

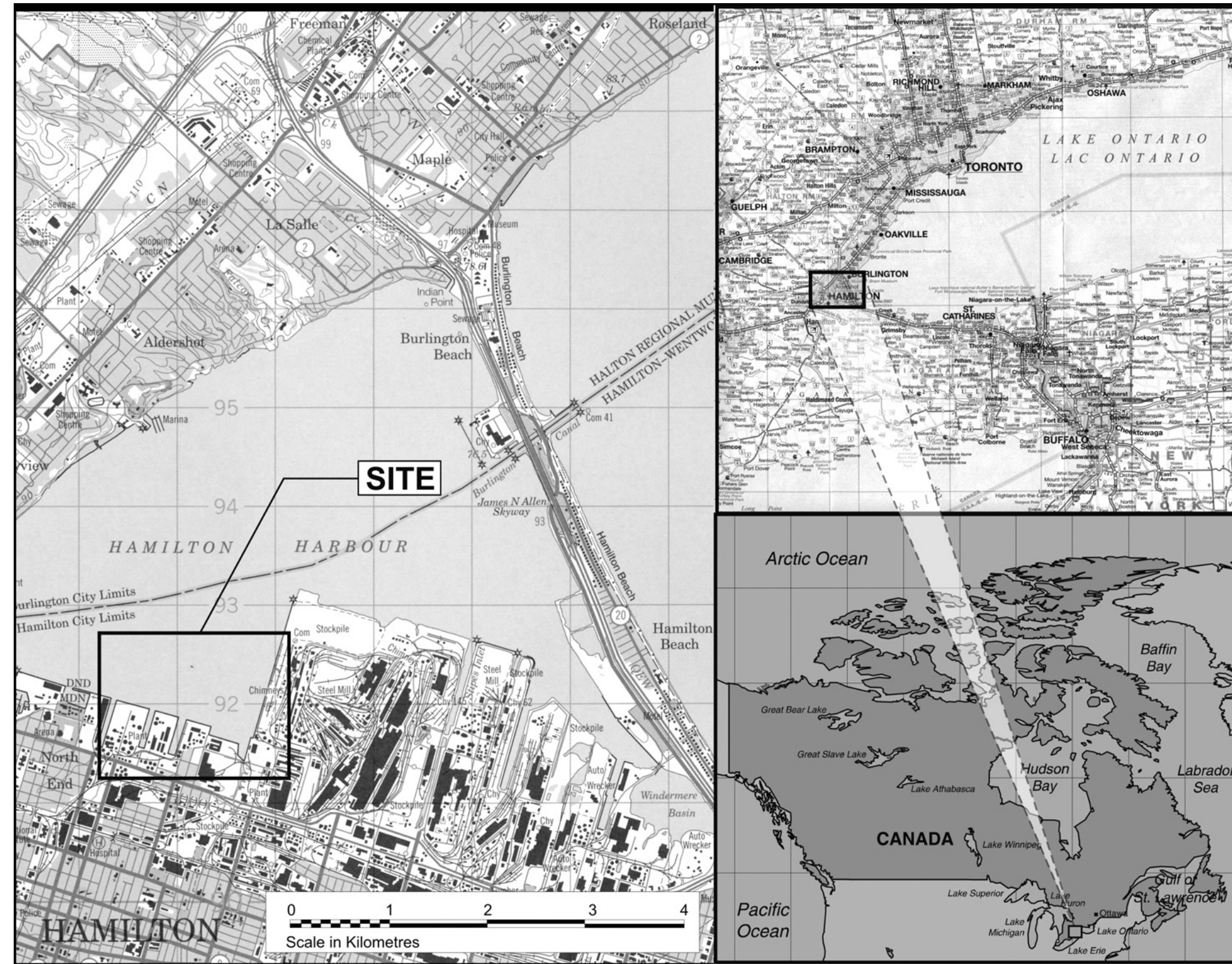
# RANDLE REEF SEDIMENT REMEDIATION PROJECT STAGE 2

## HAMILTON, ONTARIO

STAMP:



LEGEND:



### LOCATION PLAN

SCALE: N.T.S.

### DRAWING INDEX:

TP-2.0 - TITLE PAGE

- C-2.0 - MARINE WORK ZONE PLAN
- C-2.1 - EXISTING STAGING AREA LAYOUT PLAN AND TYP. DETAILS
- C-2.2 - DISCHARGE SITE PLAN
- C-2.3 - DREDGE MATERIAL INFILL SITE LAYOUT
- C-2.4 - TYP. SECTIONS AND DETAILS
- C-2.5 - US STEEL CHANNEL (PIER 16) ISOLATION CAPPING SITE PLAN AND TYP. DETAILS
- C-2.6 - US STEEL CHANNEL (PIER 16) ISOLATION CAPPING TYP. DETAILS

- S-2.1 - WATER TREATMENT PROCESS SITE PLAN
- S-2.2 - WATER TREATMENT PROCESS, PUMP PLATFORM AND WALKWAY SECTIONS AND DETAILS
- S-2.3 - WATER TREATMENT PROCESS, CONCRETE DETAILS

- D-2.0 - DREDGING PRIORITY AREAS SITE PLAN
- D-2.1 - DREDGING SITE PLAN
- D-2.2 - DREDGING SITE PLAN
- D-2.3 - DREDGING SITE PLAN
- D-2.4 - EXISTING REFLECTIVE LAYER
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- D-2.6 - EXISTING REFLECTIVE LAYER
- D-2.7 - HISTORIC SAMPLE LOCATIONS AND NEW VERIFICATION ZONES
- D-2.8 - HISTORIC SAMPLE LOCATIONS AND NEW VERIFICATION ZONES
- D-2.9 - HISTORIC SAMPLE LOCATIONS AND NEW VERIFICATION ZONES
- D-2.10 - CROSS SECTION LOCATION PLAN
- D-2.11 - ELEVATIONS AND TYP. SECTIONS
- D-2.12 - ELEVATIONS AND TYP. SECTIONS
- D-2.13 - DREDGING SEQUENCE TRANSITION TYP. SECTIONS
- D-2.14 - THIN LAYER CAP SITE PLAN
- D-2.15 - THIN LAYER CAP SITE PLAN
- D-2.16 - THIN LAYER CAP SITE PLAN
- D-2.17 - DREDGE AREA GRADE DEPTHS AND VERIFICATION ZONE LEGEND

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

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|---|---|
| A | Detail No.  |
| B | No. du detail   |
| C | drawing no. - where detail required<br>dessin no. - ou detail exigé |
| C | drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDICATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**TITLE PAGE**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**TP-2.0**

STAMP:

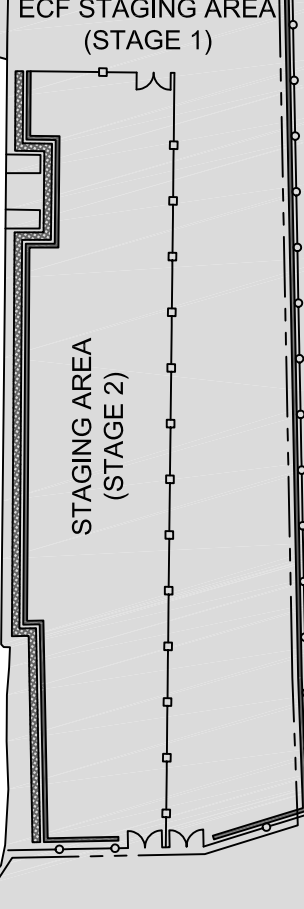
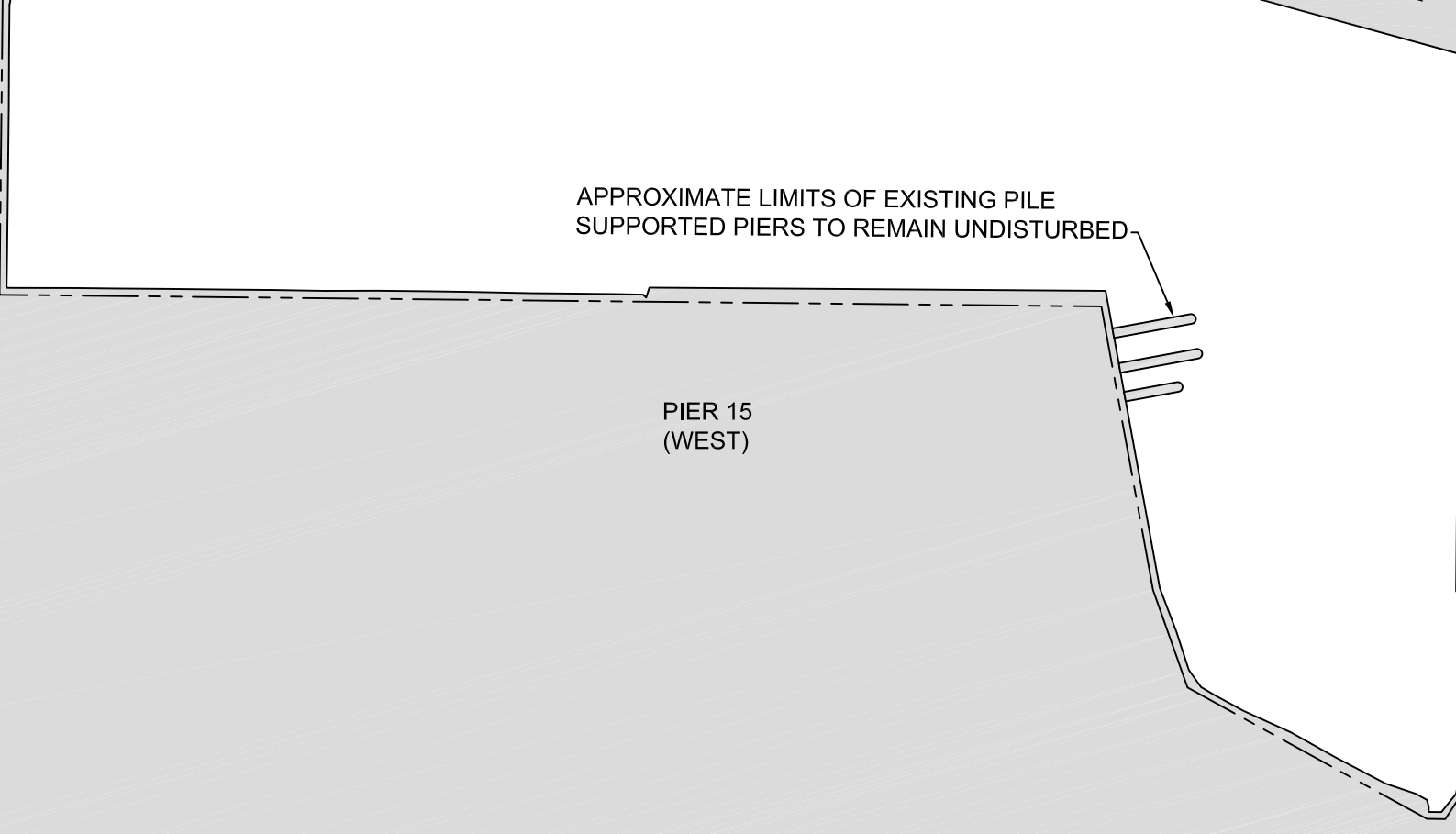
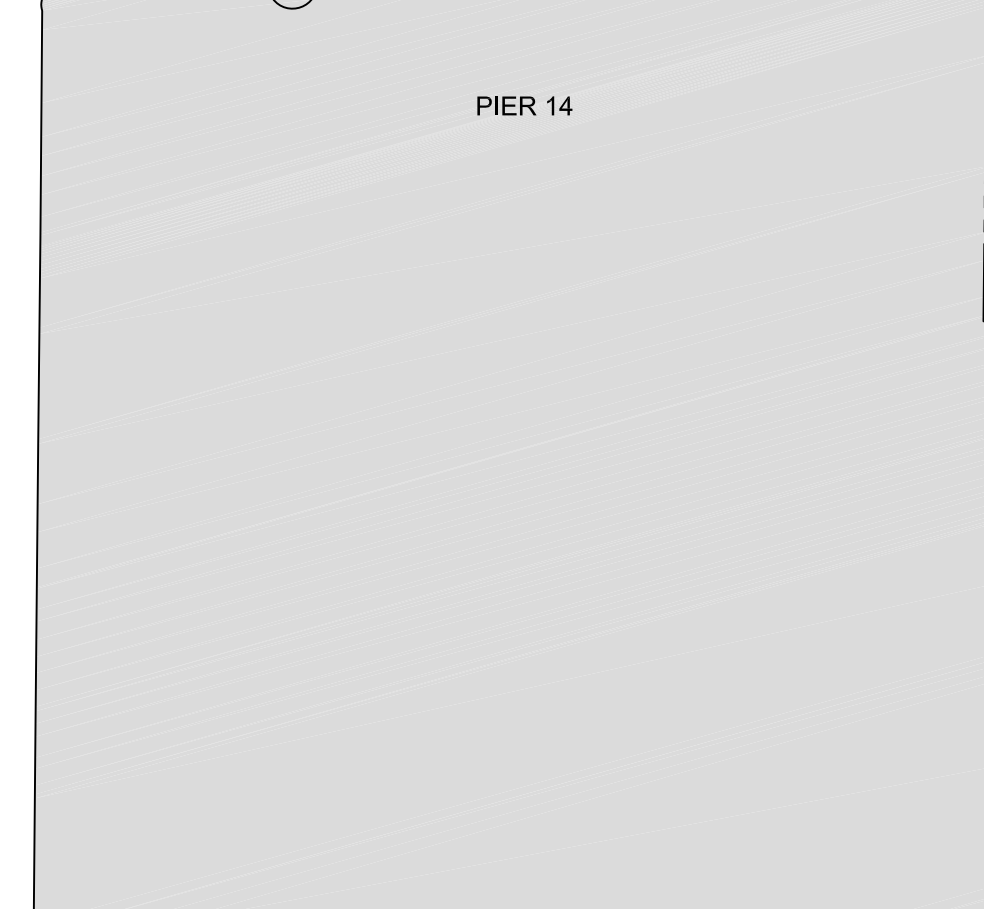
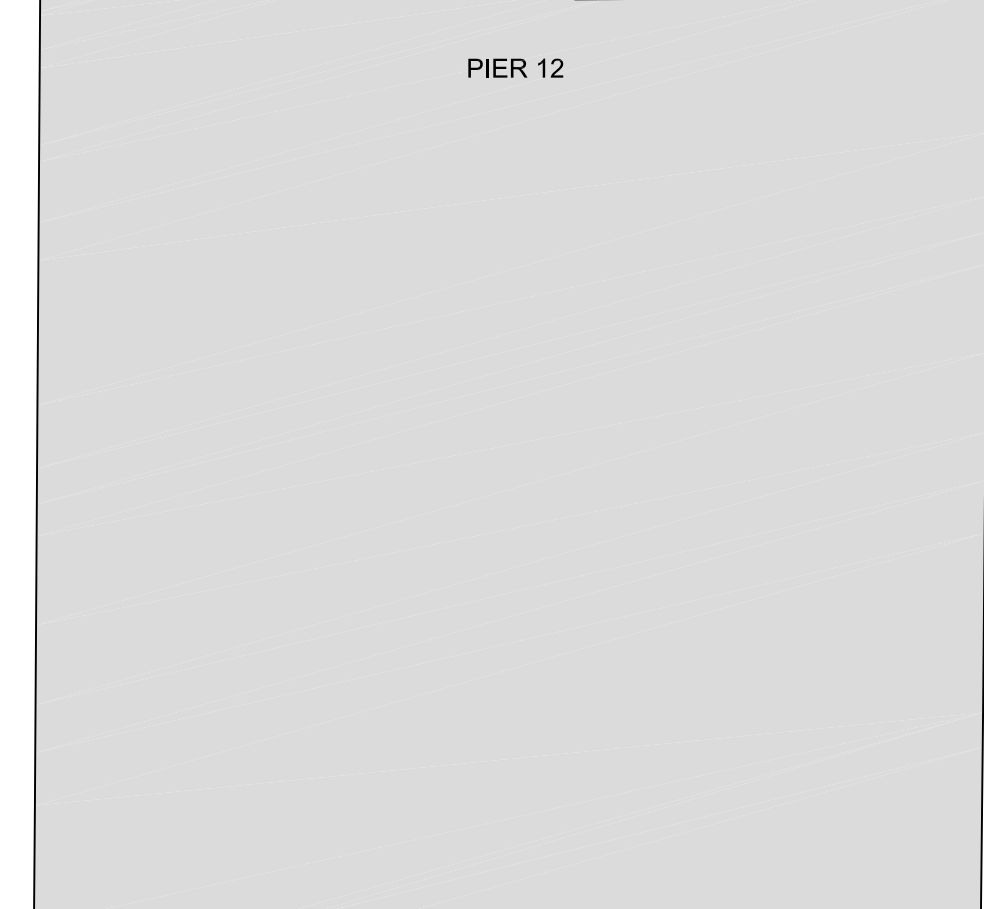
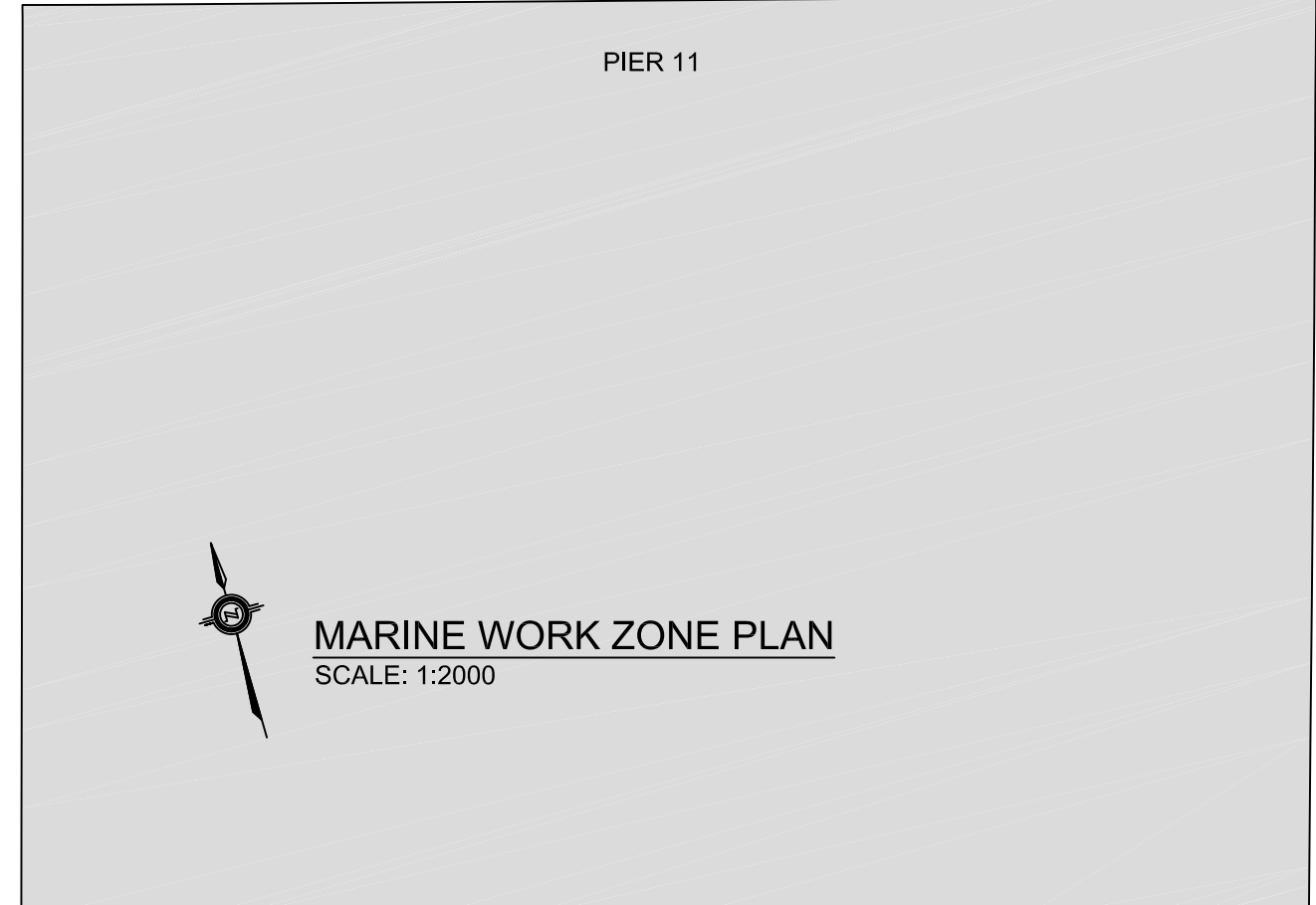
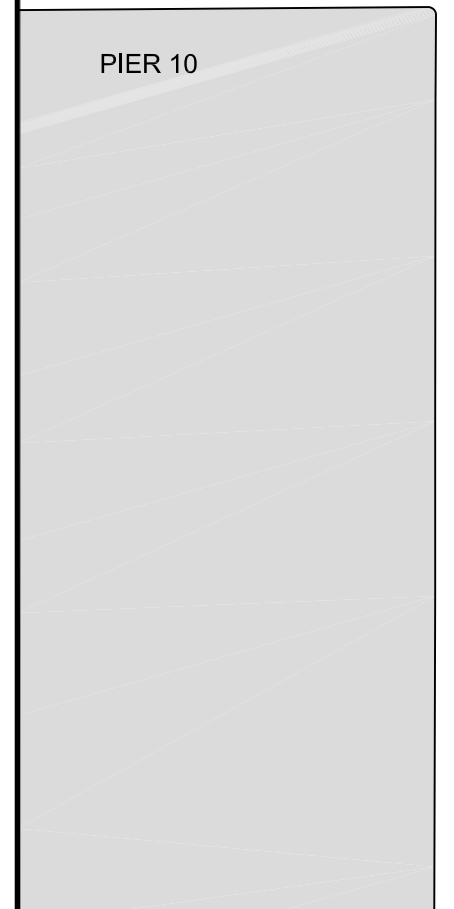
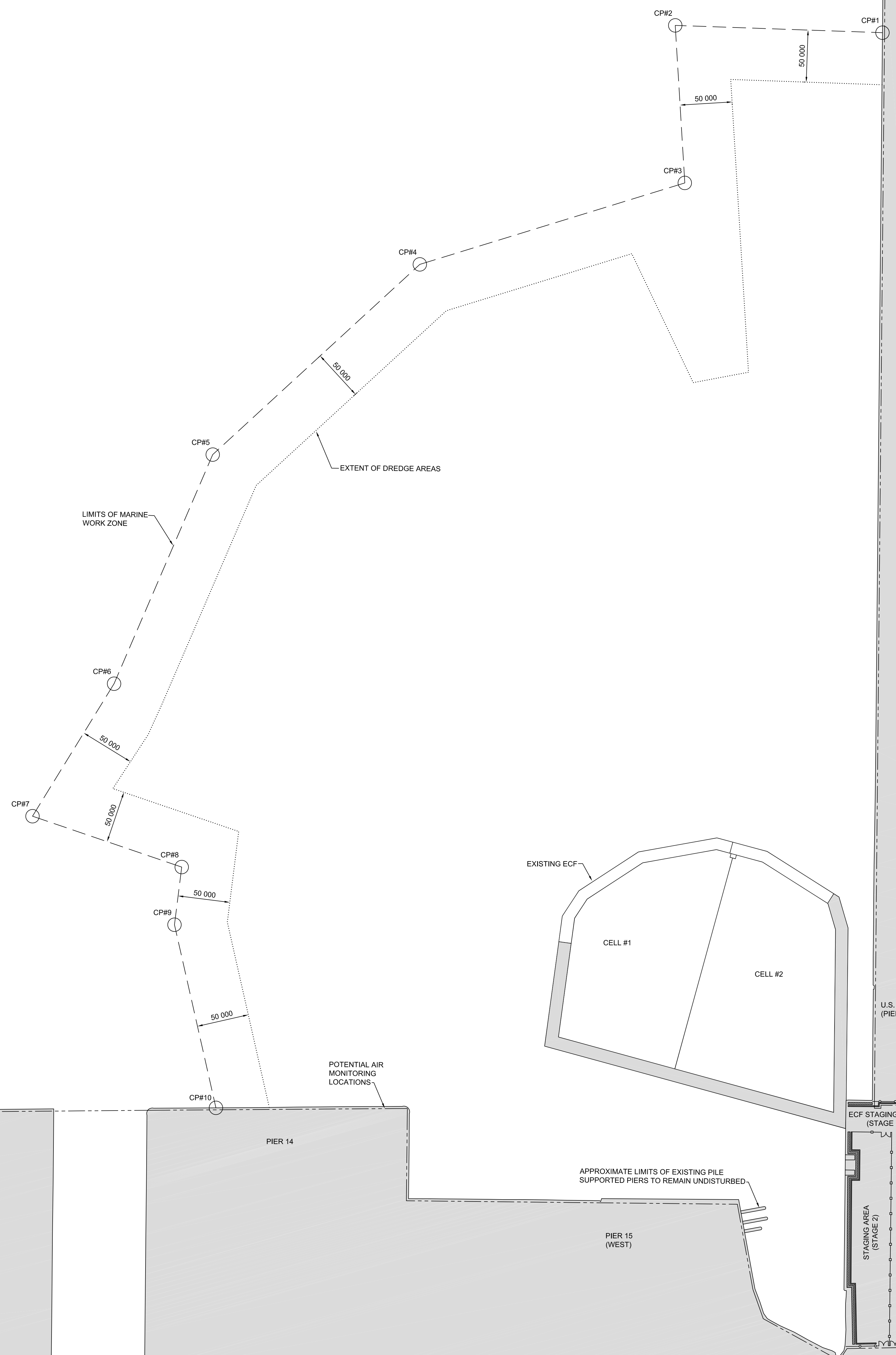


LEGEND:

- MARINE WORK ZONE LIMITS
- AIR MONITORING LOCATIONS
- ..... EXTENT OF DREDGE AREAS
- CP# MARINE WORK ZONE CONTROL POINTS

HAMILTON HARBOUR

| CP# | EASTING    | NORTHING     |
|-----|------------|--------------|
| 1   | 595,069.14 | 4,792,637.35 |
| 2   | 594,879.83 | 4,792,696.91 |
| 3   | 594,946.97 | 4,792,550.99 |
| 4   | 594,580.89 | 4,792,545.94 |
| 5   | 594,339.45 | 4,792,425.19 |
| 6   | 594,187.77 | 4,792,239.85 |
| 7   | 594,077.44 | 4,792,139.14 |
| 8   | 594,201.67 | 4,792,052.73 |
| 9   | 594,179.74 | 4,792,001.41 |
| 10  | 594,169.54 | 4,791,821.46 |



**MARINE WORK ZONE PLAN**  
SCALE: 1:2000

| revision | date |
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| A<br>B<br>C | A Detail No.<br>No. du détail   |
|             | B drawing no. - where detail required<br>dessin no. - ou détail exigé |
|             | C drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDIAION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**MARINE WORK ZONE PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

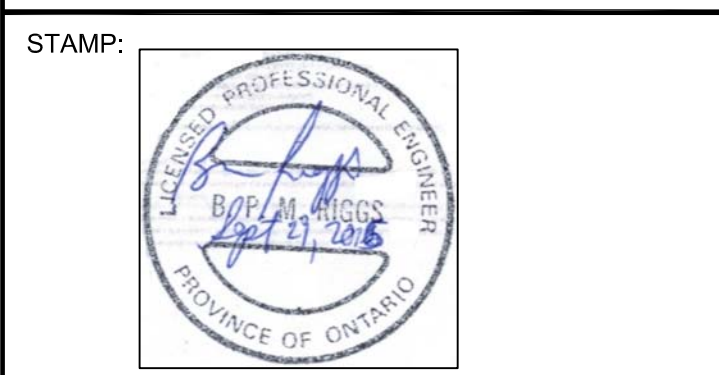
bid  
offre

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**C-2.0**

project manager  
administrateur de projets



- LEGEND:**
- - - - - EXISTING WATER LINES
  - - - - - EXISTING TEMPORARY FENCE
  - ○ ○ ○ EXISTING CHAINLINK FENCE
  - FH ○ EXISTING FIRE HYDRANT
  - CB ■ EXISTING CATCH BASINS
  - CBMH ■ EXISTING MAINTENANCE HOLE
  - + 2.31 EXISTING ELEVATIONS
  - ▨ EXISTING STRAW BALES
  - ▨ ▨ ▨ EXISTING CONC. BARRIERS

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

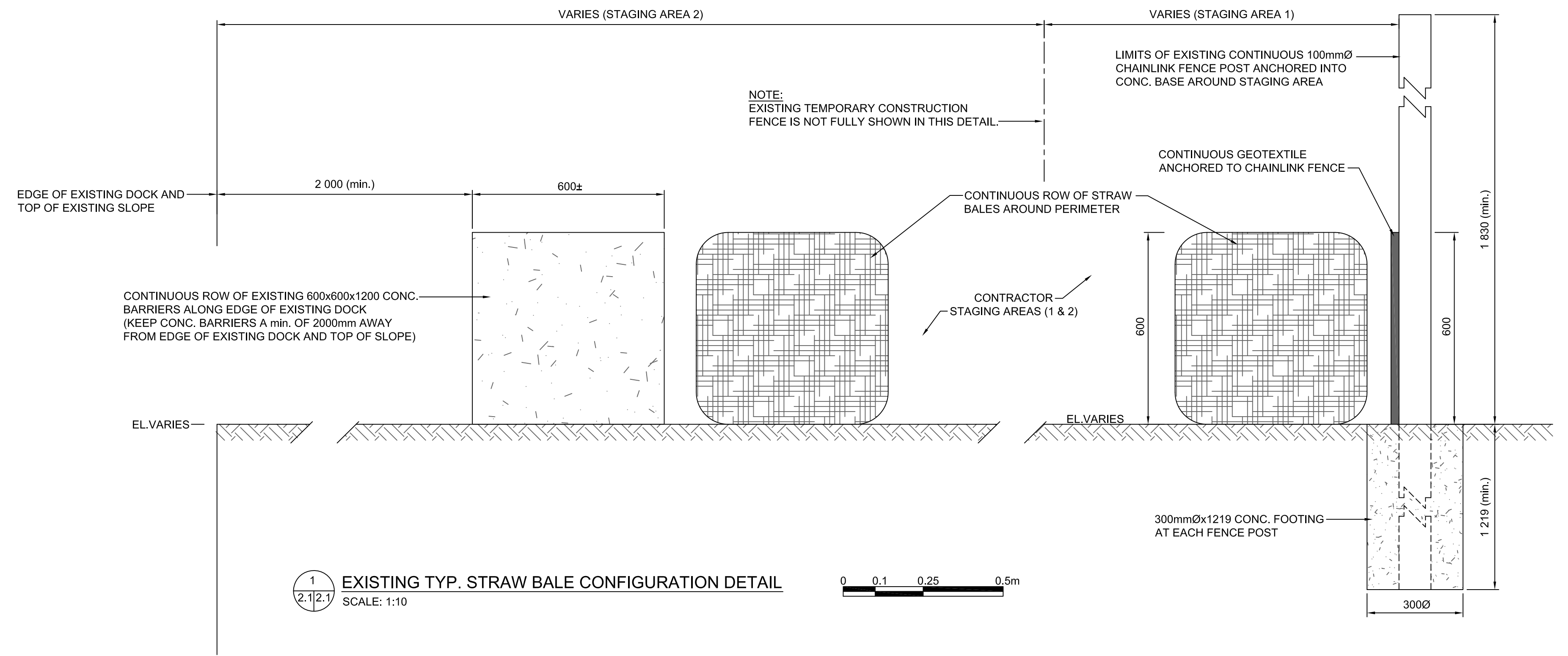
- |             |                                       |
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|             | B drawing no. - where detail required |
|             | C drawing no. - where detailed        |

project title  
titre du projet  
**HAMILTON ONTARIO**

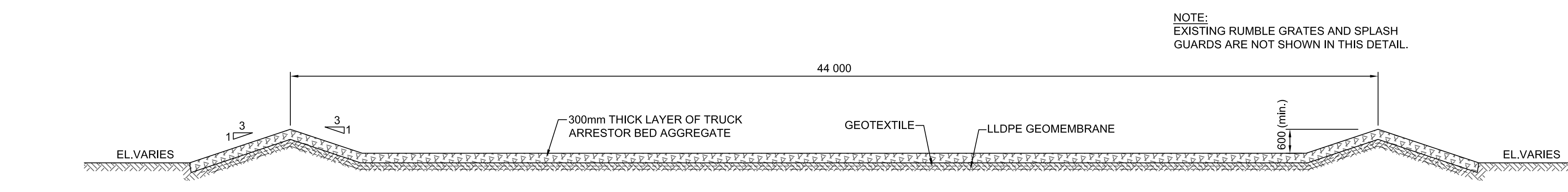
**RANDLE REEF SEDIMENT  
REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**EXISTING STAGING AREA  
LAYOUT PLAN AND TYP. DETAILS**

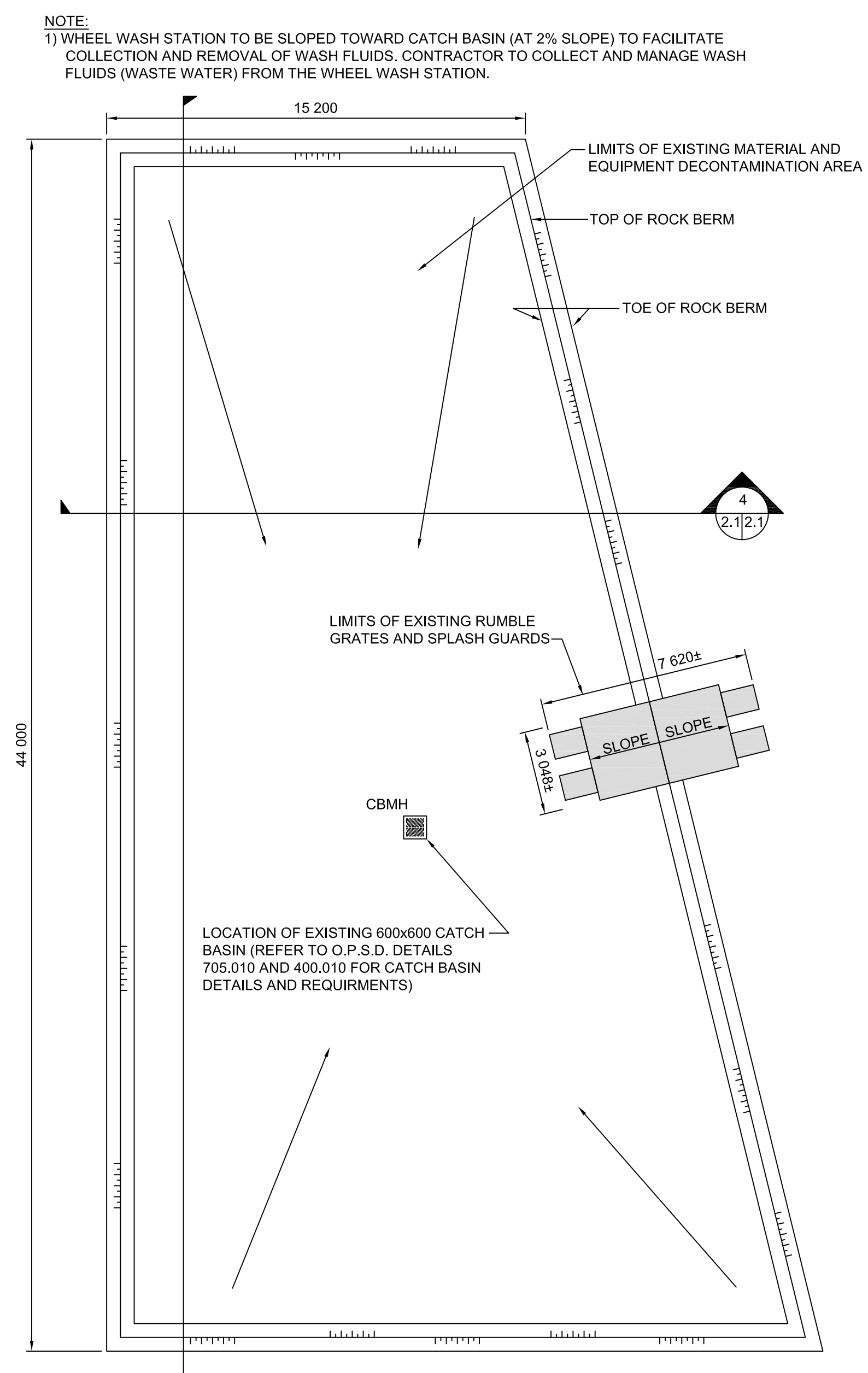
|                                |  |
|--------------------------------|--|
| drawn by<br>dessiné par        | A.MARCZENKO                                  |
| designed by<br>conc. par       | B.RIGGS                                      |
| approved by<br>approuvé par    |  |
| bid<br>offre                   | project manager<br>administrateur de projets |
| project date<br>date du projet | 2017-01-15                                   |
| project no.<br>no. du projet   | R.050927.202                                 |
| drawing no.<br>dessiné no.     | C-2.1  |



