

Parks Canada Agency

Agence Parcs Canada

Point Pelee National Park
1503 PPNP

Marsh Area Renewal – PHASE 1

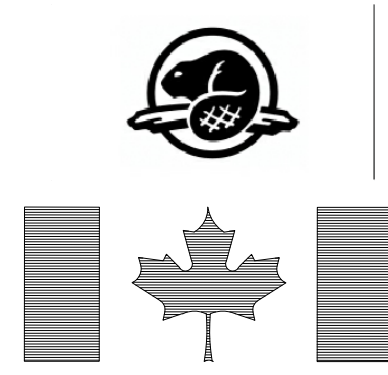
DATE: FEBRUARY 2018
ISSUED FOR TENDER

Canada



Stantec Project Number: 160622453

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GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS.
2. NOTIFY DEPARTMENTAL REPRESENTATIVE IF ANY DISCREPANCY WAS FOUND BETWEEN THESE NOTES AND THE SPECIFICATIONS.
3. ALL WORK IS TO CONFORM WITH LATEST EDITION OF THE O.B.C. AND WITH ALL APPLICABLE CODES AND BYLAWS.
4. IN CASE OF CONFLICTING INFORMATION BETWEEN CONTRACT DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN OR CONTRACTOR MUST SEEK CLARIFICATION IN WRITING FROM DEPARTMENTAL REPRESENTATIVE.
5. BEFORE PROCEEDING WITH WORK, CHECK ALL THE DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS AND REPORT DISCREPANCIES TO THE DEPARTMENTAL REPRESENTATIVE. REFER TO THE ARCHITECTURAL AND OTHER DRAWINGS FOR LOCATIONS AND DIMENSIONING OF OPENINGS AND SLEEVES NOT SHOWN ON THE STRUCTURAL DRAWINGS. HOWEVER, OBTAIN THE DEPARTMENTAL REPRESENTATIVE'S PRIOR APPROVAL BEFORE INSTALLING OPENINGS AND SLEEVES WHICH ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS.
6. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF PITS, BASES, SUMPS, TRENCHES, DEPRESSIONS, GROOVES AND CHAMFER NOT SHOWN ON STRUCTURAL DRAWINGS.
7. ALL DIMENSIONS GIVEN ON STRUCTURAL DRAWINGS ARE IN METRIC SYSTEM UNLESS OTHERWISE NOTED. DO NOT SCALE THESE DRAWINGS.
8. THE CONTRACTOR WILL FACILITATE ALL MATERIAL TESTING REQUIRED BY THE ARCHITECT AND ENGINEER, PARKS CANADA AGENCY TO COVER COST AND GENERAL CONTRACTOR TO ORGANIZE AND CO-ORDINATE
9. NATIONAL PARK – THE PROJECT IS LOCATED IN A NATIONAL PARK OF CANADA, THEREFORE STANDARDS FOR ENVIRONMENTAL PROTECTION AND FOR VISUAL AESTHETICS OF FINAL PRODUCT SHALL BE OF A QUALITY STANDARD. CONTRACT LIMITS SHALL BE STRICTLY ADHERED TO AND CONTRACTOR IS TO TAKE SPECIAL CARE TO MINIMIZE DAMAGE AND DISRUPTION AND PROTECT EXISTING FEATURES AND NATIONAL PARK ECO-SYSTEM. THE DEPARTMENTAL REPRESENTATIVE OR DESIGNATE IS TO BE NOTIFIED IMMEDIATELY IF ANY NATURAL AND CULTURAL RESOURCES ARE LOCATED DURING CONSTRUCTION. CONTRACTOR TO REFERENCE PARKS CANADA'S BASIC IMPACT ANALYSIS (BIA) FOR ECOLOGICAL RESTRICTIONS/DIRECTIONS.
10. NATIONAL PARK – EXISTING FEATURES: THE PROJECT IS LOCATED IN A NATIONAL PARK OF CANADA, THEREFORE, IT IS ESSENTIAL ALL EXISTING FEATURES REMAIN AS FOUND. CONSEQUENTLY, STANDARDS FOR ENVIRONMENTAL PROTECTION AND FOR VISUAL AESTHETICS OF FINAL PRODUCT SHALL BE OF A QUALITY STANDARD. CONTRACT LIMITS SHALL BE STRICTLY ADHERED TO AND CONTRACTOR IS TO TAKE SPECIAL CARE TO MINIMIZE DAMAGE AND DISRUPTION AND PROTECT EXISTING FEATURES. THE DEPARTMENTAL REPRESENTATIVE OR DESIGNATE IS TO BE NOTIFIED IMMEDIATELY IF ANY HISTORIC OR NATURAL RESOURCES ARE LOCATED DURING CONSTRUCTION.

Canada

LIST OF DRAWINGS

LANDSCAPE

D-L0	COVER SHEET
D-L0.1	LIST OF DRAWINGS
D-L1	CONTRACTOR STAGING AND TREE PROTECTION
D-L2	DETAIL DRAWINGS

STRUCTURAL

D-S1	EXISTING CONDITIONS AND REMOVALS PLAN – FIXED BOARDWALK
D-S2	FIXED BOARDWALK PLAN
D-S3	PROPOSED BOARDWALK PART PLAN, ELEVATION, SECTION AND DETAILS
D-S4	BOARDWALK DETAILS
D-S5	BOARDWALK TO MARSH TOWER PLAN
D-S6	TOWER AND SHADE STRUCTURE DECK
D-S7	PERGOLA PLATFORM PLAN AND SECTION
D-S8	BOARDWALK GUARDRAIL DETAILS
D-S9	MARSH TOWER STAIR TREAD DETAILS



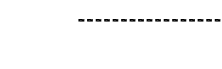






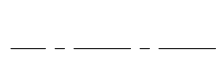
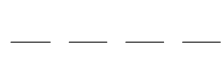

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Stantec Project Number. 160622453

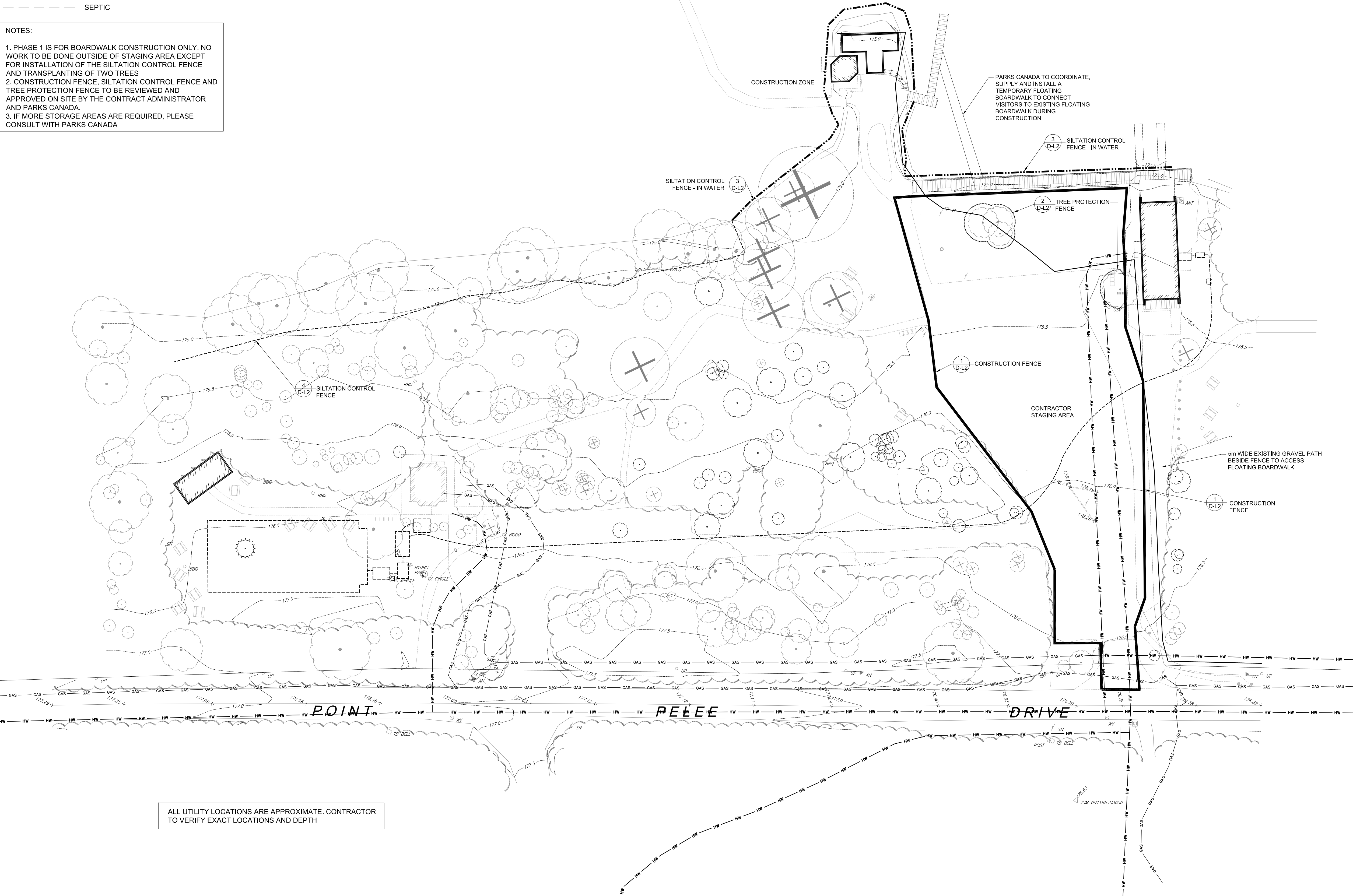
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LEGEND

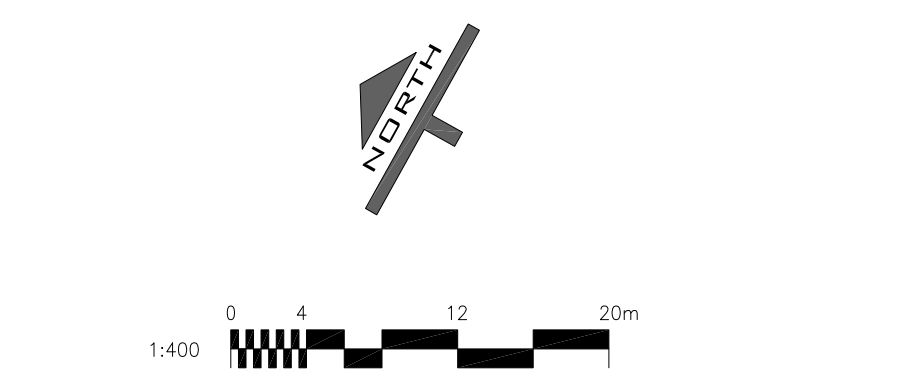
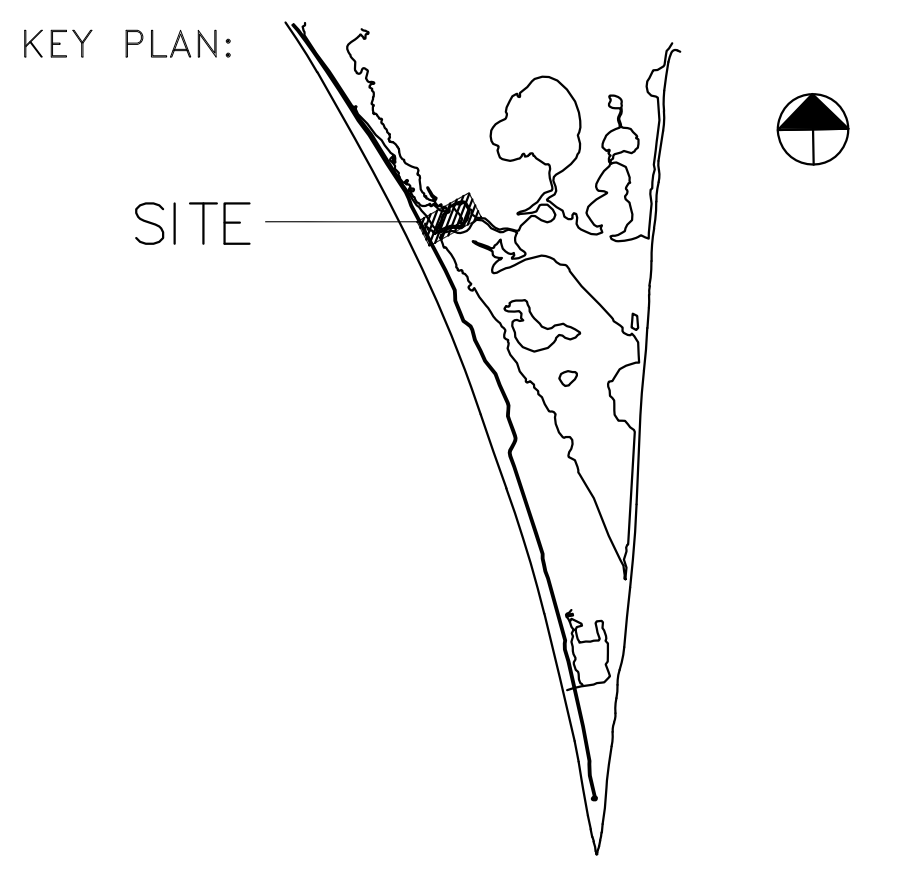
-  EXISTING CONTOURS
-  EXISTING TREES TO REMAIN
-  TREE PROTECTION FENCE
-  SILTATION CONTROL FENCE
-  SILTATION CONTROL FENCE - IN WATER
-  CONSTRUCTION FENCE
-  EXISTING DRIPLINE
-  GAS
-  WATER LINE
-  HYDRO LINE
-  HYDRO/PHONE LINE
-  SEPTIC

NOTES:

1. PHASE 1 IS FOR BOARDWALK CONSTRUCTION ONLY. NO WORK TO BE DONE OUTSIDE OF STAGING AREA EXCEPT FOR INSTALLATION OF THE SILTATION CONTROL FENCE AND TRANSPLANTING OF TWO TREES
2. CONSTRUCTION FENCE, SILTATION CONTROL FENCE AND TREE PROTECTION FENCE TO BE REVIEWED AND APPROVED ON SITE BY THE CONTRACT ADMINISTRATOR AND PARKS CANADA.
3. IF MORE STORAGE AREAS ARE REQUIRED, PLEASE CONSULT WITH PARKS CANADA



ALL UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY EXACT LOCATIONS AND DEPTH



No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
2	02.01.2018	ISSUED FOR TENDER	L.H	M.D
1	1.18.2018	100% SUBMISSION	L.H	M.D

Revision / Revision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **Stantec**

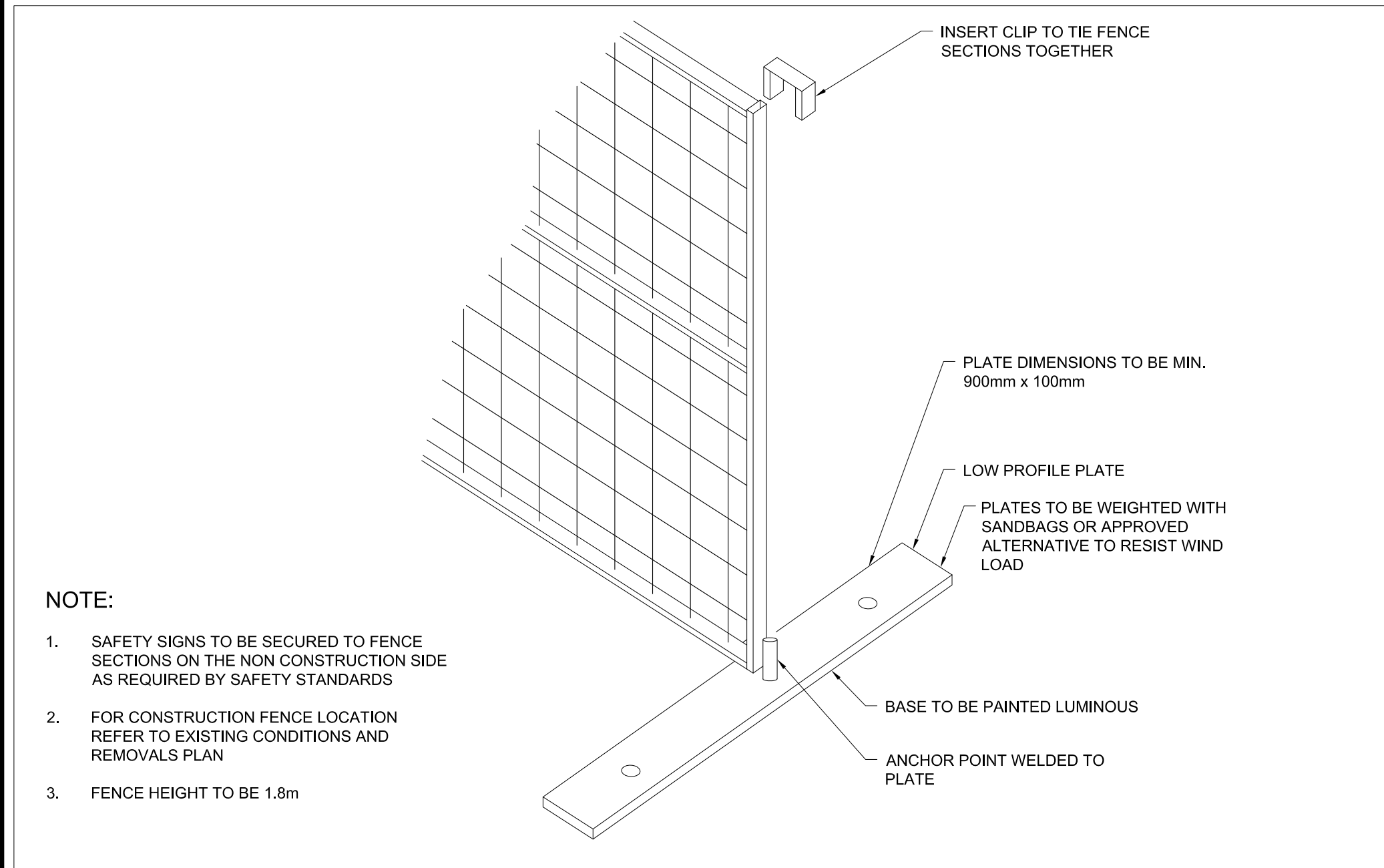
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STANTEC PROJECT NO.160622453

Project title/Titre du projet: **MARSH AREA RENEWAL PROJECT**
Point Pelee National Park
Leamington, ON

Drawing title/Titre du dessin: **CONTRACTOR STAGING AREA AND TREE PROTECTION**

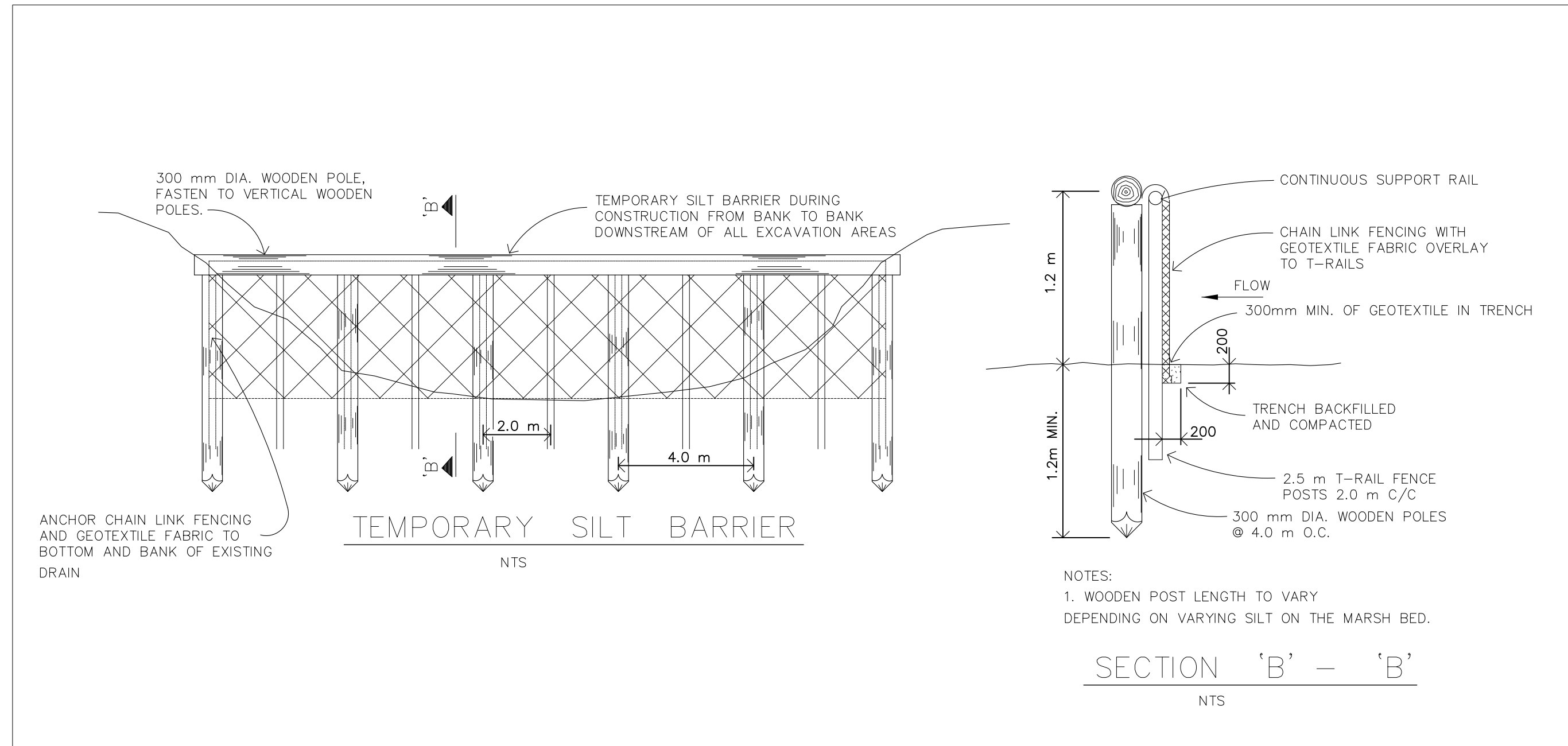
Designed by/Concept par	MD	Date	01/11/2018
Drawn by/Dessiné par	LH	Date	01/18/2018
Checked by/Vérifié par	MD	Date	01/25/2018
Approved by/approuvé par	MD	Date	02/01/2018
Project No./N° du projet	1503 PPNP	Scale/Echelle	1:400
Drawing Set No./N° de série du dessin	REV.01	Sheet No./N° de la feuille	D-11



NOTE:

- SAFETY SIGNS TO BE SECURED TO FENCE SECTIONS ON THE NON CONSTRUCTION SIDE AS REQUIRED BY SAFETY STANDARDS
- FOR CONSTRUCTION FENCE LOCATION REFER TO EXISTING CONDITIONS AND REMOVALS PLAN
- FENCE HEIGHT TO BE 1.8m

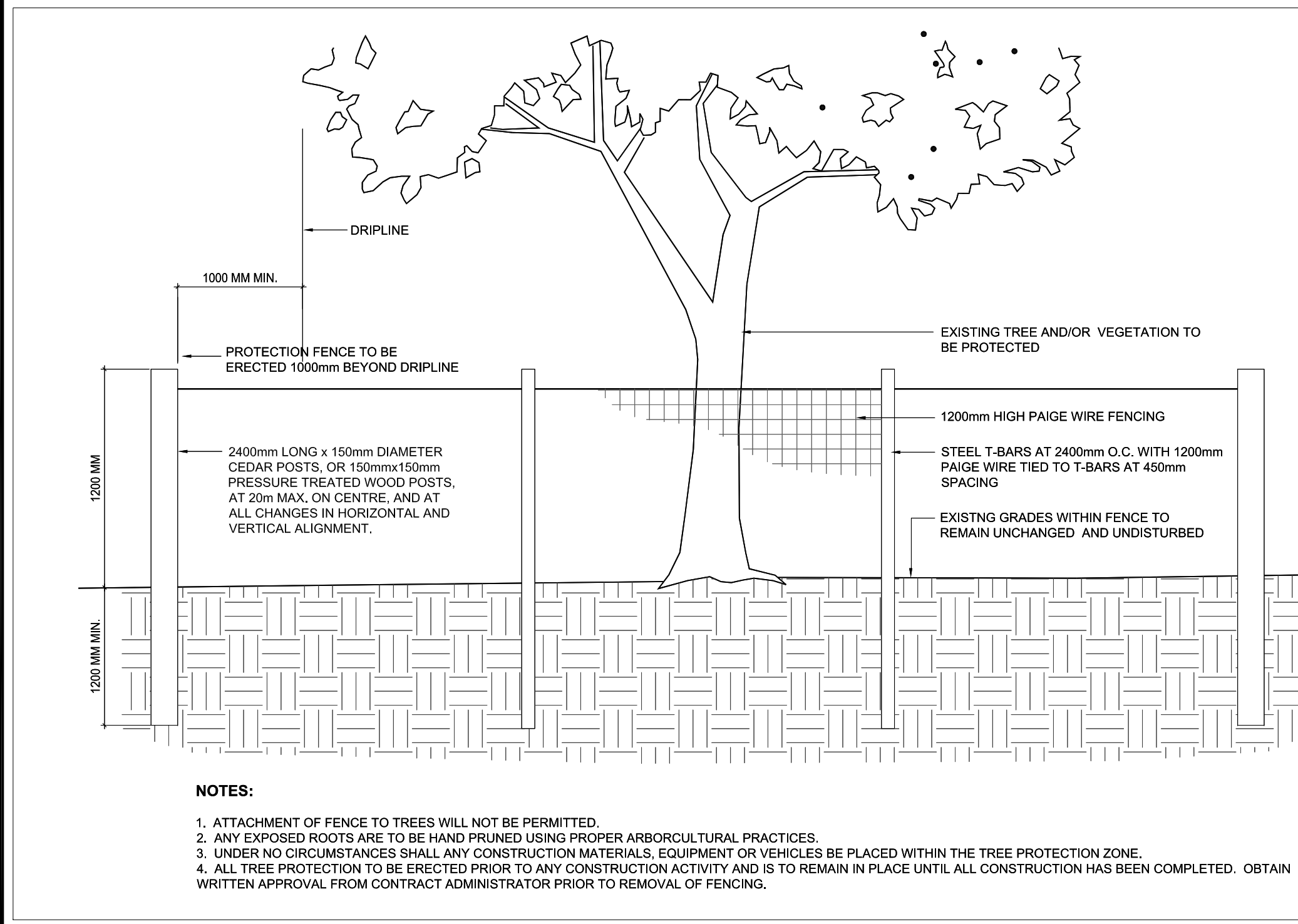
1 CONSTRUCTION FENCE
SCALE: NTS



NOTES:

- WOODEN POST LENGTH TO VARY DEPENDING ON VARYING SILT ON THE MARSH BED.

