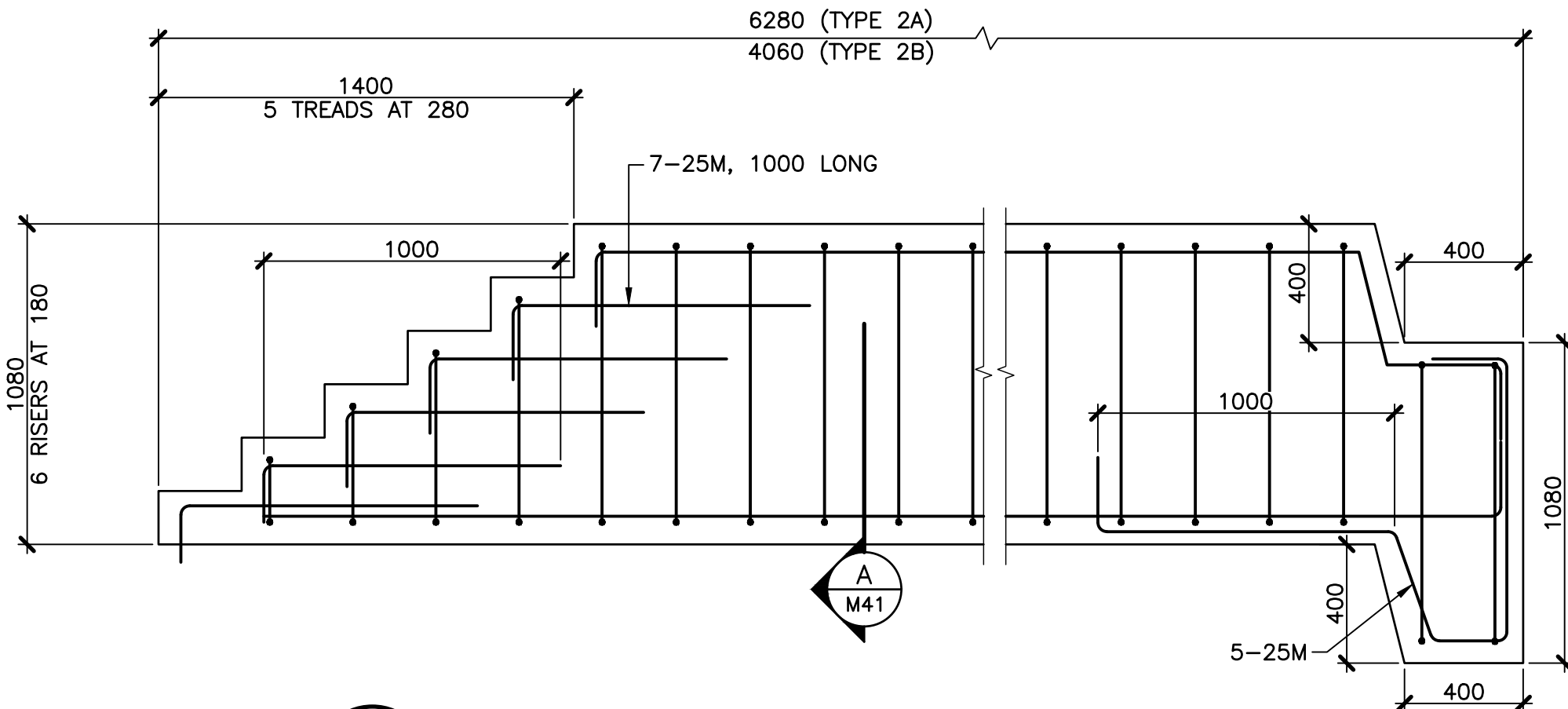
STAIR PLAN, SECTIONS
AND DETAILS



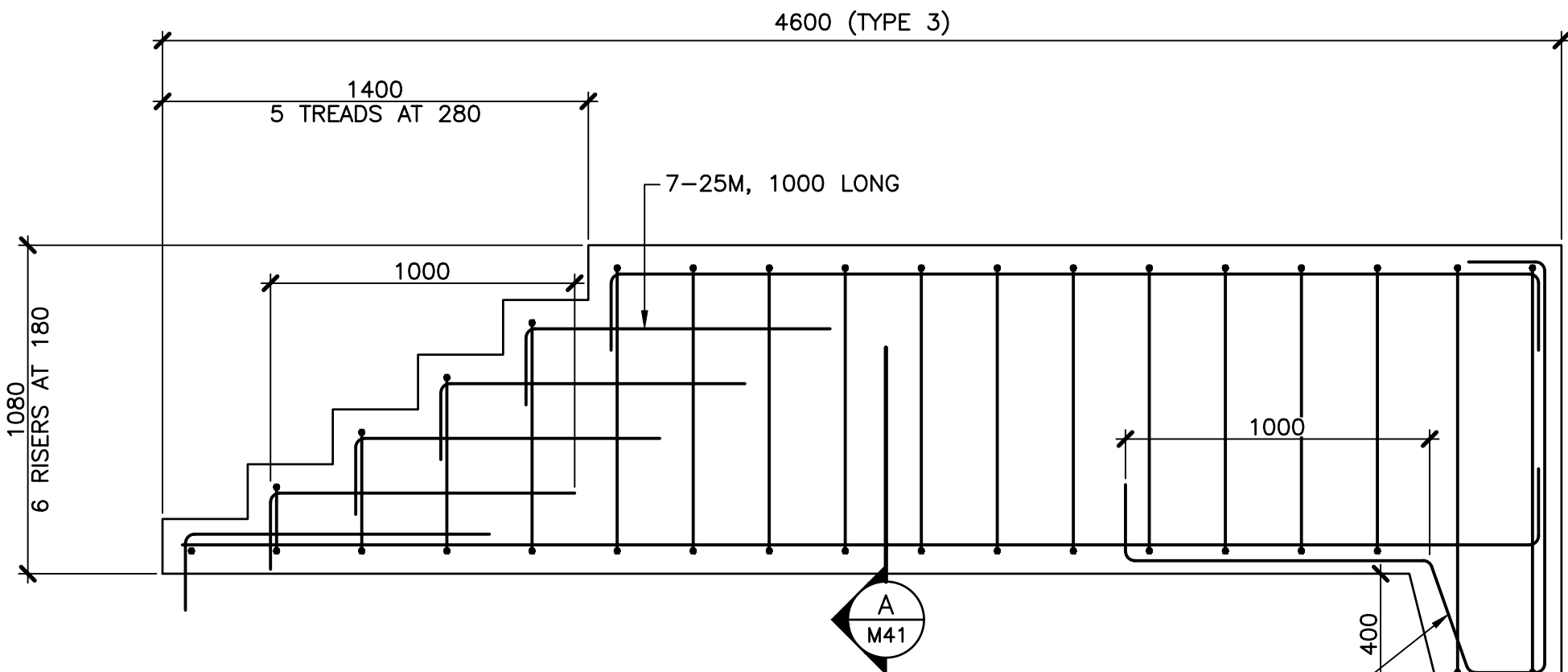
CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
LICENCED PROFESSIONAL ENGINEER Province of New Brunswick	Designed MK	Drawn LL	
Checked KM	Approved		
Sheet No 18	of 19	Drawing No M40	



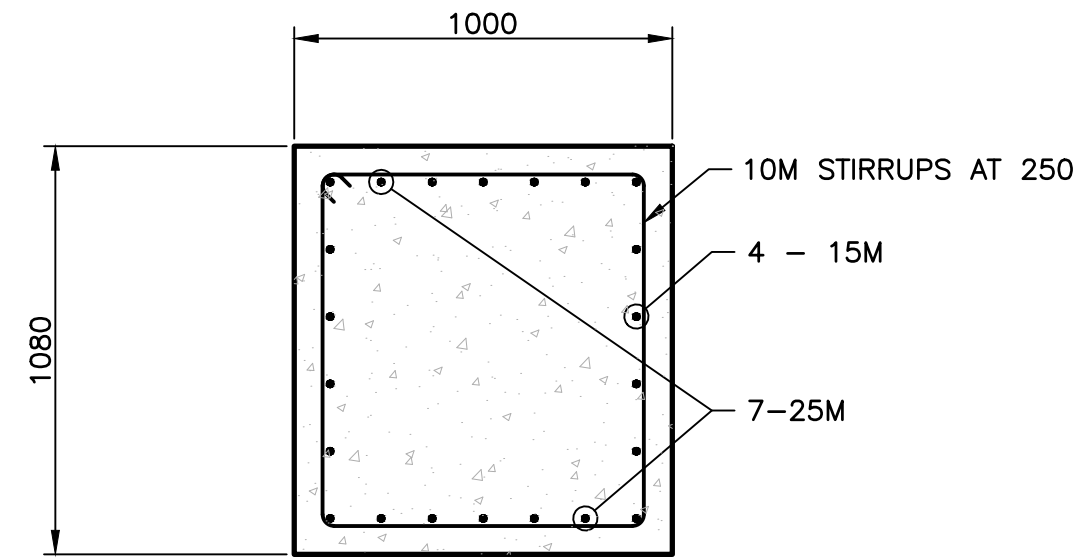
1 DETAIL PRECAST STEP BLOCK REINFORCING
TYPE 1
M40 1:20



2 DETAIL PRECAST STEP BLOCK REINFORCING
TYPE 2
M40 1:20



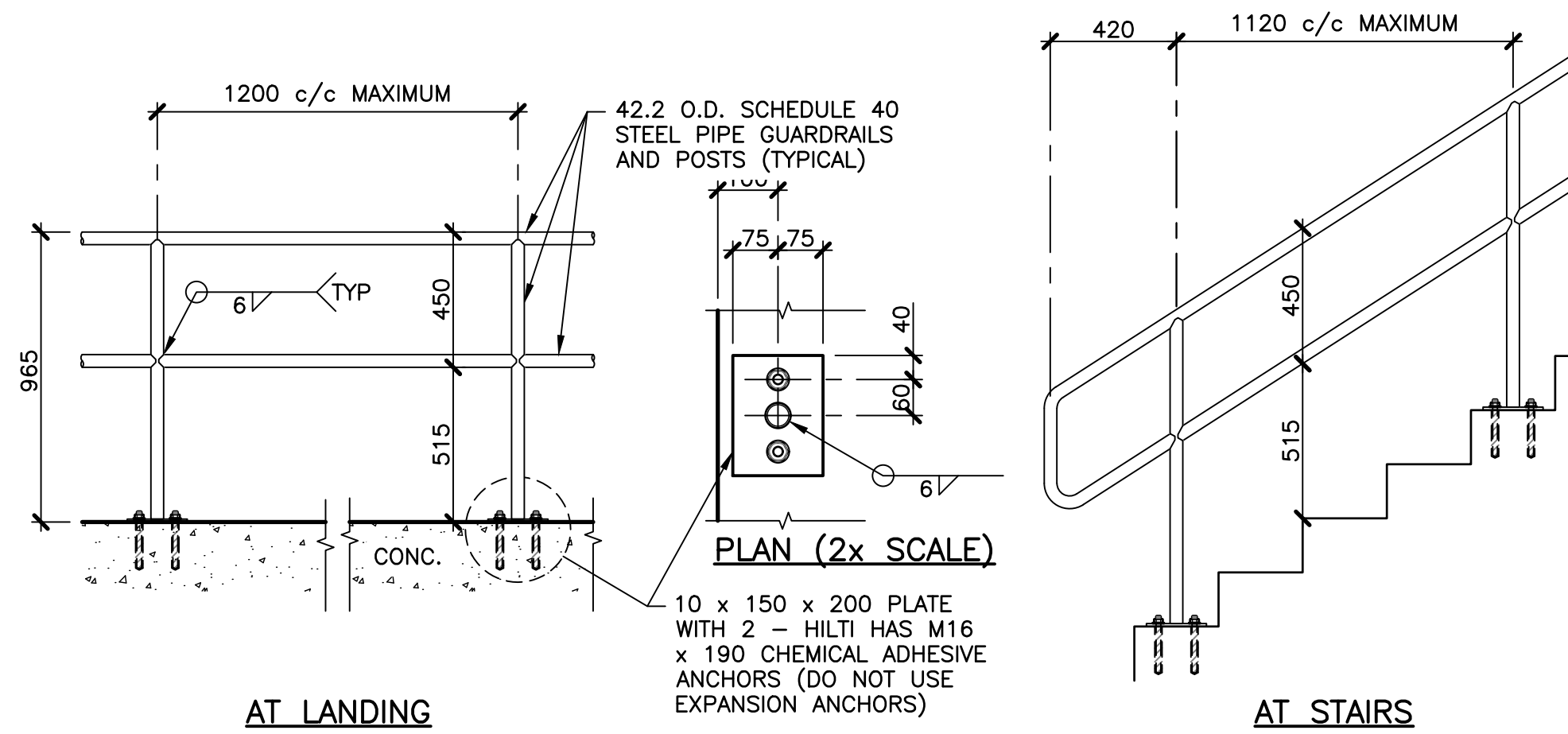
3 DETAIL PRECAST STEP BLOCK REINFORCING
TYPE 3
M40 1:20