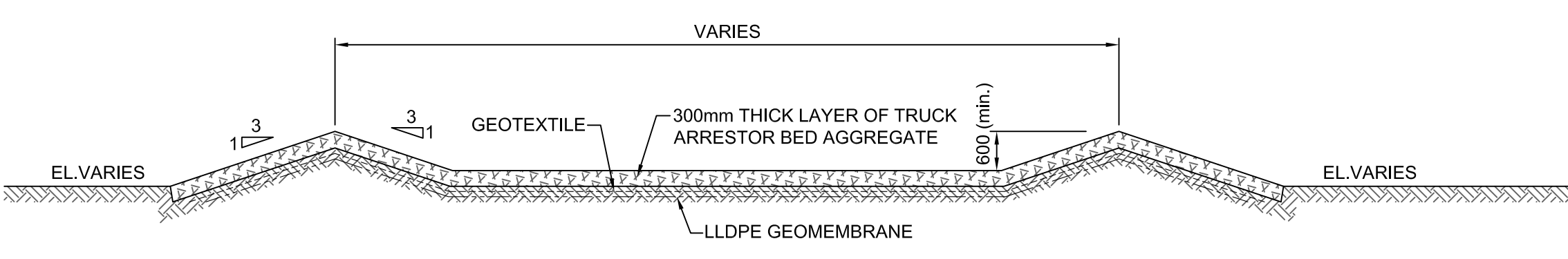
1 EXISTING TYP. STRAW BALE CONFIGURATION DETAIL  
SCALE: 1:10



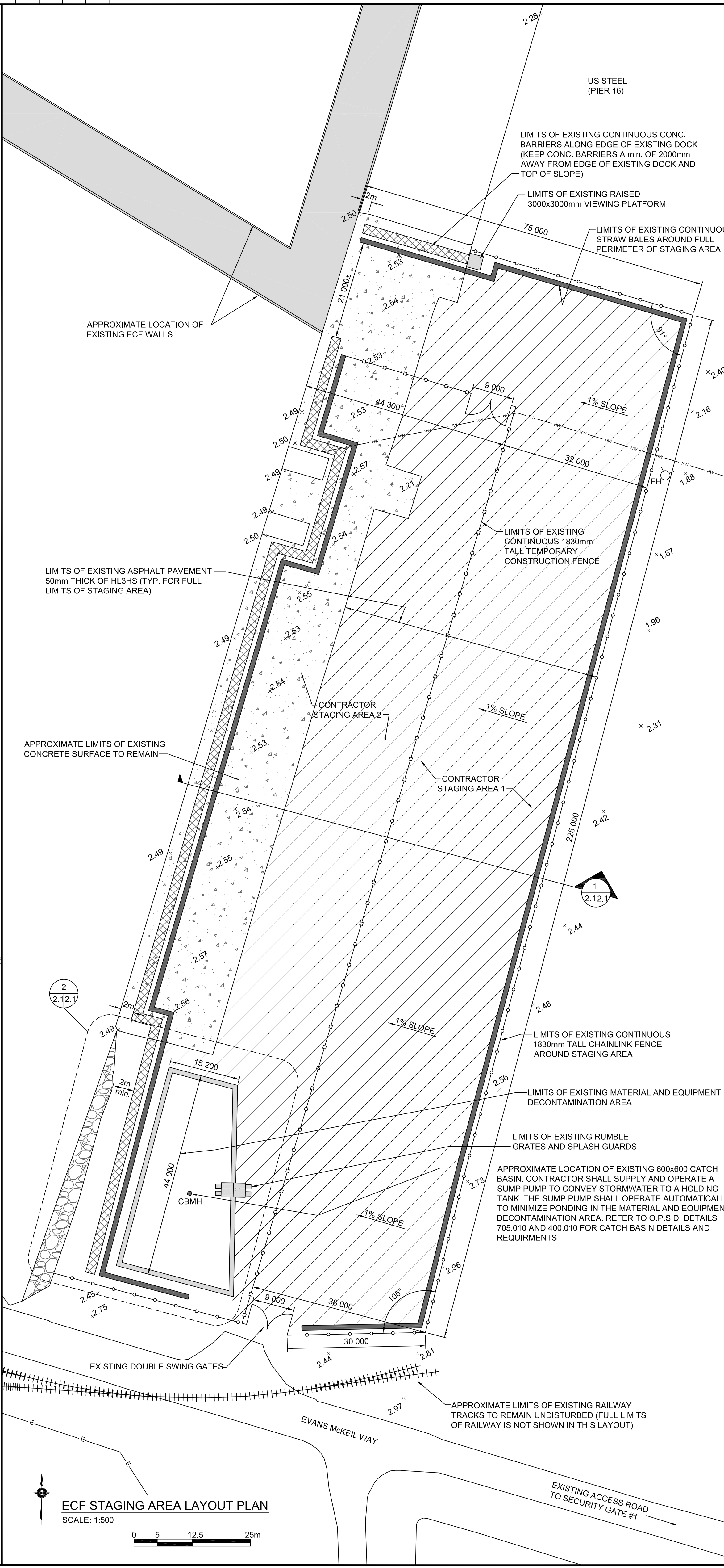
3 TYP. SECTION OF EXISTING DECONTAMINATION AREA  
SCALE: 1:100



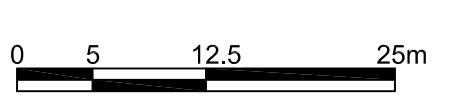
2 EXISTING DECONTAMINATION AREA LAYOUT  
SCALE: 1:150



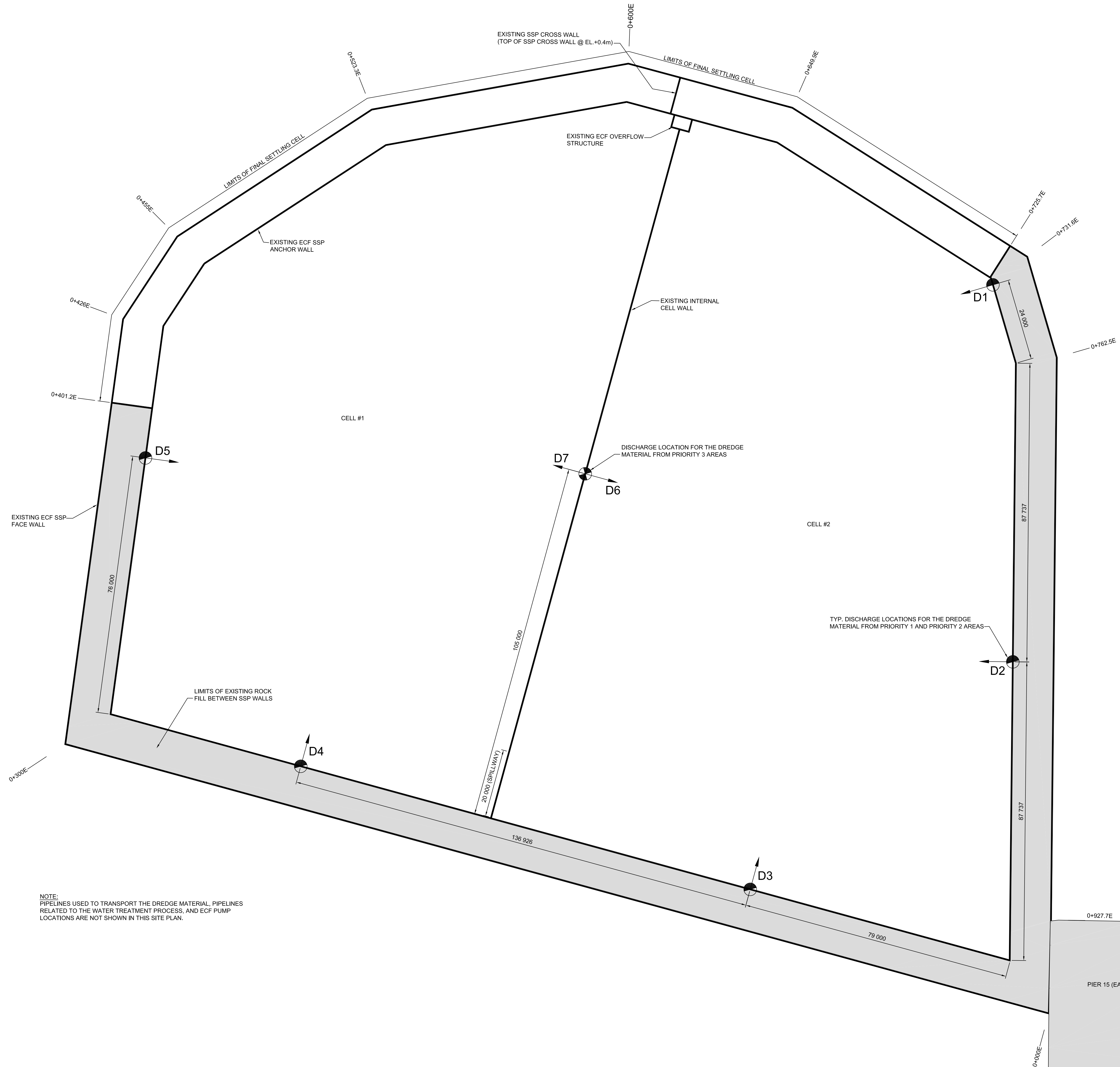
4 TYP. SECTION OF EXISTING DECONTAMINATION AREA  
SCALE: 1:100



ECF STAGING AREA LAYOUT PLAN  
SCALE: 1:500



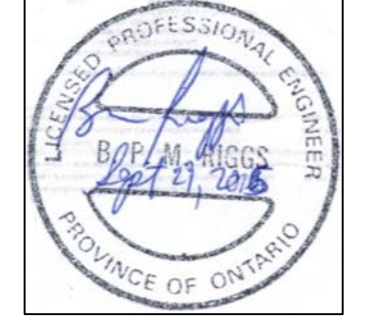
HAMILTON HARBOUR



NOTE:  
PIPELINES USED TO TRANSPORT THE DREDGE MATERIAL, PIPELINES RELATED TO THE WATER TREATMENT PROCESS, AND ECF PUMP LOCATIONS ARE NOT SHOWN IN THIS SITE PLAN.

DISCHARGE SITE PLAN  
SCALE: 1:500

STAMP:



LEGEND:  
 DISCHARGE LOCATION AND DIRECTION (PRIORITY 1 AND PRIORITY 2)  
 DISCHARGE LOCATION AND DIRECTION (PRIORITY 3)  
**D#** DISCHARGE LOCATION ID NUMBER

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

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| A | Detail No. / No. du détail   |
| B | drawing no. - where detail required / dessin no. - où détail exigé |
| C | drawing no. - where detailed / dessin no. - où détaillé            |

project title / titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title / titre du dessin  
**DISCHARGE SITE PLAN**

drawn by / dessiné par  
**A.MARCZENKO**

designed by / conçu par  
**B.RIGGS**

approved by / approuvé par

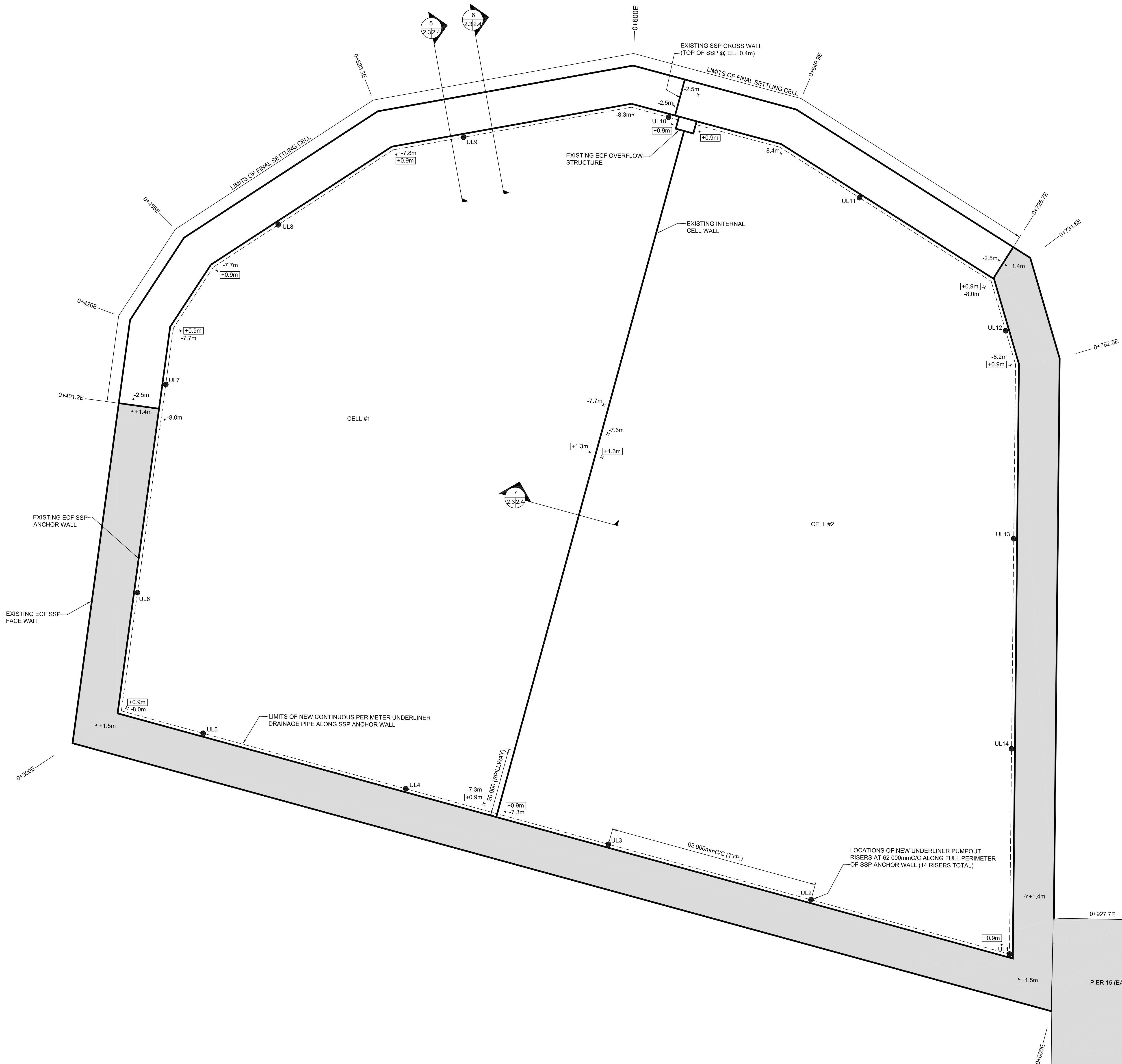
bid / offre project manager / administrateur de projets

project date / date du projet  
**2017-01-15**

project no. / no. du projet  
**R.050927.202**

drawing no. / dessin no.  
**C-2.2**

HAMILTON HARBOUR



STAMP:



LEGEND:

- +1.3m FINAL ELEVATIONS OF TOP OF DREDGE MATERIAL (RELATIVE TO DATUM)
- +8.0m EXISTING ELEVATIONS (RELATIVE TO DATUM)
- UNDERLINER DRAINAGE PIPE
- UL# PUMPOUT RISER LOCATIONS

| revision | date |
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| A<br>B<br>C | A Detail No.<br>No. du détail   |
|             | B drawing no. - where detail required<br>dessin no. - ou détail exigé |
|             | C drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**DREDGE MATERIAL INFILL SITE LAYOUT**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

bid  
offre

project manager  
administrateur de projets

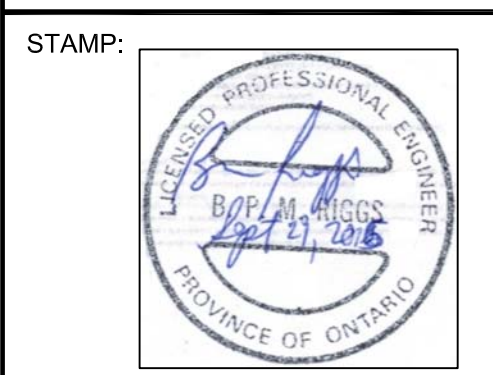
project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**C-2.3**

US STEEL (PIER 16)

PIER 15 (EAST)



LEGEND:  
+1.3m FINAL ELEVATIONS OF TOP OF DREDGE MATERIAL  
--- CONTINUOUS DRAINAGE TILE

| revision | date |
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| A | Detail No.                          |
| B | No. du détail                       |
| B | drawing no. - where detail required |
| B | dessin no. - ou détail exigé        |
| C | drawing no. - where detailed        |
| C | dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**TYP. SECTIONS AND DETAILS**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

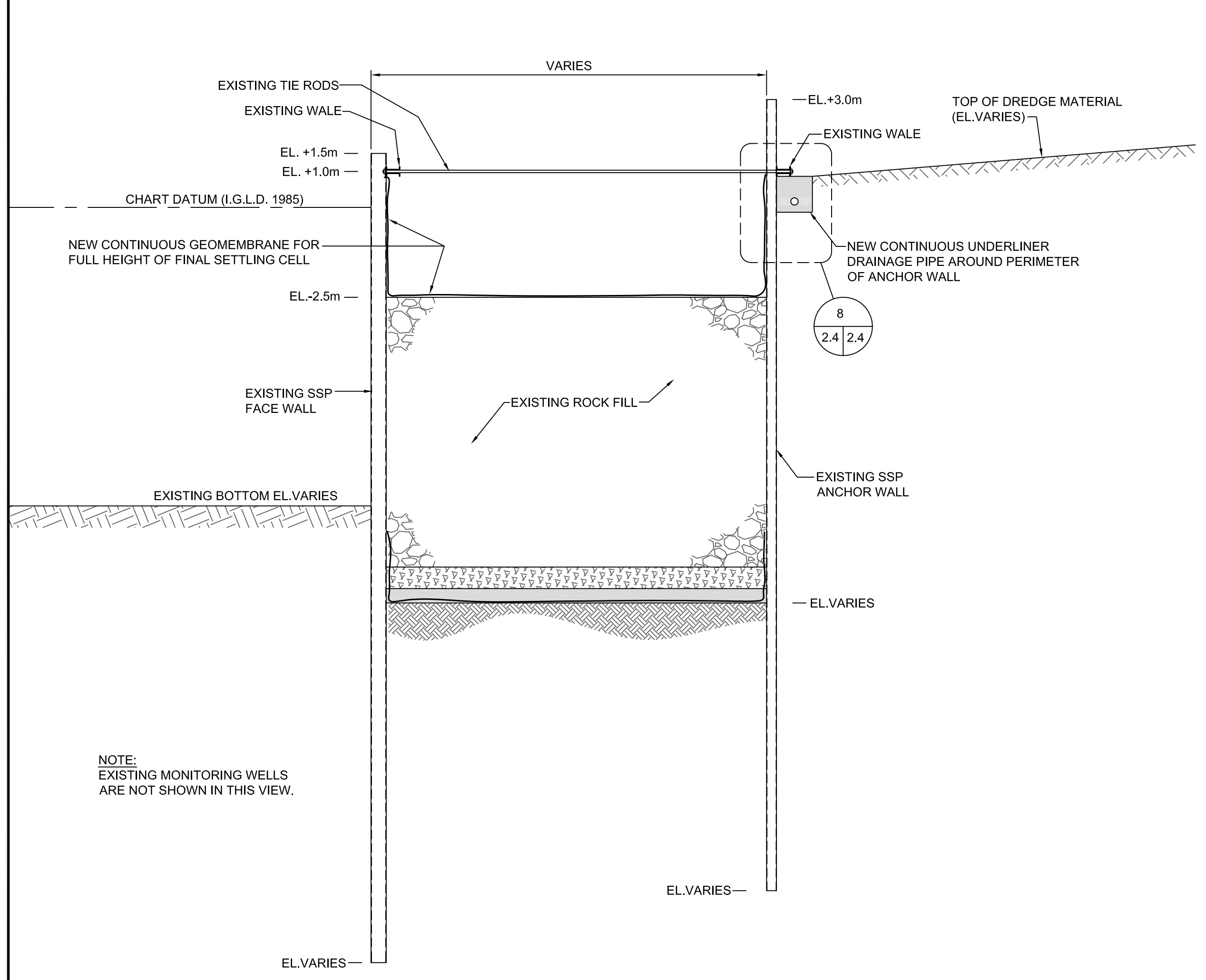
approved by  
approuvé par

bid  
offre  
project manager  
administrateur de projets

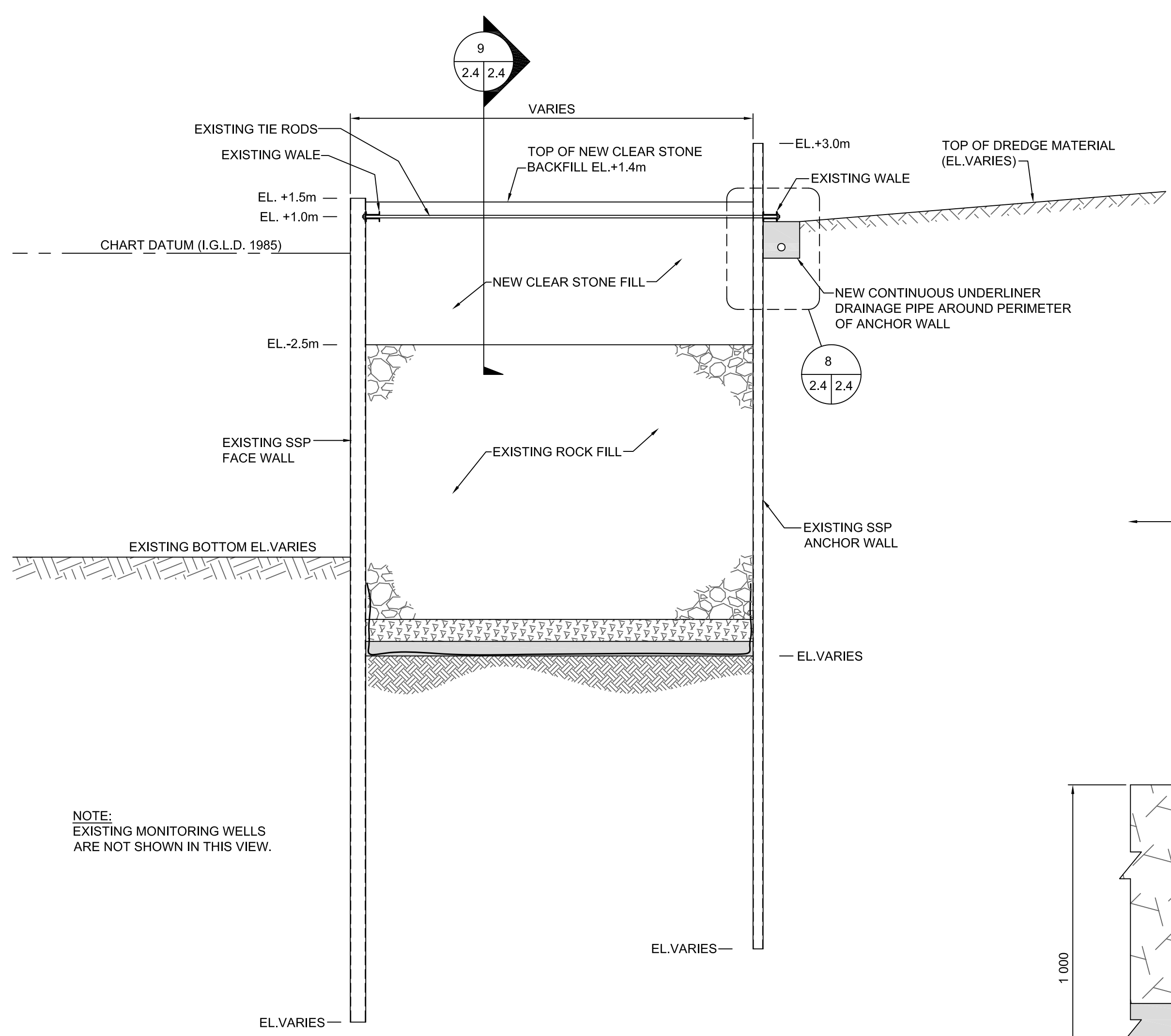
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**2017-01-15**

project no.  
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**R.050927.202**

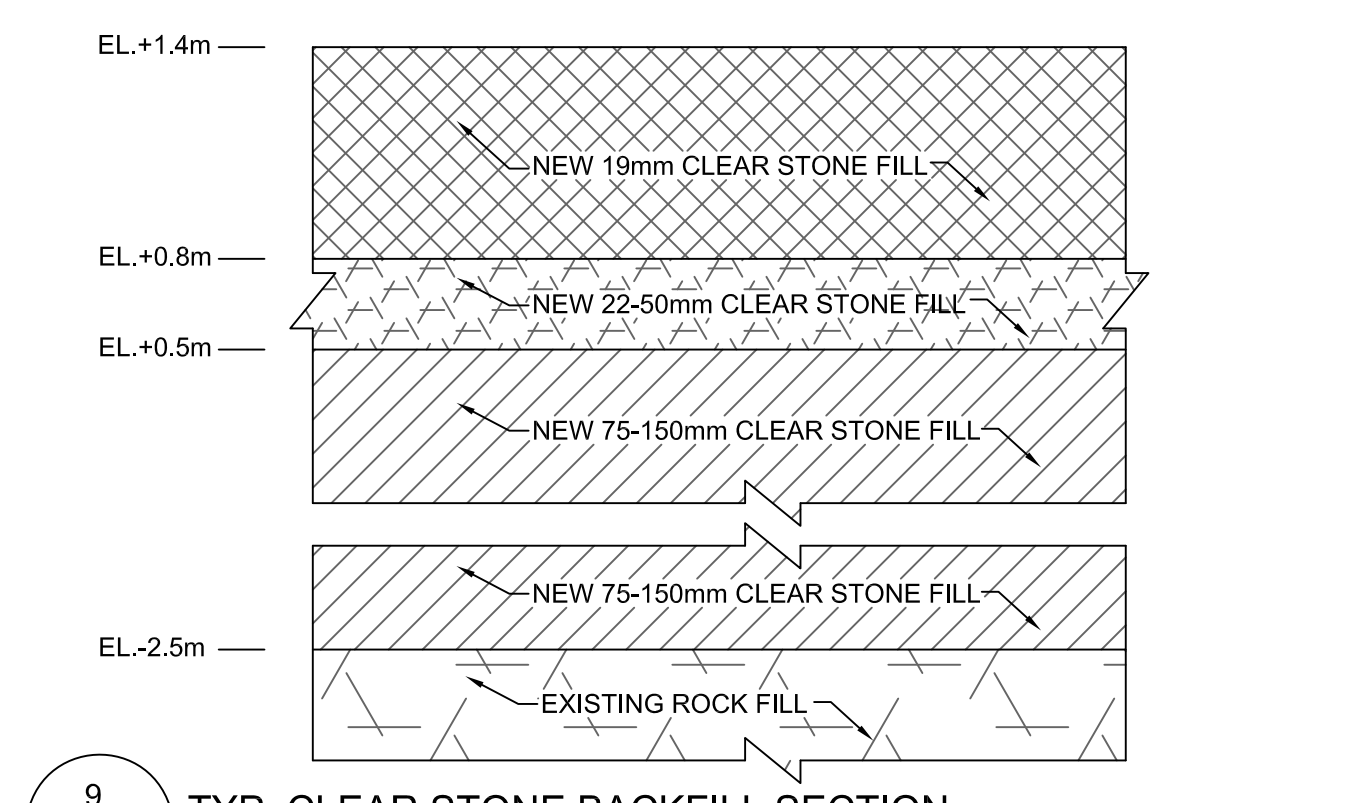
drawing no.  
dessiné no.  
**C-2.4**



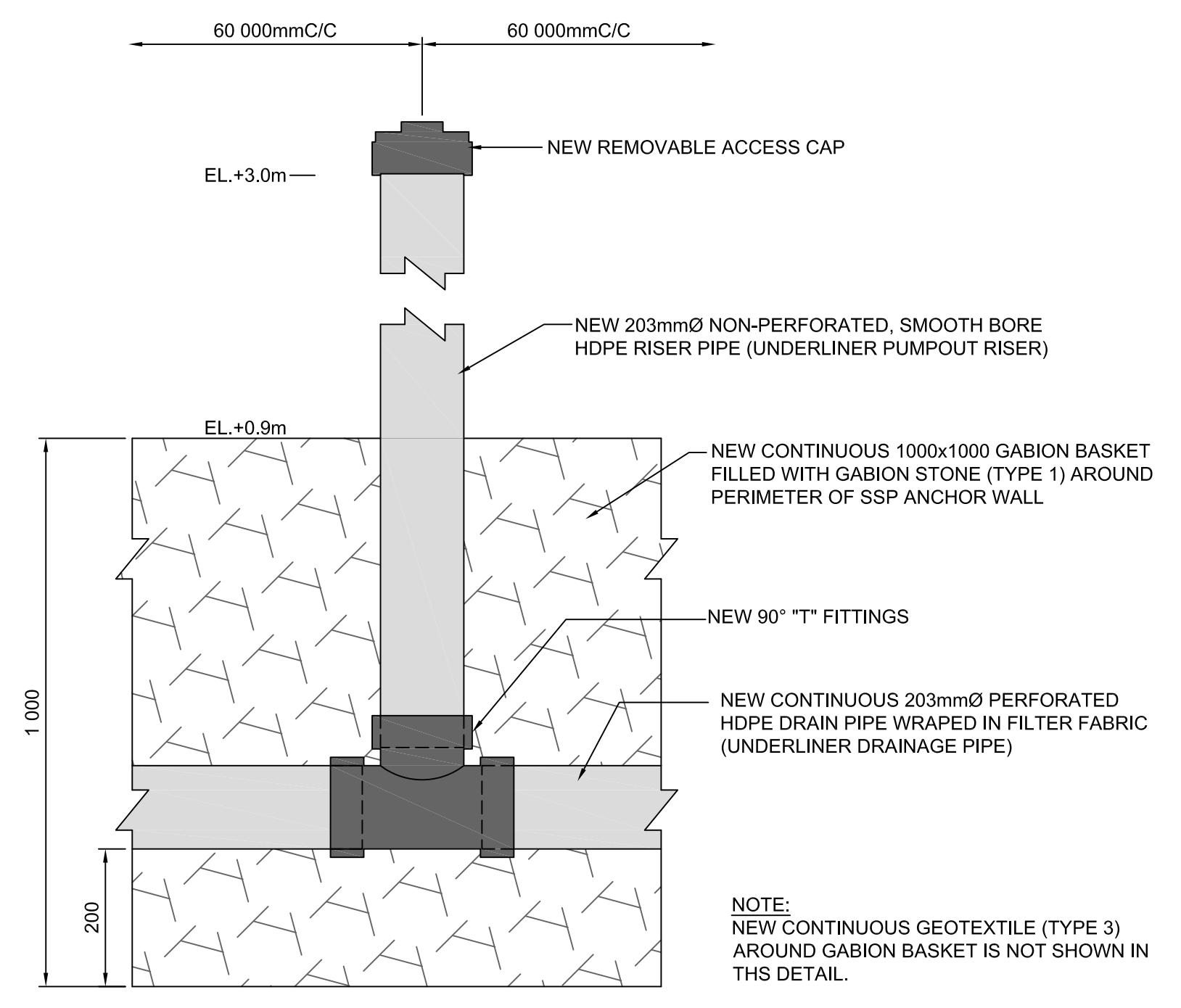
5 TYP. SECTION OF FINAL SETTLING CELL - (0+401.2E TO 0+725.7E)  
SCALE: 1:100