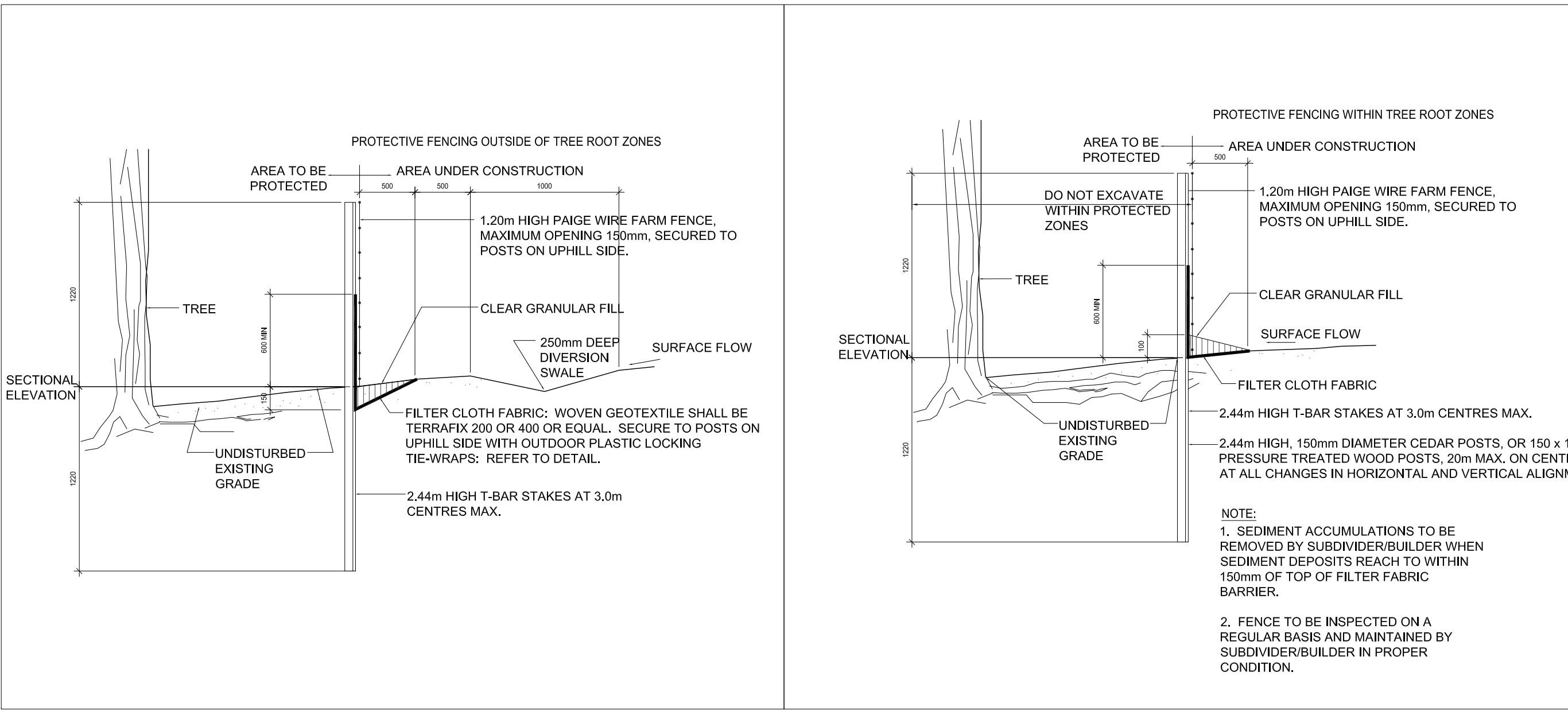
3 SILTATION CONTROL FENCE - IN WATER
SCALE: NTS



NOTES:

- ATTACHMENT OF FENCE TO TREES WILL NOT BE PERMITTED
- ANY EXPOSED ROOTS ARE TO BE HAND PRUNED USING PROPER ARBORCULTURAL PRACTICES.
- UNDER NO CIRCUMSTANCES SHALL ANY CONSTRUCTION MATERIALS, EQUIPMENT OR VEHICLES BE PLACED WITHIN THE TREE PROTECTION ZONE.
- ALL TREE PROTECTION TO BE ERECTED PRIOR TO ANY CONSTRUCTION ACTIVITY AND IS TO REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS BEEN COMPLETED. OBTAIN WRITTEN APPROVAL FROM CONTRACT ADMINISTRATOR PRIOR TO REMOVAL OF FENCING.

2 TREE PROTECTION FENCE
SCALE: NTS



NOTE:

- SEDIMENT ACCUMULATIONS TO BE REMOVED BY SUBDIVIDER/BUILDER WHEN SEDIMENT DEPOSITS REACH TO WITHIN 150mm OF TOP OF FILTER FABRIC BARRIER.
- FENCE TO BE INSPECTED ON A REGULAR BASIS AND MAINTAINED BY SUBDIVIDER/BUILDER IN PROPER CONDITION.

4 SEDIMENT CONTROL FENCE - OUTSIDE OF TREE ROOT ZONES
SCALE: NTS

4 SEDIMENT CONTROL FENCE - WITHIN TREE ROOT ZONES
SCALE: NTS

PROTECTING AND MANAGING TREES DURING CONSTRUCTION:

- Upon receiving the necessary approvals and prior to the commencement of tree removals, all areas designated for preservation must be flagged in the field. All designated preservation areas must be left standing and undamaged during the removals work. All removals must be felled into the development area. The removals are to be completed outside of the migratory bird nesting season to be confirmed. Removals may take place during this restricted time only if the requirements of the Migratory Birds Convention Act are met and resting activity is routinely monitored by qualified individuals (ie: wildlife biologists).
- Upon completion of the tree removals, all felled trees are to be removed from the site, and all brush chipped and removed. No lumber or brush from the clearing is to be stored on the site, all brush, roots and wood debris must be shredded into pieces.
- Tree Protection Fencing will be installed as required. Refer to drawing Details.
- Areas within the drip line of the trees designated for preservation are not to be used for any type of storage (e.g. storage of debris, construction material, surplus soils, and construction equipment). No trenching or tunneling for underground services shall be located within the tree protection zone or drip line of trees designated for preservation within or adjacent to construction zone unless approved by Departmental Representative.
- Trees shall not have any rigging cables or hardware of any sort attached or wrapped around them, nor shall any contaminants be dumped within the protective areas. Further, no contaminants shall be dumped or flushed where they may come into contact with the feeder roots of the trees.
- In the event that it is necessary to remove additional limbs or portions of trees, after construction has commenced, to accommodate construction, the Departmental Representative is to be informed and the removal is to be executed carefully and in full accordance with arboricultural techniques, by a certified and licensed Arborist, upon approval.
- During excavation operations in which roots are affected, the Contractor is to prune all exposed roots cleanly. Pruned root ends shall point obliquely downwards. The exposed roots should not be allowed to dry out. The Contractor shall discuss watering of the roots with the Departmental Representative prior to pruning to ensure that so that optimum soil moisture is maintained during construction and backfilling operations. Backfilling must be completed with clean, uncontaminated native topsoil.

2	02.01.2018	ISSUED FOR TENDER	L.H	M.D
1	1.18.2018	100% SUBMISSION	L.H	M.D

No.	Date	Description	Drawn by Dessiné par	Approved Approuvé
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Revision / Revision	
A	Detail number Sheet number
B	A Numero de detail B Numero de la feuille

Linear dimensions in millimetres	Dimensions linéaires en millimètres
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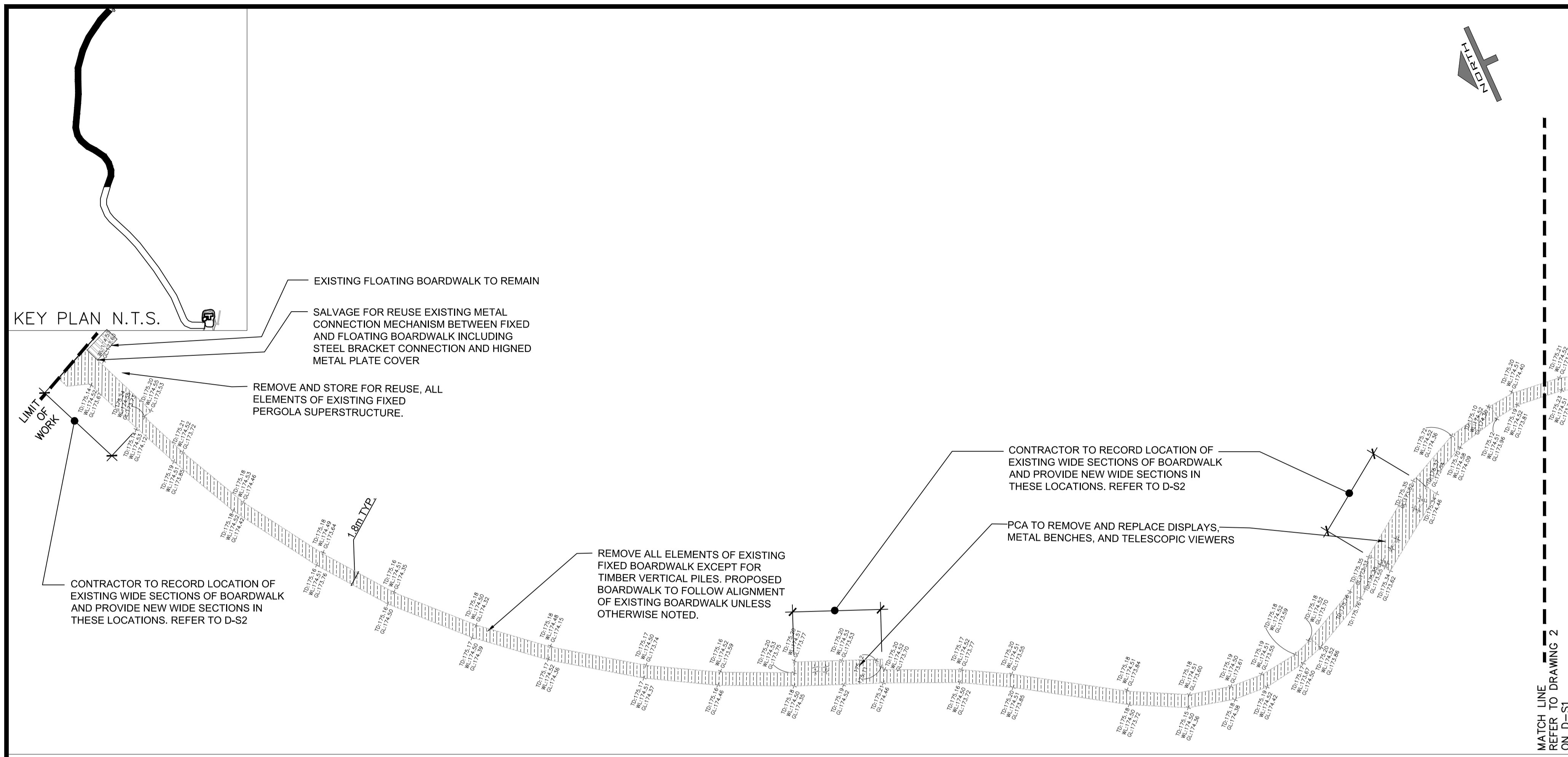
Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
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STANTEC PROJECT NO.160622453

Project title/Titre du projet
MARSH AREA RENEWAL PROJECT
Point Pelee National Park
Leamington, ON

Drawing title/Titre du dessin
DETAIL DRAWINGS

Designed by/Concept par	MD	Date	01/11/2018
Drawn by/Desiné par	LH	Date	01/18/2018
Checked by/Vérifié par	MD	Date	01/25/2018
Approved by/approuvé par	MD	Date	02/01/2018
Project No./N° du projet	1503 PPNP	Scale/Echelle	1:400
Drawing Set No./N° de série du dessin	REV.XX	Sheet No./N° de la feuille	D-L2



- LEGEND
- + 175.27 EXISTING ELEVATIONS
 - + TD EX. TOP OF DECK ELEVATION
 - + WL EX. WATER LEVEL ELEVATION
 - + GL EX. GROUND LEVEL BELOW DECK ELEVATION
- EXISTING BOARDWALK TO BE REMOVED AND DISPOSED OFF SITE (EXCEPT FOR VERTICAL TIMBER PILES AND SUPPORT TIES BETWEEN PILES)

- NOTES
1. DO NOT MODIFY EXISTING TIMBER PILES IN ANY WAY TO AVOID ENVIRONMENTAL CONTAMINATION.
 2. SUBMIT PLANS AND PROCEDURES FOR BOARDWALK REMOVALS FOR REVIEW.
 3. DISPOSE OFF SITE ALL MATERIALS REMOVED FROM BOARDWALK AND EXCAVATION WORK. EXCEPT THOSE ITEMS AS NOTED ON THE CONTRACT DRAWINGS TO BE SALVAGED AND HANDED OVER TO PARKS CANADA. CLEAN SEPARATED MATERIALS MAY BE ACCEPTED BY PARKS CANADA AGENCY (PCA), UPON REVIEW. (EG. GRAVEL, SOD, SOIL)
 4. NO DEBRIS SHALL BE ALLOWED TO FALL INTO MARSH AREA.
 5. SALVAGE AND STORE WOOD PERGOLA IN ITS ENTIRETY AND CONNECTION BRACKET AND PLATES BETWEEN FIXED AND FLOATING BOARDWALK.
 6. PCA WILL REMOVE AND REINSTATE ALL EXISTING FREE STANDING SITE FURNITURE, TELESCOPIC VIEWERS AND SIGNS.
 7. ENTIRE LENGTH OF EXISTING BOARDWALK STRINGERS ARE TO BE REMOVED AND SALVAGED BY CONTRACTOR AND HANDED OVER TO PARKS CANADA.

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Parks Canada / Parcs Canada

South Western Ontario Field Unit / Unité de gestion du Sud-Ouest de l'Ontario

KEY PLAN:

SITE

POINT PEELE NATIONAL PARK

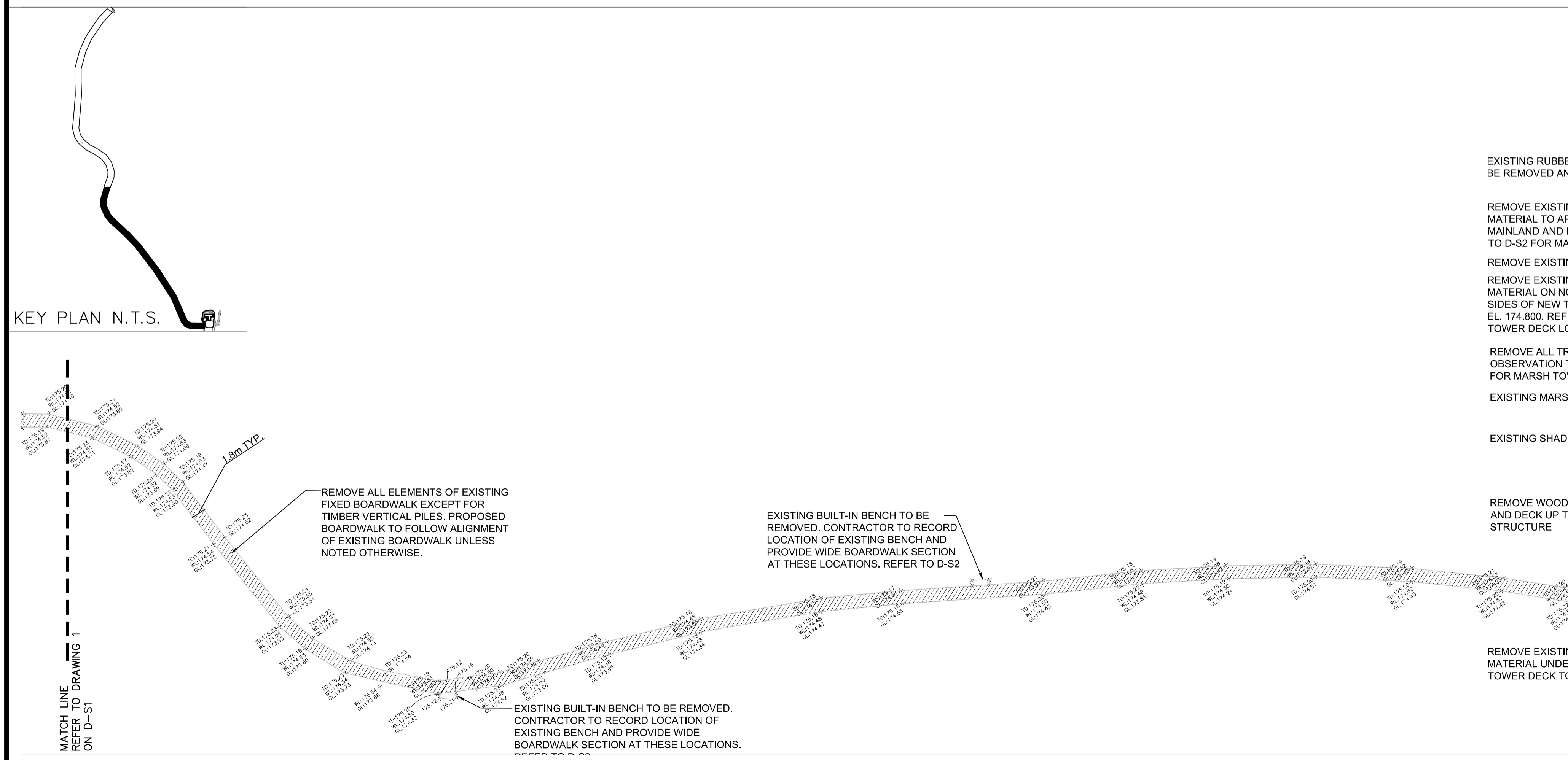
LAKE ERIE

1 FIXED BOARDWALK EXISTING CONDITIONS AND REMOVALS PLAN
D-S1 SCALE: 1:400

1:400

0 4 12 20m

5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
3	3.24.2017	99% DESIGN	S.L.	M.D
2	2.10.2017	66% DESIGN	S.L.	M.D
1	11.18.2016	CONCEPT DESIGN	S.L.	M.D



2 FIXED BOARDWALK EXISTING CONDITIONS AND REMOVALS PLAN
D-S1 SCALE: 1:400

- EXISTING RUBBER MAT BOAT LAUNCH TO BE REMOVED AND RETAINED FOR PCA
- REMOVE EXISTING SOIL AND ORGANIC MATERIAL TO APPROX. EL. 174.500 BETWEEN MAINLAND AND MARSH TOWER DECK. REFER TO D-S2 FOR MARSH TOWER DECK LOCATION
- REMOVE EXISTING BUILT-IN WOOD BENCHES
- REMOVE EXISTING SOIL AND ORGANIC MATERIAL ON NORTH, SOUTH AND WEST SIDES OF NEW TOWER DECK TO APPROX. EL. 174.800. REFER TO D-S2 FOR MARSH TOWER DECK LOCATION
- REMOVE ALL TREADS ON OBSERVATION TOWER. REFER TO D-S8 FOR MARSH TOWER MODIFICATIONS
- EXISTING MARSH TOWER
- EXISTING SHADE STRUCTURE
- REMOVE WOOD RAMP, STEPS AND DECK UP TO SHADE STRUCTURE
- REMOVE EXISTING SOIL AND ORGANIC MATERIAL UNDER LOCATION OF NEW MARSH TOWER DECK TO APPROX. EL. 174.900.

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
3	3.24.2017	99% DESIGN	S.L.	M.D
2	2.10.2017	66% DESIGN	S.L.	M.D
1	11.18.2016	CONCEPT DESIGN	S.L.	M.D

Revision / Revision

A	Detail number	A Numéro de détail
B	Sheet number	B Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **Stantec**

Engineer's Name / Nom de l'ingénieur: **S.E. ALARCON**

Professional Engineer License No. / Numéro de licence: **100067223**

STANTEC PROJECT NO.160622453

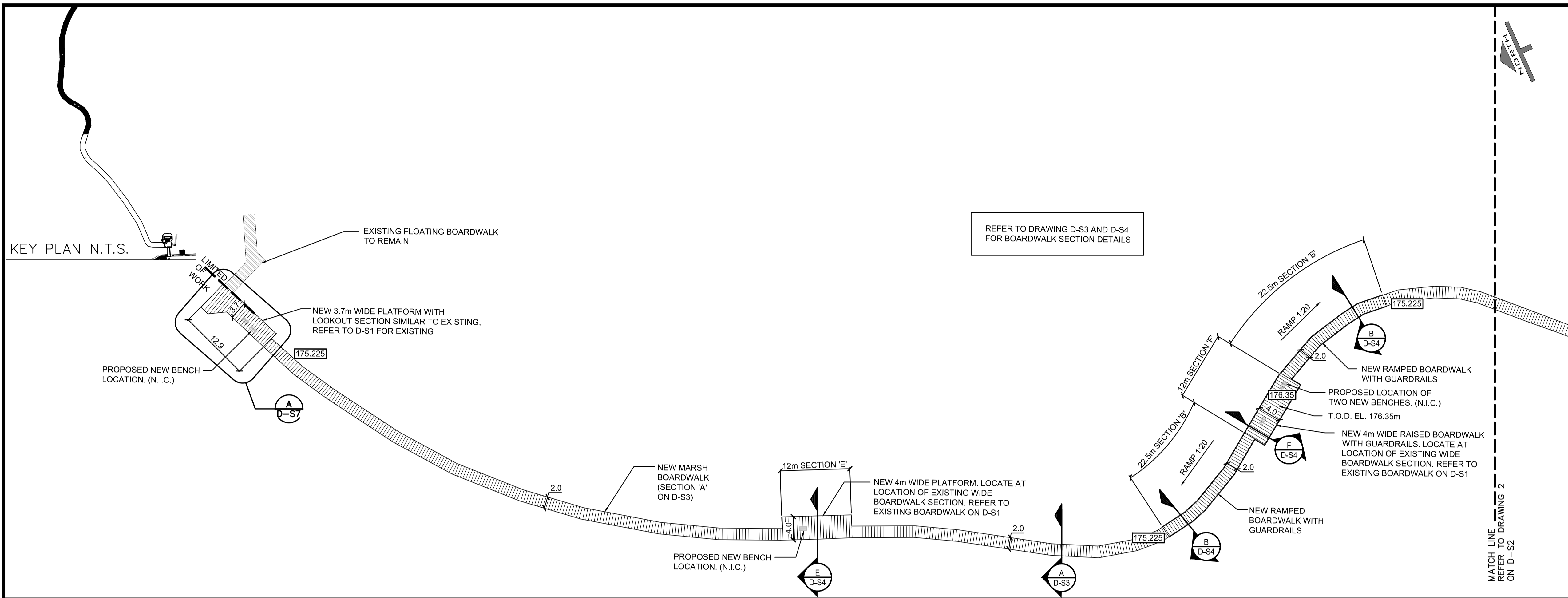
Project title/Titre du projet: **MARSH AREA RENEWAL PROJECT BOARDWALK**

Point Pelee National Park
Leamington, ON

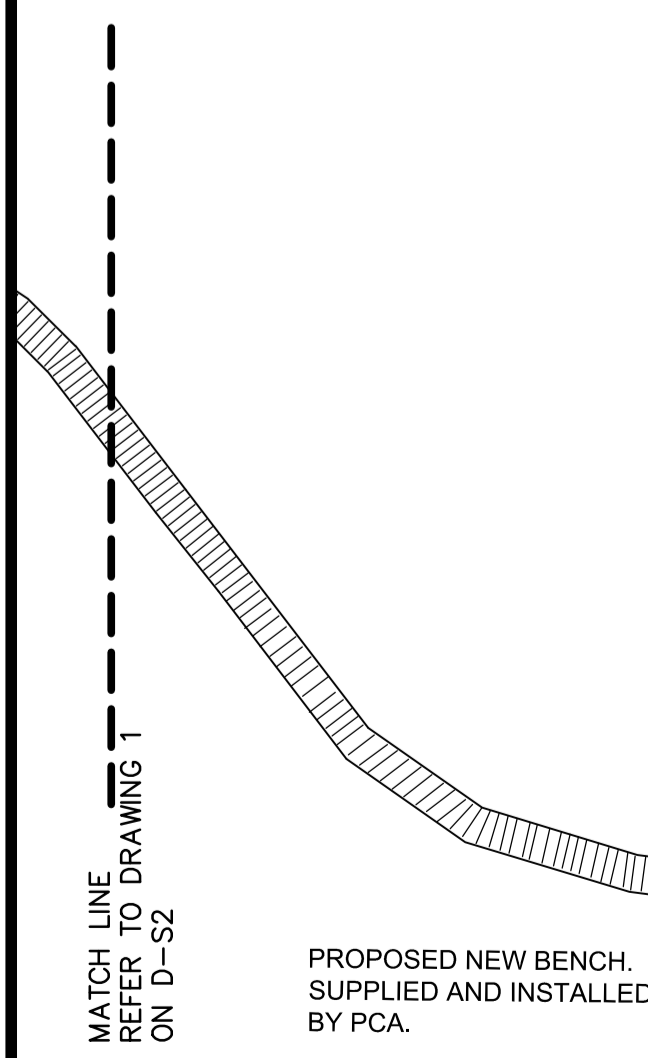
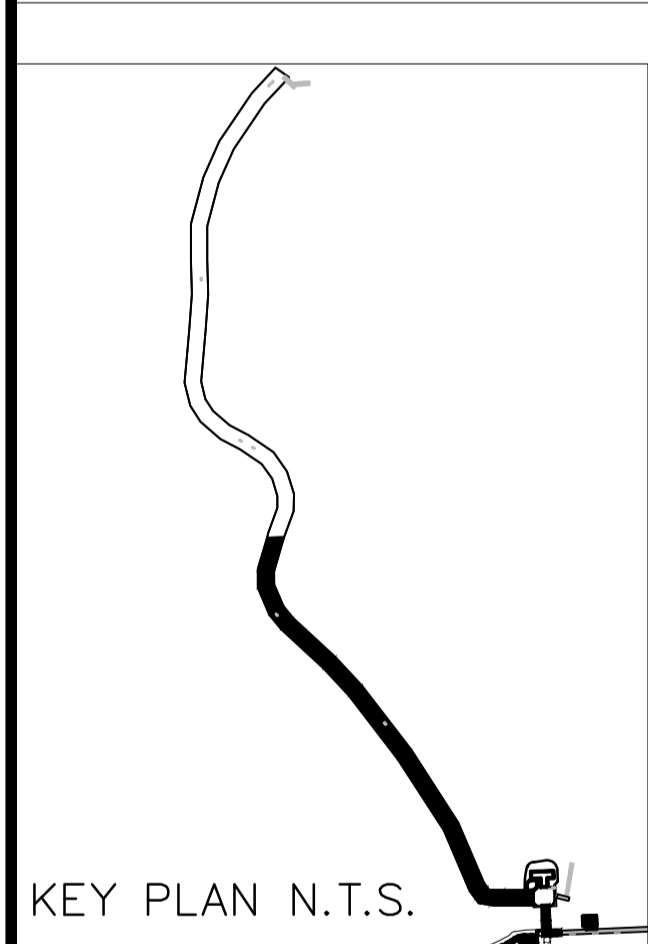
Drawing title/Titre du dessin: **EXISTING CONDITIONS AND REMOVALS PLAN - FIXED BOARDWALK**

Designed by/Concept par: SEA	Date: 01/13/2017
Drawn by/Dessiné par: SL	Date: 02/10/2017
Checked by/Véritifié par: SEA/ST	Date: 02/10/2017
Approved by/approuvé par: SEA	Date: 02/10/2017
Project No./N° du projet: 1503 PPNP	Scale/Échelle: 1:400
Sheet No./N° de la feuille: D-S1	