A SECTION PRECAST STEP BLOCK REINFORCING
TYPE 1 / TYPE 2 / TYPE 3
M41 1:20

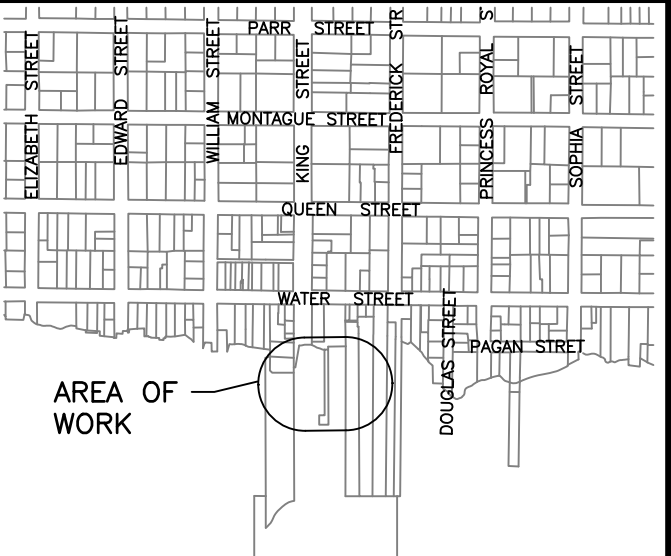
NOTES:

- PANEL LIFTING HARDWARE, PROCEDURES AND ANALYSIS BY CONTRACTOR.
- LIFTING INSERTS AND LOCATION BY CONTRACTOR.



4 DETAIL GUARDRAIL ASSEMBLY
M40 1:20

PRECAST STEP BLOCK SCHEDULE		
PANEL ID	QTY.	EST. WEIGHT (Kg)
TYPE 1A	2	18400
TYPE 1B	2	14500
TYPE 2A	2	12700
TYPE 2B	2	8700
TYPE 3	2	10600



KEY PLAN
1:10000

No.	Description	Date	By
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Revision or Issue

TOWN OF SAINT ANDREWS

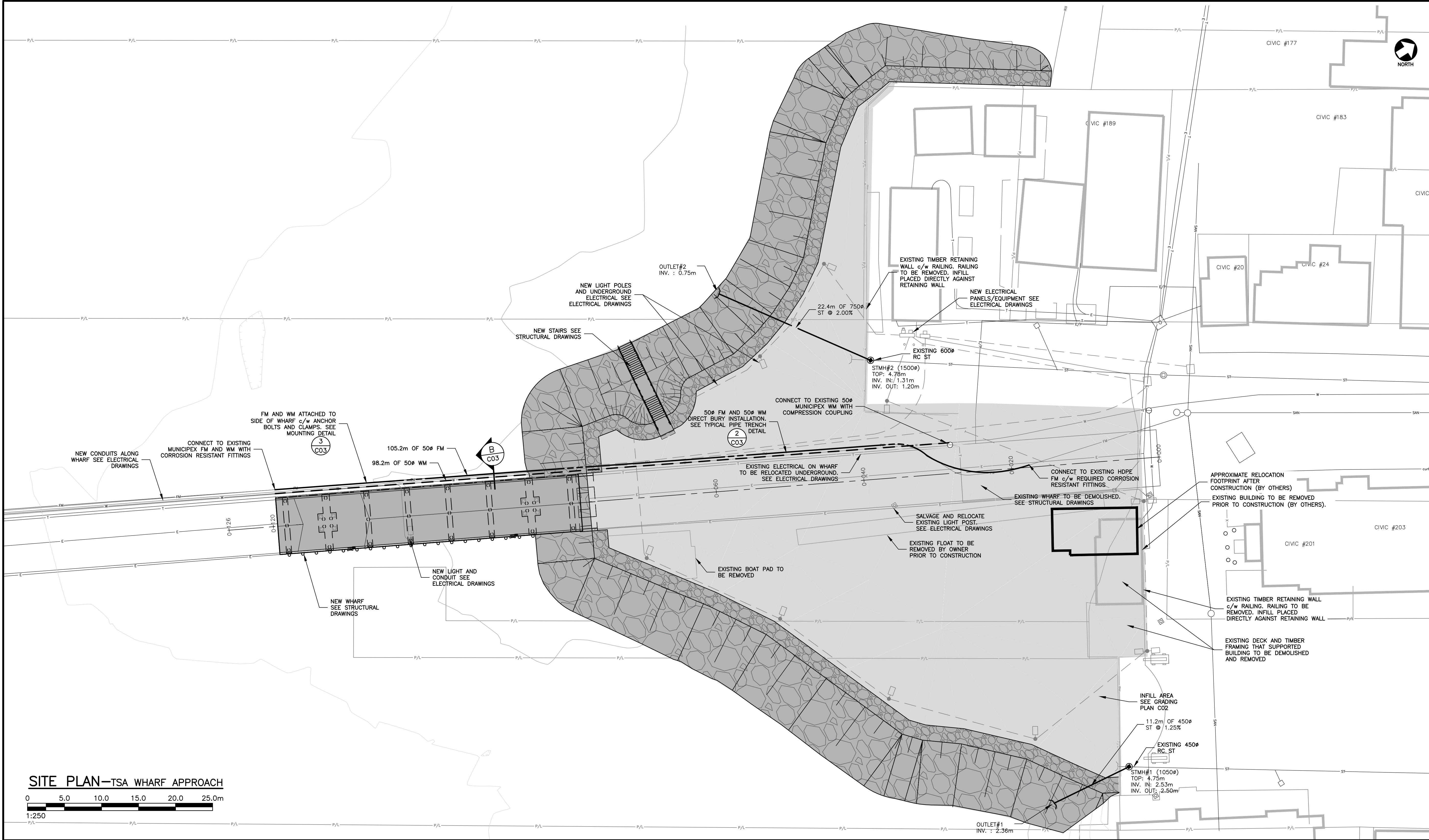
TSA WHARF APPROACH REPLACEMENT

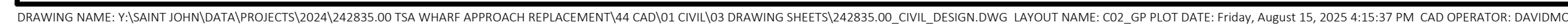
STRUCTURAL

STAIR DETAILS

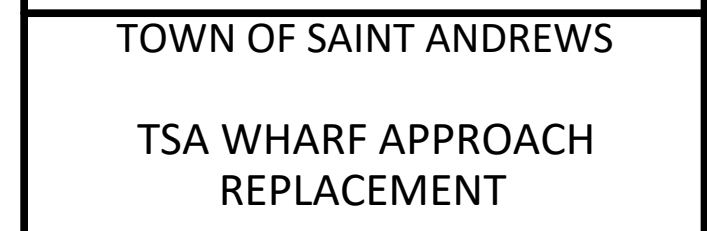


CBCL No 242835.00	Contract No TSA 2024-03	Date APR 2024	Scale AS NOTED
Licensed PROFESSIONAL ENGINEER Province of New Brunswick	Designed MK	Drawn LL	
Checked KM	Approved		
Sheet No 19	of 19		
Drawing No M41			



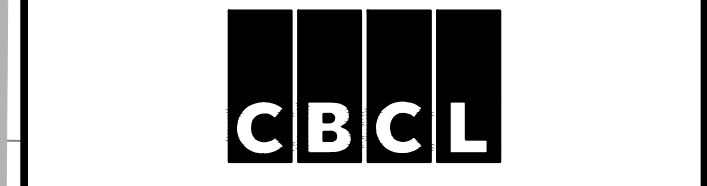


- | | | |
|------------------------|----------------------------------|------------------------|
| LEGEND: | | |
| <u>PROPOSED</u> | | <u>EXISTING</u> |
| ● | SANITARY MANHOLE (SMH) | ○ |
| ■ | CATCH BASIN (CB) | □ |
| ⊙ | STORM MANHOLE (STMH) | ⊠ |
| _____ | SANITARY SEWER | — SSW |
| _____ | SANITARY FORCE MAIN | — FM |
| _____ | STORM SEWER | — ST |
| _____ | WATER MAIN | — W |
| _____ | COMBINED SEWER | — CS |
| () | CULVERT | () |
| ⊗ | ISOLATION VALVE (BUTTERFLY/GATE) | ⊗ |
| ⊙ | CURB STOP | ⊙ |
| ⊗ | VALVE IN CHAMBER | ⊗ |
| ● | FIRE HYDRANT | ○ |
| P/L | PROPERTY LINE | P/L |
| EAS | EASEMENT | EAS |
| E/P | EDGE OF PAVEMENT | E/P |
| _____ | ROAD SHOULDER | _____ |
| G/R | GUIDE RAIL | G/R |
| S/W | SIDEWALK | S/W |
| curb | CURB | curb |
| C/G | CURBS & GUTTER | C/G |
| _____ | DITCH | _____ |
| X | FENCE | X |
| O/H | OVERHEAD UTILITIES | O/H |
| U/G | UNDERGROUND UTILITIES | U/G |
| E | UNDERGROUND ELECTRICAL | E |
| (E) (T) | ELECTRICAL / TELEPHONE MANHOLE | (E) (T) |
| ● ○ ● ○ ● ○ | POWER, UTILITY, GUY POLES | ○ ○ ○ ○ ○ ○ |
| □ | LIGHT STANDARD | □ |
| ○ | SIGN | ○ |
| _____ | BENCH MARK | _____ |
| _____ | BORE HOLE / TEST PIT | _____ |
| CONTOUR | | 12.0 |
| GRADE | | X |