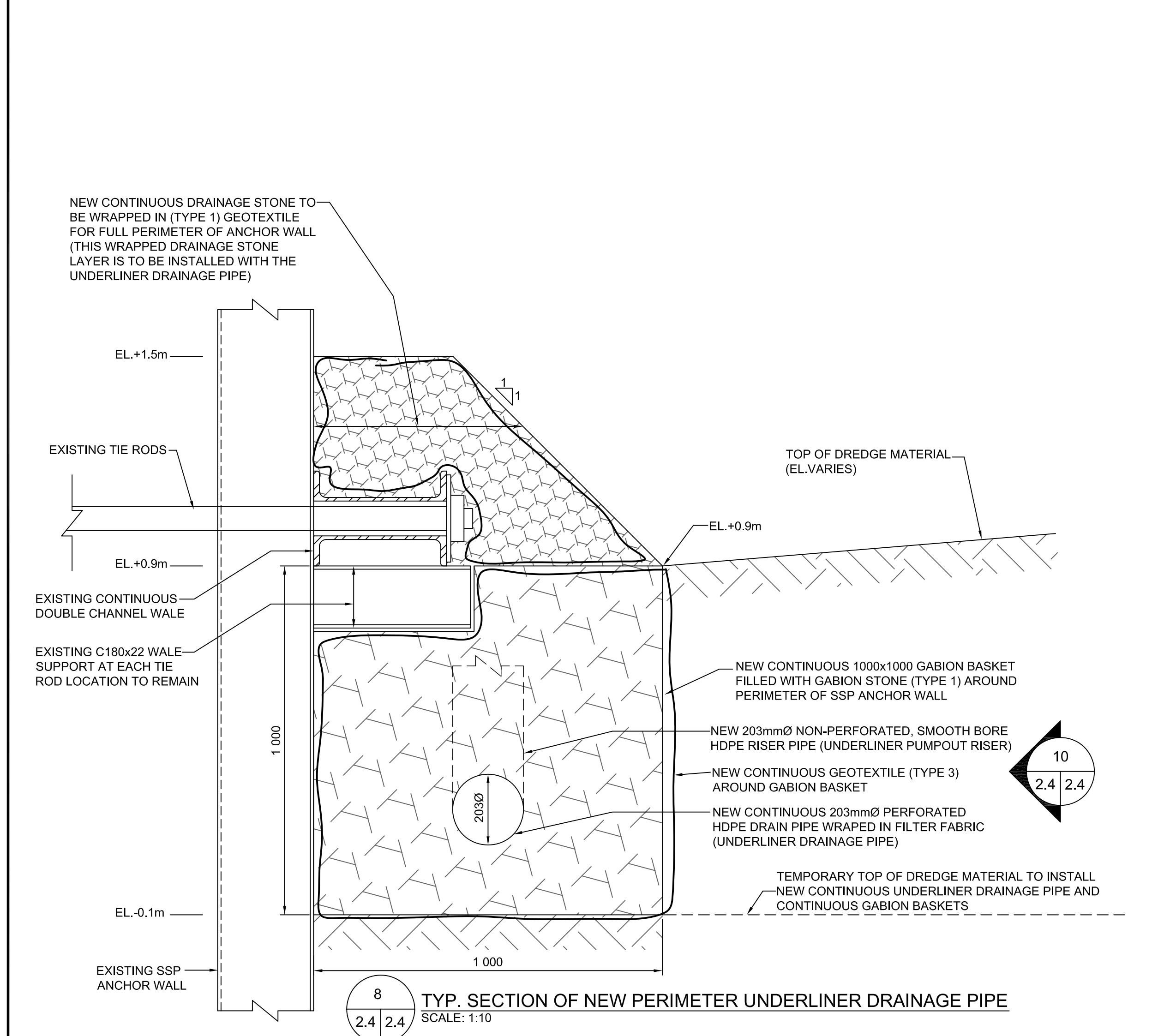
6 TYP. SECTION OF (UNUSED) FINAL SETTLING CELL - (0+401.2E TO 0+725.7E)  
SCALE: 1:100



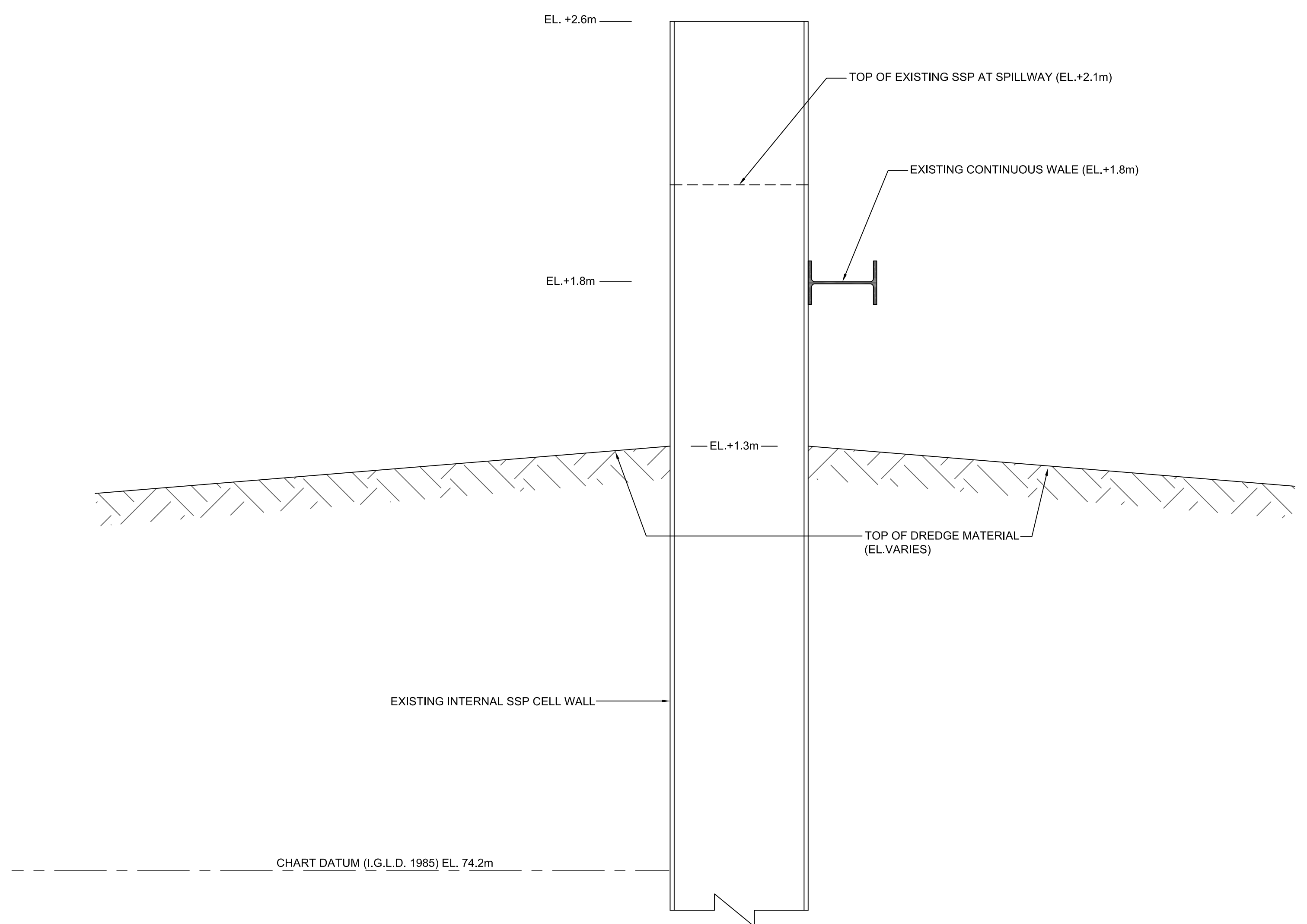
9 TYP. CLEAR STONE BACKFILL SECTION - (0+401.2E TO 0+725.7E)  
SCALE: 1:25



10 TYP. UNDERLINER PUMPOUT RISER CONNECTION DETAIL  
SCALE: 1:10

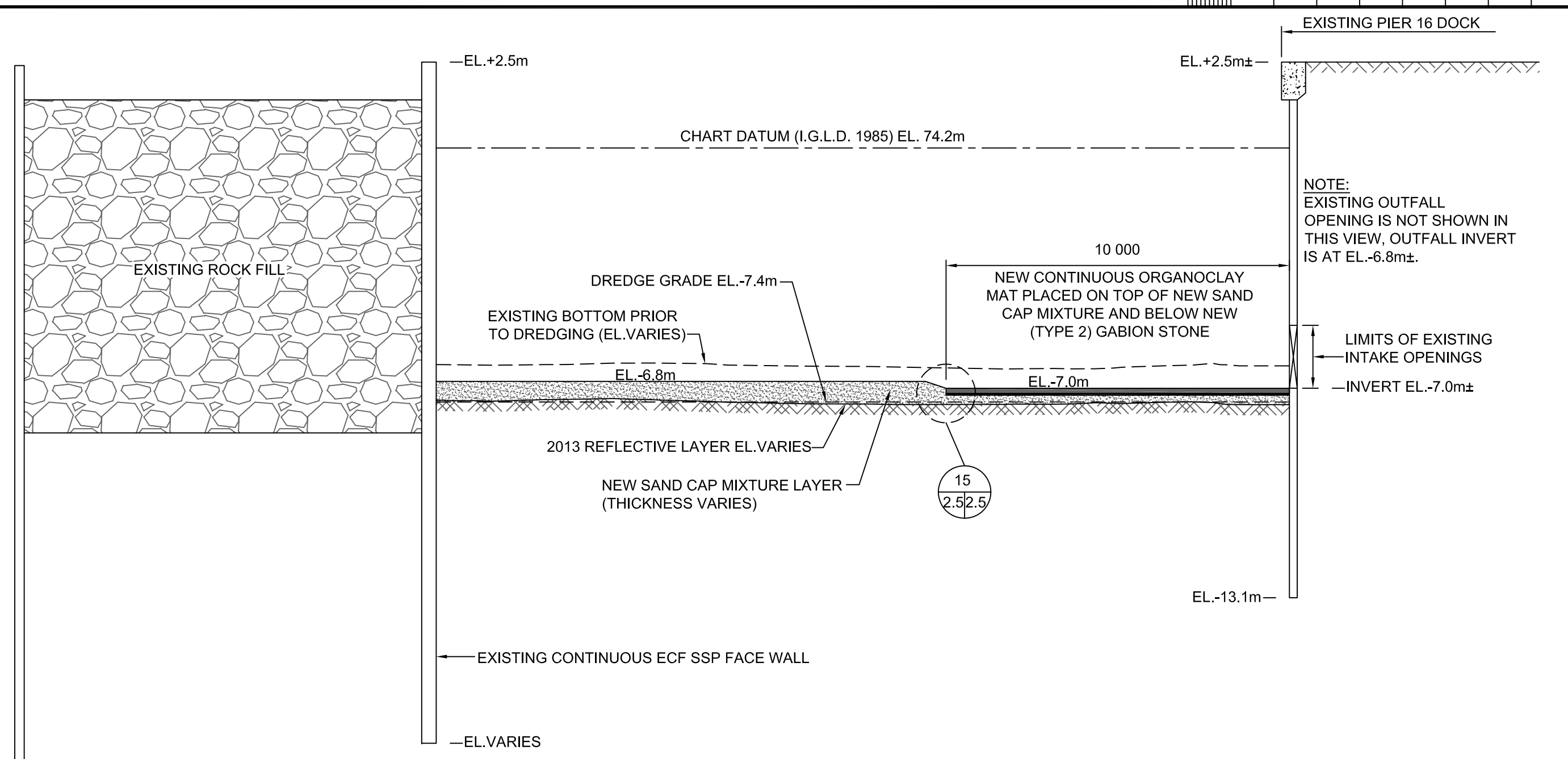


8 TYP. SECTION OF NEW PERIMETER UNDERLINER DRAINAGE PIPE  
SCALE: 1:10

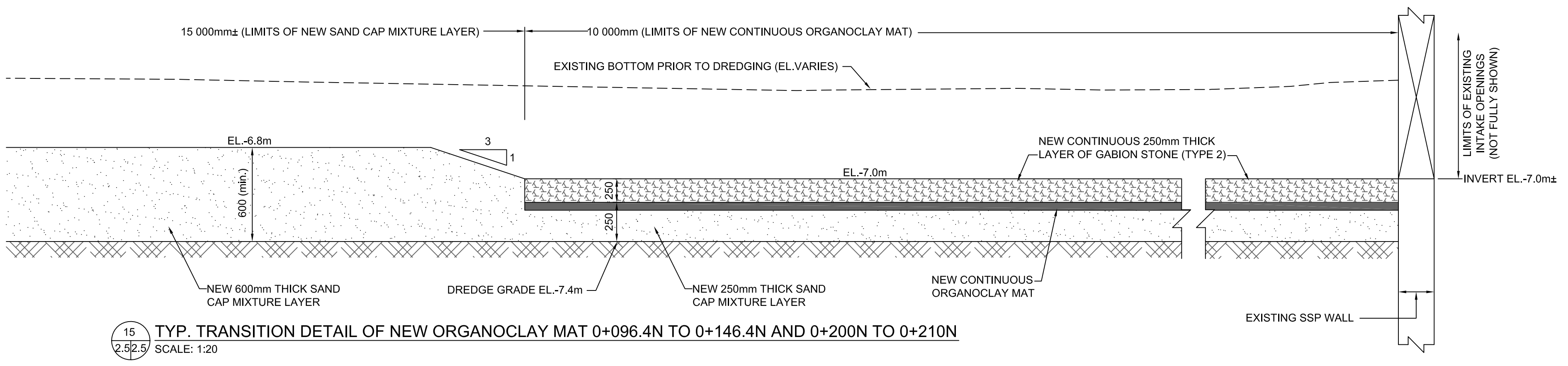


7 DREDGE MATERIAL BACKFILL DETAIL  
SCALE: 1:10

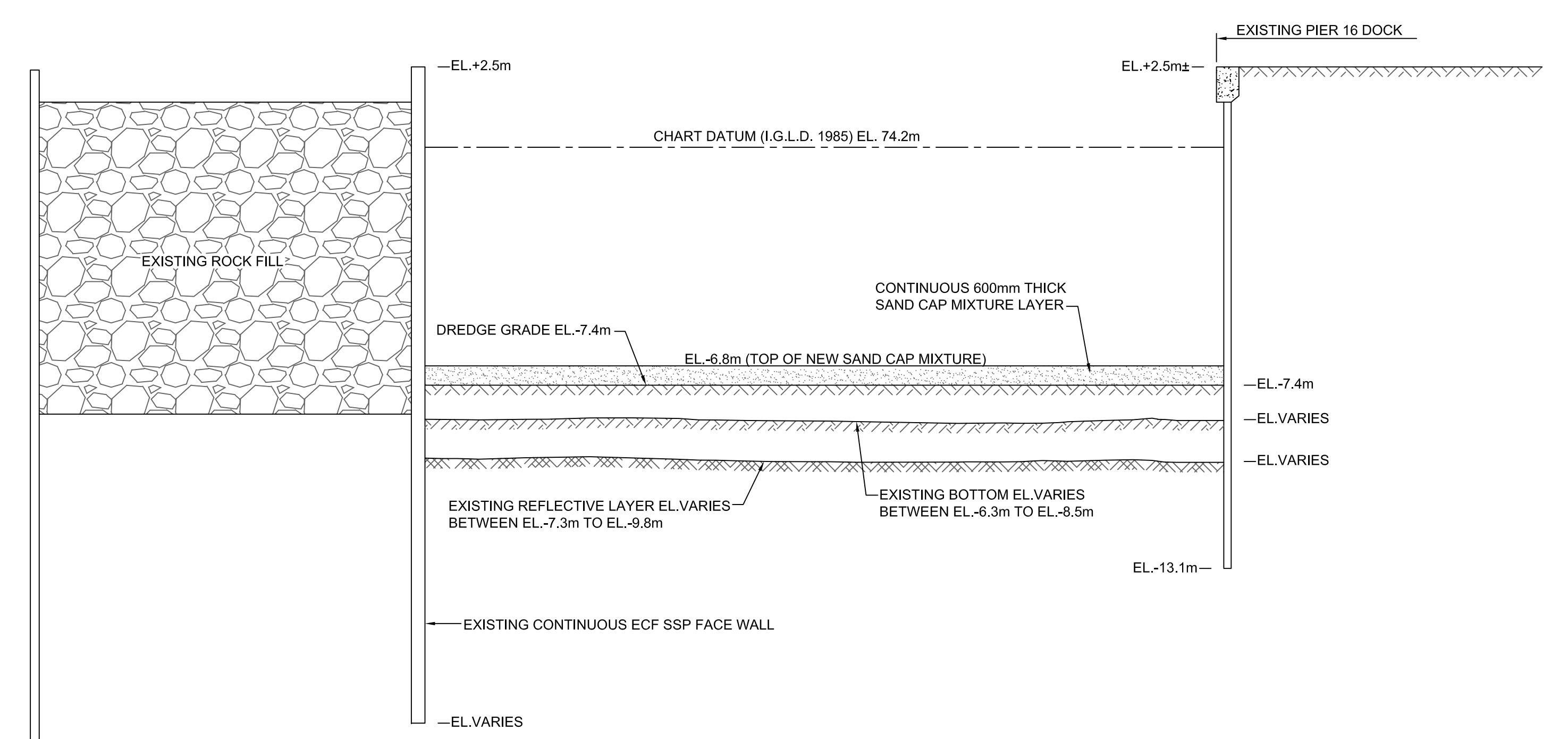
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



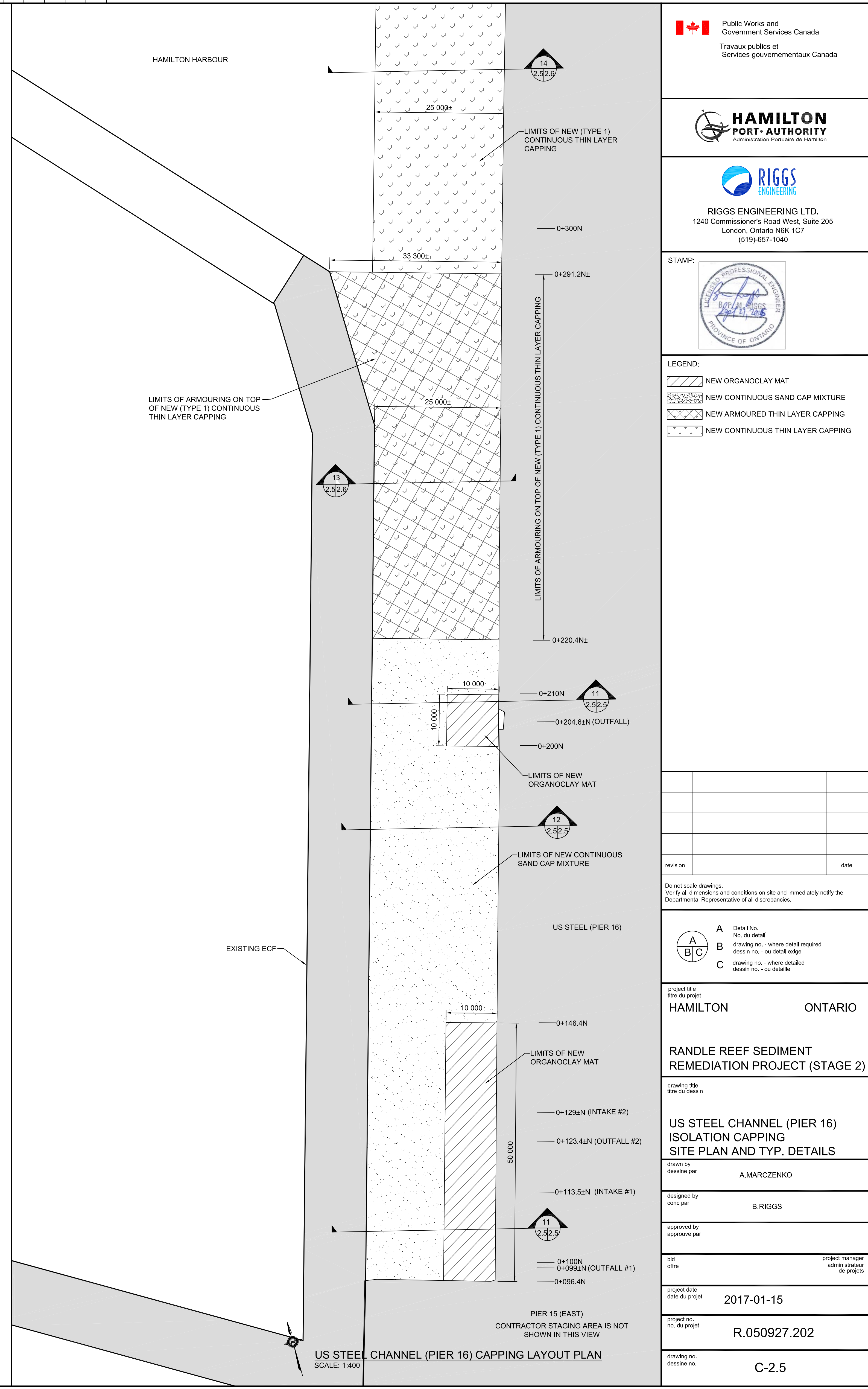
11 TYP. SECTION OF NEW ORGANOCLAY MAT BETWEEN 0+096.4N TO 0+146.4N AND 0+200N TO 0+210N  
SCALE: 1:125



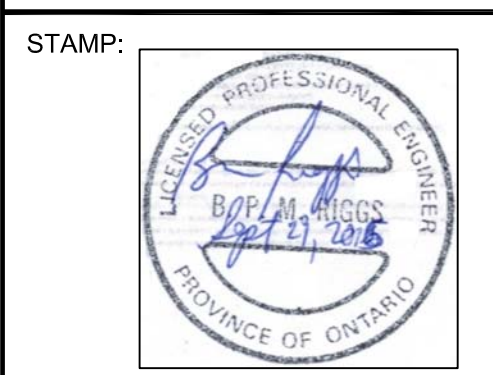
15 TYP. TRANSITION DETAIL OF NEW ORGANOCLAY MAT 0+096.4N TO 0+146.4N AND 0+200N TO 0+210N  
SCALE: 1:20



12 TYP. SECTION OF NEW SAND CAP MIXTURE LAYER BETWEEN 0+146.4N TO 0+200N AND 0+210N TO 0+220.4N  
SCALE: 1:125



US STEEL CHANNEL (PIER 16) CAPPING LAYOUT PLAN  
SCALE: 1:400



- LEGEND:
- NEW ORGANOCLAY MAT
  - NEW CONTINUOUS SAND CAP MIXTURE
  - NEW ARMURED THIN LAYER CAPPING
  - NEW CONTINUOUS THIN LAYER CAPPING

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

| Detail No. | No. du détail                       |
|------------|-------------------------------------|
| A          | drawing no. - where detail required |
| B          | dessin no. - ou détail exigé        |
| C          | drawing no. - where detailed        |
|            | dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**US STEEL CHANNEL (PIER 16) ISOLATION CAPPING SITE PLAN AND TYP. DETAILS**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

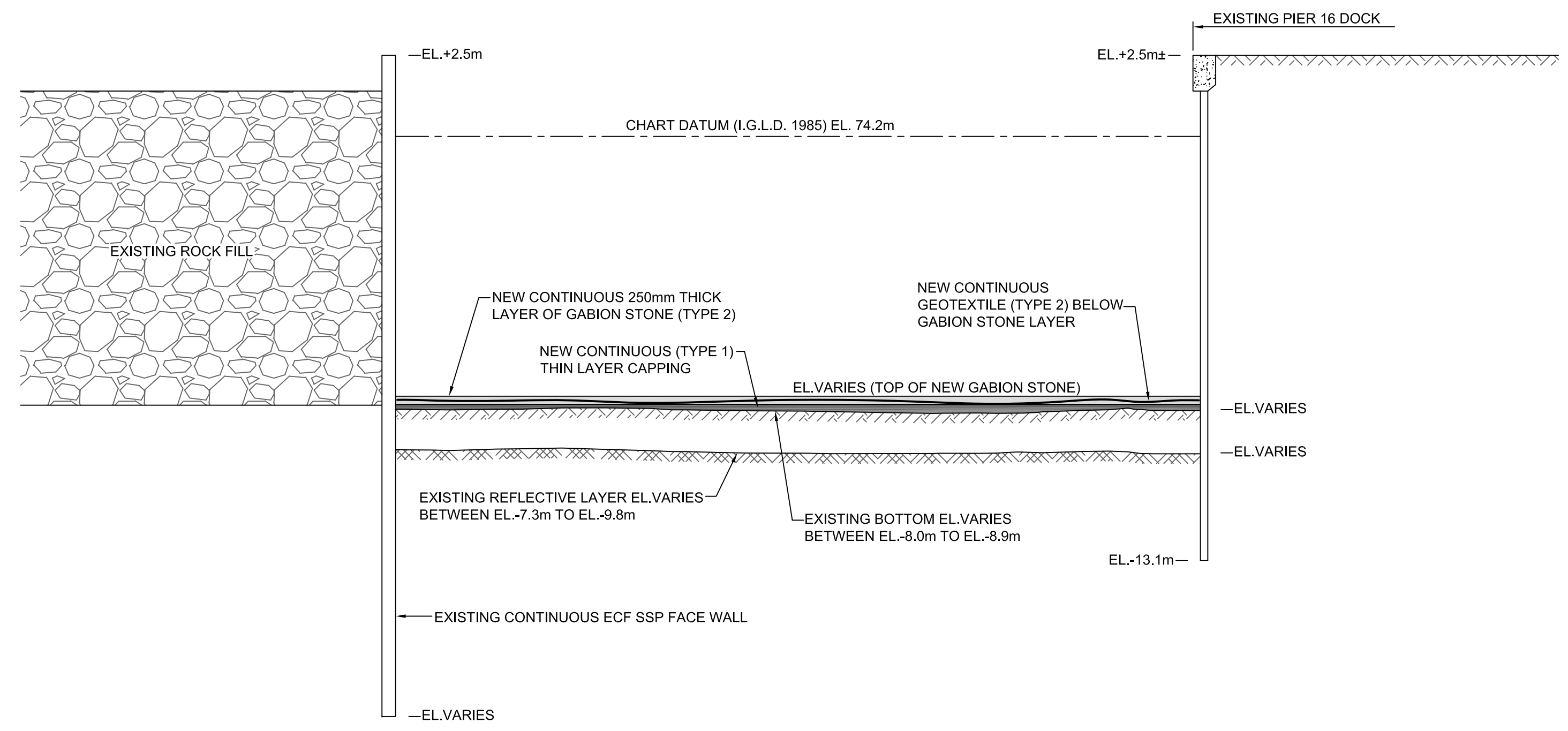
bid offer  
offre

project manager  
administrateur de projets

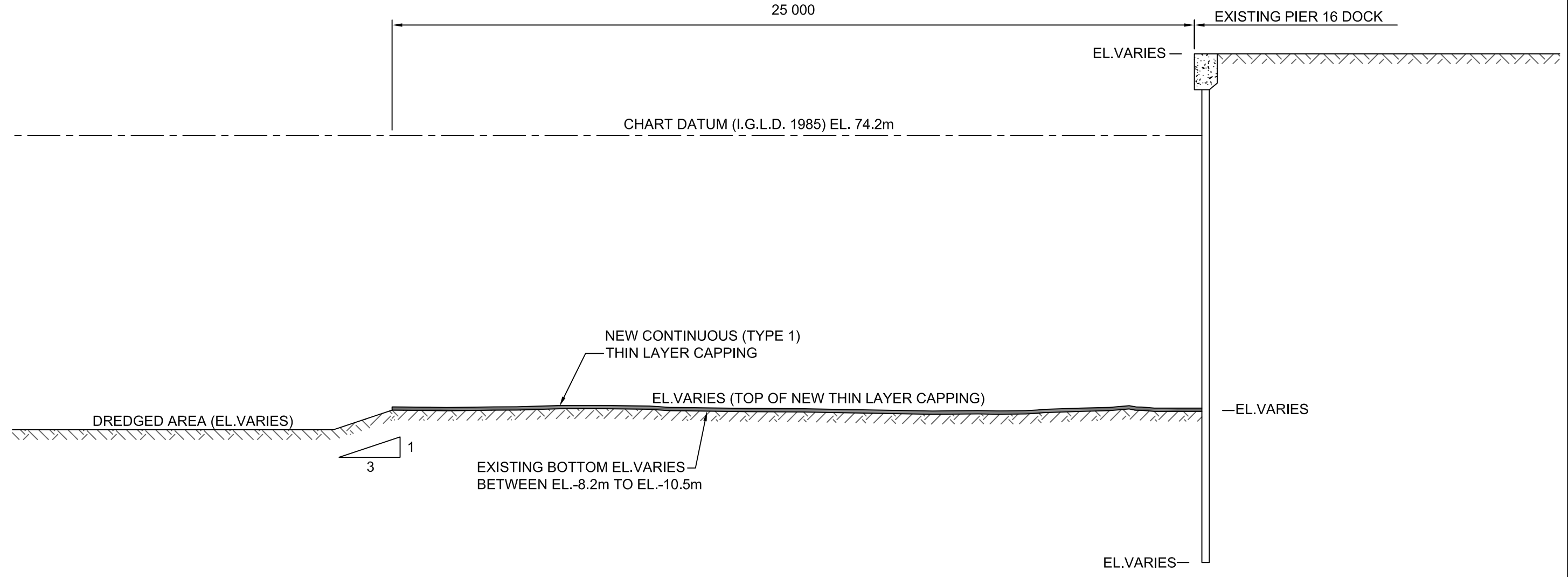
project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

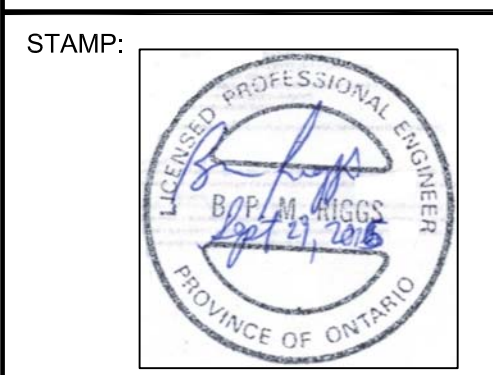
drawing no.  
dessiné no.  
**C-2.5**



13 TYP. SECTION OF NEW ARMoured THIN LAYER CAPPING BETWEEN 0+220.4 TO 0+291.2N SCALE: 1:125



14 TYP. SECTION OF NEW THIN LAYER CAPPING BETWEEN 0+291.2N TO 1+071.4N± SCALE: 1:125



LEGEND:

| revision | date |
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| C | drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**US STEEL CHANNEL (PIER 16) ISOLATION CAPPING TYP. DETAILS**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

bid  
offre

project manager  
administrateur de projets

project date  
date du projet  
**2017-01-15**

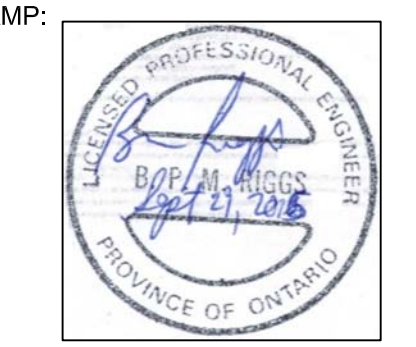
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no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**C-2.6**



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LEGEND:

| revision | date |
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|   |                                     |
|---|-------------------------------------|
| A | Detail No.                          |
| B | No. du détail                       |
| B | drawing no. - where detail required |
| B | dessin no. - ou détail exigé        |
| C | drawing no. - where detailed        |
| C | dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**WATER TREATMENT PROCESS, SITE PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conç. par  
**B.RIGGS**

approved by  
approuvé par

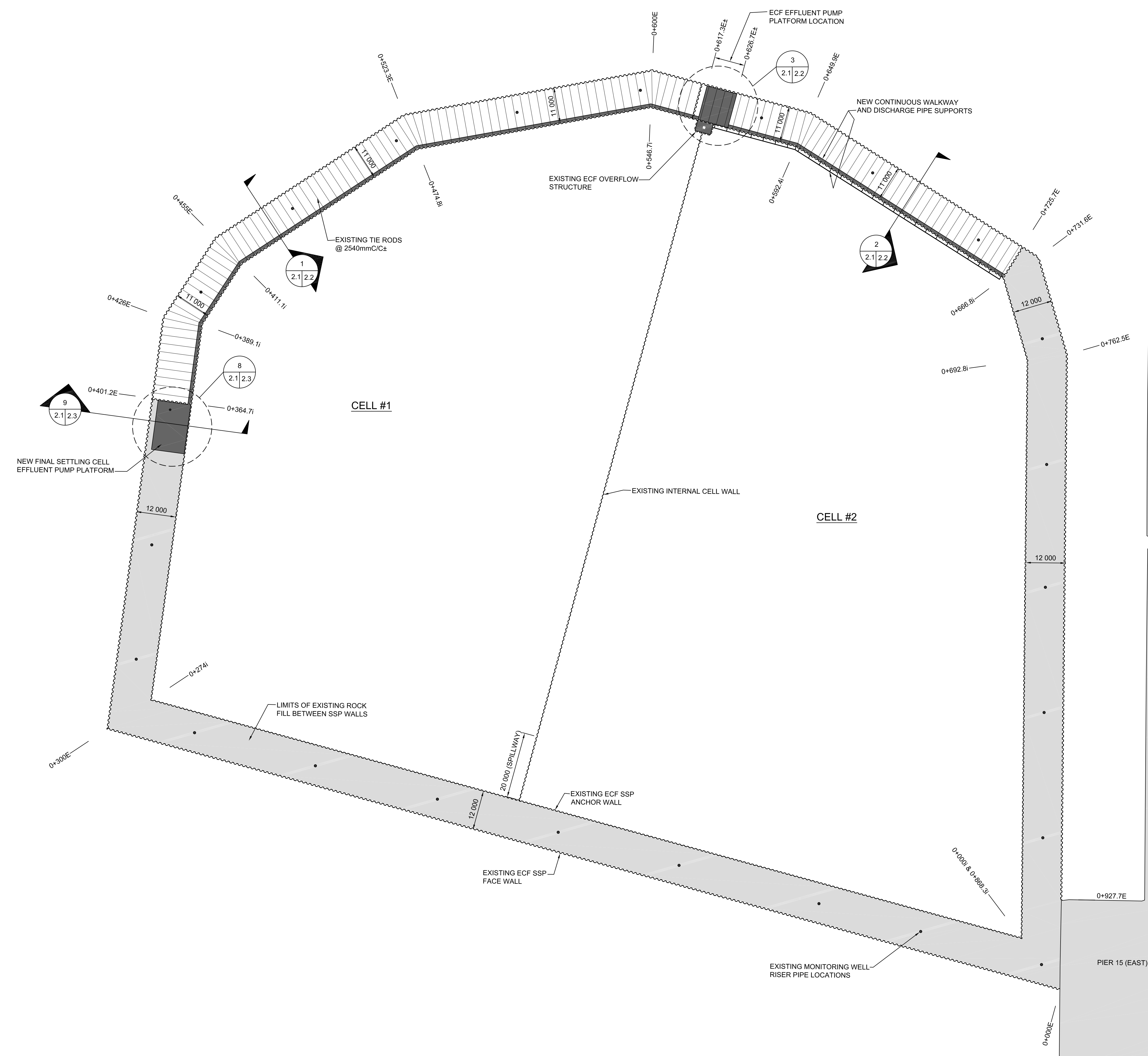
bid  
offre

project manager  
administrateur de projets

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**S-2.1**

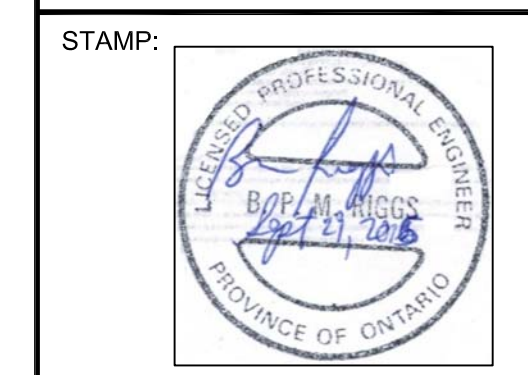


PIER 14

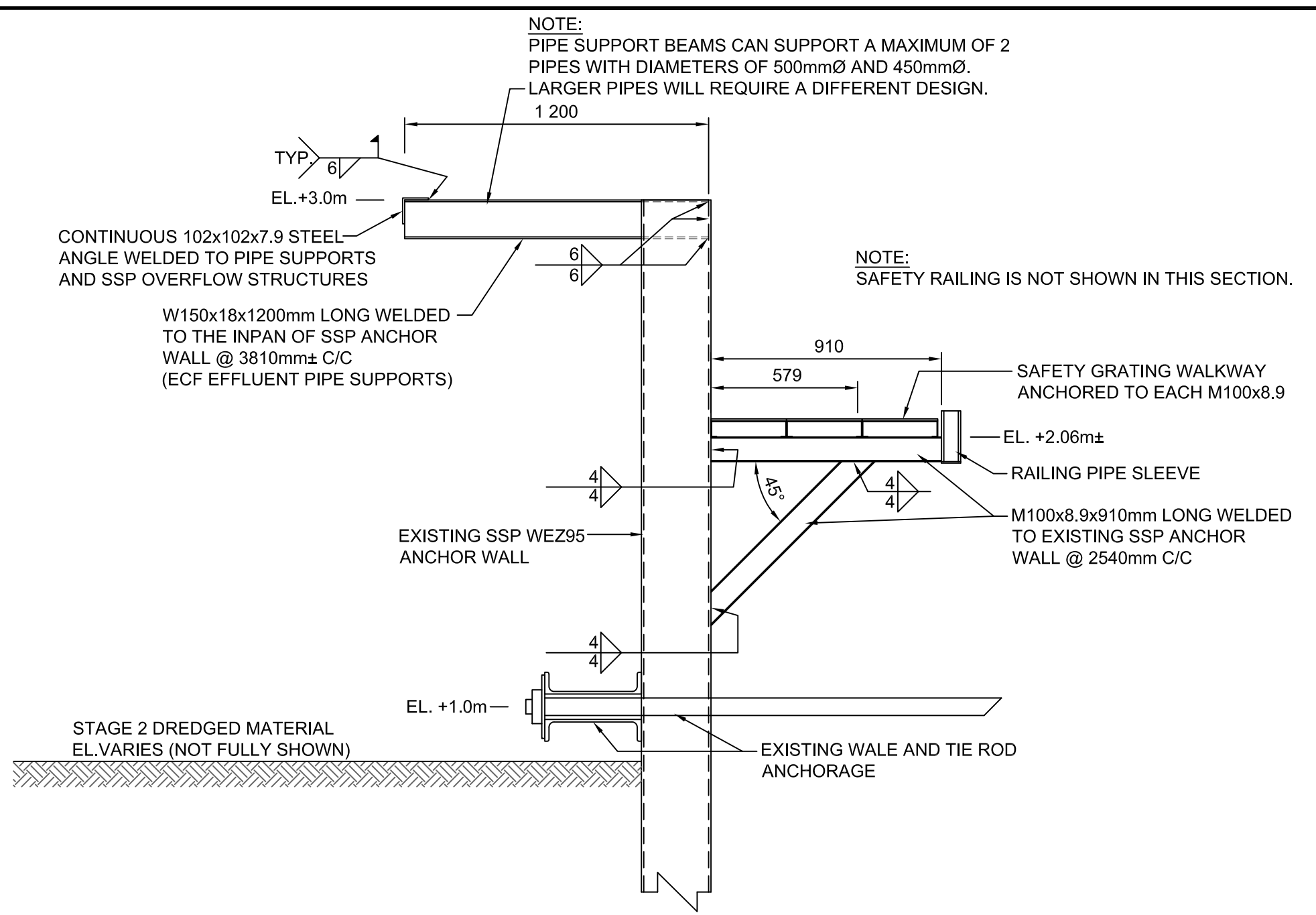
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(PIER 16)

