

# PORT DALHOUSIE, ONTARIO

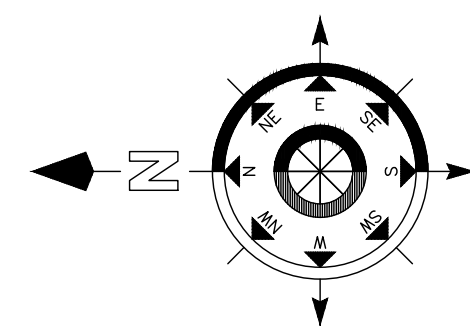
## MARINA RESTORATION (LOCATOR CODE 4768 )



GOVERNMENT  
OF CANADA  
FISHERIES  
AND OCEANS

GOUVERNEMENT  
DU CANADA  
PÊCHES  
ET OCÉANS

SMALL CRAFT HARBOURS  
CENTRAL AND ARCTIC REGION



# AECOM

London, Ontario  
519.673.0510  
PROJECT No. 60528656

## ISSUED FOR TENDER AUGUST 24, 2018



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GENERAL NOTES :

1. SAFEGUARD ALL EXISTING STRUCTURES, SERVICES AND UTILITIES WHICH WILL BE AFFECTED BY THE WORK OF THIS CONTRACT.
2. BEFORE PROCEEDING WITH THE WORK, CHECK AND VERIFY ALL DIMENSIONS AND ALL ELEVATIONS SHOWN ON THE DRAWINGS AND REPORT ANY DISCREPANCIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENVIRONMENTAL PROTECTION AND CONSTRAINTS DURING PERFORMANCE OF THE WORK.
4. ACCESS PERMISSION FOR SHEET PILING INSTALLATION SHALL BE ARRANGED BY SMALL CRAFT HARBOURS.
5. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE NOTED.
6. THE USE OF THE TERM "TYPICAL" AND "TYP." DENOTES A COMMON DIMENSION, FEATURE, FORM OF CONSTRUCTION AND SCOPE OF WORK, WHICH IS APPLICABLE TO OTHER LOCATIONS ON THE DRAWING (TO AVOID REPETITION).

CONSTRUCTION NOTES :

1. THE LOCATION OF POLE LINES, CONDUITS, WATERMAIN, SEWERS AND OTHER UTILITIES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN THE ACCURACY OF THE LOCATION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.
2. BEFORE STARTING WORK THE CONTRACTOR SHALL LOCATE ALL UTILITIES AND SHALL PROTECT THEM FROM DAMAGE.
3. ALL WORK SHALL MEET THE MINIMUM STANDARDS OF THE SPECIFICATIONS AND THE OCCUPATIONAL HEALTH AND SAFETY ACT (OHSA).
4. ENVIRONMENTAL APPLICATIONS HAVE BEEN FILED WITH VARIOUS AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENVIRONMENTAL PROTECTION AND CONSTRAINTS DURING PERFORMANCE OF THE WORK.
5. ALL TREES, FACILITIES AND MISCELLANEOUS OBSTRUCTIONS TO THE WORK ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL COMPLETE A VISUAL SITE REVIEW PRIOR TO THE BID AND PRIOR TO UNDERTAKING THE WORK.
6. THE CONTRACTOR SHALL INSTALL AND MAINTAIN A SECURE SITE PERIMETER FENCE AT ALL TIMES DURING CONSTRUCTION. FENCING SHALL INCLUDE SIGNAGE NOTIFYING PUBLIC OF HAZARDS. LOCKABLE GATES SHALL BE INSTALLED TO PROVIDE VEHICLE AND PERSONNEL ACCESS.
7. THE CONTRACTOR SHALL REGULARLY CLEAN ROADS (PUBLIC AND PRIVATE) BY MECHANICAL CLEANING AND CONTROL DUST.
8. VIBRATION MONITORING OF EXISTING FACILITIES SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENT.
9. RESTORE AREAS WITH SALVAGED TOP SOIL FROM SITE FOR 150mm THICK TOPSOIL AND GRASS SEEDED, UNLESS NOTED OTHERWISE.
10. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION UNLESS NOTED OTHERWISE.
11. THE CONTRACTOR SHALL PREPARE AND MAINTAIN A WORKING AS BUILT FULL SIZE 'REDLINE' MARKUP SET OF THE CONTRACT DRAWINGS. WORKING AS BUILTS SHALL BE KEPT CURRENT ON A WEEKLY BASIS AND BE AVAILABLE ON THE JOB SITE AT ALL TIMES. THE 'REDLINE' SET SHALL DEPICT ALL CURRENT VARIATIONS/DEVIATIONS (INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: ADDENDUMS, CHANGE ORDERS, FIELD ADJUSTMENTS, EXISTING AND NEW UTILITY LINES). MEASUREMENTS ARE TO BE SHOWN FOR ALL CHANGE OF DIRECTION POINTS AND ALL COMPONENTS. THESE SHALL BE SHOWN WITH TWO OFFSET DISTANCES TO PERMANENTLY FIXED FEATURES.
12. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING A PRE-CONSTRUCTION SURVEY TO DOCUMENT SITE CONDITIONS PRIOR TO START OF WORK. SUBMIT SURVEY TO THE OWNER AND THE CONSULTANT.

MATERIAL SPECIFICATIONS :

1. CONCRETE : IN ACCORDANCE WITH CSA STANDARD A23.1 AND A23.2.  
CLASS OF CONCRETE : 30 MPa  
CLEAR COVER TO REINFORCING STEEL : 70 ± 20mm
2. STRUCTURAL CONCRETE UNLESS OTHERWISE NOTED: 30 MPa AT 28 DAYS, EXPOSURE CLASSIFICATION F-1.
3. REINFORCING STEEL: CSA STANDARD G30.18, GRADE 400, DEFORMED BARS.
4. STRUCTURAL STEEL: CSA STANDARD G40.20/G40.21, GRADE 350W ROLLED SECTIONS, 300W PLATES.
5. BOLTS: ASTM AF3125 (25mm DIAMETER, UNLESS NOTED OTHERWISE).
6. WWF : 152x152 - MW 18.7
7. WELDING: CSA STANDARD W59 PERFORMED BY WELDERS MEETING THE REQUIREMENTS OF CSA STANDARD W47.
8. UNLESS OTHERWISE NOTED THE MINIMUM FILLET WELD SHALL BE AS FOLLOWS:

MATERIAL THICKNESS OF THICKER PART JOINED (mm)	MINIMUM SIZE OF SINGLE PASS FILLET WELD (mm)
TO 12 INCLUSIVE	5
OVER 12 TO 20	6
OVER 20 TO 40	8
OVER 40 TO 60	10
OVER 60 TO 80	12
9. SHEET PILES :

1. STEEL SHEET PILES TO CONFORM TO ASTM A527 GRADE 50, OR CSA G40.20/G40.21 GRADE 350W.
2. STEEL CHANNEL WALERS, PLATES, STRUTS AND BRACES TO CONFORM TO CSA STANDARD G40.20/G40.21, GRADE 350W.
10. TIE RODS :

1. TIE RODS ANCHORING TO SSP ANCHOR WALL SHALL BE 36mm DIAMETER (#11) GRADE 75 (ASTM A615) THREADBAR.
2. PROVIDE BEVELED WASHERS AND PLATES WITH MINIMUM PLATE THICKNESS OF 16mm.
3. ALL TIE RODS, COUPLERS AND HEX NUTS TO BE PROVIDED BY ANCHOR SUPPLIER.
4. STRESS 36mm DIAMETER DYWIDAG TIE RODS TO 50 - 75 MPa, SNUG FIT.

SHEET PILE NOTES :

1. CORNER SECTIONS SHALL BE PROVIDED AT ALL BENDS TO SHEETING.
2. MECHANICAL COUPLERS/TURNBUCKLES WITH LOCK NUTS FOR. TIES SHALL BE PROVIDED AS REQUIRED TO SUIT THE TIE LENGTHS.
3. LOCATIONS/DETAILS OF WALER SPLICE PLATES ARE SHOWN ON THE DRAWINGS. THE NUMBER AND ACTUAL LOCATION OF EACH WALER SPLICE PLATE IS TO BE DETERMINED BY THE CONTRACTOR TO SUIT THE WALER PIECE LENGTHS.
4. DRIVING CAPS SHALL BE USED TO PROTECT THE PILE TOPS DURING INSTALLATION.
5. TOP DRIVING GUIDES SHALL BE USED FOR SHEET PILE ALIGNMENT.
6. THE CONTRACTOR SHALL NOTE THAT THE INSTALLATION OF SHEETING WILL NOT RESULT IN A REDUCTION TO WATER LEVEL ON THE FILL SIDE.
7. TYPICAL SPACING OF TIEBACKS AND DEADMEN IS PROVIDED ON THE DRAWINGS. SPACING OF DEADMEN MAY BE MODIFIED TO AVOID SPATIAL CONFLICTS SUBJECT TO ENGINEER'S APPROVAL.
8. THE CONTRACTOR SHALL PROVIDE LAYOUT OF THE SHEET PILE WALL TO SUIT THE EXISTING STRUCTURE ARRANGEMENT. THE CONTRACTOR MAY MAKE MINOR ADJUSTMENTS TO THE WALL LAYOUT SHOWN, AS REQUIRED TO ACCOMMODATE PILE SHAPE, INTERLOCKS, BENDS, INTERFACE WITH ADJACENT STEEL SHEET PILE WALLS EXISTING STRUCTURES, OBSTRUCTIONS, ETC. ALL PROPOSED ADJUSTMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE.
9. PILE CAP AND BOLLARDS TO BE PAINTED WHITE.

DESIGN LOADING :

1. PIER LIVE LOAD : 7.2 kN/m²

SURVEY INFORMATION :

1. ELEVATIONS BASED UPON CANADIAN GEODETIC VERTICAL DATUM.
2. BENCHMARK :  
LOCATED AT WEST CONCRETE FOUNDATION WALL OF INNER LIGHTHOUSE.  
ELEVATION = 75.822 m ASL  
GEODETIC SURVEY OF CANADA BM, No. 561F.
3. ELEVATIONS ARE PROVIDED IN RELATION TO CHART DATUM (LEVEL 0.00) RELATIVE TO IGLD 1985 (ELEVATION 74.20), UNLESS OTHERWISE NOTED.

LEGEND :

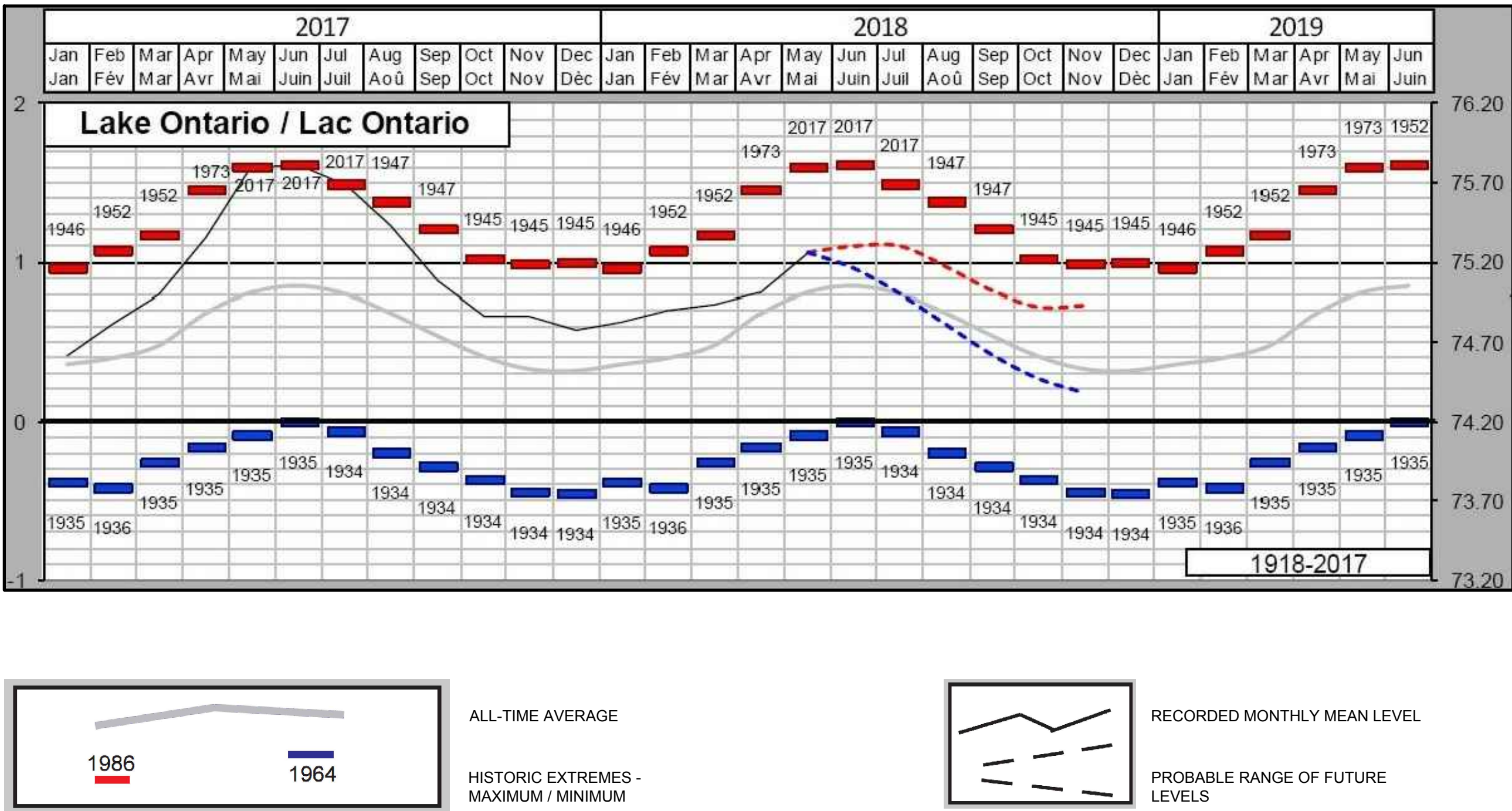
	SECTION NUMBER		ROCK PROTECTION
	DETAIL LETTER		CONCRETE REMOVAL
	ORIGINAL ELEVATION		FILL MATERIAL REMOVAL
	FINAL ELEVATION		GRANULAR 'A'
	TREE		GRANULAR 'B'
	BRUSH		CLEAR STONE
	BOLLARD		CONCRETE
	HYDRO POLE		GARDENS
	JUNCTION BOX		LIGHT STANDARD
	EMERGENCY LADDER		BELL PEDESTAL
	LIFE RING STATION		CHAINLINK FENCE
	POST		ORNAMENTAL FENCE
	POWER PEDESTAL		WOOD FENCE
	TIMBER FENDER		BORE HOLE

ABBREVIATIONS :

BOT.	BOTTOM	m	METERS
CONC.	CONCRETE	MAX.	MAXIMUM
CL.	CENTRE LINE	MIN.	MINIMUM
C.J.	CONSTRUCTION JOINT	MISC.	MISCELLANEOUS
CONC.	CONCRETE	mm	MILLIMETERS
CONT.	CONTINUOUS	N.T.S.	NOT TO SCALE
DIAMETER	DIAMETER	PL.	PLATE
DWG.	DRAWING	R/W	RETAINING WALL
E.F.	EACH FACE	SQ.	SQUARE
EL.	ELEVATION	SSP	STEEL SHEET PILING
E.W.	EACH WAY	T/CONC.	TOP OF CONCRETE
EX.	EXISTING	TYP.	TYPICAL
GRAN.	GRANULAR	U.O.N.	UNLESS OTHERWISE NOTED
HWL	HIGH WATER LEVEL	U/S	UNDERSIDE
I.G.L.D.	INTERNATIONAL GREAT LAKES DATUM	W.L.	WATER LEVEL
LWL	LOW WATER LEVEL	W.P.	WORKING POINT
LS	LIGHT STANDARD		

WATER LEVEL CHART :

(WATER LEVELS TAKEN FROM [www.waterlevels.gc.ca](http://www.waterlevels.gc.ca))



KEY MAP

GOVERNMENT OF CANADA  
FISHERIES AND OCEANS

GOUVERNEMENT DU CANADA  
PÊCHES ET OcéANS

Small Craft Harbours  
Ports pour petits bateaux

LICENSED PROFESSIONAL ENGINEER  
J. PUCCHIO  
24/08/2018  
PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER  
J.A. WALLACE  
100078389  
24/08/2018  
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revision		date

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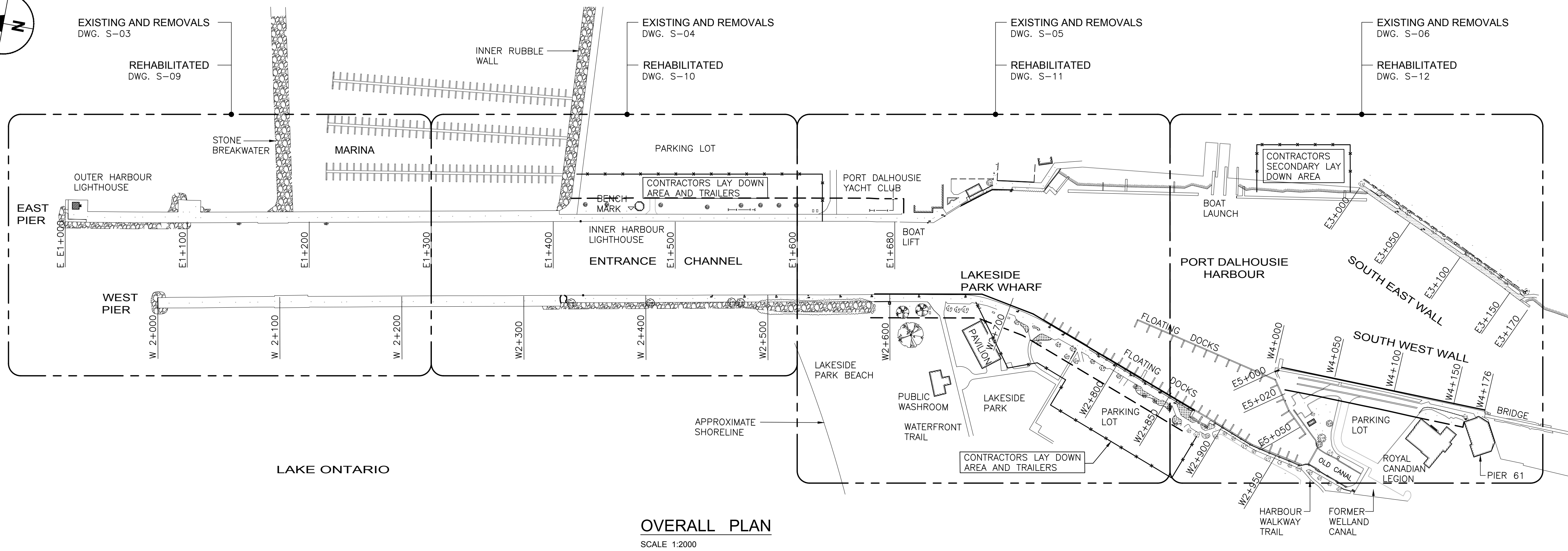
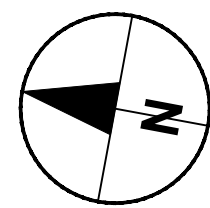
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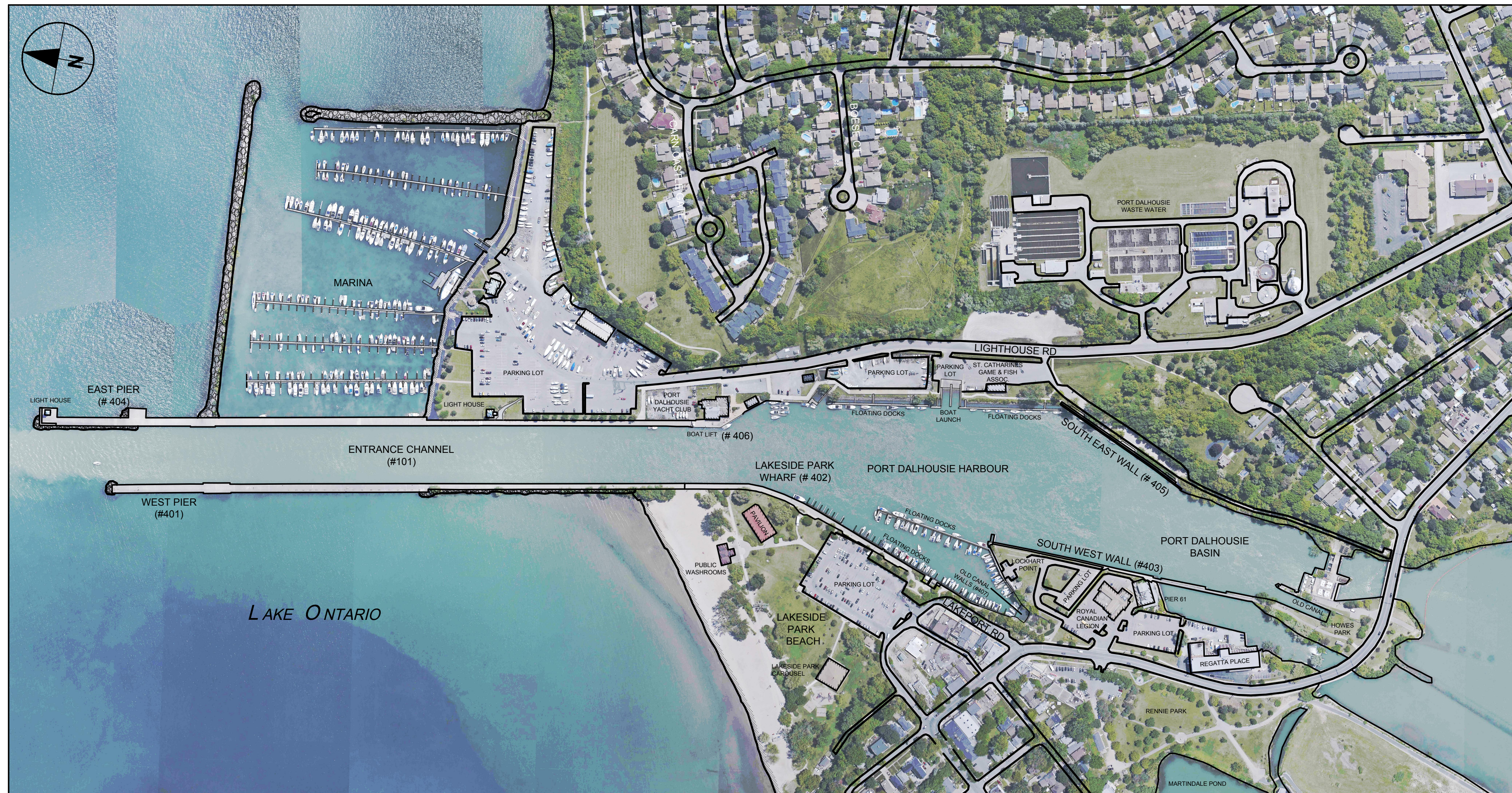
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project title titre du projet	
HARBOUR REHABILITATION PORT DALHOUSIE, ONTARIO	
drawing title titre du dessin	
NOTES AND LEGEND	
drawn by dessiné par	T.G.
designed by conc par	J.P.
approved by approuvé par	J.P.
bid offre	project manager administrateur de projets
project date date du projet	
2018-07-20	
project no. no. du projet	
drawing no. dessiné no.	locator code code de localisation
S-01	4768







OVERALL PLAN  
SCALE 1:2000



LOCATION PLAN  
SCALE N.T.S.



