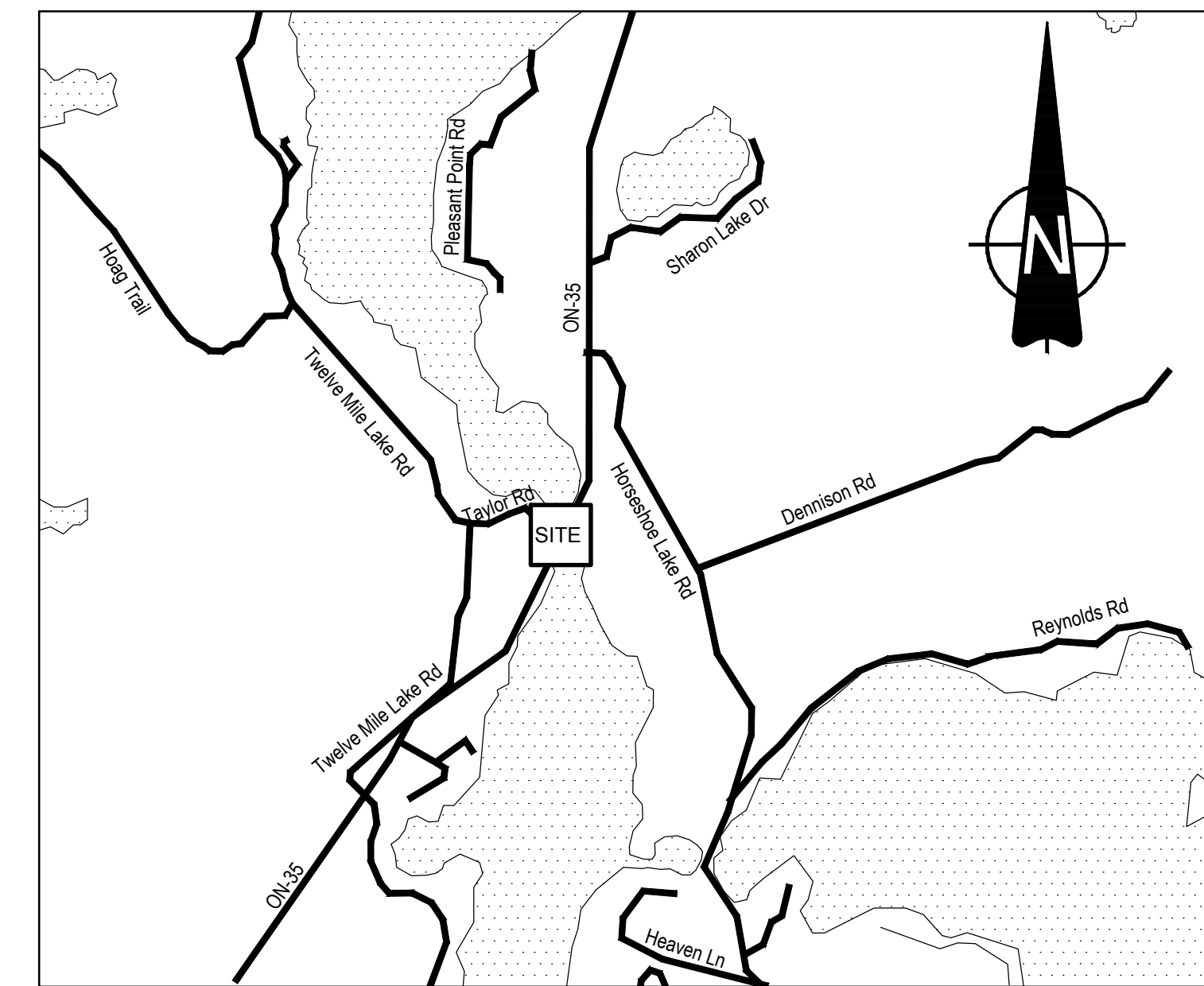


TWELVE MILE LAKE DAM REPLACEMENT

MINDEN HILLS, ONTARIO



FOR TENDER

| DWG No. | DESCRIPTION |
|---------|--|
| 100 | COVER SHEET AND DRAWING LIST |
| 101 | EXISTING CONDITIONS AND SITE SURVEY |
| 102 | EXISTING CONDITIONS - DAM ELEVATION AND SECTIONS |
| 103 | LAYDOWN AREA - PLAN VIEW |
| 104 | PROPOSED CONSTRUCTION STAGING - PLAN STAGE 1 TO 4 |
| 105 | PROPOSED CONSTRUCTION STAGING - PLAN STAGE 5 TO 8 |
| 106 | PROPOSED CONSTRUCTION STAGING - PLAN STAGE 9 TO 10 |
| 107 | REMOVALS |
| 108 | CONSTRUCTION - NEW GENERAL ARRANGEMENT |
| 109 | CONSTRUCTION - ELEVATION AND SECTIONS |
| 110 | REINFORCING - PIER SECTIONS AND SILL SLAB |
| 111 | REINFORCING - DECK |
| 112 | TYPICAL DETAILS - GAIN EMBEDDED PARTS |
| 113 | DECK EQUIPMENT DETAILS |
| 114 | LOG PINNING MECHANISM - DETAILS & GENERAL ASSEMBLY |
| 115 | MISCELLANEOUS METAL DETAILS |
| 116 | MISCELLANEOUS DETAILS |
| 117 | PUBLIC SAFETY MEASURES |
| 118 | BOOM DETAILS |
| 119 | GRADING AND RESTORATION PLAN |
| 120 | STANDARD DETAILS 1 |
| 121 | STANDARD DETAILS 2 |
| 122 | STANDARD DETAILS 3 |
| 123 | STANDARD DETAILS 4 |



| No. | Description | Drawn By / Dessiné par | Date |
|-----|--------------------|------------------------|-------------|
| C | REVISED FOR TENDER | M.G. | JUL-24-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

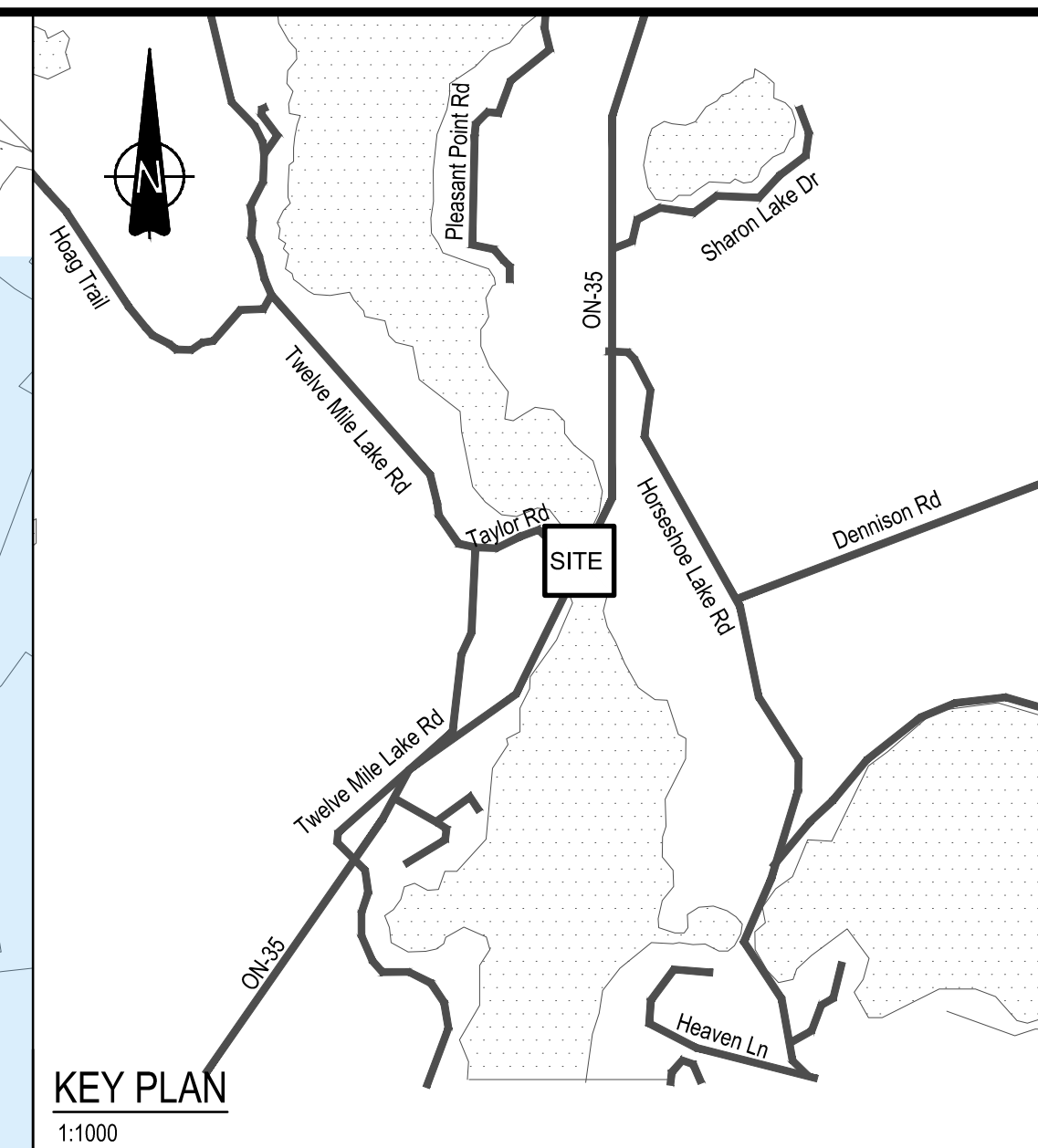
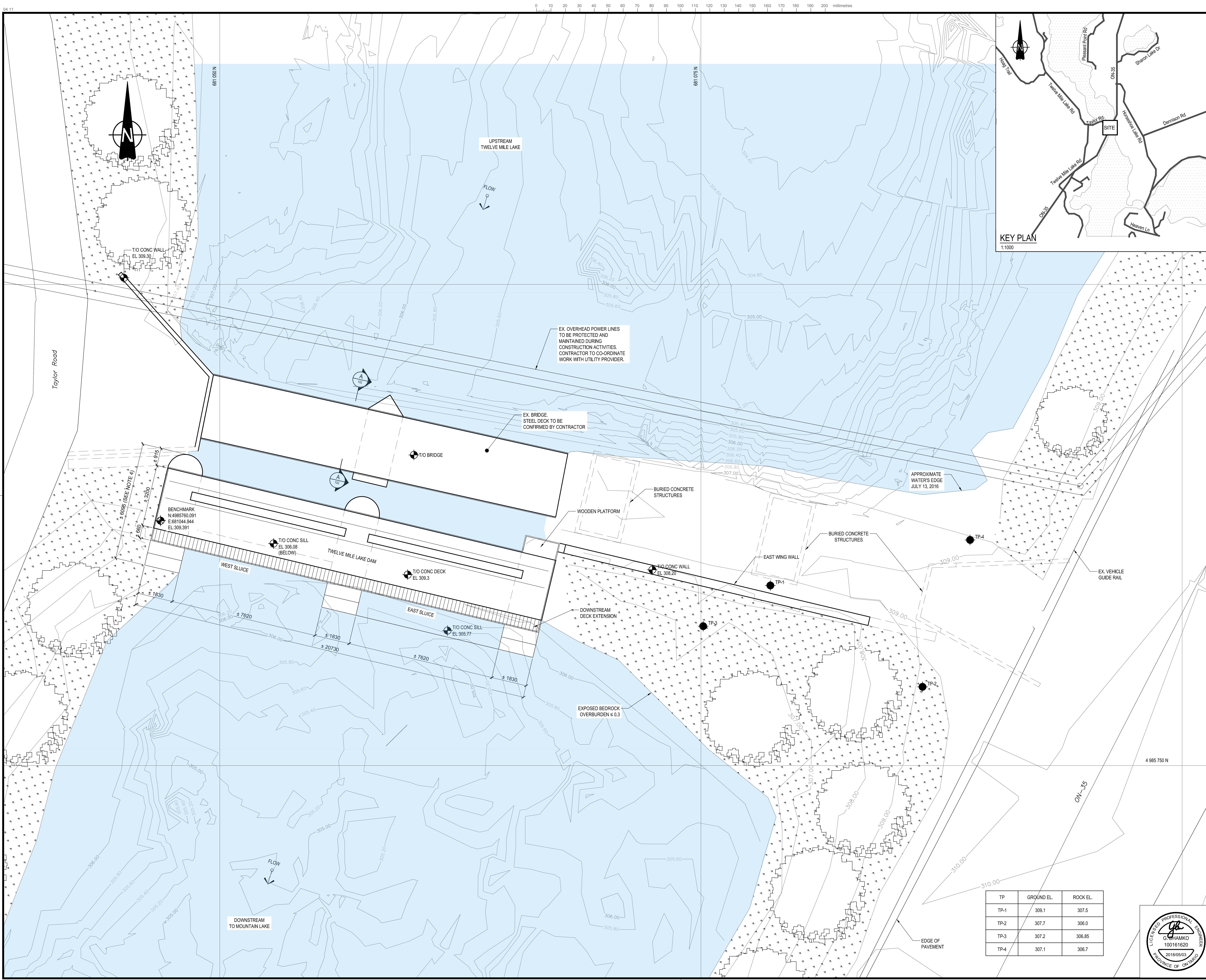
| | |
|---|--|
| A | Detail number / Numéro du détail |
| B | Location dwg. number / Numéro sur dessin |



Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
COVER SHEET AND DRAWING LIST

| | |
|--|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 100 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |



- NOTES:**
- BURIED STRUCTURES WERE NOT OBSERVED IN THE TOPOGRAPHIC SURVEY AND ARE DRAWN BASED ON RECORD DRAWING T-11-118. DO NOT USE BURIED STRUCTURES AS SUPPORTS FOR TEMPORARY WORKS.
 - TP-01 COMPLETED BY SOILPROBE (JUNE 2016), TP-1 TO TP-4 COMPLETED BY WSP (DEC 2016).
 - TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA WAS COLLECTED BY WSP ON JULY 2016.
 - DIMENSIONS ARE OBTAINED FROM RECORD DRAWING T-11-118 AND MAY NOT BE ACCURATE. CONTRACTOR MAY ENCOUNTER SITE CONDITIONS SLIGHTLY DIFFERENT THAN SHOWN ON DRAWINGS.
 - CONTRACTOR IS RESPONSIBLE FOR VERIFYING SITE CONDITIONS AND EXISTING DIMENSIONS AS REQUIRED.
 - CONTRACTOR TO SURVEY EX. CONDITIONS AND VERIFY BENCHMARK IN ORDER TO ENSURE ACCURACY OF NEW CONSTRUCTION.
 - CONTRACTOR TO CERTIFY LOAD CAPACITY OF EXISTING BRIDGE PRIOR TO USE FOR TEMPORARY WORKS.

FOR TENDER

- LEGEND:**
- DIRECTION OF WATER FLOW
 - TREES
 - BRUSH (PLAN VIEW)
 - EARTH (SECTION)
 - ROCK (SECTION)
 - WATER
 - ELEVATION MARKER
 - TP

| No. | Description | Drawn By / Dessiné Par | Date |
|-----|-------------------|------------------------|-------------|
| C | ISSUED FOR TENDER | A.U. | OCT-02-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

| | |
|--|---|
| | A Detail number Numéro du détail |
| | B Location dwg. number Numéro sur dessin |

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Project title / Titre du projet

TWELVE MILE LAKE DAM REPLACEMENT

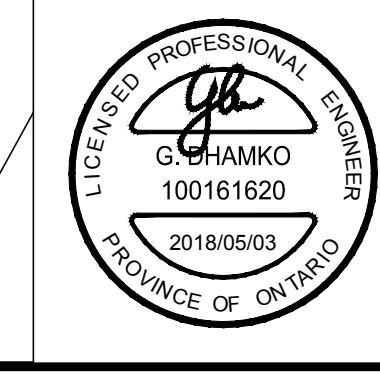
Drawing title / Titre du dessin

EXISTING CONDITIONS AND SITE SURVEY

| | |
|---|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |

| | | |
|--|---|---|
| Project manager / Administrateur de projet NICHOLAS READ | HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 101 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 | |

| TP | GROUND EL. | ROCK EL. |
|------|------------|----------|
| TP-1 | 309.1 | 307.5 |
| TP-2 | 307.7 | 306.0 |
| TP-3 | 307.2 | 306.85 |
| TP-4 | 307.1 | 306.7 |



NOTES:

1. ALL DIMENSION IN mm U.N.O. AND ARE APPROXIMATE.
2. EXISTING GROUND/ROCK PROFILE WAS NOT VERIFIED IN THE FIELD AND IS FROM PCA DRAWING T-11-116.
3. DIMENSIONS ARE OBTAINED FROM RECORD DRAWING T-11-116 AND MAY NOT BE ACCURATE. CONTRACTOR MAY ENCOUNTER SITE CONDITIONS SLIGHTLY DIFFERENT THAN SHOWN ON DRAWINGS.
4. CONTRACTOR SHALL NOT RELY ON ANY EXISTING SAFETY SYSTEMS.

FOR TENDER

LEGEND:

- BOULDERS
- CONCRETE
- ROCK (SECTION)

| No. | Description | Drawn By (Des.Par) | Date |
|-----|-------------------|--------------------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

A Detail number
B Location dwg. number



Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
EXISTING CONDITIONS DAM ELEVATION AND SECTIONS

Drawn by / Dessiné par
MAITE GARCIA

Designed by / Conçu par
KARINA SETO

Approved by / Approuvé par
GENTI DHAMKO

Drawing Date / Date du dessin
FEBRUARY 2018

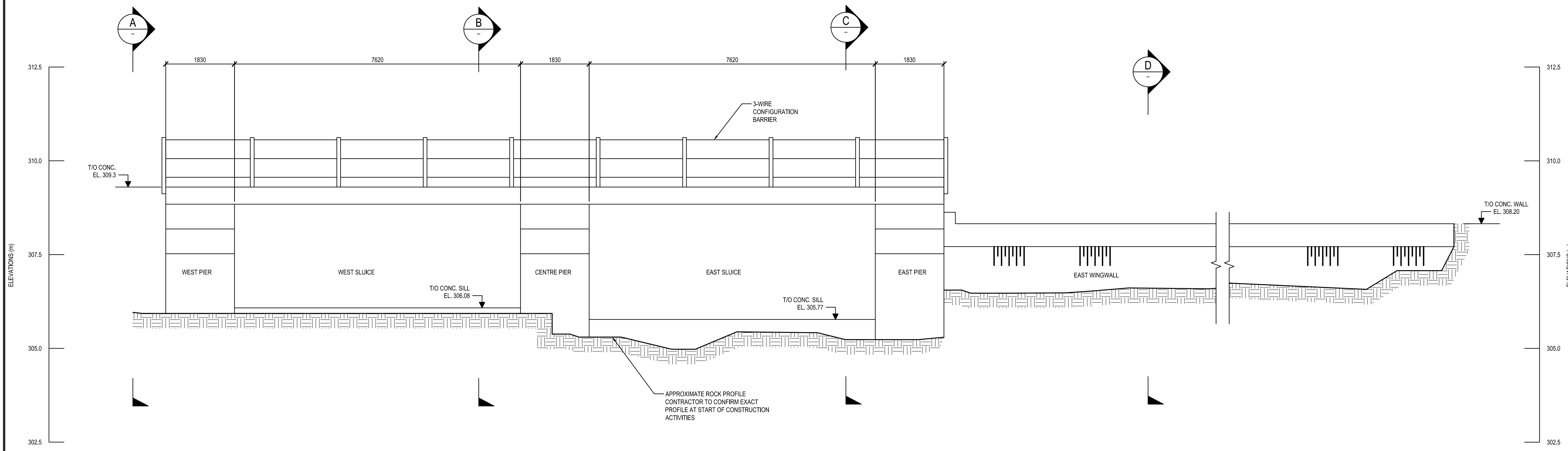
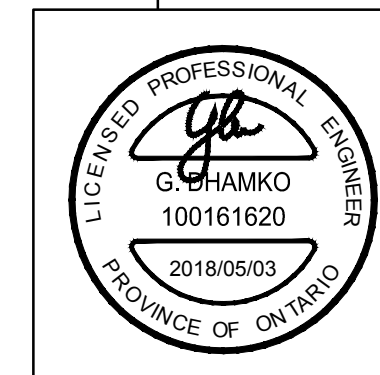
Project manager / Administrateur de projet
NICHOLAS READ