PIER 15 (EAST)

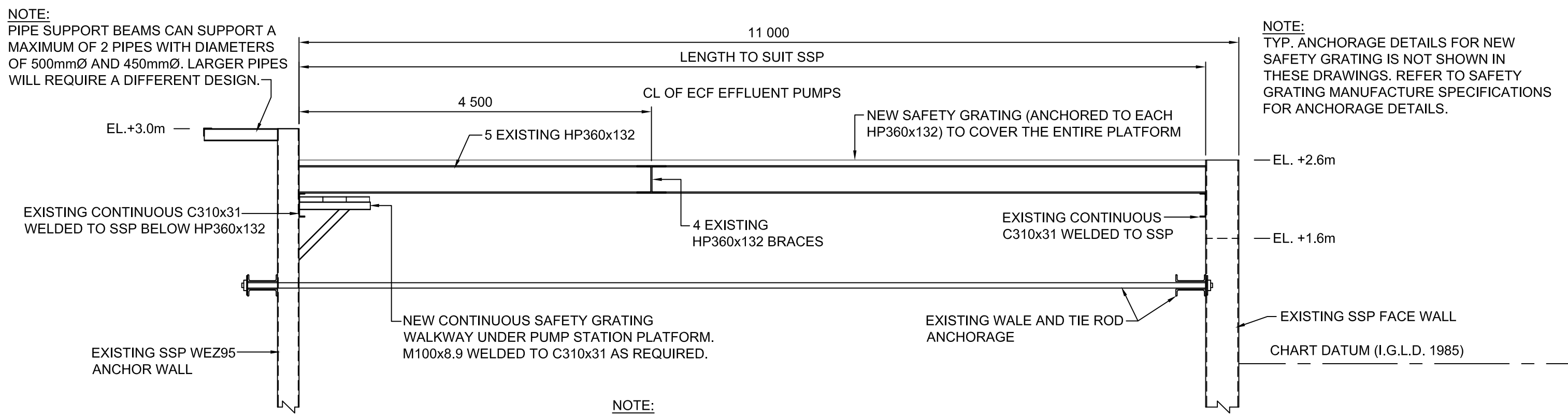
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SCALE: 1:500



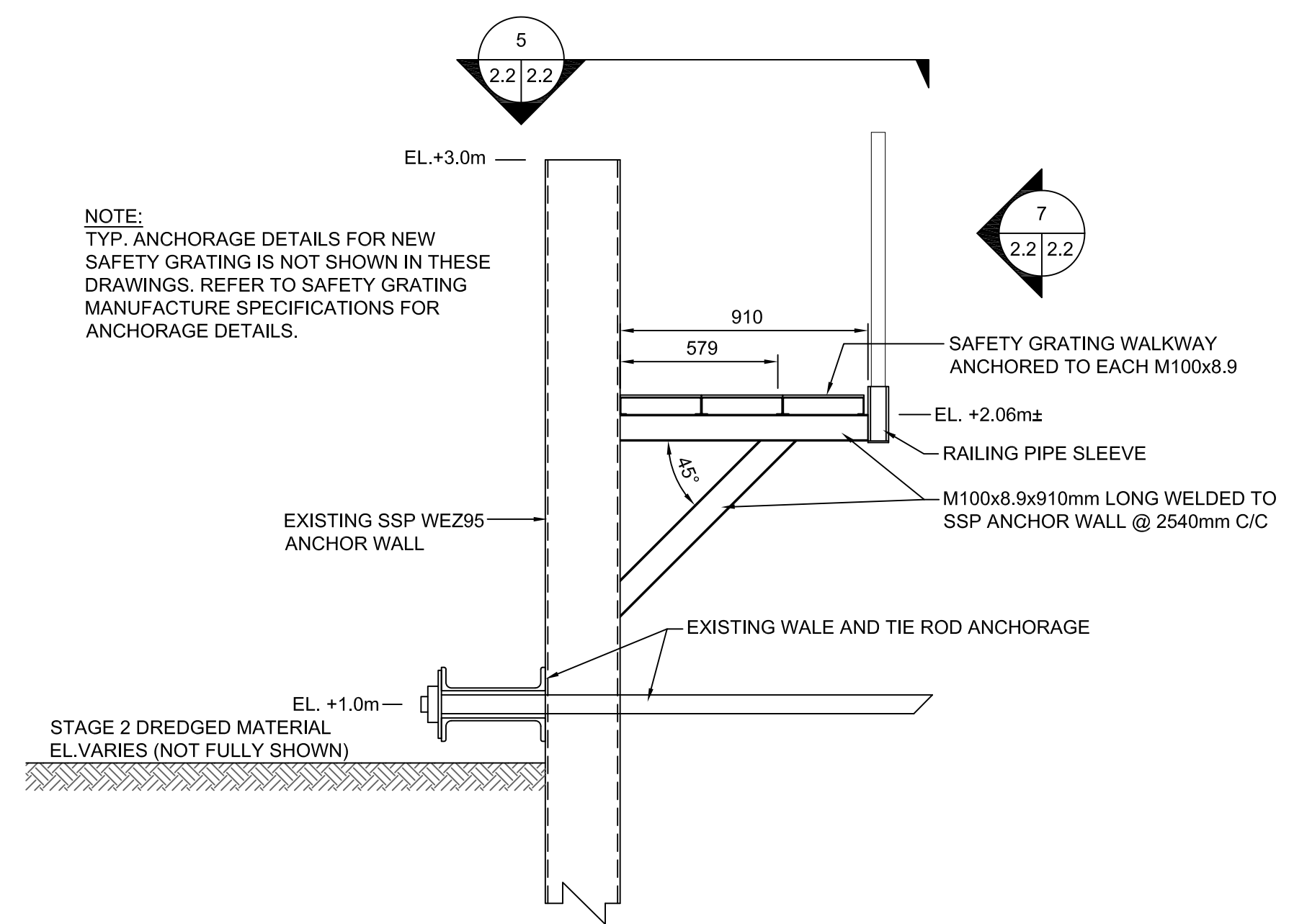
LEGEND:



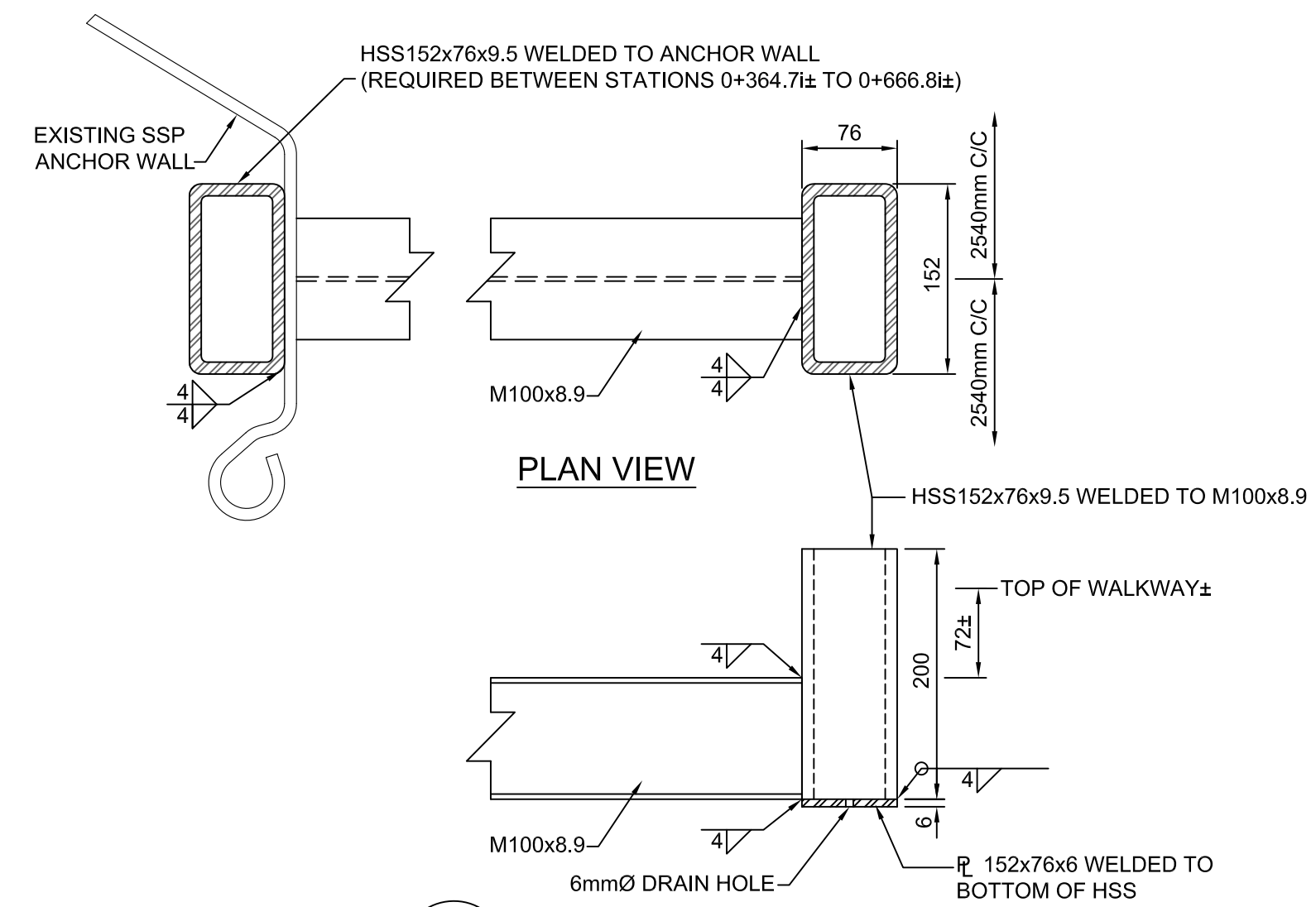
2 TYP. WALKWAY AND PIPE SUPPORT SECTION - (0+566.312 TO 0+666.812)  
SCALE: 1:20



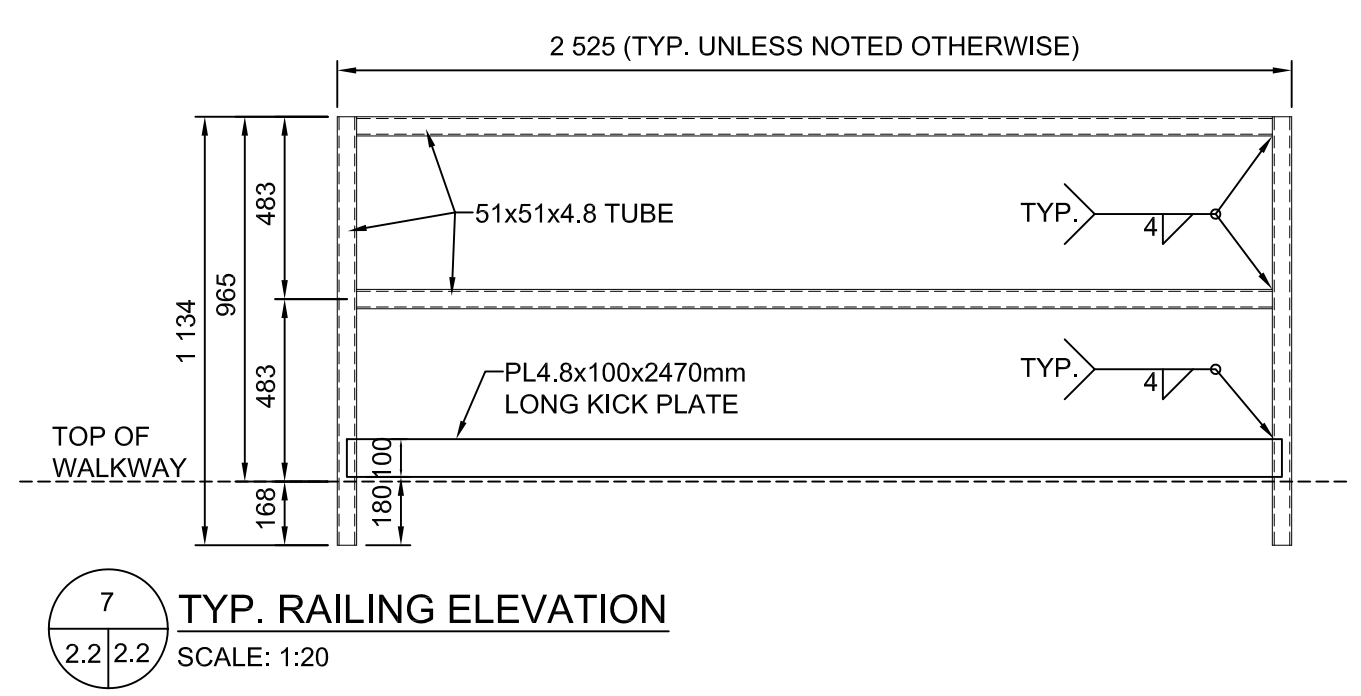
4 PUMP STATION PLATFORM SECTION  
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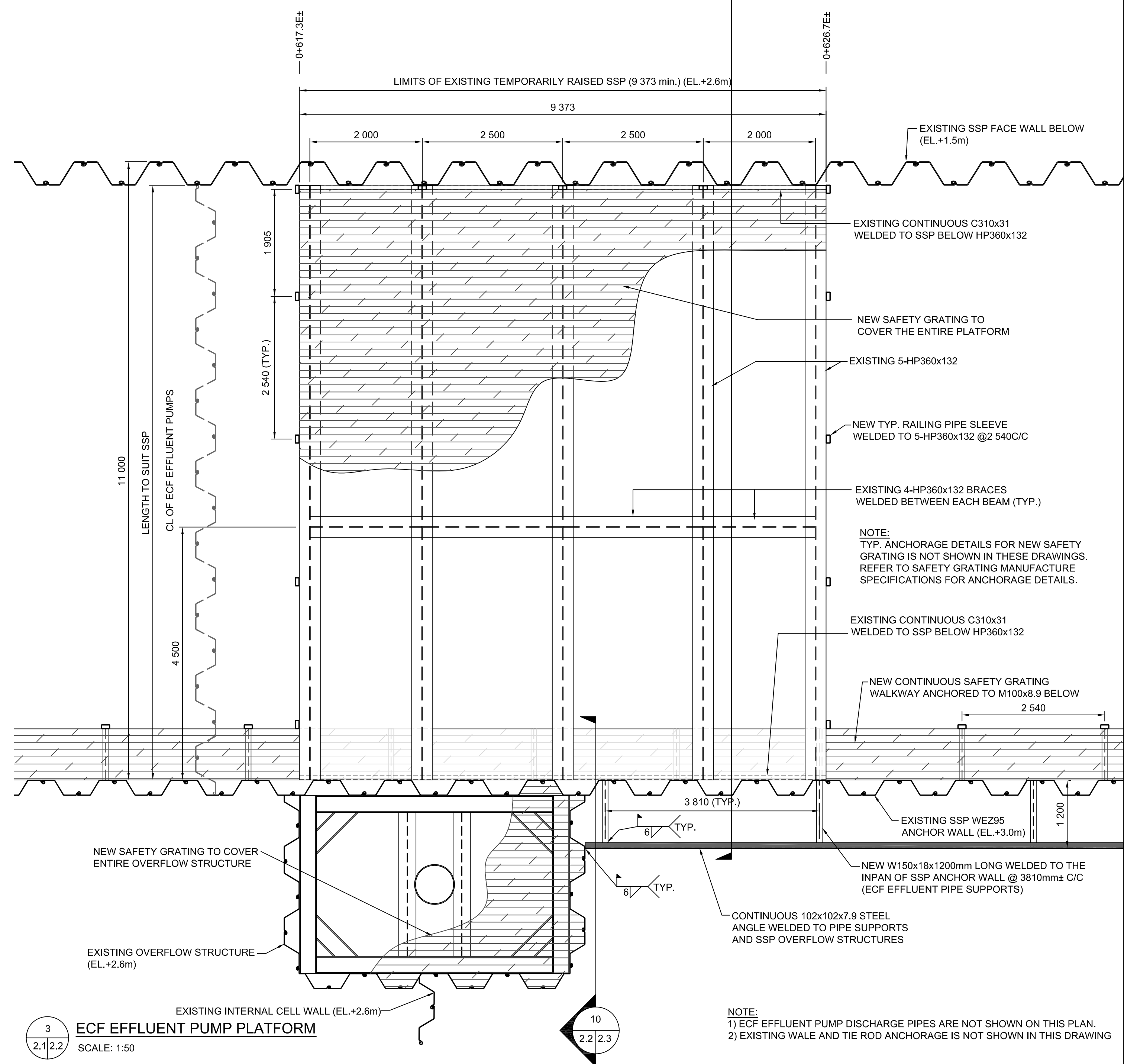
1 TYP. WALKWAY SECTION - (0+364.712 TO 0+566.312)  
SCALE: 1:20



5 RAILING PIPE SLEEVE DETAIL  
SCALE: 1:5



7 TYP. RAILING ELEVATION  
SCALE: 1:20



3 ECF EFFLUENT PUMP PLATFORM  
SCALE: 1:50

| revision | date |
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|          |      |
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| A | Detail No.                          |
|---|-------------------------------------|
| B | No. du detail                       |
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|   | dessin no. - ou detail exigé        |
|   | drawing no. - where detailed        |
|   | dessin no. - ou detailé             |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**WATER TREATMENT PROCESS, PUMP PLATFORM AND WALKWAY SECTIONS AND DETAILS**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

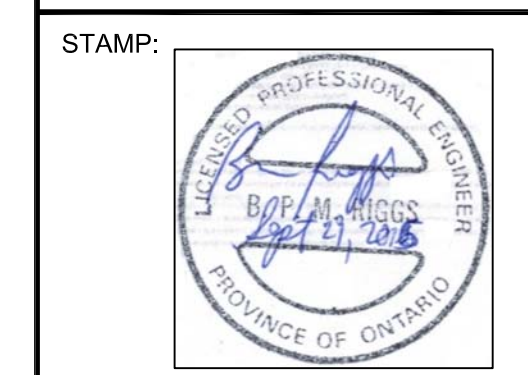
approved by  
approuvé par

bid  
offre

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**S-2.2**



LEGEND:

| revision | date |
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|          |   |
|----------|---|
| <b>A</b> | Detail No.  |
| <b>B</b> | No. du détail   |
| <b>C</b> | drawing no. - where detail required<br>dessin no. - ou détail exigé |
|          | drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**WATER TREATMENT PROCESS,  
CONCRETE DETAILS**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conc par  
**B.RIGGS**

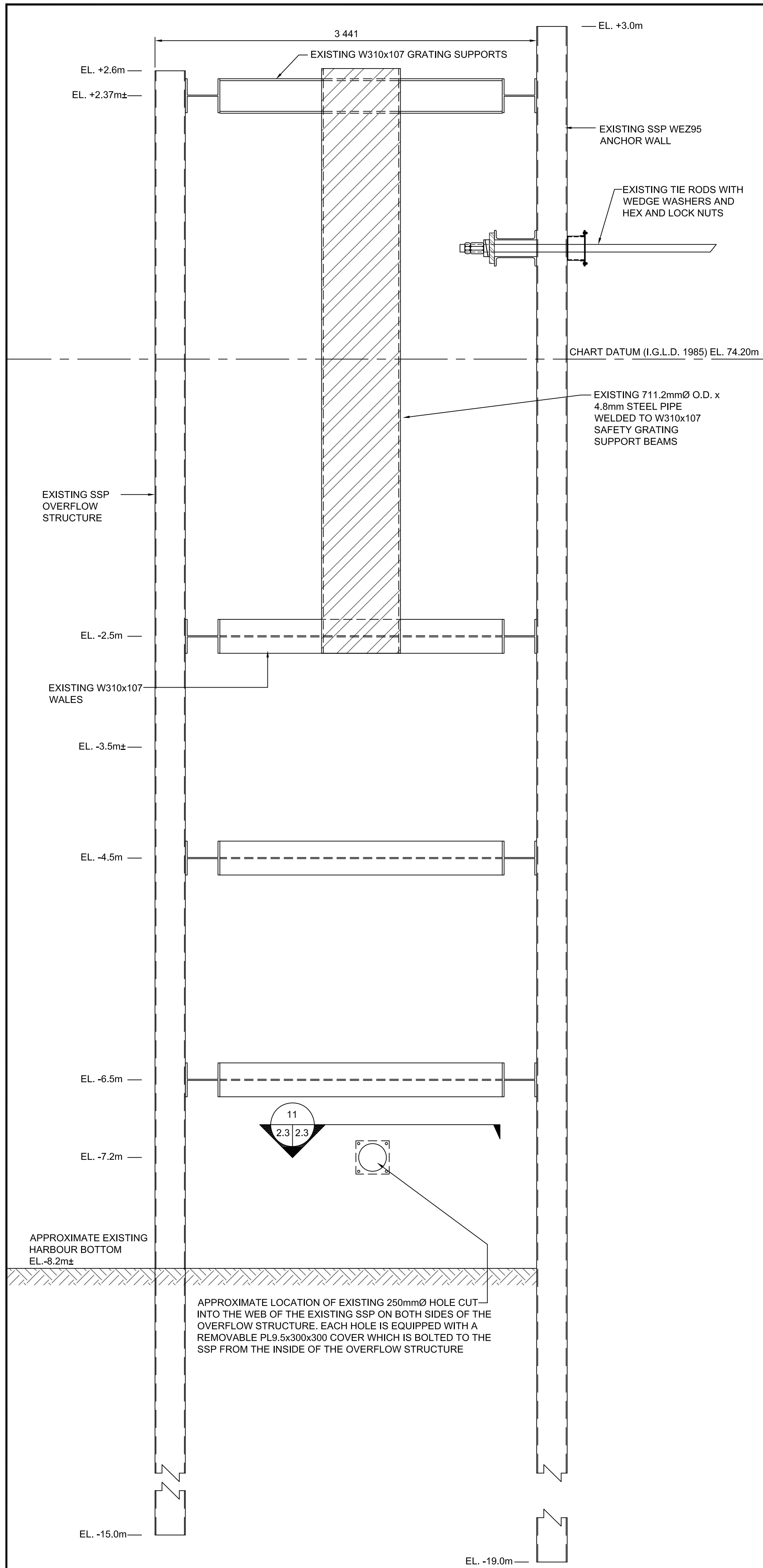
approved by  
approuvé par

bid  
offre  
project manager  
administrateur de projets

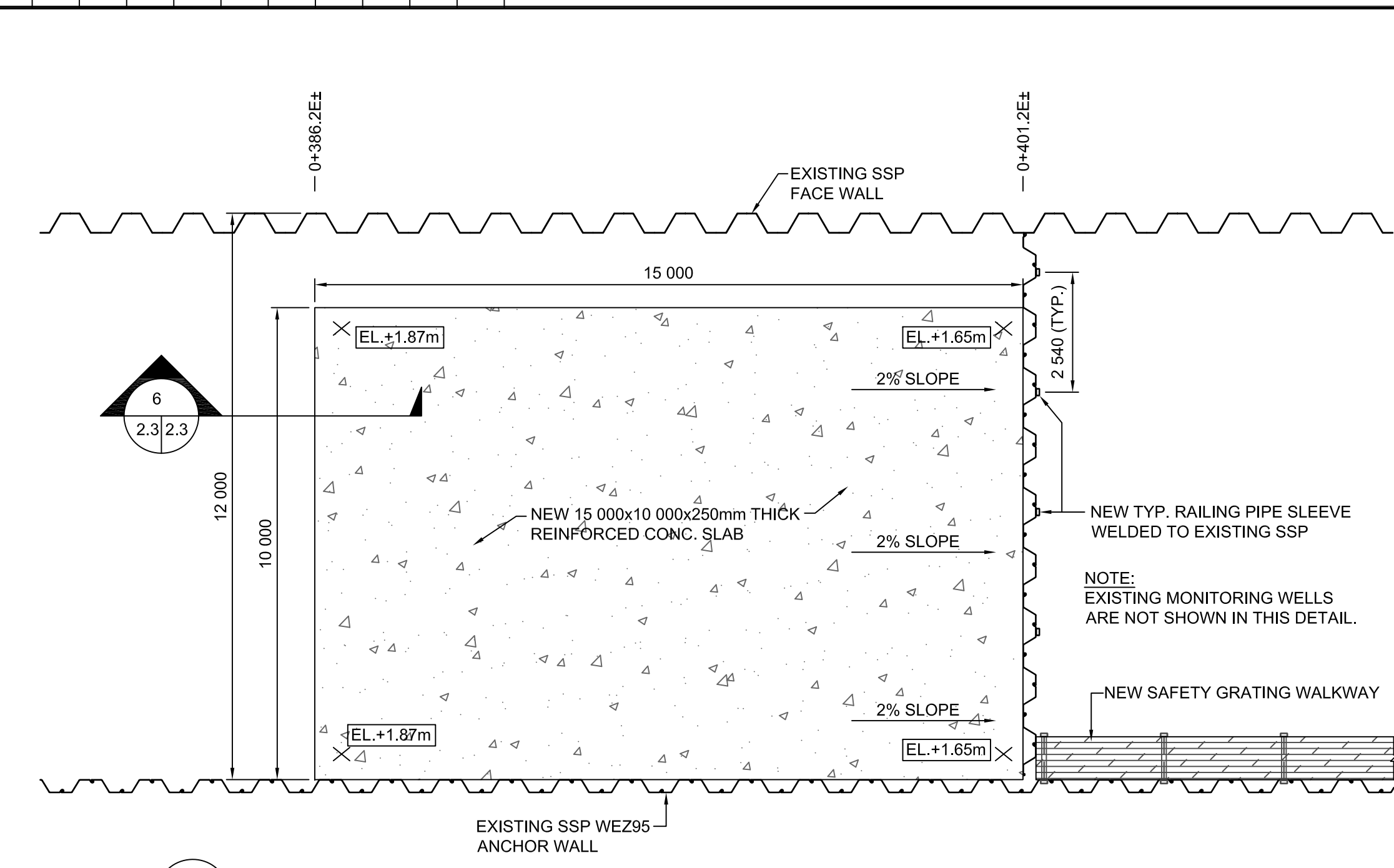
project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

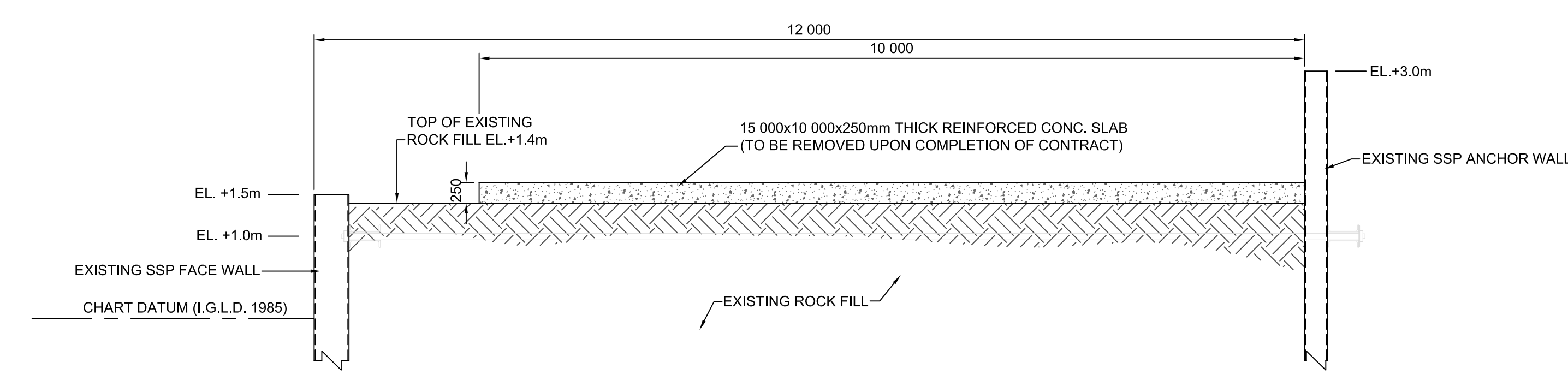
drawing no.  
dessiné no.  
**S-2.3**



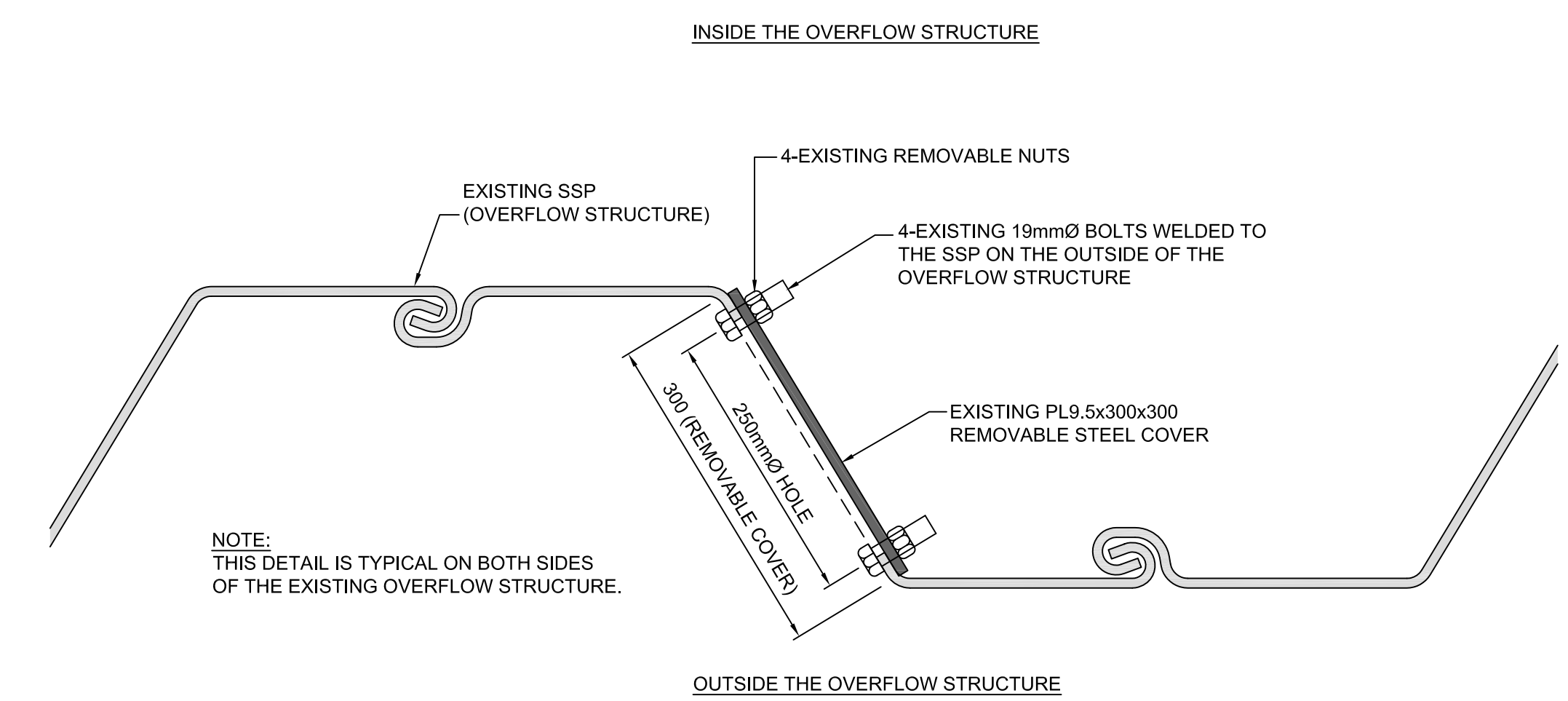
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2.2/2.3  
**EXISTING OVERFLOW STRUCTURE SECTION**  
SCALE: 1:25