Drawing Set No./N° de série du dessin: REV.XX XX



1
D-S2
FIXED BOARDWALK PLAN
SCALE: 1:400

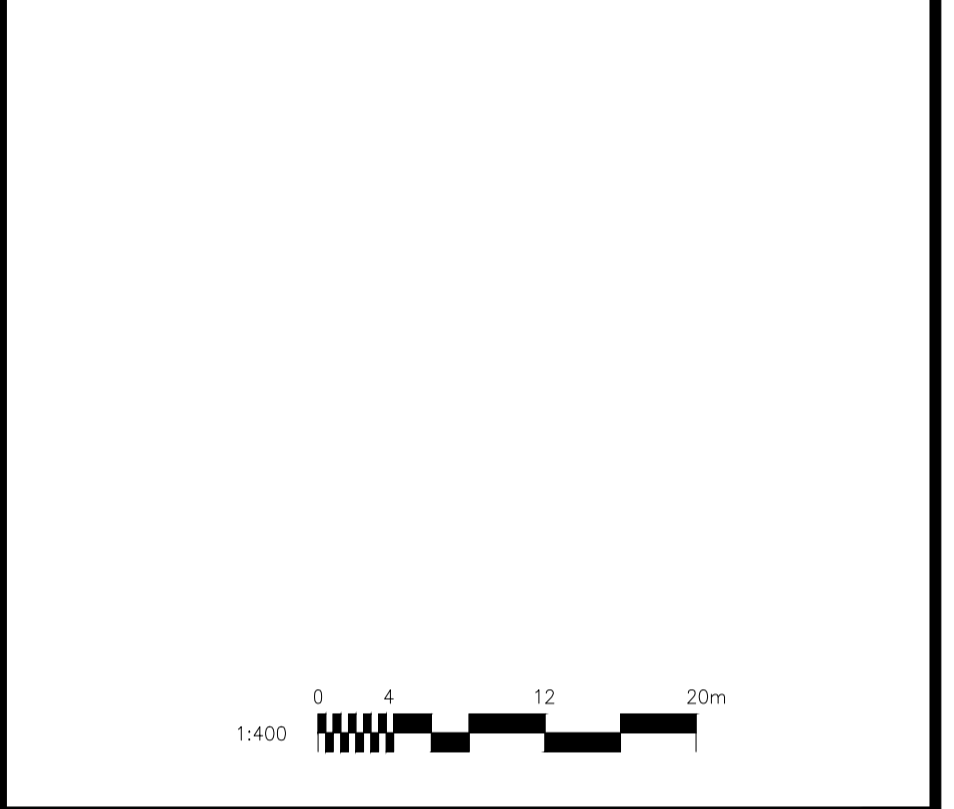
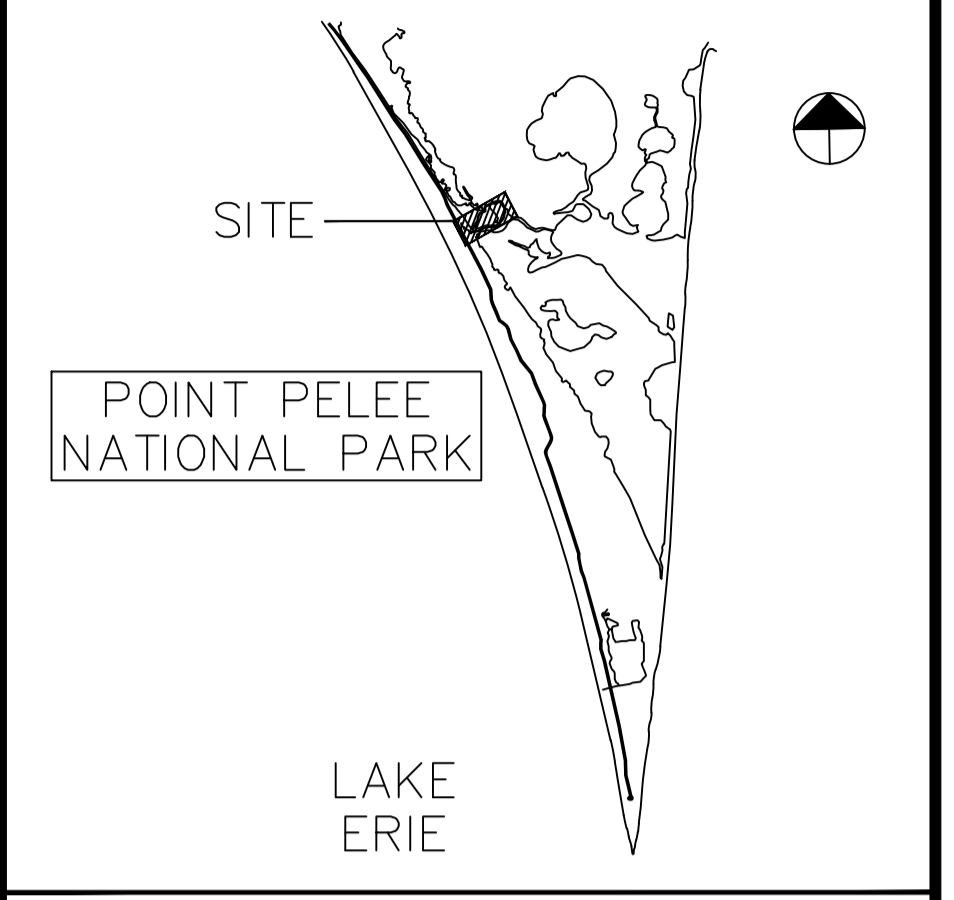
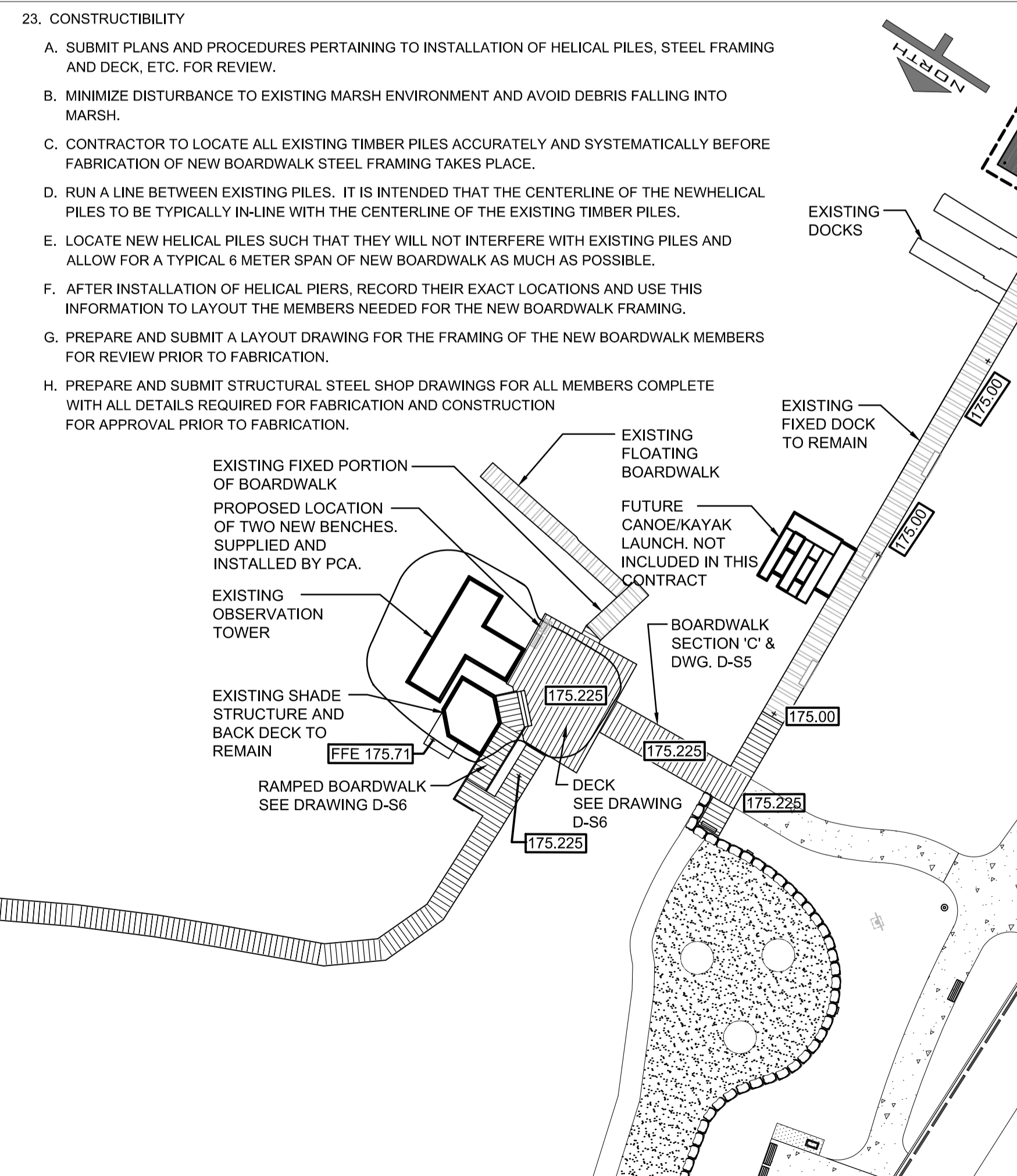


2
D-S2
FIXED BOARDWALK PLAN
SCALE: 1:400

- BOARDWALK GENERAL NOTES:**
- THESE NOTES APPLY TO THE BOARDWALK EXTENDING INTO THE MARSH, THE DECK AREA AT THE BOTTOM OF THE MARSH TOWER, THE SECTION OF BOARDWALK FROM THE TOWER TO THE MAIN LAND AND RAMP/STAIRS AT THE OBSERVATION TOWER ENTRANCE.
 - APPROXIMATE LENGTH OF BOARDWALK FROM THE DECK TO THE CONNECTION AT THE EXISTING REST PERGOLA IS APPROXIMATELY 500 LINEAR METERS.
 - THE NEW BOARDWALK IS TO BE IN THE SAME LOCATION AND FOLLOW THE SAME PATH AS THE EXISTING BOARDWALK. REFER TO DRAWING D-S1 FOR INFORMATION ON EXISTING BOARDWALK.
 - EXISTING TIMBER PILES WHICH SUPPORTED THE EXISTING BOARDWALK ARE TO REMAIN IN PLACE. CONSTRUCT NEW BOARDWALK TO AVOID CONTACT WITH THE EXISTING TIMBER PILES. DUE TO POTENTIAL FOR ENVIRONMENTAL CONTAMINATION DO NOT CONNECT OR MODIFY EXISTING PILES.
 - ACCORDING TO RECORD DRAWINGS OF THE EXISTING BOARDWALK SETS OF TIMBER PILES SUPPORTING THE BOARDWALK ARE LOCATED AT A 6.6 METER SPACING. IT IS LIKELY THAT BENDS IN THE EXISTING BOARDWALK OCCUR AT A TIMBER PILE LOCATION. THERE IS NO RECORD OF THE EXACT LOCATION OF THE EXISTING PILES. LOCATIONS OF EXISTING TIMBER PILES MUST BE LOCATED AND RECORDED BY THE CONTRACTOR DURING CONSTRUCTION. SET LOCATIONS OF NEW HELICAL PIERS TO AVOID AN INTERFERENCE WITH THE EXISTING TIMBER PILES. SUBMIT LOCATION PLAN SHOWING EXISTING AND NEW PILES FOR REVIEW.
 - TOP OF DECK ELEVATION TO BE 175.225 UNLESS OTHERWISE NOTED.
 - WATER LEVEL AND BOTTOM OF MARSH ELEVATION VARIES, HOWEVER THE APPROXIMATE HEIGHT FROM MARSH BOTTOM TO TOP OF NEW BOARDWALK IS 1m TO 1.7m. THIS DEPTH WOULD BE TO SOFT BOTTOM.
 - DESIGN SERVICE LIVE LOAD IS 4.8 kPa.
 - ALL NAILERS TO BE PRESSURE TREATED LUMBER. ALL OTHER TIMBER INCLUDING DECK, FACIA, CURBS, AND GUARDRAILS TO BE WHITE CEDAR, GRADE NO. 1.
 - BOARDWALK TO BE 2000mm WIDE EXCEPT IN AREAS NOTED AS WIDER.
 - THERE ARE TO BE CURBS ON BOTH SIDES OF THE BOARDWALK EXCEPT IN LOCATIONS WHERE THERE IS TO BE A GUARDRAIL AS NOTED ON THE DRAWINGS.
 - GUARDRAIL TO BE 1070 HIGH ABOVE DECK SURFACE UNLESS OTHERWISE NOTED IN THE CONTRACT DRAWING. GUARDRAILS CONSIST OF TIMBER POSTS AND RAILS WITH GALVANIZED PIPE HANDRAIL (IN AREAS INDICATED) AND STAIN LESS STEEL CABLES. S.S. CABLES TO HAVE TENSION ADJUSTMENTS CAPABILITIES.
 - EXISTING FREE STANDING SITE FURNITURE, TELESCOPIC VIEWER AND SIGNS TO BE REMOVED AND REINSTALLED BY PCA STAFF.
 - STRUCTURAL STEEL TO CSA-G40.20, GRADE 300W.
 - ALL STEEL FRAMING TO BE HOT-DIP GALVANIZED TO CSA-G164.
 - ALL FASTENERS INCLUDING BOLTS, NAILS, SCREWS, NUTS, AND WASHERS TO BE HOT-DIP GALVANIZED.
 - WELDING ELECTRODES: CSA-W48 SERIES; LOW HYDROGEN E49XX SERIES.
 - BOLTS, NUTS AND WASHERS FOR CONNECTIONS: HIGH STRENGTH; ASTM A325 OR ASTM A325 TYPE 1.
 - WELDERS MUST BE CSA W47.1 CERTIFIED. SUBMIT WELDING CERTIFICATE IN ACCORDANCE WITH CSA W47.1
 - STAINLESS STEEL CABLE TO AISI TYPE 304.

- 21. HELICAL PILES:**
- PILE CAPACITY REQUIRED IS 100kN SERVICE LOAD IN COMPRESSION.
 - APPROXIMATE NUMBER OF HELICAL PILES REQUIRED FOR THE BOARDWALK INCLUDING DECK IS 300. THIS INCLUDES APPROXIMATELY 100 BATTERED PILES. PILE ASSEMBLY IS TO BE HOT DIP GALVANIZED.
 - MAXIMUM SPACING OF HELICAL PILES ALONG THE BOARDWALK IS 6m.
 - APPROXIMATE LENGTH REQUIRED FOR EACH PILE IS 8.4m FROM THE TOP OF THE DECK TO A BEARING ELEVATION OF 167.20 +/- . ACTUAL DEPTH REQUIREMENT FOR PILES TO BE DETERMINED AS PART OF THE HELICAL PILE DETAILED DESIGN TO BE COMPLETED BY THE PILE SUPPLIER DURING CONSTRUCTION. LOCATION AND NUMBER OF BATTERED PILES TO BE DETERMINED BY PILE MANUFACTURER DURING DETAILED DESIGN AND ARE TO BE AS REQUIRED FOR CAPACITY AND STABILITY OF THE STRUCTURE.
 - CUSTOM BRACKETS ARE REQUIRED AT THE PILE CAPS TO SUIT THE BOARDWALK STEEL FRAMING. MORE THAN ONE CUSTOM BRACKET WILL LIKELY BE REQUIRED. SUBMIT TESTING PROCEDURE FOR REVIEW.
 - COMPLETE HELICAL PILE ASSEMBLY INCLUDING PILES, BRACKETS AND HELICAL PLATES TO BE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER IN THE PROVINCE OF ONTARIO. SUBMIT DETAILED CERTIFIED PILE DESIGN DRAWINGS INCLUDING PLACEMENT PLAN AND INSTALLATION PROCEDURES FOR REVIEW.
 - FIELD TESTING OF PILES IN COMPRESSION IS REQUIRED AS PER SPECIFICATIONS.
 - REFER TO GEOTECHNICAL INVESTIGATION 'PROPOSED MARSH AREA RENEWAL POINT PELEE NATIONAL PARK, LEAMINGTON, ON' BY STANTEC, DATED DECEMBER 13, 2016.
- 22. STEEL CORROSION PROTECTION SYSTEM:**
- CATHODIC PROTECTION SYSTEM IS TO BE DESIGNED, SUPPLIED AND INSTALLED TO PROTECT ALL BOARDWALK STEEL FRAMING MEMBERS FROM CORROSION.
 - THE CONTRACTOR SHALL RETAIN A CORROSION CONSULTANT TO DESIGN THE CATHODIC PROTECTION SYSTEM, SUPPLY ALL THE LABOUR, MATERIALS AND THE EQUIPMENT TO COMPLETE THE WORK. THE CONTRACTOR AND ANY SUBCONTRACTOR MUST COMPLY WITH ALL LOCAL SAFETY REQUIREMENTS.
 - THE CATHODIC PROTECTION SYSTEM SHALL HAVE A SERVICE LIFE OF A MINIMUM OF 25 YEARS. CORROSION PROTECTION SYSTEM DESIGN TO BE CERTIFIED BY A PROFESSIONAL ENGINEER IN THE PROVINCE OF ONTARIO AND CERTIFIED AS A CATHODIC PROTECTION SPECIALIST BY NACE INTERNATIONAL. CERTIFIED DESIGN DRAWINGS INCLUDING SPECIFICATION AND INSTALLATION PROCEDURES TO BE SUBMITTED FOR REVIEW.

- 23. CONSTRUCTIBILITY**
- SUBMIT PLANS AND PROCEDURES PERTAINING TO INSTALLATION OF HELICAL PILES, STEEL FRAMING AND DECK, ETC. FOR REVIEW.
 - MINIMIZE DISTURBANCE TO EXISTING MARSH ENVIRONMENT AND AVOID DEBRIS FALLING INTO MARSH.
 - CONTRACTOR TO LOCATE ALL EXISTING TIMBER PILES ACCURATELY AND SYSTEMATICALLY BEFORE FABRICATION OF NEW BOARDWALK STEEL FRAMING TAKES PLACE.
 - RUN A LINE BETWEEN EXISTING PILES. IT IS INTENDED THAT THE CENTERLINE OF THE NEW HELICAL PILES TO BE TYPICALLY IN-LINE WITH THE CENTERLINE OF THE EXISTING TIMBER PILES.
 - LOCATE NEW HELICAL PILES SUCH THAT THEY WILL NOT INTERFERE WITH EXISTING PILES AND ALLOW FOR A TYPICAL 6 METER SPAN OF NEW BOARDWALK AS MUCH AS POSSIBLE.
 - AFTER INSTALLATION OF HELICAL PIERS, RECORD THEIR EXACT LOCATIONS AND USE THIS INFORMATION TO LAYOUT THE MEMBERS NEEDED FOR THE NEW BOARDWALK FRAMING.
 - PREPARE AND SUBMIT A LAYOUT DRAWING FOR THE FRAMING OF THE NEW BOARDWALK MEMBERS FOR REVIEW PRIOR TO FABRICATION.
 - PREPARE AND SUBMIT STRUCTURAL STEEL SHOP DRAWINGS FOR ALL MEMBERS COMPLETE WITH ALL DETAILS REQUIRED FOR FABRICATION AND CONSTRUCTION FOR APPROVAL PRIOR TO FABRICATION.



No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
3	3.24.2017	99% DESIGN	S.L.	M.D
2	2.10.2017	66% DESIGN	S.L.	M.D
1	11.18.2016	CONCEPT DESIGN	S.L.	M.D

Revision / Revision

(A)	Detail number	A Numéro de détail
(B)	Sheet number	B Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **Stantec**

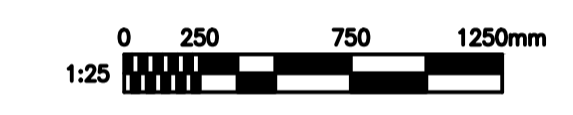
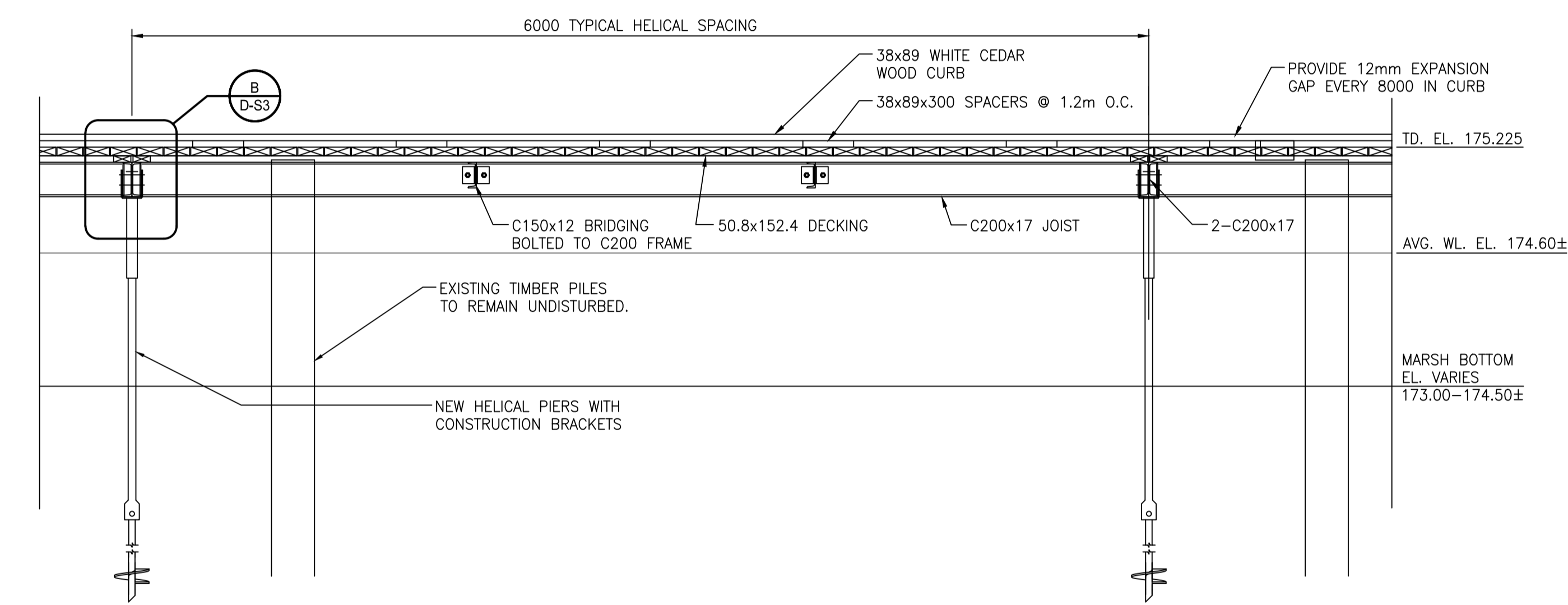
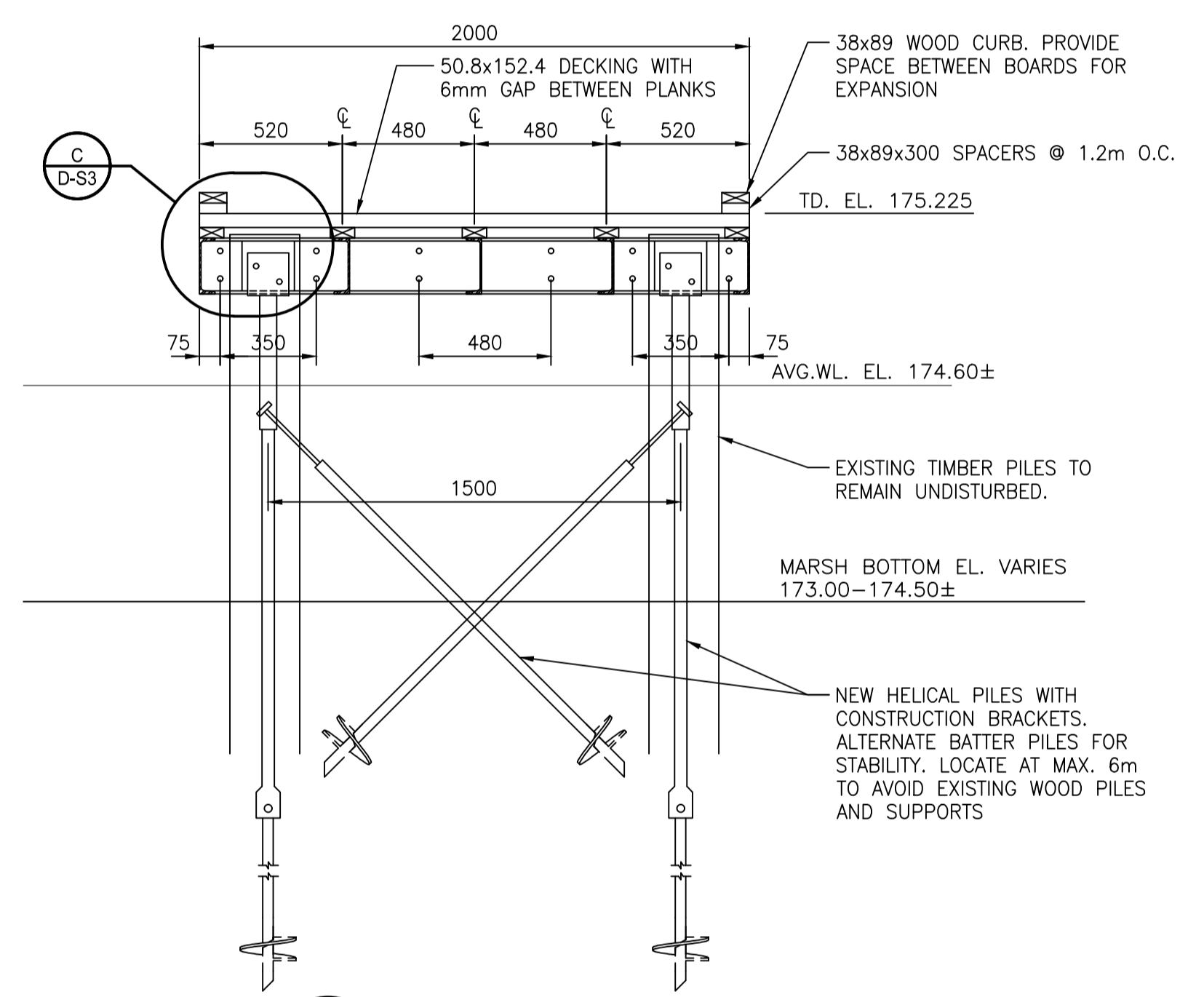
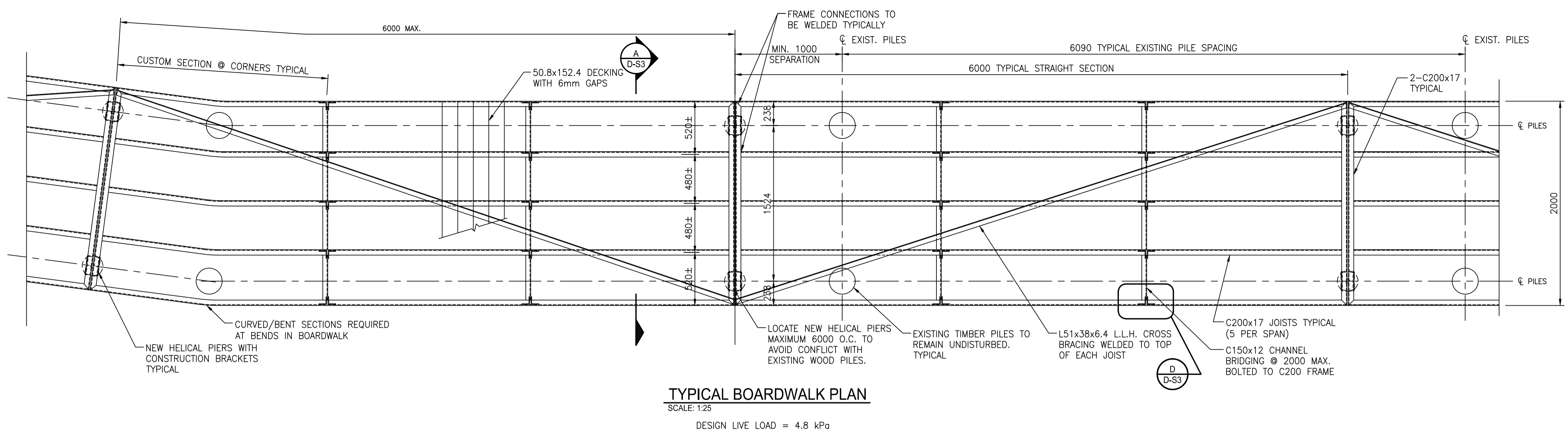
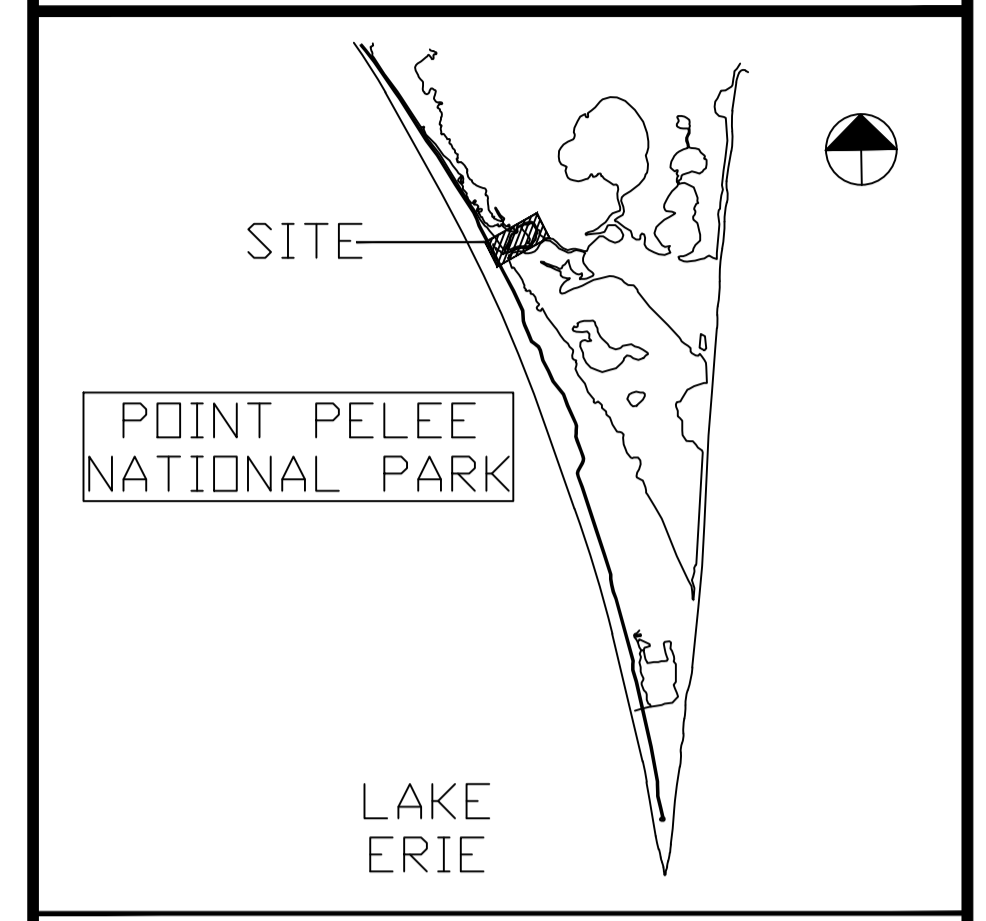
Engineer's Name / Nom de l'ingénieur: **S.E. ALARCON** (100067223)