GOVERNMENT  
OF CANADA




GOUVERNEMENT  
DU CANADA

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project title titre du projet	
HARBOUR REHABILITATION PORT DALHOUSIE, ONTARIO	
drawing title titre du dessin	
OVERALL PLAN AND LIST OF DRAWINGS	
drawn by dessiné par	T.G.
designed by conçu par	J.P.
approved by approuvé par	J.P.
bid offre	project manager administrateur de projets
project date date du projet	
2018-07-20	
project no. no. du projet	
drawing no. dessiné no.	locator code code de localisation
S-02	4768

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SCALE 1:500

1. IDENTIFY ALL COMPONENTS TO REMAIN IN PLACE AND PROVIDE MEASURES TO ENSURE THAT THEY ARE NOT DAMAGED DURING REMOVAL OPERATIONS.
2. REMOVAL OF EXISTING ITEMS SHALL BE PERFORMED WITH GREAT CARE SO AS NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF EXISTING STRUCTURES.
3. CONTRACTOR TO CONFIRM EXISTING ELEVATIONS BY SURVEYING PRIOR TO REMOVALS. SUBMIT THE SURVEY TO THE DEPARTMENTAL REPRESENTATIVE.
4. REVIEW ALL ITEMS IDENTIFIED TO BE SALVAGED AND REPORT IF ANY ARE NOT SALVAGEABLE TO THE CONTRACT ADMINISTRATOR PRIOR TO COMMENCEMENT OF REMOVALS. ONCE REMOVAL OPERATION IS STARTED, ALL SALVAGED ITEMS THAT BECOME DAMAGED ARE TO BE REPLACED BY THE CONTRACTOR AT NO EXTRA EXPENSE TO THE OWNER.
5. ASSESSMENT AND CONSIDERATION RELATED TO THE COMPETENCY OF EXISTING STRUCTURAL COMPONENTS SHALL BE PROVIDED BY THE CONTRACTOR. MEANS/METHODOLOGIES FOR REMOVALS AND ACCESS TO CARRY OUT THE WORK ARE THE RESPONSIBILITY OF THE CONTRACTOR.
6. FOR ADDITIONAL REMOVAL DETAILS SEE DRAWING S-24.
7. RETAIN AND STOCK PILE EXISTING TOPSOIL FOR REUSE IN THE PARK (AT PREAPPROVED LOCATIONS AND PLACE SILT FENCE AROUND PERIMETER).

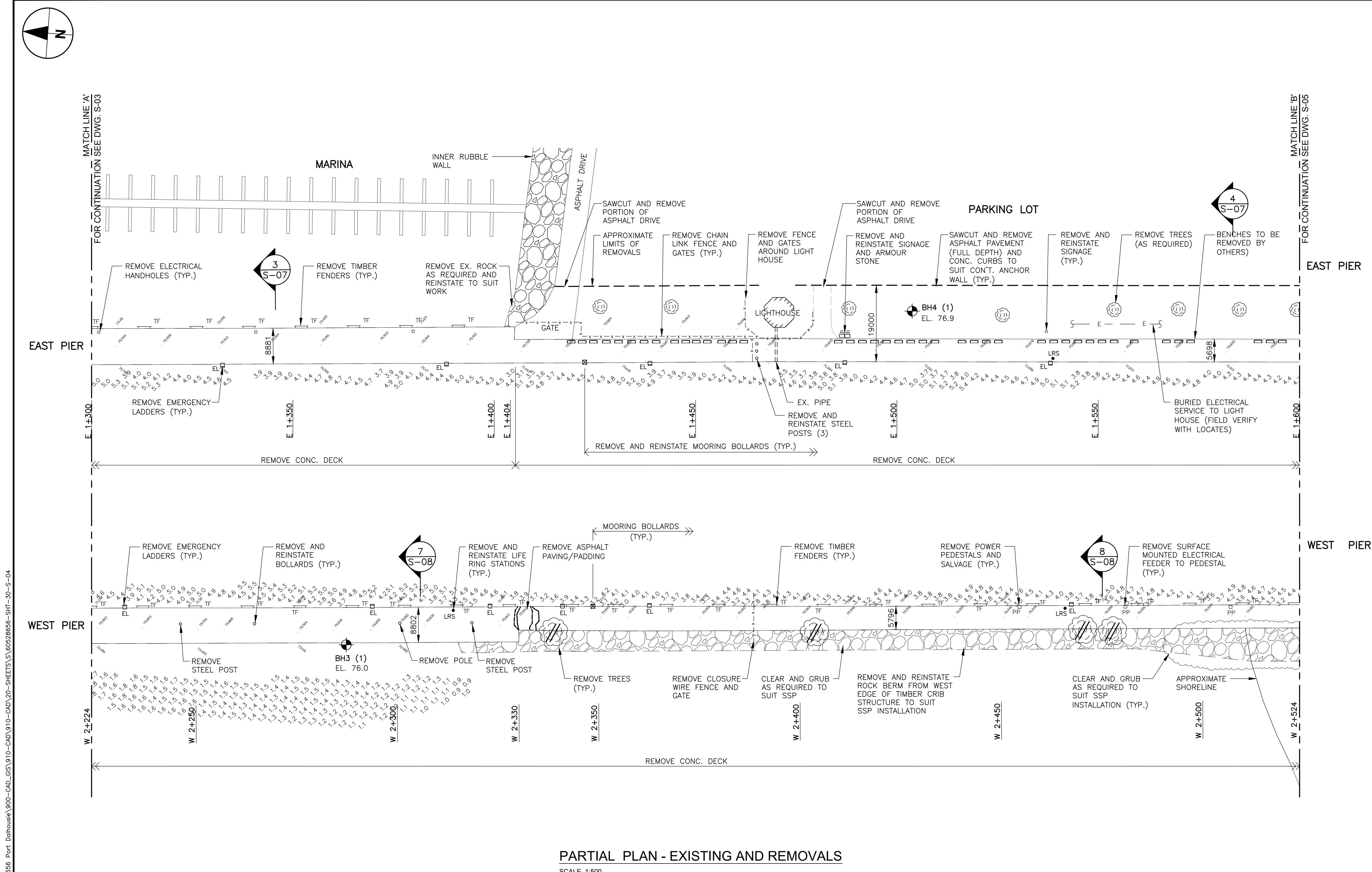
1. TOP OF BOREHOLE ELEVATIONS PROVIDED AND BOREHOLE NUMBERS ARE REFERENCED TO THE FOLLOWING REPORTS :
  - A. GEOTECHNICAL INVESTIGATION PORT DALHOUSIE PIER JANUARY 2015.
  - B. GEOTECHNICAL INVESTIGATION PORT DALHOUSIE PIER JUNE 2016.
  - C. GEOTECHNICAL INVESTIGATION AND LIMITED CHEMICAL TESTING PROGRAM PORT DALHOUSIE HARBOUR WALL JANUARY 2017.

1. RETAIN TREES UNLESS INDICATED FOR REMOVAL ON CONTRACT DRAWINGS.
2. WHEN TREES ARE LOCATED WITHIN AN AREA OF WORK, PROTECT THE TREE AND ROOT SYSTEM IN PLACE WHERE POSSIBLE. IF TREES ARE AN OBSTRUCTION TO THE WORK, REMOVE THE TREE AND ROOTBALL, AND RETAIN FOR REINSTALLATION AT A LATER TIME.
3. TREES THAT ARE TALLER THAN 10m NEED NOT BE RETAINED IF CONSIDERED AN OBSTRUCTION TO WORK. OBTAIN THE APPROVAL TO PERMANENTLY REMOVE TREES BY THE DEPARTMENTAL REPRESENTATIVE.


1. REVIEW EACH MARINE/MOURING BOLLARD WITH THE DEPARTMENTAL REPRESENTATIVE TO DETERMINE IF IT MAY BE RETAIN IN PLACE OR REMOVED/REINSTATED.

1. TEN CONCRETE CORES HAVE BEEN EXTRACTED FROM VARIOUS LOCATIONS ALONG THE EAST AND WEST PIERS. THE EXISTING DEPTH OF CONCRETE AND ASSOCIATED COMPRESSIVE STRENGTHS ARE PROVIDED FOR REFERENCE (PETO MACCALLUM LTD. REPORT, CONCRETE CORING OF EXISTING PIER DECKS, JULY 2018)..







PARTIAL PLAN - EXISTING AND REMOVALS  
SCALE 1:500




GOVERNMENT OF CANADA  
FISHERIES AND OCEANS



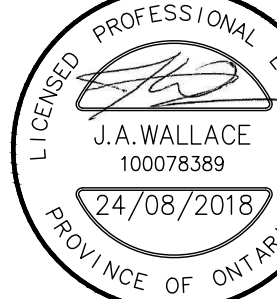
GOUVERNEMENT DU CANADA  
PÊCHES ET Océans



Small Craft Harbours  
Ports pour petits bateaux



LICENCED PROFESSIONAL ENGINEER  
J. PUCCHIO  
24/08/2018  
PROVINCE OF ONTARIO




LICENCED PROFESSIONAL ENGINEER  
J.A. WALLACE  
24/08/2018  
PROVINCE OF ONTARIO

NOTES:

1. FOR REMOVALS, BOREHOLES, TREES AND BOLLARD NOTES SEE DRAWING S-03.

revision	ISSUED FOR TENDER	AUG. 24, 2018
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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

PARTIAL PLAN  
EXISTING AND REMOVALS - 2

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

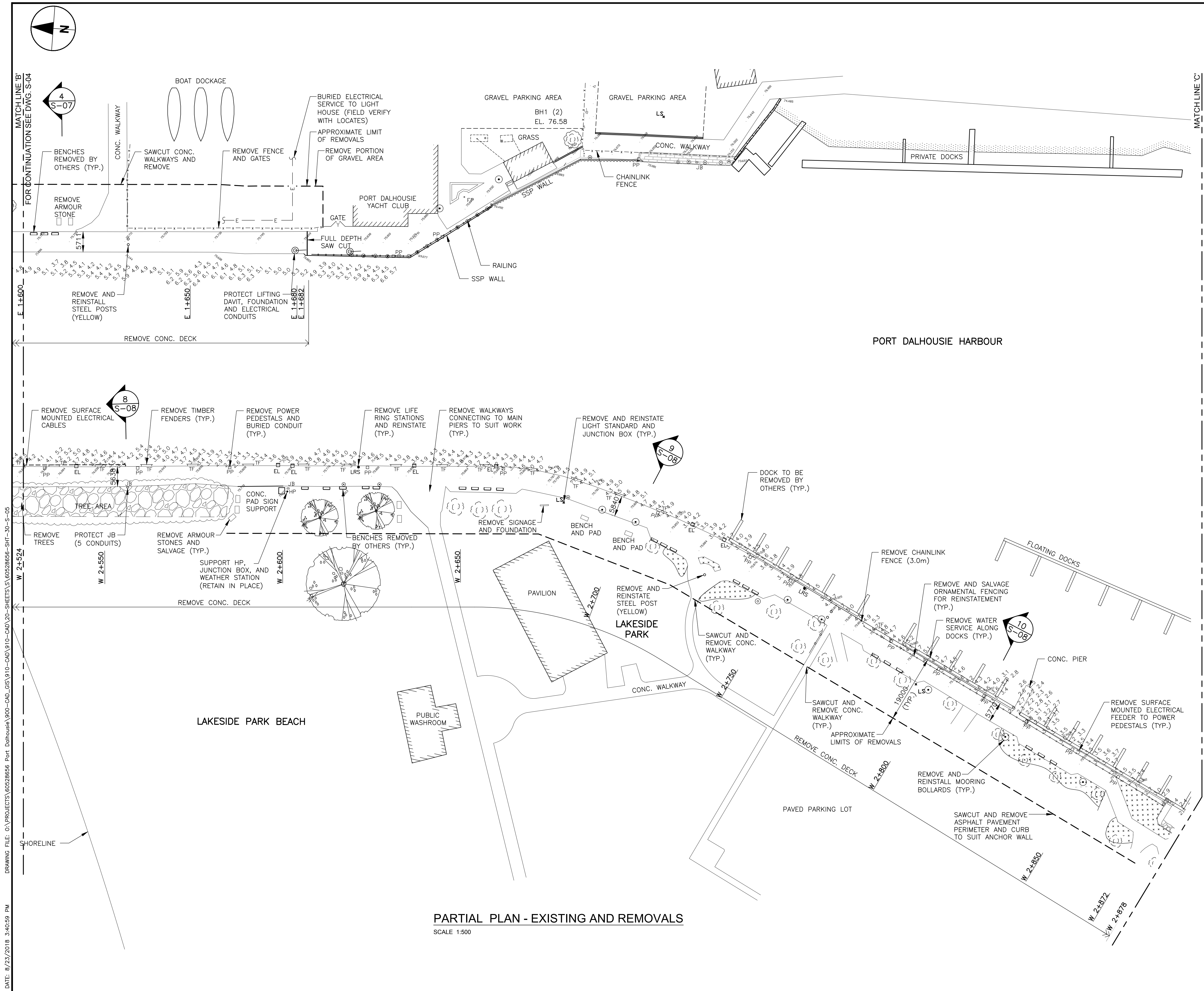
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dessiné no.

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locator code  
code de localisation


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PARTIAL PLAN - EXISTING AND REMOVALS  
SCALE 1:500




GOVERNMENT OF CANADA  
FISHERIES AND OCEANS



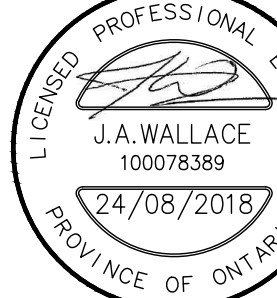
GOUVERNEMENT DU CANADA  
PÊCHES ET Océans



Small Craft Harbours  
Ports pour petits bateaux



LICENCED PROFESSIONAL ENGINEER  
J. PUCCHIO  
24/08/2018  
PROVINCE OF ONTARIO




LICENCED PROFESSIONAL ENGINEER  
J.A. WALLACE  
24/08/2018  
PROVINCE OF ONTARIO

NOTES:

- FOR REMOVALS, BOREHOLES, TREES AND BOLLARD NOTES SEE DRAWING S-03.
- REMOVE CONCRETE DECK, COPING AND FILL MATERIALS TO A DEPTH TO SUIT NEW CONSTRUCTION. REMOVE LOOSE CONCRETE ON SIDES OF DETERIORATING COPING BLOCKS.

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HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

PARTIAL PLAN  
EXISTING AND REMOVALS - 3

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N.J.P.

approved by  
approuvé par

J.W.J.P.

bid  
offre

project manager  
administrateur de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

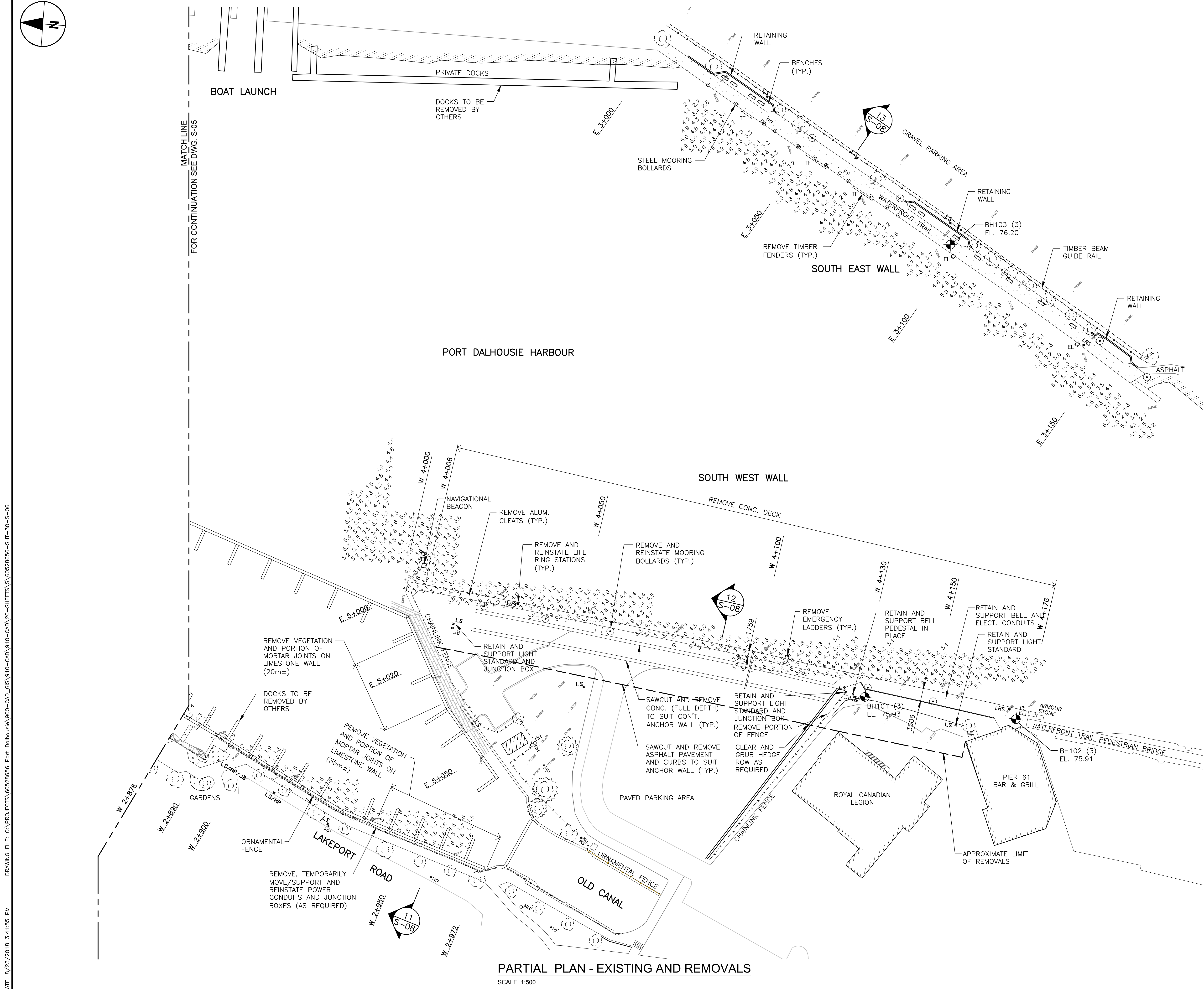
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code de localisation

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GOVERNMENT  
OF CANADA






GOVERNEMENT  
DU CANADA

FISHERIES  
AND OCEANS

PÊCHES  
ET Océans

Small Craft Harbours  
Ports pour petits bateaux






NOTES:

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HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

PARTIAL PLAN  
EXISTING AND REMOVALS - 4

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

drawing no.  
dessiné no.