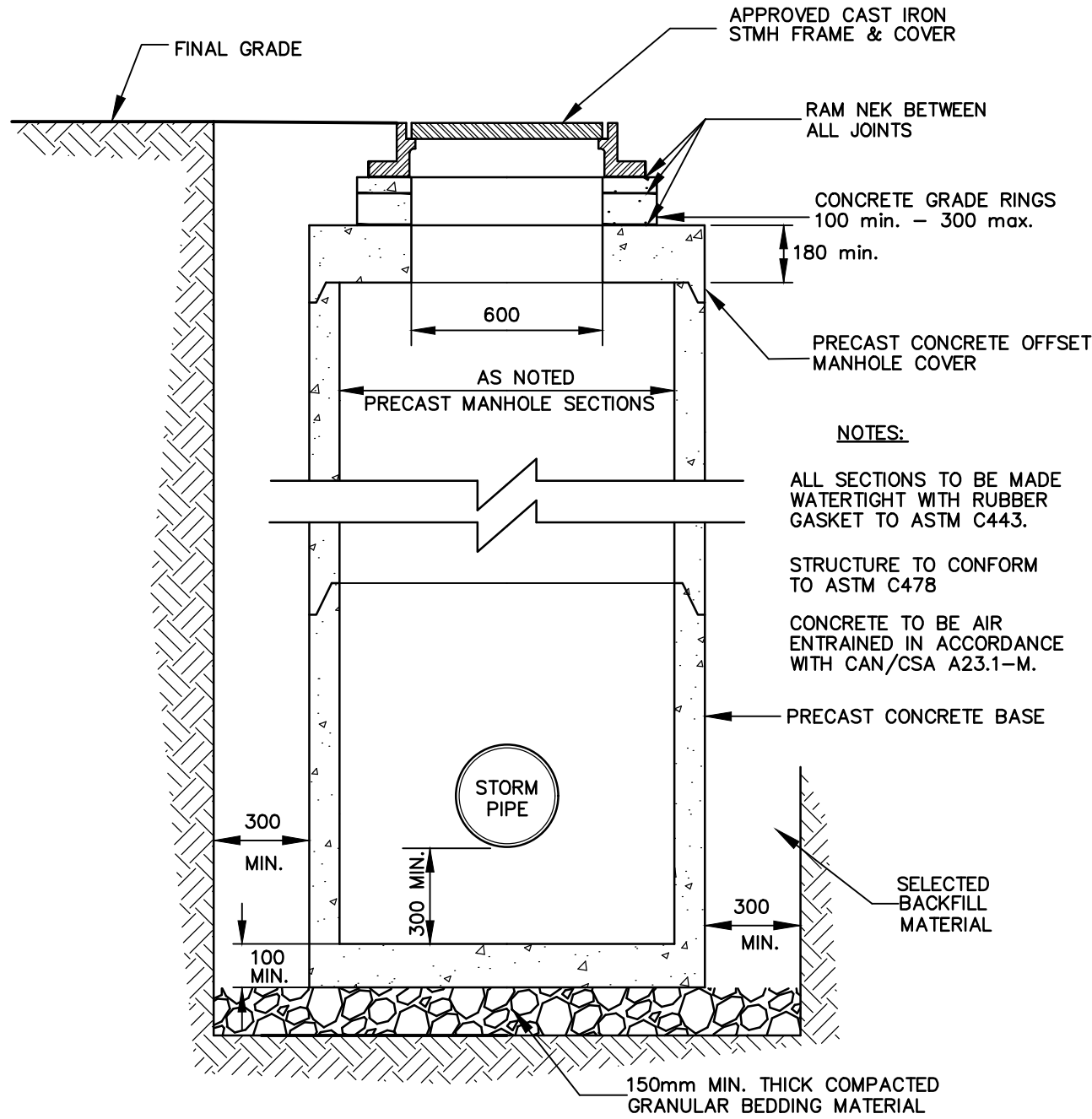


CIVIL

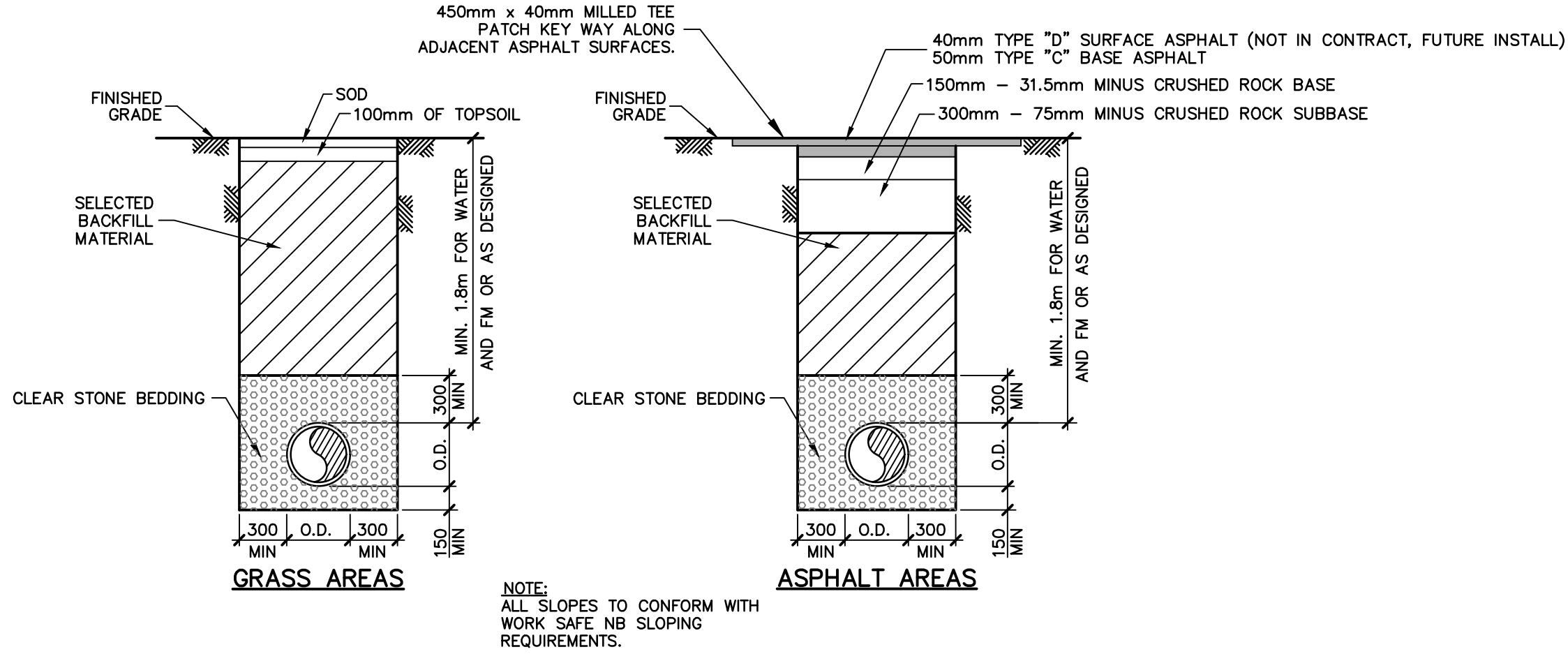
GRADING PLAN



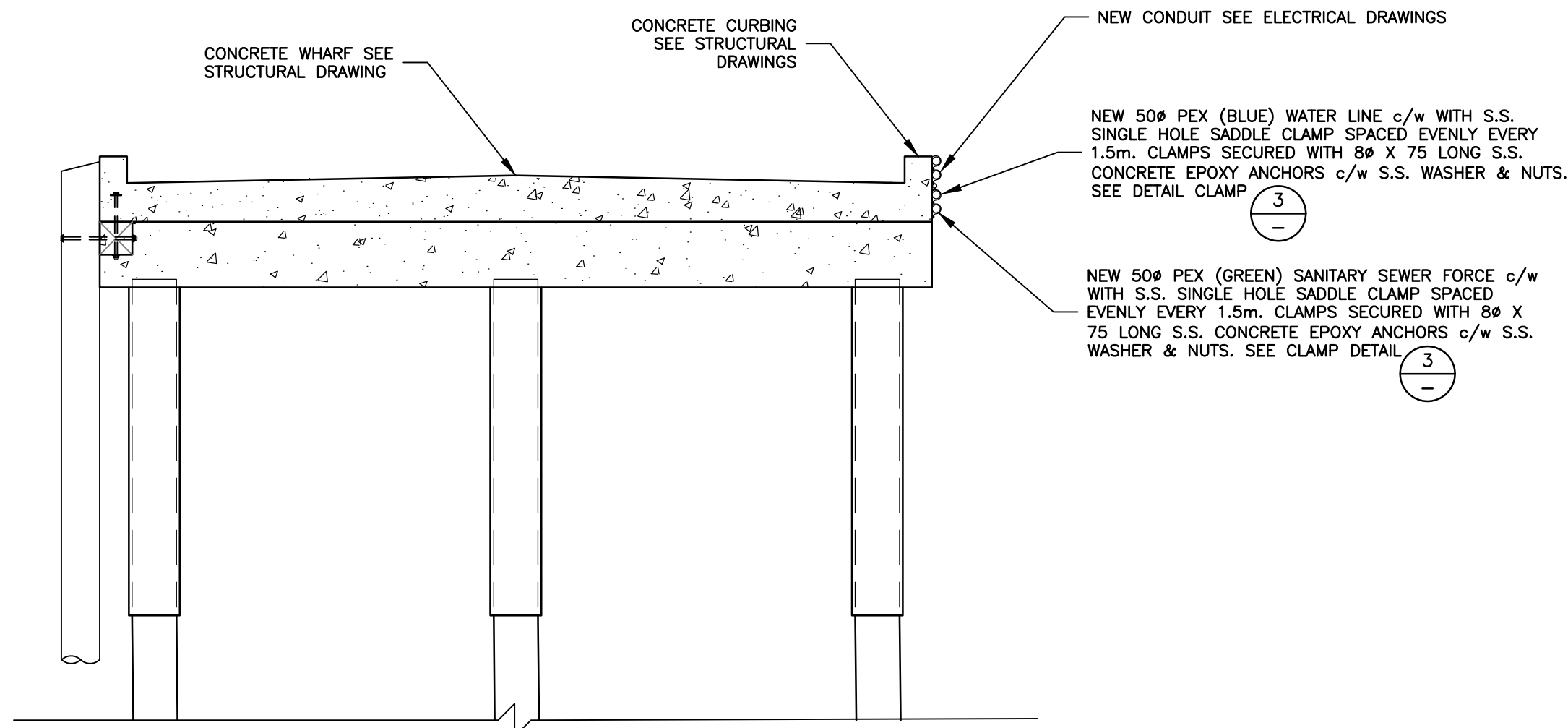
	CBCL No.	Contract No.	
	242835.00	TSA 2024-03	
	Date	Scale	
	MAR 2024	AS NOTED	
	Designed	Drawn	
	DLM	WMB	
	Checked	Approved	
	KM		
	Sheet No.		
	2	of 3	
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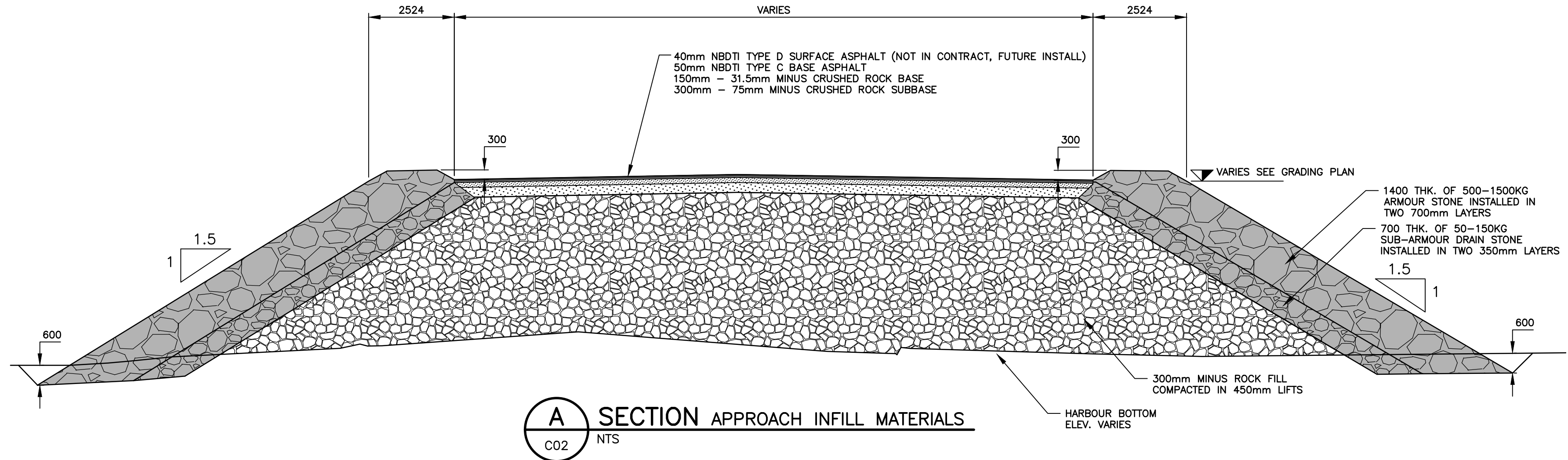
1 DETAIL—STORM MANHOLE
C01 NTS