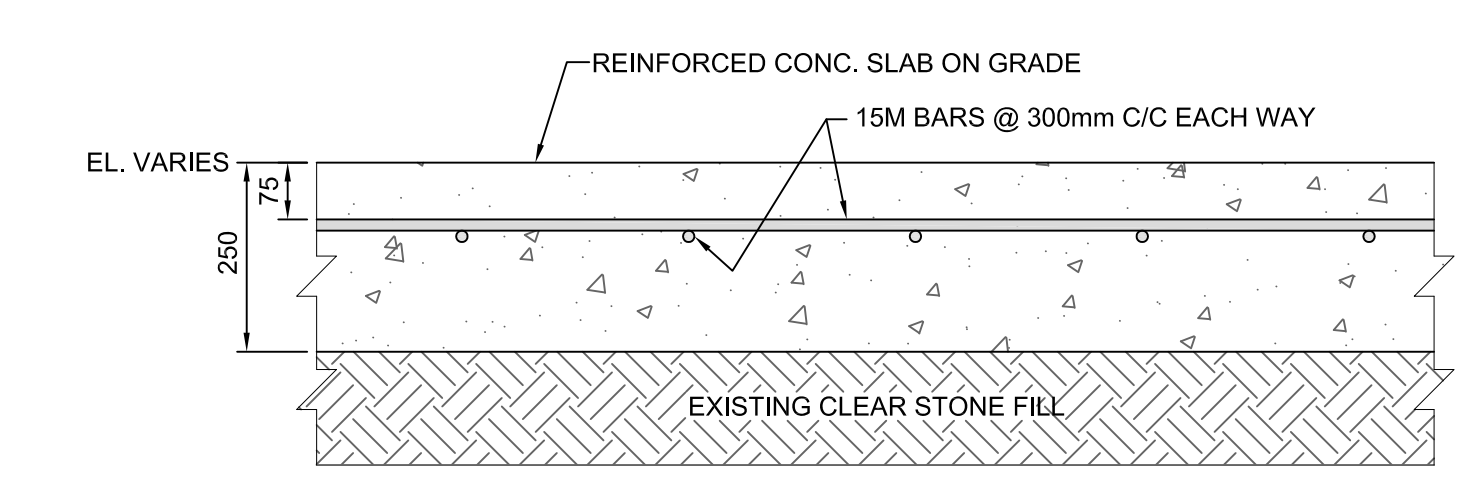
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2.1/2.3  
**FINAL SETTLING CELL EFFLUENT PUMP PLATFORM PLAN**  
SCALE: 1:100



**9**  
2.1/2.3  
**FINAL SETTLING CELL EFFLUENT PUMP PLATFORM SECTION**  
SCALE: 1:50



**11**  
2.3/2.3  
**DETAIL OF EXISTING OVERFLOW STRUCTURE BOTTOM ACCESS HOLE**  
SCALE: 1:5



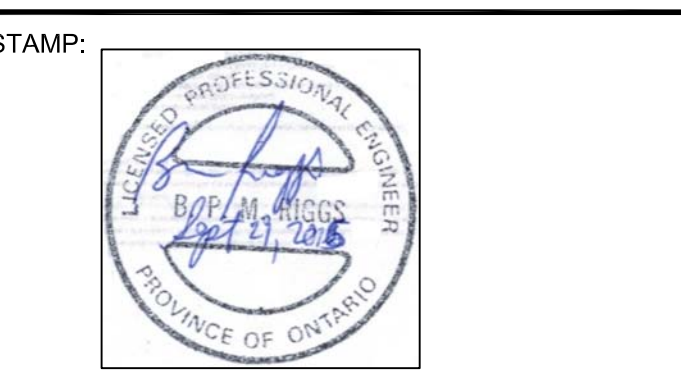
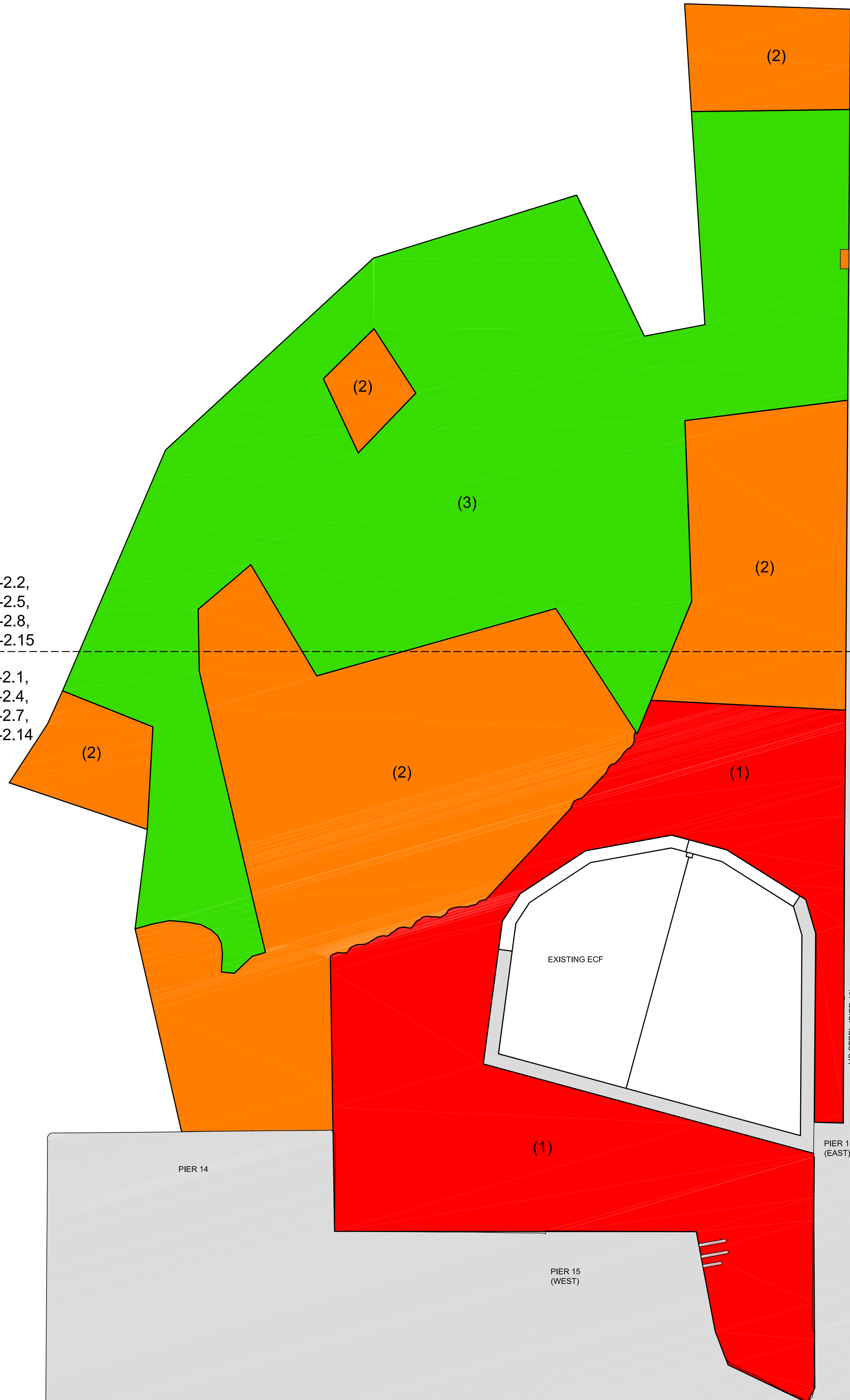
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2.3/2.3  
**FINAL SETTLING CELL EFFLUENT PUMP PLATFORM CONC. SLAB**  
SCALE: 1:10

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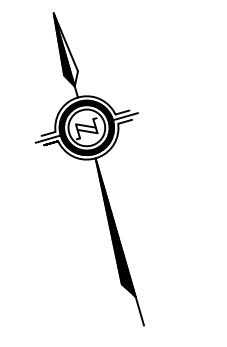
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SHEET #D-2.6,  
SHEET #D-2.9,  
SHEET #D-2.16

SHEET #D-2.2,  
SHEET #D-2.5,  
SHEET #D-2.8,  
SHEET #D-2.15

SHEET #D-2.1,  
SHEET #D-2.4,  
SHEET #D-2.7,  
SHEET #D-2.14



LEGEND:  
■ PRIORITY AREA 1  
■ PRIORITY AREA 2  
■ PRIORITY AREA 3  
 (#) PRIORITY AREA IDENTIFICATION NUMBER  
 - - - PAGE LAYOUT BOUNDARY



| revision | date |
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|   |                                     |
|---|-------------------------------------|
| A | Detail No.                          |
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| C | drawing no. - where detailed        |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDICATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**DREDGING PRIORITY AREAS  
SITE PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

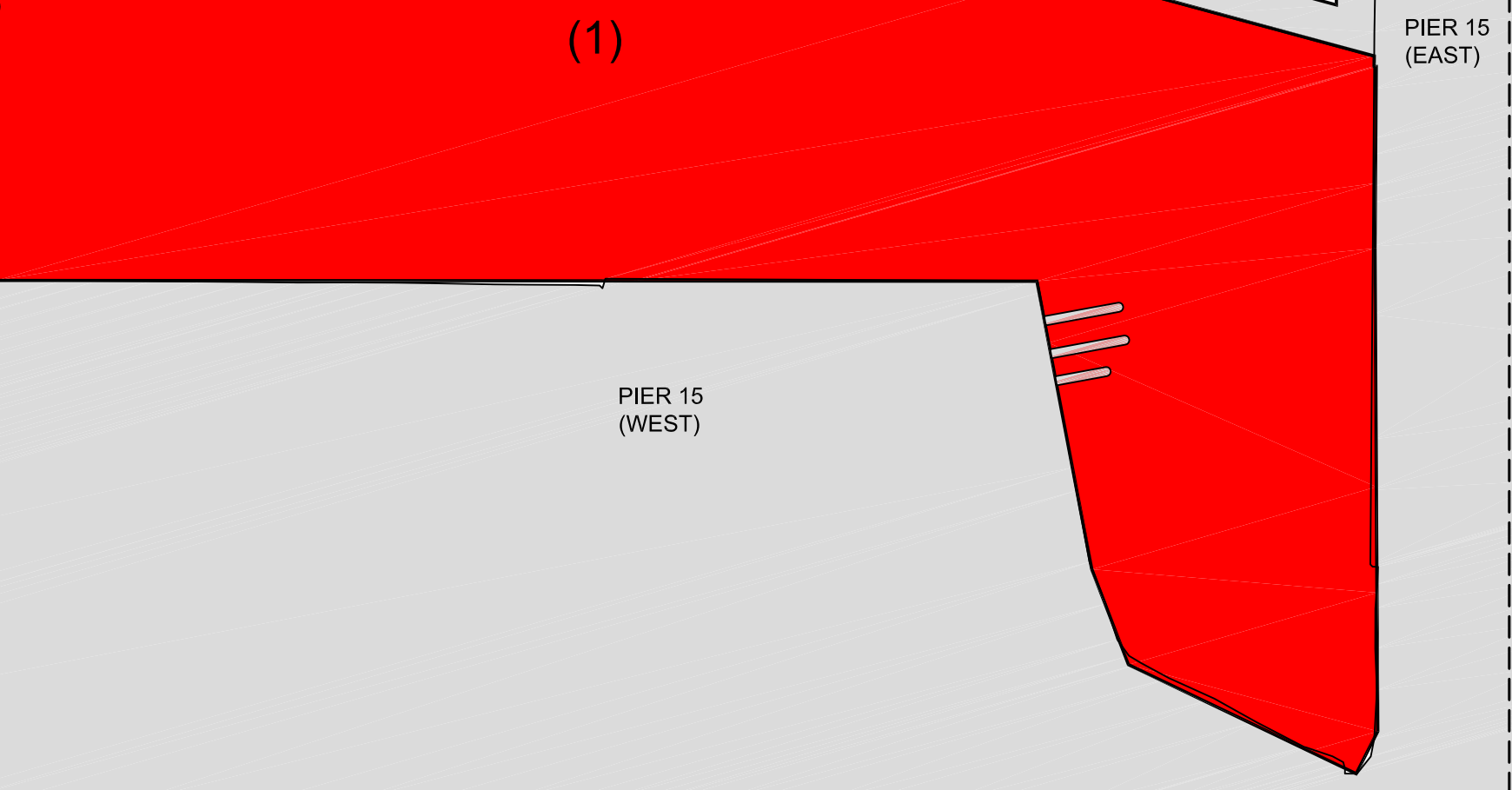
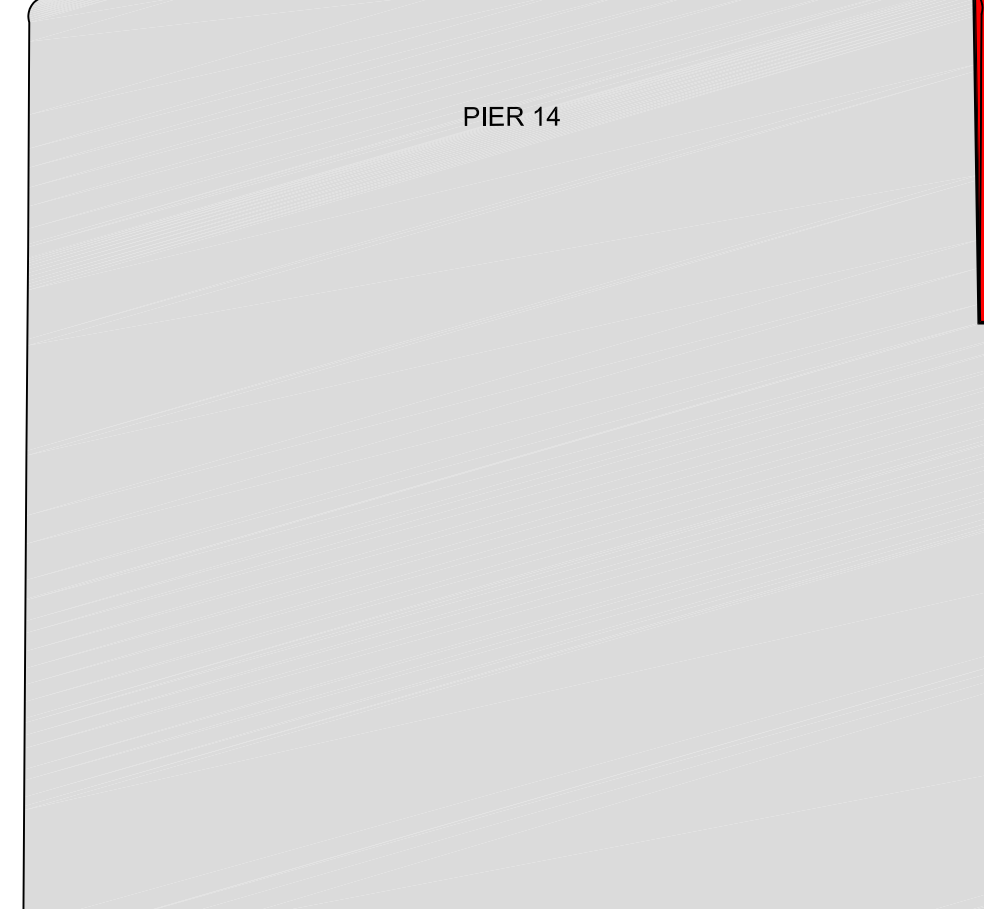
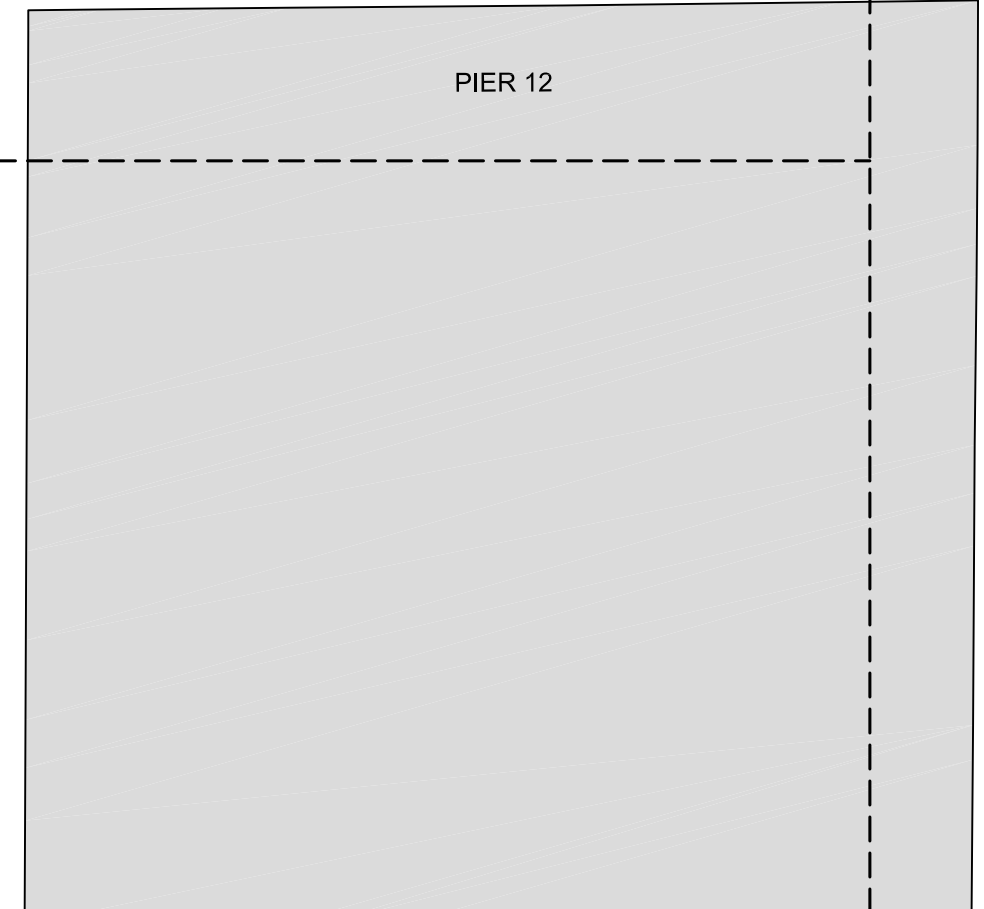
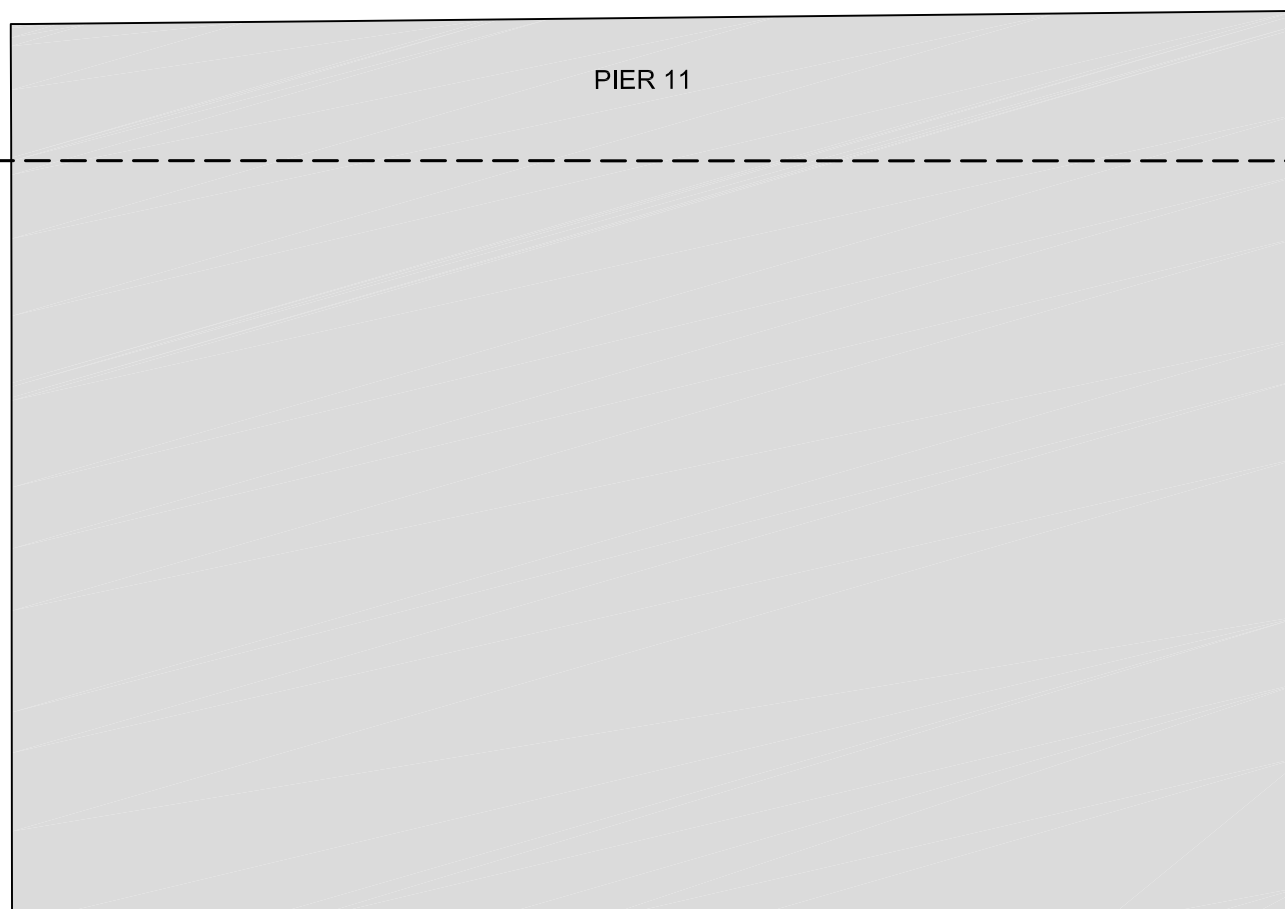
approved by  
approuvé par

bid office  
project manager  
administrateur de projets

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050937.202**

drawing no.  
dessiné no.  
**D-2.0**



0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



STAMP:



LEGEND:  
 - - - PRIORITY AREA BOUNDARY  
 - - - DREDGE AREA BOUNDARY  
 63 2013 SOUNDINGS  
 P# - # DREDGE AREA IDENTIFICATION NUMBER  
 - - - DREDGE AREA # AND DREDGE SEQUENCE #  
 - - - PRIORITY AREA #

NOTES:  
 1) BATHYMETRIC DATA WAS COLLECTED IN 2013.  
 2) BATHYMETRIC DATA SHOWN ALONG PIER 15 (WEST), PIER 14, AND PIER 12 WAS COLLECTED IN 2002.  
 3) DRAWING UNITS ARE IN METERS UNLESS NOTED OTHERWISE.  
 4) HORIZONTAL DATUM IS REFERENCED TO NAD83.  
 5) SOUNDINGS ARE SHOWN IN METERS BELOW CHART DATUM I.G.L.D. 1985.  
 6) THE SOUNDING INFORMATION SHOWN REPRESENTS RESULTS OF THE SURVEY MADE ON THE DATES SPECIFIED AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME.

| revision | date |
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|-------------|---|
| A<br>B<br>C | A Detail No.<br>No. du détail   |
|             | B drawing no. - where detail required<br>dessin no. - ou détail exigé |
|             | C drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**DREDGING SITE PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

bid  
offre

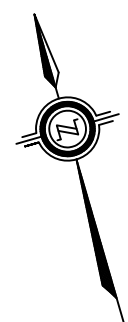
project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050937.202**

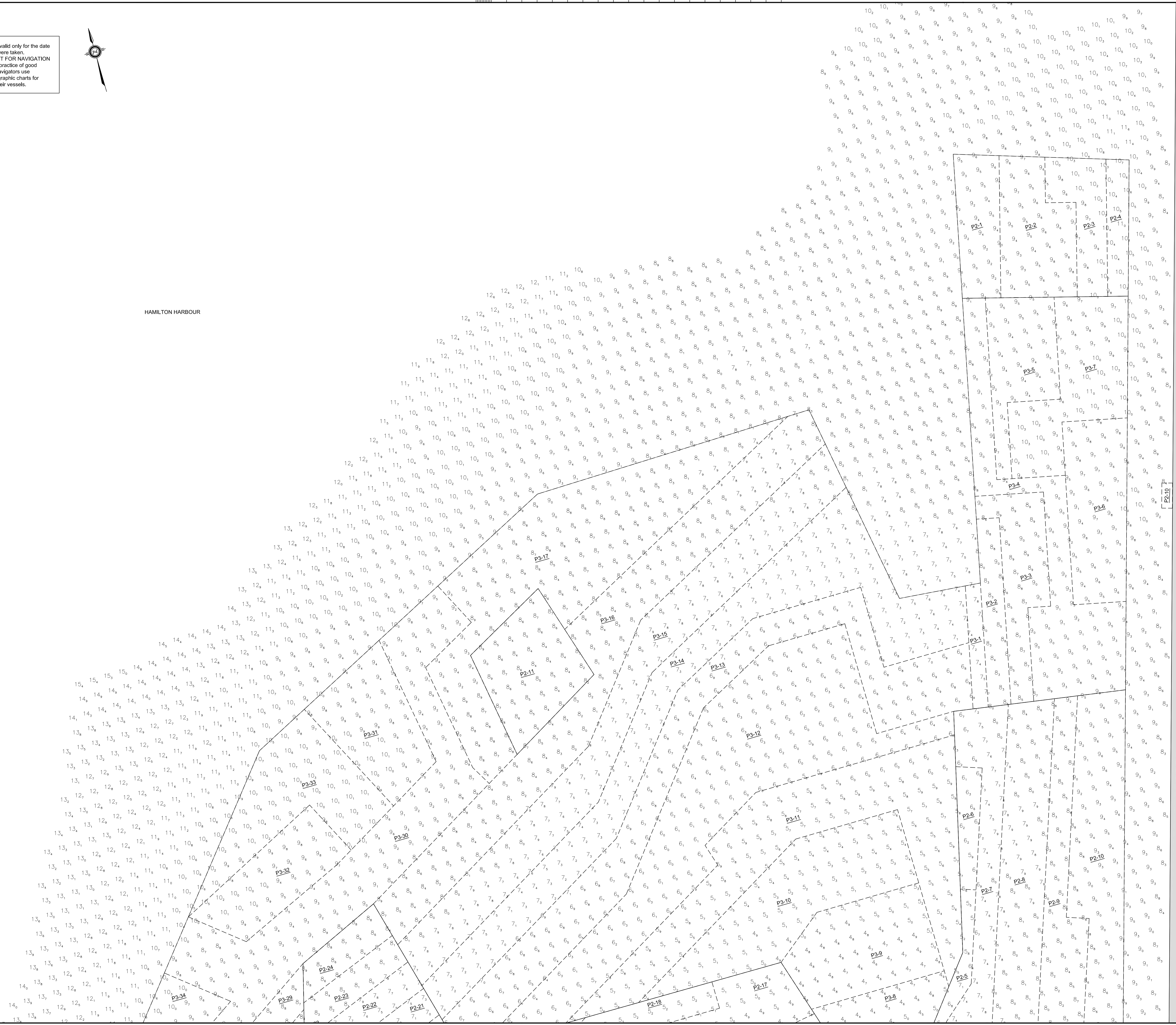
drawing no.  
dessiné no.  
**D-2.1**

• Soundings are valid only for the date and time they were taken.  
 • This plan is NOT FOR NAVIGATION  
 • In the ordinary practice of good seamanship, navigators use updated hydrographic charts for navigation of their vessels.

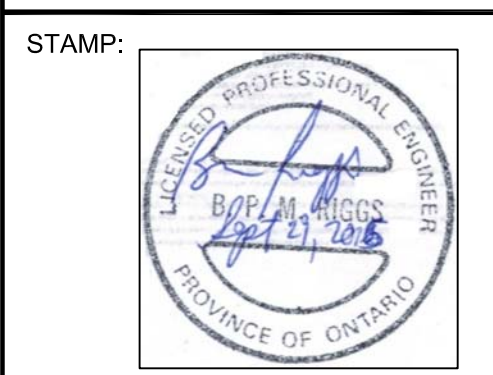
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HAMILTON HARBOUR



RIGGS ENGINEERING LTD.  
1240 Commissioner's Road West, Suite 205  
London, Ontario N6K 1C7  
(519)-657-1040



- LEGEND:
- PRIORITY AREA BOUNDARY
  - - - DREDGE AREA BOUNDARY
  - 6.5 2013 SOUNDINGS
  - P# - # DREDGE AREA IDENTIFICATION NUMBER
  - └ DREDGE AREA # AND DREDGE SEQUENCE #
  - └ PRIORITY AREA #

- NOTES:
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| revision | date |
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|  | A Detail No.<br>No. du détail   |
|  | B drawing no. - where detail required<br>dessin no. - où détail exigé |
|  | C drawing no. - where detail<br>dessin no. - où détail                |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDIATION PROJECT (STAGE 2)**  
drawing title  
titre de dessin  
**DREDGING SITE PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

bid  
offre

project manager  
administrateur de projets  
**2017-01-15**

project no.  
no. du projet  
**R.050937.202**

drawing no.  
dessiné no.  
**D-2.2**

US STEEL (PIER 16)

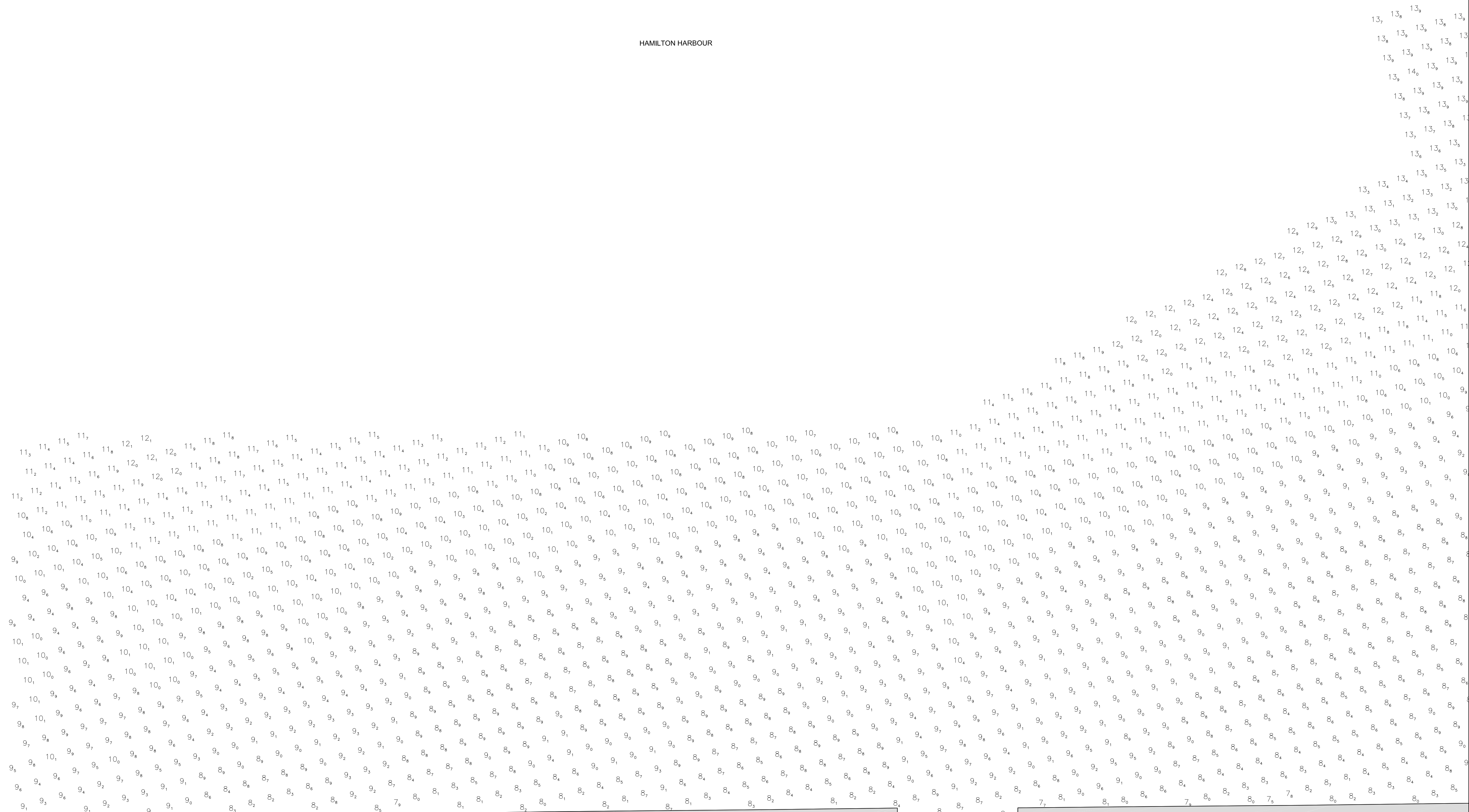
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LEGEND:

- PRIORITY AREA BOUNDARY
- - - DREDGE AREA BOUNDARY
- 6 2013 SOUNDINGS
- P# - # DREDGE AREA IDENTIFICATION NUMBER
- └ DREDGE AREA # AND DREDGE SEQUENCE #
- └ PRIORITY AREA #

HAMILTON HARBOUR



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|  | B | drawing no. - where detail required |
|  | C | drawing no. - where detailed        |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**DREDGING SITE PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

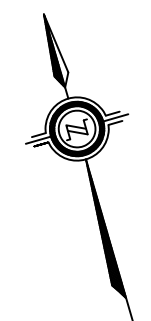
bid  
offre  
project manager  
administrateur de projet

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050937.202**

drawing no.  
dessiné no.  
**D-2.3**

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PIER 10

PIER 11

PIER 12

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

STAMP:



LEGEND:

- PRIORITY AREA BOUNDARY
- DREDGE AREA BOUNDARY
- 2013 REFLECTIVE LAYER
- P# - # DREDGE AREA IDENTIFICATION NUMBER
- DREDGE AREA # AND DREDGE SEQUENCE #
- PRIORITY AREA #

- NOTES:
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| revision | date |
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project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**EXISTING REFLECTIVE LAYER**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