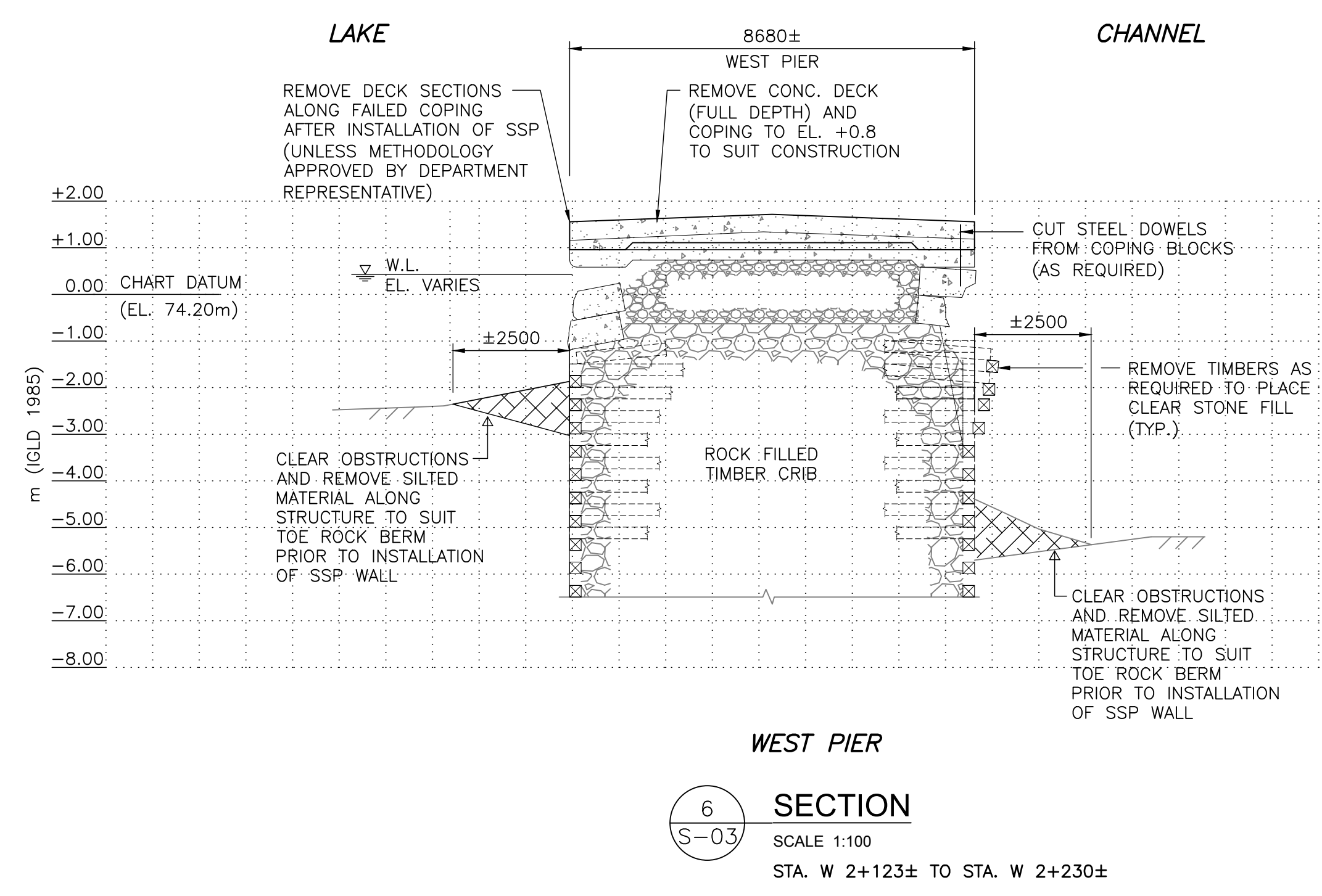
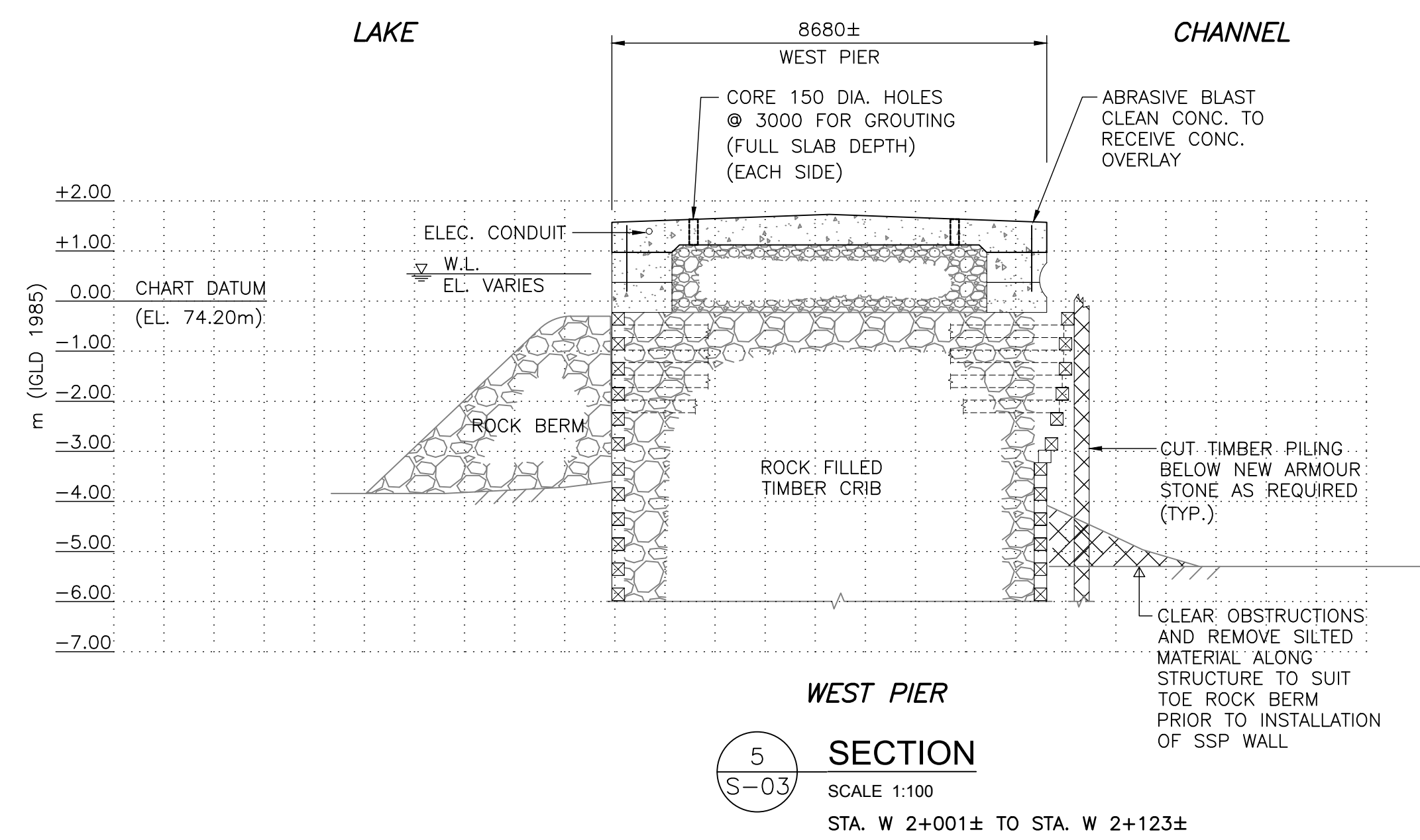
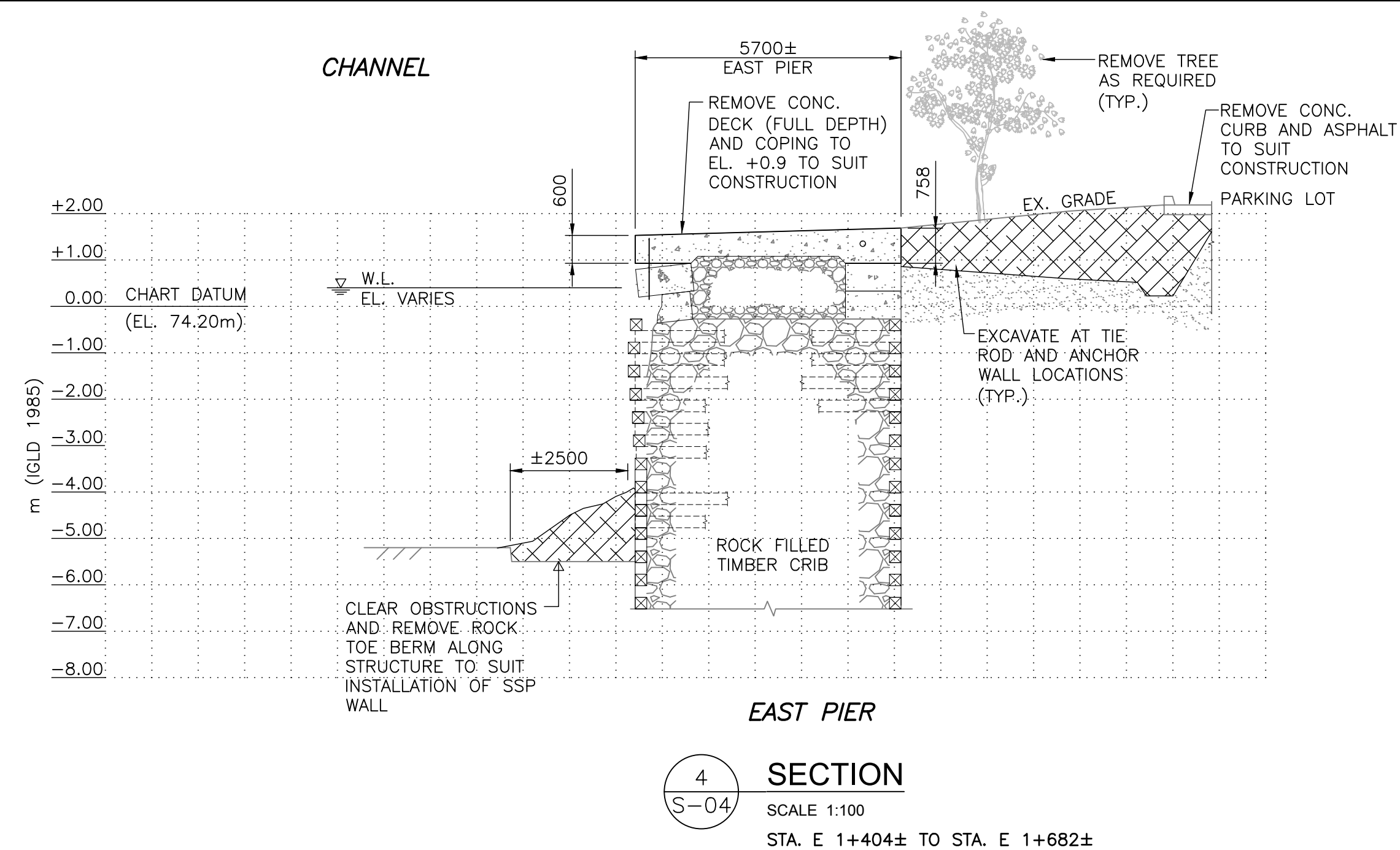
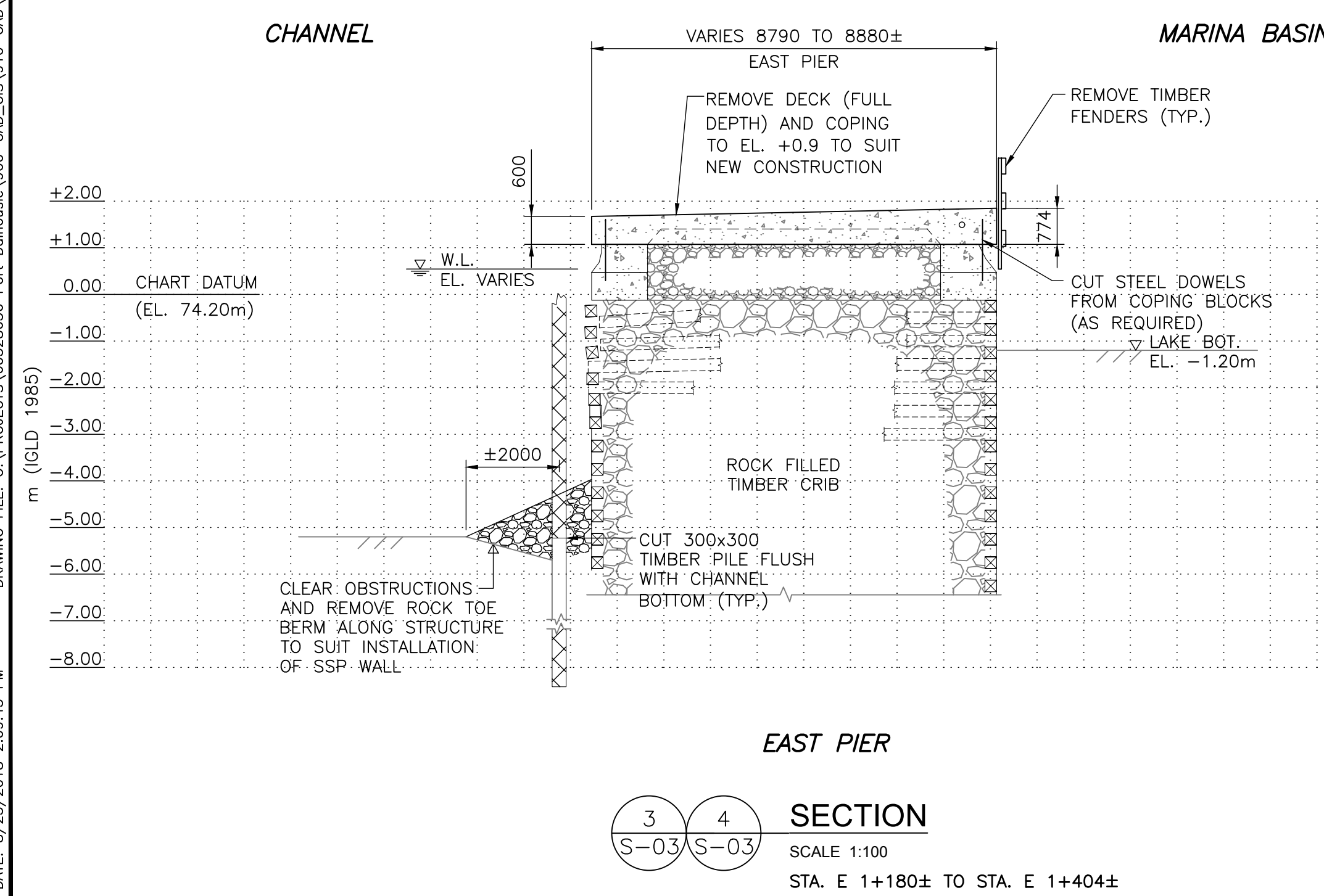
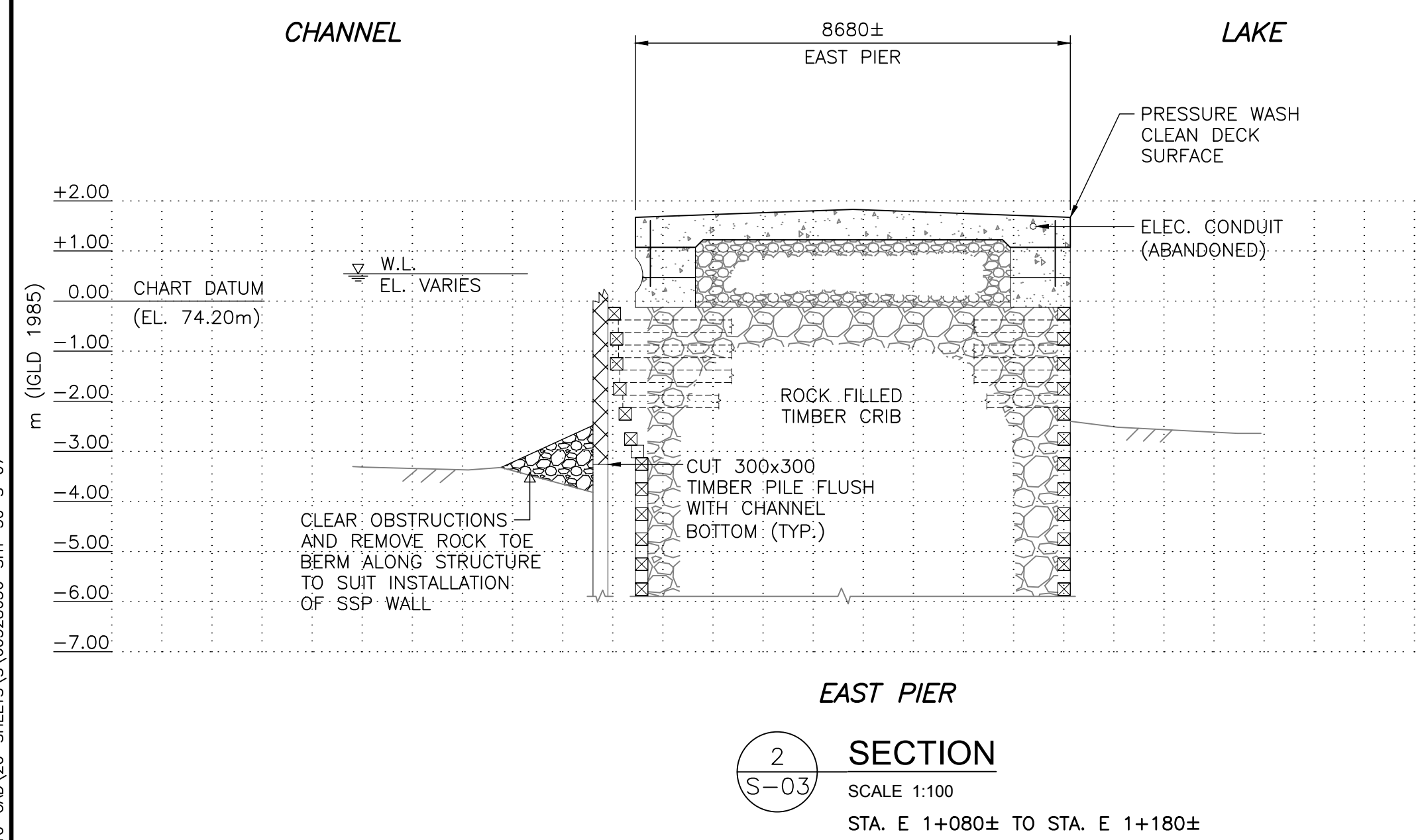
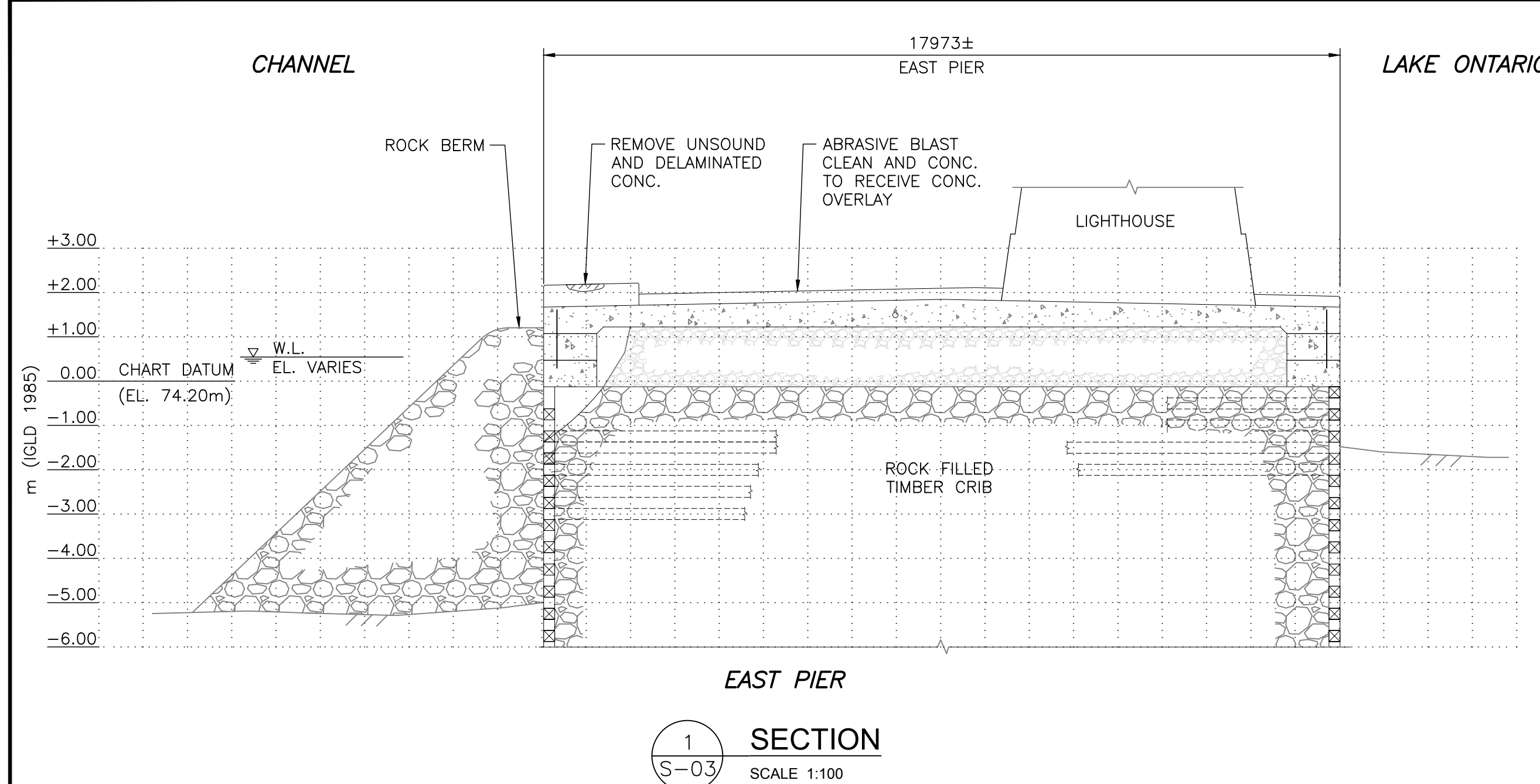
S-06

locator code  
code de localisation

4768



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GOVERNMENT OF CANADA  
FISHERIES AND OCEANS

GOUVERNEMENT DU CANADA  
PÊCHES ET OcéANS

SMALL CRAFT HARBOURS  
CENTRAL AND ARCTIC REGION

Small Craft Harbours  
Ports pour petits bateaux

NOTES:

- FOR REMOVALS, BOREHOLES, TREES AND BOLLARD NOTES SEE DRAWING S-03.
- REMOVE CONCRETE DECK, COPING AND FILL MATERIALS TO A DEPTH TO SUIT NEW CONSTRUCTION. REMOVE LOOSE CONCRETE ON SIDES OF DETERIORATING COPING BLOCKS. CUT STEEL DOWELS FROM COPING BLOCKS (AS REQUIRED).
- THE LOCATION OF CONCRETE CORES SHALL BE REVIEWED ON SITE WITH THE DEPARTMENTAL REPRESENTATIVE.

A	ISSUED FOR TENDER	AUG. 24, 2018
revision		date

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

**AECOM**

PROJECT No.: 60528656

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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

SECTIONS  
EXISTING AND REMOVALS - 1

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

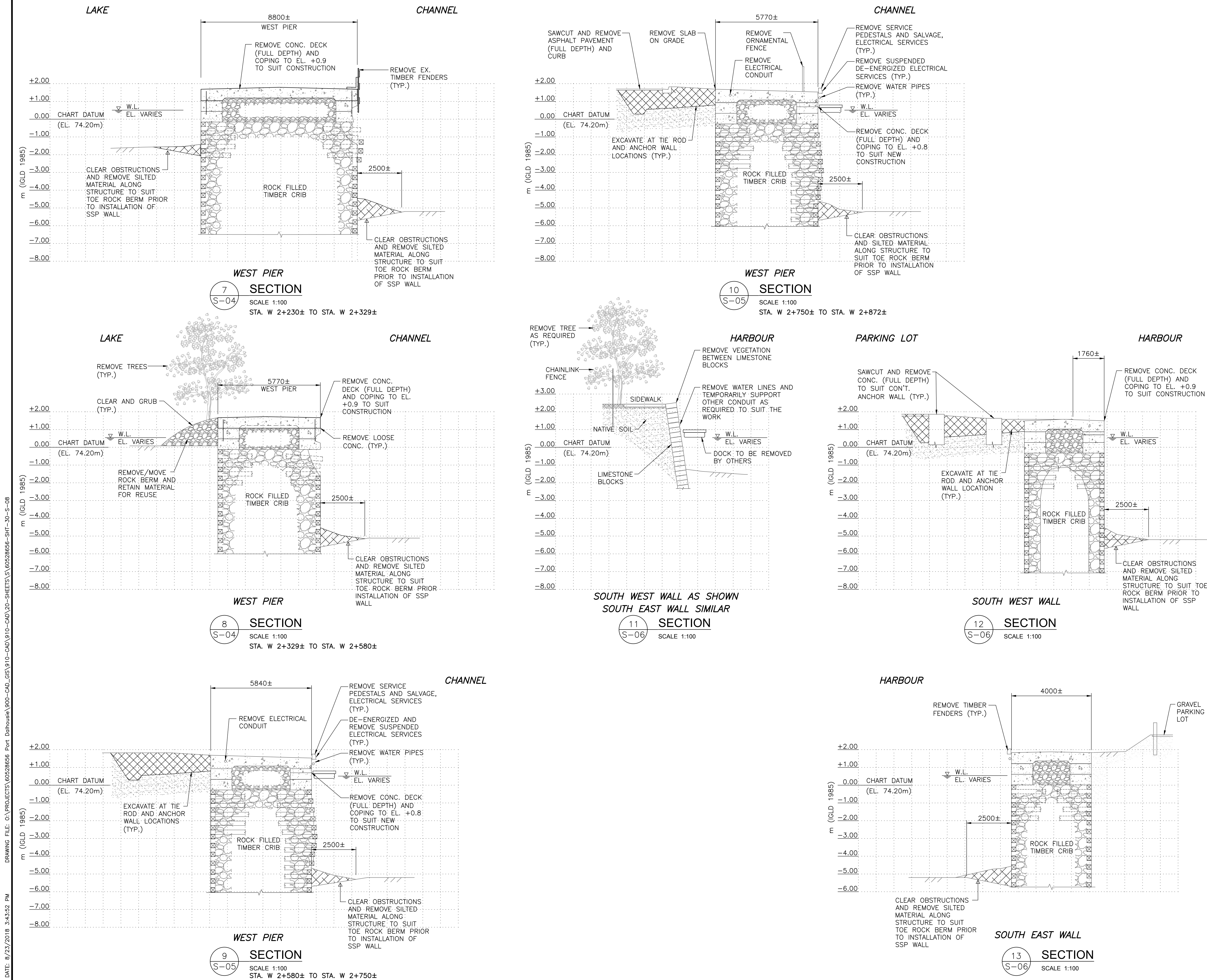
drawing no.  
dessiné no.

S-07


locator code  
code de localisation

4768






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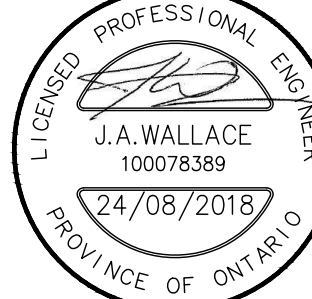

GOVERNMENT OF CANADA  
FISHERIES AND OCEANS



GOUVERNEMENT DU CANADA  
PÊCHES ET OcéANS

Small Craft Harbours  
Ports pour petits bateaux






NOTES:  
1. FOR REMOVALS, BOREHOLES, TREES AND BOLLARD NOTES SEE DRAWING S-03.  
2. REMOVE CONCRETE DECK, COPING AND FILL MATERIALS TO A DEPTH TO SUIT NEW CONSTRUCTION. REMOVE LOOSE CONCRETE ON SIDES OF DETERIORATING COPING BLOCKS. CUT STEEL DOWELS FROM COPING BLOCKS (AS REQUIRED).