2 DETAIL—SINGLE PIPE TRENCH
C01 N.T.S.



C SECTION — WHARF WATER & FORCE MAIN INSTALL
C01 NTS



3 DETAIL— 50mm SINGLE HOLE SADDLE CLAMP
N.T.S.

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- THE HORIZONTAL DATUM UTILIZED IS NAD83 (CSRS) NEW BRUNSWICK DOUBLE STEREOGRAPHIC PROJECTION.
- ALL ELEVATIONS ARE IN GEODETIC METRES AND REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1928 (CGVD28)
- ALL CHAINAGES ARE IN METRES.
- LOCATION OF EXISTING SERVICES, STRUCTURES AND BUILDINGS APPROXIMATE ONLY.
- CONTRACTOR TO ENSURE THAT ALL MUNICIPAL INFRASTRUCTURE, PUBLIC UTILITIES, NATURAL GAS AND OTHER INFRASTRUCTURE ARE LOCATED IN THE FIELD PRIOR TO START OF EXCAVATION.
- ALL FIELD SURVEY INFORMATION PROVIDED BY CBCL LIMITED.
- TYPICAL TRENCH DETAIL, PIPE INSTALLATION, FITTINGS & STRUCTURES, ETC. REFER TO CITY, TOWN OR VILLAGE SPECIFICATIONS FOR DEVELOPERS.
- SANITARY MANHOLES TO BE 1050# UNLESS OTHERWISE NOTED.
- ALL CATCH BASINS, MANHOLES, GATE VALVE CHAMBERS AND AIR RELEASE CHAMBERS TO HAVE MINIMUM 100mm RISER BETWEEN FRAME & CONCRETE COVER. TOP RISER TO BE MADE OF RUBBER.
- ALL WATER LINES LESS THAN 1.8m COVER TO BE INSULATED WITH 50mm THICK RIGID "STYROFOAM SM" BOARD.
- ALL WATER, SANITARY AND STORM STUBS TO BE PLUGGED /CAPPED & WATER MAIN FITTINGS TO BE RESTRAINED. LOCATION TO BE MARKED WITH A 38x89 STUD FROM INVERT OF PIPE TO 300mm BELOW FINISH GRADE.

LEGEND:

PROPOSED	EXISTING

A	ISSUED FOR TENDER	2025-08-14	DLM
No.	Description	Date	By

Revision or Issue

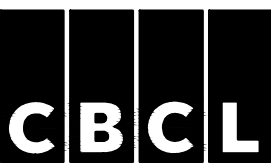


TOWN OF SAINT ANDREWS

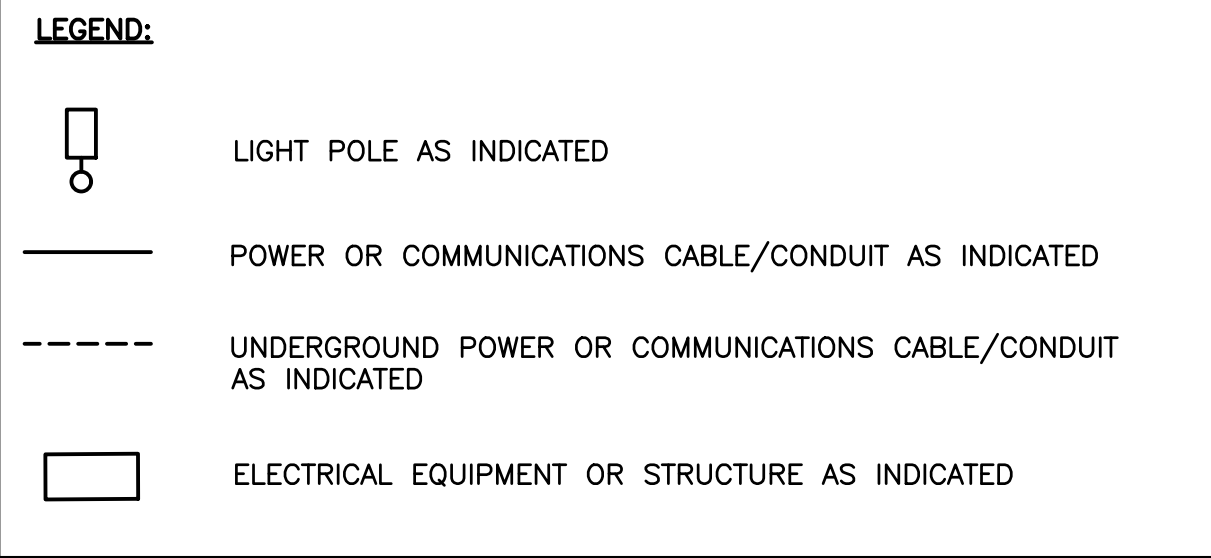
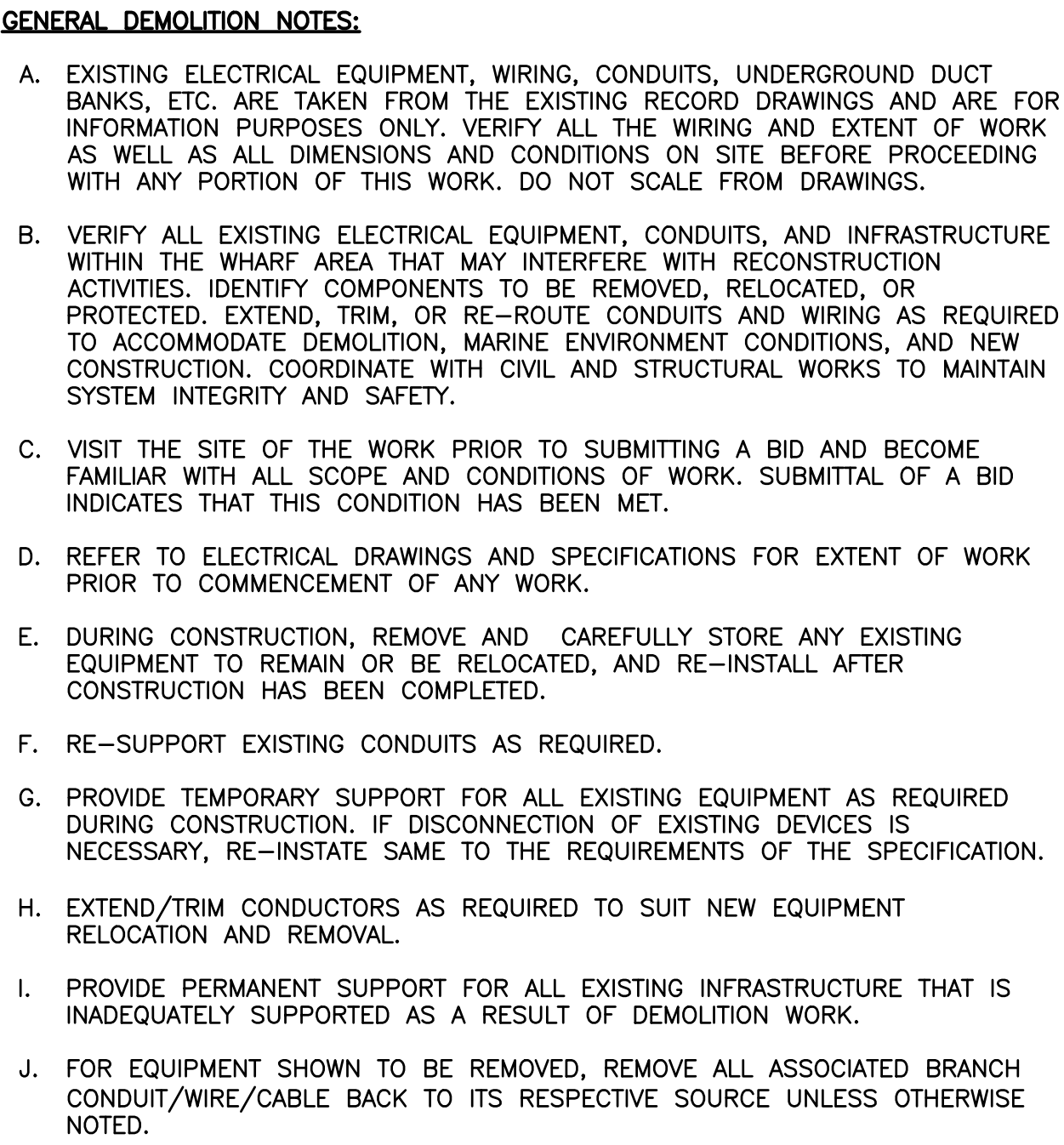
TSA WHARF APPROACH REPLACEMENT

CIVIL


DETAILS

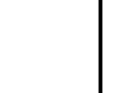


	CBCL No. 242835.00 Date MAR 2024 Designed DLM Checked KM Sheet No. 3 of 3 Drawing No. C03	Contract No. TSA 2024-03 Scale AS NOTED Drawn WMB Approved
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LEGEND:

	LIGHT POLE AS INDICATED
	POWER OR COMMUNICATIONS CABLE/CONDUIT AS INDICATED
	UNDERGROUND POWER OR COMMUNICATIONS CABLE/CONDUIT AS INDICATED
	ELECTRICAL EQUIPMENT OR STRUCTURE AS INDICATED

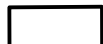


LIGHT POLE AS INDICATED

POWER OR COMMUNICATIONS CABLE/CONDUIT AS INDICATED

----- UNDERGROUND POWER OR COMMUNICATIONS CABLE/CONDUIT
AS INDICATED

☐ ELECTRICAL EQUIPMENT OR STRUCTURE AS INDICATED



NOTES:

1. EXISTING TELEPHONE CABLE IN 32mm PVC CONDUIT TO REMAIN.
2. LOCATE AND REMOVE EXISTING FEED #2/10 + #12 GND RW90 IN 19mm PVC CONDUIT TO STREET LIGHT.
3. LOCATE AND REMOVE EXISTING 3#4/0 TECK CABLE TO EXISTING METER CENTER ON WHARF.
4. EXISTING 3#6 RW90 IN 32mm PVC CONDUIT TO REMAIN.
5. EXISTING 120/240V 1PH 3W METER CENTER ON WHARF TO REMAIN. DISCONNECT & REMOVE THE SERVICE FEEDER.
6. EXISTING UNDERGROUND SERVICES ROUTING TO BE COORDINATED WITH UTILITY BEFORE COMMENCING ANY WORK.
7. REMOVE EXISTING ALUMINUM LIGHT POLE AND LUMINAIRE WIRED TO TOWN STREET LIGHTING CIRCUIT (UNMETERED).
8. EXISTING 300KVA 12.47KV-600V PAD MOUNT UTILITY TRANSFORMER & PROTECTIVE BOLLARDS TO REMAIN.
9. THIS DRAWING TO BE READ IN CONJUNCTION WITH CIVIL AND STRUCTURAL DRAWINGS.
10. COORDINATE WITH UTILITIES PRIOR TO DISCONNECTING SERVICE FEEDER AND COMMUNICATIONS WIRING.
11. EXISTING ENCLOSURE INCLUDES A 60A, 347/600V, 3PH, 4W SERVICE, UTILITY METER, DISCONNECT SWITCH, 15KVA 600-120/240V STEP DOWN TRANSFORMER AND 100A, 120/240V PANEL BOARD FEEDING LIGHT POLES & RECEPTACLES IN THE SQUARE AREA ARE TO REMAIN.
12. CONDUCT SURVEY AND LOCATE ALL THE UNDERGROUND SERVICES IN THE PROJECT SCOPE OF WORK PRIOR TO THE DEMOLITION.

0	ISSUED FOR TENDER	2025-08-14	DLM
No.	Description	Date	By

Revision or Issue



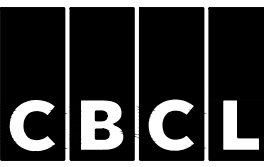
TOWN OF SAINT ANDREWS

TSA WHARF APPROACH REPLACEMENT

ELECTRICAL

ELECTRICAL DEMOLITION

SITE PLAN



D1-1505 BARRINGTON ST
HALIFAX NS B3J 2R7

CBCL No	Contract No
343835 00	TEA 3034 01

Date	Scale
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Designed	Drawn
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V3	MM
Checked	Approved

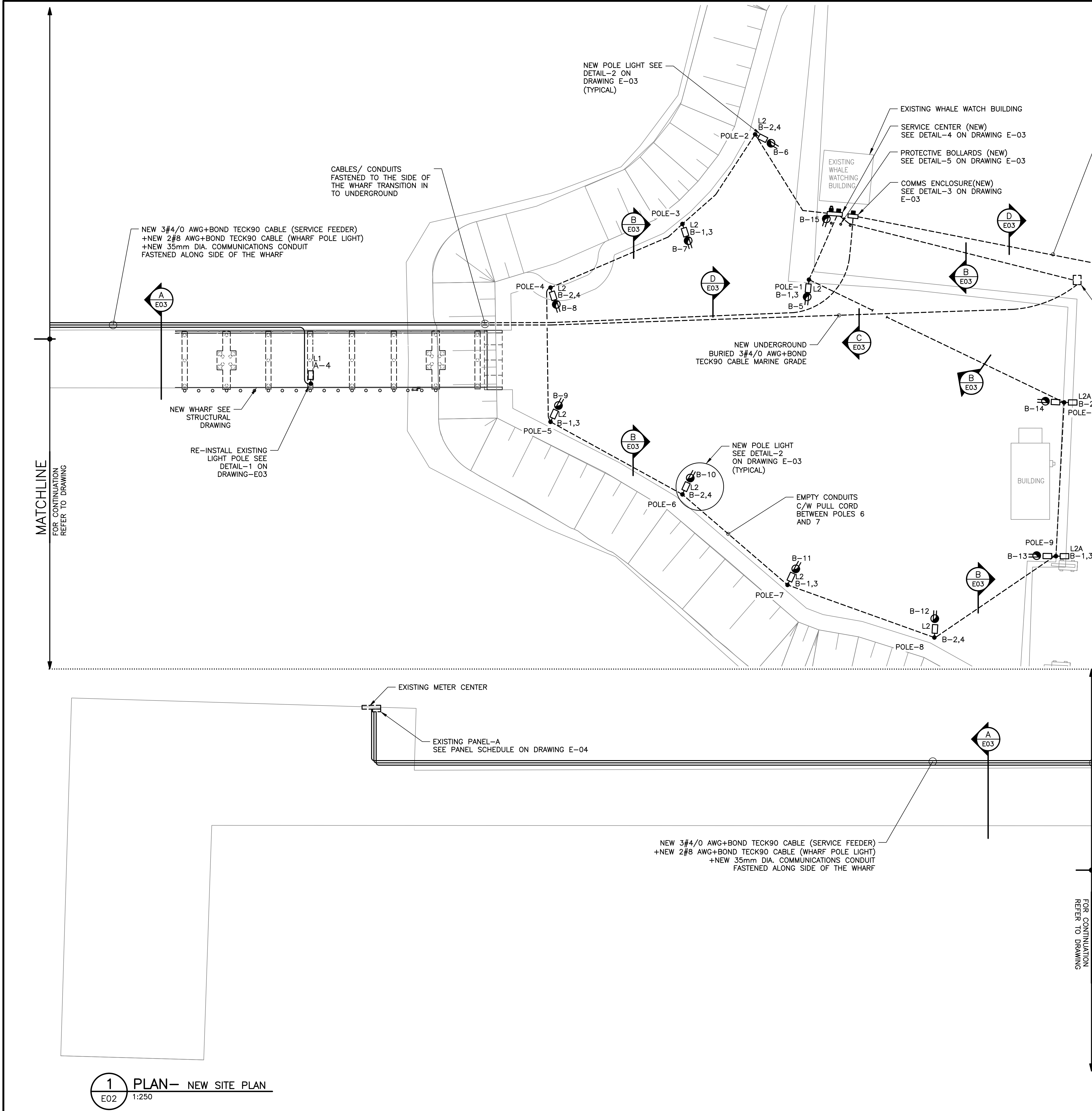
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1 of 4

E 01

E=0

CBCL-610x914 TITLE SHEET (ARCH D



LEGEND:

- NEW LIGHT POLE TYPE AS INDICATED
- POWER OR COMMUNICATIONS CABLE OR CONDUIT AS INDICATED
- UNDERGROUND POWER OR COMMUNICATIONS CABLE/CONDUIT AS INDICATED
- ELECTRICAL EQUIPMENT OR STRUCTURE AS INDICATED
- DUPLEX RECEPTACLE, 125V, 15A, RATED, WITH GROUND FAULT CIRCUIT INTERRUPTER (GFCI) (5-20R), MARINE GRADE

- NOTES:**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH CIVIL AND STRUCTURAL DRAWINGS.
 - COORDINATE WITH UTILITIES PRIOR TO INSTALLING NEW POWER SERVICE FEEDER AND NEW COMMUNICATIONS WIRING.
 - REFER TO THE PANEL SCHEDULE ON DRAWING E03.
 - REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING E03.
 - CONDUCT SURVEY AND LOCATE ALL THE UNDERGROUND SERVICES PRIOR TO THE CONSTRUCTION.