HCEW Number / Numéro de CHTI
1361-30029431

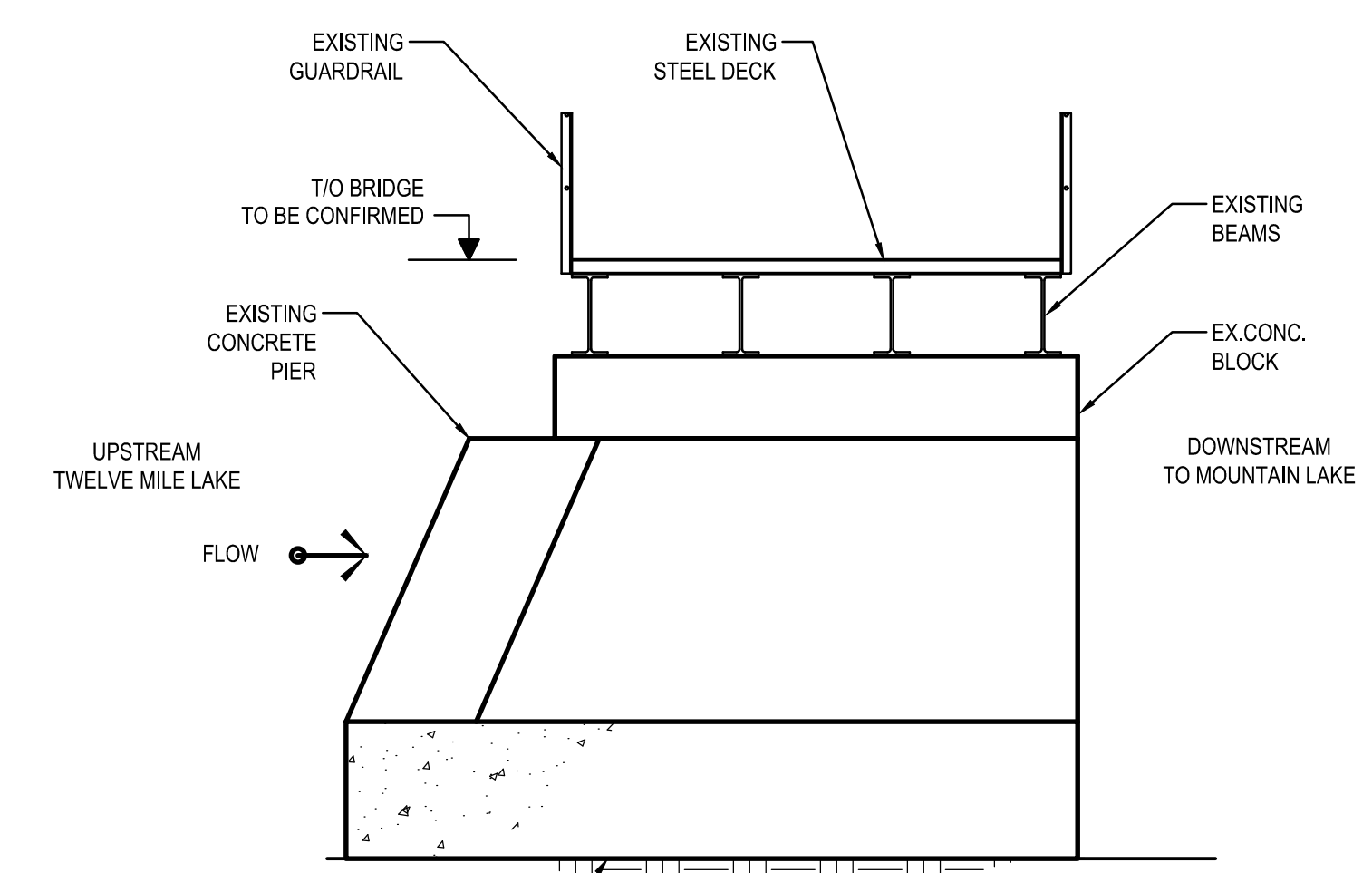
Project Number / Numéro du projet
161-05116-00