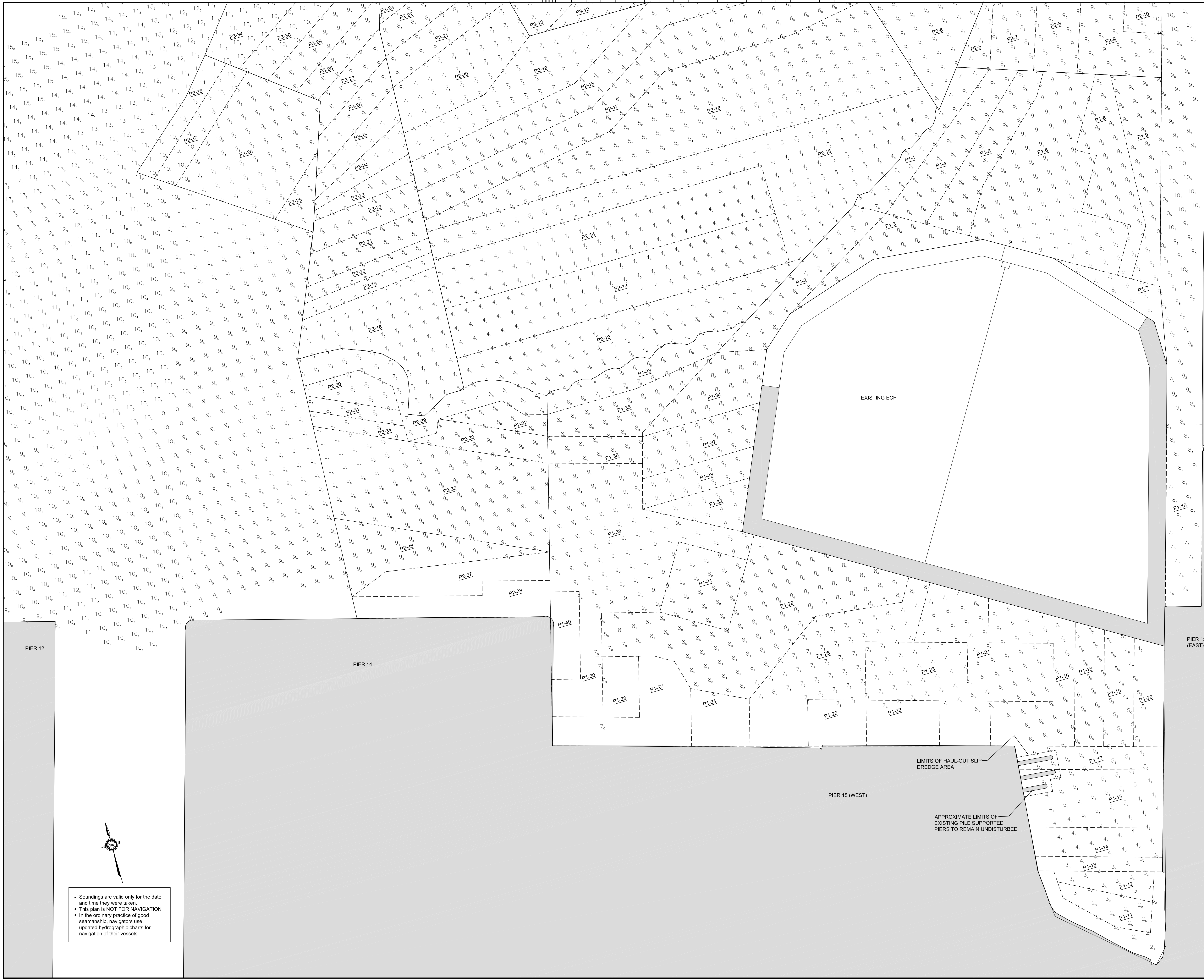
approved by  
approuvé par

bid  
offre  
project manager  
administrateur de projets

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.4**



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STAMP:



LEGEND:

- PRIORITY AREA BOUNDARY
- - - DREDGE AREA BOUNDARY
- 5 2013 REFLECTIVE LAYER
- P# - # DREDGE AREA IDENTIFICATION NUMBER
- └ DREDGE AREA # AND DREDGE SEQUENCE #
- └ PRIORITY AREA #

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| A<br>B<br>C | A Detail No.<br>No. du détail   |
|             | B drawing no. - where detail required<br>dessin no. - ou détail exigé |
|             | C drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre de dessin  
**EXISTING REFLECTIVE LAYER**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
concé par  
**B.RIGGS**

approved by  
approuvé par

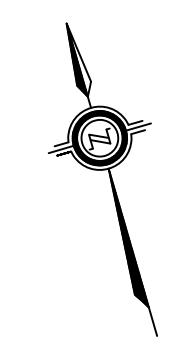
bid  
offre

project manager  
administrateur de projets  
**2017-01-15**

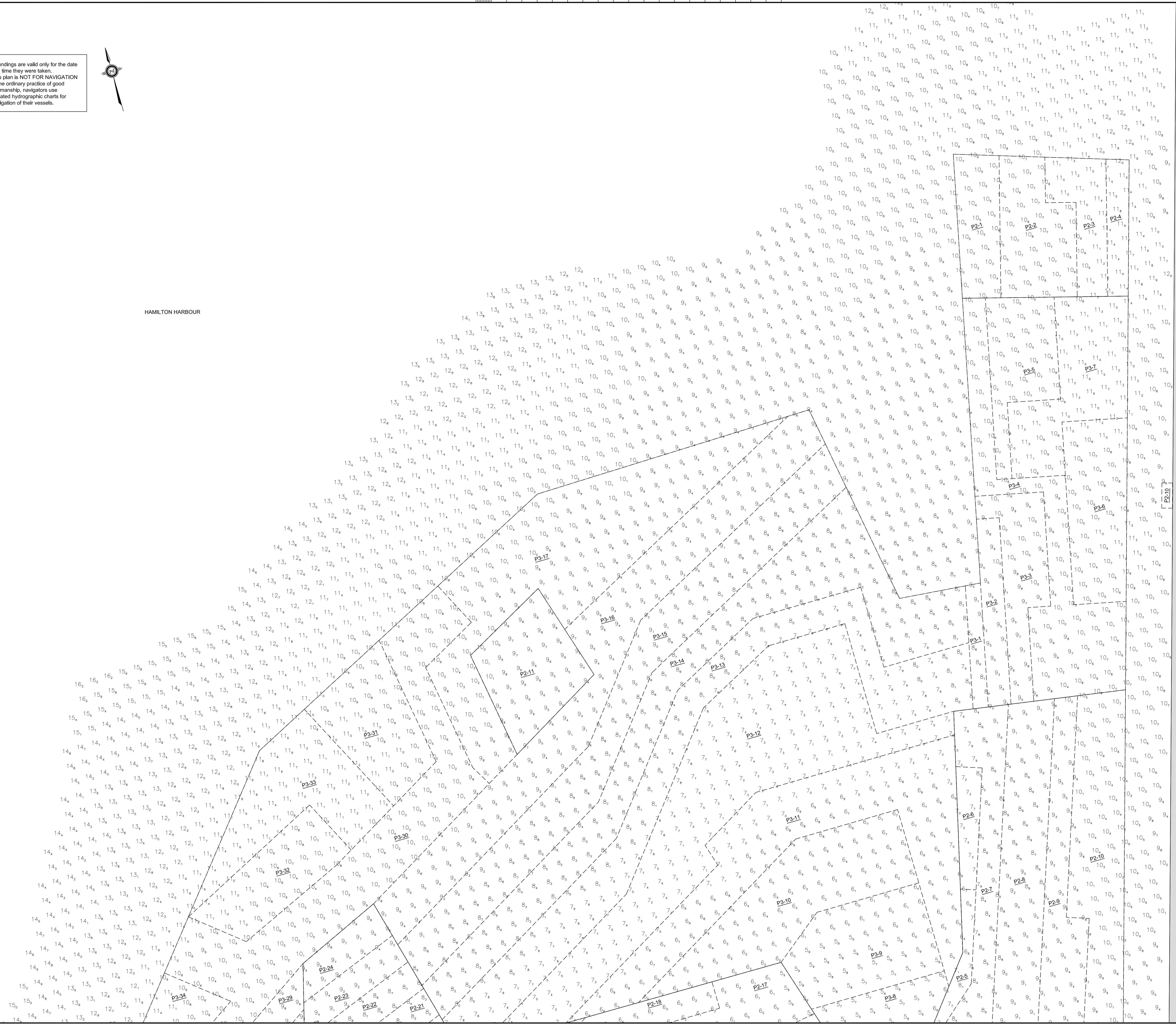
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no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.5**

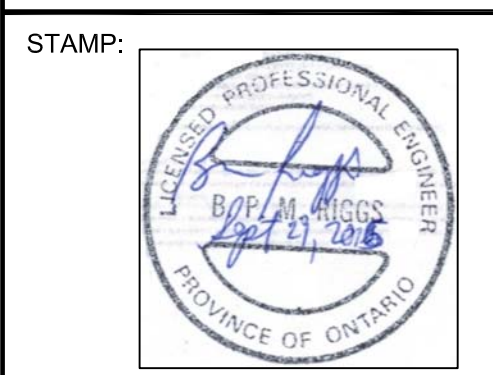
- Soundings are valid only for the date and time they were taken.
- This plan is NOT FOR NAVIGATION
- In the ordinary practice of good seamanship, navigators use updated hydrographic charts for navigation of their vessels.



HAMILTON HARBOUR

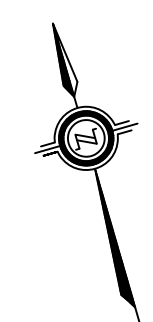


US STEEL (PIER 6)



**LEGEND:**  
 - - - PRIORITY AREA BOUNDARY  
 - - - DREDGE AREA BOUNDARY  
 ⊙ 2013 REFLECTIVE LAYER  
 P#-# DREDGE AREA IDENTIFICATION NUMBER  
 L DREDGE AREA # AND DREDGE SEQUENCE #  
 L PRIORITY AREA #

HAMILTON HARBOUR



• Soundings are valid only for the date and time they were taken.  
 • This plan is NOT FOR NAVIGATION  
 • In the ordinary practice of good seamanship, navigators use updated hydrographic charts for navigation of their vessels.



**NOTES:**  
 1) BATHYMETRIC DATA WAS COLLECTED IN 2013.  
 2) DRAWING UNITS ARE IN METERS UNLESS NOTED OTHERWISE.  
 3) HORIZONTAL DATUM IS REFERENCED TO NAD83.  
 4) SOUNDINGS ARE SHOWN IN METERS BELOW CHART DATUM I.G.L.D. 1985.  
 5) THE SOUNDING INFORMATION SHOWN REPRESENTS RESULTS OF THE SURVEY MADE ON THE DATES SPECIFIED AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME.

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

|  |  |
|--|--|
|  | A Detail No. / No. du détail   |
|  | B drawing no. - where detail required / dessin no. - ou détail exigé |
|  | C drawing no. - where detailed / dessin no. - ou détaillé            |

project title / titre du projet  
**HAMILTON ONTARIO**

**RANLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title / titre du dessin  
**EXISTING REFLECTIVE LAYER**

drawn by / dessiné par  
**A.MARCZENKO**

designed by / conçu par  
**B.RIGGS**

approved by / approuvé par

bid / offre  
 project manager / administrateur de projets

project date / date du projet  
**2017-01-15**

project no. / no. du projet  
**R.050927.202**

drawing no. / dessin no.  
**D-2.6**

PIER 10

PIER 11

PIER 12

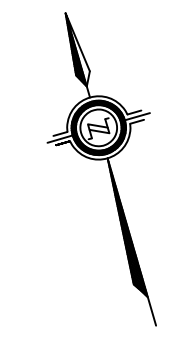
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

STAMP:



LEGEND:

- VERIFICATION ZONE BOUNDARY
- VZ-## VERIFICATION ZONE IDENTIFICATION CODE
- VERIFICATION ZONE NUMBER
- HISTORIC SAMPLE LOCATIONS
- 03-45 SAMPLE IDENTIFICATION CODE
- SAMPLE NUMBER THAT YEAR (ex. #45)
- YEAR SAMPLE WAS TAKEN (ex. 2003)



US STEEL (PIER 16)

PIER 15 (EAST)

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

|             |                                       |
|-------------|---------------------------------------|
| A<br>B<br>C | A Detail No.                          |
|             | B drawing no. - where detail required |
|             | C drawing no. - where detailed        |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**HISTORICAL SAMPLE LOCATIONS  
AND NEW VERIFICATION ZONES**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

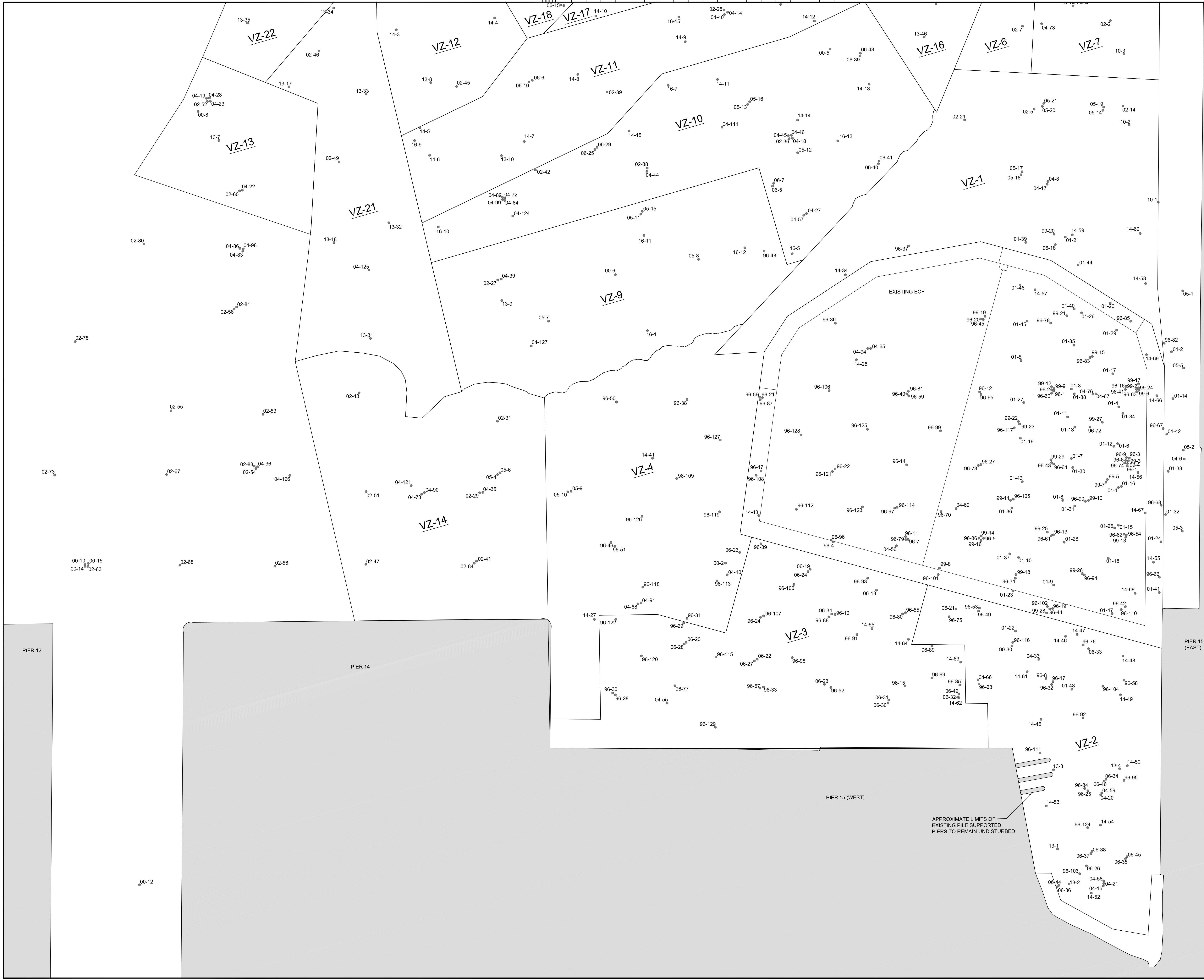
approved by  
approuvé par

bid  
offre  
project manager  
administrateur de projets

project date  
date du projet  
**2017-01-15**

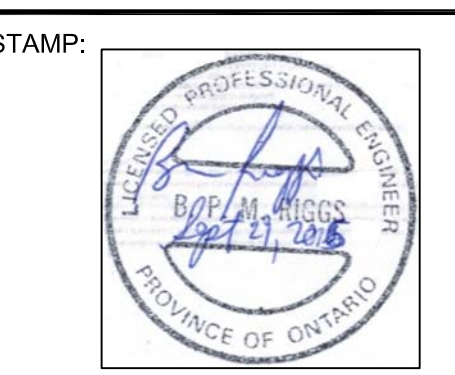
project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.7**

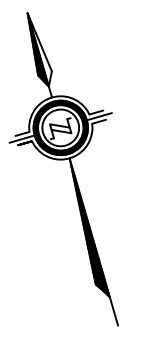


APPROXIMATE LIMITS OF  
EXISTING PILE SUPPORTED  
PIERS TO REMAIN UNDISTURBED

HAMILTON HARBOUR



LEGEND:  
 — VERIFICATION ZONE BOUNDARY  
 VZ-## VERIFICATION ZONE IDENTIFICATION CODE  
 — VERIFICATION ZONE NUMBER  
 ● HISTORIC SAMPLE LOCATIONS  
 03-45 SAMPLE IDENTIFICATION CODE  
 — SAMPLE NUMBER THAT YEAR (ex. #45)  
 — YEAR SAMPLE WAS TAKEN (ex. 2003)



US STEEL (PIER 16)

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

|  |   |
|--|---|
|  | A Detail No.<br>No. du détail   |
|  | B drawing no. - where detail required<br>dessin no. - ou détail exigé |
|  | C drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDATION PROJECT (STAGE 2)**

**HISTORICAL SAMPLE LOCATIONS  
AND NEW VERIFICATION ZONES**

drawn by  
dessiné par **A.MARCZENKO**

designed by  
conçu par **B.RIGGS**

approved by  
approuvé par

bid  
offre project manager  
administrateur de projets

project date  
date du projet **2017-01-15**

project no.  
no. du projet **R.050927.202**

drawing no.  
dessiné no. **D-2.8**

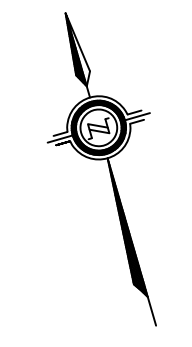
STAMP:



LEGEND:

- VERIFICATION ZONE BOUNDARY
- VZ-## VERIFICATION ZONE IDENTIFICATION CODE
- VERIFICATION ZONE NUMBER
- HISTORIC SAMPLE LOCATIONS
- 03-45 SAMPLE IDENTIFICATION CODE
- SAMPLE NUMBER THAT YEAR (ex. #45)
- YEAR SAMPLE WAS TAKEN (ex. 2003)

HAMILTON HARBOUR



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

- |  |   |
|--|---|
|  | A Detail No.<br>No. du détail   |
|  | B drawing no. - where detail required<br>dessin no. - ou détail exigé |
|  | C drawing no. - where detailed<br>dessin no. - ou détaillé            |

02-82  
02-74

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDICATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**HISTORICAL SAMPLE LOCATIONS  
AND NEW VERIFICATION ZONES**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

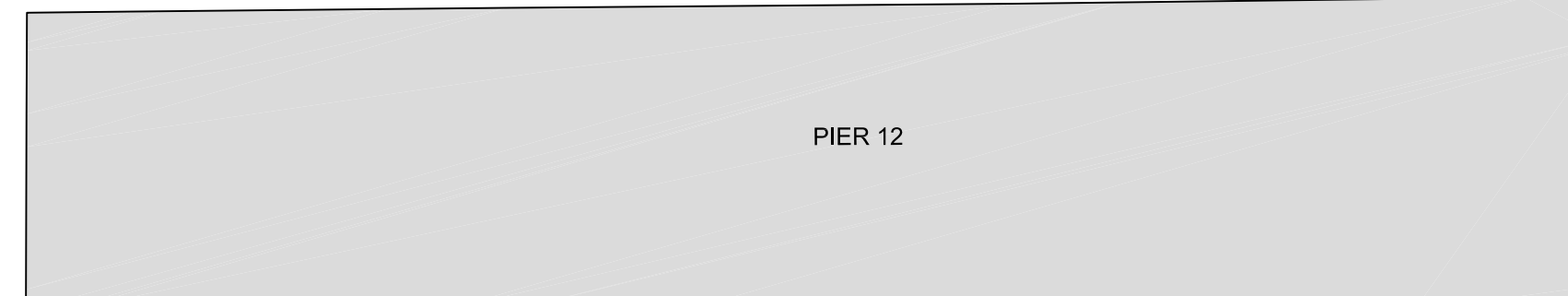
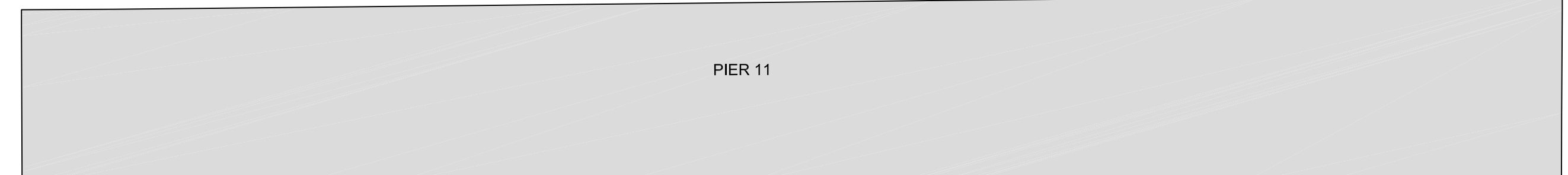
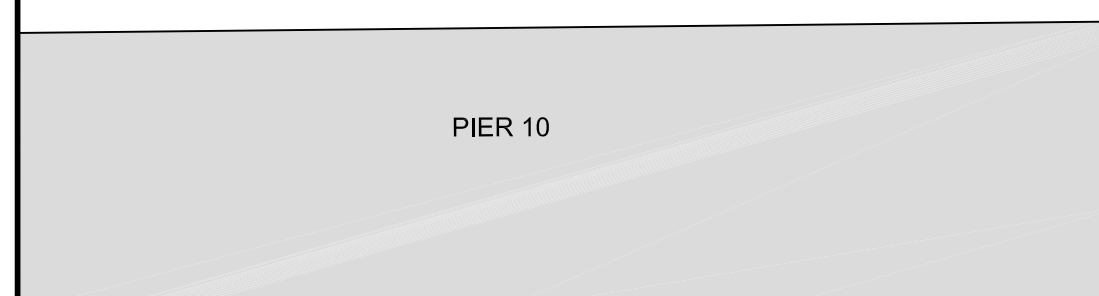
bid  
offre

project manager  
administrateur  
de projets

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.9**



02-72

02-62  
00-13

02-50

02-76

02-59

04-50  
04-49

02-71

04-88 04-96  
04-80 04-75 04-47 04-48  
04-25

04-52  
04-51

02-65

02-16

13-6

02-57  
00-11

13-6

02-75

02-79

02-64

02-69

04-85  
04-79

02-61

02-70

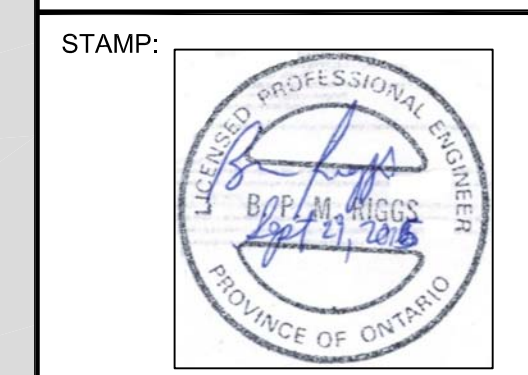
04-85 04-100  
04-79

02-66

04-54

04-34 04-53  
04-26

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



LEGEND:

- 0+300N
- 0+204.6±N (OUTFALL)
- 0+200N
- US STEEL (PIER 16)
- 0+129±N (INTAKE #2)
- 0+123.4±N (OUTFALL #2)
- 0+113.5±N (INTAKE #1)
- 0+100N
- 0+099±N (OUTFALL #1)
- 0+096.4N
- 0+069.3N
- PIER 15 (EAST)  
CONTRACTOR STAGING AREA  
IS NOT SHOWN IN THIS VIEW
- 0+000N
- 0+086.2N
- 0+100N
- 0+150.6N

| revision | date |
|----------|------|
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Do not scale drawings.  
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|   |                                     |
|---|-------------------------------------|
| A | Detail No.                          |
| B | No. du détail                       |
| B | drawing no. - where detail required |
| B | dessin no. - ou detail exigé        |
| C | drawing no. - where detailed        |
| C | dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDIAION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**CROSS SECTION LOCATION PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçue par  
**B.RIGGS**

approved by  
approuvé par

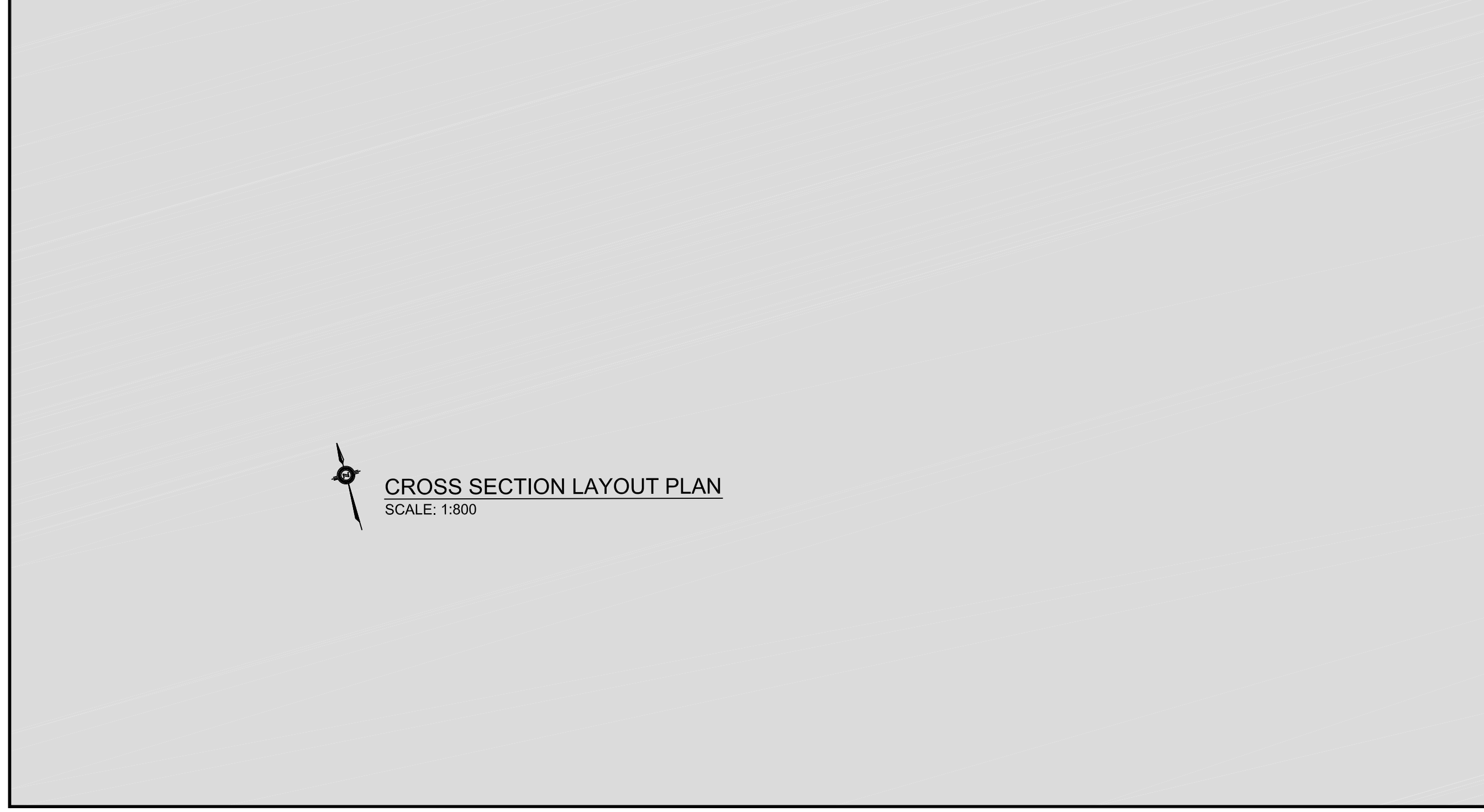
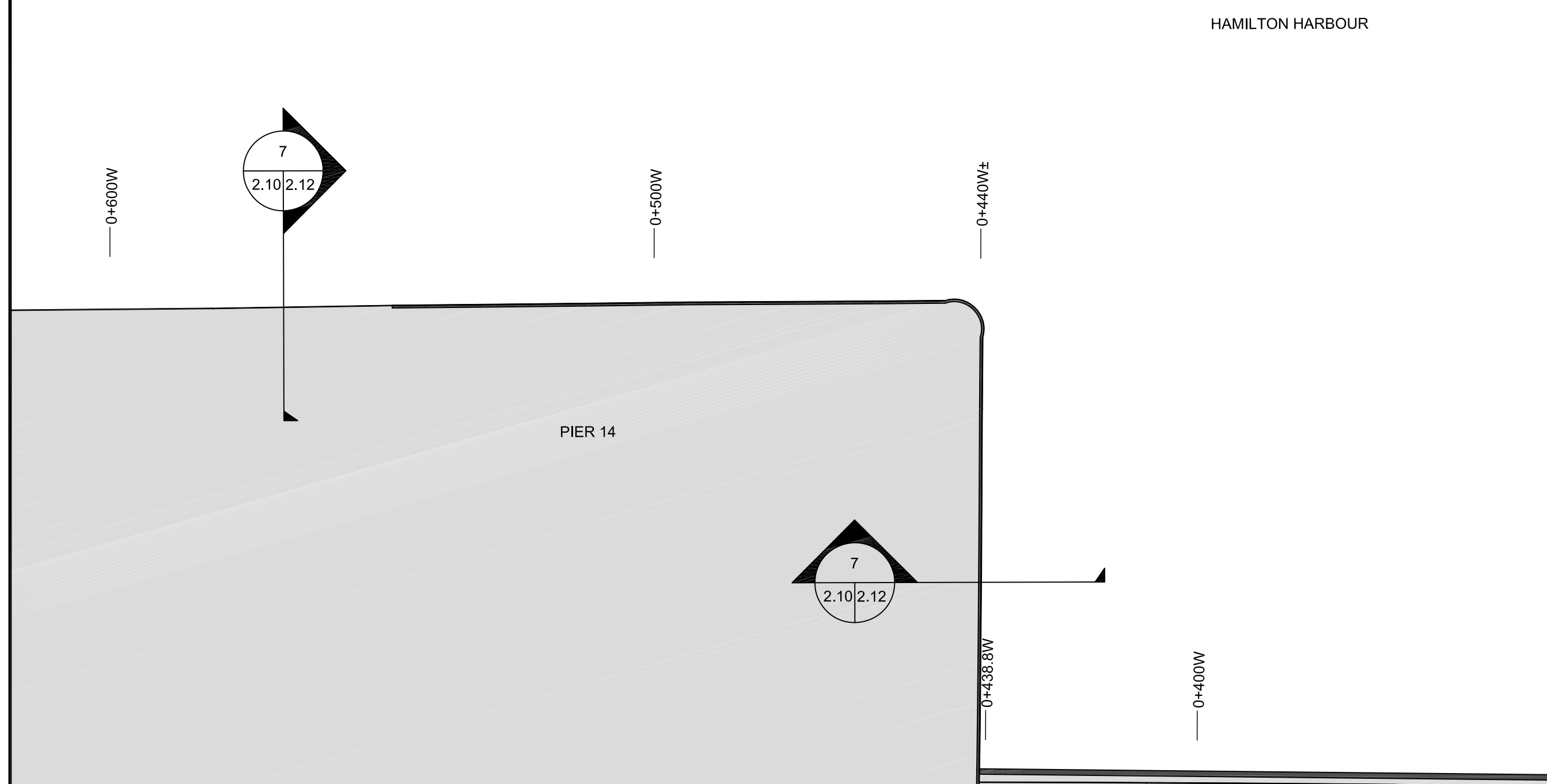
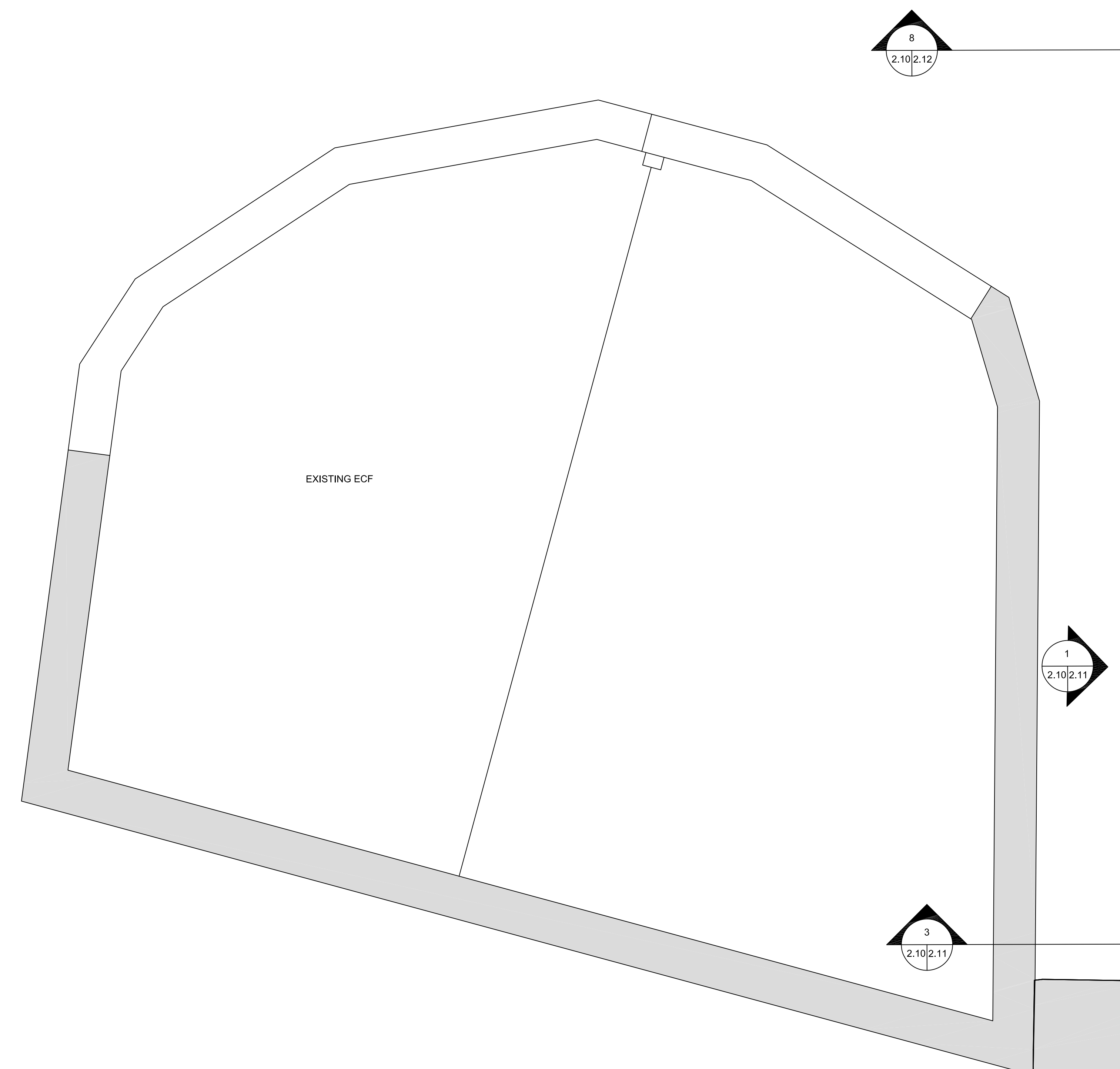
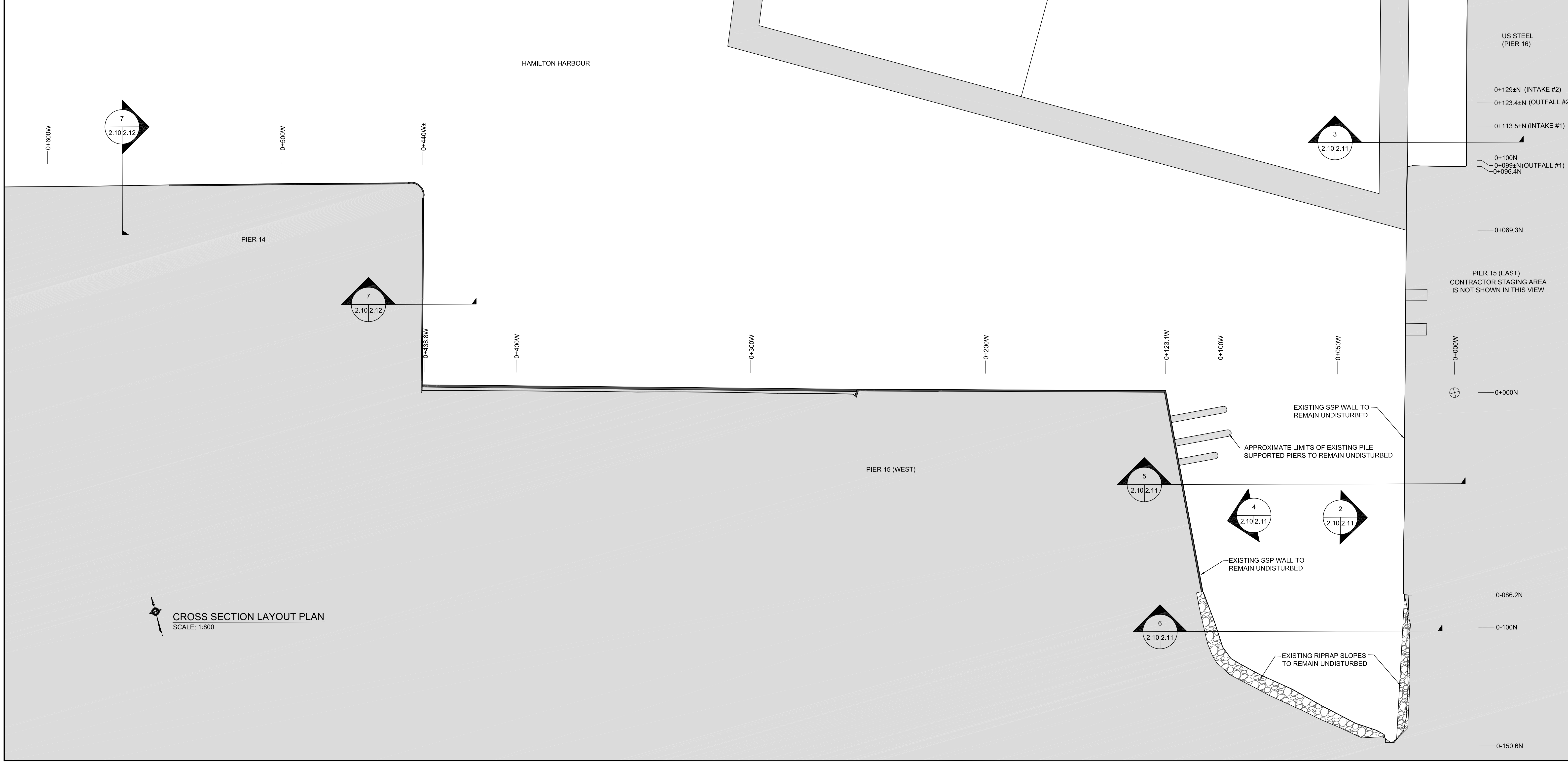
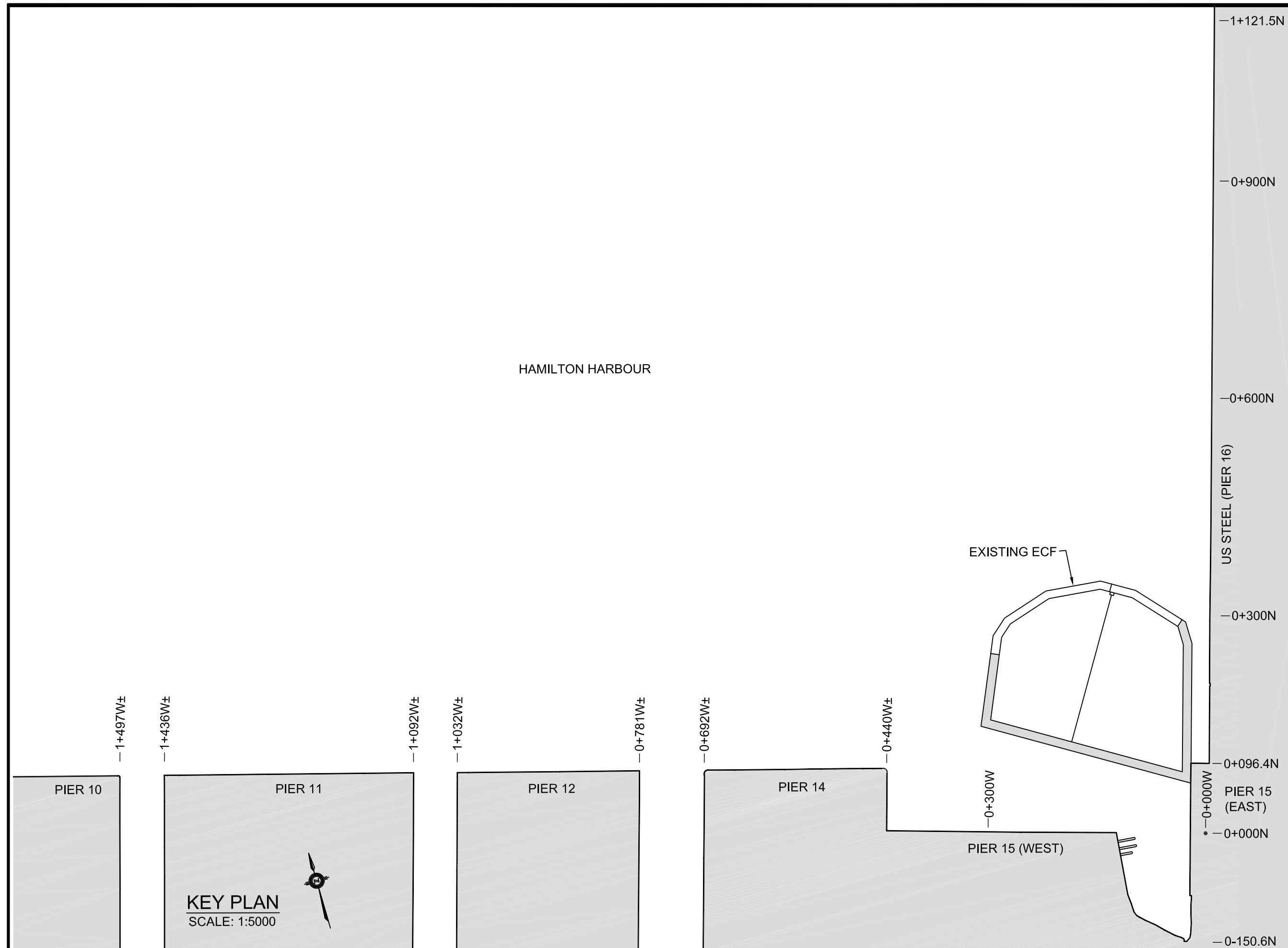
bid  
offre