0	ISSUED FOR TENDER	2025-08-14	DLM
No.	Description	Date	By

Revision or Issue



TOWN OF SAINT ANDREWS

TSA WHARF APPROACH REPLACEMENT

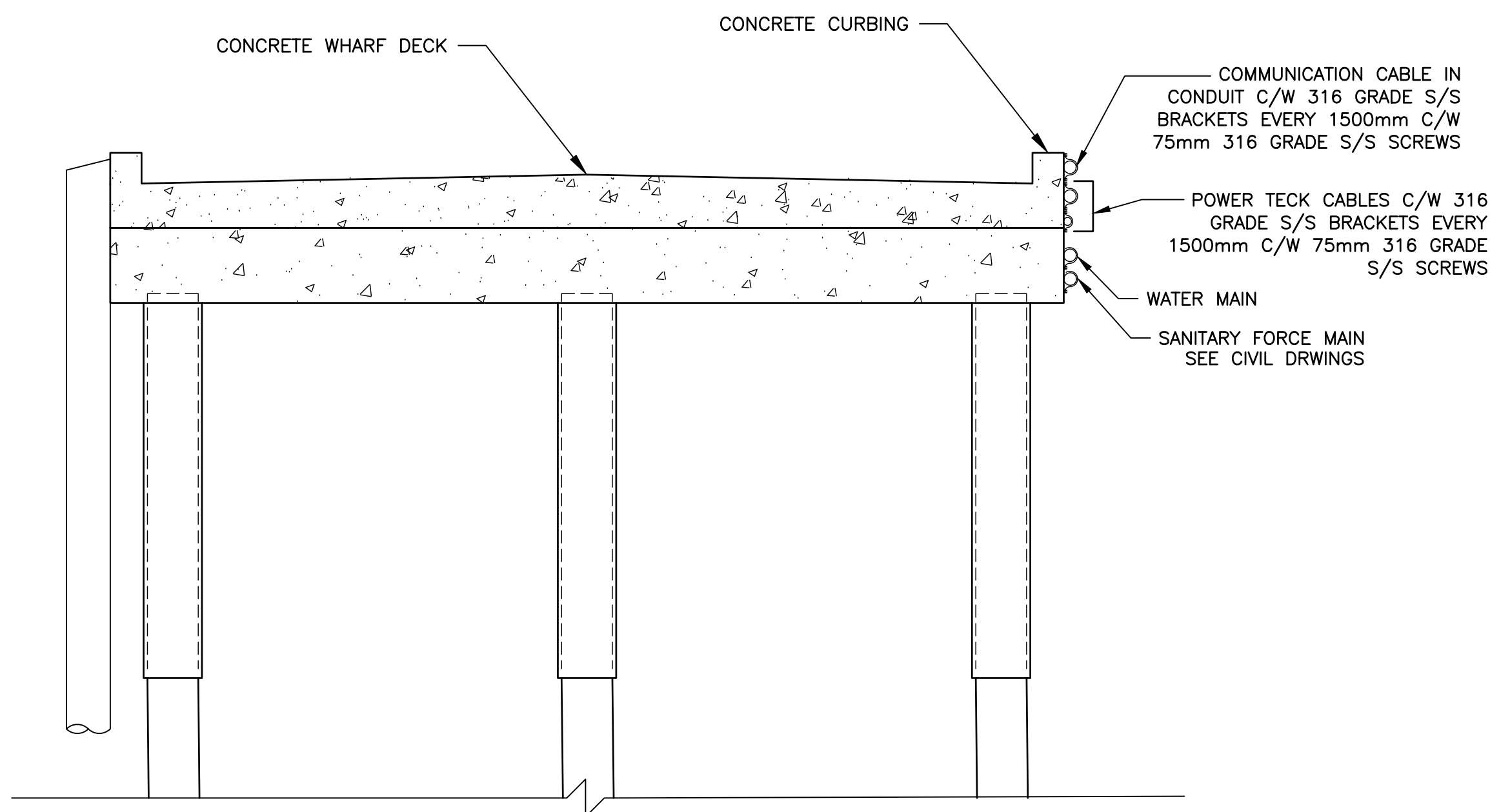
ELECTRICAL

ELECTRICAL NEW CONSTRUCTION

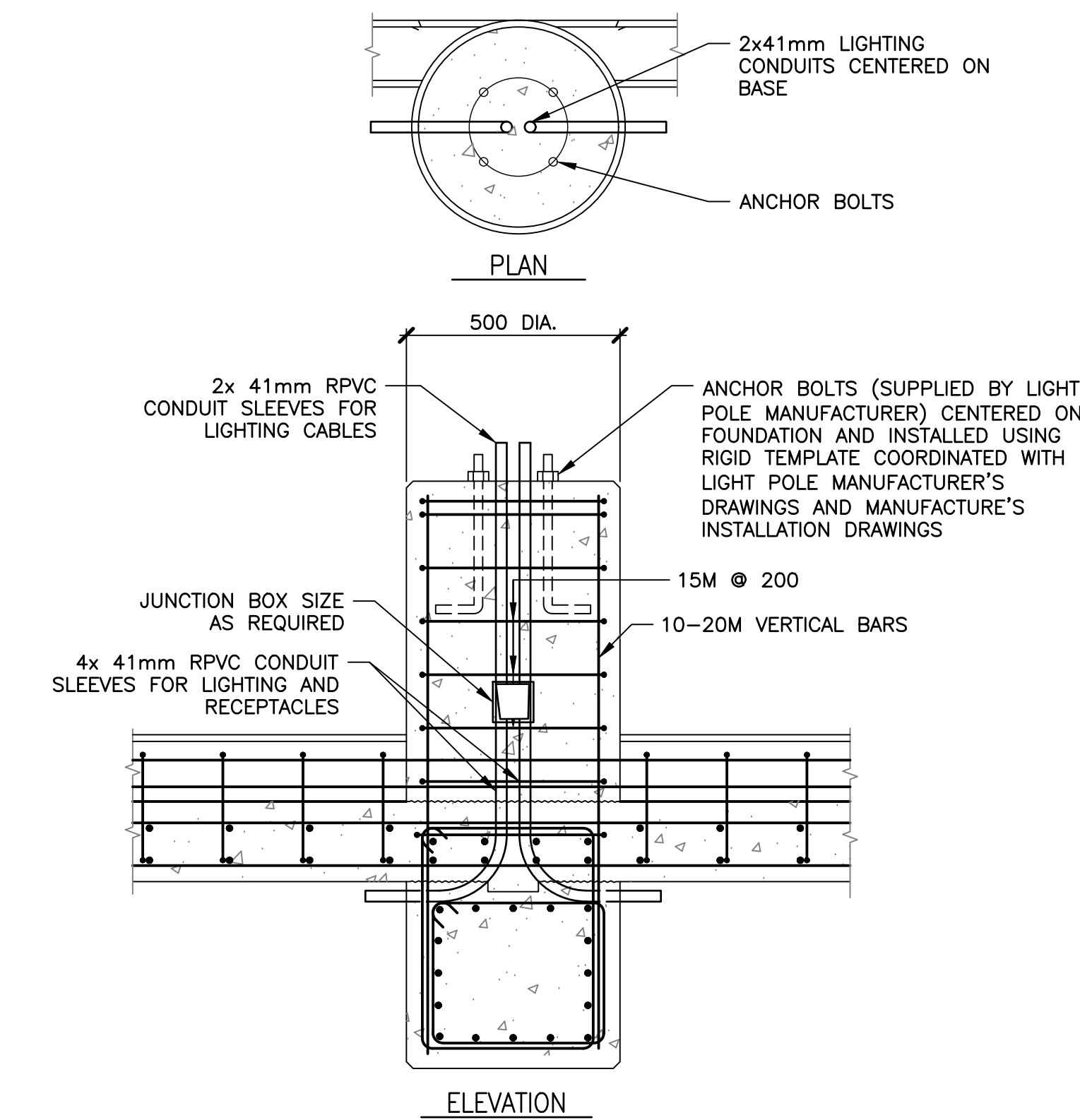
SITE PLAN



LICENCED PROFESSIONAL ENGINEER Province of New Brunswick	CBCL No. 242835.00	Contract No. TSA 2024-03
Designed VS	Date APRIL 2024	Scale AS NOTED
Checked SW	Drawn MM	Approved DLM
Signature	Sheet No. 2	of 4
Aug. 15, 2025 Date	Drawing No. E-02	
INGÉNIEUR TITULAIRE DE PERMIS Province du Nouveau Brunswick		

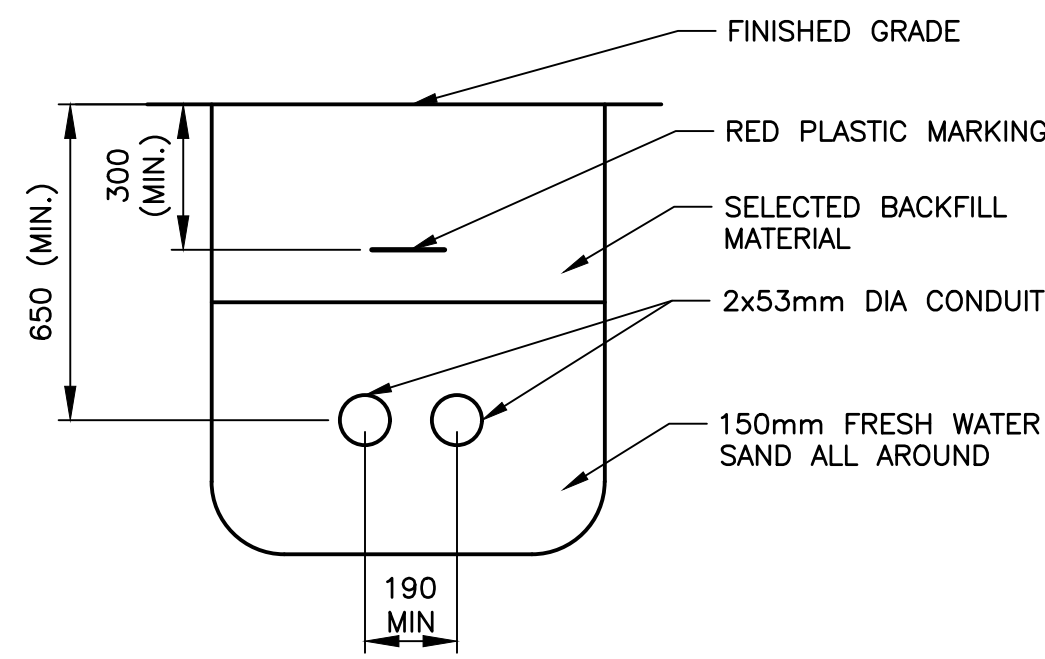


A SECTION—WHARF POWER & COMMS. CABLE/ CONDUIT INSTALLATION
E02 N.T.S

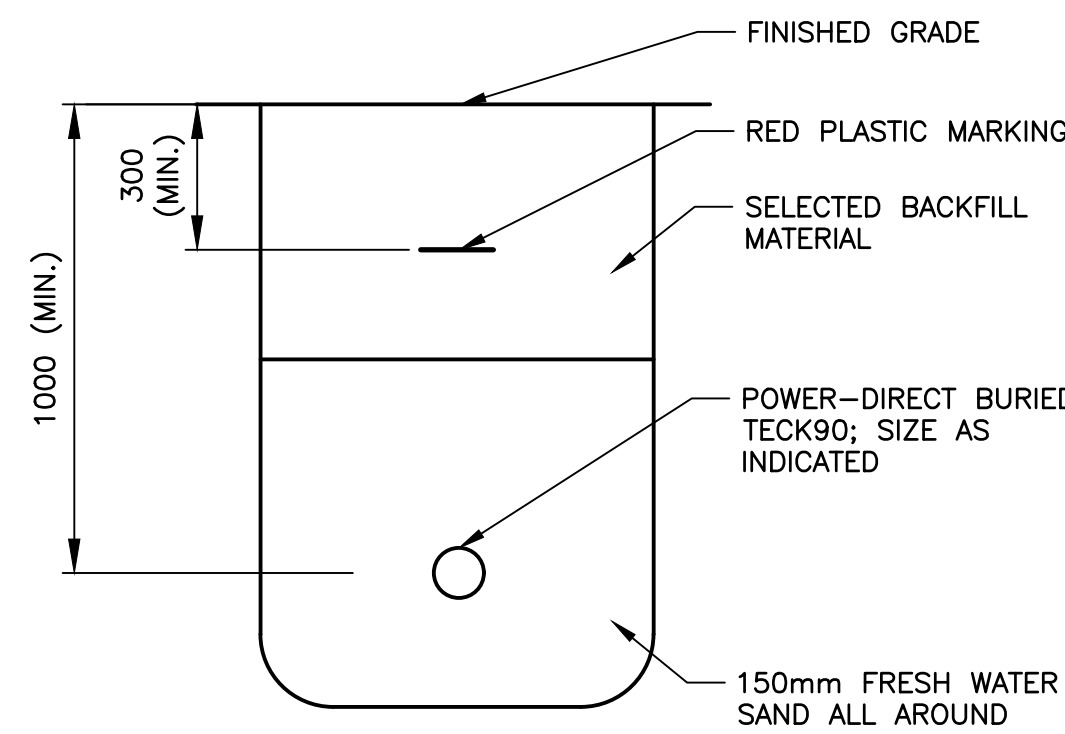


- NOTES:**
1. THE ABOVE DETAILS IS FOR REFERENCE ONLY. REFER TO STRUCTURAL DRAWINGS FOR MORE DETAILS.
 2. SEE ELECTRICAL PLANS FOR SIZE AND QUANTITY OF CONDUITS.