STANTEC PROJECT NO.160622453

Project title/Titre du projet
MARSH AREA RENEWAL PROJECT BOARDWALK
Point Pelee National Park
Leamington, ON

Drawing title/Titre du dessin
FIXED BOARDWALK PLAN

Designed by/Concept par	SEA	Date	01/13/2017
Drawn by/Dessiné par	SL	Date	02/10/2017
Checked by/Véifié par	SEA/ST	Date	02/10/2017
Approved by/approuvé par	SEA	Date	02/10/2017
Project No./N° du projet	1503 PPNP	Scale/Échelle	1:400
Drawing Set No./N° de série du dessin	REV.XX	Sheet No./N° de la feuille	D-S2



No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
3	3.24.2017	99% DESIGN	S.L.	M.D
2	2.10.2017	66% DESIGN	S.L.	M.D
1	11.18.2016	CONCEPT DESIGN	S.L.	M.D

A	Detail number	A Numéro de détail
B	Sheet number	B Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **Stantec**

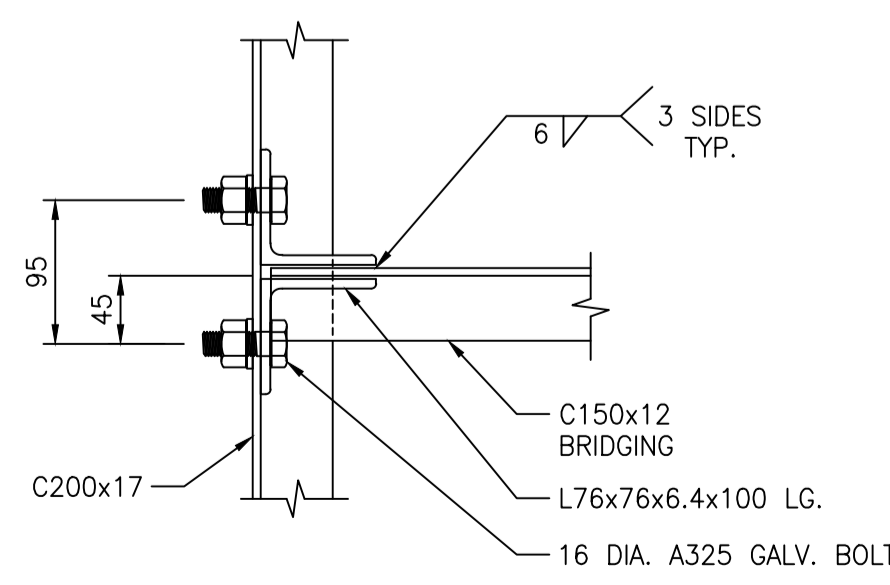
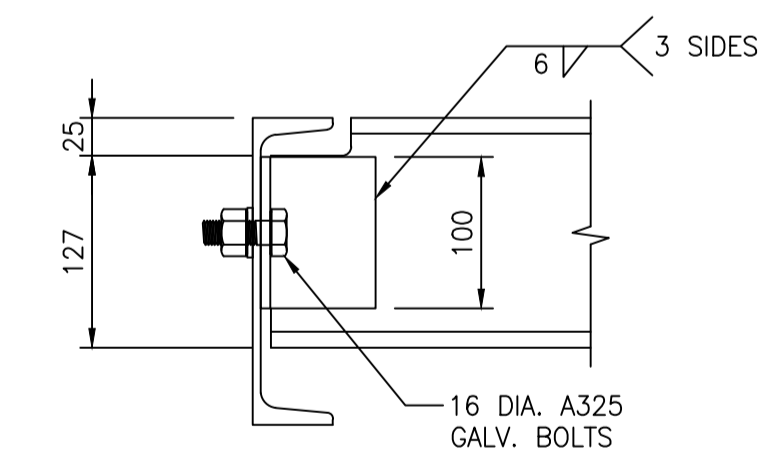
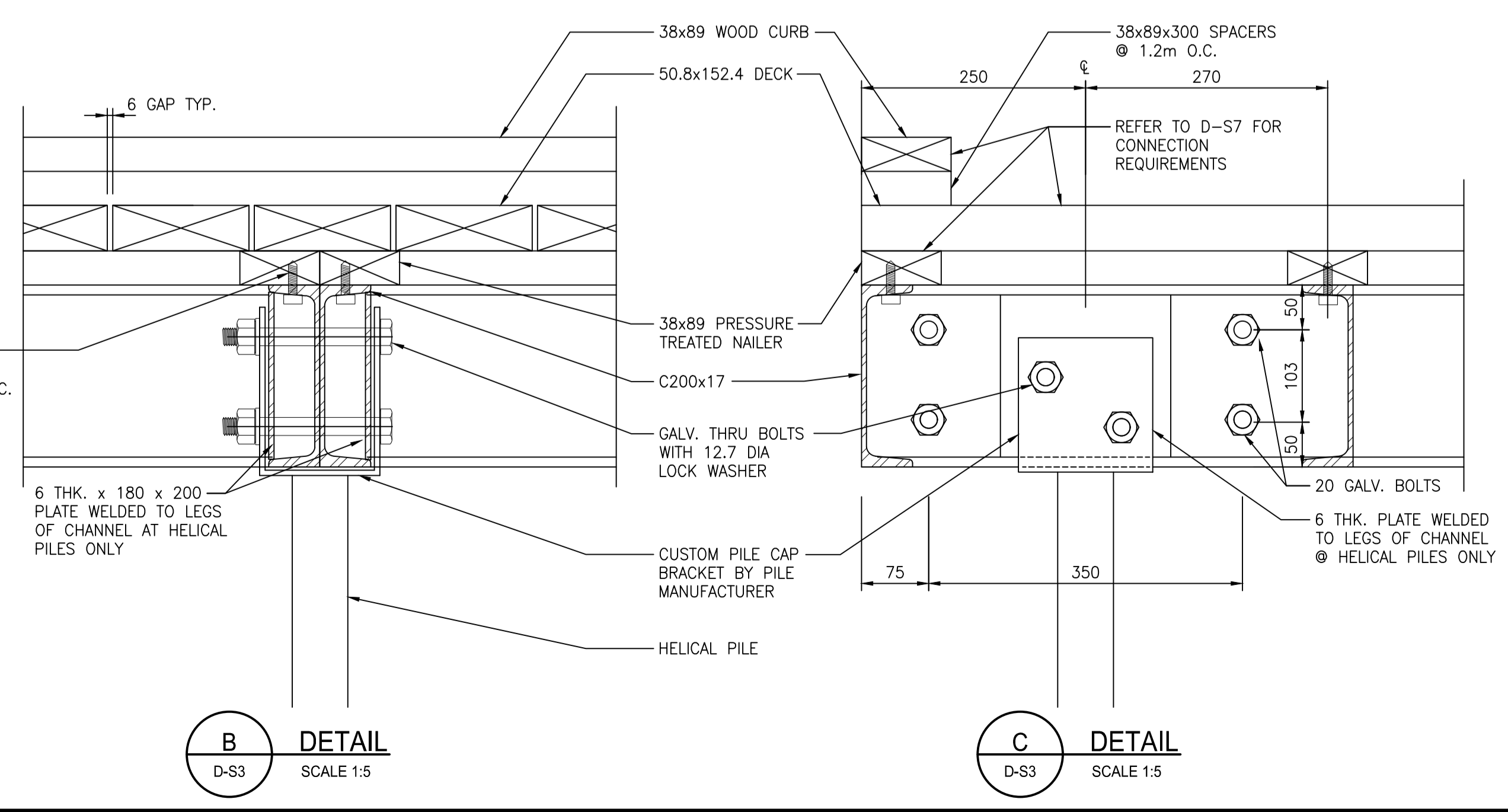
Project No. / Numéro de projet: STANTEC PROJECT NO.160622453

Province of Ontario Professional Engineer Seal: S.E. ALARCON 100067223

Project Title / Titre du projet: **MARSH AREA RENEWAL PROJECT BOARDWALK**
Point Pelee National Park
Leamington, ON

Drawing Title / Titre du dessin: **PROPOSED BOARDWALK PART PLAN, ELEVATION, SECTION AND DETAILS**

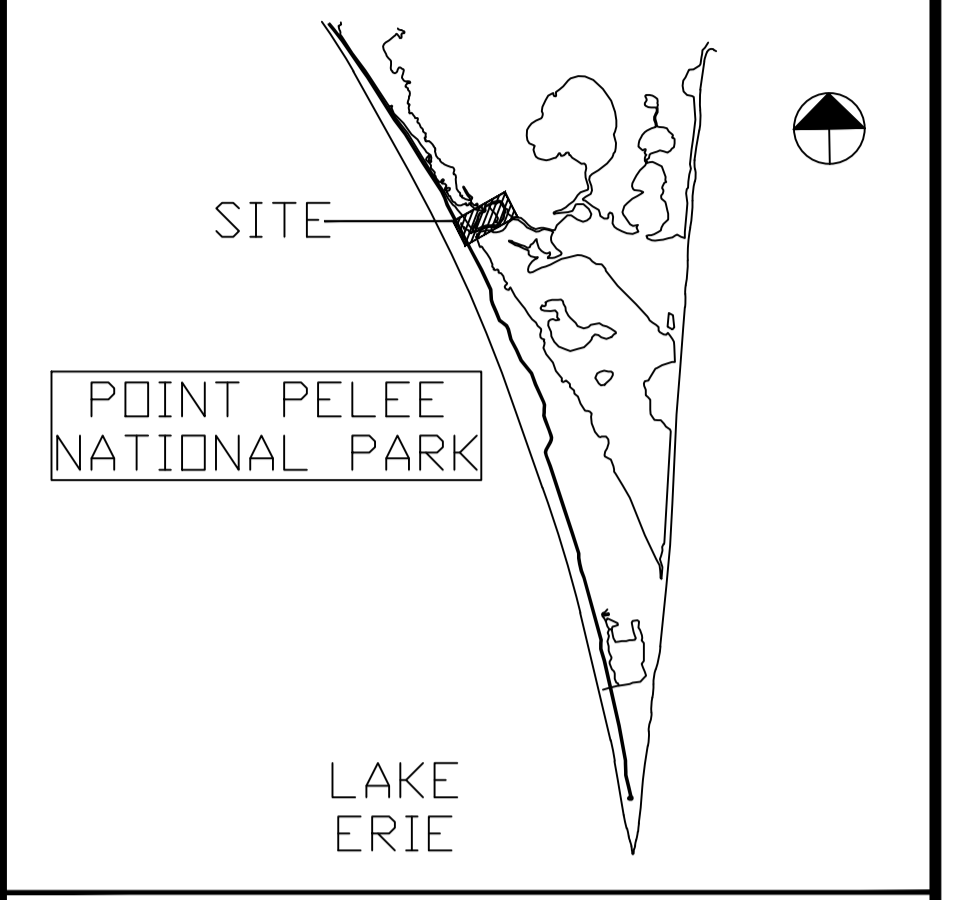
Designed by / Concept par: SEA	Date: 01/13/2017
Drawn by / Dessiné par: SL	Date: 02/10/2017
Checked by / Vérifié par: SEA/ST	Date: 02/10/2017
Approved by / Approuvé par: SEA	Date: 02/10/2017
Project No. / No du projet: 1503 PPNP	Scale / Échelle: AS NOTED
Drawing Set No. / No de série du dessin:	Sheet No. / N° de la feuille: D-S3



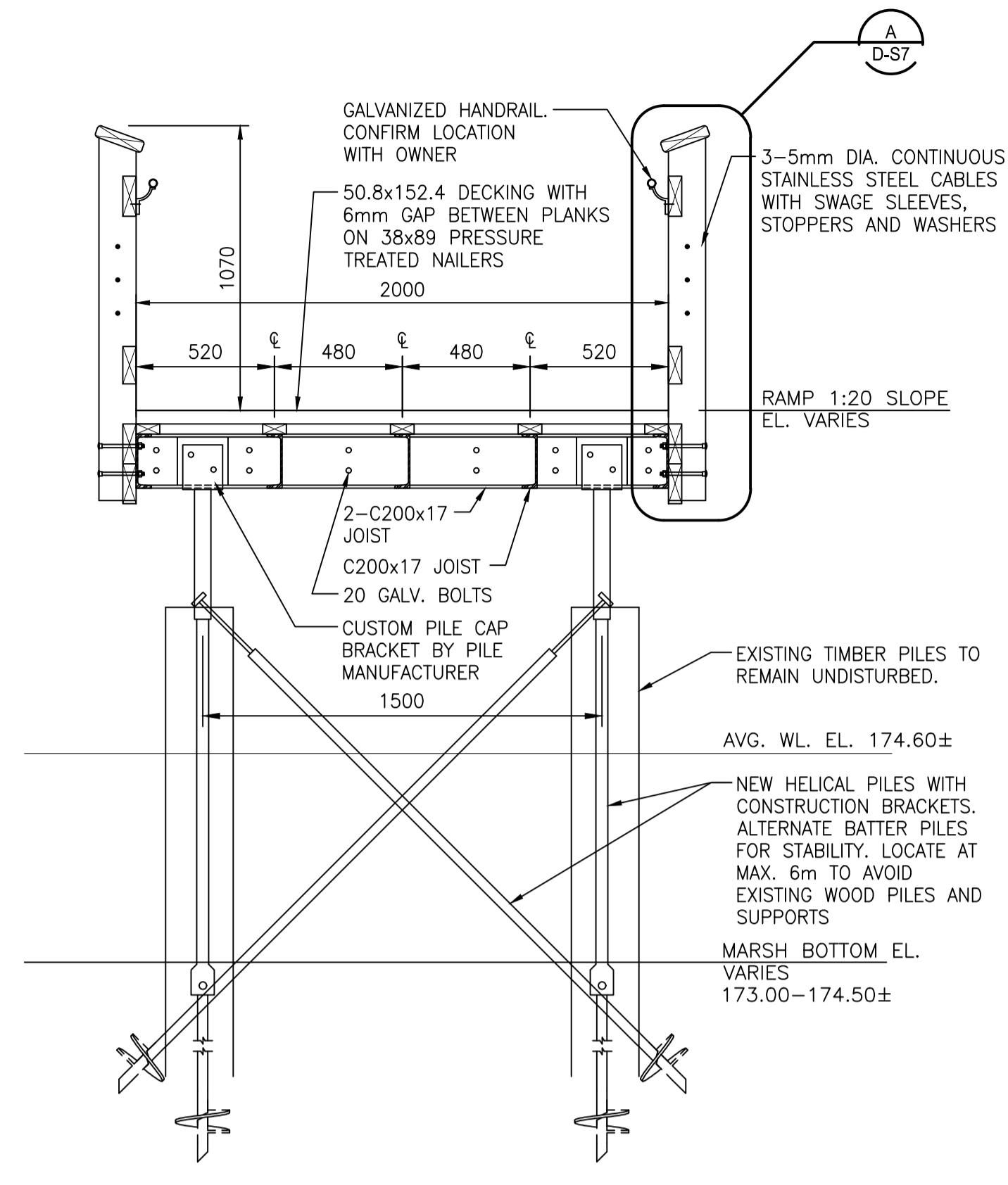
D C150 BRIDGING CONNECTION DETAIL
SCALE 1:5

- NOTES:**
- REFER TO D-S2 FOR NOTES AND OVERALL PLAN.
 - DESIGN HELICAL PILES FOR SUPPORTING BOARDWALK SELF WEIGHT AND LIVE LOAD. PROVIDE BATTER PILES TO ENSURE BOARDWALK FRAMING LATERAL STABILITY.
 - ROLL CHANNEL SECTIONS AS REQUIRED TO SUIT BOARDWALK CURVE/BENT SECTIONS.
 - TOUCH UP FIELD WELDED CONNECTIONS WITH 2 COATS OF ZINC RICH PAINT.

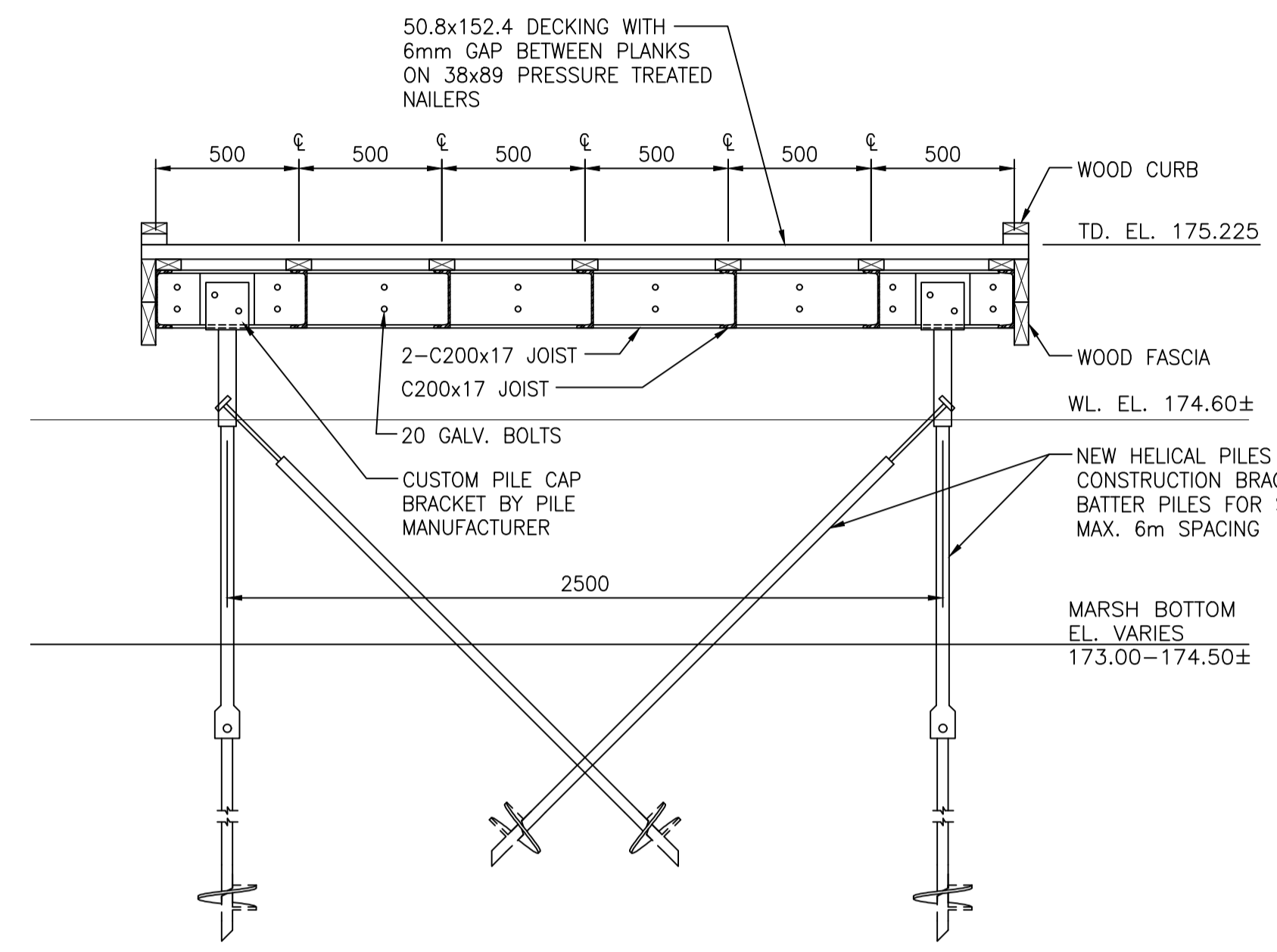
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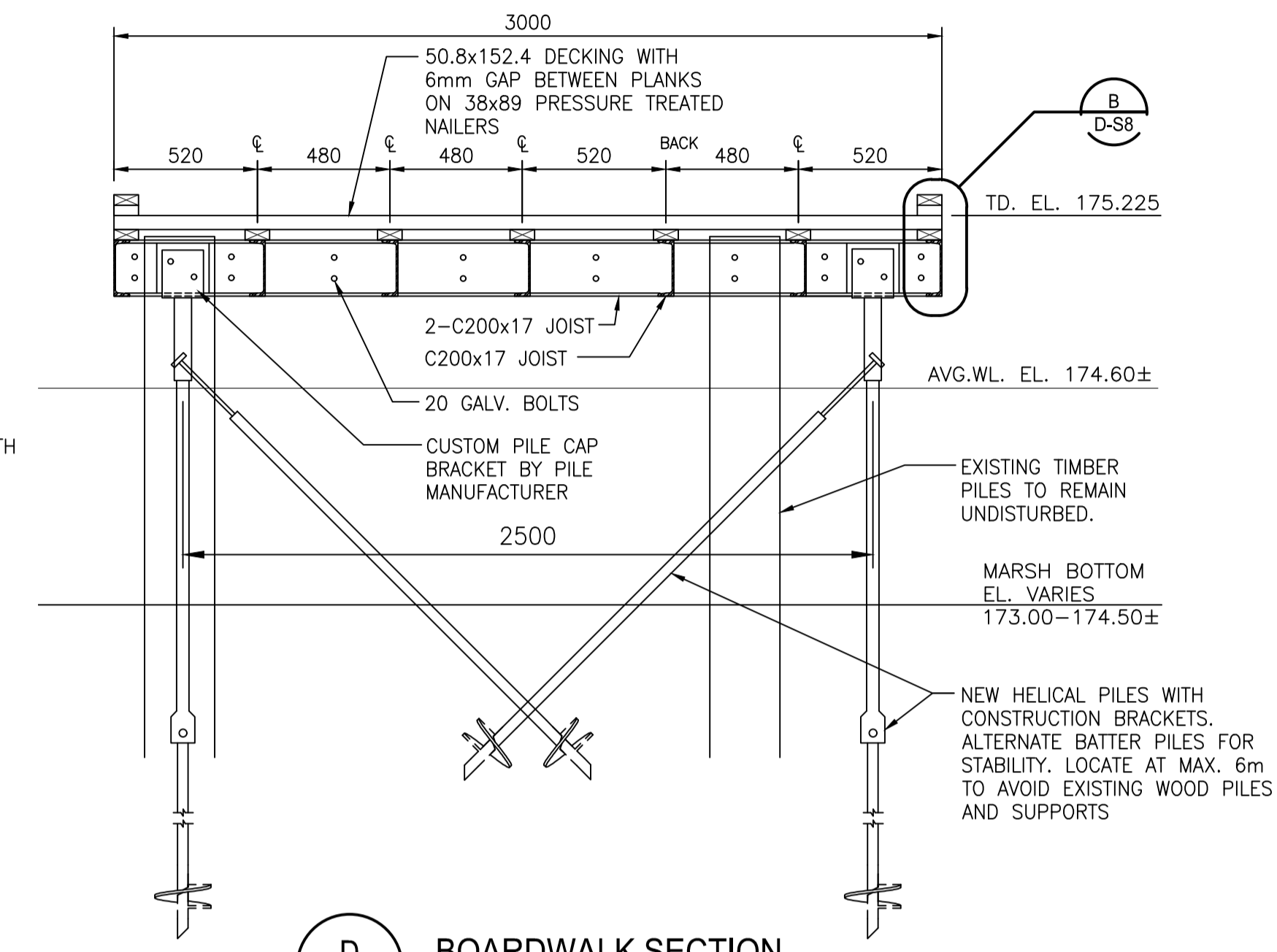
NOTE:
 REFER TO D-S2 AND D-S3 FOR NOTES AND OVERALL PLAN.



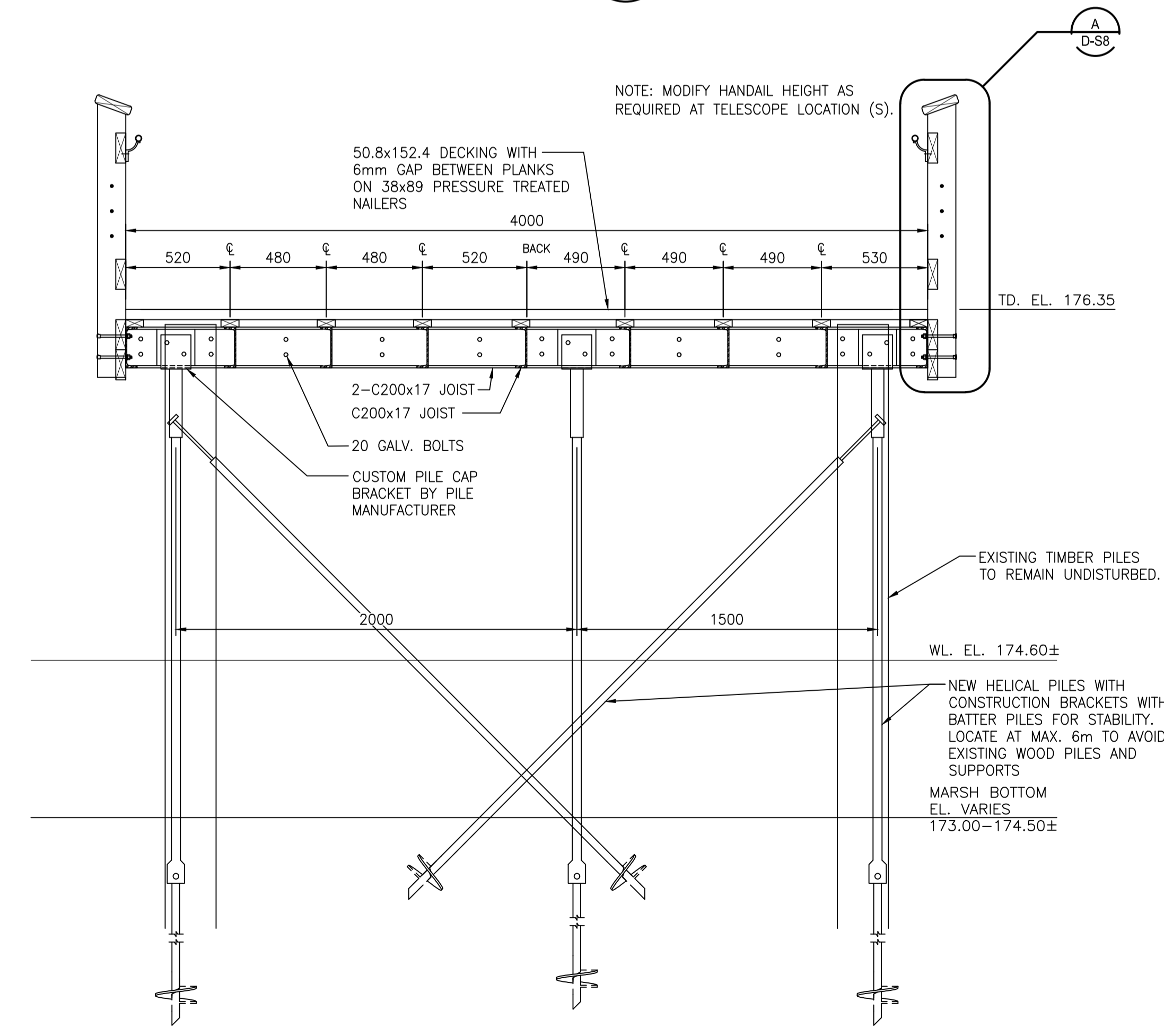
B BOARDWALK RAMP SECTION
 D-S2 SCALE 1:20