A	ISSUED FOR TENDER	AUG. 24, 2018
revision		date

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project title  
titre du projet

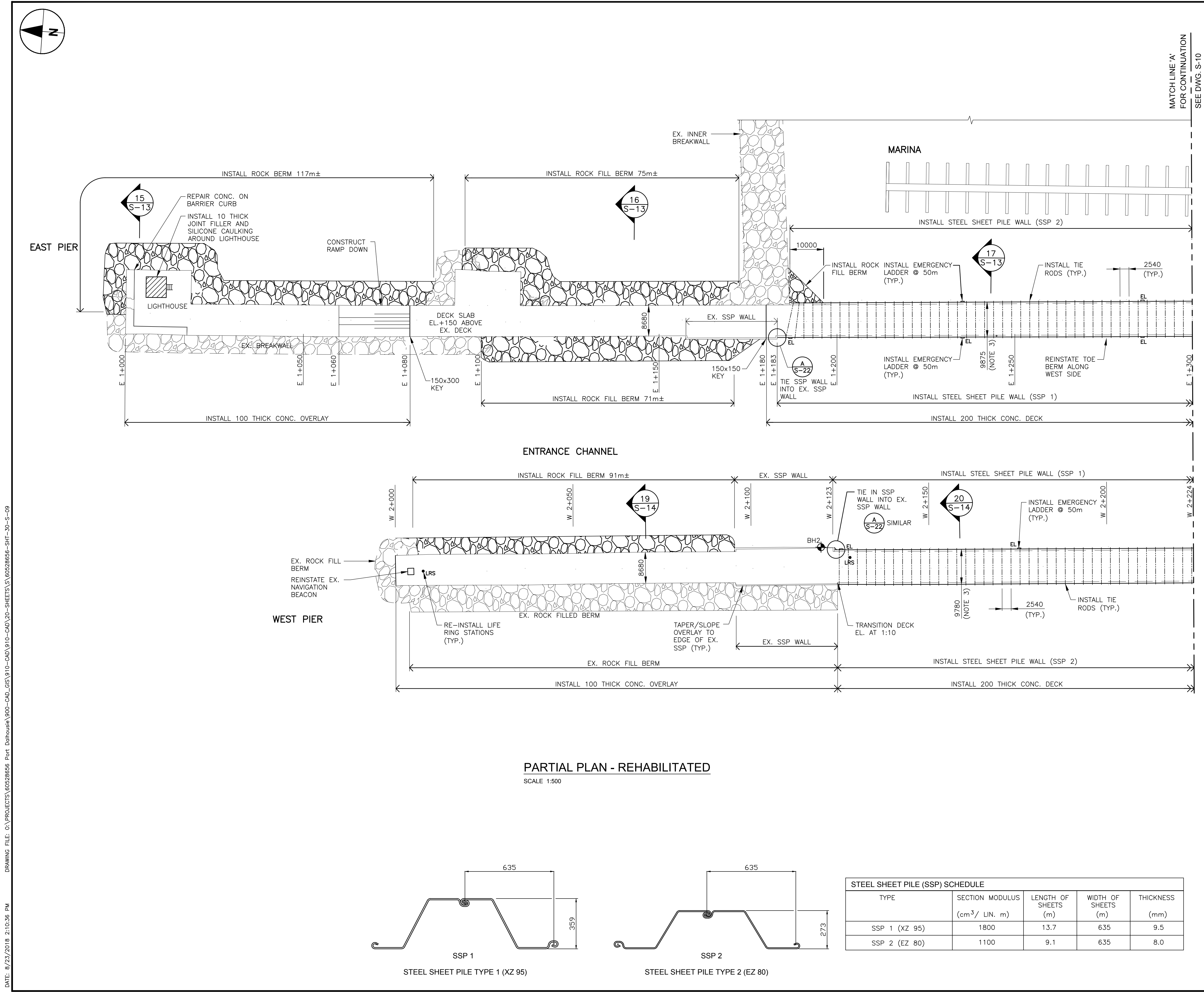
HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin


SECTIONS  
EXISTING AND REMOVALS - 2

drawn by dessiné par	B.J.B./T.G.
designed by conçu par	S.N./J.P.
approved by approuvé par	J.W./J.P.
bid offre	
project manager administrateur de projets	
project date date du projet	2018-07-20
project no. no. du projet	
drawing no. dessiné no.	S-08
locator code code de localisation	4768







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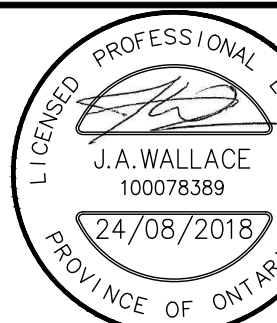

GOVERNMENT OF CANADA  
FISHERIES AND OCEANS



GOUVERNEMENT DU CANADA  
PÊCHES ET Océans



Small Craft Harbours  
Ports pour petits bateaux




NOTES:

- EXISTING LIFE RING STATIONS AND BOLLARDS SHALL BE ABRASIVE BLAST CLEAN TO BARE WHITE METAL (SSPC-SP5) AND PAINTED WITH TWO COATS OF PRIMER AND 2 FINISHED COATS AS SPECIFIED.
- PRIOR TO INSTALLATION, REVIEW THE LOCATIONS TO REINSTALL REMOVED COMPONENTS (BOLLARDS, LRS, ETC.) WITH THE DEPARTMENTAL REPRESENTATIVE.
- DECK WIDTH INDICATED ON PLANS ARE TO INSIDE FACES OF SSP.

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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

PARTIAL PLAN  
REHABILITATED - 1

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

S-09

locator code  
code de localisation

4768

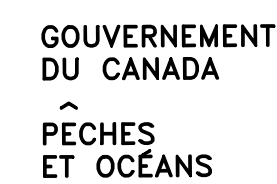




WEST  
PIER

WEST  
PIER

SCALE 1:500



1. FOR REINSTATEMENT OF EXISTING COMPONENTS  
SEE NOTES SEE DRAWING S-09.
2. CONSTRUCT CONCRETE BARRIER CURB TO  
OPSD 600.110 AROUND PERIMETER OF  
PARKING LOTS, EAST AND WEST PIERS.
3. DECK WIDTH INDICATED ON PLANS ARE TO  
INSIDE FACES OF SSP.

Do not scale drawings.  
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HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

PARTIAL PLAN  
REHABILITATED - 2

B.J.B./T.G.

S.N./J.P

J.W./J.P

project manager  
administrative  
de project

2018-07-20

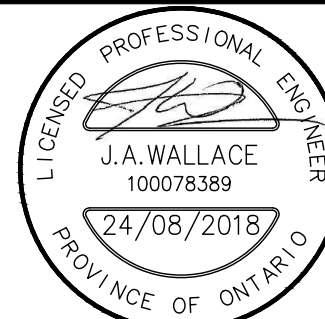
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1. FOR NOTES REGARDING REINSTATEMENT OF EXISTING COMPONENTS SEE DRAWING S-03.
2. WEST PIER - EAST SIDE  
INSTALL 32mm DIAMETER SURFACE MOUNTED WELDING ANCHORS WITH 20-20mm DIAMETER THREADED WATER FIXTURES, FROM STATION W2+775 TO W2+972.
3. INSTALL 75mm DIAMETER PVC DUCTS TRANSVERSELY ACROSS THE DECKS, EMBEDDED IN GRANULAR AT 6.0m SPACING WITH END CAPS, FROM STATION W2+600 TO W2+870.
4. INSTALL EXISTING RAILING SYSTEM WITH 4-12mm DIAMETER STAINLESS STEEL ADHESIVE ANCHORS (120mm EMBEDMENT).

Do not scale drawings.  
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Departmental Representative of all discrepancies.

**AECOM**

project title	
titre du projet	

drawing title  
titre du dessin

PARTIAL PLAN  
REHABILITATED - 3

designed by  
conc par S.N./J.P.

bid	project manager
offre	administrateur de projets

project no. no. du projet	
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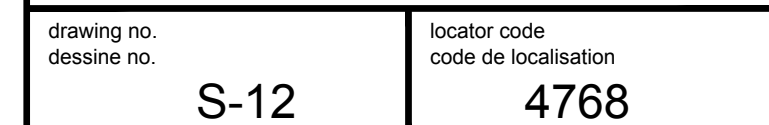
drawing no. dessine no.	locator code code de localisation
S-11	4768



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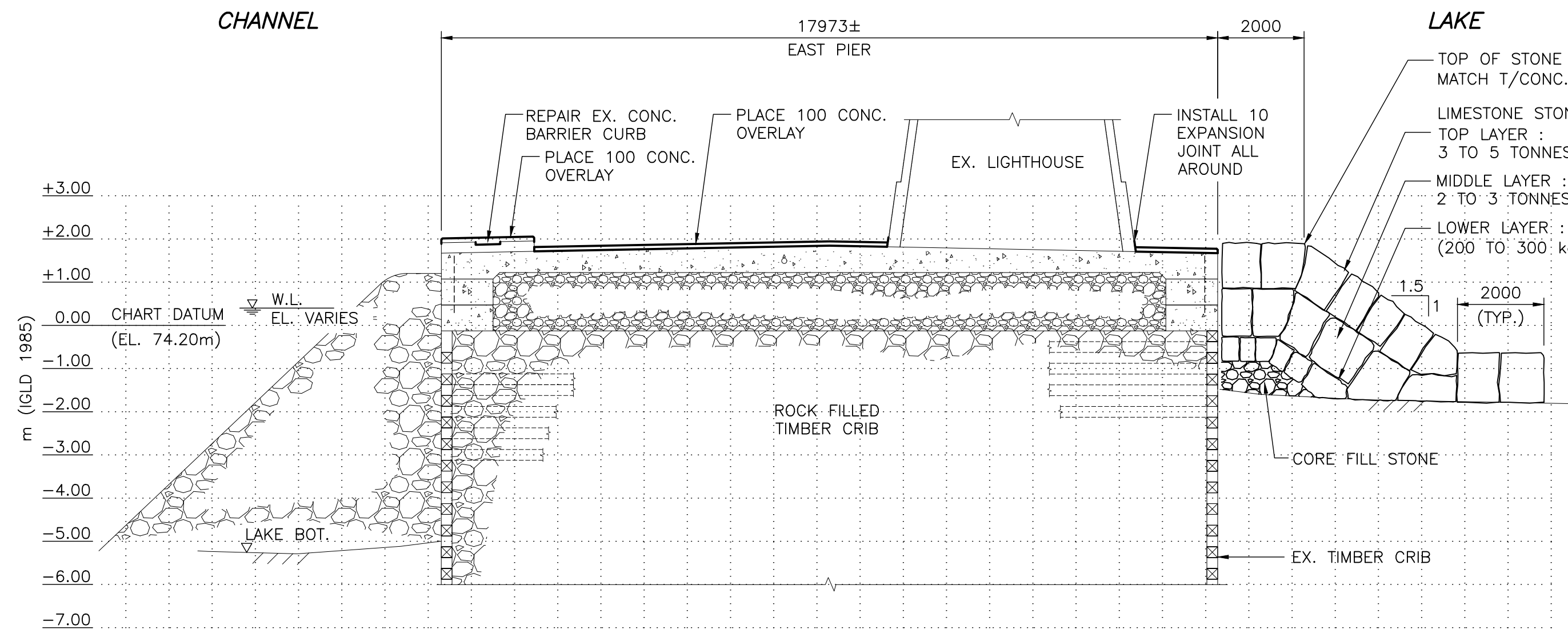
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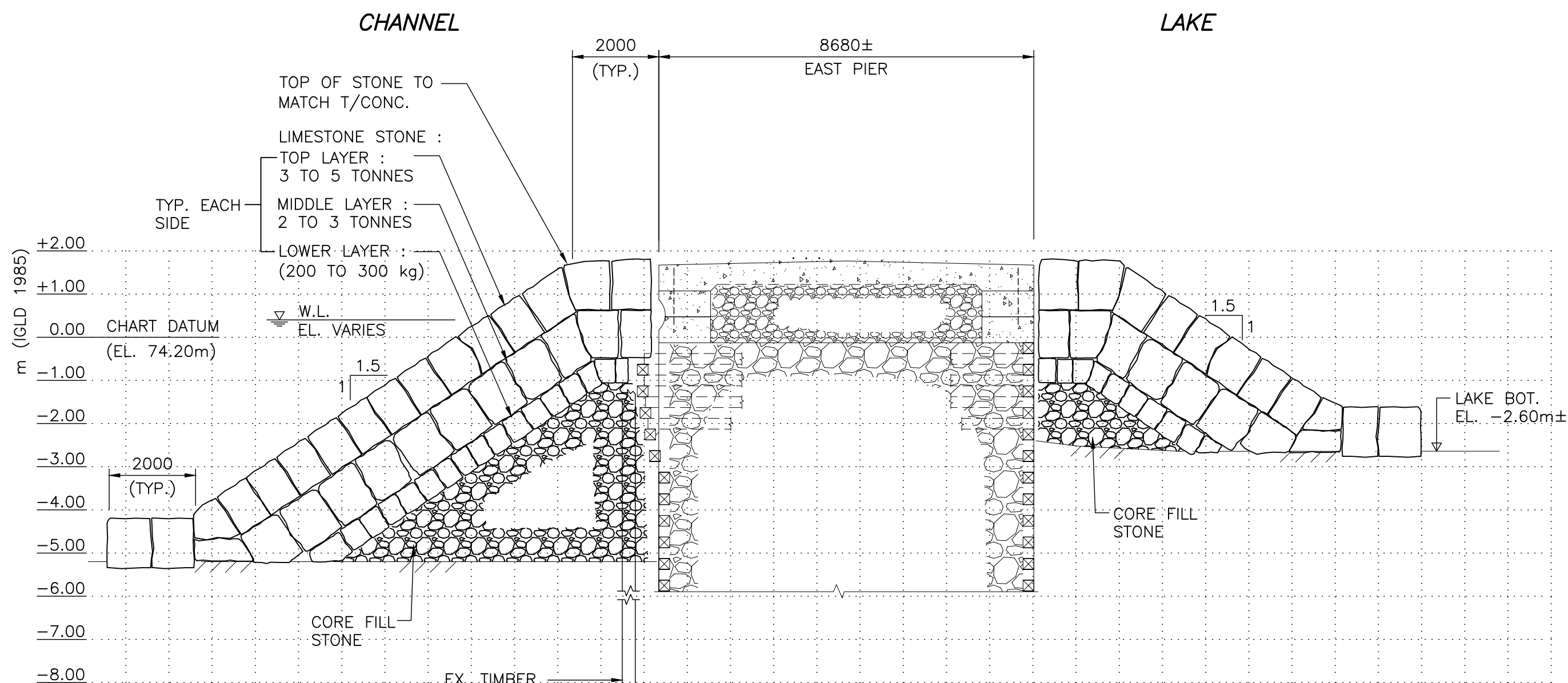




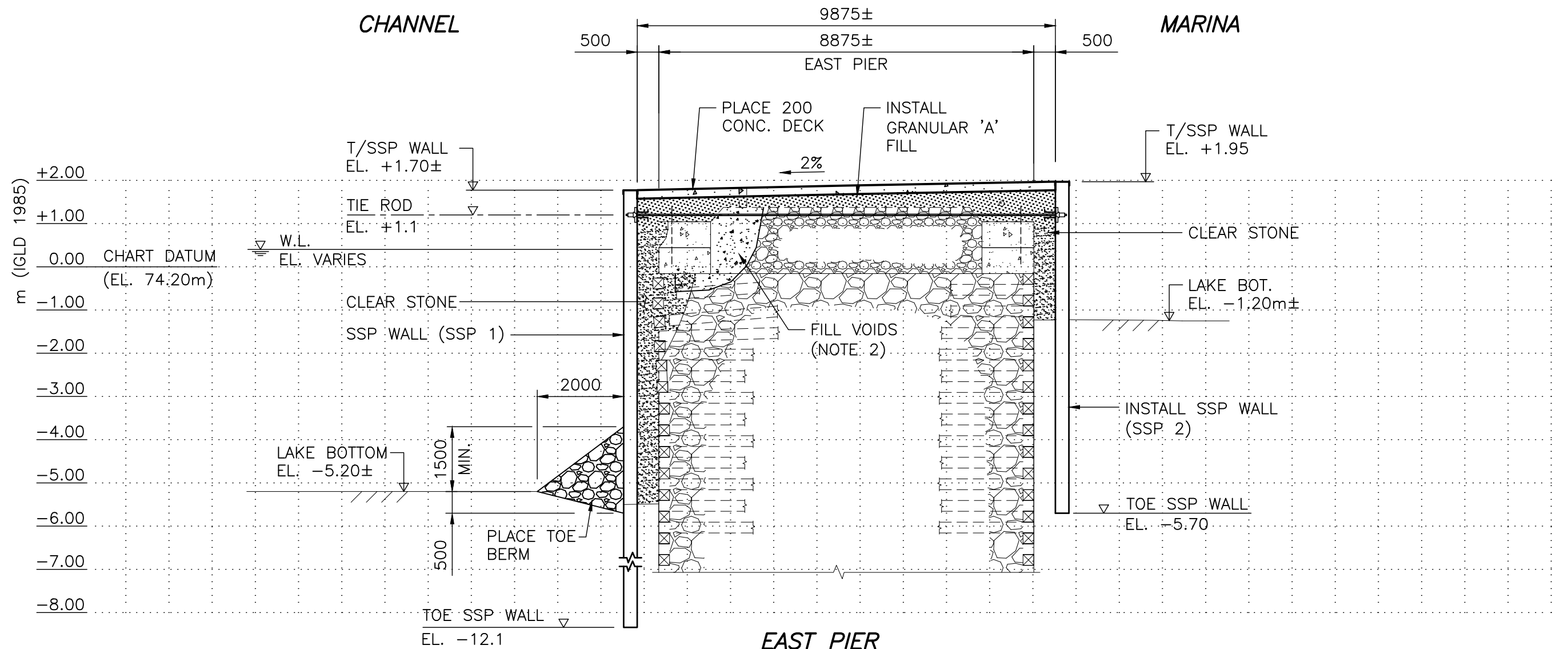
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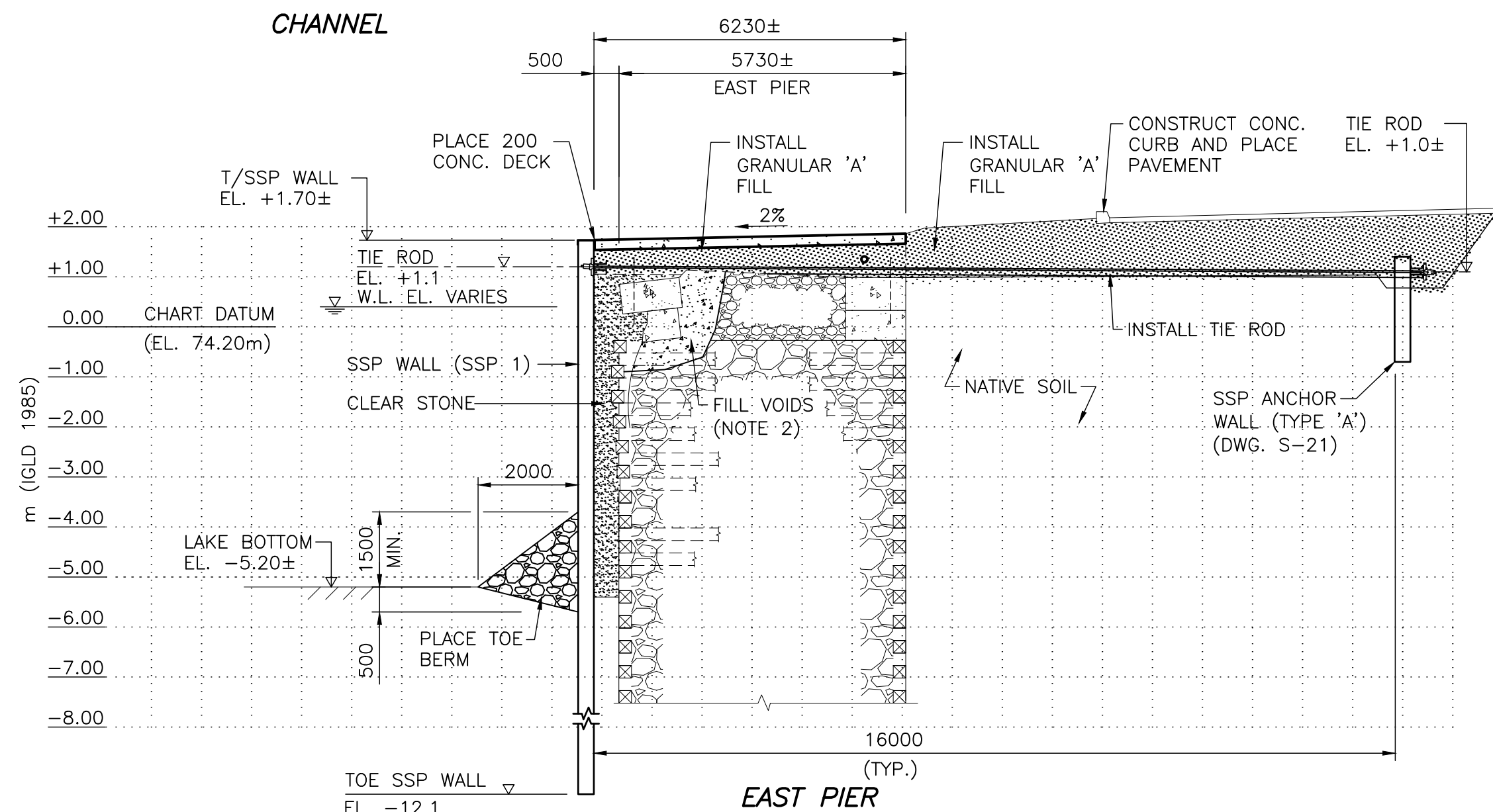
**15 SECTION**  
S-09  
SCALE 1:100



**16 SECTION**  
S-09  
SCALE 1:100  
STA. E 1+080± TO STA. E 1+180±



**17 SECTION**  
S-09  
SCALE 1:100  
STA. E 1+180± TO STA. E 1+405±



**18 SECTION**  
S-10  
SCALE 1:100  
STA. E 1+405± TO STA. E 1+682±

SMALL CRAFT HARBOURS  
CENTRAL AND ARCTIC REGION



**NOTES :**

1. VERTICAL LOCATION OF WALES MAY BE ADJUSTED TO SUIT EXISTING CONDITIONS (UP TO ± 0.1m) WITH THE ACCEPTANCE OF THE CONTRACT ADMINISTRATOR.
2. FILL VOIDS WITHIN EXISTING STRUCTURE WITH FLOWABLE GROUT, CLEAR STONE OR GRANULAR 'A' , AS AGREED UPON WITH DEPARTMENTAL REPRESENTATIVE. DEFER WORK TO COMPLETION OF STEEL PILE WORK, AS REQUIRED, TO ENSURE CONTAINMENT OF FILL.
3. FOR ADDITIONAL SSP WALL REQUIREMENTS SEE TYPICAL SECTION ON DRAWING S-20.

A	ISSUED FOR TENDER	AUG. 24, 2018
revision		date

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**AECOM**

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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

SECTIONS  
REHABILITATED - 1

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

drawing no.  
dessiné no.