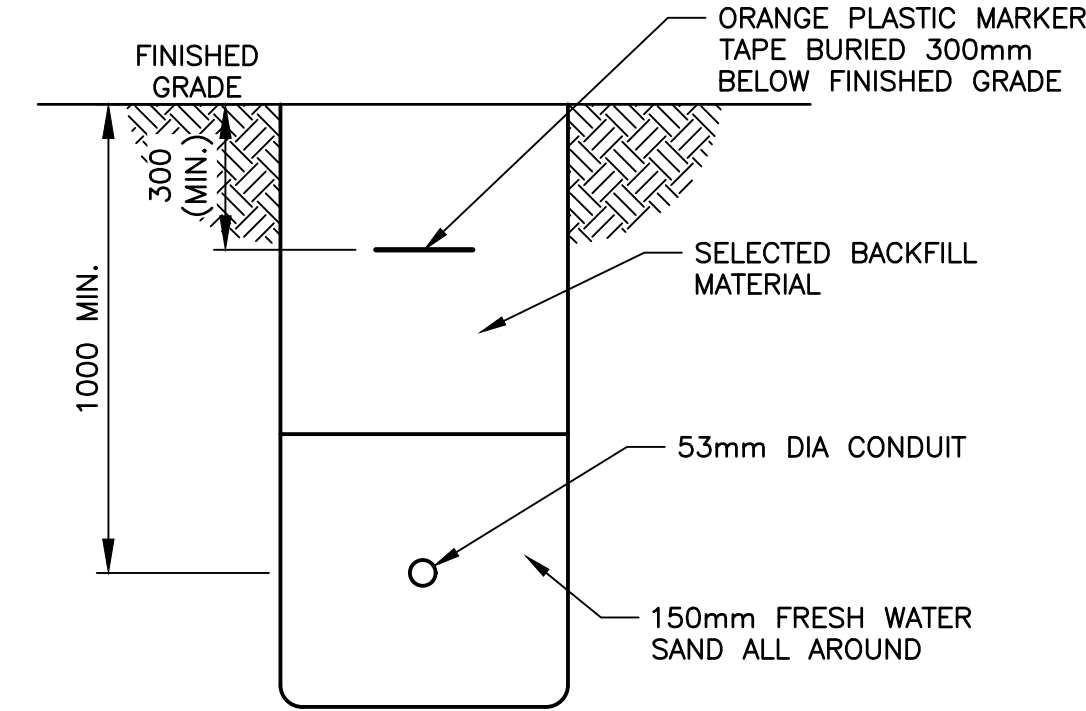
1 DETAIL—LIGHT BASE TYPE 1
N.T.S



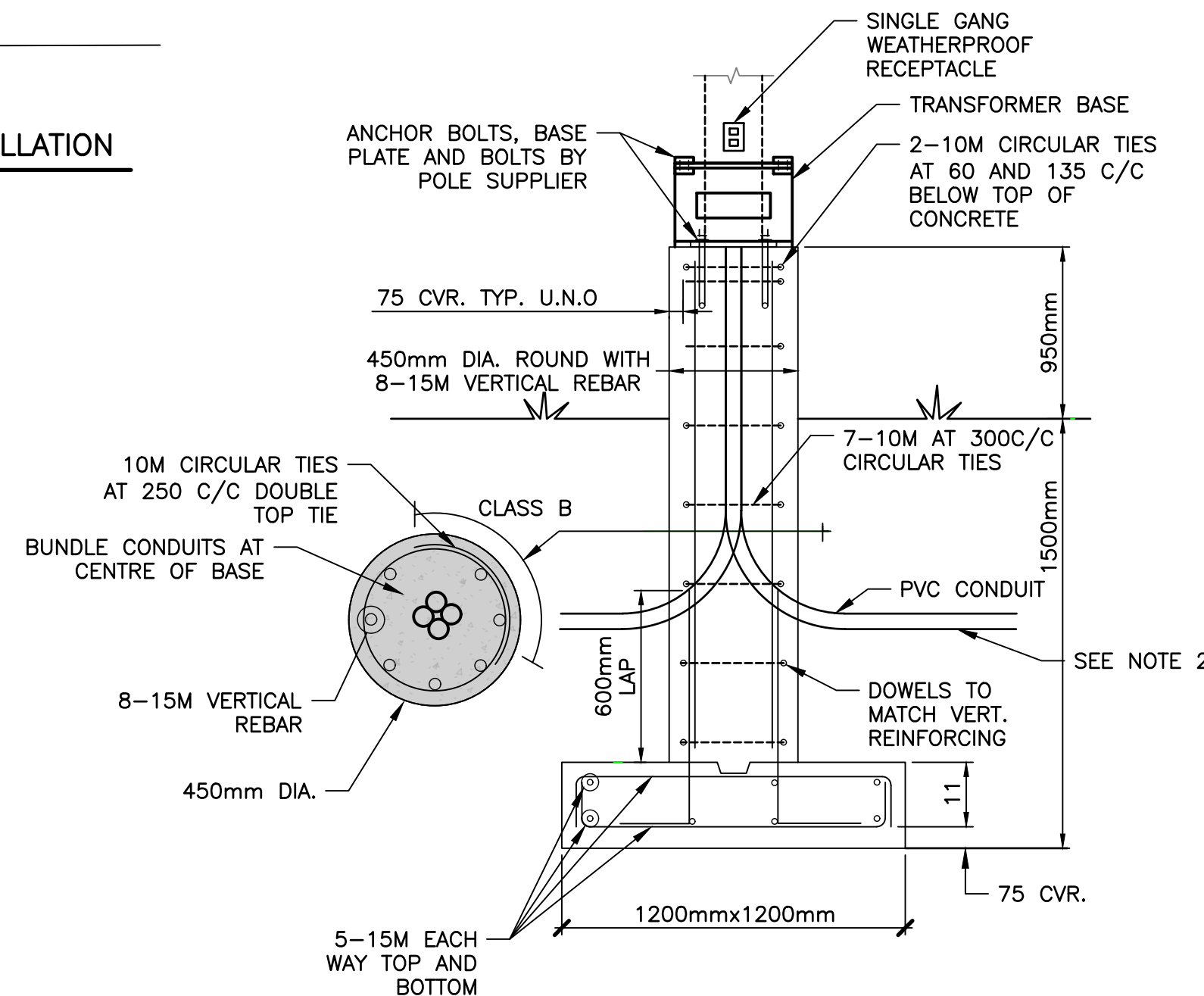
B SECTION— LIGHTING/ POWER DUCTBANK
E02 N.T.S SEE NOTE 1 & 2



C SECTION— POWER DUCTBANK
E02 N.T.S SEE NOTE 1 & 2

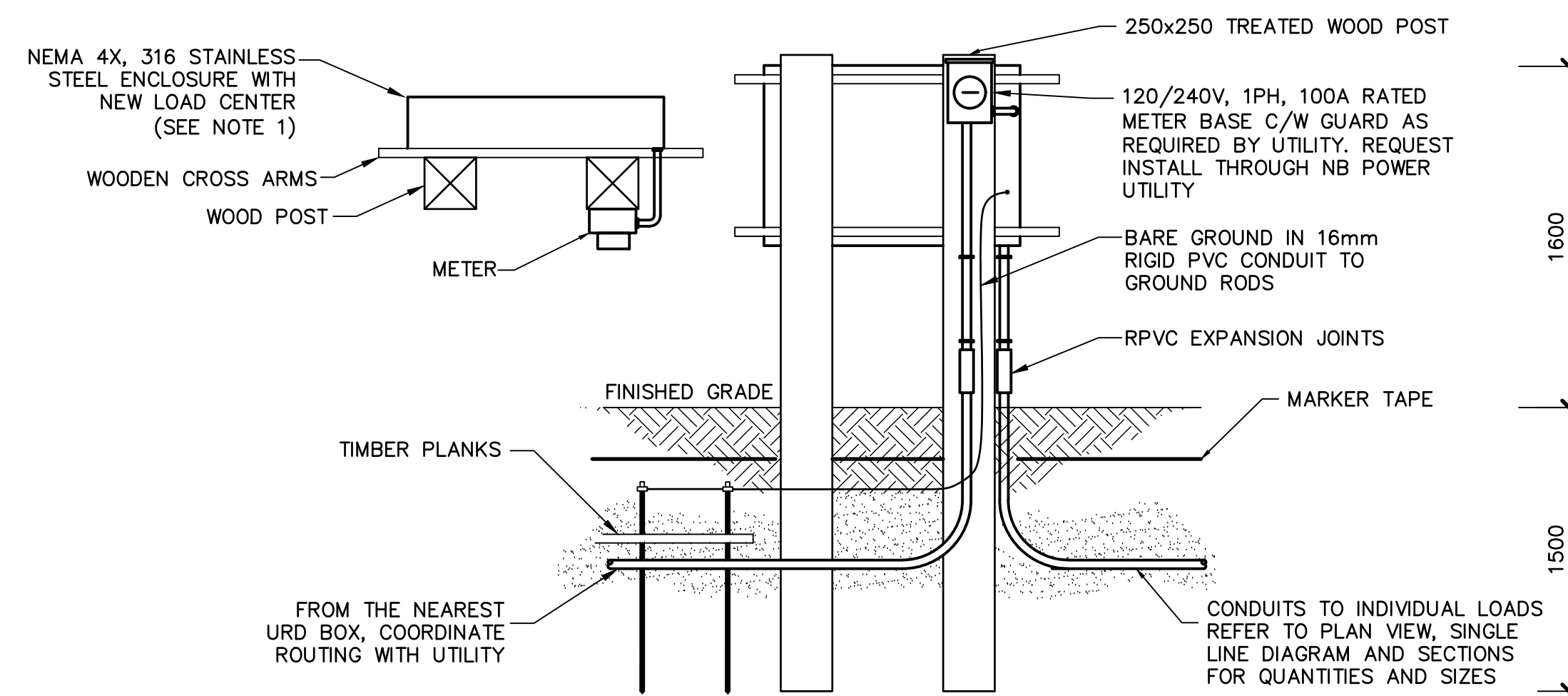


D SECTION— COMMUNICATIONS DUCTBANK
E02 N.T.S SEE NOTE 1 & 2



- NOTES:**
1. THE ABOVE DETAILS IS FOR REFERENCE ONLY. REFER TO STRUCTURAL DRAWINGS FOR MORE DETAILS
 2. SEE ELECTRICAL PLANS FOR SIZE AND QUANTITY OF CONDUITS.

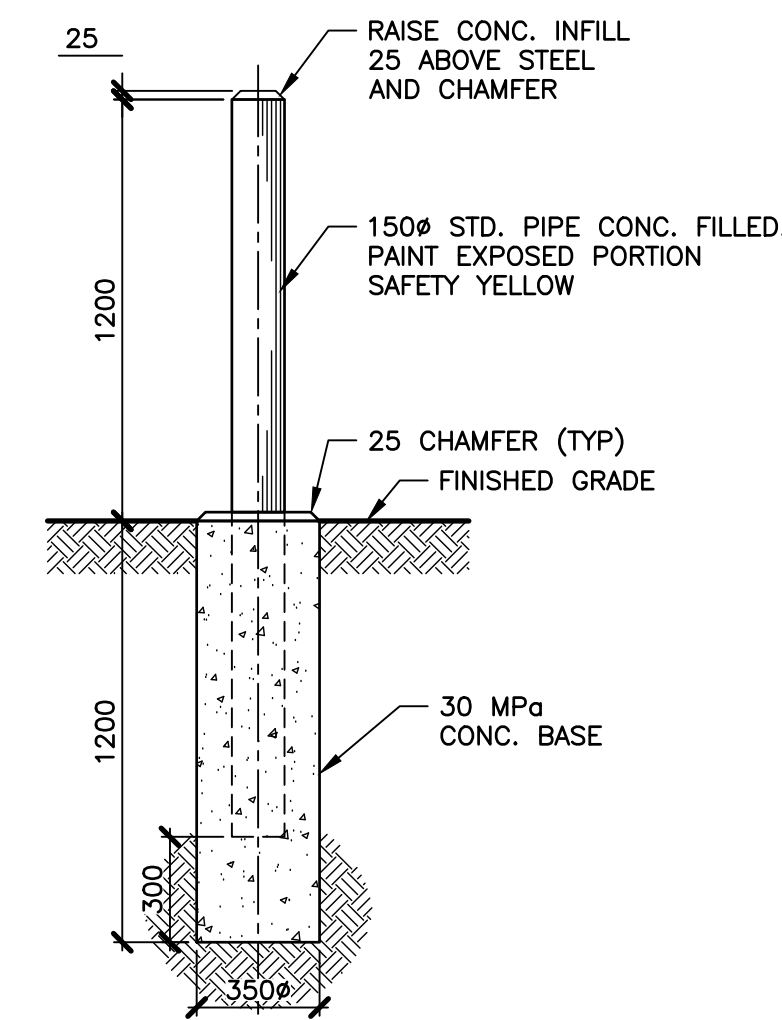
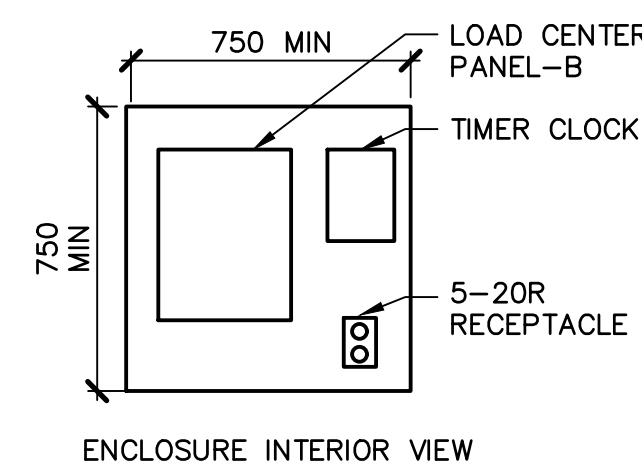
2 DETAIL—LIGHT BASE TYPE 2
N.T.S