Sheet Number / Numéro de Dessin
102

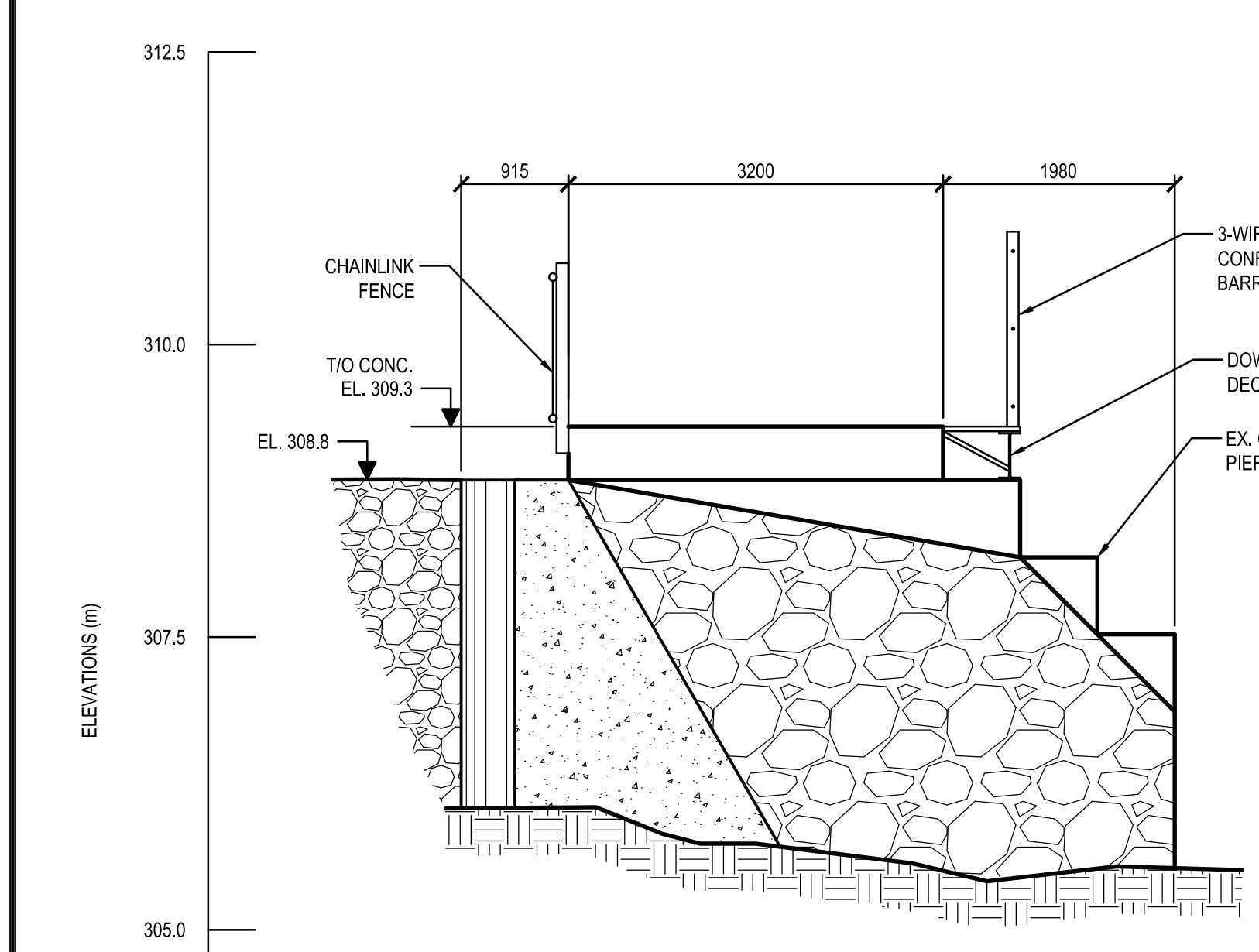
Sheet / Feuille
1 of 1



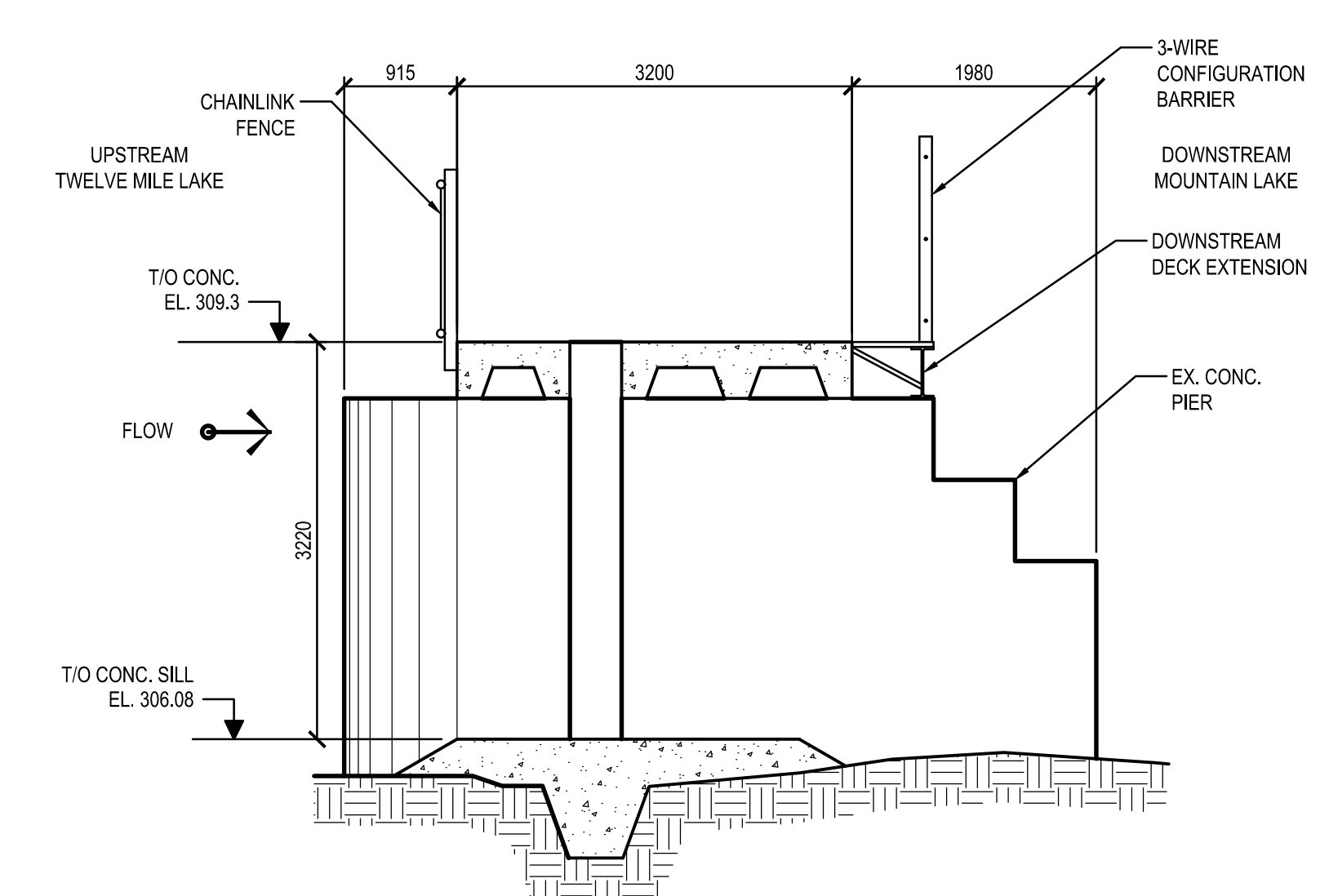
DOWNSTREAM ELEVATION
1:50



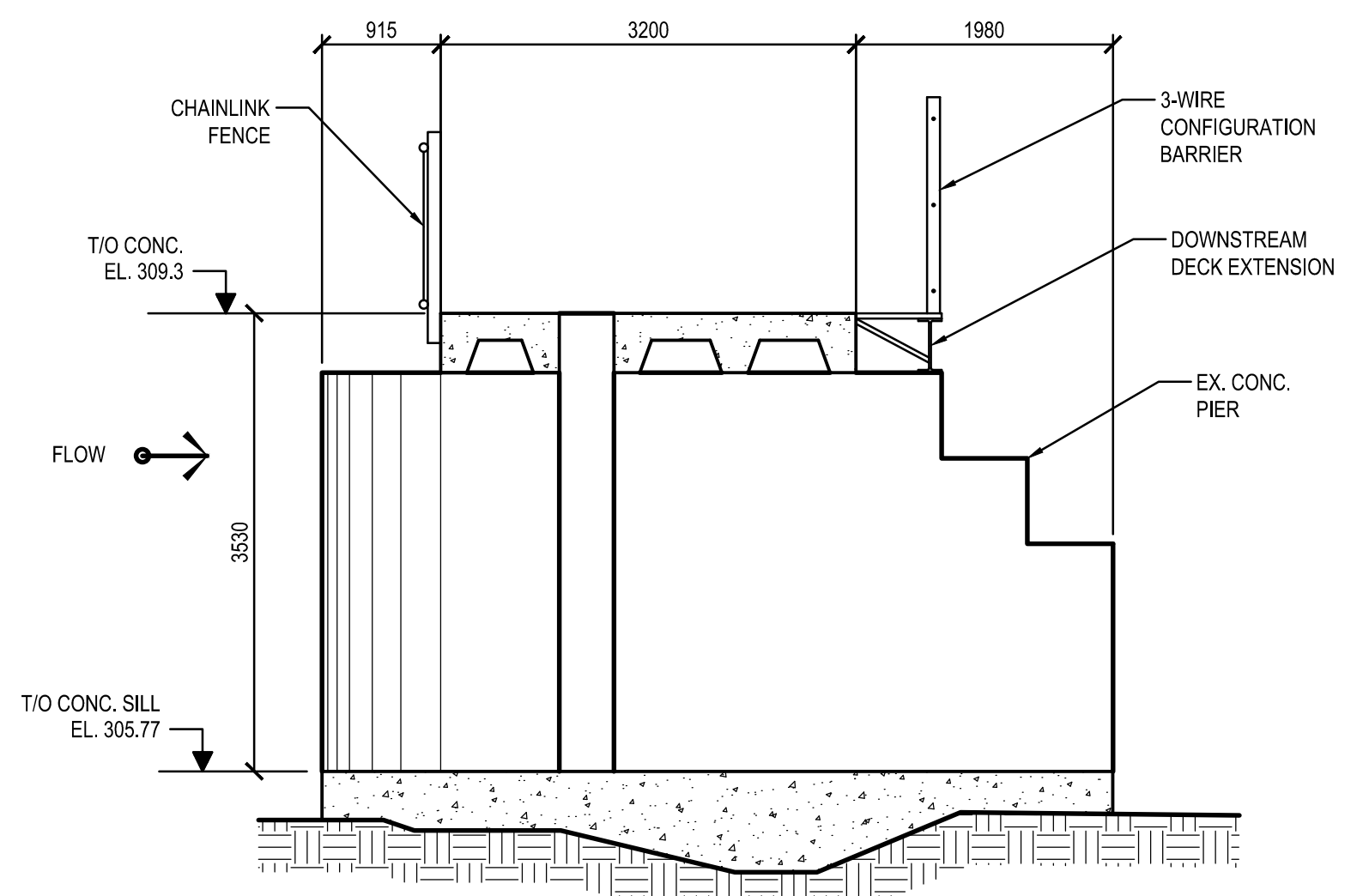
BRIDGE DECK SECTION
SECTION A
1:50



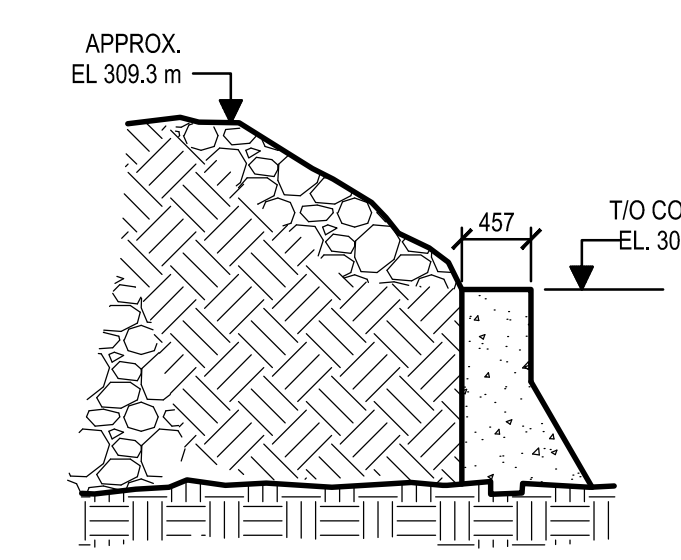
SECTION A
1:50



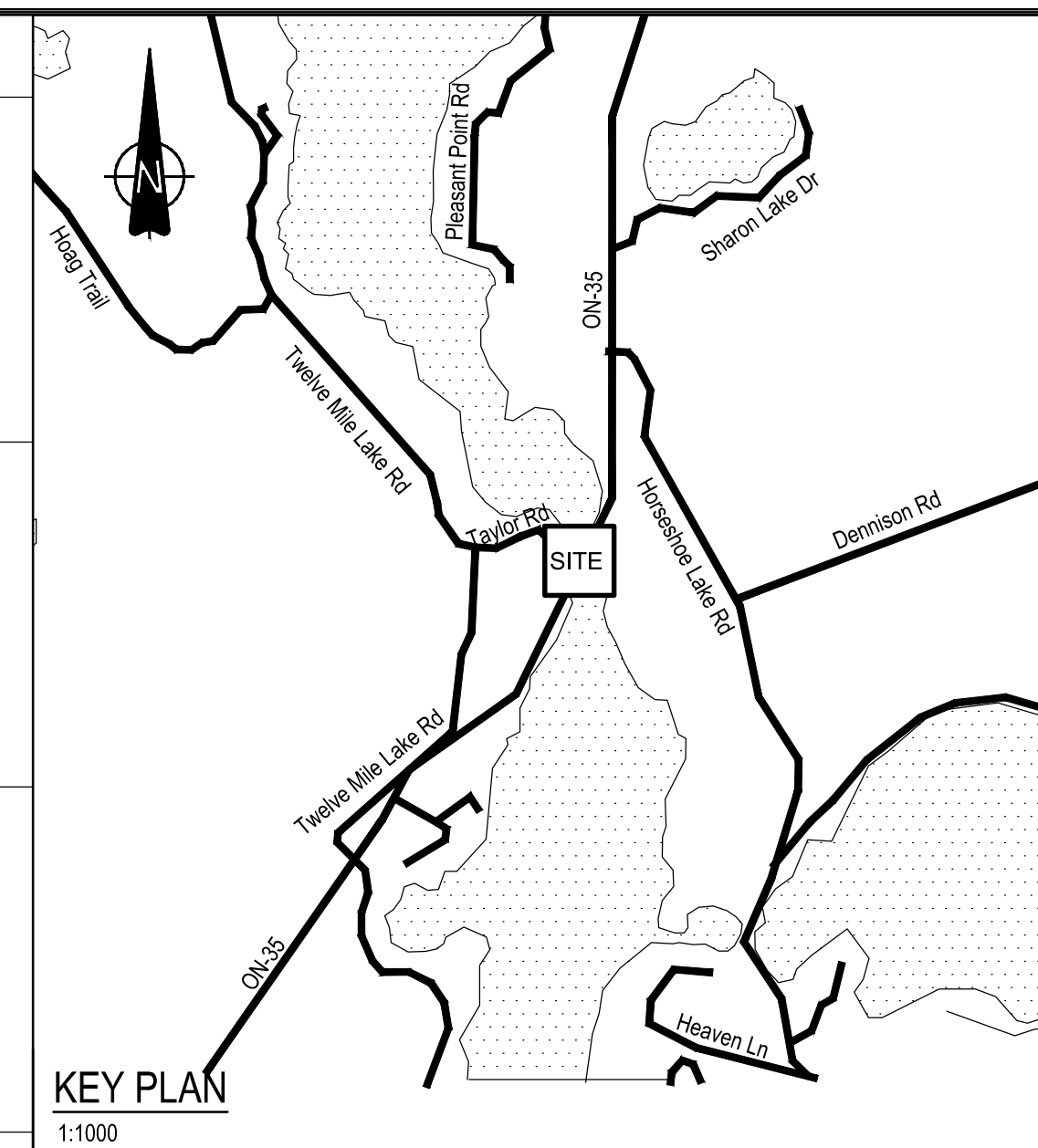
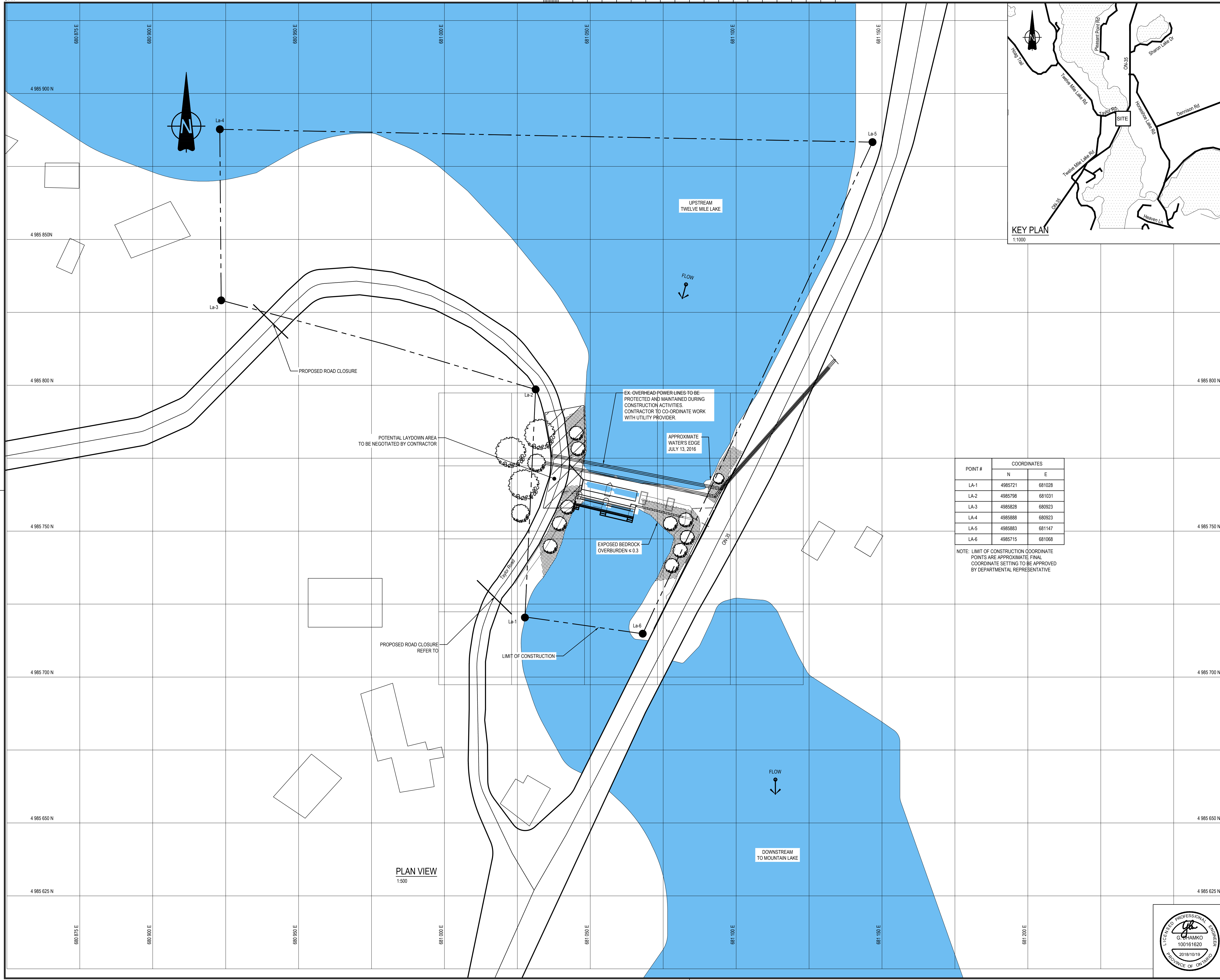
SECTION B
1:50



SECTION C
1:50



SECTION D
1:50



| POINT # | COORDINATES | |
|---------|-------------|--------|
| | N | E |
| LA-1 | 4985721 | 681028 |
| LA-2 | 4985798 | 681031 |
| LA-3 | 4985828 | 680923 |
| LA-4 | 4985888 | 680923 |
| LA-5 | 4985883 | 681147 |
| LA-6 | 4985715 | 681068 |

NOTE: LIMIT OF CONSTRUCTION COORDINATE POINTS ARE APPROXIMATE. FINAL COORDINATE SETTING TO BE APPROVED BY DEPARTMENTAL REPRESENTATIVE

NOTES:
1. CONTRACTOR TO OBTAIN ANY REQUIRED PERMITS FOR ROAD ACCESS.

FOR TENDER

- LEGEND:
- DIRECTION OF WATER FLOW
 - TREES
 - BRUSH (PLAN VIEW)
 - TEMPORARY LAYDOWN AREA
 - LIMIT OF WORK AREA
 - WORK AREA CONTROL POINTS
 - EXISTING BUILDINGS

| No. | Description | Drawn By (Des.P) | Date |
|-----|--------------------|------------------|-------------|
| C | REVISED FOR TENDER | H.Z. | OCT-18-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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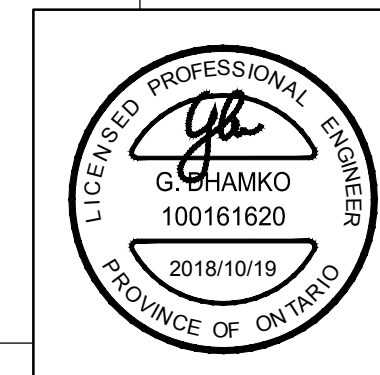
- A Detail number / Numéro du détail
- B Location dwg. number / Numéro sur dessin



Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
LAYDOWN AREA PLAN VIEW

| | |
|--|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 103 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |



NOTES:

1. THE PROPOSED STAGING AND COFFERDAM CONFIGURATION IS FOR PLANNING AND PERMITTING PURPOSES ONLY. CONTRACTOR TO PROVIDE FINAL STAGING AND STAMPED COFFERDAM DESIGN TO DEPARTMENTAL REPRESENTATIVE FOR APPROVAL AT LEAST 14 DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. DIVERSION WILL BE BY EXISTING DAM. CONTRACTOR TO PROVIDE ACCESS TO PCA FOR STOP LOGS OPERATIONS.
3. TWELVE MILE LAKE WATER LEVELS WILL BE CONTROLLED BY NEW DAM. CONTRACTOR TO PROVIDE ACCESS TO PCA FOR STOP LOGS OPERATIONS.
4. PRIOR TO STAGE 4 - DEWATERING PHASE 2, NEW EAST SLUICE MUST BE OPERATIONAL AND LIFTING EQUIPMENT MUST BE ACCESSIBLE BY PCA OPERATORS.
5. CONTRACTOR TO BE AWARE OF OVERHEAD POWER LINES FOR REQUIRED CLEARANCES WHEN SELECTING EQUIPMENT AND CONSTRUCTION/DEMOLITION METHODS.
6. PCA WILL NOT MANIPULATE LOGS TO STOP FLOWS FOR COFFERDAM INSTALLATION STAGING. TWO SLICES MUST BE OPERATIONAL AT ALL TIMES, INCLUDING DURING THE INSTALLATION OF COFFERDAM. CONTRACTOR TO TAKE NECESSARY MEASURES TO PERFORM WORK WITH THE OUTLINED RESTRICTION.
7. FOR SEASONAL AVERAGE WATER LEVELS OR ADDITIONAL INFORMATION REQUIRED FOR COFFERDAM DESIGN CONTACT THE ENGINEER.

FOR TENDER

LEGEND:

- DIRECTION OF WATER FLOW
- TREES
- HYDRAULIC SEEDING & GRANULAR FILL
- ROCK FRAGMENTS / RIP-RAP
- WATER
- REMOVALS

| | | | |
|-----|-------------------|----------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |
| No. | Description | Drawn By | Date |

Revision / Révision

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| | |
|---|---|
| A | A Detail number Numéro du détail |
| B | B Location dwg. number Numéro sur dessin |