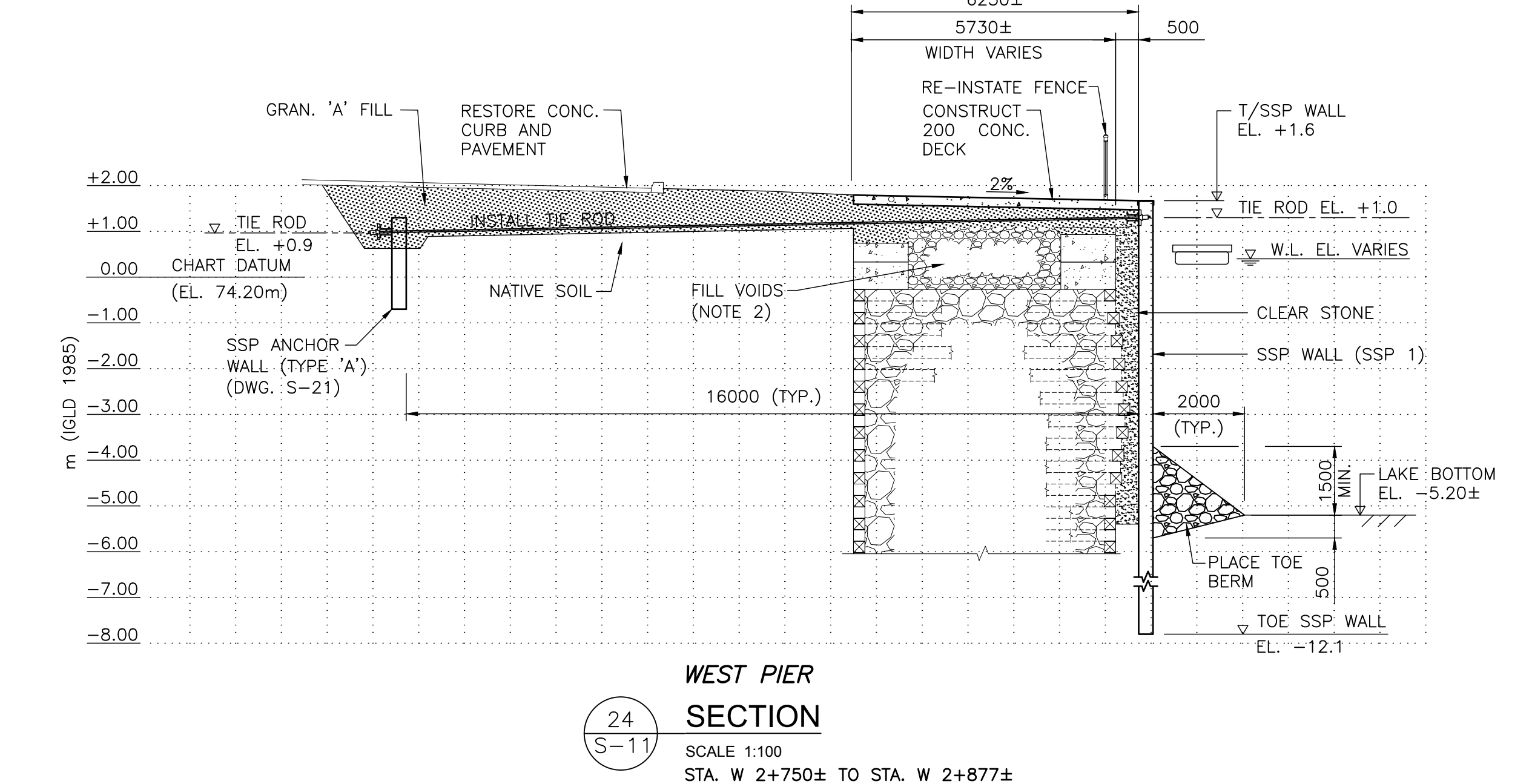
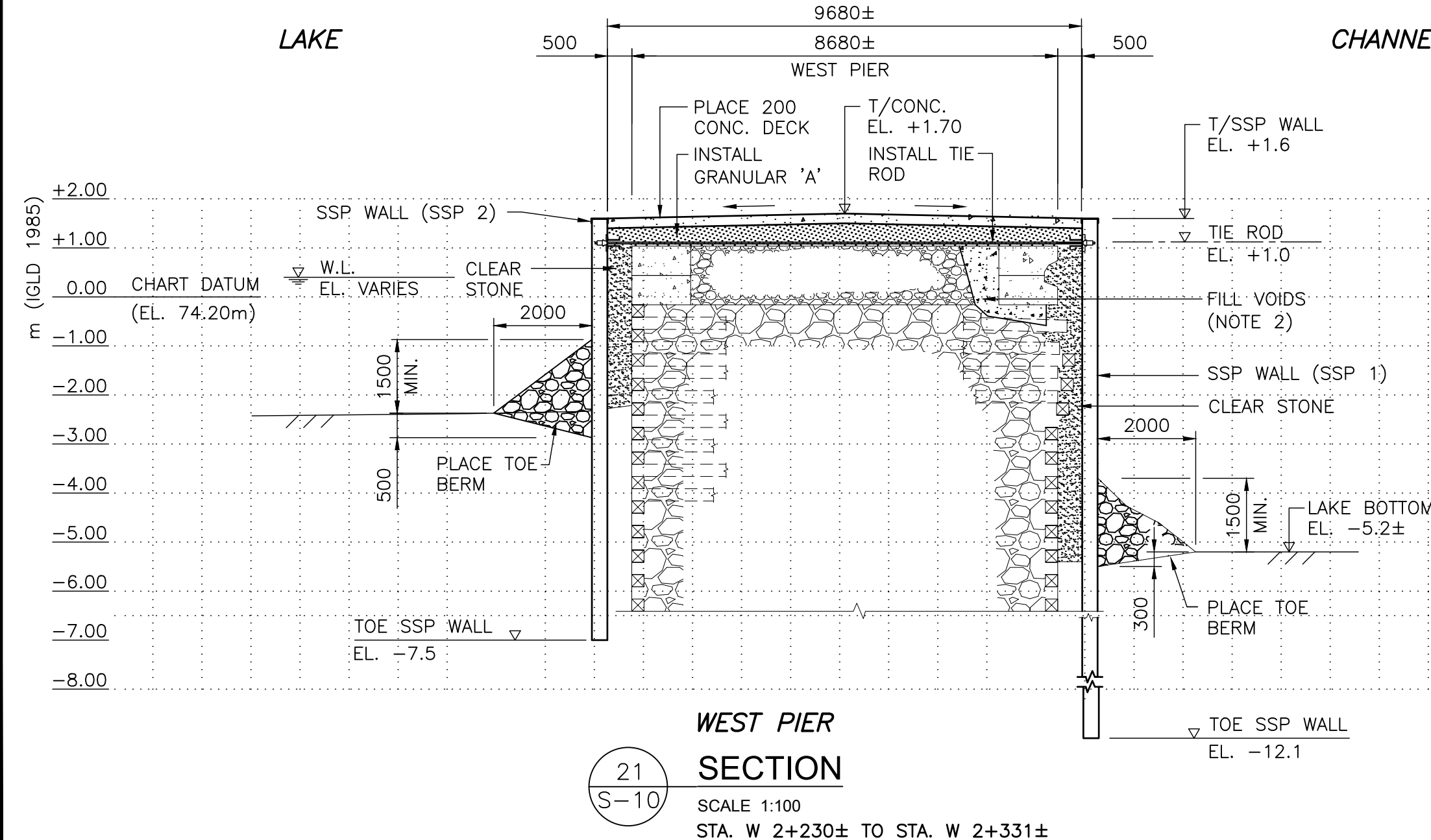
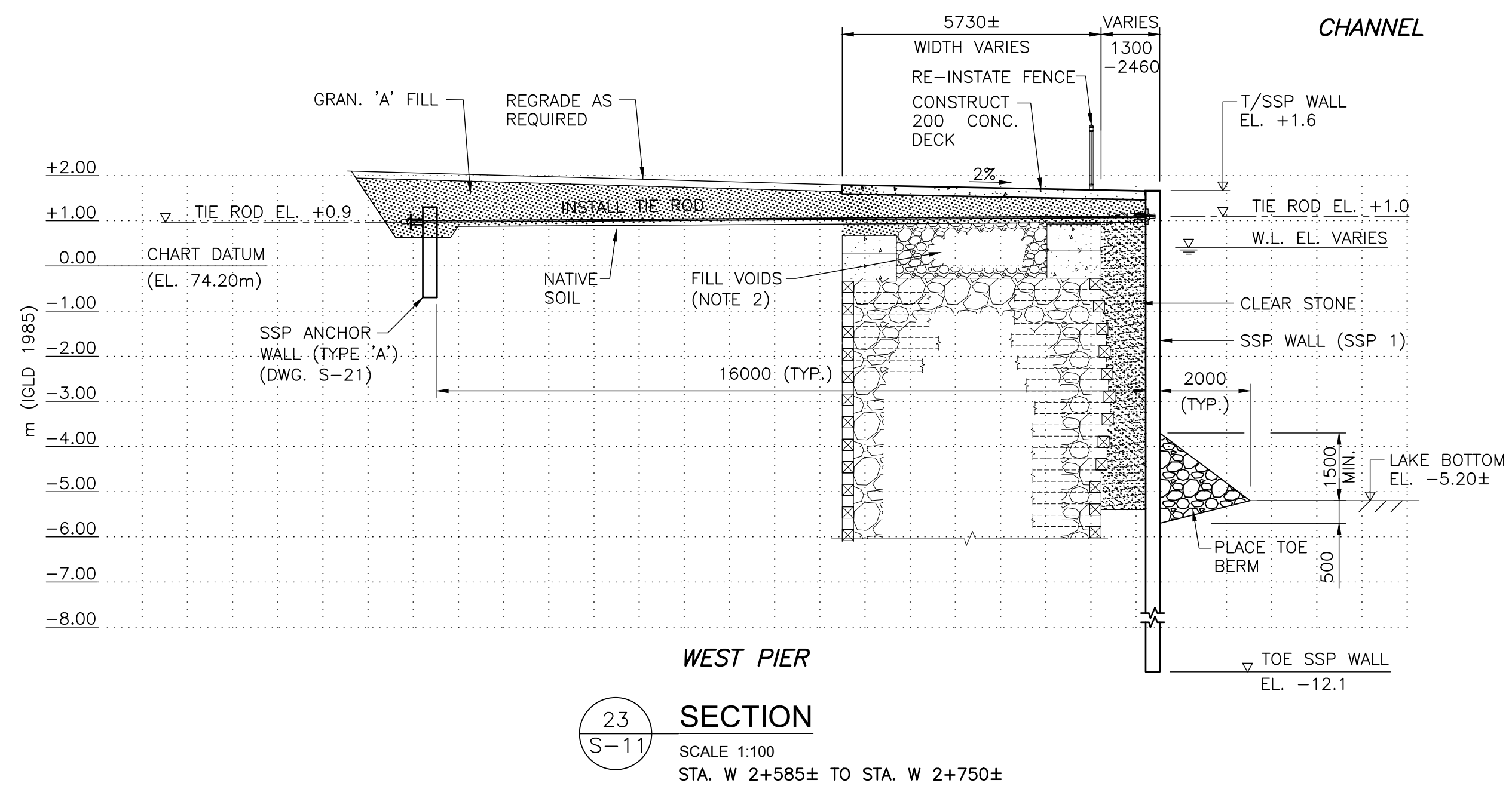
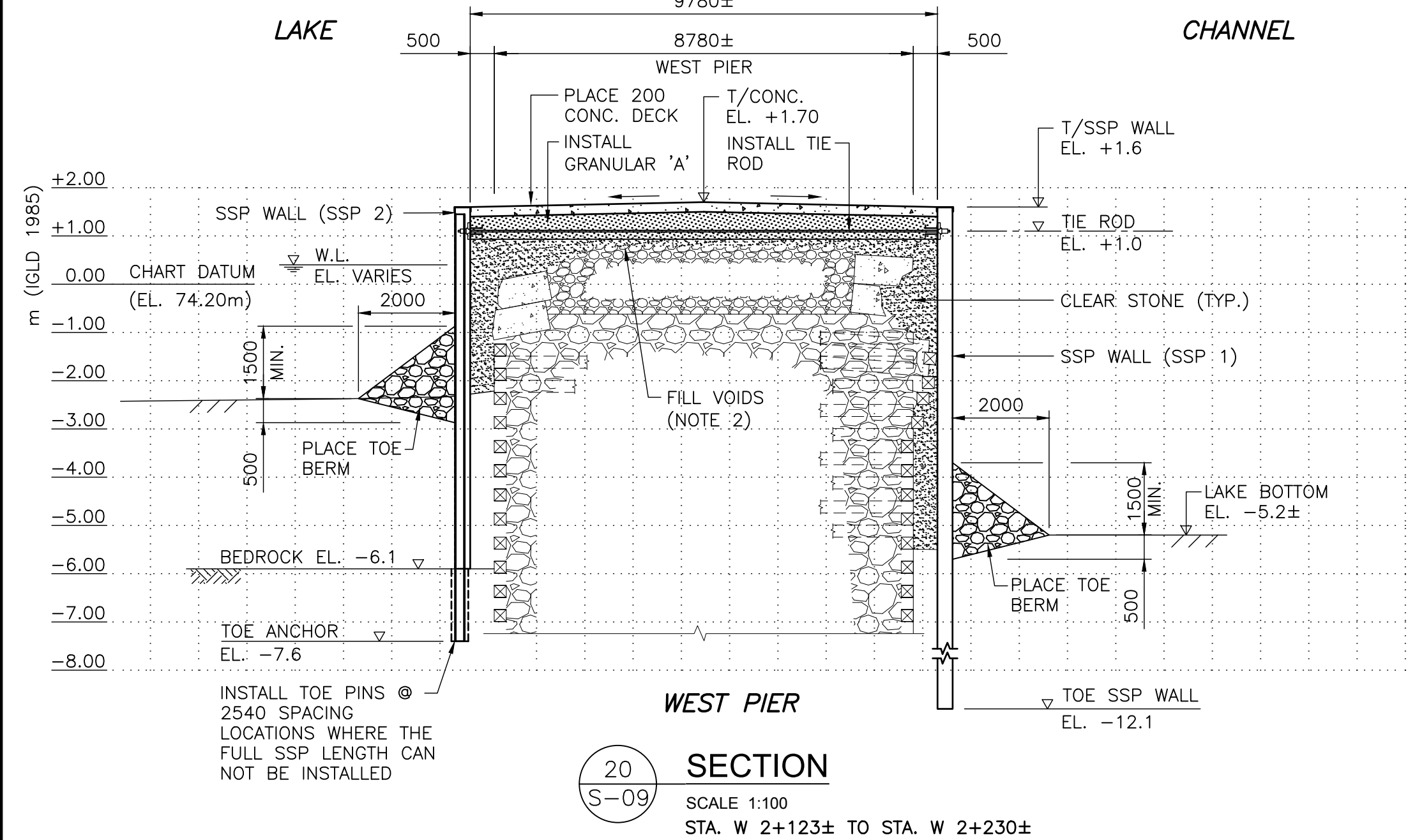
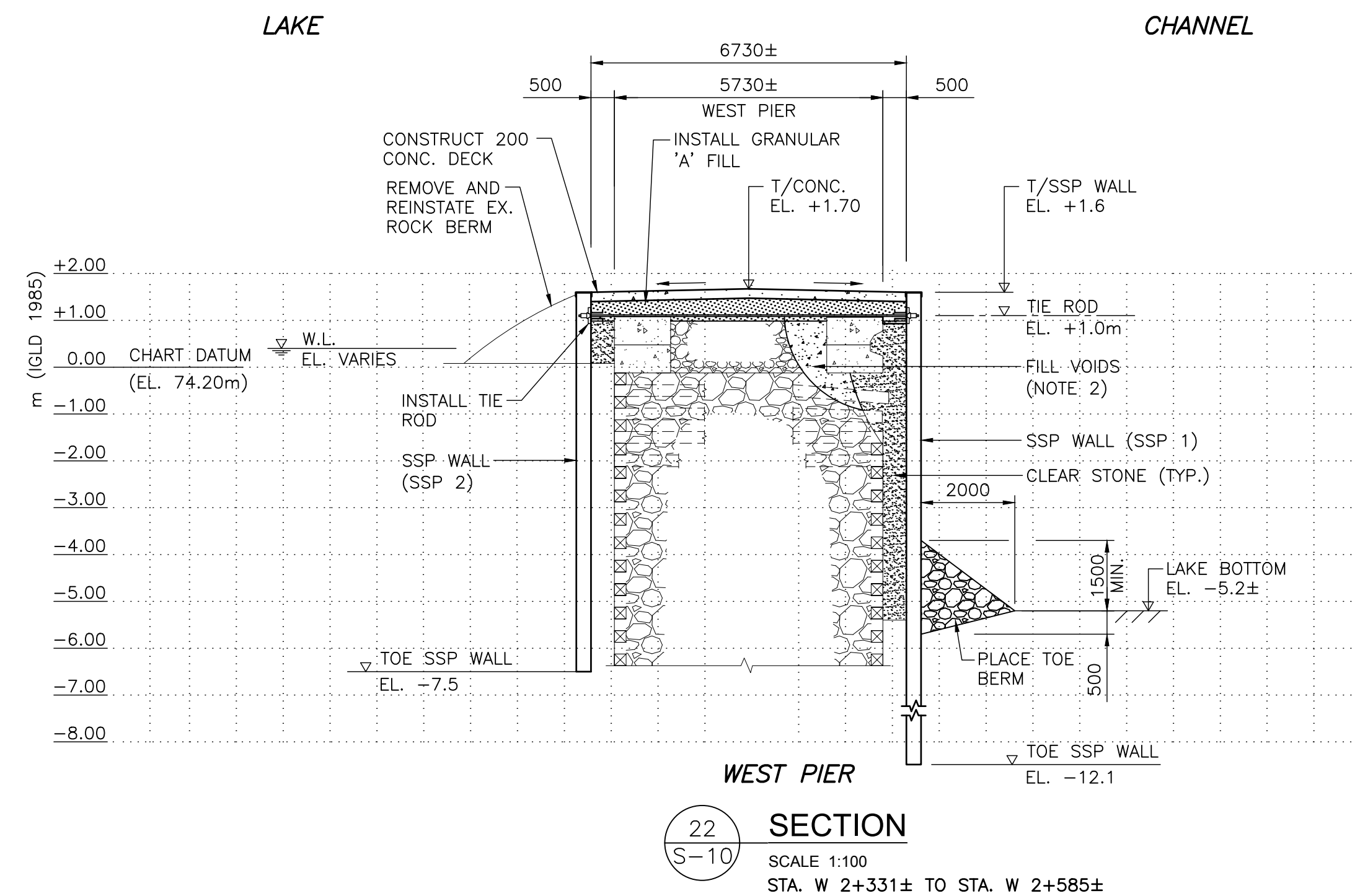
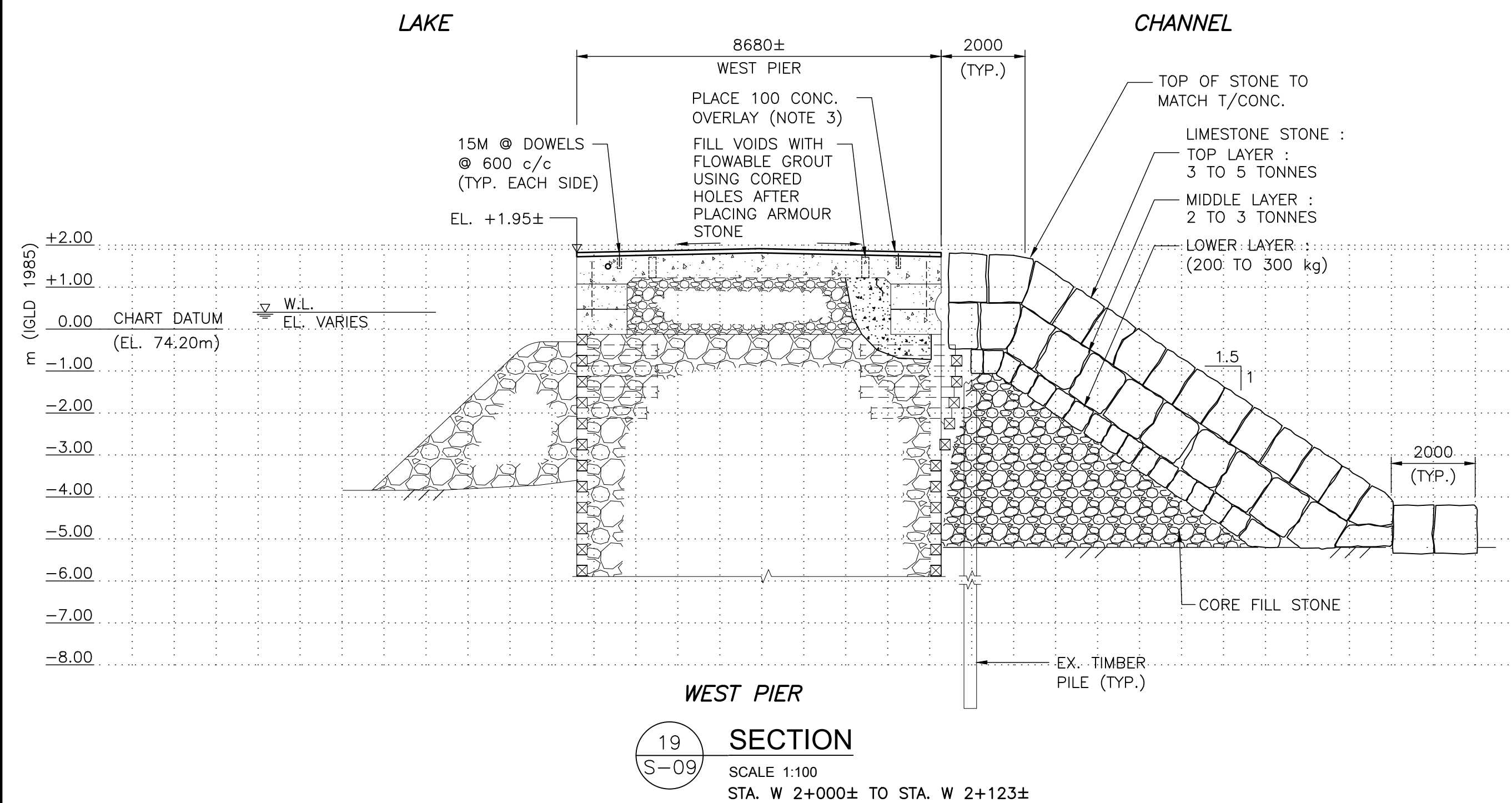
S-13

locator code  
code de localisation

4768



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GOVERNMENT OF CANADA  
FISHERIES AND OCEANS  
GOUVERNEMENT DU CANADA  
PÊCHES ET OcéANS

SMALL CRAFT HARBOURS  
CENTRAL AND ARCTIC REGION

Small Craft Harbours  
Ports pour petits bateaux

LICENCED PROFESSIONAL ENGINEER  
J. PUCCHIO  
24/08/2018  
PROVINCE OF ONTARIO

LICENCED PROFESSIONAL ENGINEER  
J.A. WALLACE  
100078389  
24/08/2018  
PROVINCE OF ONTARIO

NOTE:  
1. VERTICAL LOCATION OF WALES MAY BE ADJUSTED TO SUIT EXISTING CONDITIONS (UP TO ± 0.1m) WITH THE ACCEPTANCE OF THE DEPARTMENTAL REPRESENTATIVE.  
2. FILL VOIDS WITHIN EXISTING STRUCTURE WITH FLOWABLE GROUT, CLEAR STONE OR GRANULAR 'A', AS AGREED UPON WITH DEPARTMENTAL REPRESENTATIVE. DEFER WORK TO COMPLETION OF STEEL PILE WORK, AS REQUIRED, TO ENSURE CONTAINMENT OF FILL.  
3. CONSTRUCT CONCRETE OVERLAY FOLLOWING PLACEMENT OF ARMOUR STONE.  
4. INSTALL TOE PINS PRIOR TO THE INSTALLATION OF CLEAR STONE FILL. TOE PINS ANTICIPATED BETWEEN W2+123 AND W2+160.  
5. FOR ADDITIONAL SSP WALL REQUIREMENTS SEE TYPICAL SECTION ON DRAWING S-20.

revision	ISSUED FOR TENDER	AUG. 24, 2018
		date

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PROJECT No.: 60528656

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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

SECTIONS  
REHABILITATED - 2

drawn by  
dessiné par  
B.J.B./T.G.

designed by  
conçu par  
S.N./J.P.

approved by  
approuvé par  
J.W./J.P.