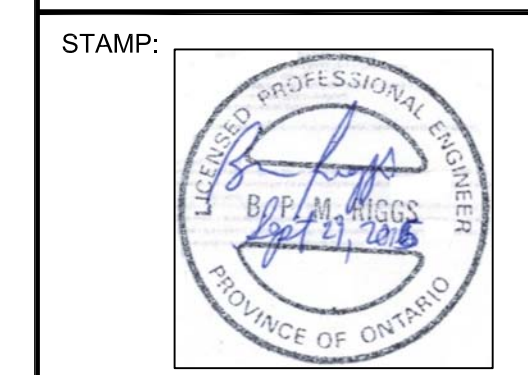
project manager  
administrateur  
de projets

project date  
date du projet  
**2017-01-15**

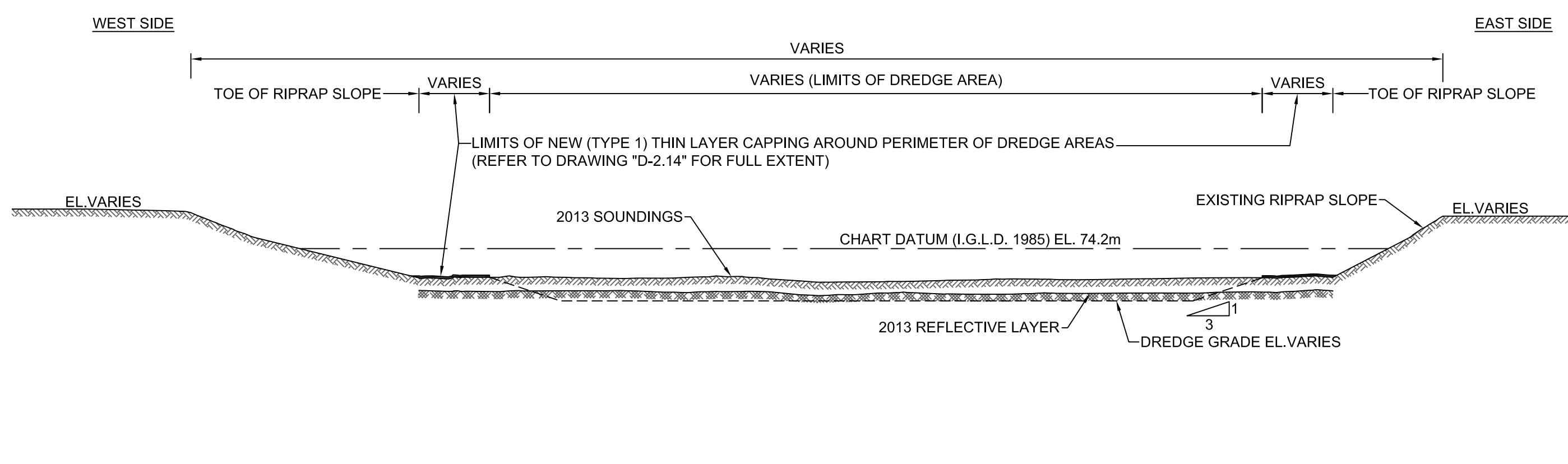
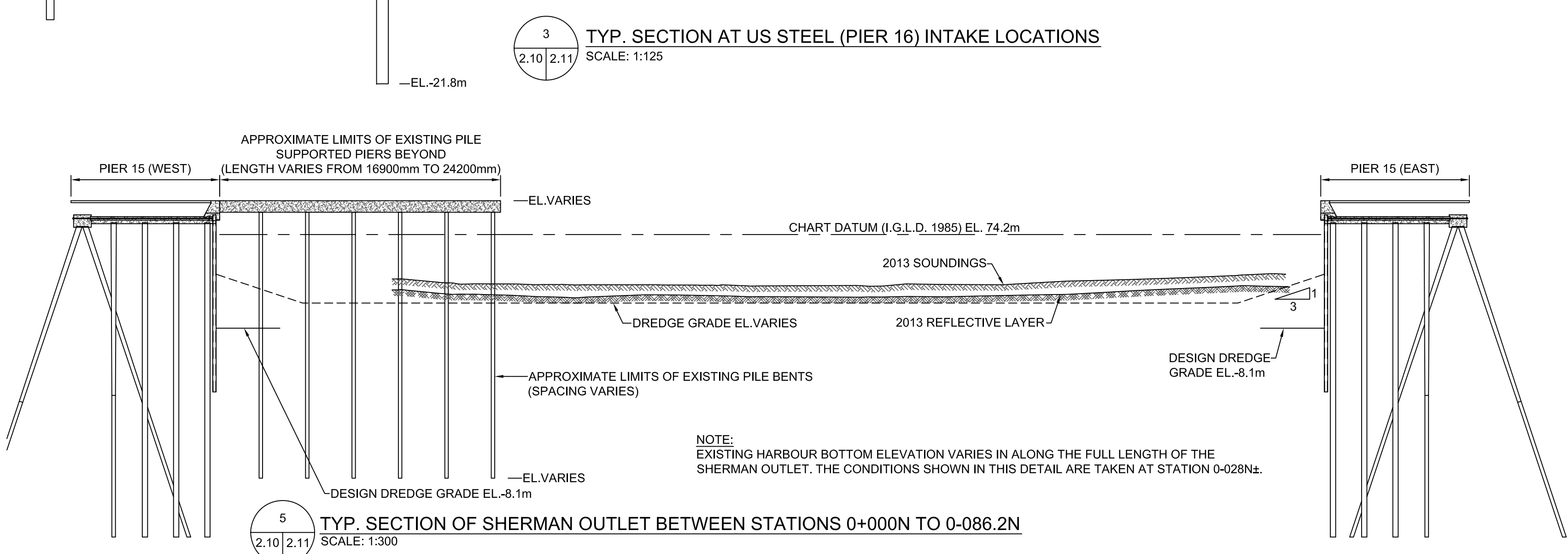
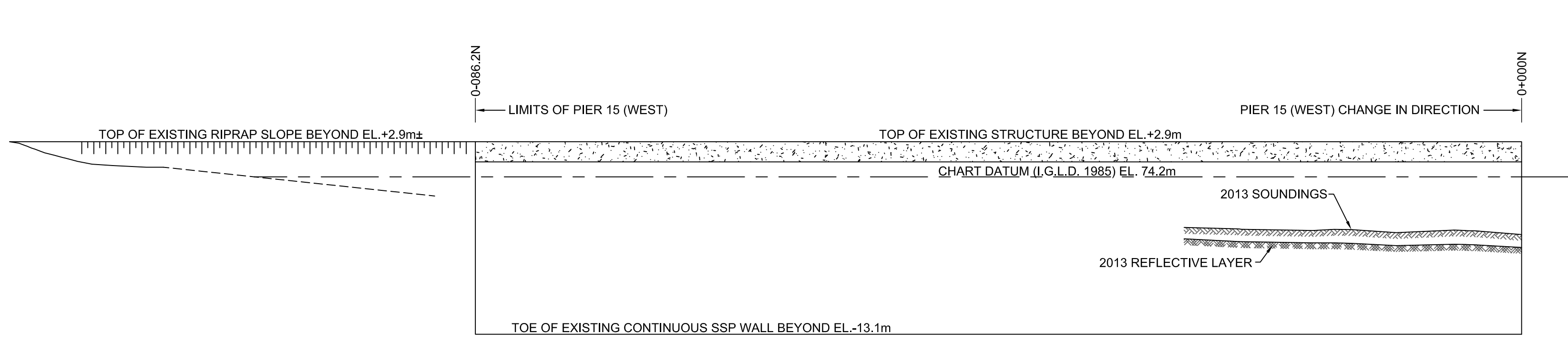
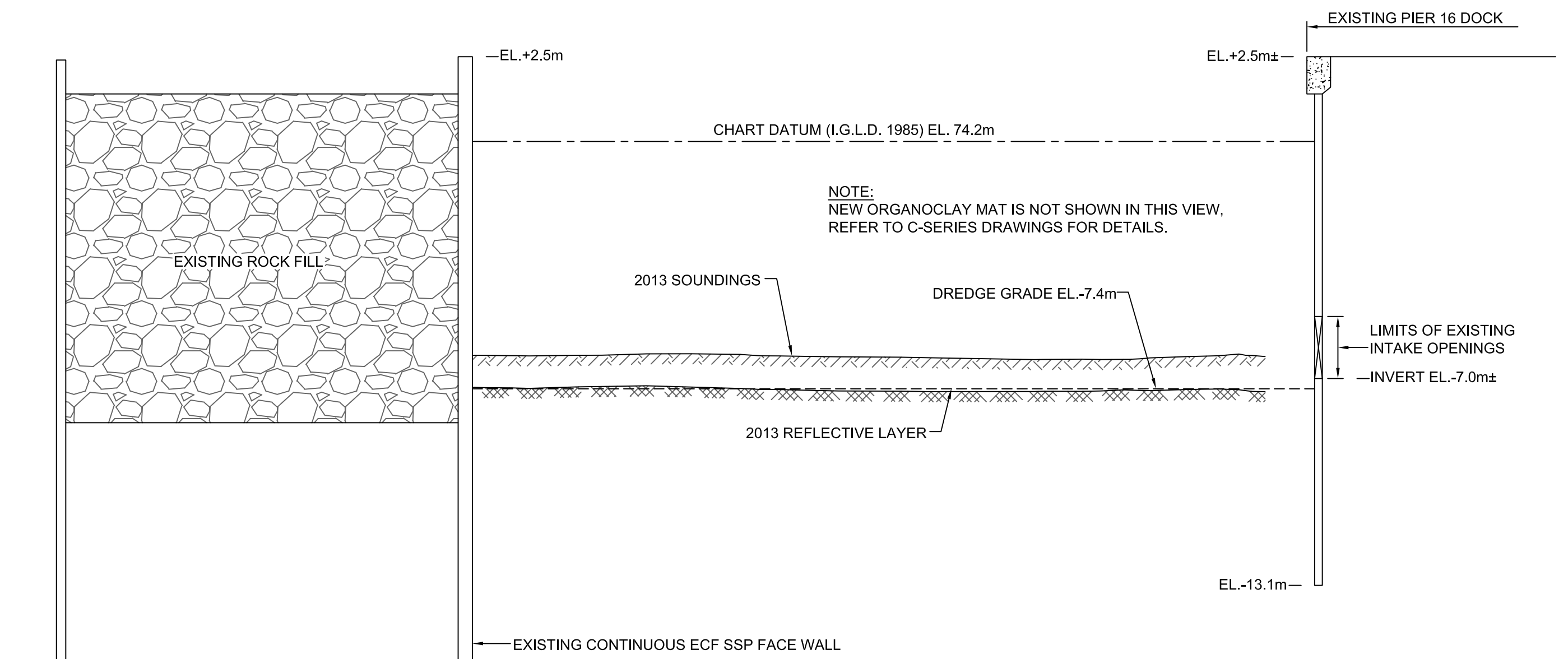
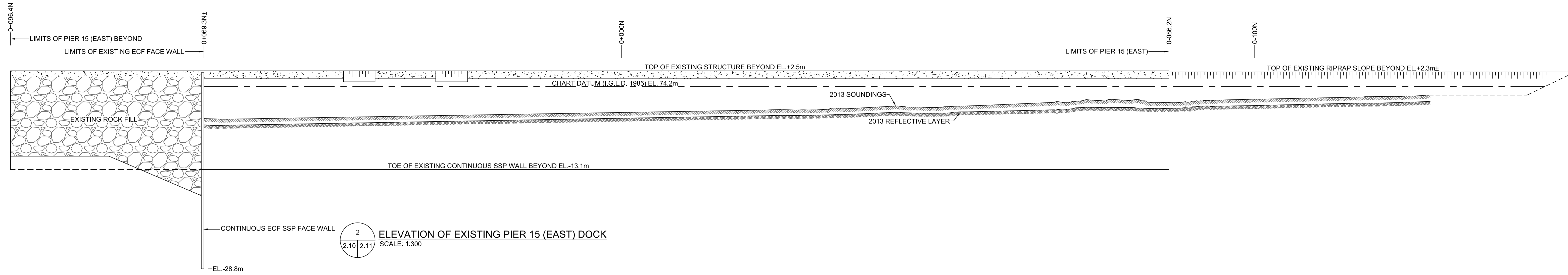
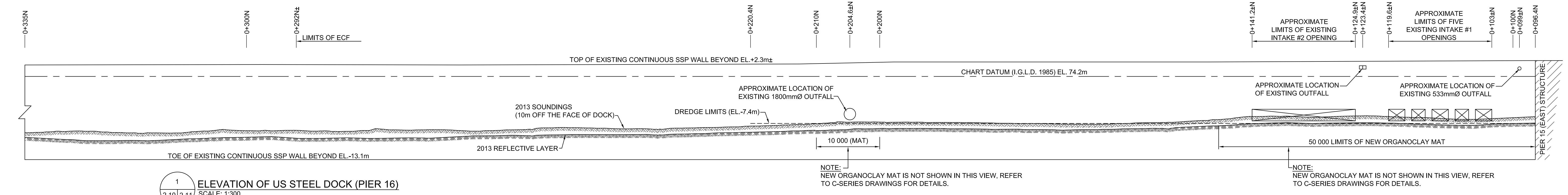
project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.10**





LEGEND:



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

|   |                                     |
|---|-------------------------------------|
| A | Detail No.                          |
| B | drawing no. - where detail required |
| C | drawing no. - where detailed        |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**ELEVATIONS AND TYP. SECTIONS**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

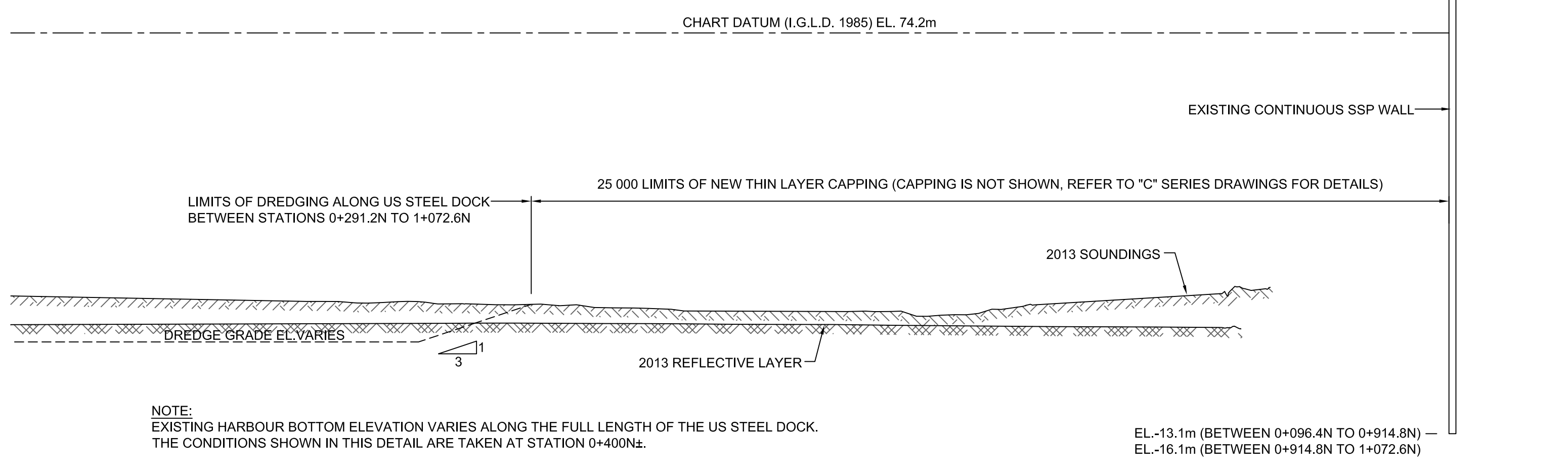
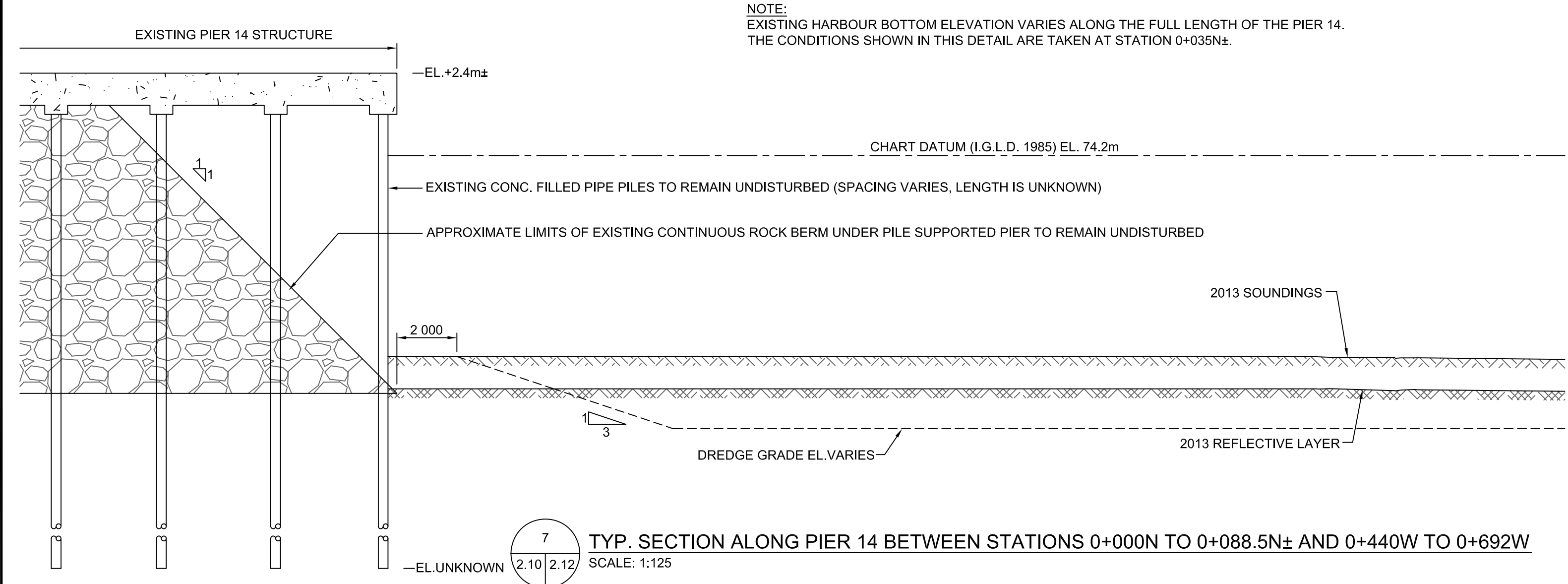
bid offer  
offre de soumission

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.11**

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



8  
 2.10 | 2.12  
 TYP. SECTION ALONG US STEEL DOCK (PIER 16) BETWEEN STATIONS 0+291.2N TO 1+072.6N±  
 SCALE: 1:125

Public Works and Government Services Canada  
 Travaux publics et Services gouvernementaux Canada

HAMILTON PORT AUTHORITY  
 Administration Portuaire de Hamilton

RIGGS ENGINEERING  
 RIGGS ENGINEERING LTD.  
 1240 Commissioner's Road West, Suite 205  
 London, Ontario N6K 1C7  
 (519) 657-1040



LEGEND:

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|----------|------|
| revision | date |
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Do not scale drawings.  
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- A Detail No.  
No. du détail
- B drawing no. - where detail required  
dessin no. - ou détail exigé
- C drawing no. - where detailed  
dessin no. - ou détaillé

project title  
titre du projet  
HAMILTON ONTARIO

RANDLE REEF SEDIMENT  
 REMEDIATION PROJECT (STAGE 2)

drawing title  
titre du dessin  
ELEVATIONS AND TYP. SECTIONS

drawn by  
dessiné par  
A.MARCZENKO

designed by  
conc. par  
B.RIGGS

approved by  
approuvé par

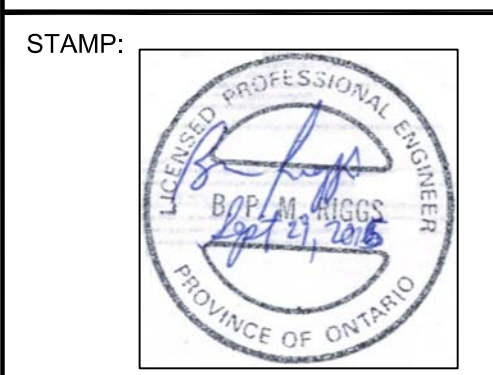
bid  
offre  
project manager  
administrateur de projets

project date  
date du projet  
2017-01-15

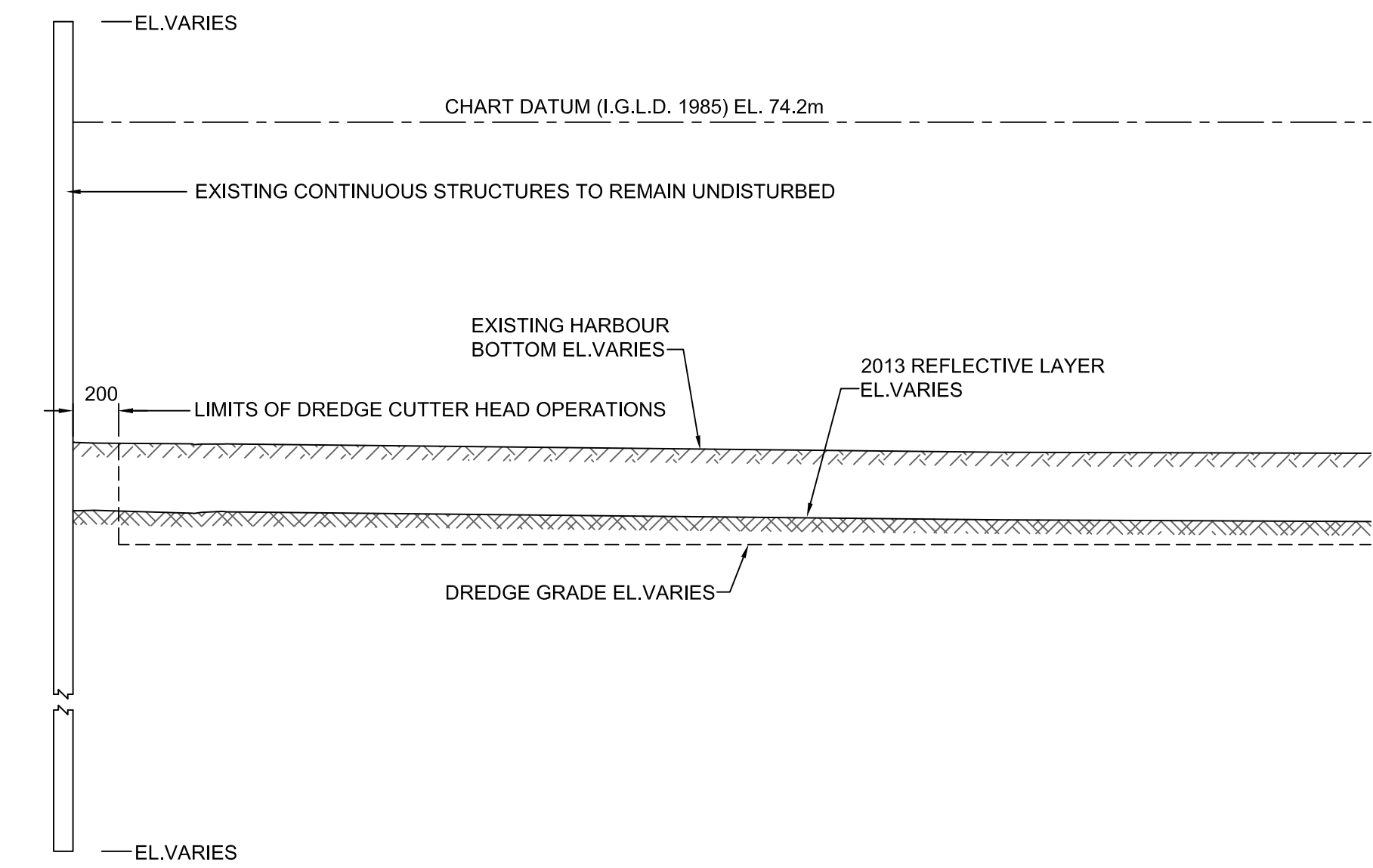
project no.  
no. du projet  
R.050927.202

drawing no.  
dessiné no.  
D-2.12

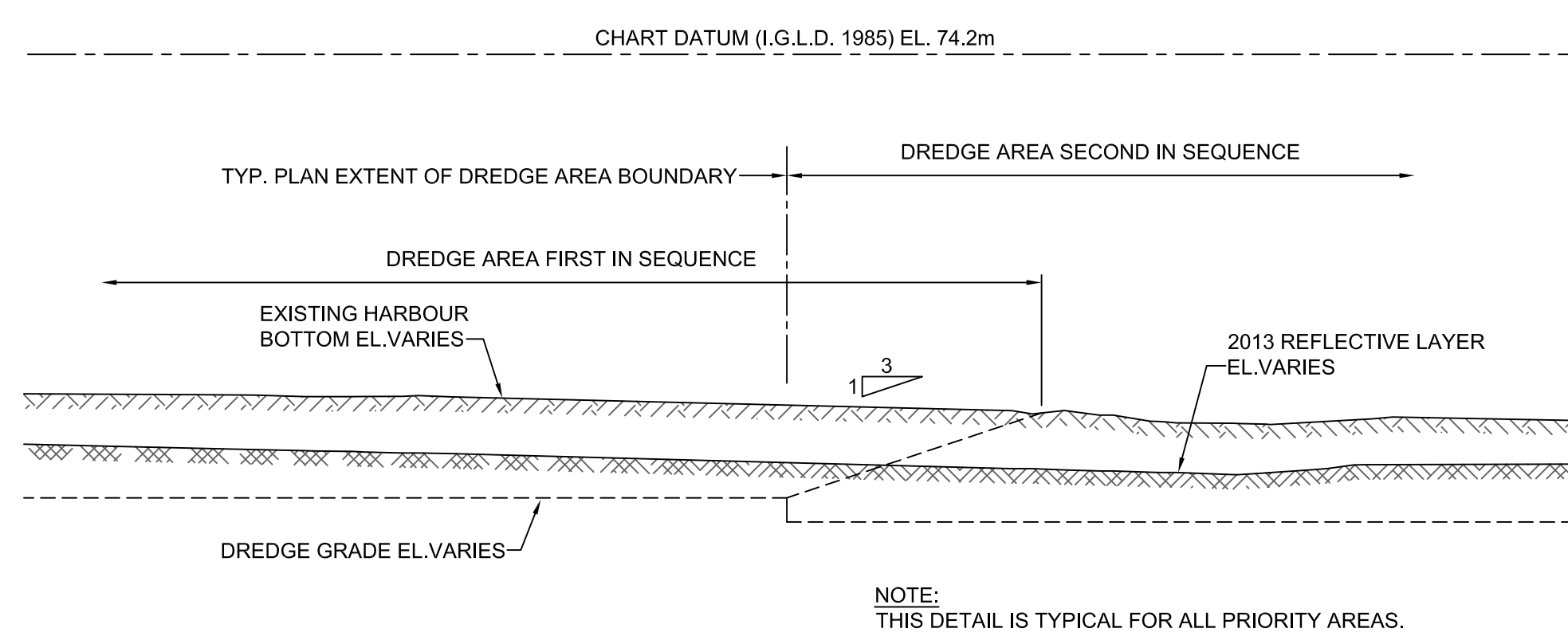




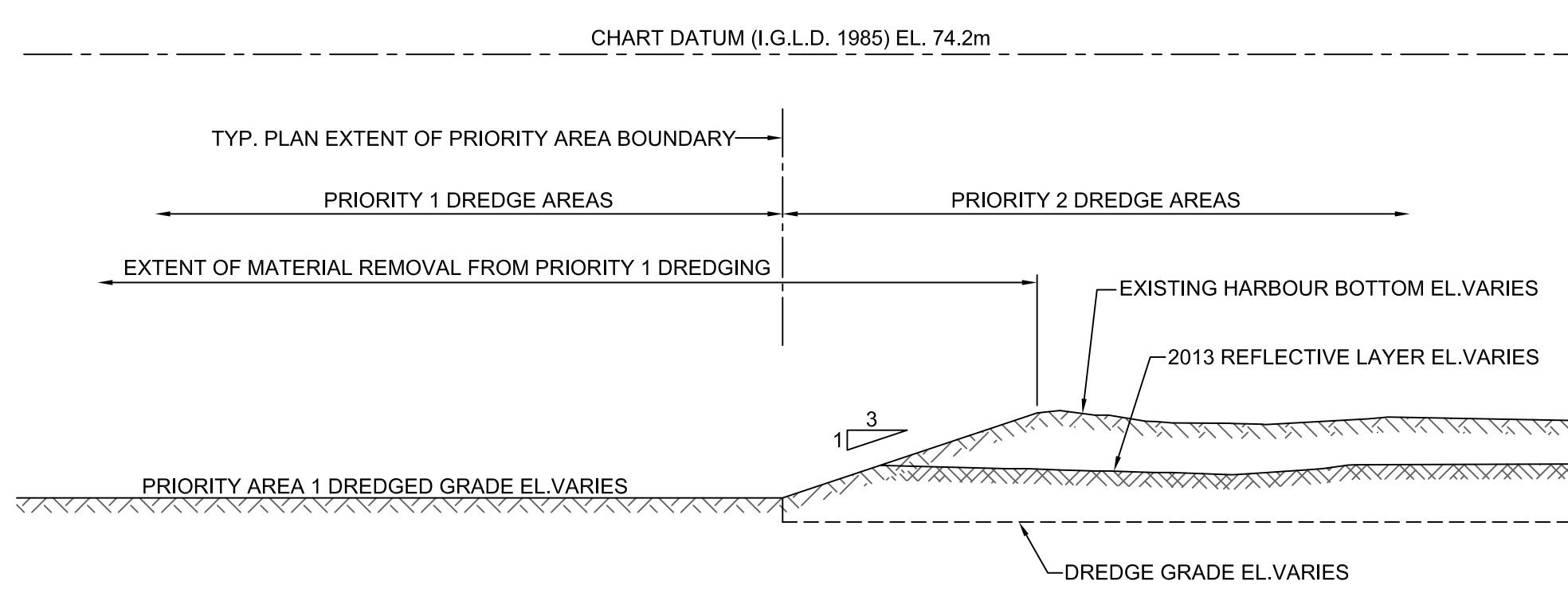
LEGEND:



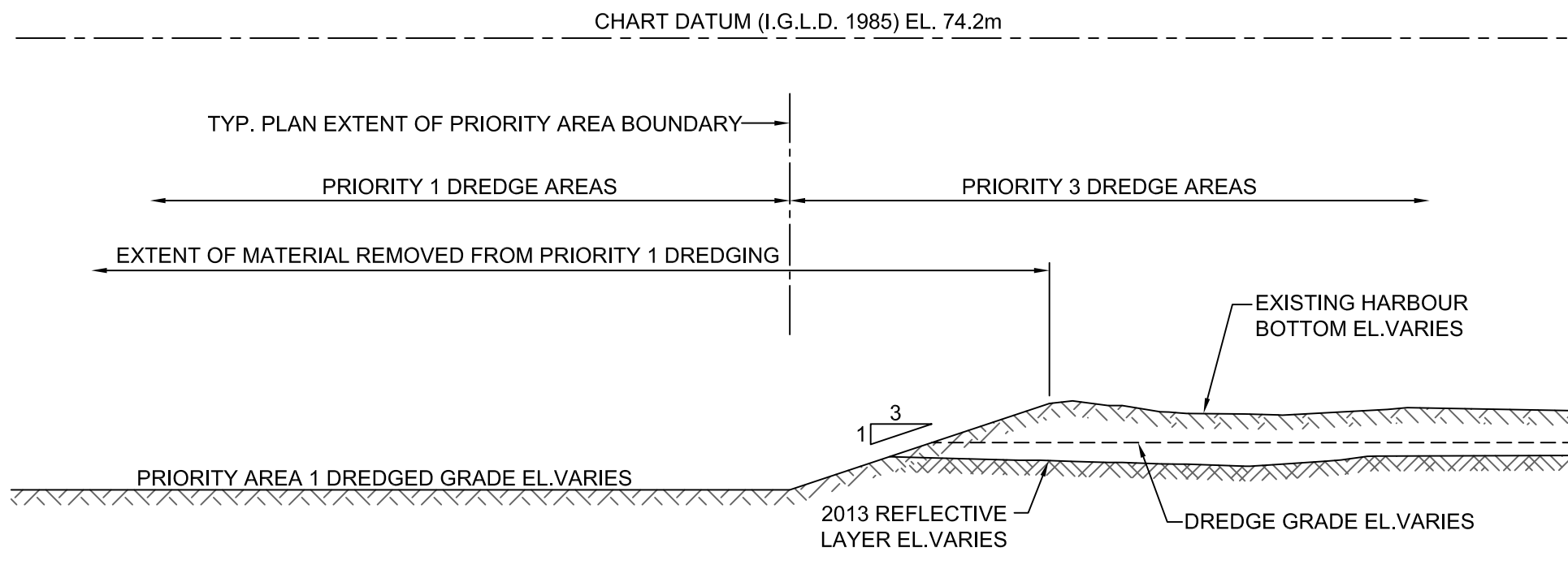
TYP. DREDGING TRANSITION ALONG PERIMETER OF ALL EXISTING STRUCTURES  
SCALE: 1:125



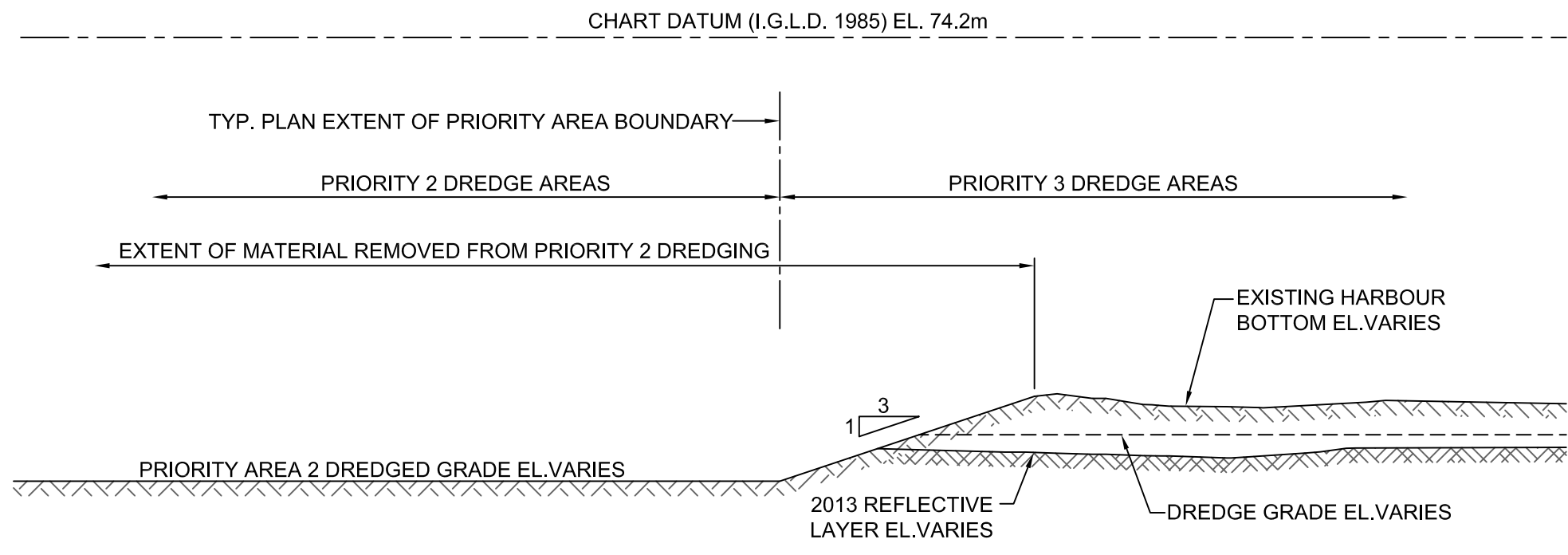
TYP. DREDGING TRANSITION BETWEEN SEQUENCE NUMBERS  
SCALE: 1:125



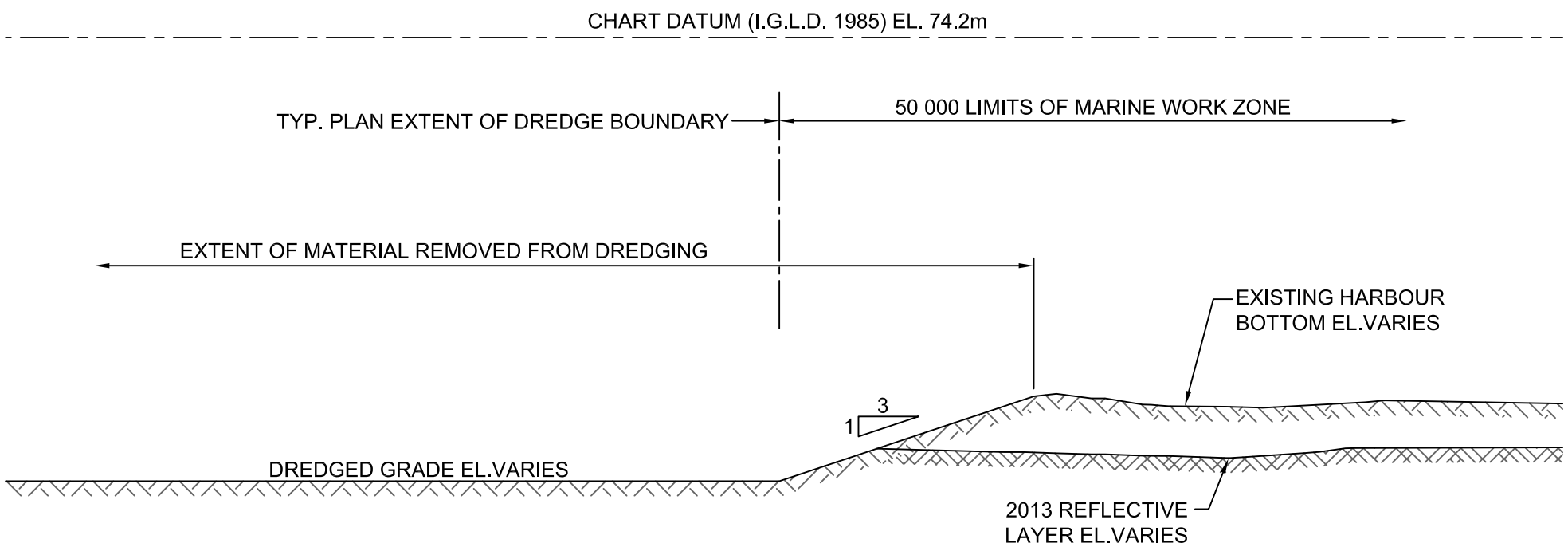
TYP. DREDGING TRANSITION BETWEEN PRIORITY 1 AREAS AND PRIORITY 2 AREAS  
SCALE: 1:125



TYP. DREDGING TRANSITION BETWEEN PRIORITY 1 AREAS AND PRIORITY 3 AREAS  
SCALE: 1:125



TYP. DREDGING TRANSITION BETWEEN PRIORITY 2 AREAS AND PRIORITY 3 AREAS  
SCALE: 1:125



TYP. DREDGING TRANSITION AT BOUNDARY OF DREDGE AREAS  
SCALE: 1:125

| revision | date |
|----------|------|
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|          |      |
|          |      |
|          |      |

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

|          |   |
|----------|---|
| <b>A</b> | Detail No.  |
| <b>B</b> | No. du détail   |
| <b>C</b> | drawing no. - where detail required<br>dessin no. - ou détail exigé |
|          | drawing no. - where detailed<br>dessin no. - ou détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
REMEDICATION PROJECT (STAGE 2)**

drawing title  
titre du dessin  
**DREDGING SEQUENCE  
TRANSITION TYP. SECTIONS**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

bid  
offre

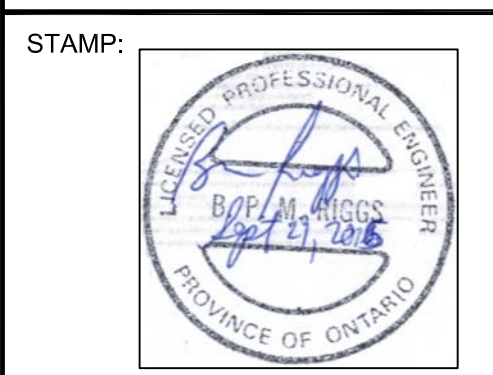
project manager  
administrateur  
de projets

project date  
date du projet  
**2017-01-15**

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.13**

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



LEGEND:  
CAPPING AREA BOUNDARY  
2013 SOUNDINGS  
C# - # CAPPING AREA IDENTIFICATION NUMBER  
CAPPING AREA # AND SEQUENCE #  
CAPPING AREA MATERIAL TYPE #

NOTES:  
1) BATHYMETRIC DATA WAS COLLECTED IN 2013.  
2) BATHYMETRIC DATA SHOWN ALONG PIER 15 (WEST), PIER 14, AND PIER 12 WAS COLLECTED IN 2002.  
3) DRAWING UNITS ARE IN METERS UNLESS NOTED OTHERWISE.  
4) HORIZONTAL DATUM IS REFERENCED TO NAD83. SOUNDINGS ARE SHOWN IN METERS BELOW CHART DATUM I.G.L.D. 1985.  
5) THE SOUNDING INFORMATION SHOWN REPRESENTS RESULTS OF THE SURVEY MADE ON THE DATES SPECIFIED AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME.

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|   |  |
|---|--|
| A | Detail No. No. du détail   |
| B | drawing no. - where detail required dessin no. - ou détail exigé |
| C | drawing no. - where detailed dessin no. - ou détaillé            |

project title / titre du projet: HAMILTON ONTARIO

RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)

drawing title / titre du dessin: THIN LAYER CAP SITE PLAN

drawn by / dessiné par: A.MARCZENKO

designed by / conçu par: B.RIGGS

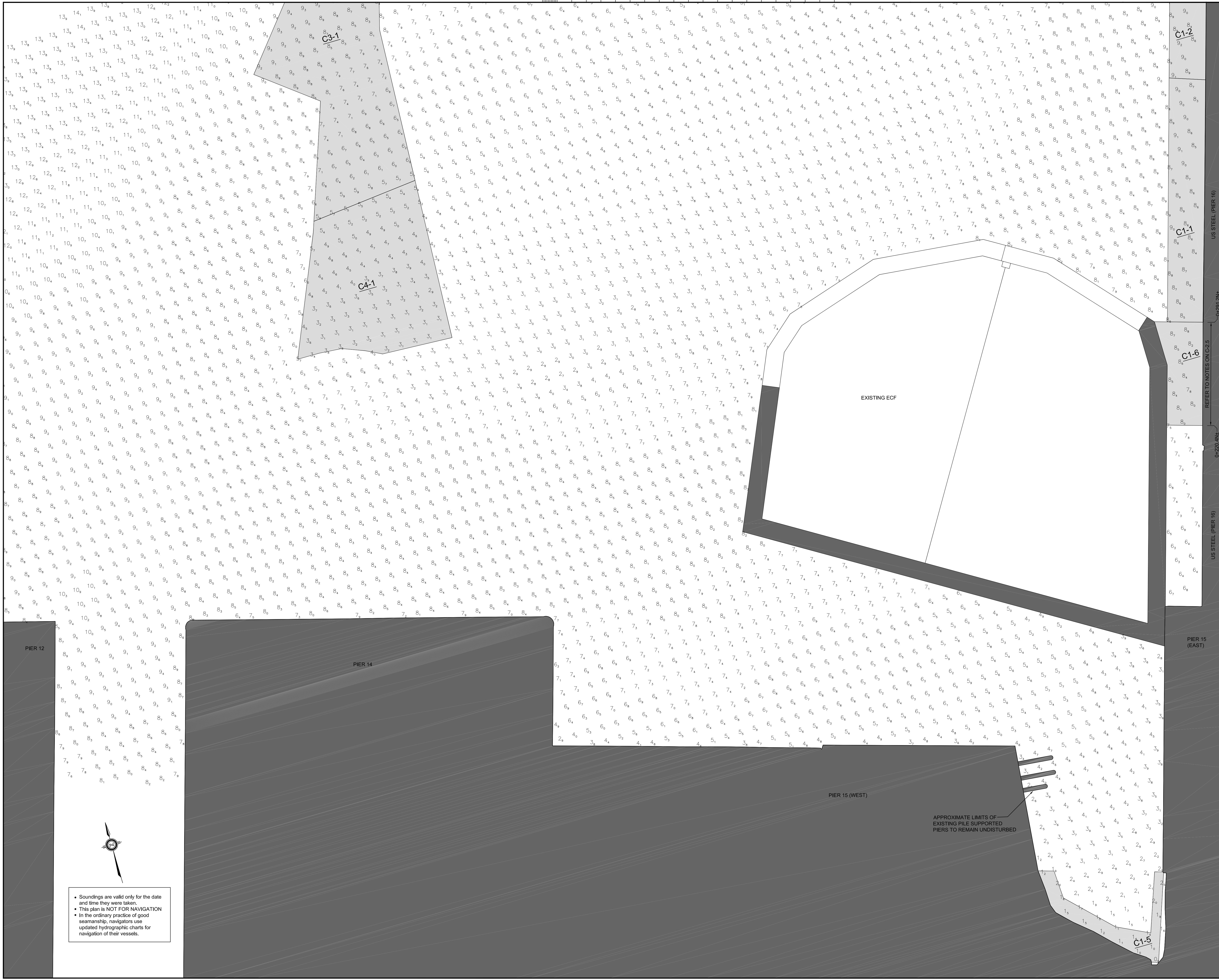
approved by / approuvé par:

bid / offre: project manager / administrateur de projets

project date / date du projet: 2017-01-15

project no. / no. du projet: R.050927.202

drawing no. / dessiné no.: D-2.14



• Soundings are valid only for the date and time they were taken.  
• This plan is NOT FOR NAVIGATION  
• In the ordinary practice of good seamanship, navigators use updated hydrographic charts for navigation of their vessels.

US STEEL (PIER 16)  
D-220-4N1  
US STEEL (PIER 16)  
D-220-4N1

APPROXIMATE LIMITS OF EXISTING PILE SUPPORTED PIERS TO REMAIN UNDISTURBED

EXISTING ECF

PIER 12

PIER 14

PIER 15 (WEST)

PIER 15 (EAST)

C1-5

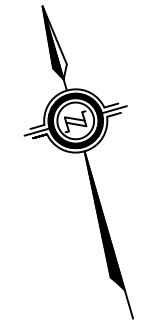
C3-1

C1-2

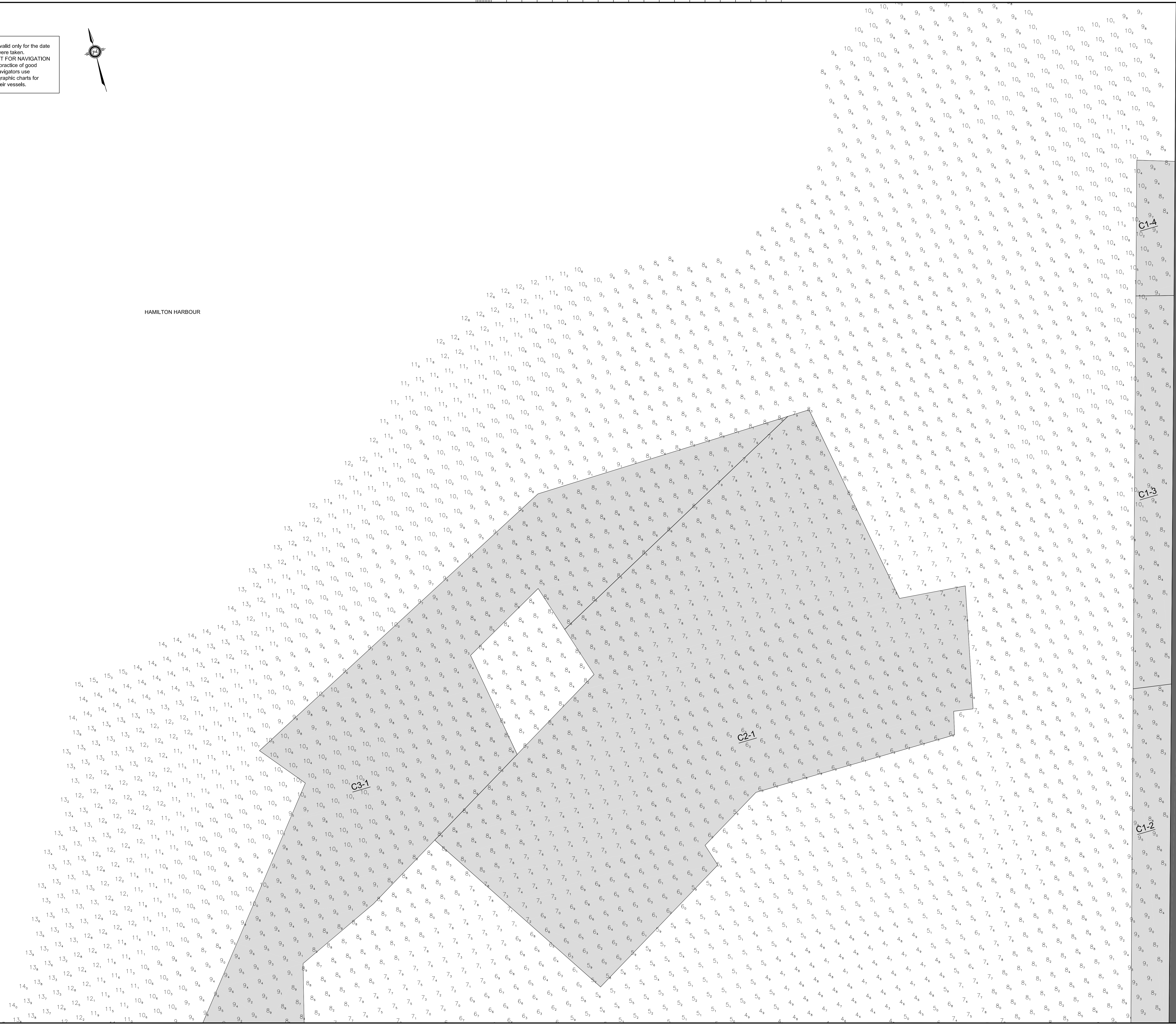
C1-1

C1-6

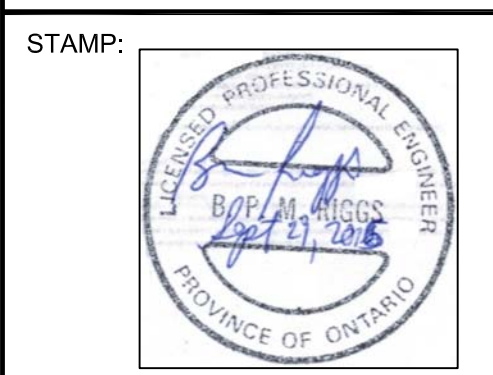
• Soundings are valid only for the date and time they were taken.  
 • This plan is NOT FOR NAVIGATION  
 • In the ordinary practice of good seamanship, navigators use updated hydrographic charts for navigation of their vessels.



HAMILTON HARBOUR



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LEGEND:  
 [Symbol] CAPPING AREA BOUNDARY  
 [Symbol] 2013 SOUNDINGS  
 C# - # CAPPING AREA IDENTIFICATION NUMBER  
 [Symbol] CAPPING AREA # AND SEQUENCE #  
 [Symbol] CAPPING AREA MATERIAL TYPE #

NOTES:  
 1) BATHYMETRIC DATA WAS COLLECTED IN 2013.  
 2) BATHYMETRIC DATA SHOWN ALONG PIER 15 (WEST), PIER 14, AND PIER 12 WAS COLLECTED IN 2002.  
 3) DRAWING UNITS ARE IN METERS UNLESS NOTED OTHERWISE.  
 4) HORIZONTAL DATUM IS REFERENCED TO NAD83.  
 5) SOUNDINGS ARE SHOWN IN METERS BELOW CHART DATUM I.G.L.D. 1985.  
 6) THE SOUNDING INFORMATION SHOWN REPRESENTS RESULTS OF THE SURVEY MADE ON THE DATES SPECIFIED AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME.

| revision | date |
|----------|------|
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Do not scale drawings.  
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|  |   |
|--|---|
|  | A Detail No.<br>No. du détail   |
|  | B drawing no. - where detail required<br>dessin no. - où détail exigé |
|  | C drawing no. - where detailed<br>dessin no. - où détaillé            |

project title  
titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT  
 REMEDIATION PROJECT (STAGE 2)**  
 drawing title  
titre du dessin  
**THIN LAYER CAP SITE PLAN**

drawn by  
dessiné par  
**A.MARCZENKO**

designed by  
conçu par  
**B.RIGGS**

approved by  
approuvé par

bid  
offre

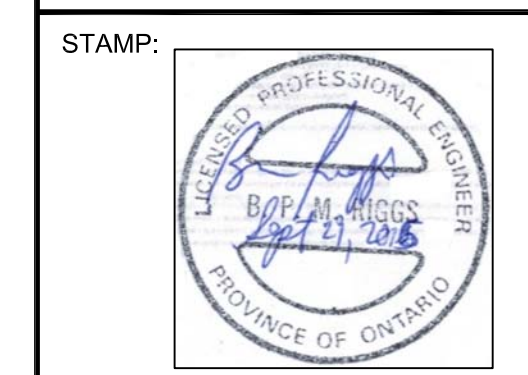
project manager  
administrateur de projet  
 2017-01-15

project no.  
no. du projet  
**R.050927.202**

drawing no.  
dessiné no.  
**D-2.15**

US STEEL (PIER 16)

US STEEL (PIER 16)



LEGEND:  
CAPPING AREA BOUNDARY  
S 2013 SOUNDINGS  
C#-# CAPPING AREA IDENTIFICATION NUMBER  
CAPPING AREA # AND SEQUENCE #  
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|             |  |
|-------------|--|
| A<br>B<br>C | A Detail No. No. du détail   |
|             | B drawing no. - where detail required dessin no. - ou détail exigé |
|             | C drawing no. - where detailed dessin no. - ou détaillé            |

project title / titre du projet  
**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title / titre du dessin  
**THIN LAYER CAP SITE PLAN**

drawn by / dessiné par  
**A.MARCZENKO**

designed by / conçu par  
**B.RIGGS**

approved by / approuvé par

bid / offre  
project manager / administrateur de projet

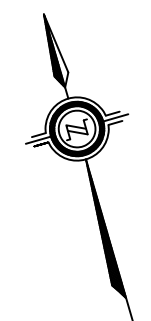
project date / date du projet  
**2017-01-15**

project no. / no. du projet  
**R.050927.202**

drawing no. / dessiné no.  
**D-2.16**



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PIER 10

PIER 11

PIER 12

| DREDGE AREA LEGEND |             |                   |             |             |                   |             |             |                   |
|--------------------|-------------|-------------------|-------------|-------------|-------------------|-------------|-------------|-------------------|
| PRIORITY 1         |             |                   | PRIORITY 2  |             |                   | PRIORITY 3  |             |                   |
| DREDGE AREA        | GRADE DEPTH | VERIFICATION ZONE | DREDGE AREA | GRADE DEPTH | VERIFICATION ZONE | DREDGE AREA | GRADE DEPTH | VERIFICATION ZONE |
| P1-1               | *           | VZ-1              | P2-1        | 10.6        | VZ-5              | P3-1        | 8.5         | VZ-15             |
| P1-2               | *           | VZ-1              | P2-2        | 10.8        | VZ-5              | P3-2        | 9.3         | VZ-15             |
| P1-3               | 8.7         | VZ-1              | P2-3        | 11.1        | VZ-5              | P3-3        | 9.5         | VZ-15             |
| P1-4               | 8.7         | VZ-1              | P2-4        | 11.6        | VZ-5              | P3-4        | 10          | VZ-15             |
| P1-5               | 9           | VZ-1              | P2-5        | *           | VZ-6              | P3-5        | 10.5        | VZ-15             |
| P1-6               | 9.2         | VZ-1              | P2-6        | 7.8         | VZ-6              | P3-6        | 10.5        | VZ-15             |
| P1-7               | 9.3         | VZ-1              | P2-7        | 8.6         | VZ-6              | P3-7        | 11          | VZ-15             |
| P1-8               | 9.5         | VZ-1              | P2-8        | 9.1         | VZ-7              | P3-8        | 5.5         | VZ-16             |
| P1-9               | 10.1        | VZ-1              | P2-9        | 9.6         | VZ-7              | P3-9        | 5.7         | VZ-16             |
| P1-10              | 7.4         | N/A               | P2-10       | 10.1        | VZ-7              | P3-10       | 6           | VZ-16             |
| P1-11              | 3.1         | VZ-2              | P2-11       | 10.1        | VZ-8              | P3-11       | 6.5         | VZ-17             |
| P1-12              | 3.7         | VZ-2              | P2-12       | 3.7         | VZ-9              | P3-12       | 7           | VZ-17             |
| P1-13              | 4.1         | VZ-2              | P2-13       | 3.9         | VZ-9              | P3-13       | 7.5         | VZ-18             |
| P1-14              | 5           | VZ-2              | P2-14       | 4.5         | VZ-9              | P3-14       | 8.2         | VZ-18             |
| P1-15              | 5.6         | VZ-2              | P2-15       | 4.8         | VZ-10             | P3-15       | 8.8         | VZ-19             |
| P1-16              | 6.5         | VZ-2              | P2-16       | 5.4         | VZ-10             | P3-16       | 9           | VZ-19             |
| P1-17              | 7           | VZ-2              | P2-17       | 5.9         | VZ-11             | P3-17       | 9.7         | VZ-20             |
| P1-18              | 7           | VZ-2              | P2-18       | 6.4         | VZ-11             | P3-18       | 4           | VZ-21             |
| P1-19              | 7           | VZ-2              | P2-19       | 6.8         | VZ-11             | P3-19       | 4.5         | VZ-21             |
| P1-20              | 7           | VZ-2              | P2-20       | 7.2         | VZ-12             | P3-20       | 5           | VZ-21             |
| P1-21              | 7.1         | VZ-2              | P2-21       | 8           | VZ-12             | P3-21       | 5.5         | VZ-21             |
| P1-22              | 7.1         | VZ-3              | P2-22       | 8.4         | VZ-12             | P3-22       | 6           | VZ-21             |
| P1-23              | 7.6         | VZ-3              | P2-23       | 8.9         | VZ-12             | P3-23       | 6.5         | VZ-21             |
| P1-24              | 7.1         | VZ-3              | P2-24       | 9.3         | VZ-12             | P3-24       | 7           | VZ-21             |
| P1-25              | 8           | VZ-3              | P2-25       | 9.4         | VZ-13             | P3-25       | 7.5         | VZ-21             |
| P1-26              | 8.2         | VZ-3              | P2-26       | 10          | VZ-13             | P3-26       | 8           | VZ-21             |
| P1-27              | 8           | VZ-3              | P2-27       | 10.6        | VZ-13             | P3-27       | 8.5         | VZ-21             |
| P1-28              | 8.3         | VZ-3              | P2-28       | 11.1        | VZ-13             | P3-28       | 9           | VZ-21             |
| P1-29              | 8.5         | VZ-3              | P2-29       | *           | VZ-14             | P3-29       | 9.5         | VZ-21             |
| P1-30              | 9.1         | VZ-4              | P2-30       | 8.3         | VZ-14             | P3-30       | 10.2        | VZ-22             |
| P1-31              | 9.2         | VZ-4              | P2-31       | 8.8         | VZ-14             | P3-31       | 10.5        | VZ-22             |
| P1-32              | 9.3         | VZ-4              | P2-32       | 8.8         | VZ-14             | P3-32       | 10.5        | VZ-22             |
| P1-33              | *           | VZ-4              | P2-33       | 9.2         | VZ-14             | P3-33       | 11          | VZ-22             |
| P1-34              | 8.7         | VZ-4              | P2-34       | 9.2         | VZ-14             | P3-34       | 11          | VZ-22             |
| P1-35              | 8.8         | VZ-4              | P2-35       | 9.8         | VZ-14             |             |             |                   |
| P1-36              | 9.2         | VZ-4              | P2-36       | 10.1        | VZ-14             |             |             |                   |
| P1-37              | 9.3         | VZ-4              | P2-37       | 10.8        | VZ-14             |             |             |                   |
| P1-38              | 9.6         | VZ-4              | P2-38       | 11.3        | VZ-14             |             |             |                   |
| P1-39              | 9.6         | VZ-4              |             |             |                   |             |             |                   |
| P1-40              | 10.8        | VZ-4              |             |             |                   |             |             |                   |

NOTES:  
1) \* AREAS WITH SLOPING GRADE DEPTHS.

| VERIFICATION ZONES |               |                        |
|--------------------|---------------|------------------------|
| ZONE #             | PRIORITY AREA | AREA (m <sup>2</sup> ) |
| VZ-1               | 1             | 26,898                 |
| VZ-2               | 1             | 22,526                 |
| VZ-3               | 1             | 27,867                 |
| VZ-4               | 1             | 27,011                 |
| VZ-5               | 2             | 10,281                 |
| VZ-6               | 2             | 7,907                  |
| VZ-7               | 2             | 21,299                 |
| VZ-8               | 2             | 4,486                  |
| VZ-9               | 2             | 23,511                 |
| VZ-10              | 2             | 26,799                 |
| VZ-11              | 2             | 19,111                 |
| VZ-12              | 2             | 10,478                 |
| VZ-13              | 2             | 9,308                  |
| VZ-14              | 2             | 24,932                 |
| VZ-15              | 3             | 26,961                 |
| VZ-16              | 3             | 17,826                 |
| VZ-17              | 3             | 29,930                 |
| VZ-18              | 3             | 27,554                 |
| VZ-19              | 3             | 25,164                 |
| VZ-20              | 3             | 14,204                 |
| VZ-21              | 3             | 19,418                 |
| VZ-22              | 3             | 30,833                 |



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**HAMILTON ONTARIO**

**RANDLE REEF SEDIMENT REMEDIATION PROJECT (STAGE 2)**

drawing title / titre du dessin  
**DREDGE AREA GRADE DEPTHS AND VERIFICATION ZONE LEGEND**

drawn by / dessiné par  
**A.MARCZENKO**

designed by / conçu par  
**B.RIGGS**

approved by / approuvé par

bid / offre project manager / administrateur de projets

project date / date du projet  
**2017-01-15**

project no. / no. du projet  
**R.050937.202**

drawing no. / dessiné no.  
**D-2.17**