- NOTES:**
1. ENCLOSURE SHALL BE NEMA 4X, 316 STAINLESS STEEL, CONTINUOUS DOOR GASKET, CONTINUOUS HINGE, TWIST LATCH DOOR FASTENERS, PADLOCKING PROVISION, INNER PANELS AS REQUIRED, SIZED TO SUIT INTERIOR EQUIPMENT & WOOD POST MOUNTING. PROVIDE 5-20R DUPLEX RECEPTACLE IN THE ENCLOSURE.
 2. LOCATE ON SITE TO PROVIDE 1000mm MINIMUM CLEARANCE AROUND THE SERVICE CENTER.

4 DETAIL—SERVICE CENTER
N.T.S

3 DETAIL—COMMUNICATIONS ENCLOSURE MOUNTING
N.T.S



- NOTES:**
1. BOLLARDS SHALL BE SEPARATED FROM EACH OTHER BY NO MORE THAN 1250mm.(ALL MEASUREMENTS TAKEN RELATIVE TO THE CENTER OF THE BOLLARD).
 2. ALL METAL TO BE HOT DIPPED GALVANIZED.
 3. AFTER INSTALLATION, ANY EXPOSED METAL EDGES SHALL BE PROTECTED WITH COLD GALVANIZING.
 4. BOLLARDS ONLY REQUIRED ON SIDES EXPOSED TO VEHICULAR TRAVEL.

5 DETAIL—PROTECTIVE BOLLARD
N.T.S

NOTES:

1. MAINTAIN MINIMUM 300mm HORIZONTAL AND 150 mm VERTICAL SEPARATION BETWEEN POWER AND COMMUNICATION CABLES AND CONDUITS.
2. ROUTE COMMUNICATIONS CABLES AND CONDUITS ABOVE POWER CIRCUITS AT CROSSOVERS.

0	ISSUED FOR TENDER	2025-08-14	DLM
No.	Description	Date	By

Revision or Issue



TOWN OF SAINT ANDREWS

TSA WHARF APPROACH REPLACEMENT

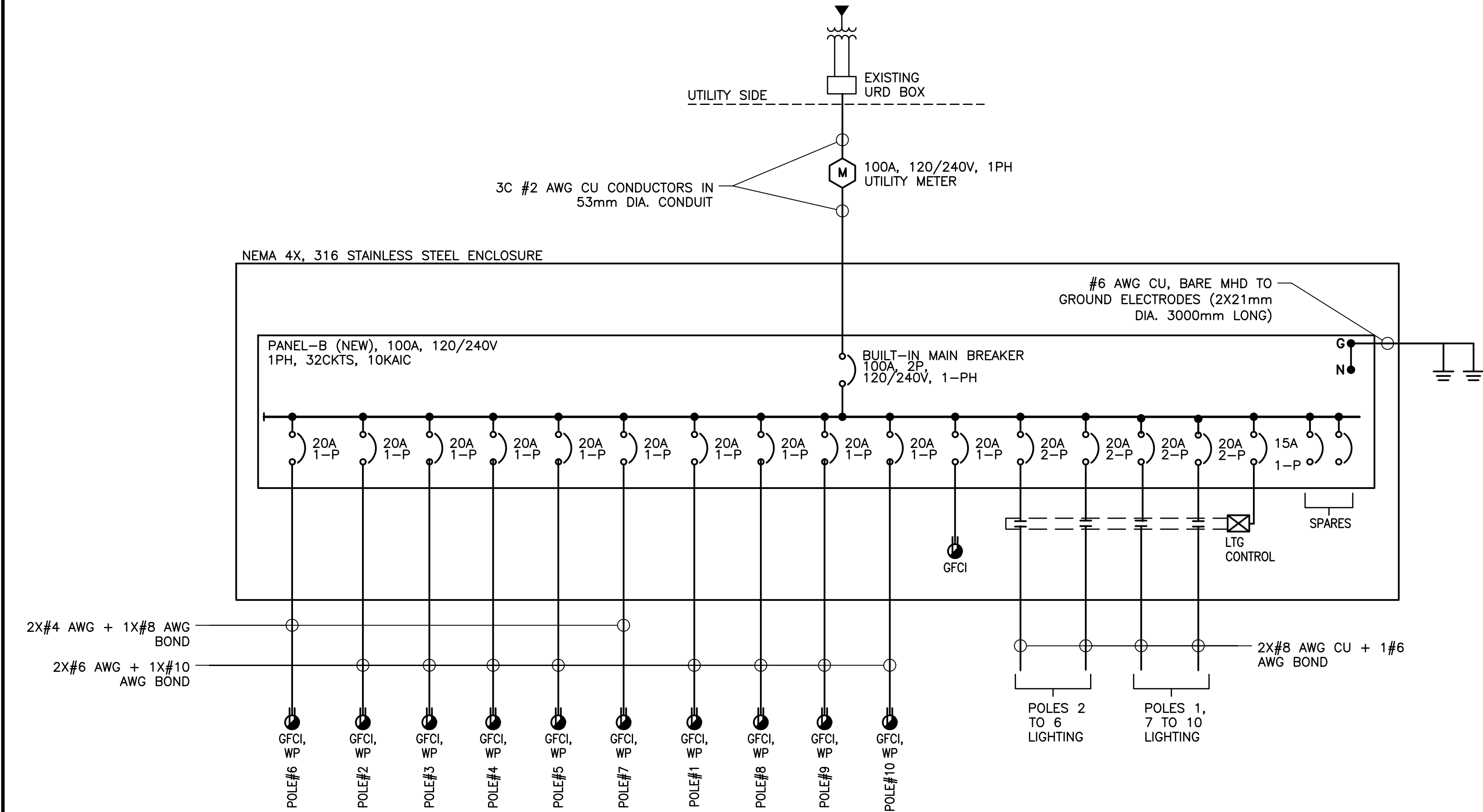
ELECTRICAL

DETAILS



LICENCED PROFESSIONAL ENGINEER Province of New Brunswick	CBCL No. 242835.00	Contract No. TSA 2024-03
Designed VS	Date APRIL 2024	Scale AS NOTED
Checked SW	Drawn MM	Approved DLM
Signature Aug. 15, 2025	Sheet No. 3	of 4
INGÉNIEUR TITULAIRE DE PERMIS Province du Nouveau Brunswick	Drawing No.	

E-03



1
— N.T.S

DETAIL—SINGLE LINE DIAGRAM (IN—FILL AREA)

LIGHTING FIXTURE SCHEDULE						
TYPE	DESCRIPTION	SOURCE	BALLAST / DRIVER	COLOUR TEMP.	VOLTAGE	STANDARD OF ACCEPTANCE
L2	INFILL AREA DECORATIVE LIGHTING: POLE MOUNTED LED AREA LIGHTING FIXTURE, IP66 RATED AND UL/cUL LISTED FOR WET LOCATIONS. CORROSION RESISTANT HOUSING TO BE 1000 HOUR SALT SPRAY TESTED PER ASTM B117 WITH A MINIMUM SCRIBE RATING OF 5 PER ASTM D1654. SINGLE PIECE DIE CAST ALUMINUM HOUSING WITH INTEGRAL HEAT SINK & 10KV SURGE PROTECTOR, 80 CRI MIN. TYPE IV DISTRIBUTION, SUITABLE FOR OPERATION IN -40°C TO 40°C AMBIENT ENVIRONMENTS. COMES WITH SINGLE ARM, SINGLE TOP BANNER ARM, BASE COVER AND POLE.	10,000 LUMENS	LED DRIVER	4000K	240V	FIXTURE: CYCLONE LIGHTING CY25P1B-DP3AR-T4-P60-40K-240-10KV-ADP-DIM-GM-TX-MG ARM: MA202-C1-INS2-ADP-PTL-240-GM-TX-MG SINGLE TOP BANNER ARM : BA3_5D_24IN_S-GM-TX-MG BASE COVER : BC57-BK-TX-MG
L2A	SAME AS TYPE L2 BUT TWO FIXTURES MOUNTED ON SINGLE POLE WITH TWIN ARM UNITS IN 180 DEGREES.	10,000 LUMENS	LED DRIVER	4000K	240V	FIXTURES: CYCLONE LIGHTING CY25P1B-DP3AR-T4-P60-40K-240-10KV-ADP-DIM-GM-TX-MG (QTY. 2) ARM: MA202-C2-INS2-ADP-PTL-240-GM-TX-MG TWIN TOP BANNER ARMS: BA3_5D_24IN_TW-GM-TX-MG BASE COVER: BC57-BK-TX-MG
POLE	ROUND 130MM DIA, 4500MM LONG, ALUMINUM SHAFT, WELDED TO BOTH THE TOP AND BOTTOM OF A CAST ALUMINUM REINFORCED ANCHOR PLATE. HAND HOLE 50X130MM WITH WEATHERPROOF COVER AND COPPER GROUND LUG. 5-20R GFCI MARINE GRADE RECEPTACLE INSTALLED ON THE BASE 90 DEGREES TO THE HAND HOLE COVER. PROVIDE 250mm HIGH TRANSFORMER BASE TO MATCH POLE.					POLE: CYCLONE LIGHTING PAL52-18-INS-CSA-GM-TX-MG CP6200
NOTE: ALL THE NEW LIGHT FIXTURES IN THE IN-FILL AREA TO BE CONTROLLED BY THE TIME SWITCH, LIGHTS TO BE TURNED ON AT SUNSET AND OFF AT DAWN. TIMER CONTROL SHALL BE WITH 24-HOUR/365 DAYS, 2-CIRCUIT ELECTRONIC CONTROL, 240 VAC, 60HZ, 2-SPST/DPST, WITH METAL ENCLOSURE, STANDARD OF ACCEPTANCE: INTERMATIC ET2125C OR APPROVED EQUIVALENT.						

Remarks	Power: 120/240V, 1ø, 3-WIRE # OF CCTS: 32 INCOMING: SERVICE ENTRANCE										PANEL 'B' (NEW) LOC: IN-FILL AREA										SYM. IC.: 10kAIC Mains: 100A MAIN BKR.: 100A,2P										Remarks																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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