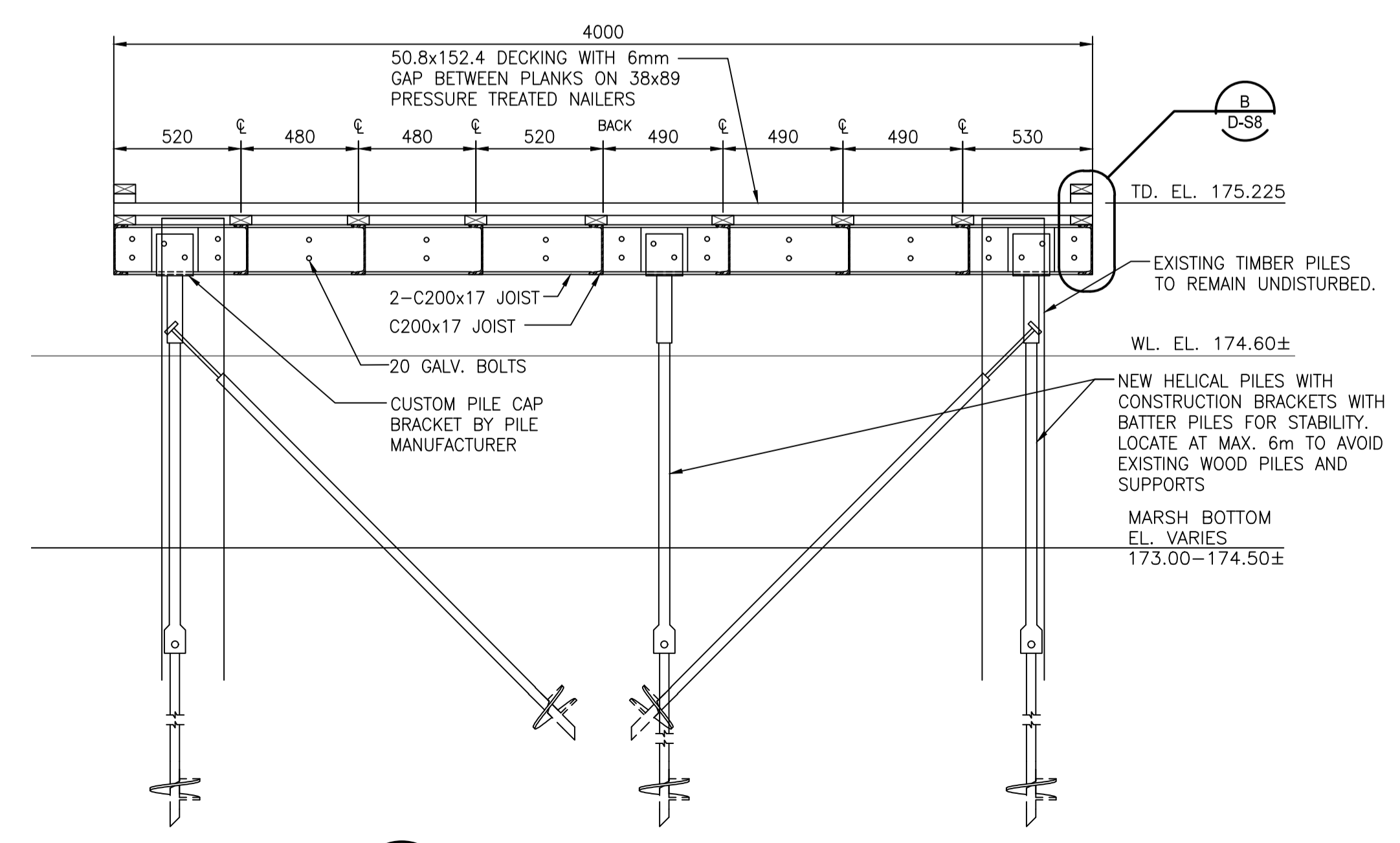
C BOARDWALK TO MARCH TOWER SECTION
 D-S2 SCALE 1:20



D BOARDWALK SECTION
 D-S2 SCALE 1:20



F BOARDWALK SECTION
 D-S2 SCALE 1:20



E BOARDWALK SECTION
 D-S2 SCALE 1:20

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
3	3.24.2017	99% DESIGN	S.L.	M.D
2	2.10.2017	66% DESIGN	S.L.	M.D
1	11.18.2016	CONCEPT DESIGN	S.L.	M.D

Revision / Revision	Detail number / A Numéro de détail	Sheet number / B Numéro de la feuille

Consultant's Name / Nom de l'expert-conseil: **Stantec**

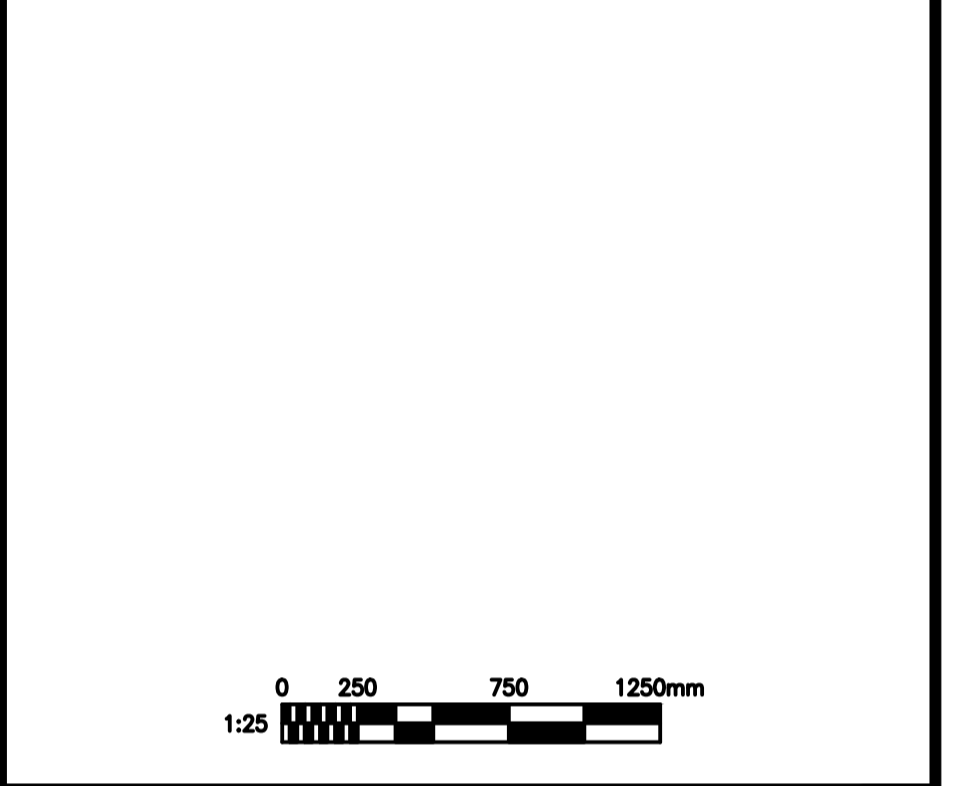
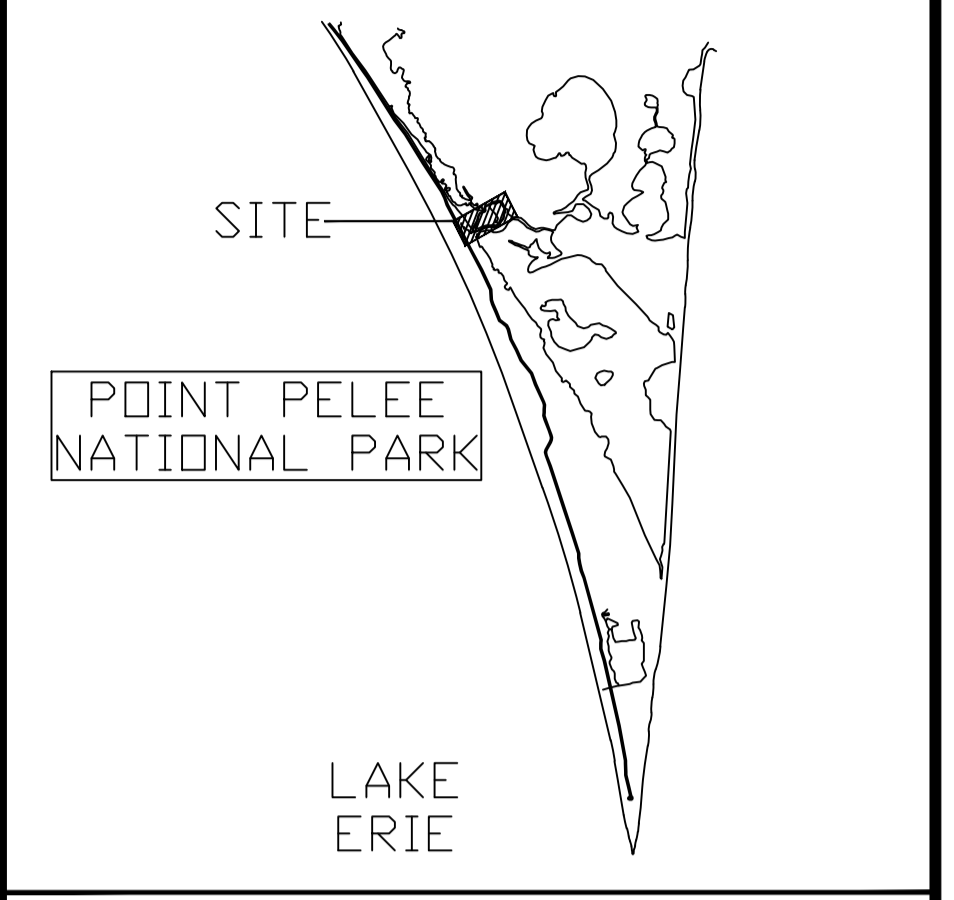
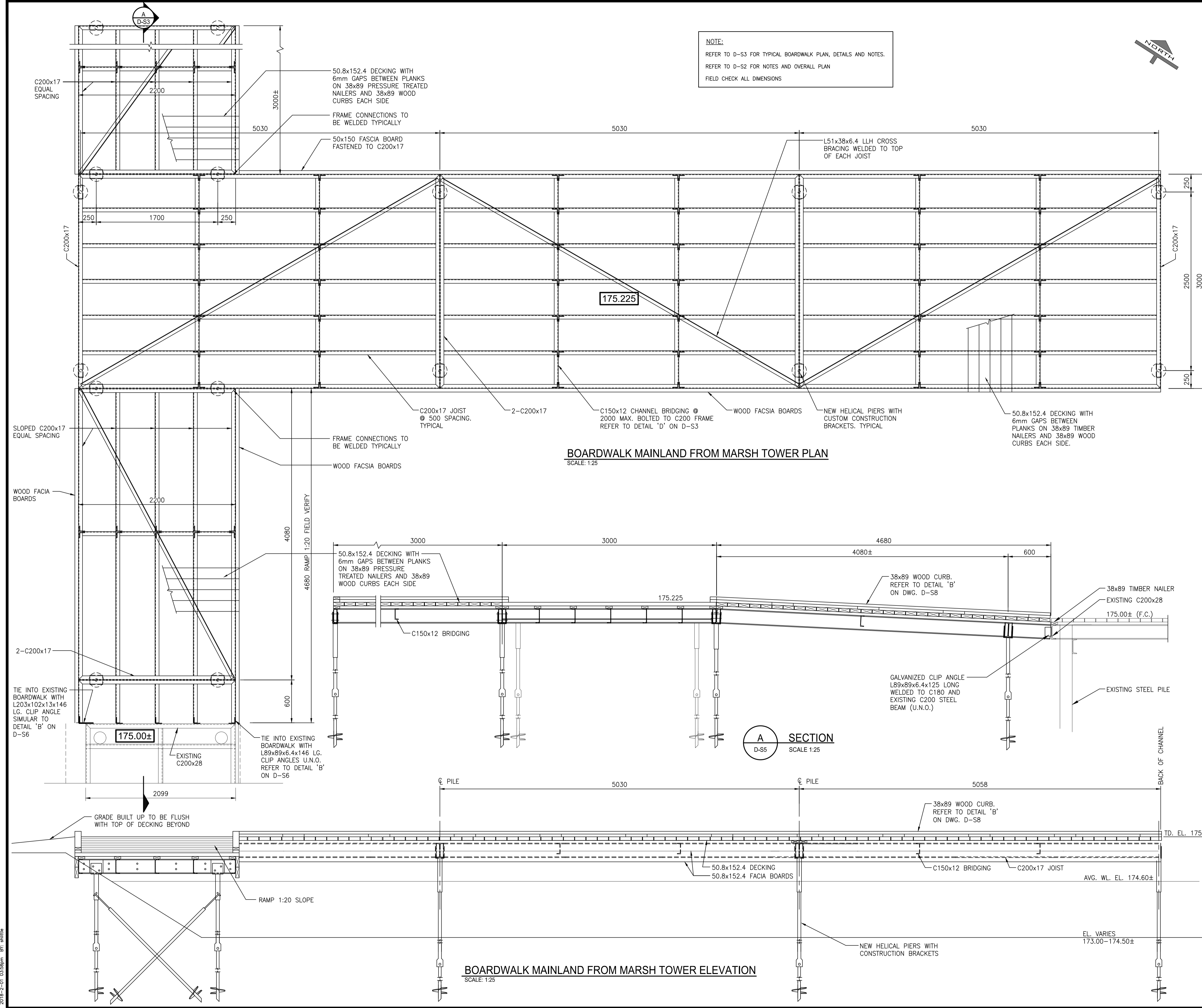
Engineer's Name / Nom de l'ingénieur: **S.E. ALARCON** (100067223)

STANTEC PROJECT NO.160622453

Project title / Titre du projet: **MARSH AREA RENEWAL PROJECT BOARDWALK**
 Point Pelee National Park
 Leamington, ON

Drawing title / Titre du dessin: **BOARDWALK DETAILS**

Designed by / Concept par: SEA	Date: 01/13/2017
Drawn by / Dessiné par: SL	Date: 02/10/2017
Checked by / Vérifié par: SEA/ST	Date: 02/10/2017
Approved by / Approuvé par: SEA	Date: 02/10/2017
Project No. / No du projet: 1503 PPNP	Scale / Échelle: 1:20
Drawing Set No. / No de série du dessin:	Sheet No. / No de la feuille: D-S4



Revision / Revision	Detail number / A Numéro de détail	Sheet number / B Numéro de la feuille
(A)		
(B)		

Consultant's Name / Nom de l'expert-conseil: **Stantec**

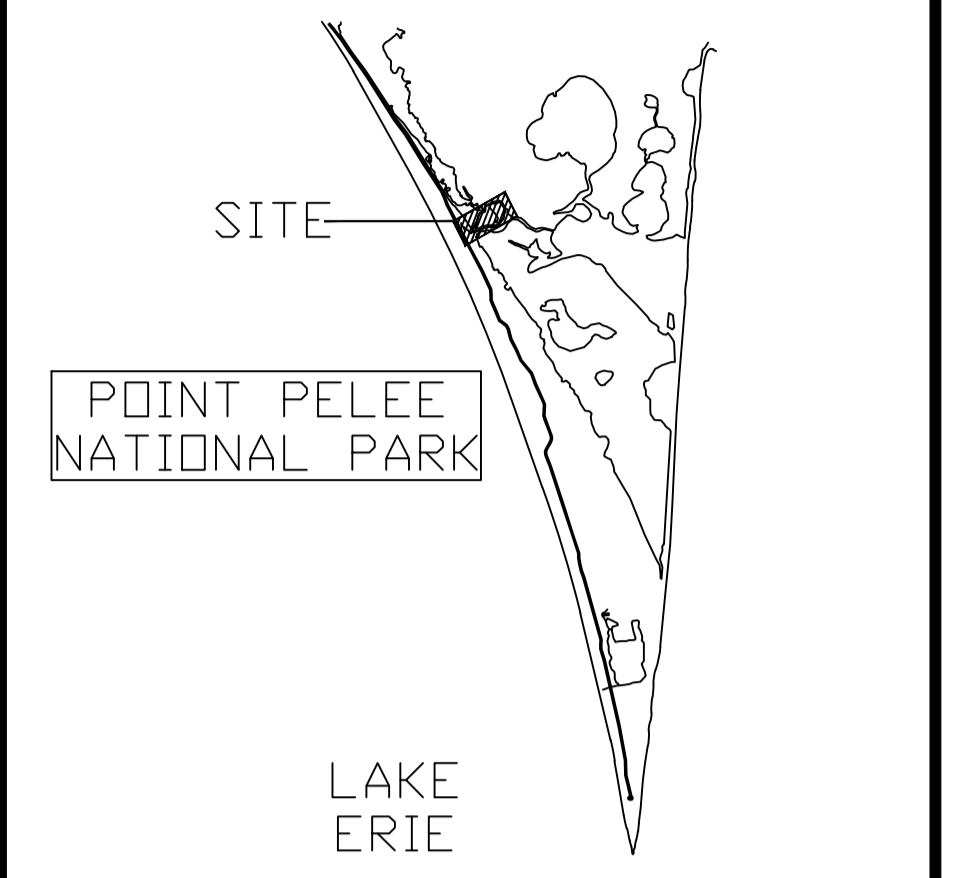
Engineer's Name / Nom de l'ingénieur: **S.E. ALARCON** (100067223)

STANTEC PROJECT NO. 160622453

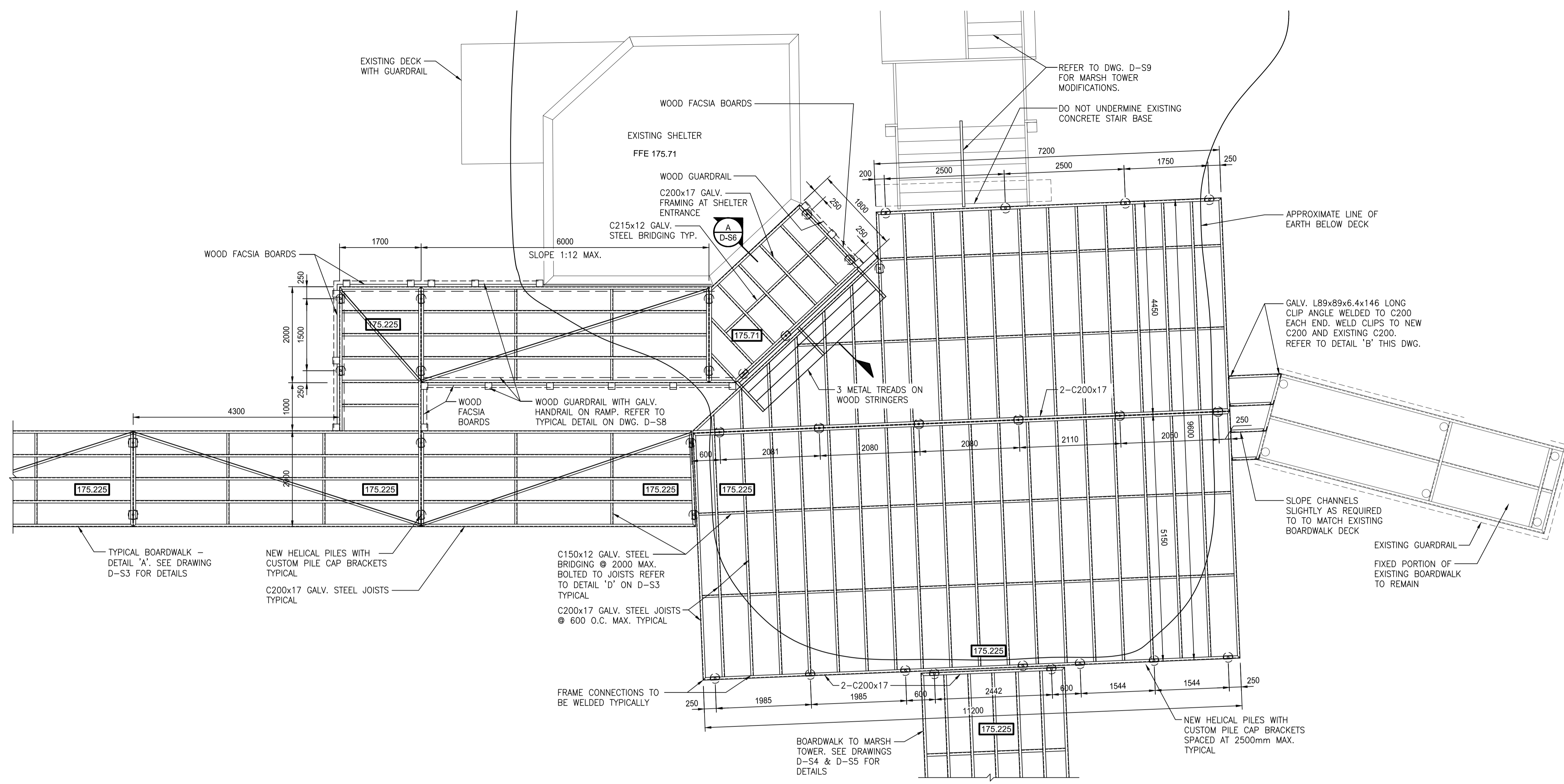
Project Title / Titre du projet: **MARSH AREA RENEWAL PROJECT BOARDWALK**
 Point Pelee National Park
 Leamington, ON

Drawing Title / Titre du dessin: **BOARDWALK TO MARSH TOWER PLAN**

Designed by / Concept par: SEA	Date: 01/13/2017
Drawn by / Dessiné par: SL	Date: 02/10/2017
Checked by / Vérifié par: SEA/ST	Date: 02/10/2017
Approved by / Approuvé par: SEA	Date: 02/10/2017
Project No. / No du projet: 1503 PPNP	Scale / Échelle: 1:25
Drawing Set No. / No de série du dessin:	Sheet No. / Note de feuille: D-S5

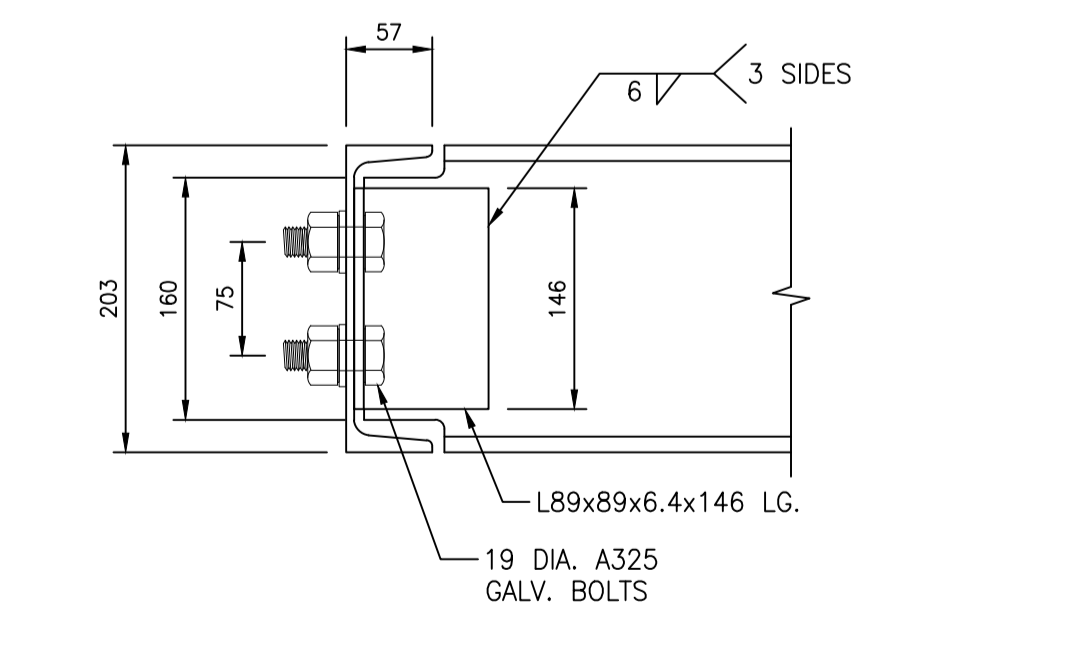


LAKE ERIE

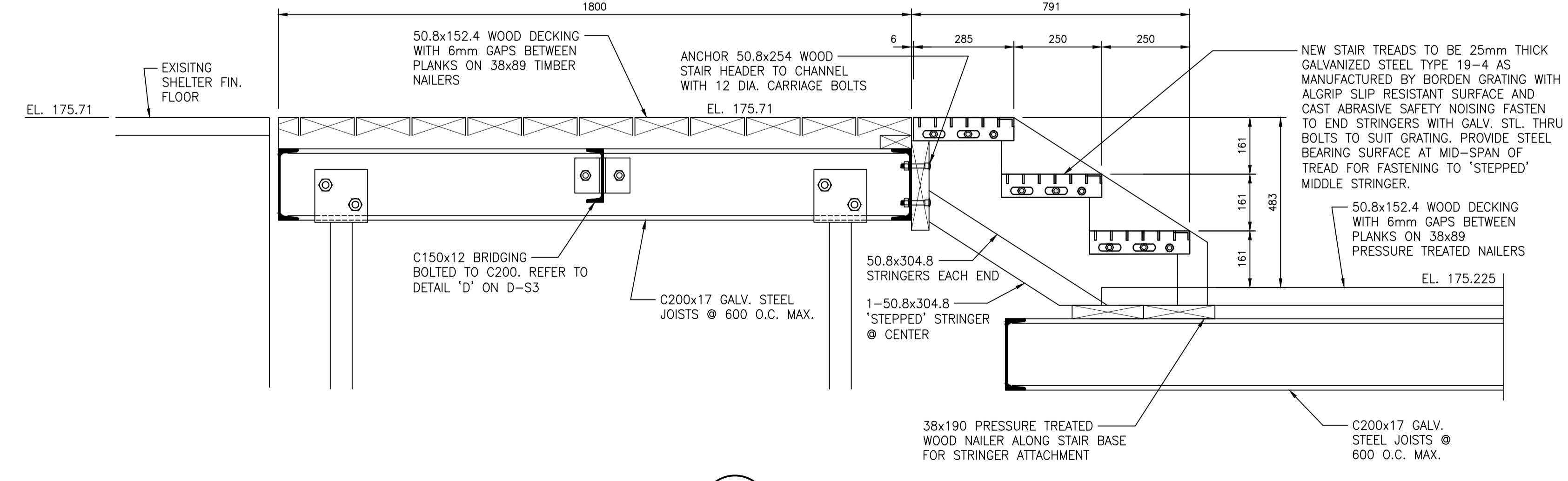


TOWER AND SHADE STRUCTURE DECK - PLAN
SCALE: 1:50

NOTE:
1. REFER TO D-S2 AND D-S3 FOR NOTES AND OVERALL PLAN.
2. VERIFY EXISTING FACILITIES DIMENSIONS AND LOCATIONS IN FIELD.
3. FIELD CHECK ALL DIMENSION/ELEVATIONS.