bid  
offre

project manager  
administrateur de projets

project date  
date du projet  
2018-07-20

project no.  
no. du projet

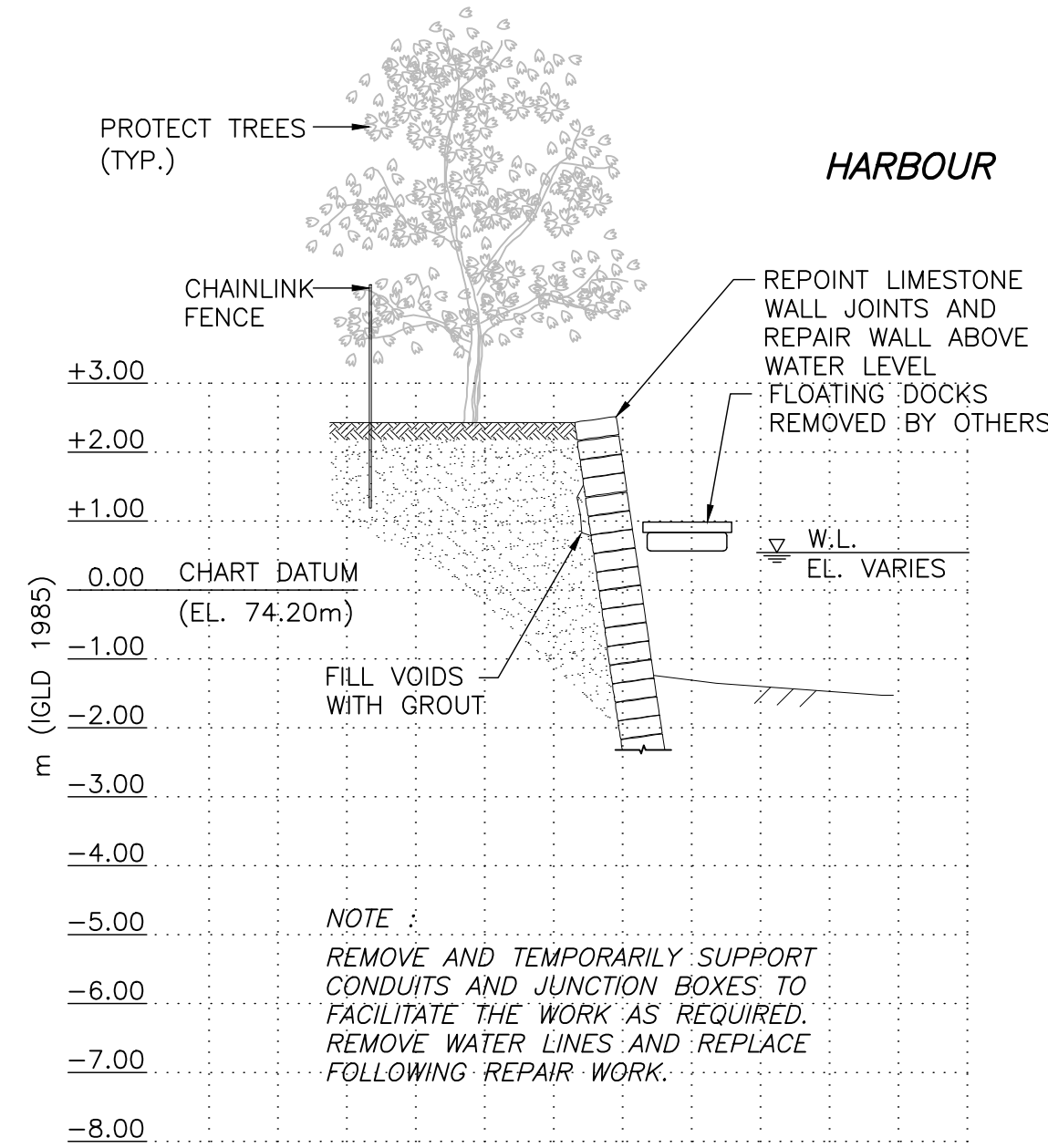
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dessiné no.

locator code  
code de localisation  
S-14

4768

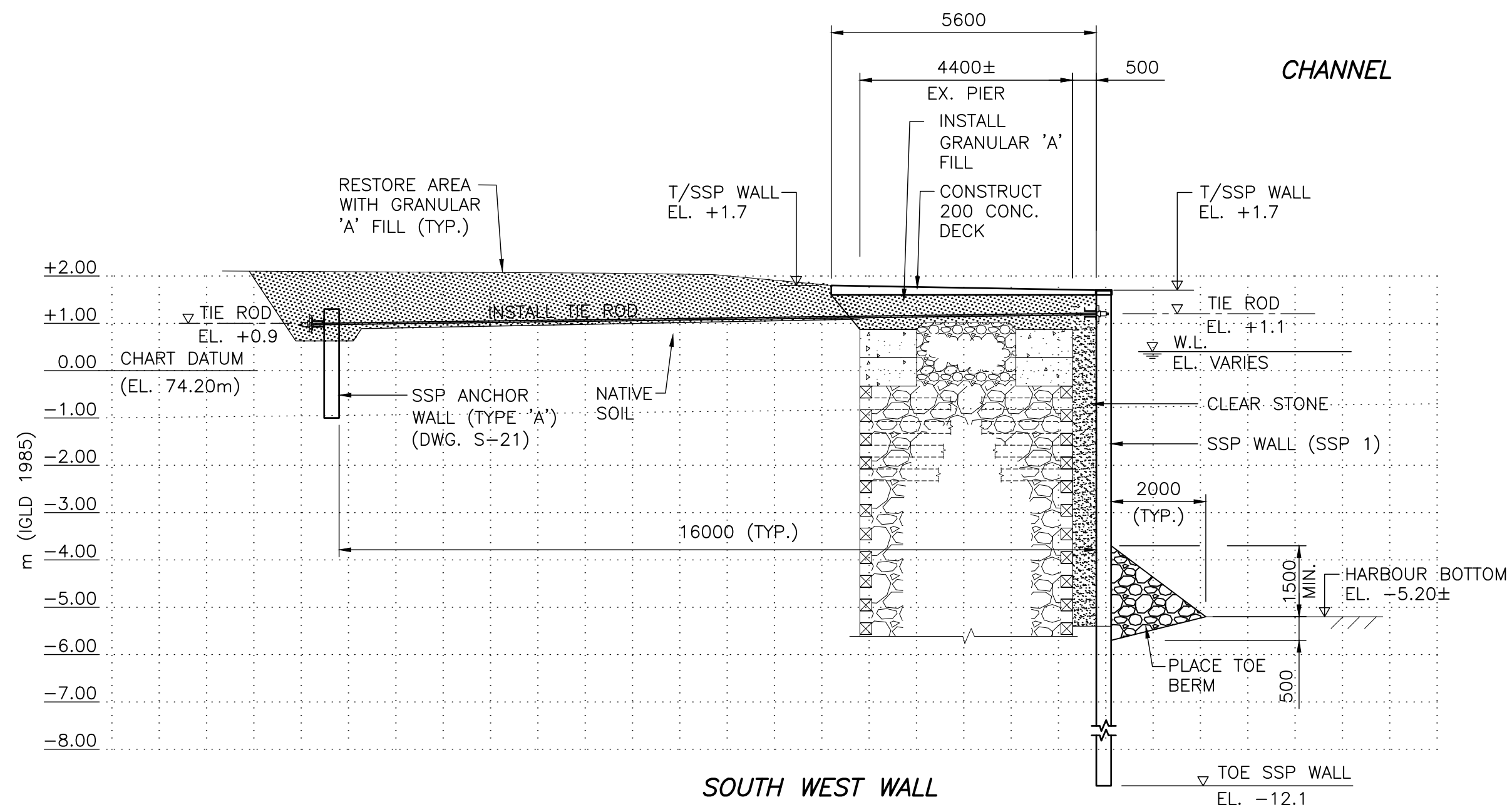


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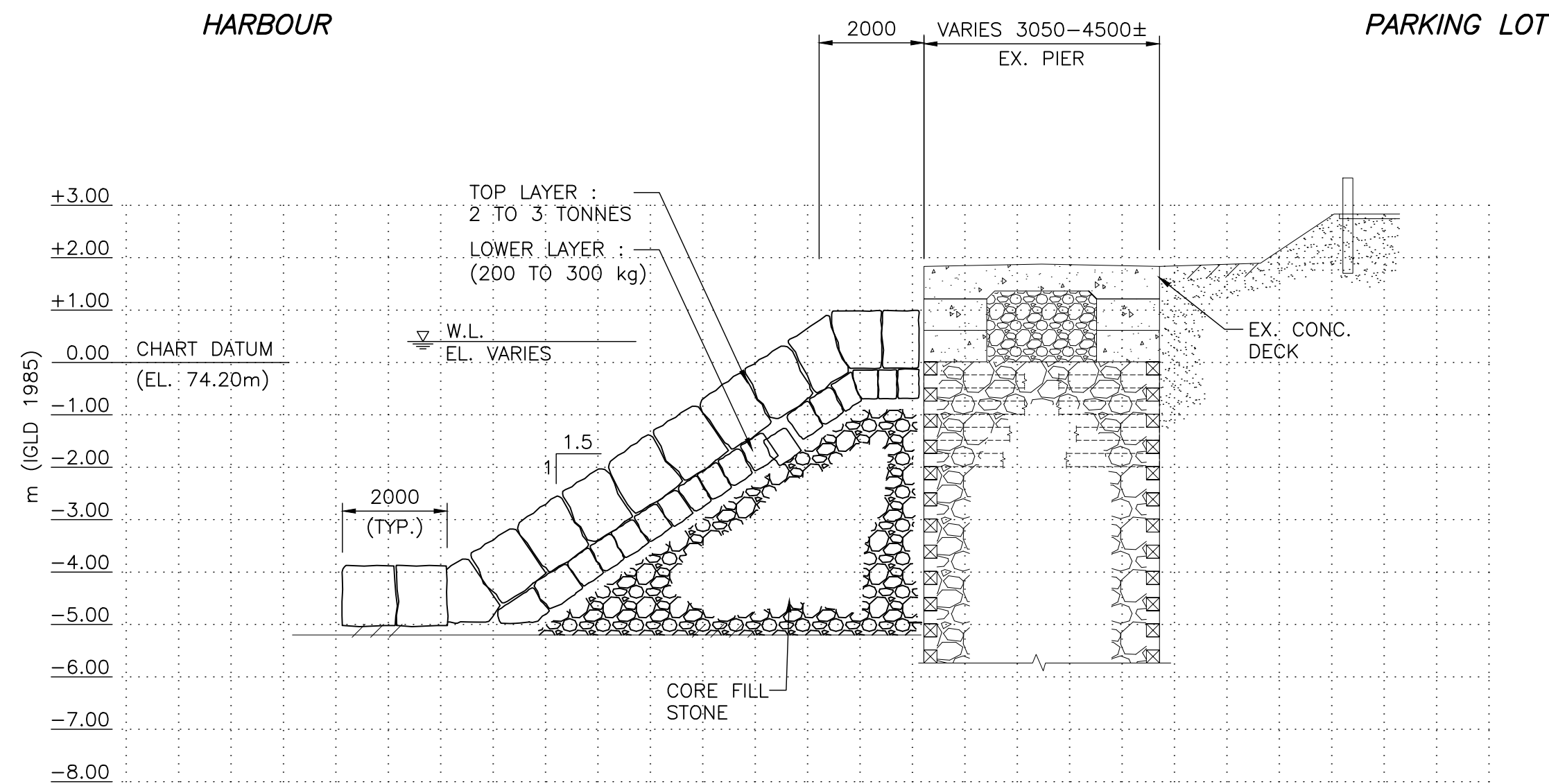
LIMESTONE BLOCK WALL SOUTH WEST AS SHOWN  
SOUTH EAST SIMILAR

25  
S-12  
SCALE 1:100



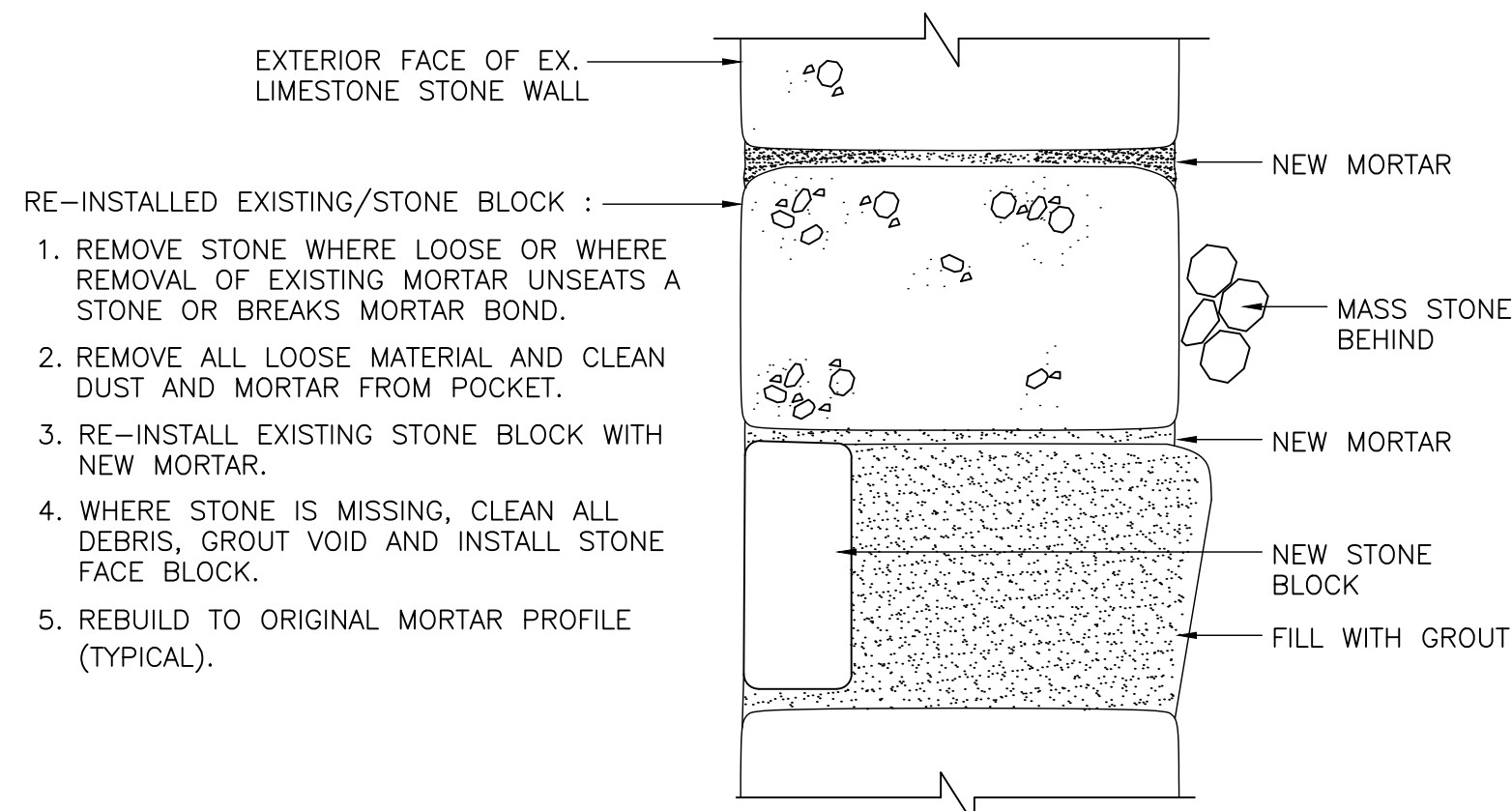
SOUTH WEST WALL

26  
S-12  
SCALE 1:100

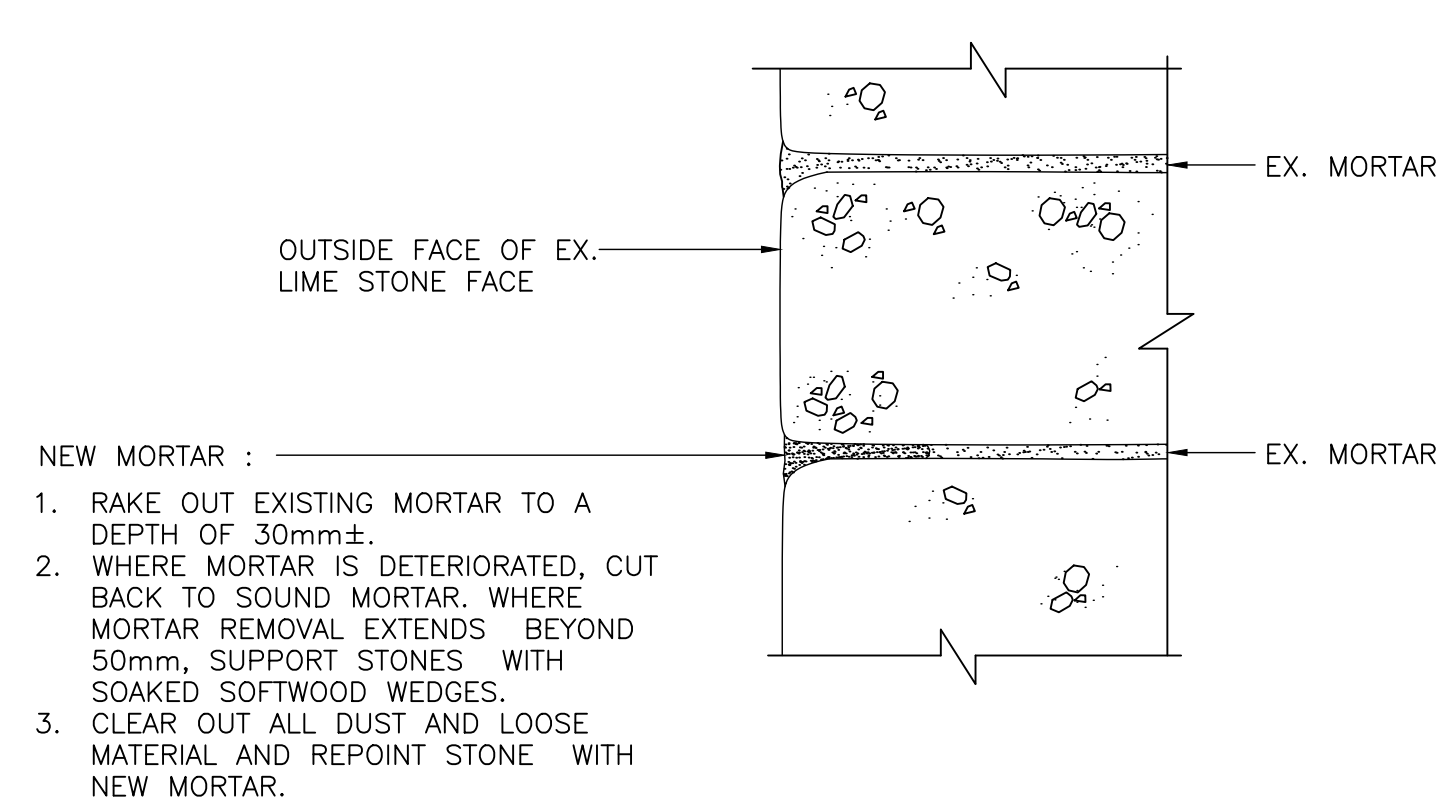


SOUTH EAST WALL

27  
S-12  
SCALE 1:100



EXISTING / NEW STONE INSTALLATION DETAIL




MORTAR JOINT REPAIR DETAILS

NOTE : MATCH MORTAR COLOUR TO BE UNIFORM IN ALL REPAIR AREAS.

LIMESTONE BLOCK WALL REPAIR DETAILS

N.T.S.



GOVERNMENT  
OF CANADA


GOUVERNEMENT  
DU CANADA

FISHERIES  
AND OCEANS

FISHERIES  
AND OCEANS

PÊCHES  
ET Océans

Small Craft Harbours  
Ports pour petits bateaux



LICENSED PROFESSIONAL ENGINEER  
J. PUCCHIO  
24/08/2018  
PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER  
J.A. WALLACE  
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PROVINCE OF ONTARIO

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A	ISSUED FOR TENDER	AUG. 24, 2018
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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