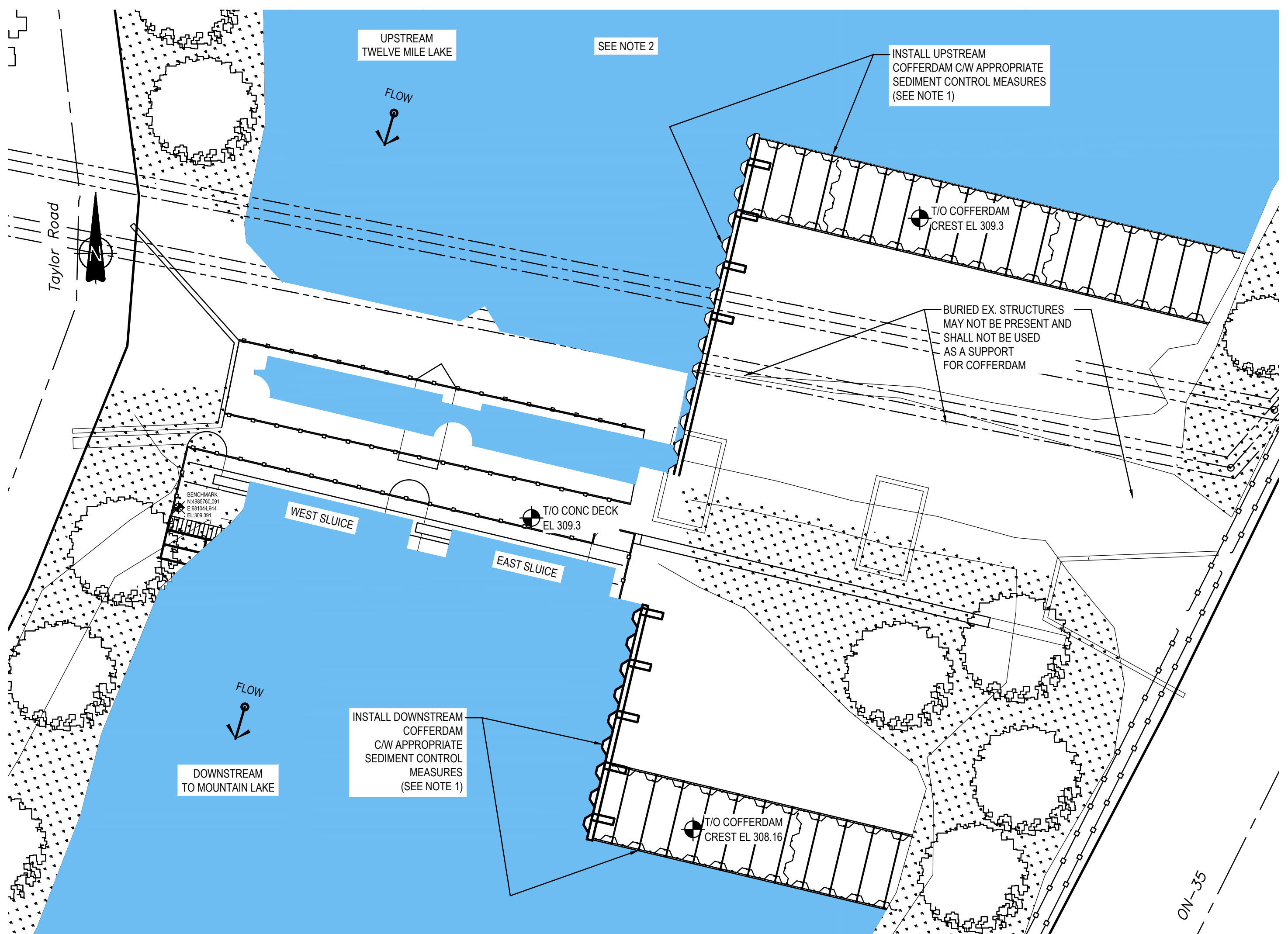


Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

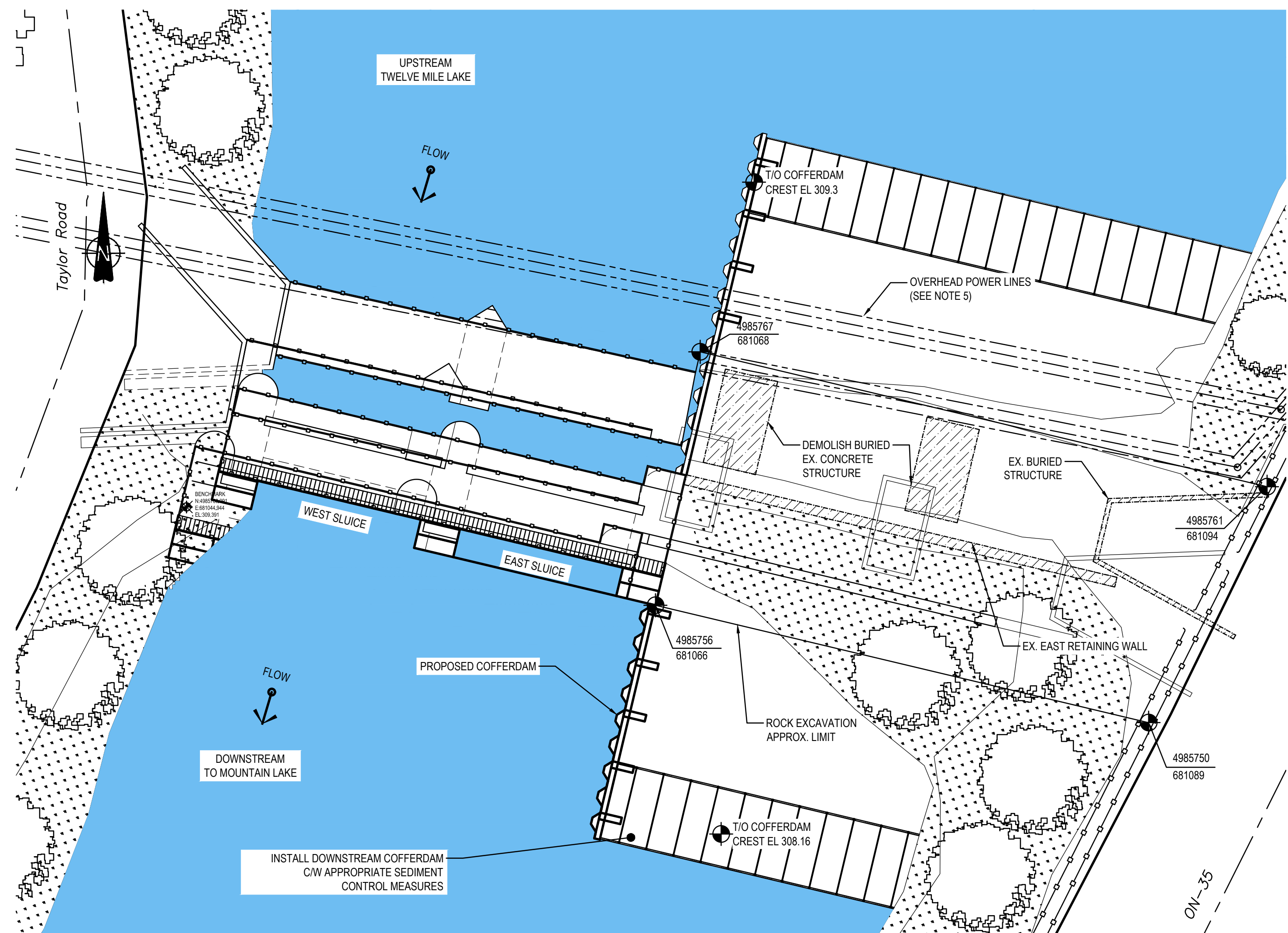
Drawing title / Titre du dessin
PROPOSED CONSTRUCTION STAGING PLAN STAGE 1 TO 4

Drawn by / Dessiné par: MAITE GARCIA
Designed by / Conçu par: KARINA SETO
Approved by / Approuvé par: GENTI DHAMKO
Drawing Date / Date du dessin: FEBRUARY 2018

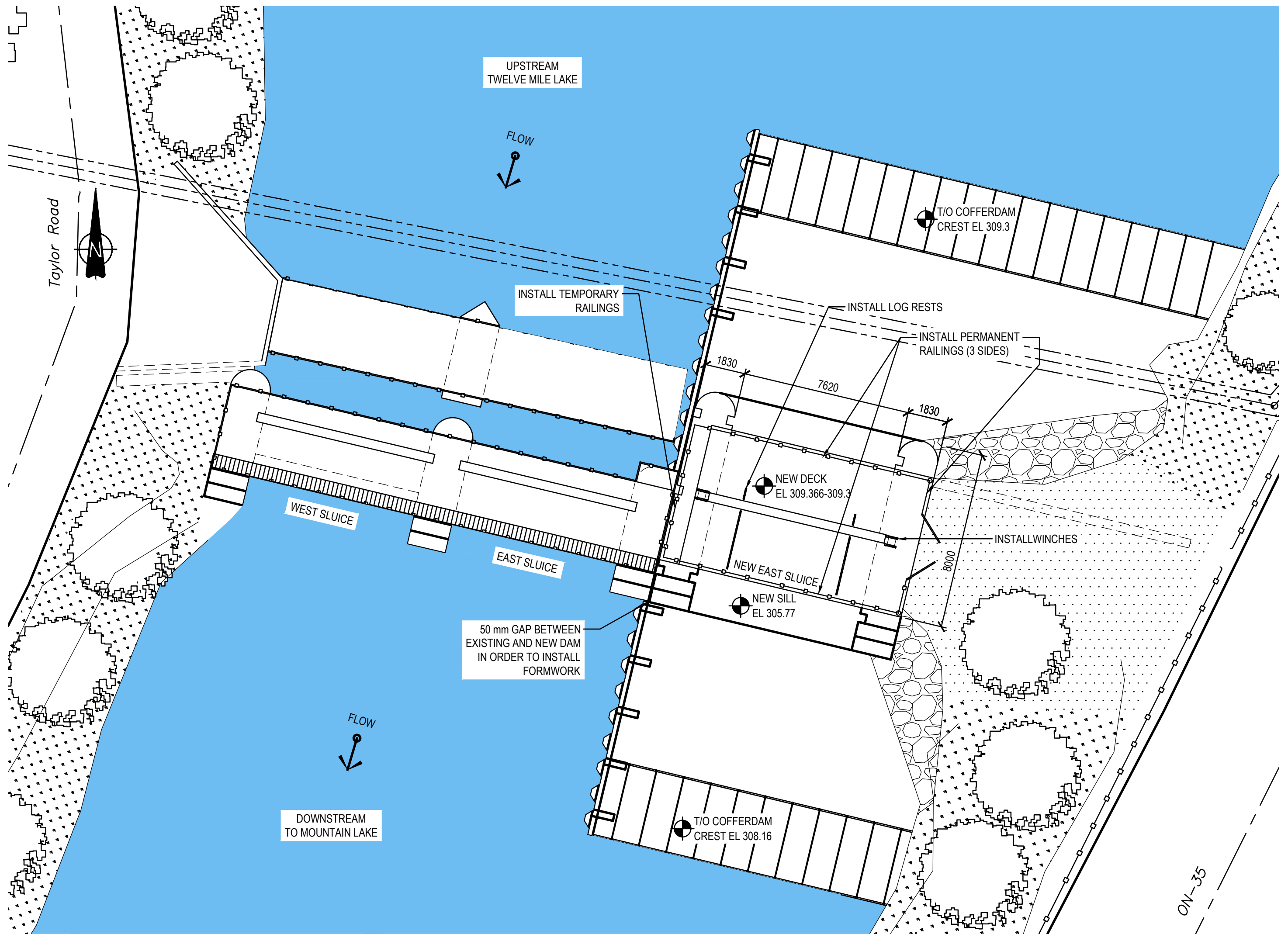
Project manager / Administrateur de projet: NICHOLAS READ
PCSW Number / Numéro de CHTI: 1361-30029431
Drawing Number / Numéro du Dessin: 104
Project Number / Numéro du projet: 161-05116-00
Sheet Number / Numéro de la feuille: 1 of 1