B TYPICAL C200x17 BOLTED CONNECTION
SCALE: 1:5



A SECTION THRU WOOD STAIR
SCALE: 1:10

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
3	3.24.2017	99% DESIGN	S.L.	M.D
2	2.10.2017	66% DESIGN	S.L.	M.D
1	11.18.2016	CONCEPT DESIGN	S.L.	M.D

Revision / Revision	Detail number / A Numéro de détail	Sheet number / B Numéro de la feuille
	A	B

Consultant's Name / Nom de l'expert-conseil: **Stantec**

Engineer's Name / Nom de l'ingénieur: **S.E. ALARCON**

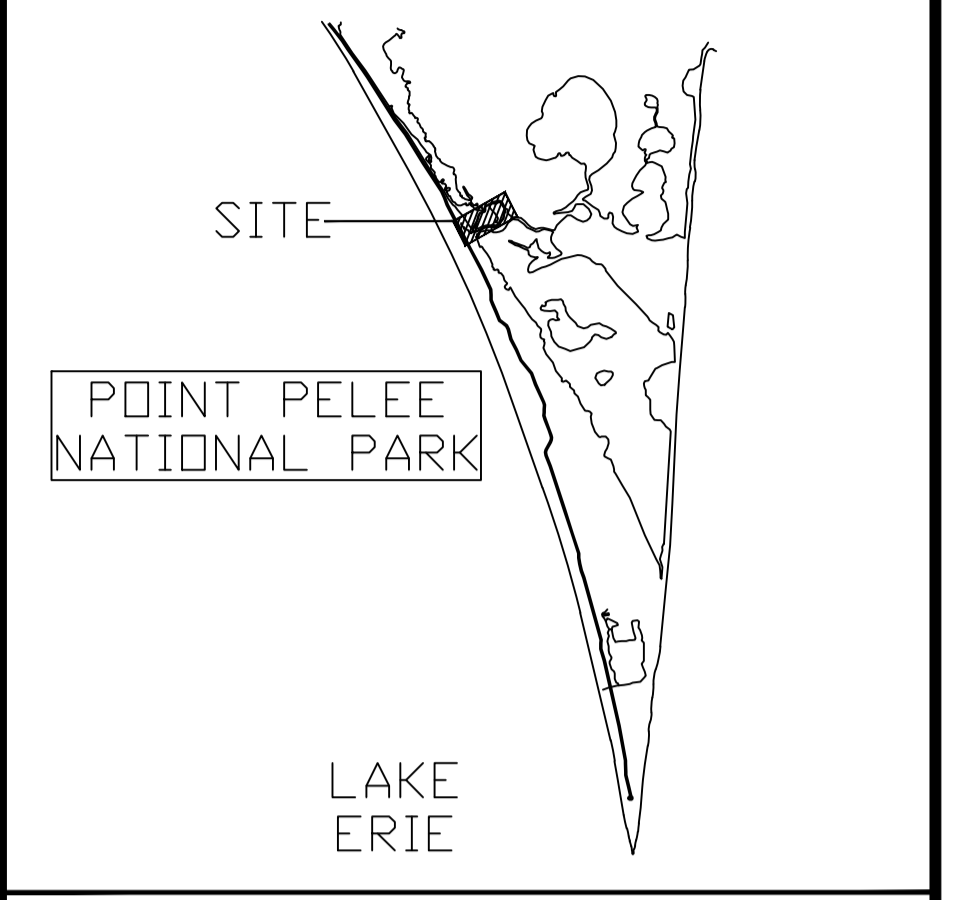
Professional Engineer License No.: **100067223**

STANTEC PROJECT NO.160622453

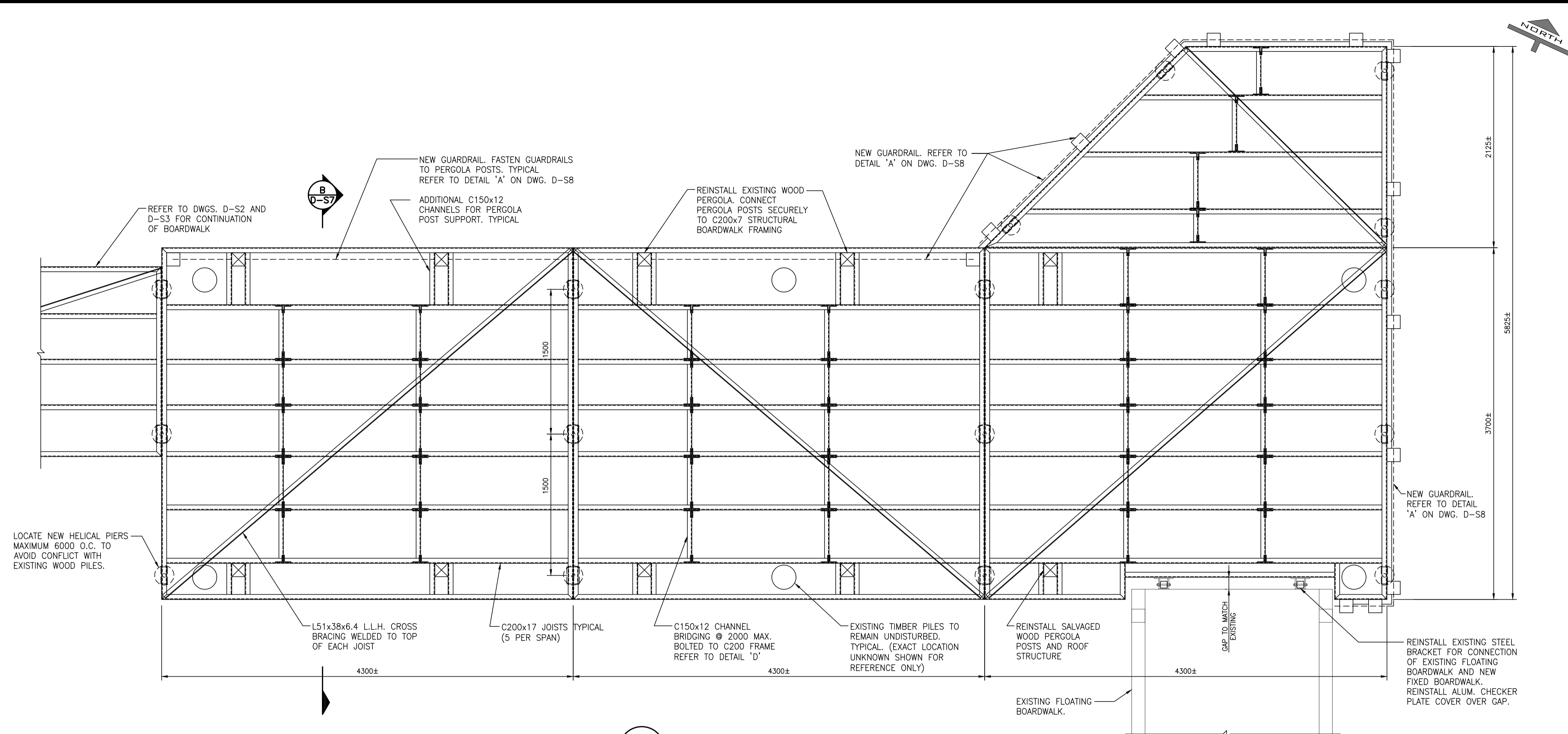
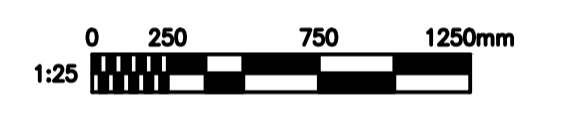
Project Title/Titre du projet: **MARSH AREA RENEWAL PROJECT BOARDWALK**
Point Pelee National Park
Leamington, ON

Drawing Title/Titre du dessin: **TOWER AND SHADE STRUCTURE DECK**

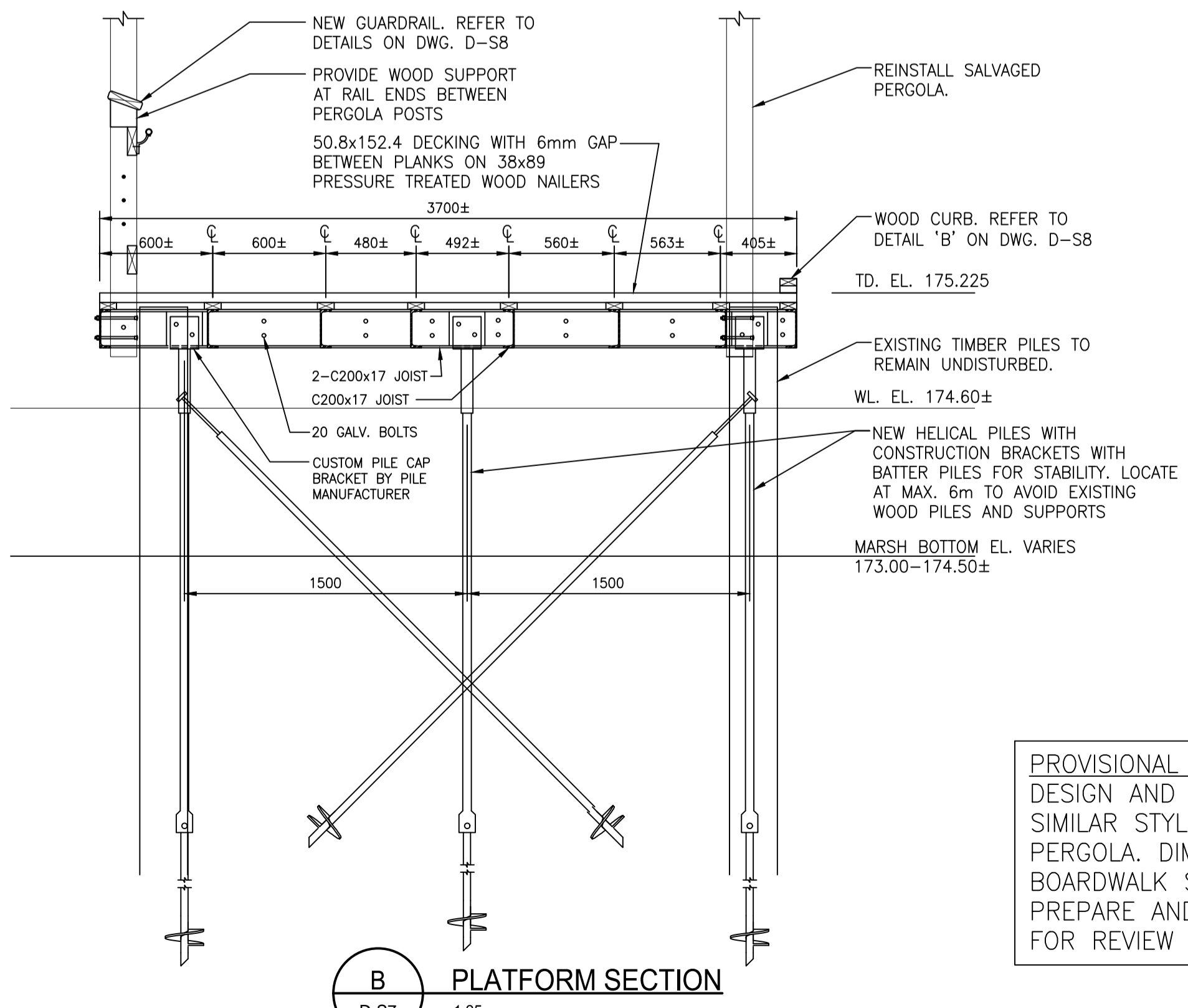
Designed by/Concept par: SEA	Date: 01/13/2017
Drawn by/Dessiné par: SL	Date: 02/10/2017
Checked by/Vérité par: SEA/ST	Date: 02/10/2017
Approved by/approuvé par: SEA	Date: 02/10/2017
Project No./N° du projet: 1503 PPNP	Scale/Échelle: AS NOTED
Drawing Set No./N° de série du dessin: R-3	Sheet No./N° de la feuille: D-S6



LAKE ERIE



A PLATFORM WITH LOOKOUT - PLAN
D-S2 1:25



B PLATFORM SECTION
D-S7 1:25

NOTE:

- REFER TO D-S2 AND D-S3 FOR NOTES AND OVERALL PLAN.
- VERIFY EXISTING FACILITIES DIMENSIONS AND LOCATIONS IN FIELD.
- ALL DIMENSIONS SHOWN ARE ±. FIELD MEASUREMENTS OF EXISTING ARE REQUIRED.
- CONTRACTOR TO CAREFULLY MEASURE AND NOTE EXISTING BOARDWALK CONFIGURATION FOR REFERENCE DURING RECONSTRUCTION NEW BOARDWALK TO BE SIMILAR TO EXISTING LAYOUT.
- THE LOCATIONS OF TIMBER PILES IS UNKNOWN. CONTRACTOR TO LOCATE EXIST PILES AND AVOID DISTURBING THEM DURING CONSTRUCTION.
- SALVAGE EXISTING STEEL BRACKET CONNECTION FROM EXISTING BOARDWALK CONNECTION TO THE FLOATING BOARDWALK. SANDBLAST CLEAN STEEL SURFACE AND INSTALL ON NEW STEEL FRAME BOARDWALK AND REINSTALL CONNECTION WITH FLOATING SECTION.
- REINSTALL HINGED CHECKER PLATE METAL COVER BETWEEN NEW AND FLOATING BOARDWALK.

PROVISIONAL ITEM:
DESIGN AND CONSTRUCT A NEW WOOD PERGOLA WITH SIMILAR STYLE AND MATERIALS AS EXISTING REMOVED PERGOLA. DIMENSIONS OF NEW PERGOLA TO SUIT NEW BOARDWALK STRUCTURE BASED ON FIELD MEASUREMENTS. PREPARE AND SUBMIT SHOP DRAWINGS FOR NEW PERGOLA FOR REVIEW PRIOR TO FABRICATION.



EXISTING PERGOLA PLATFORM

PCA TO REMOVE AND REINSTALL SITE FURNITURE AND SIGNS.

EXISTING FLOATING BOARDWALK

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
2	2.01.2018	TENDER	S.L.	M.D
1	1.19.2018	100% SUBMISSION	S.L.	M.D

Detail number / Numéro de détail	Sheet number / Numéro de la feuille
A	B

Consultant's Name / Nom de l'expert-conseil: **Stantec**

Project No.: STANTEC PROJECT NO.160622453

Project title/Titre du projet: **MARSH AREA RENEWAL PROJECT BOARDWALK**

Point Pelee National Park, Leamington, ON

Professional Engineer Seal: S.E. ALARCON 100067223, FEB 1 2018, PROVINCE OF ONTARIO

Designed by/Concept par	Date
SEA	01/13/2017

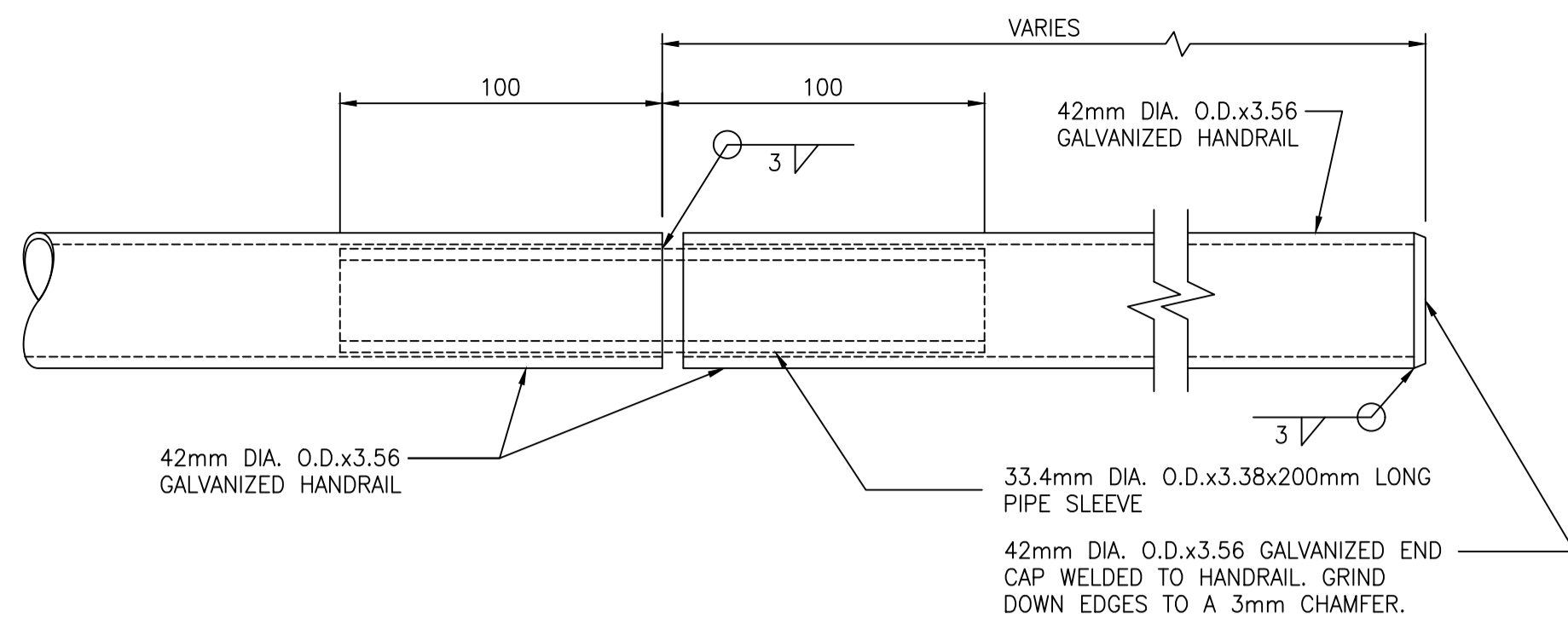
Drawn by/Dessiné par	Date
SL	02/10/2017

Checked by/Véritifié par	Date
SEA/ST	02/10/2017

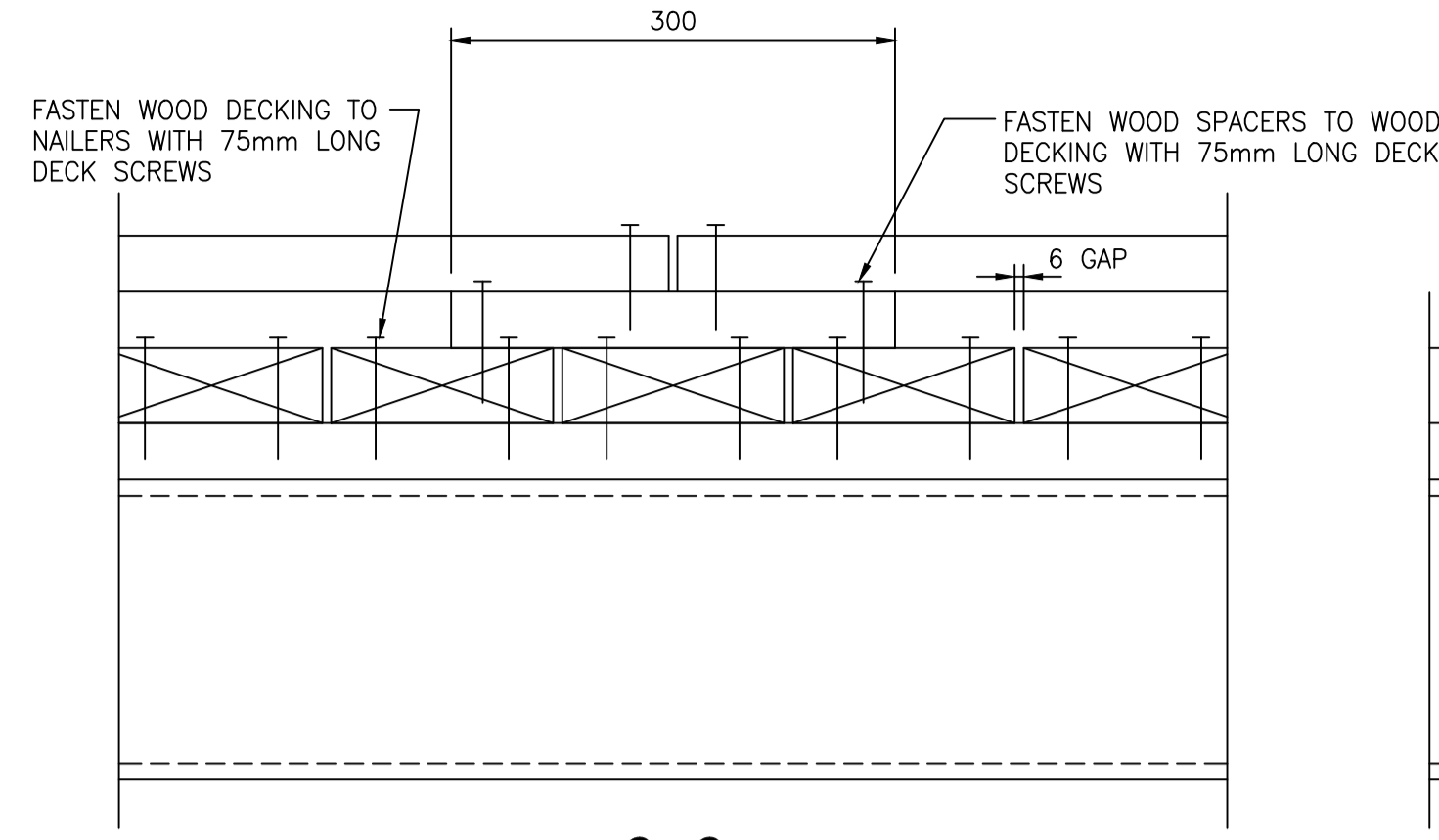
Approved by/approuvé par	Date
SEA	02/10/2017

Project No./N° du projet	Scale/Échelle	Sheet No./N° de la feuille
1503 PPNP	AS NOTED	D-S7

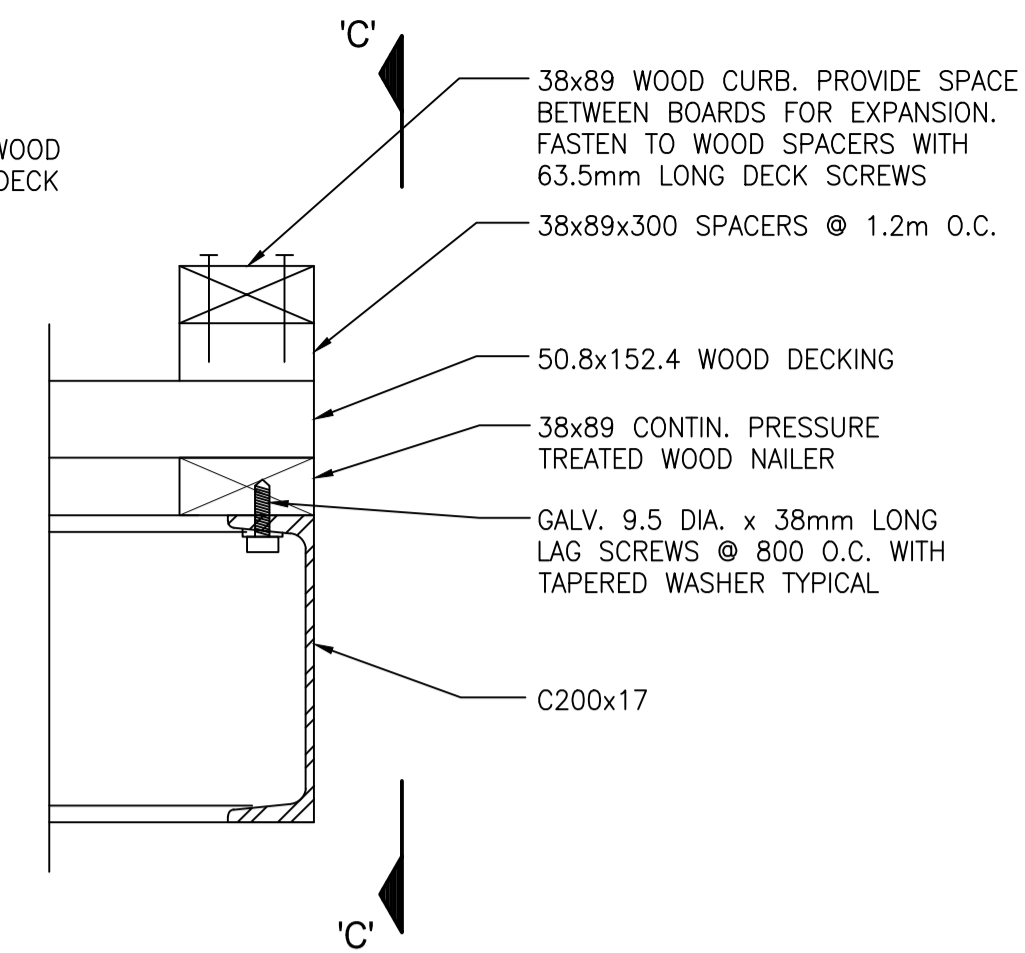
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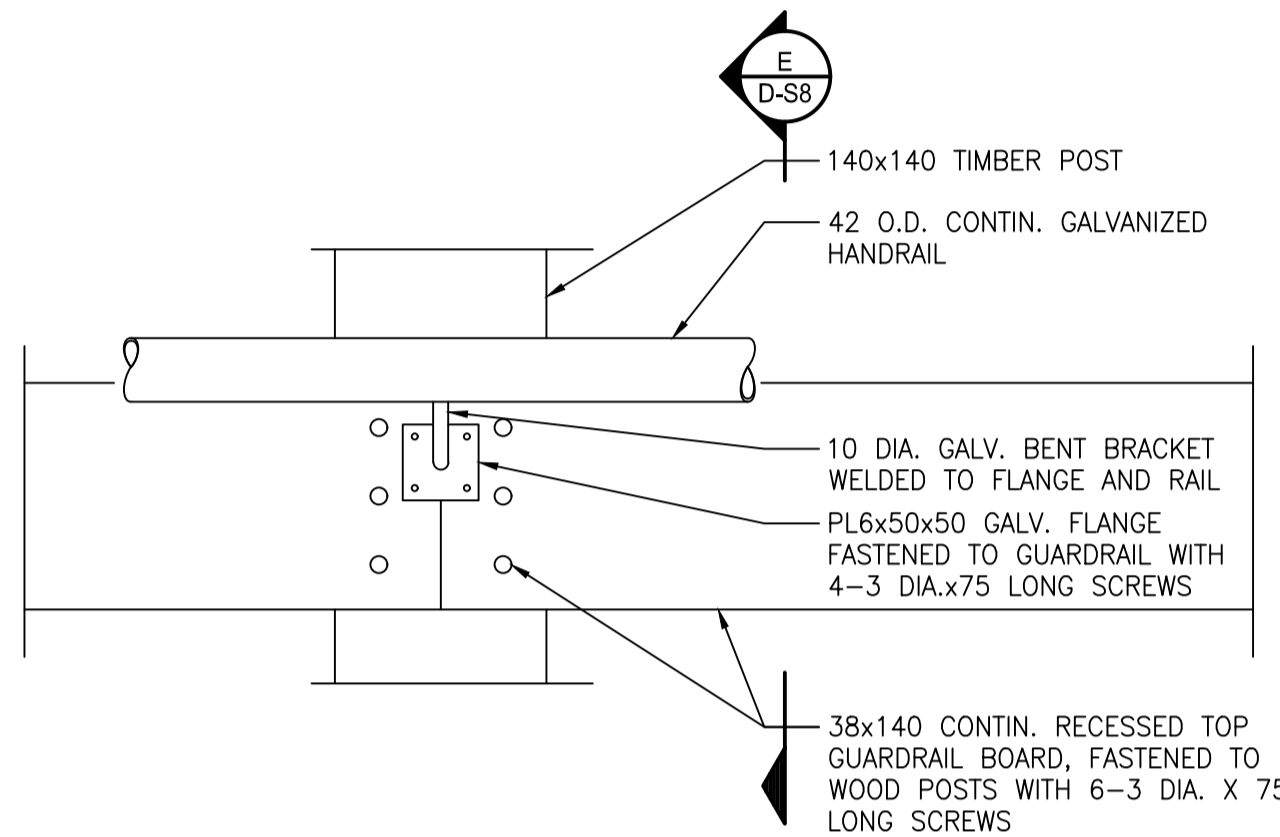
HANDRAIL SPLICE AND END CAP DETAIL
SCALE: 1:2



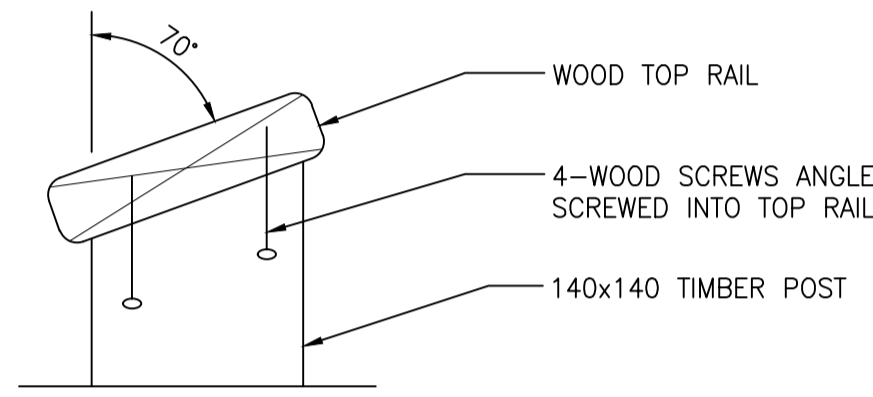
C - C CURB AND DECK CONNECTION DETAILS
SCALE: 1:5