SECTIONS  
REHABILITATED - 3

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

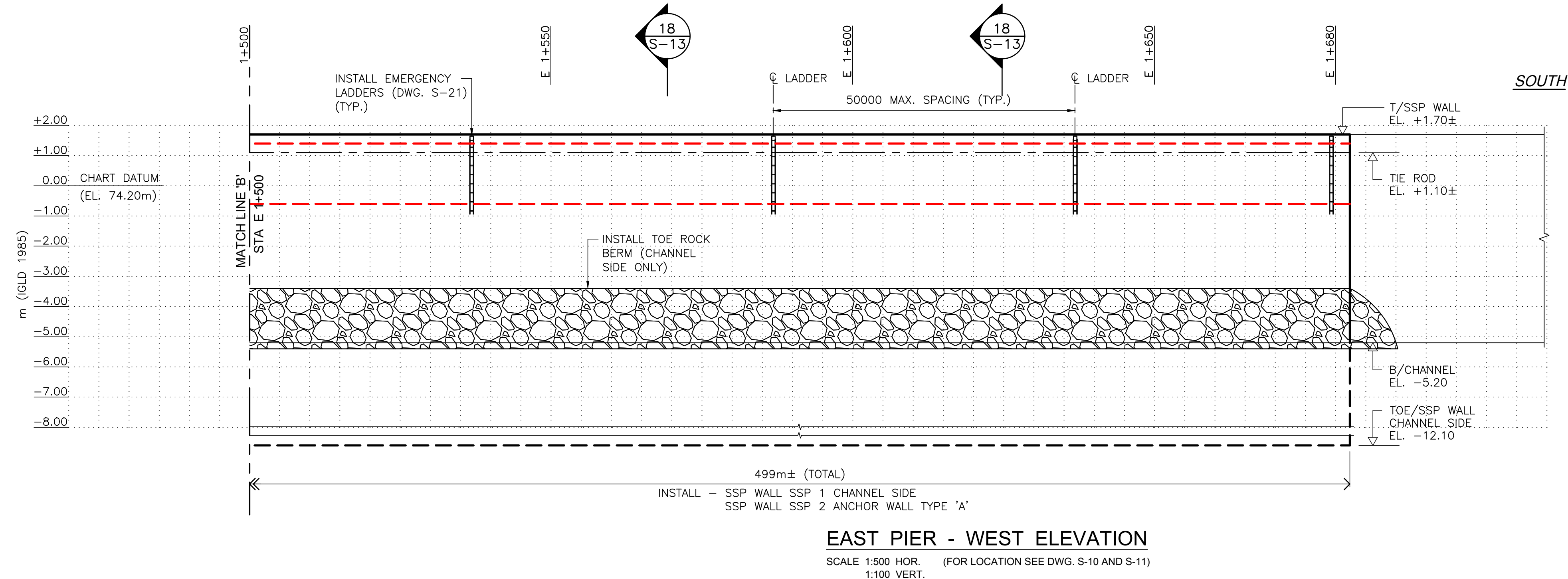
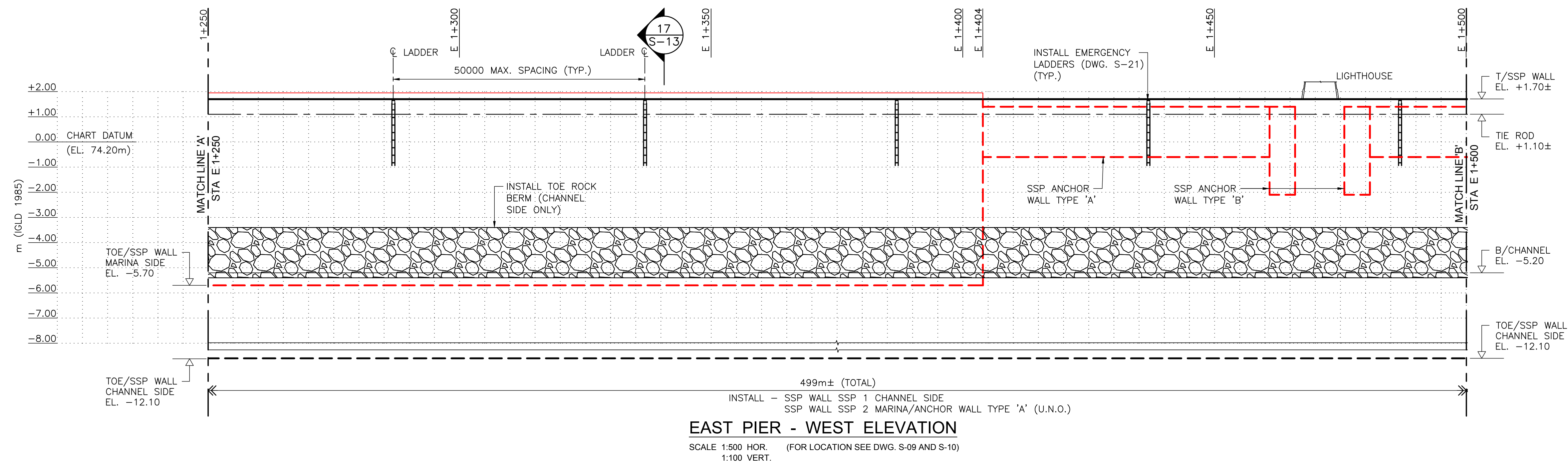
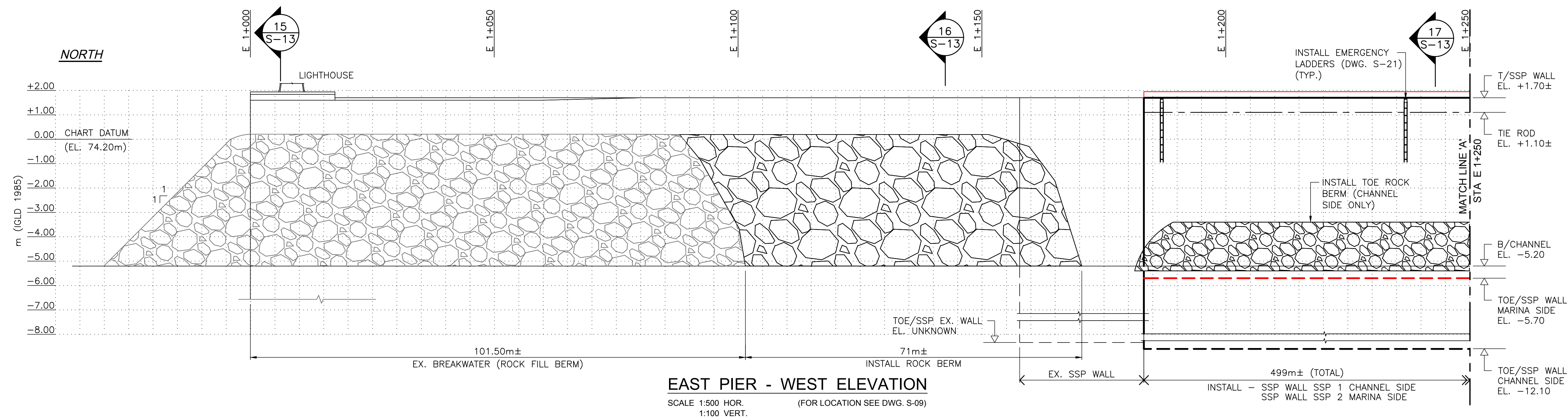
drawing no.  
dessiné no.

S-15

locator code  
code de localisation

4768



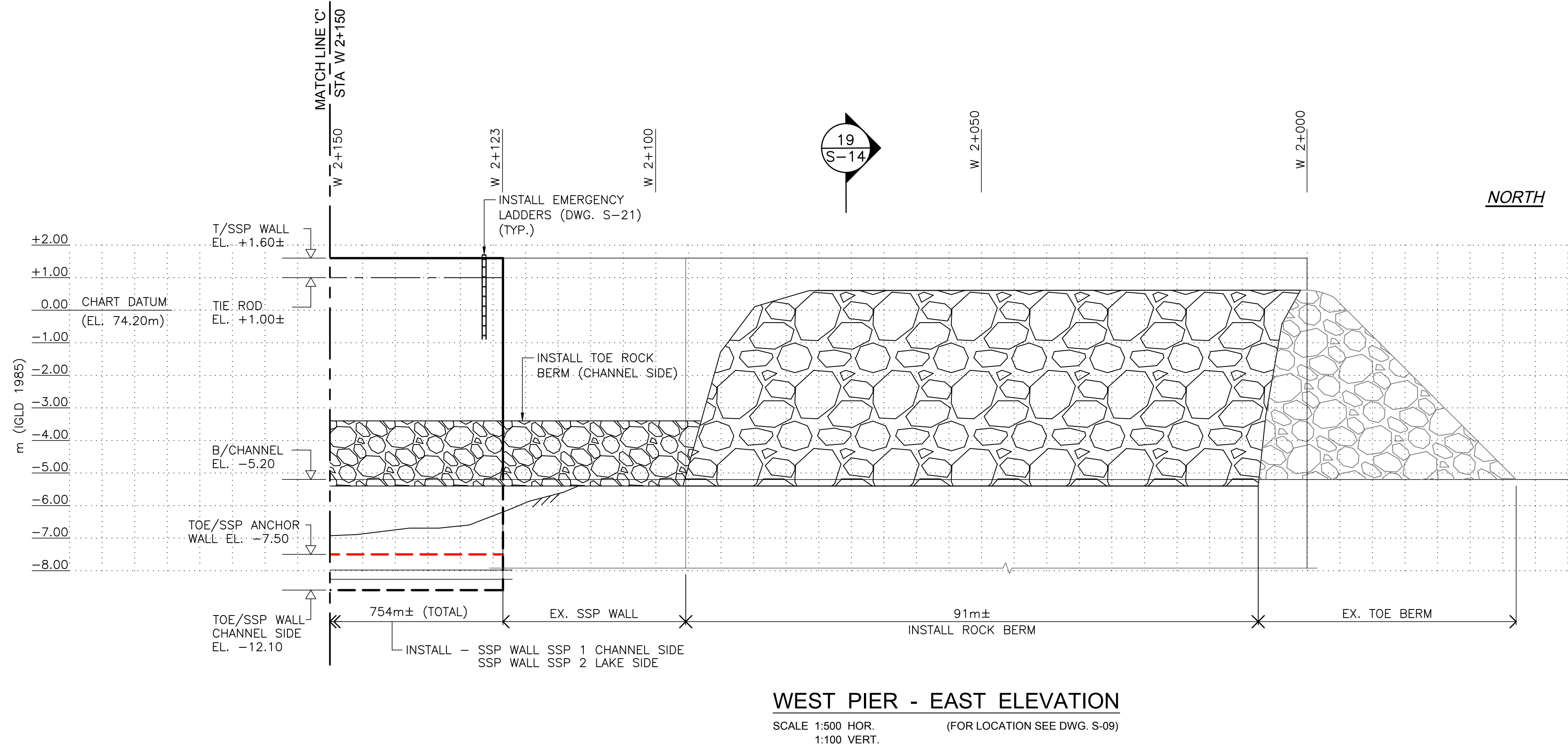
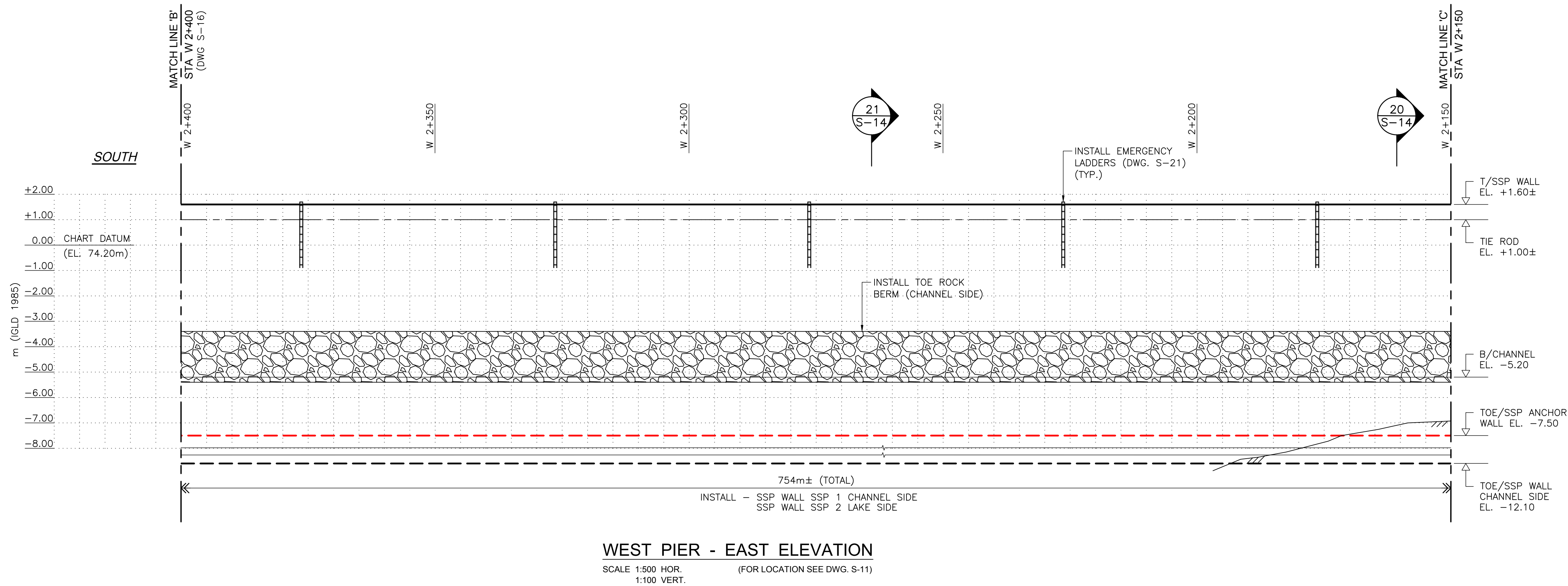










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GOVERNMENT OF CANADA  
FISHERIES AND OCEANS



GOUVERNEMENT DU CANADA  
PÊCHES ET OcéANS


SMALL CRAFT HARBOURS  
CENTRAL AND ARCTIC REGION





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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

PARTIAL WALL ELEVATIONS  
REHABILITATED - 3

drawn by  
dessiné par

B.J.B./T.G.

designed by  
conçu par

S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

drawing no.  
dessiné no.

S-18

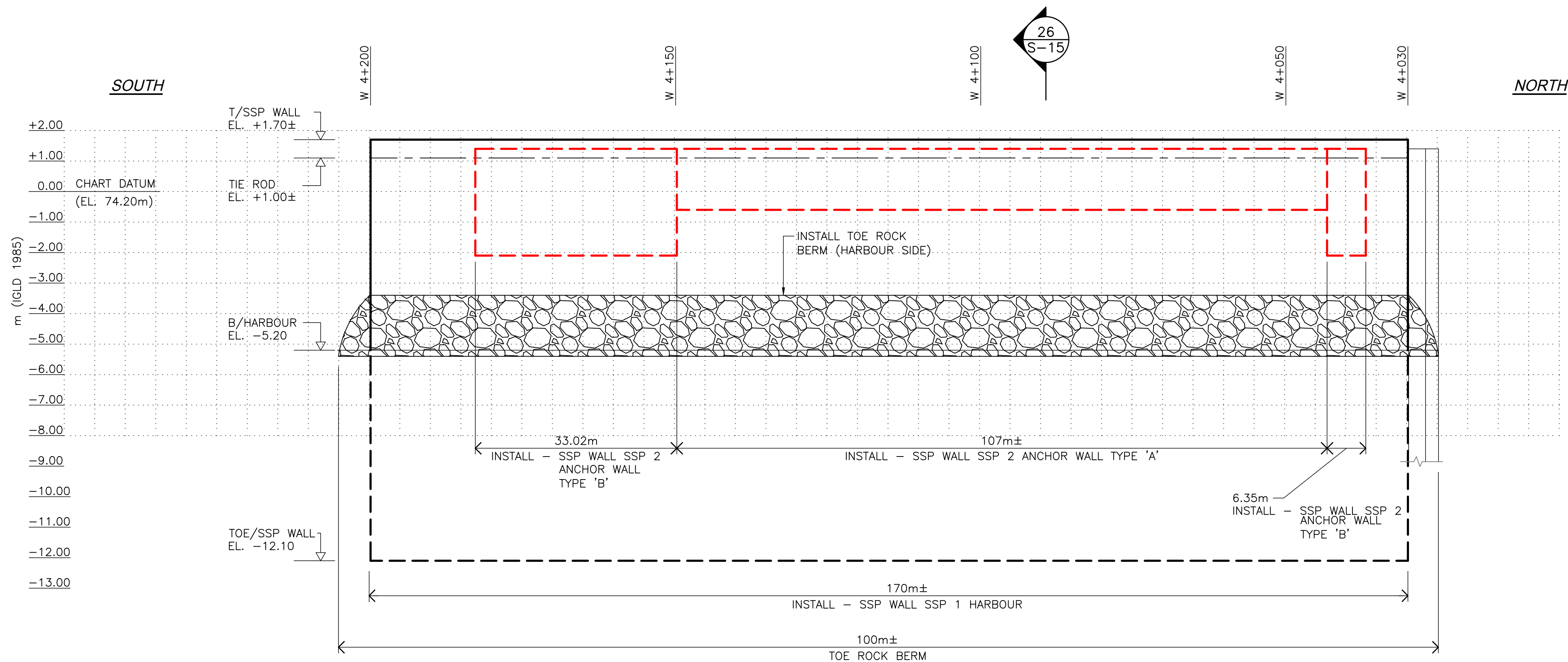
locator code  
code de localisation

4768




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### SOUTH WEST WALL

SCALE 1:500 HOR. (FOR LOCATION SEE DWG. S-12)  
1:100 VERT.



GOVERNMENT  
OF CANADA

GOVERNEMENT  
DU CANADA

FISHERIES  
AND OCEANS

GOVERNEMENT  
DU CANADA

PÊCHES  
ET OCÉANS

SMALL CRAFT HARBOURS  
CENTRAL AND ARCTIC REGION



Small Craft Harbours  
Ports pour petits bateaux  
www.dfo-mpo.gc.ca/pch-csp



LICENSED PROFESSIONAL ENGINEER  
J. PUCCHIO  
24/08/2018  
PROVINCE OF ONTARIO



LICENSED PROFESSIONAL ENGINEER  
J.A. WALLACE  
100078389  
24/08/2018  
PROVINCE OF ONTARIO

**AECOM**

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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

PARTIAL WALL ELEVATIONS  
REHABILITATED - 4

drawn by  
dessiné par

B.J.B./T.G.

designed by  
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S.N./J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

drawing no.  
dessiné no.

S-19

locator code  
code de localisation

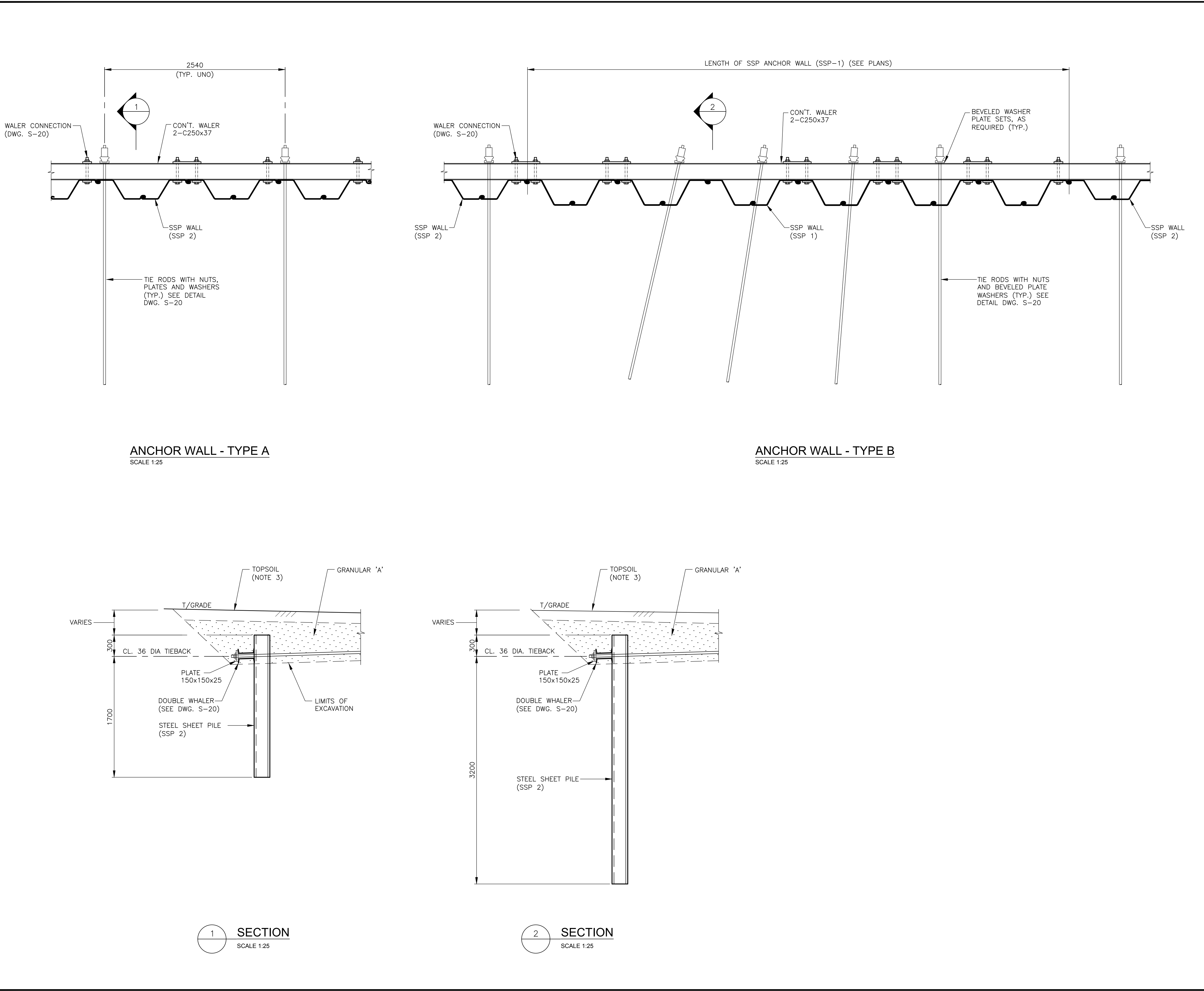
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GOVERNMENT OF CANADA  
FISHERIES AND OCEANS



GOUVERNEMENT DU CANADA  
PÊCHES ET OcéANS

Small Craft Harbours  
Ports pour petits bateaux






NOTES :  
1. FOR WALER DETAILS SEE DRAWING S-20.  
2. FIELD VERIFY AND FIT TIES AT ANGLES TO SUIT VARIOUS ARRANGEMENTS AS NOTED ON PLANS.  
3. REINSTALL 150mm THICK TOP SOIL FROM STOCK PILED MATERIALS IN PARK AREAS (WEST PIER) AND GRASS SEED.  
4. THE ARRANGEMENT FOR BEVELED WASHER PLATE SETS SHALL BE DETAILED ON SHOP DRAWINGS PROVIDED BY THE CONTRACTOR.

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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

ANCHOR WALL DETAILS

drawn by  
dessiné par

T.G.

designed by  
conçu par

J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur de projets

project date  
date du projet

2018-07-20

project no.  
no. du projet

drawing no.  
dessiné no.

S-21

locator code  
code de localisation

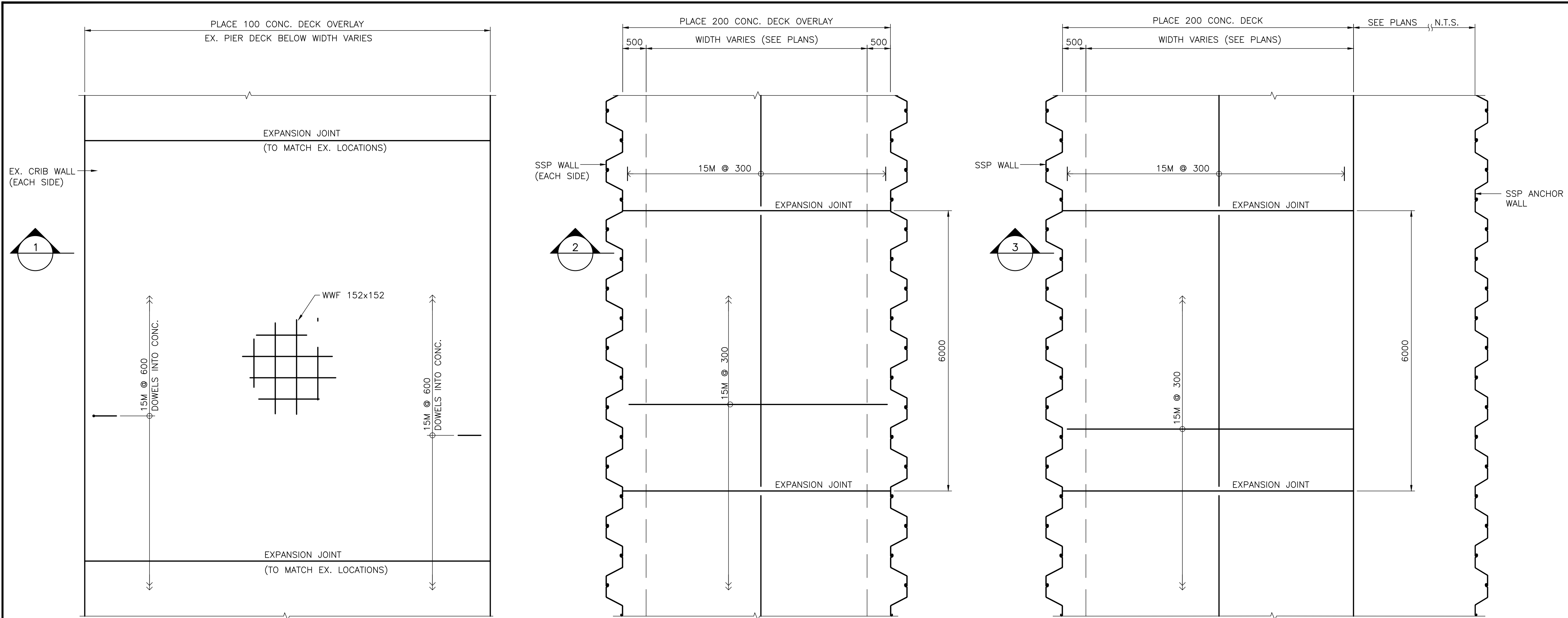
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**PARTIAL PLAN PIER DECK  
OVERLAY**