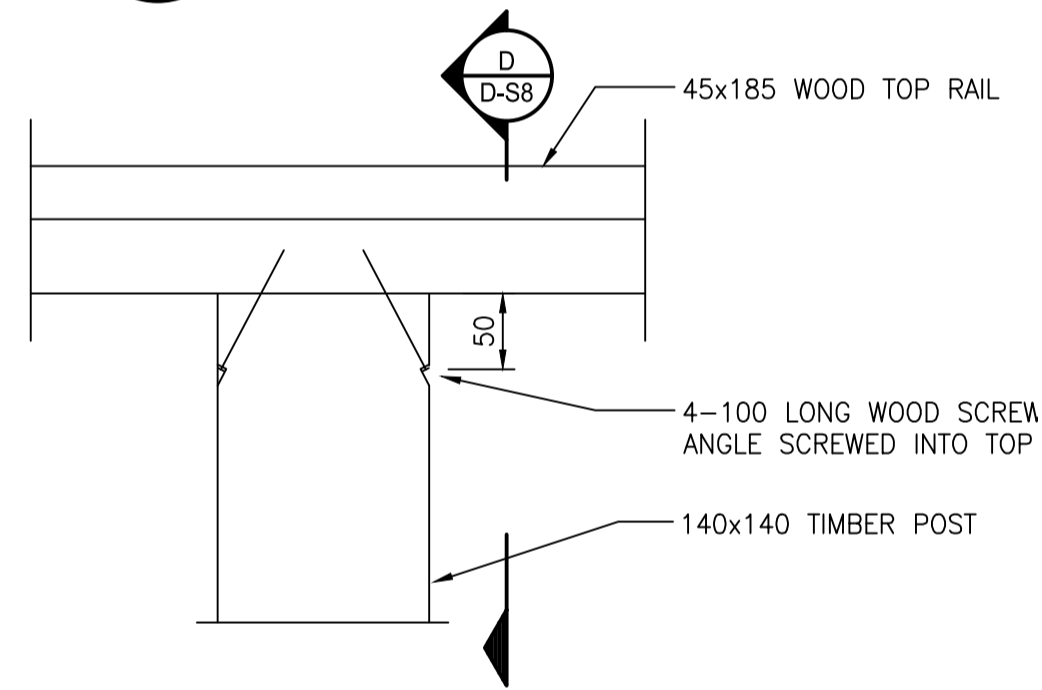
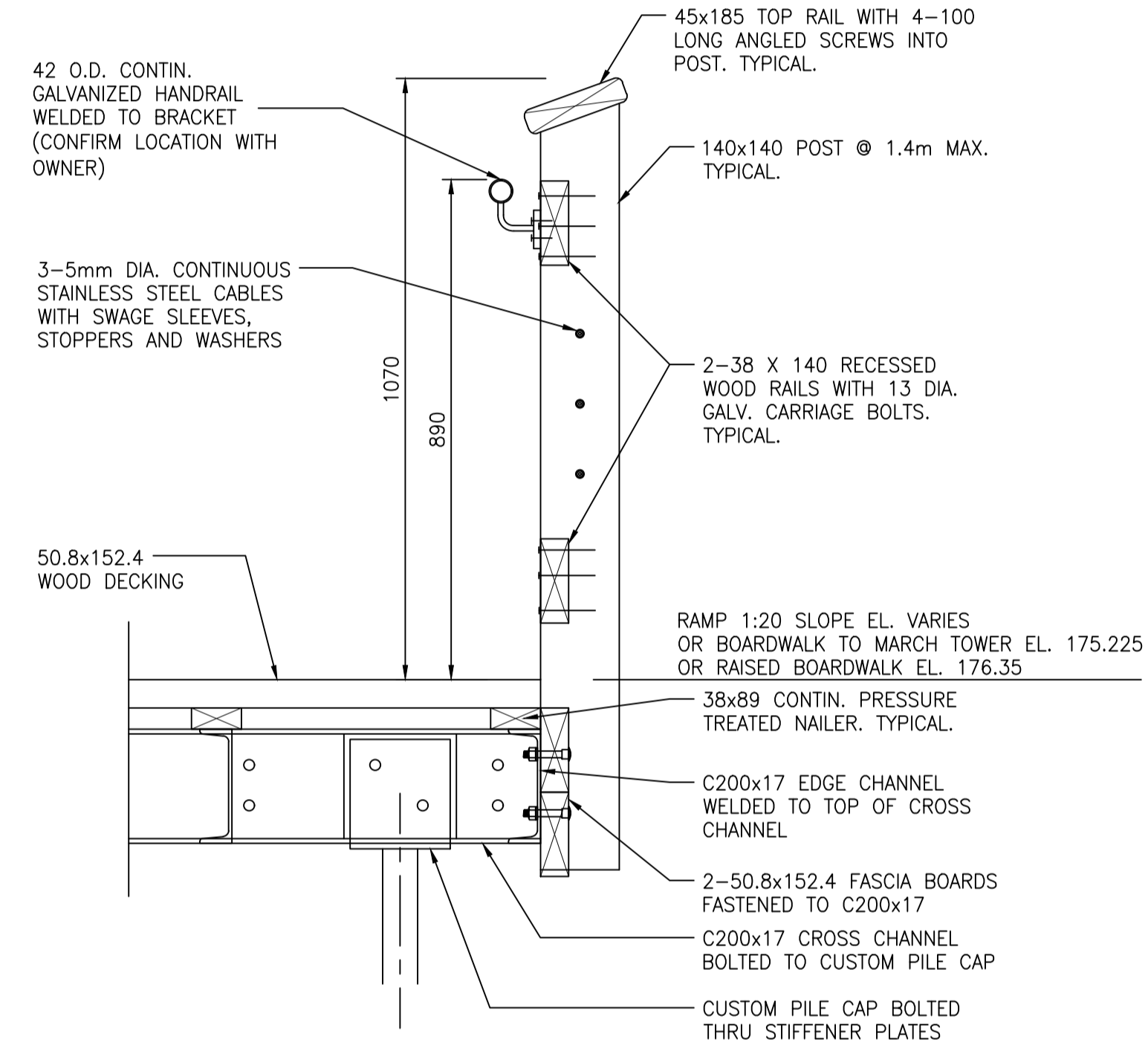
A GUARDRAIL POST DETAIL
SCALE: 1:10



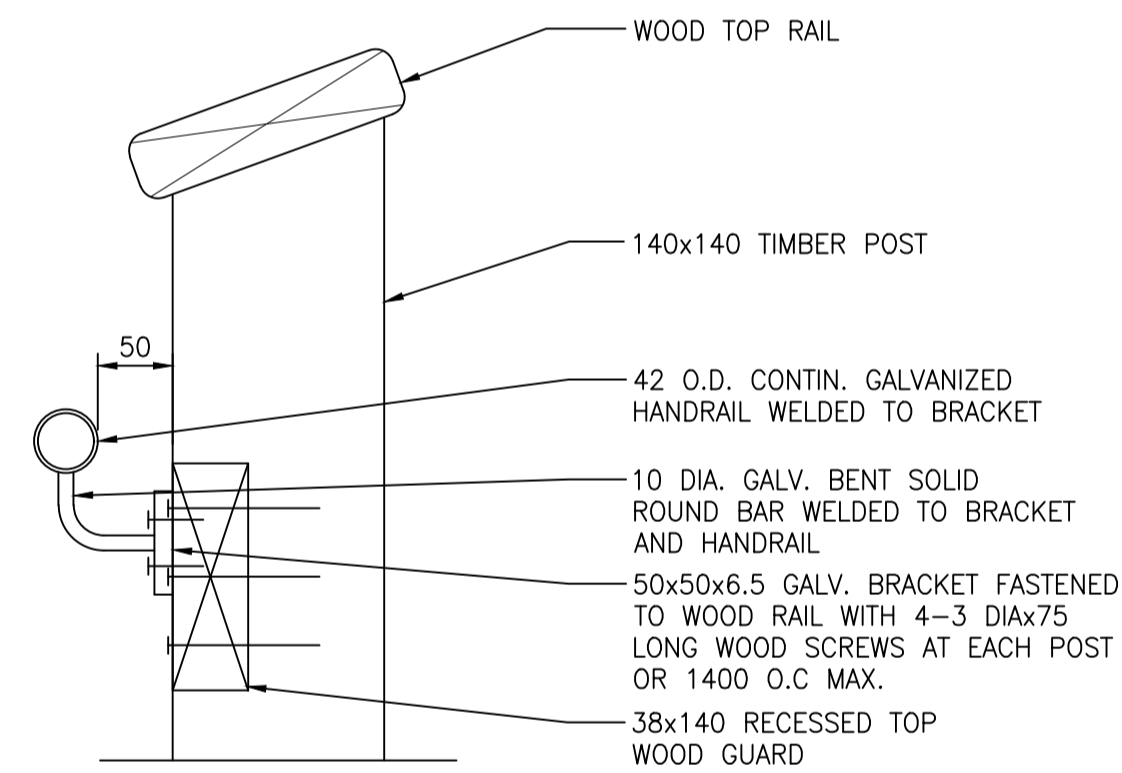
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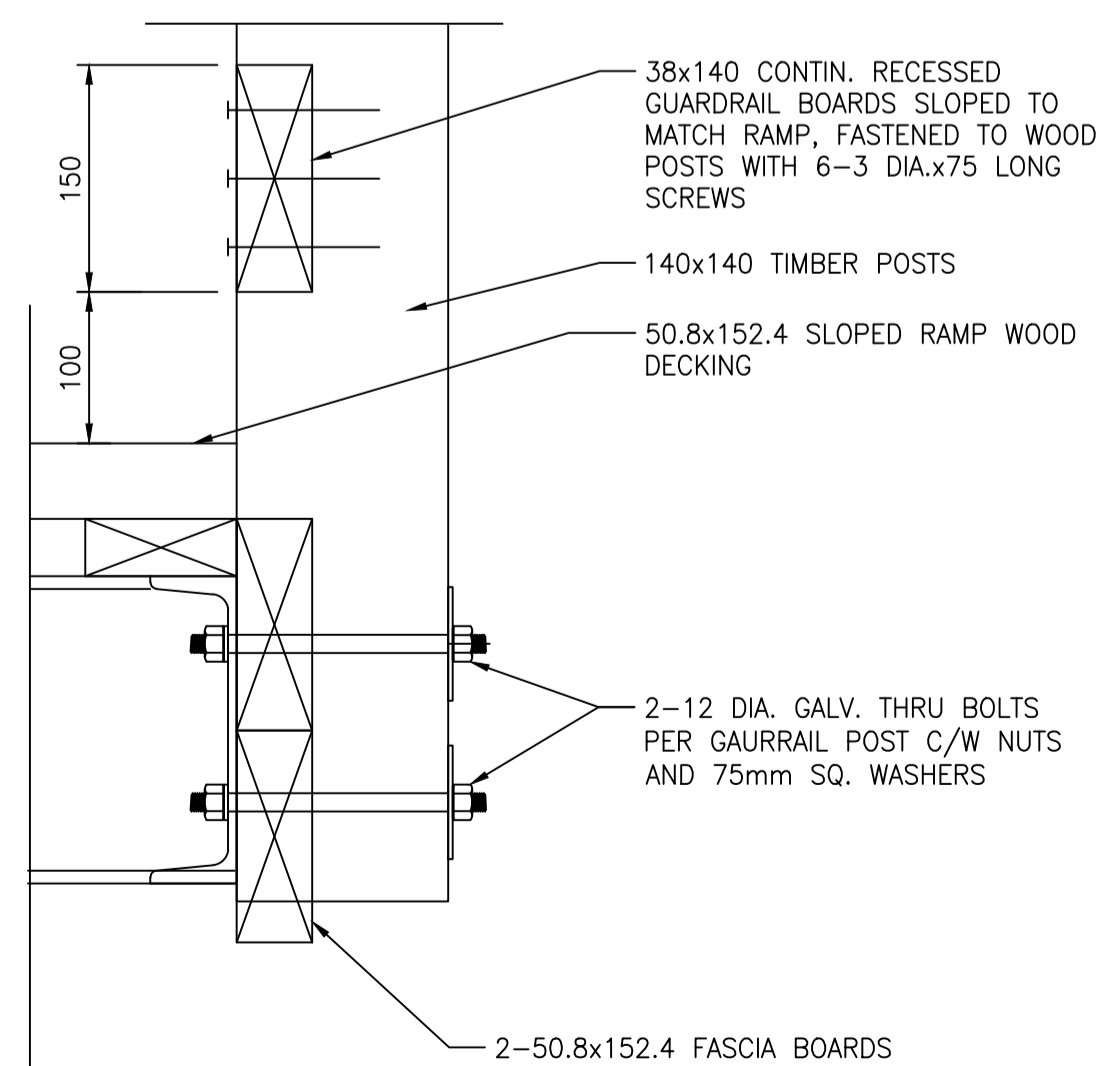
D TOP RAIL CONNECTION DETAIL
SCALE: 1:5



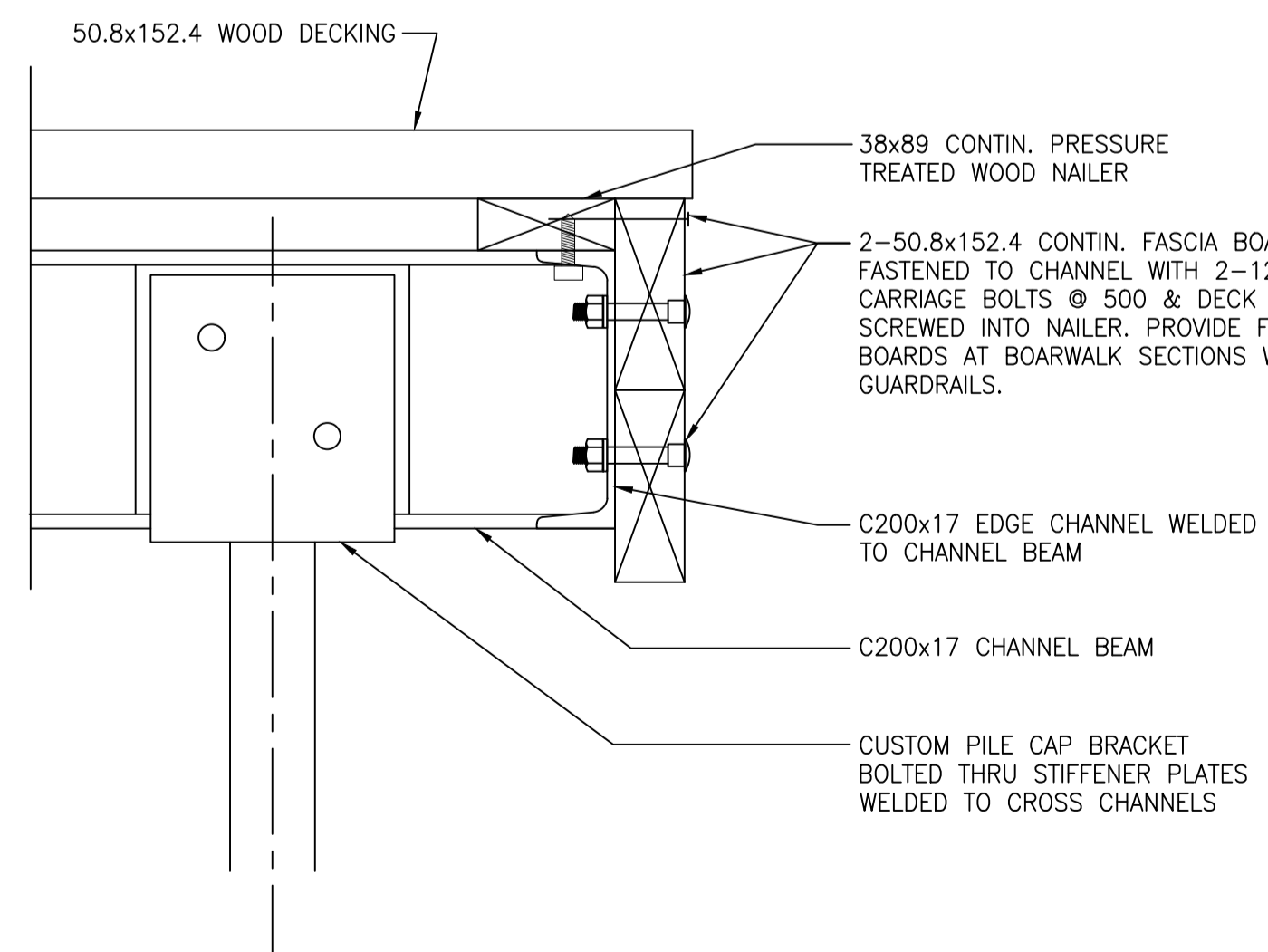
TOP RAIL CONNECTION DETAIL
SCALE: 1:5



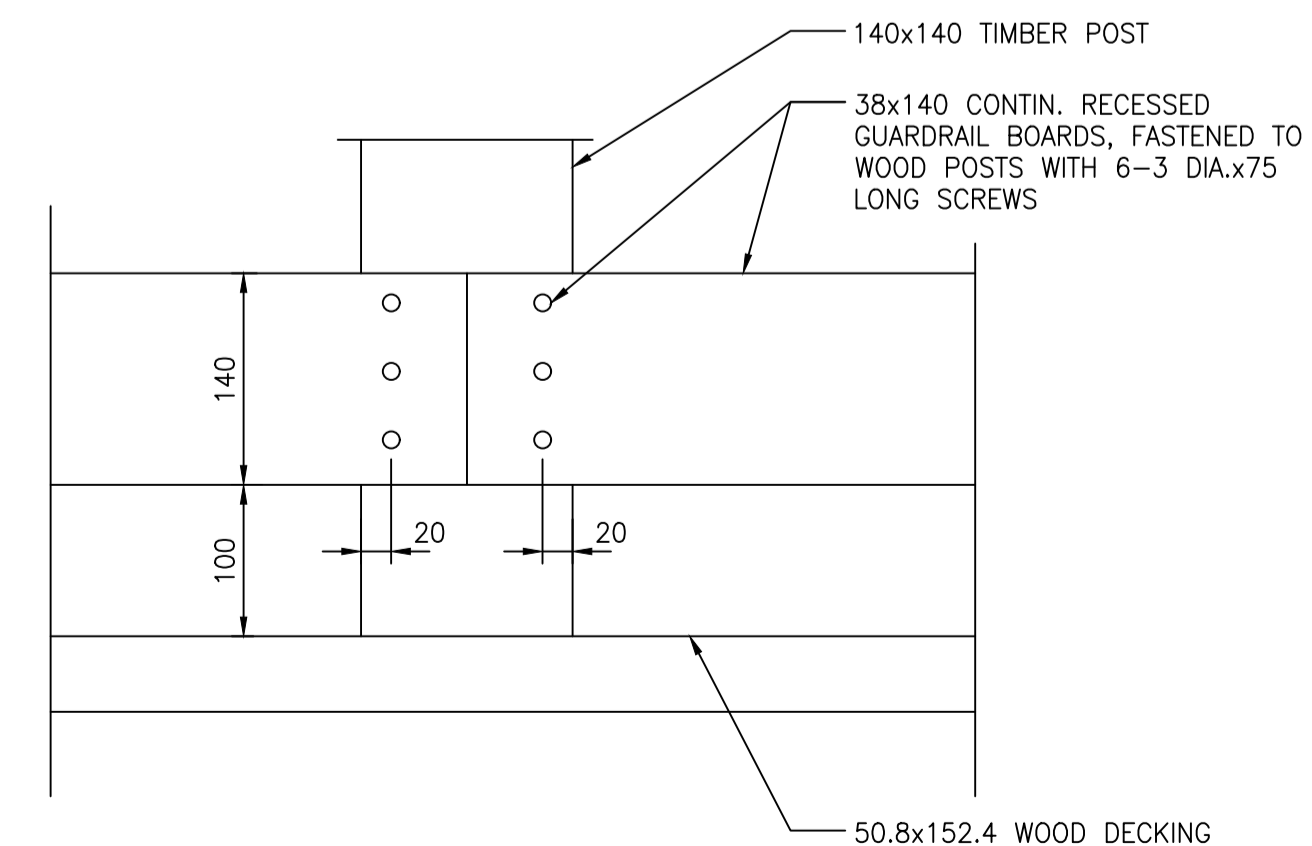
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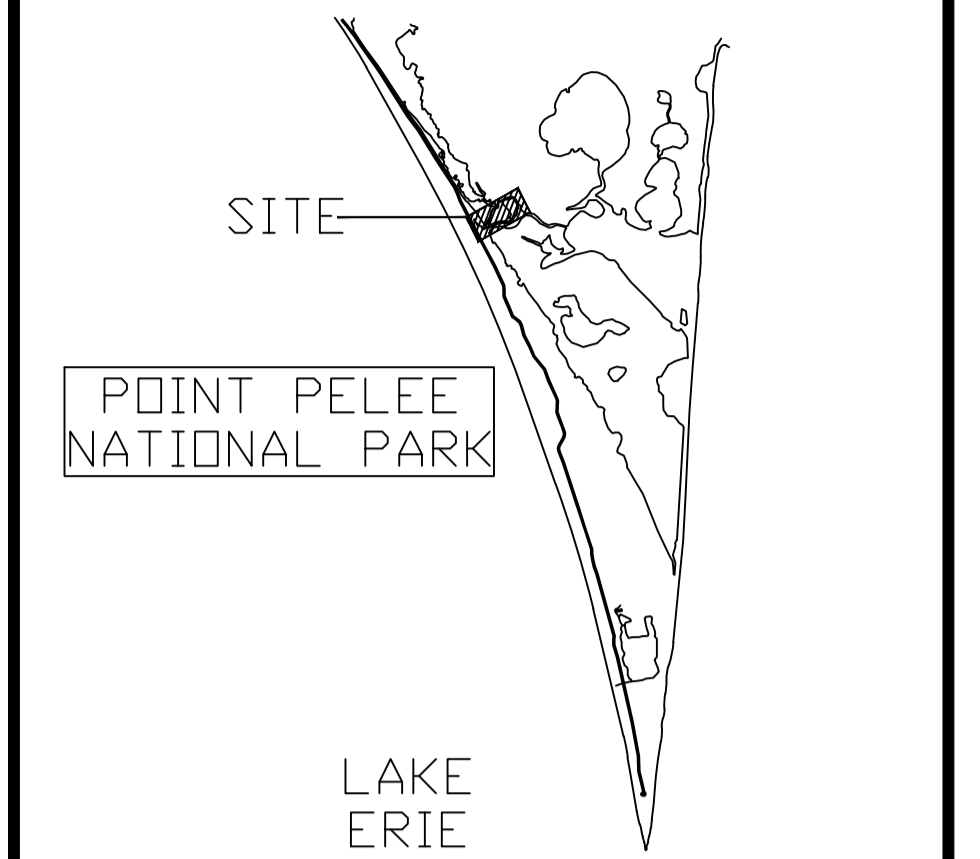
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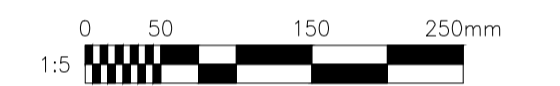
FASCIA CONNECTION DETAIL
SCALE: 1:5



GUARDRAIL CONNECTION DETAIL
SCALE: 1:5



LAKE ERIE



No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
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1	11.18.2016	CONCEPT DESIGN	S.L.	M.D

Revision / Revision

A	B	A	B
Detail number	Sheet number	A Numéro de détail	B Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **Stantec**

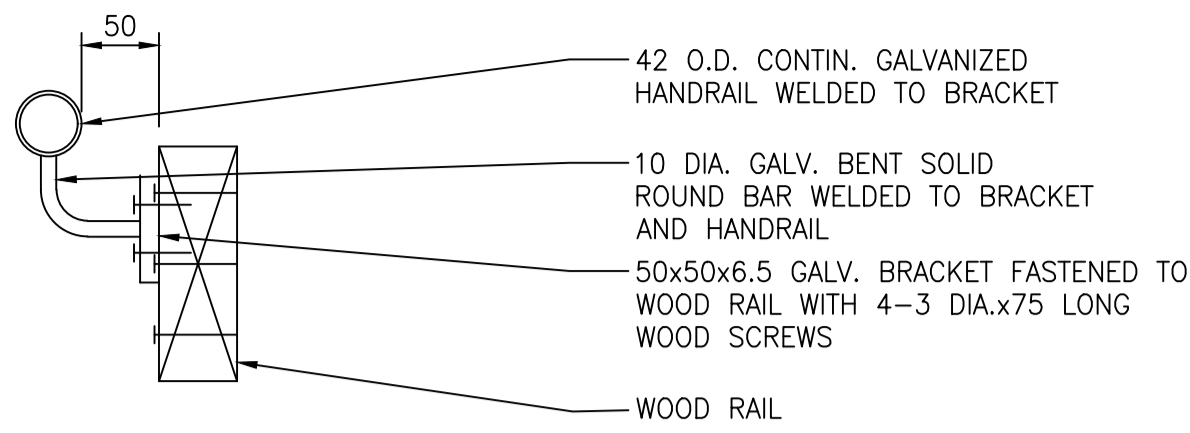
Project No.: STANTEC PROJECT NO.160622453

Professional Engineer License: S.E. ALARCON 100067223, FEB 1 2018, PROVINCE OF ONTARIO

Project Title/Titre du projet: **MARSH AREA RENEWAL PROJECT BOARDWALK**
Point Pelee National Park
Leamington, ON

Drawing Title/Titre du dessin: **BOARDWALK GUARDRAIL DETAILS**

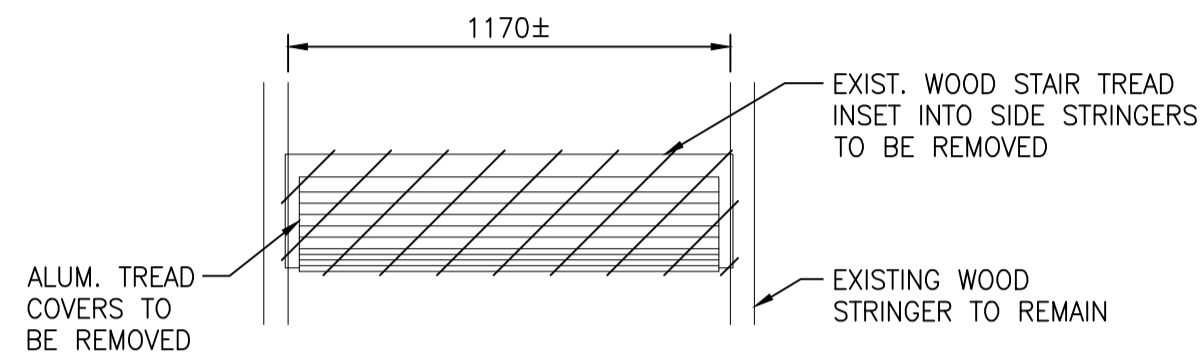
Designed by/Concept par: SEA	Date: 01/13/2017
Drawn by/Dessiné par: DM	Date: 02/10/2017
Checked by/Vérité par: SEA/ST	Date: 02/10/2017
Approved by/approuvé par: SEA	Date: 02/10/2017
Project No./N° du projet: 1503 PPNP	Scale/Échelle: AS NOTED
Drawing Set No./N° de série du dessin:	Sheet No./N° de la feuille: D-S8



NOTE:
NEW HANDRAIL TO BE APPLIED ON EACH SIDE OF ALL STAIRS UP THE TOWER.
ATTACH HANDRAIL TO EXISTING WOOD RAIL AT 90° FROM TOP OF TREAD TO TOP OF RAIL

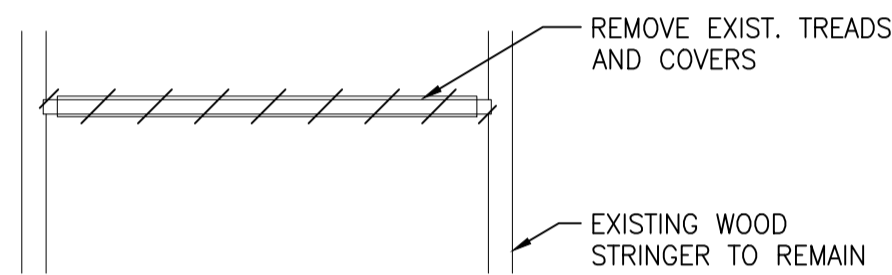
TYPICAL HANDRAIL DETAIL

SCALE: N.T.S.



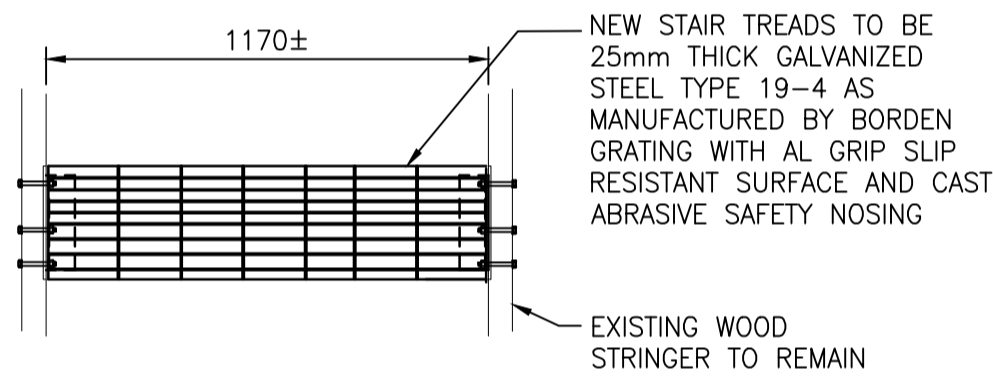
TYPICAL TREAD PLAN - DEMOLITION

SCALE: 1:20



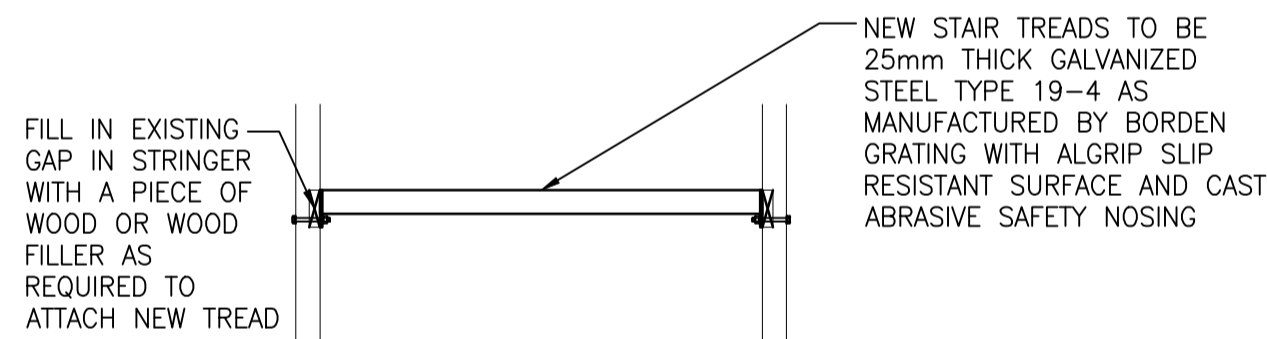
TYPICAL TREAD SECTION - DEMOLITION

SCALE: 1:20



TYPICAL TREAD PLAN - NEW

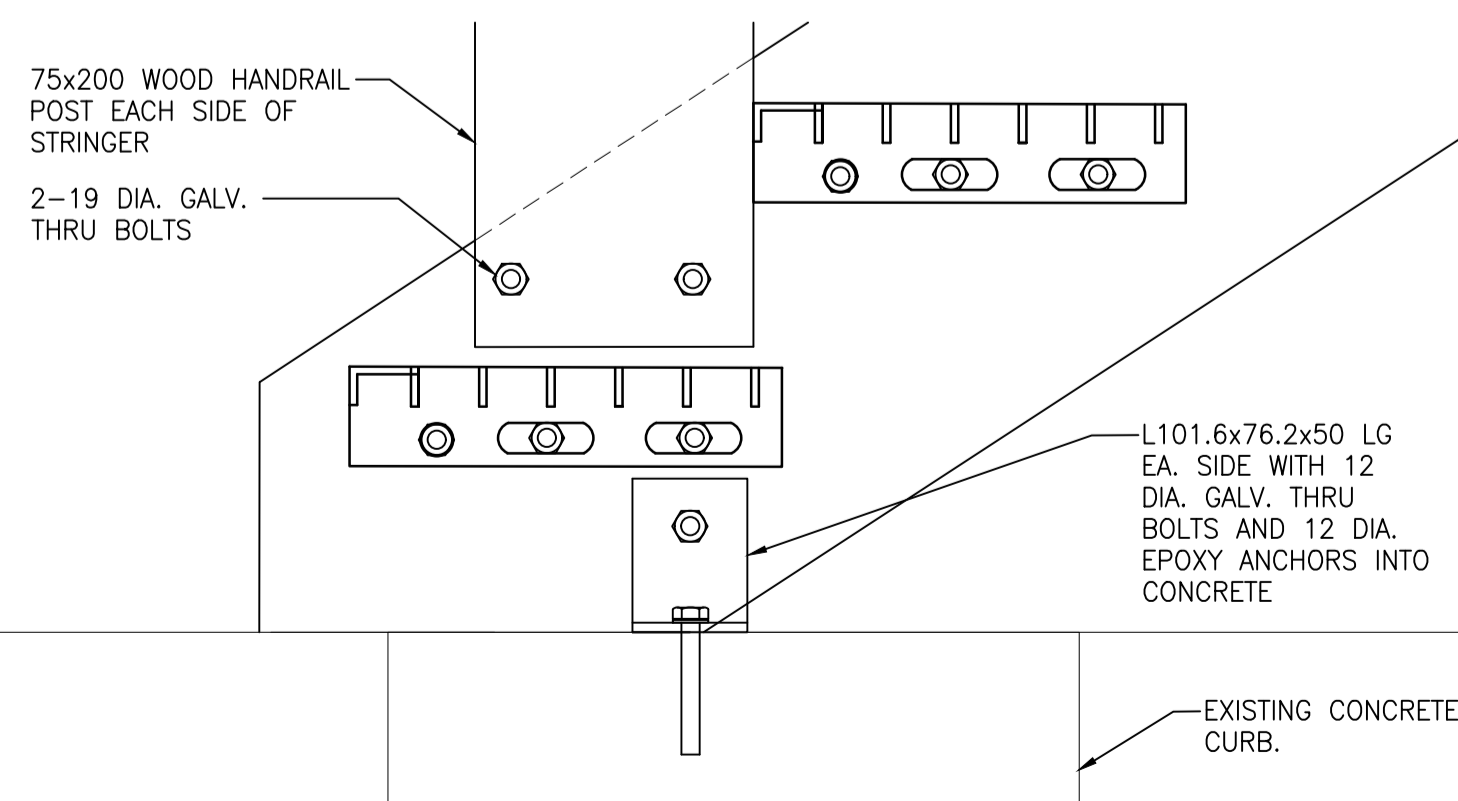
SCALE: 1:20



TYPICAL TREAD SECTION - NEW

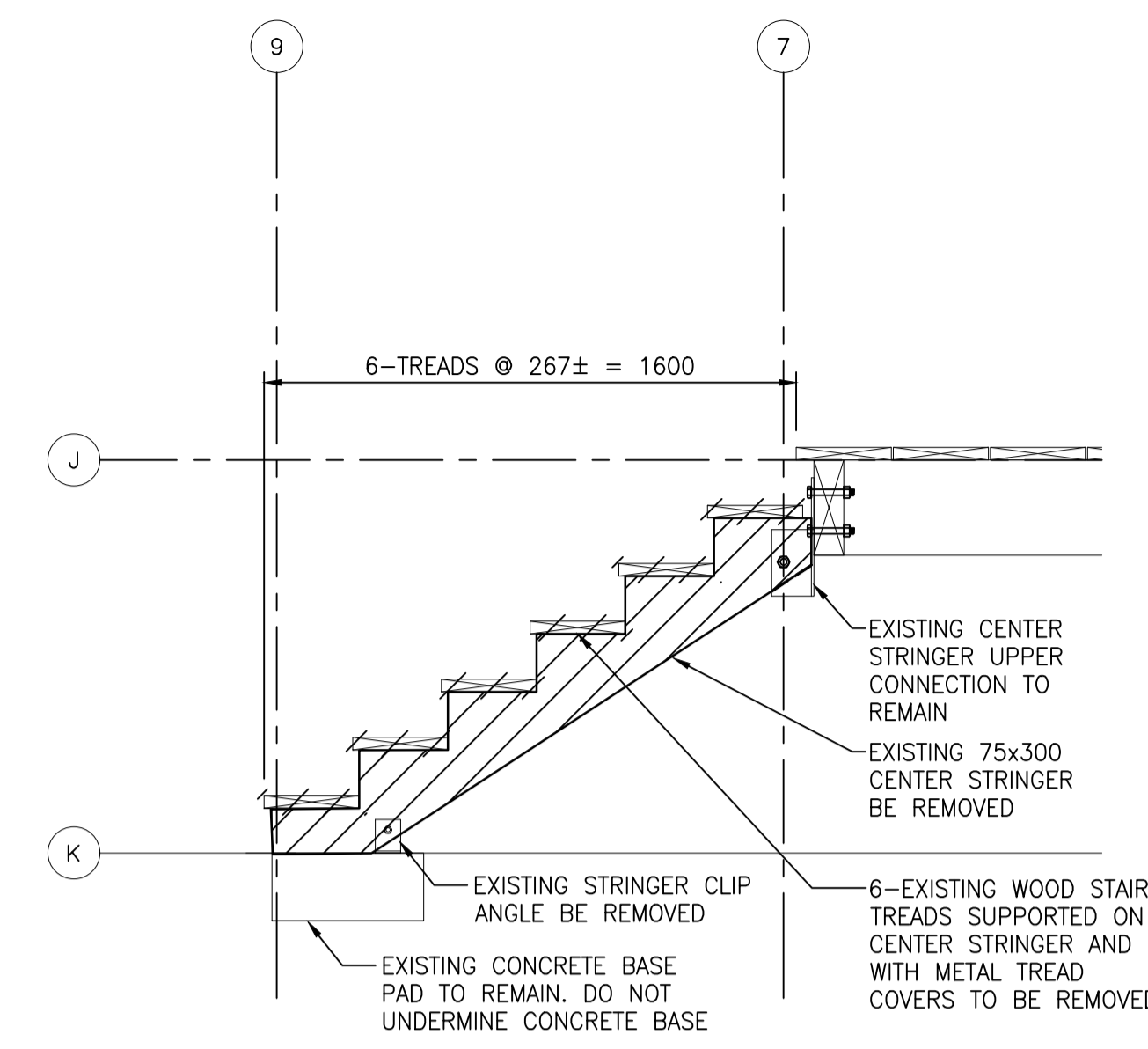
SCALE: 1:20

- NOTE:
1. TYPICAL SPAN BETWEEN STRINGERS IS 1170±. FIELD VERIFY.
 2. 42 TREADS APPROX. 1170 WIDE TO BE REMOVED
6 TREADS APPROX. 2690 WIDE TO BE REMOVED. EACH RUN HAS 6 TREADS AND 6 RISERS.
 3. DO NOT REMOVE MORE THAN ONE RUN OF TREADS AT A TIME.



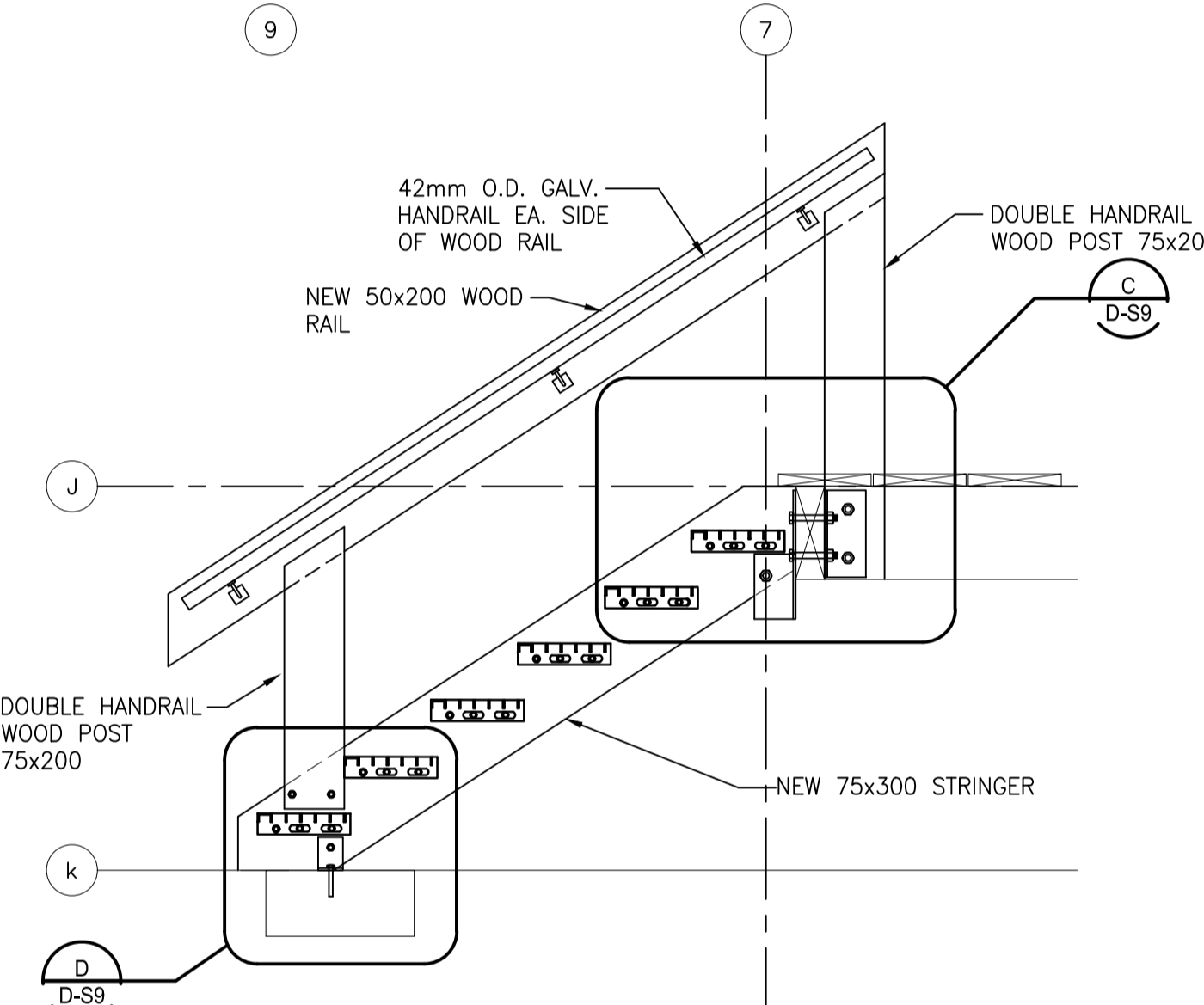
D BOTTOM TREAD CENTER CONNECTION DETAIL

SCALE: 1:5



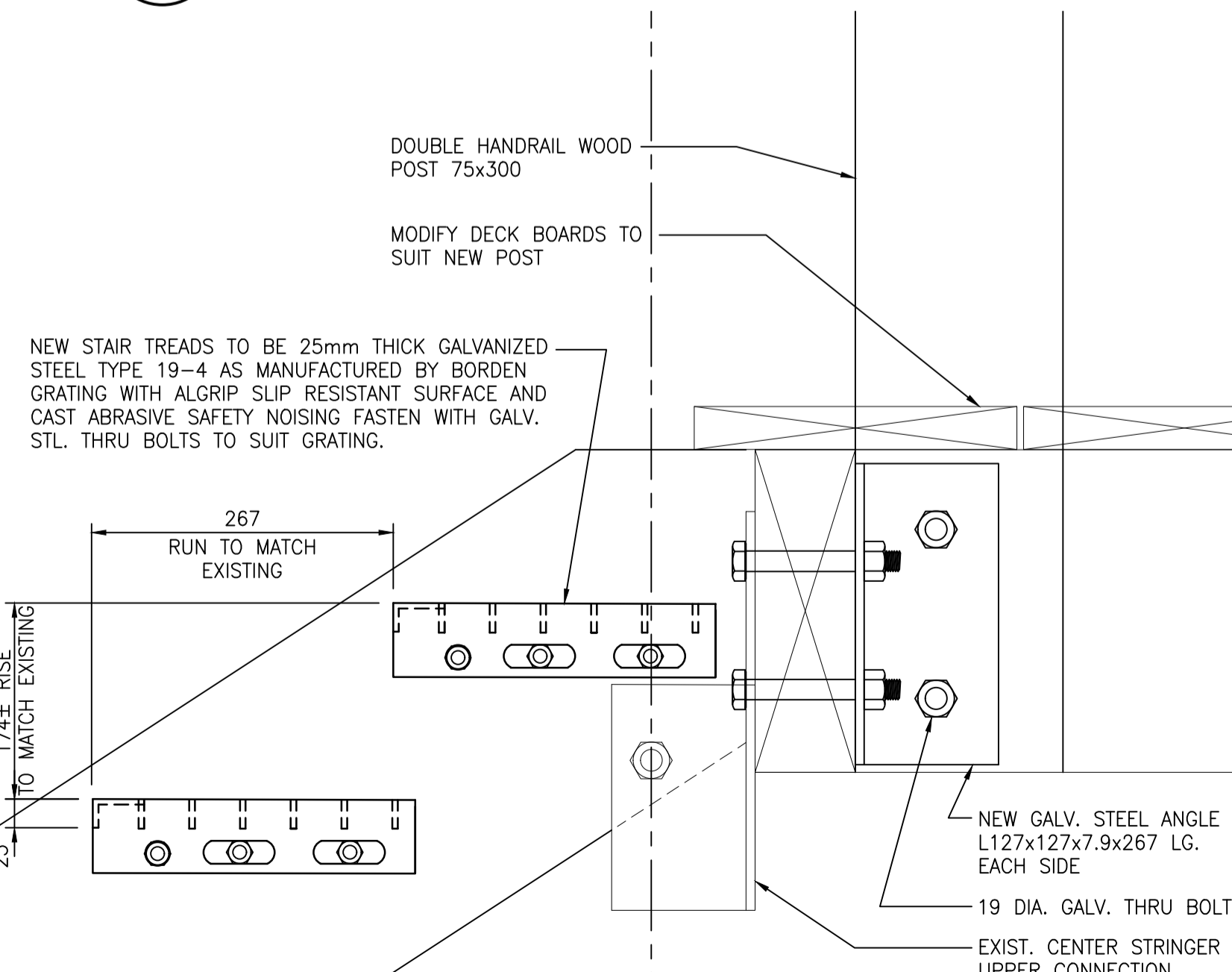
A MARSH TOWER STAIR SECTION - DEMOLITION

SCALE: 1:20



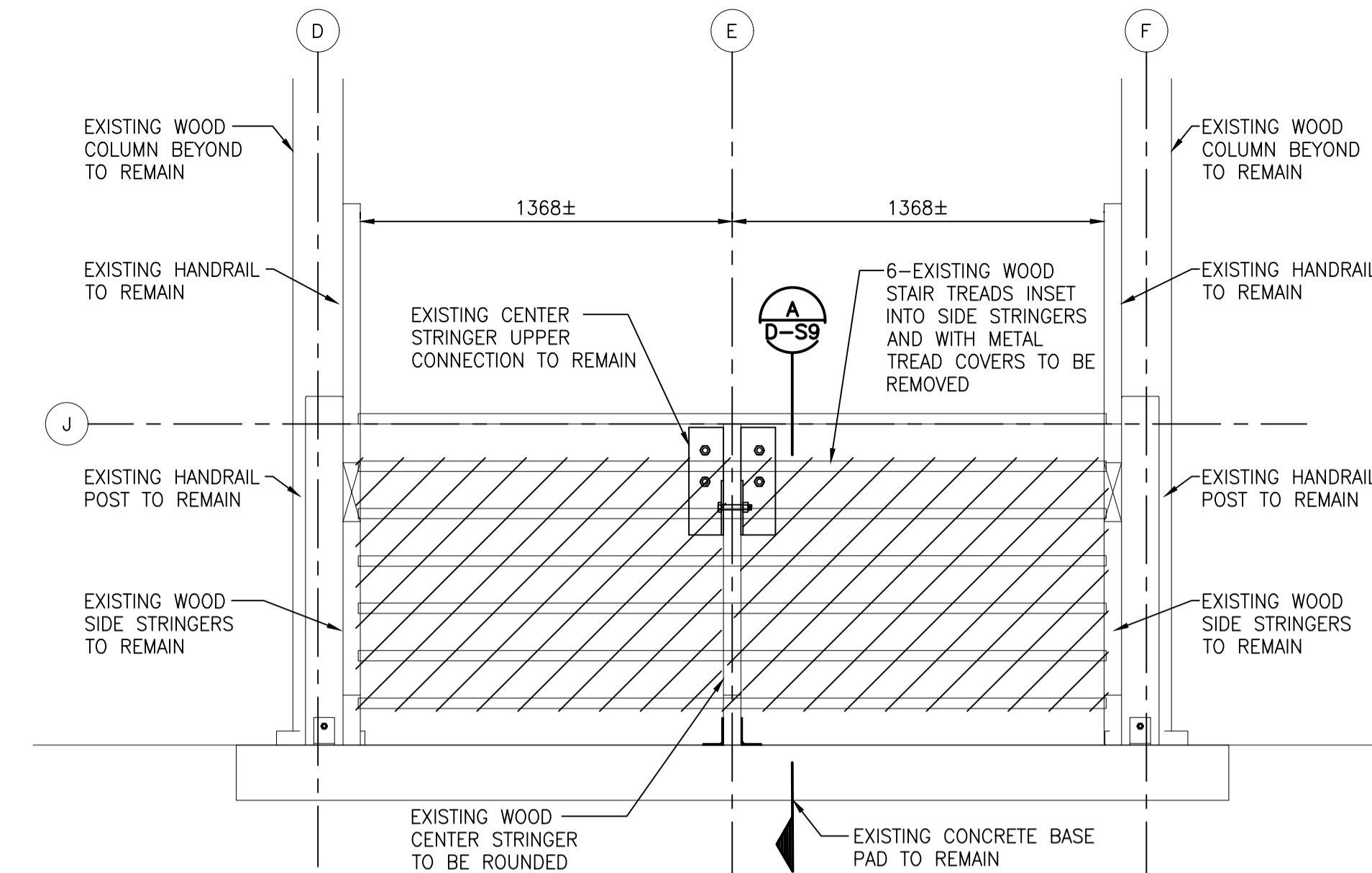
B MARSH TOWER STAIR SECTION - NEW WORK

SCALE: 1:20



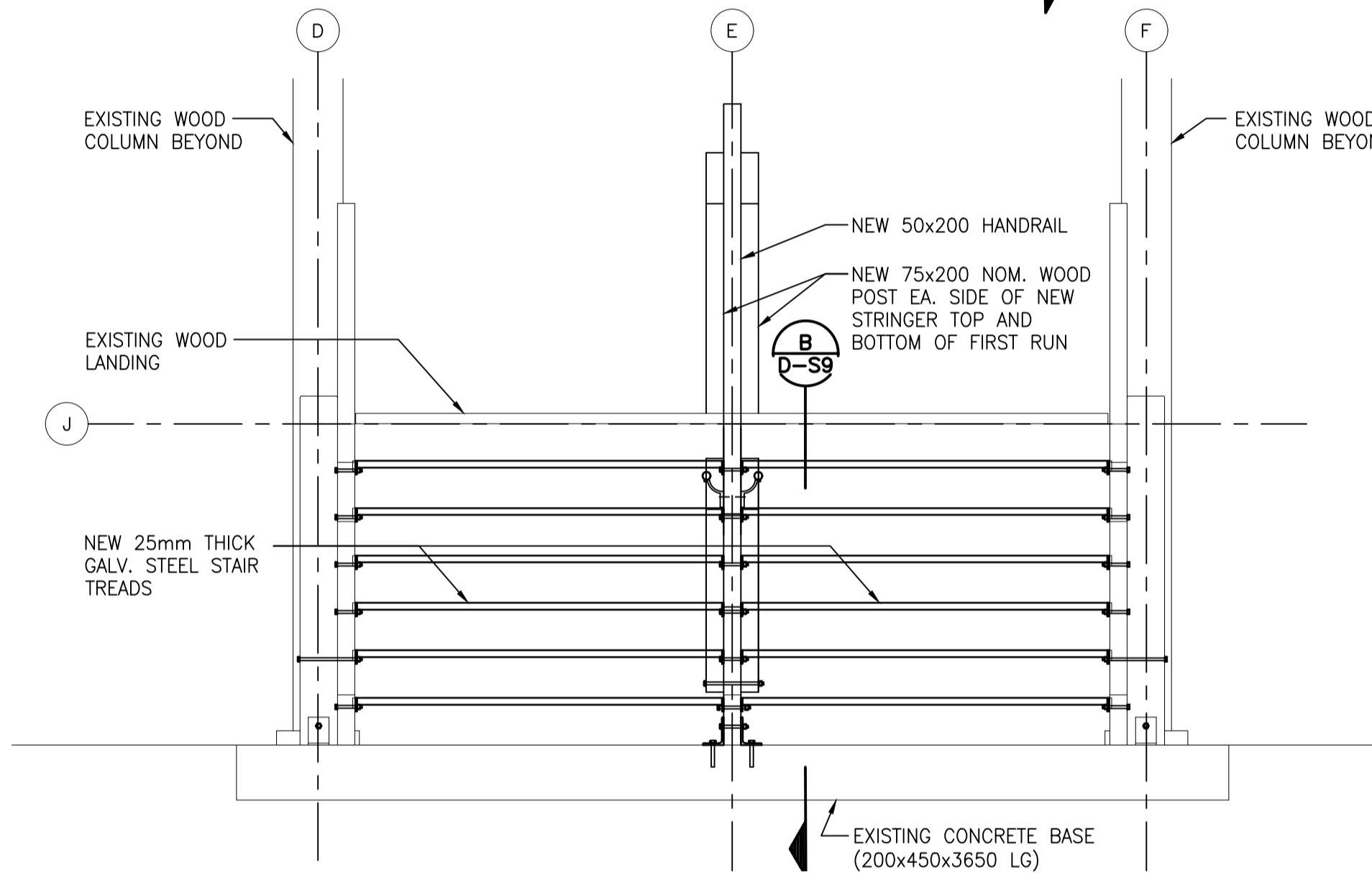
C UPPER HANDRAIL POST CENTER CONNECTION DETAIL

SCALE: 1:5



MARSH TOWER STAIR FRONT ELEVATION - DEMOLITION (FIRST STAIR RUN)

SCALE: 1:20

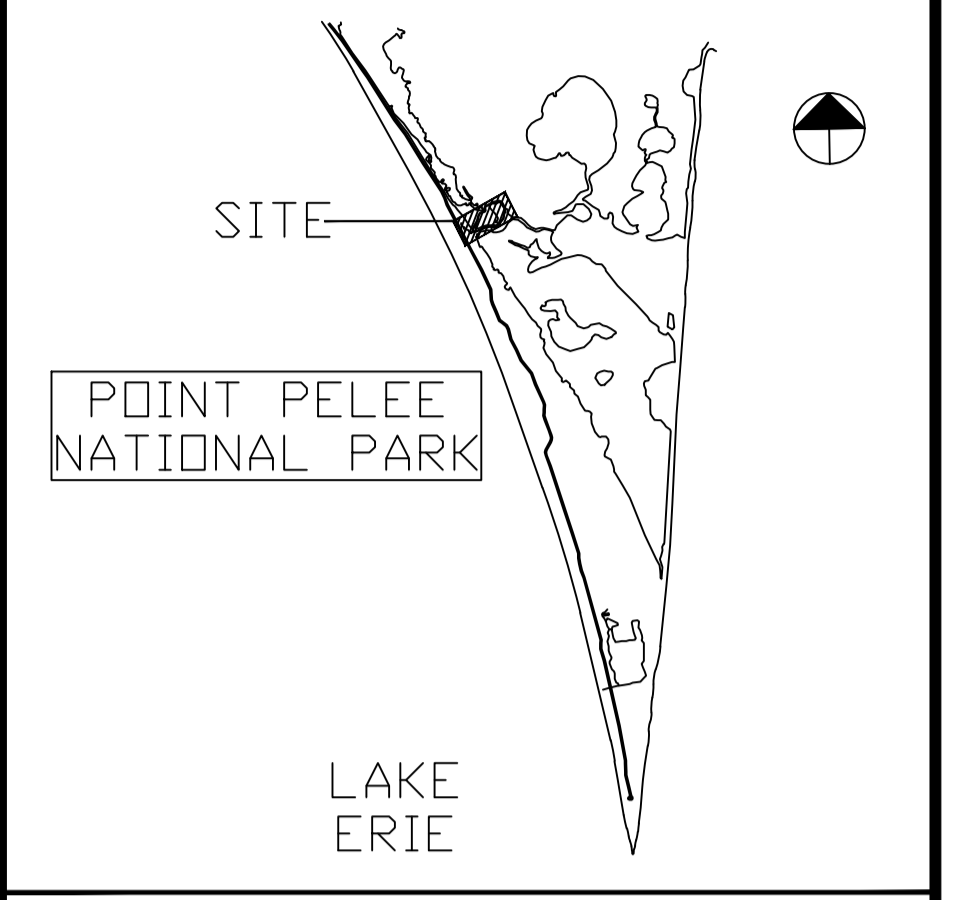


MARSH TOWER STAIR FRONT ELEVATION - NEW WORK

SCALE: 1:20



EXISTING MARSH TOWER



0 200 600 1000mm
1:20

5	2.01.2018	TENDER	S.L.	M.D
4	1.19.2018	100% SUBMISSION	S.L.	M.D
3	3.24.2017	99% DESIGN	S.L.	M.D
2	2.10.2017	66% DESIGN	S.L.	M.D
1	11.18.2016	CONCEPT DESIGN	S.L.	M.D

No. Date Description Drawn by / Dessiné par Approved / Approuvé

A	Detail number	A Numéro de détail
B	Sheet number	B Numéro de la feuille
Linear dimensions in millimetres		Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **Stantec**

Project No./Titre du projet: STANTEC PROJECT NO.160622453

Project title/Titre du projet: MARSH AREA RENEWAL PROJECT BOARDWALK
Point Pelee National Park
Leamington, ON

Drawing title/Titre du dessin: **MARSH TOWER STAIR TREAD DETAILS**

Designed by/Concept par: SEA	Date: 01/13/2017
Drawn by/Designe par: SL	Date: 02/10/2017
Checked by/Vérifié par: SEA/ST	Date: 02/10/2017
Approved by/approuvé par: SEA	Date: 02/10/2017
Project No./N° du projet: 1503 PPNP	Scale/Échelle: AS NOTED
Drawing Set No./N° de série du dessin:	Sheet No./N° de la feuille: D-S9