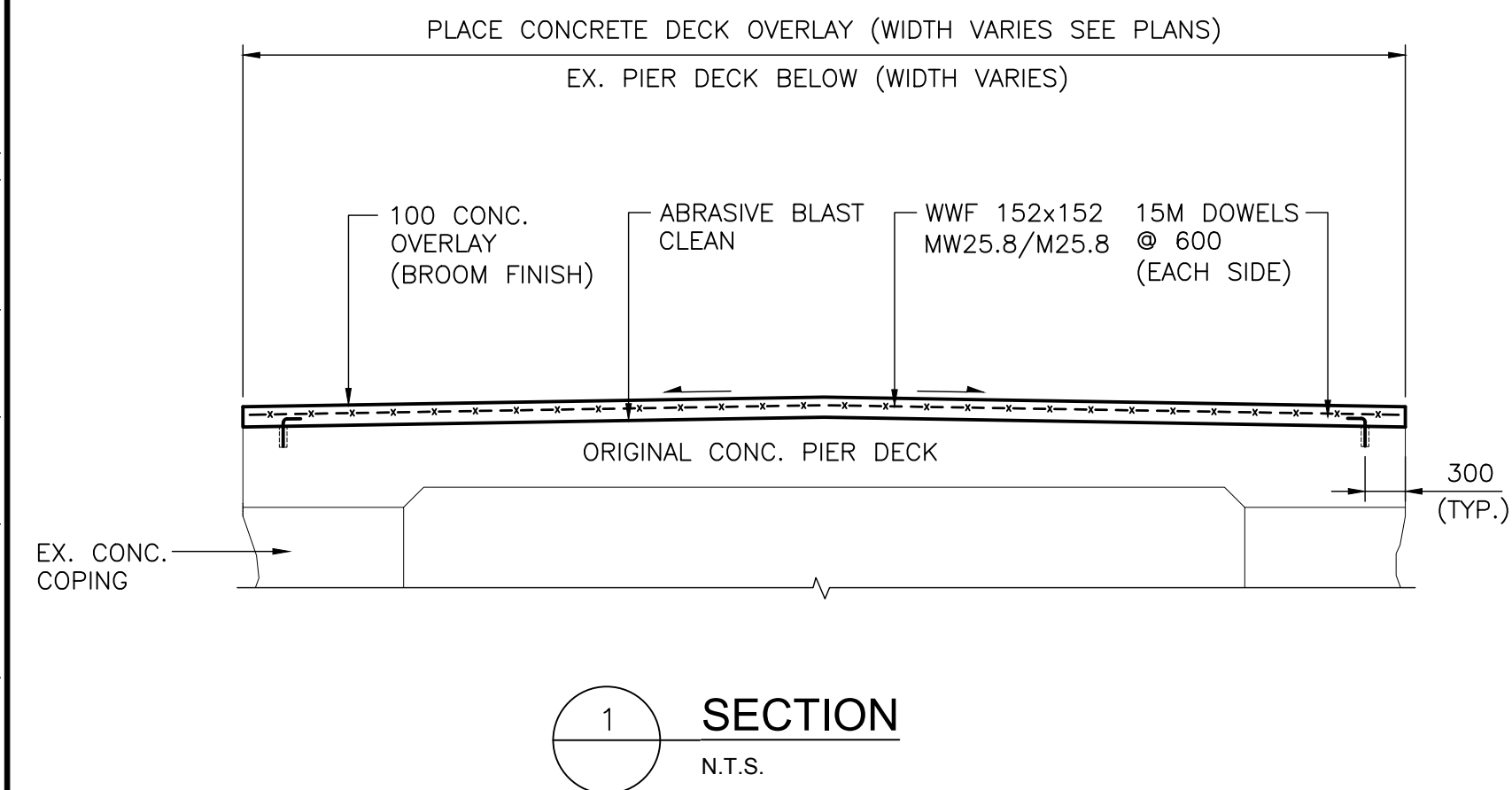
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**PARTIAL PLAN PIER DECK  
SSP WALLS**

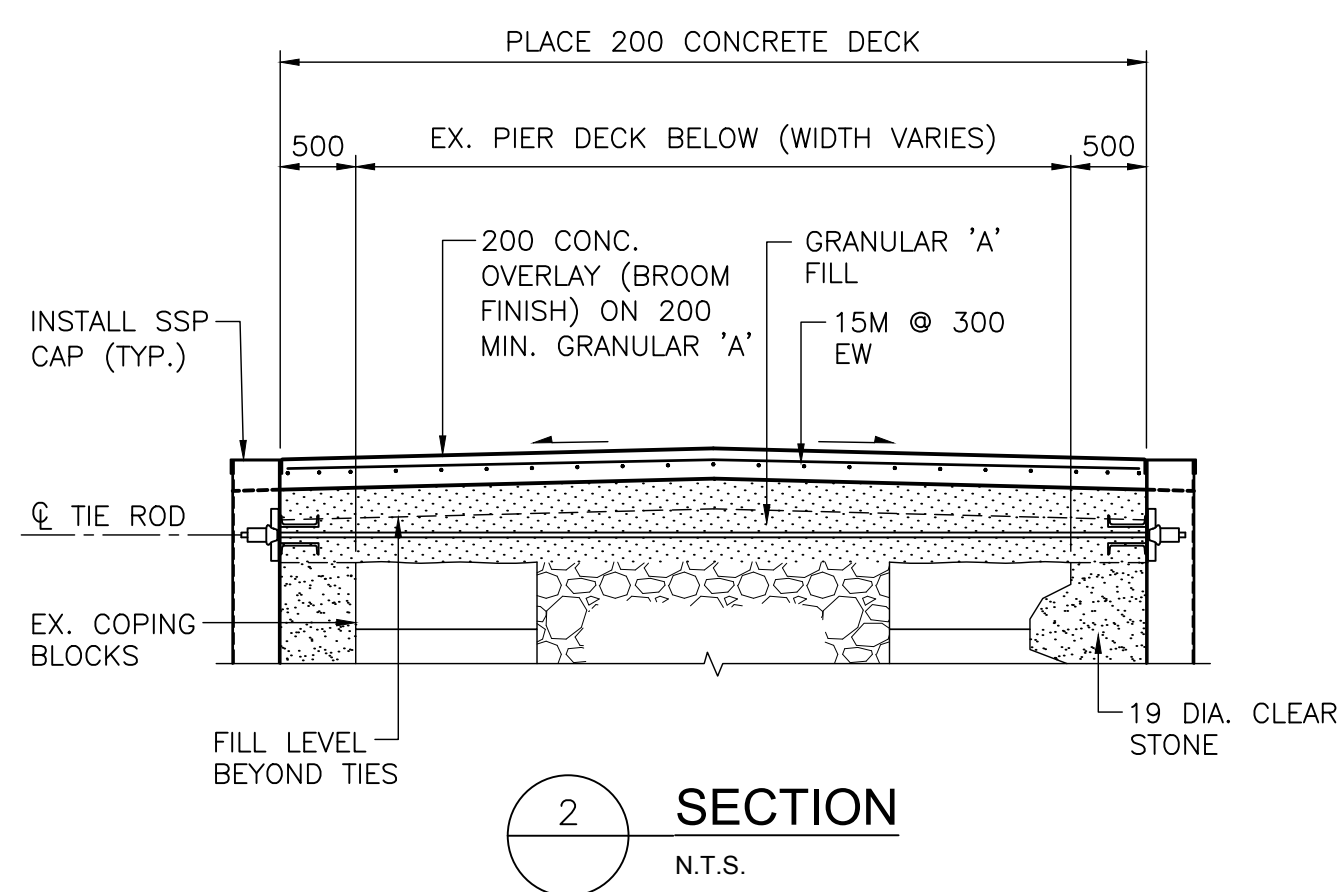
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**PARTIAL PLAN PIER DECK  
SSP WALL ANCHOR WALL**

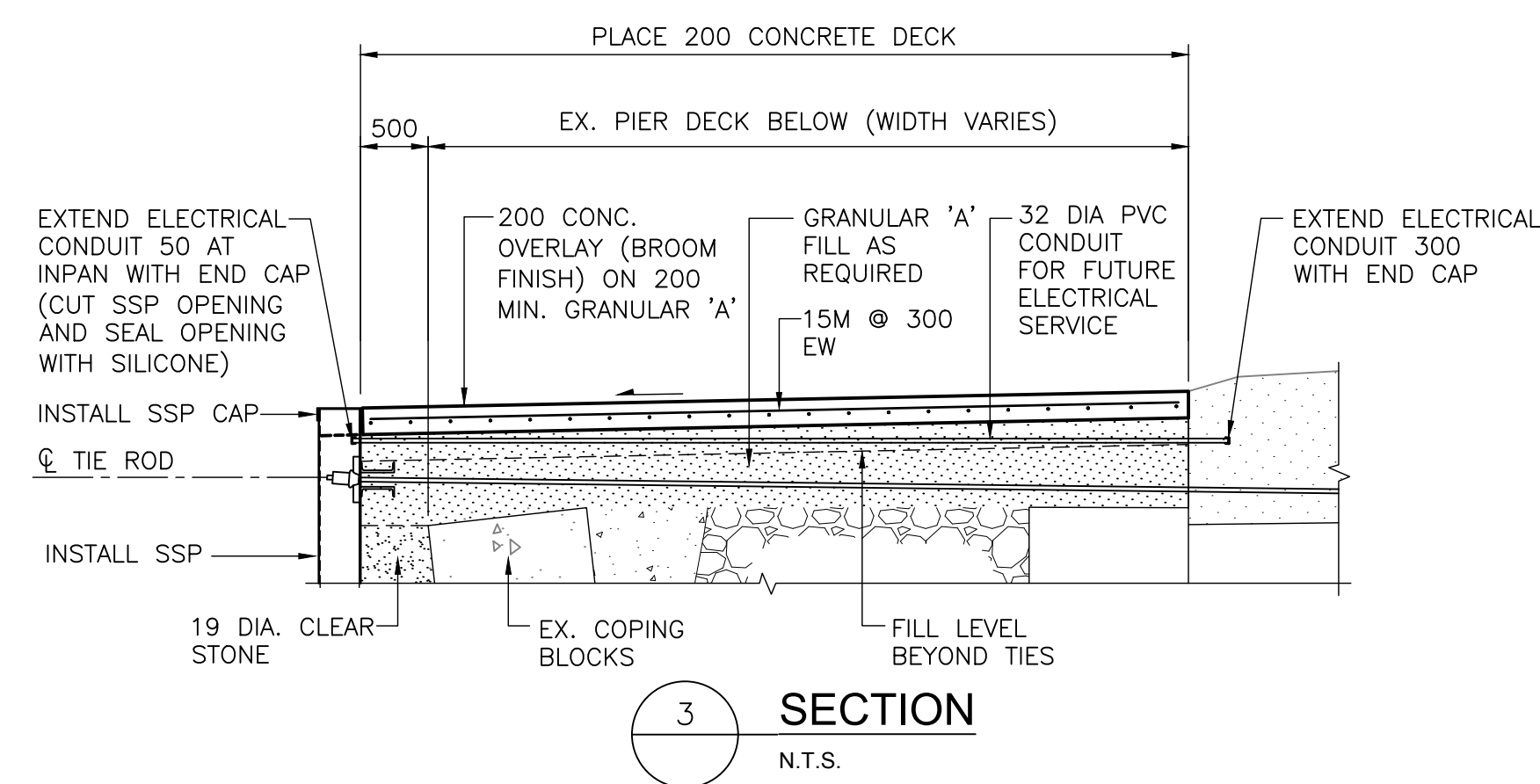
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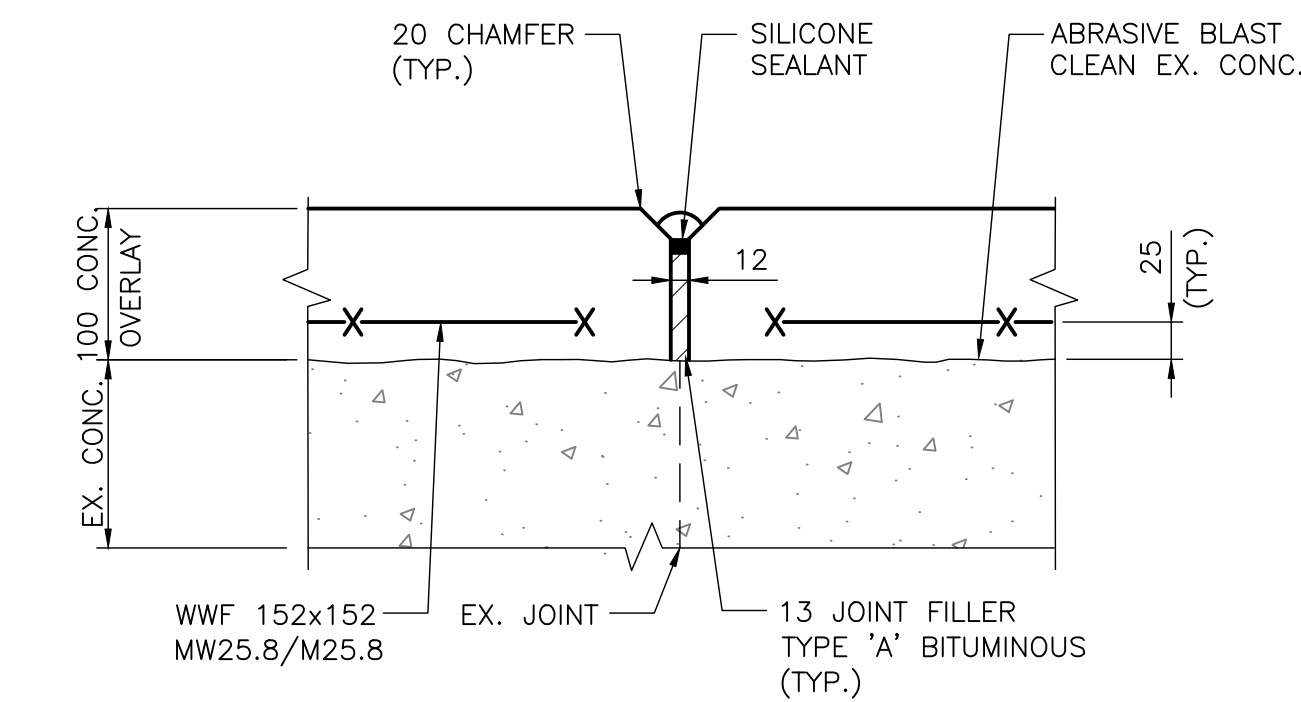
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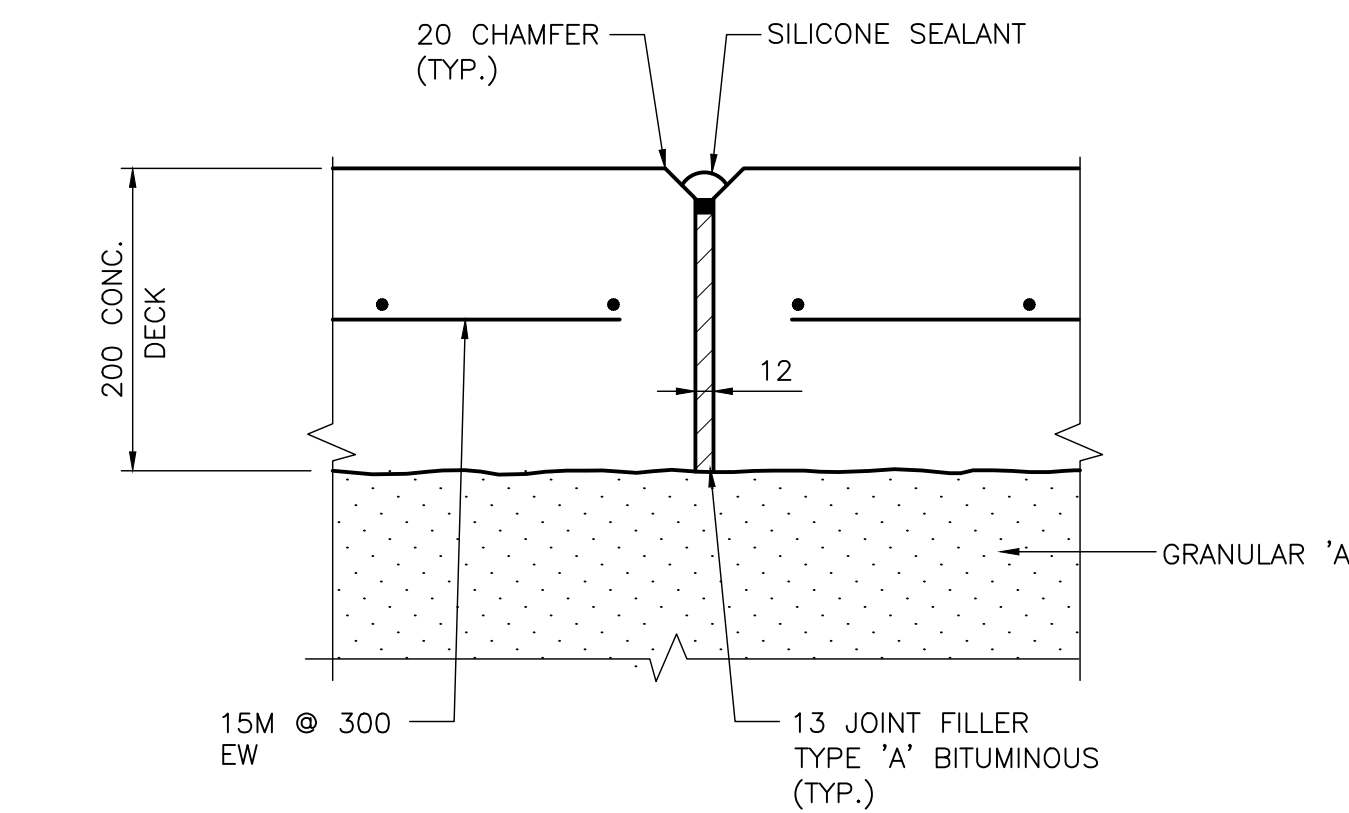
**2 SECTION**  
N.T.S.




**3 SECTION**  
N.T.S.



**DECK EXPANSION JOINT SECTION - WWF**  
SCALE 1:5



**DECK EXPANSION JOINT SECTION - REBAR**  
SCALE 1:5



GOVERNMENT  
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DU CANADA

FISHERIES  
AND OCEANS


FISHERIES  
AND OCEANS

PÊCHES  
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SMALL CRAFT HARBOURS  
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LICENCED PROFESSIONAL ENGINEER  
J. PUCCHIO  
24/08/2018  
PROVINCE OF ONTARIO



LICENCED PROFESSIONAL ENGINEER  
J.A. WALLACE  
100078389  
24/08/2018  
PROVINCE OF ONTARIO

NOTE :

1. BEND TRANSVERSE REINFORCING STEEL OR LAP, AS REQUIRED TO SUIT CENTRE CROWNS IN DECK SLAB.
2. WHERE ELEVATIONS ARE NOT PROVIDED ON PLAN, PROVIDE DECK SURFACE SLOPE OF 2%.

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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

TYPICAL DECK DETAILS

drawn by  
dessiné par

T.G.

designed by  
conçue par

J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet

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no. du projet

drawing no.  
dessiné no.

S-23

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code de localisation

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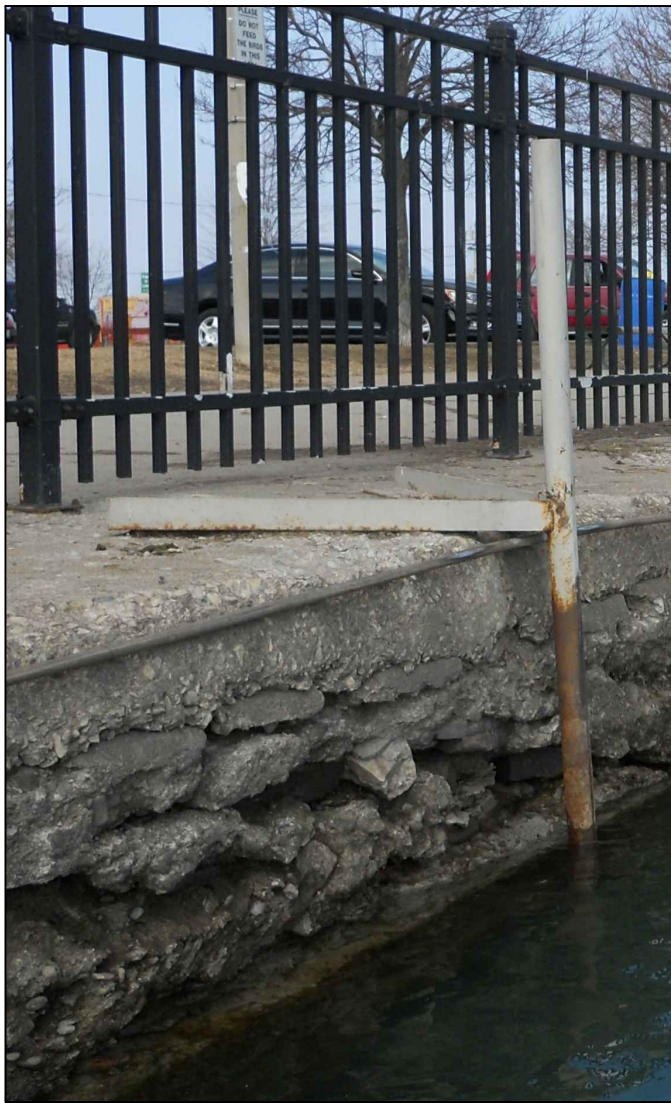
BENCH



ORNAMENTAL RAILING



BOLLARDS



DOCK OR BOAT TIE POINT



DOCK TIE POINTS



TIMBER BUMPER BOARDS



POST



CLEAT



LIFE RING STATION




EMERGENCY LADDER




POWER PEDESTALS

REMOVAL LIST OF EXISTING ACCESSORIES		
ITEM	ACTION	OWNED BY
BOLLARDS	REMOVE/RE-INSTATE WHERE FEASIBLE (OR RETAIN IN PLACE)	SCH
HYDRO POLES	RETAIN IN PLACE	CITY
EMERGENCY LADDERS	REMOVE AND DISPOSE	DYC
LIFE RING STATIONS	REMOVE AND RE-INSTATE	DYC
POWER PEDESTALS	REMOVE, SALVAGE AND STORE	CITY
LIGHT STANDARDS	RETAIN IN PLACE	CITY
BELL PEDESTALS	RETAIN IN PLACE	BELL
MOORING CLEATS	REMOVE, SALVAGE AND STORE	DYC
TIMBER BUMPER BOARDS	REMOVE AND DISPOSE	DYC
NAVIGATIONAL AID	RETAIN IN PLACE	CITY
BENCHES	REMOVED BY OTHERS	CITY
ORNAMENTAL RAILING	REMOVE AND REINSTALL (STA. W2+775 - W2+878)	CITY
NOTES :		
1. CONTRACTOR TO CONFIRM LOCATION OF ALL ITEMS FOR REINSTALLATION, UNLESS OTHERWISE NOTED.		
2. ALL SIGNAGE TO BE RETURNED TO OWNER.		
3. ALL REINSTATED ITEMS SHALL BE INSTALLED WITH 4-16 DIAMETER STAINLESS STEEL ADHESIVE ANCHORS WITH AN EMBEDMENT OF 120mm. FIELD CONFIRM DETAILS AND ADJUST TO SUIT.		
LEGEND :		
DYC	PORT DALHOUSIE YACHT CLUB	
CITY	CITY OF ST. CATHARINES	
SCH	SMALL CRAFT HARBOURS	






GOVERNMENT OF CANADA  
FISHERIES AND OCEANS



GOUVERNEMENT DU CANADA  
PÊCHES ET OCÉANS


SMALL CRAFT HARBOURS  
CENTRAL AND ARCTIC REGION





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project title  
titre du projet

HARBOUR REHABILITATION  
PORT DALHOUSIE, ONTARIO

drawing title  
titre du dessin

REMOVAL DETAILS

drawn by  
dessiné par

T.G.

designed by  
conçu par

J.P.

approved by  
approuvé par

J.W./J.P.

bid  
offre

project manager  
administrateur de projets

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date du projet

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project no.  
no. du projet

drawing no.  
dessiné no.

S-24

locator code  
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