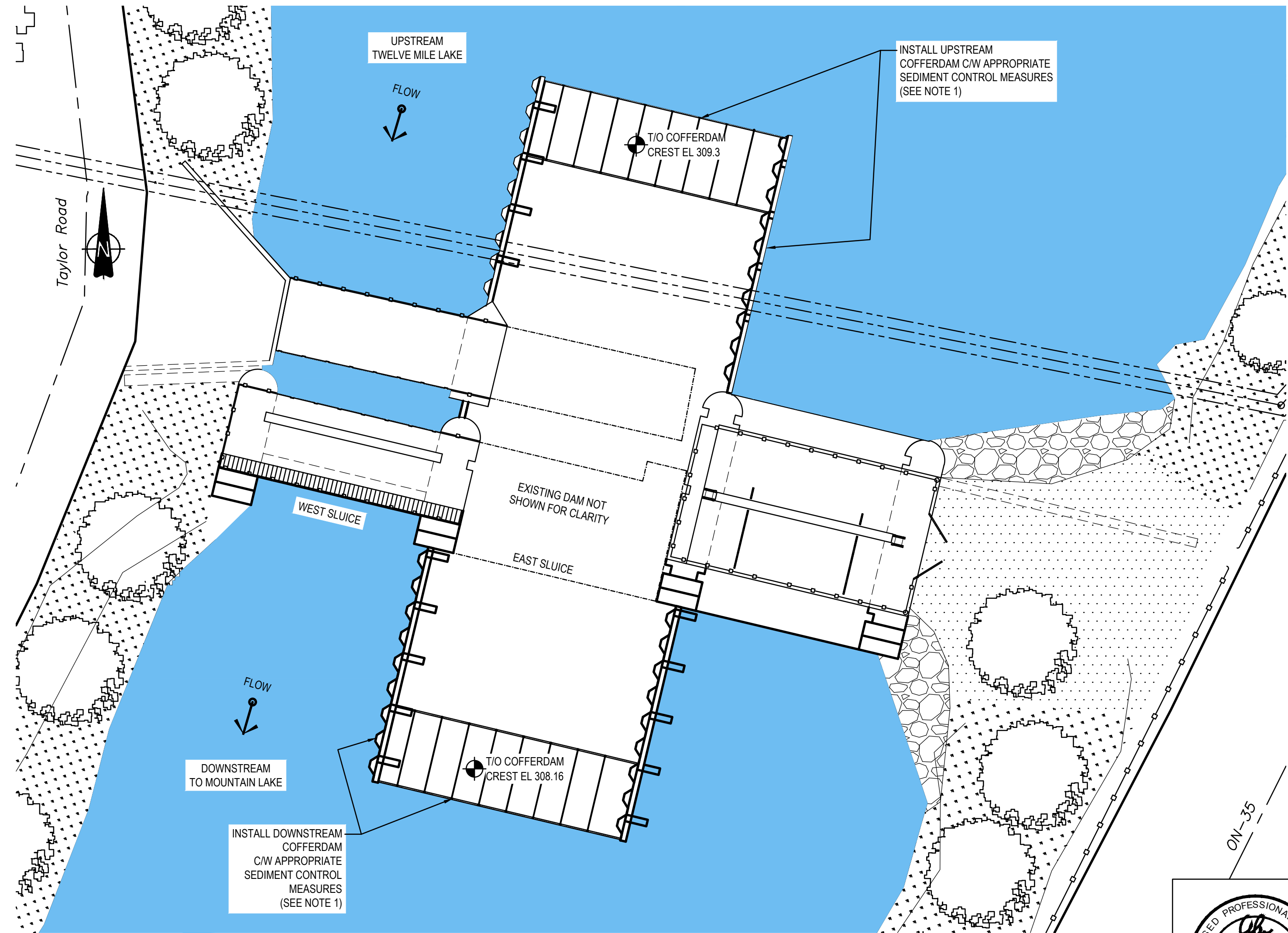
STAGE 1 - MOBILIZATION AND DEWATERING PHASE 1
1:150



STAGE 2 - DEMOLITION-EAST SIDE OF DAM
1:150



STAGE 3 - CONSTRUCTION OF EAST SLUICE
1:150



STAGE 4 - DEWATERING PHASE 2
1:150

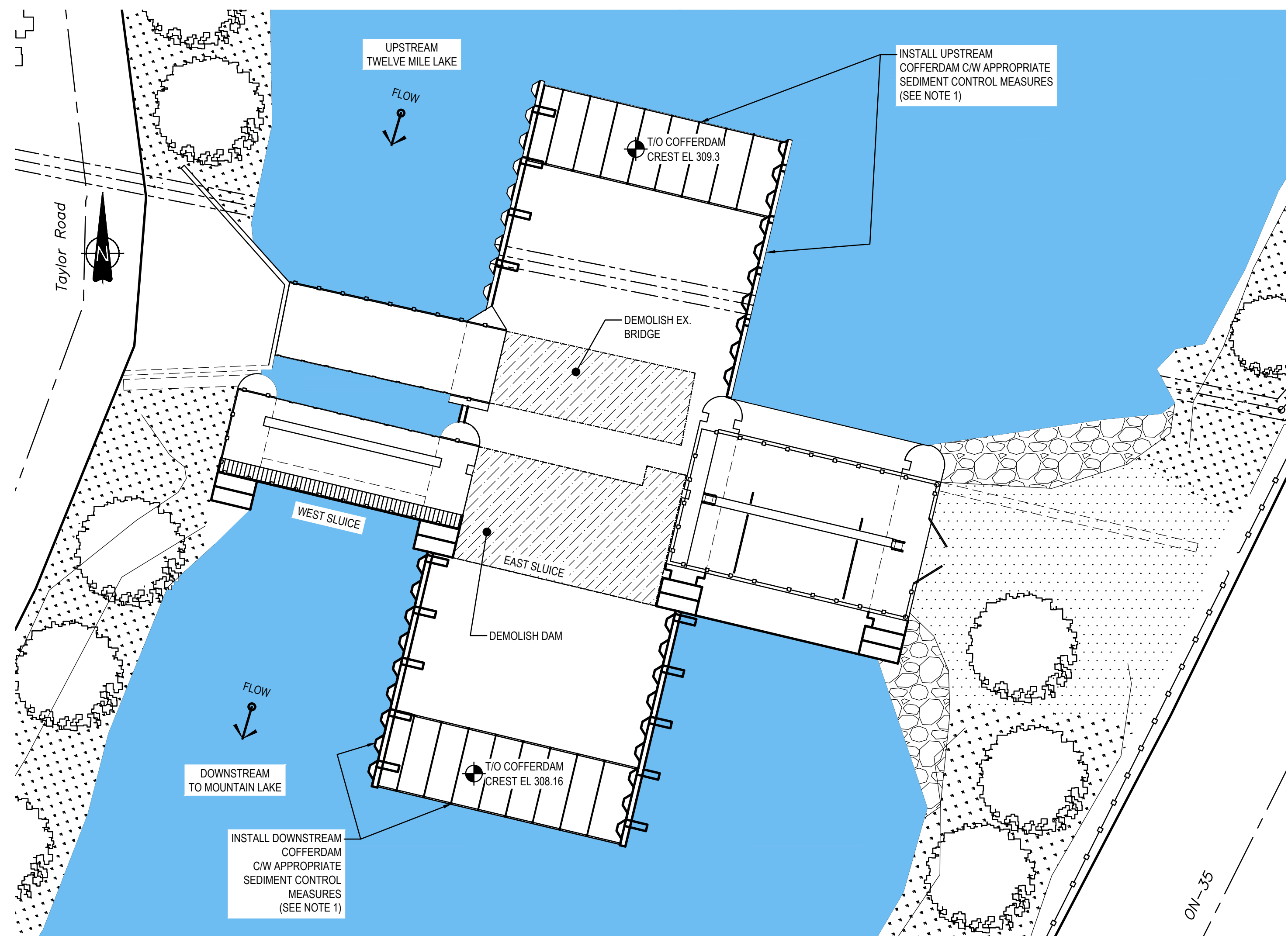
NOTES:

- 1. THE PROPOSED STAGING AND COFFERDAM CONFIGURATION IS FOR PLANNING AND PERMITTING PURPOSES ONLY. CONTRACTOR TO PROVIDE FINAL STAGING AND COFFERDAM DESIGN TO DEPARTMENTAL REPRESENTATIVE FOR APPROVAL AT LEAST 14 DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

FOR TENDER

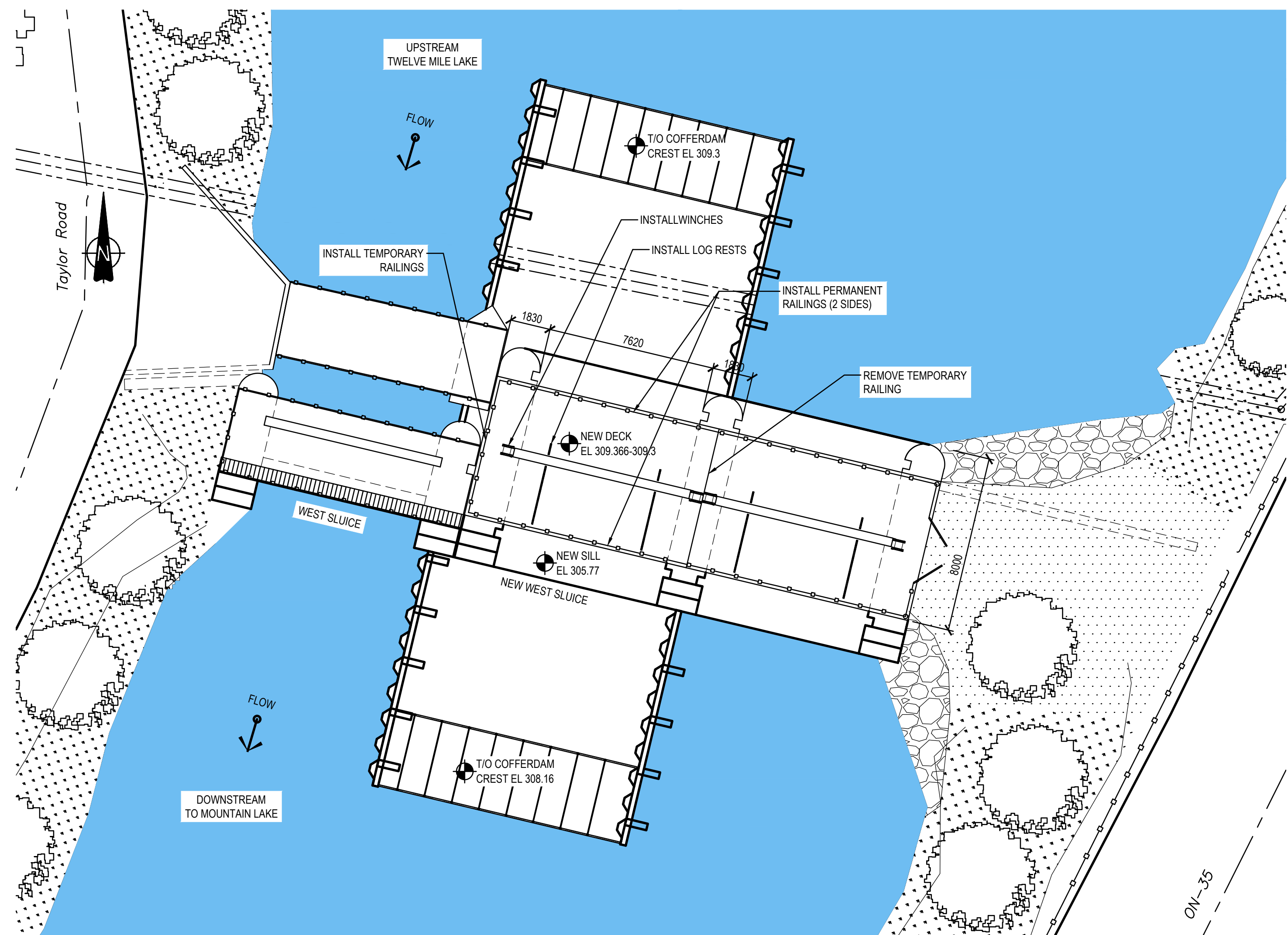
LEGEND:

- DIRECTION OF WATER FLOW
- TREES
- HYDRAULIC SEEDING & GRANULAR FILL
- ROCK FRAGMENTS / RIP-RAP
- WATER
- REMOVALS



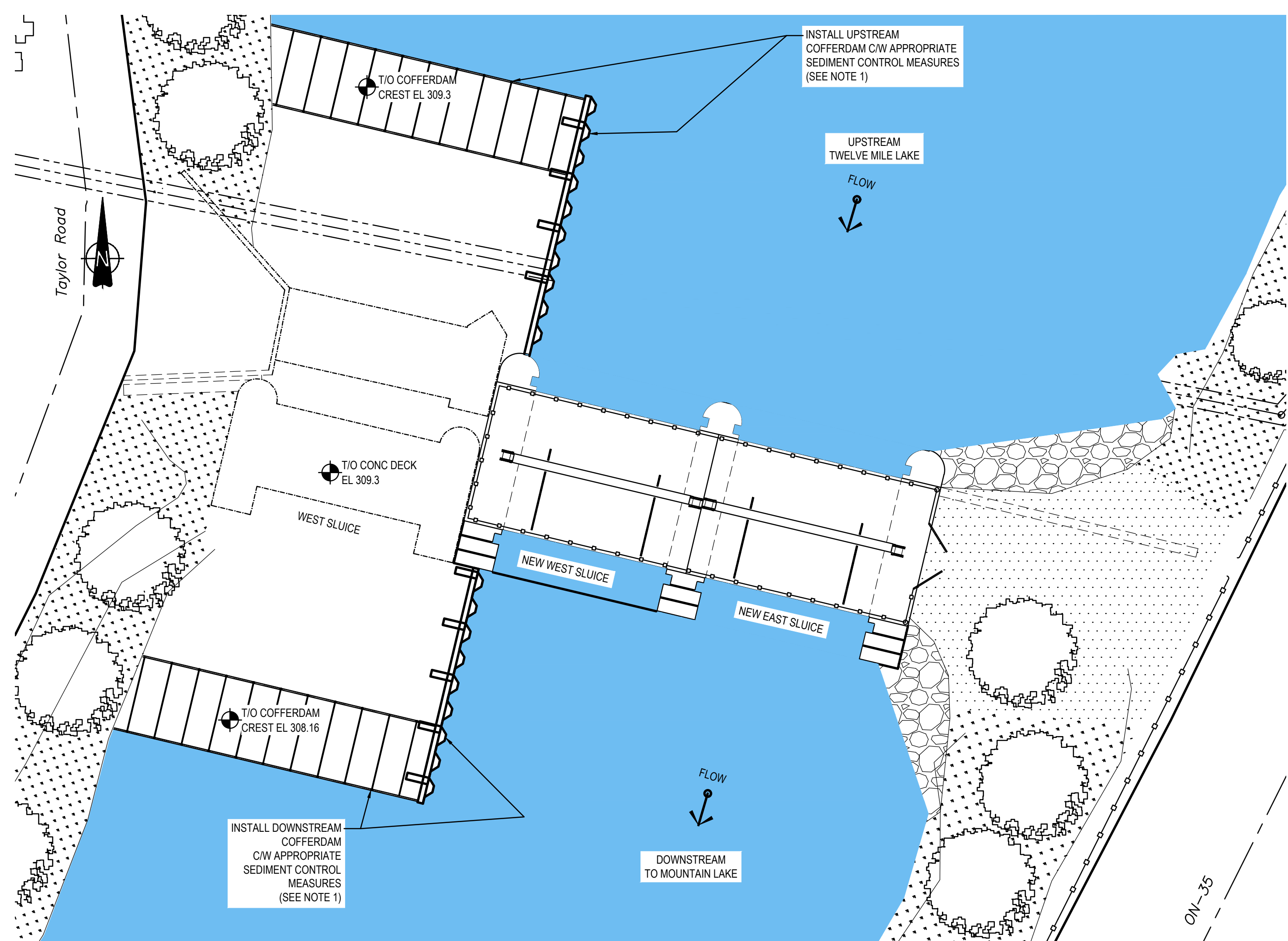
STAGE 5 - DEMOLITION EX. EAST SLUICE

1:150



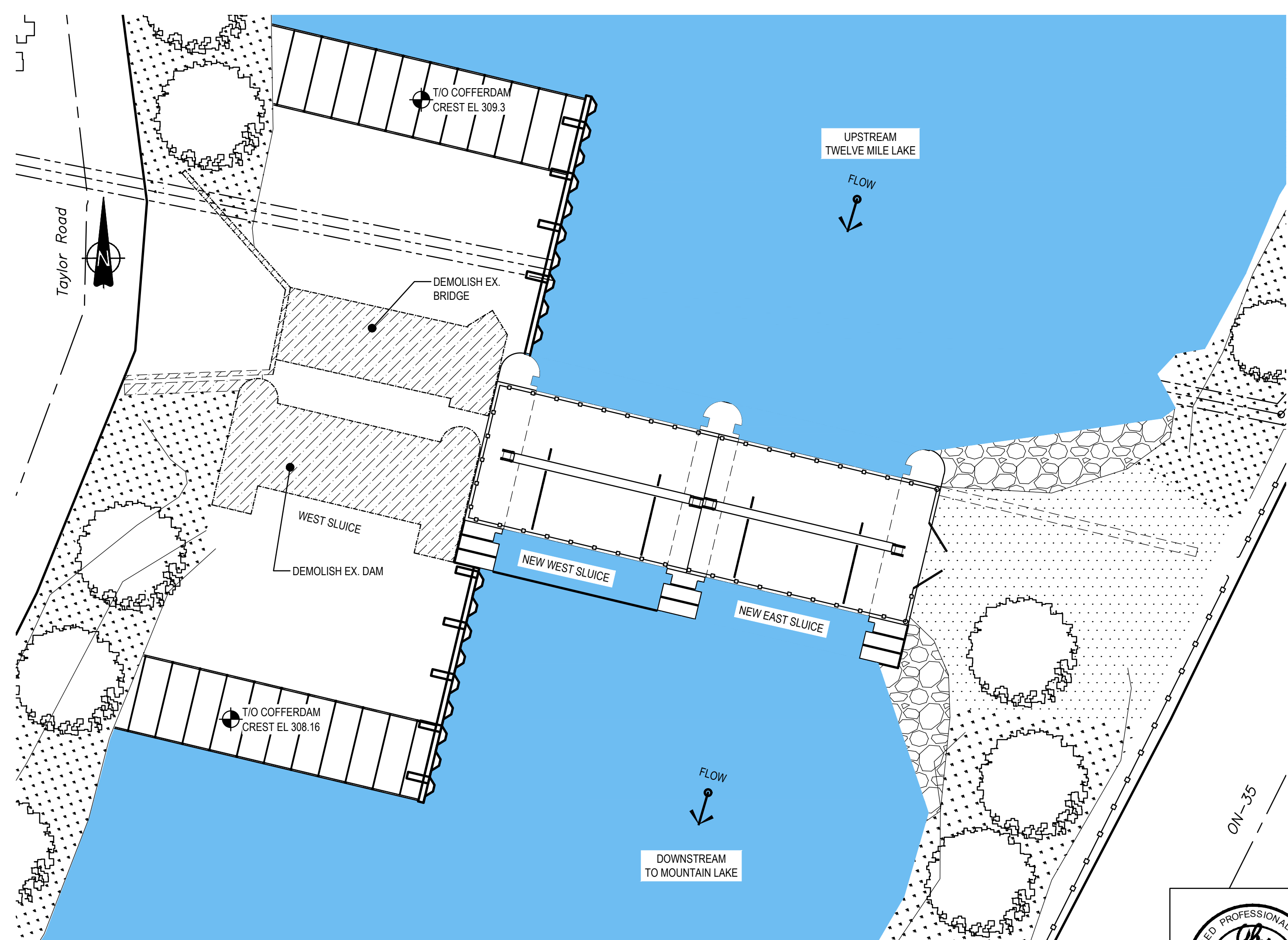
STAGE 6 - CONSTRUCTION WEST SLUICE

1:150



STAGE 7 - DEWATERING PHASE 3

1:150



STAGE 8 - DEMOLITION - WEST SIDE OF DAM

1:150

| | | | |
|---------------------|-------------------|----------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |
| No. | Description | Drawn By | Date |
| Revision / Révision | | | |

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

| | |
|---|---|
| A | A Detail number Numéro du détail |
| B | B Location dwg. number Numéro sur dessin |



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Project title / Titre du projet

TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin

PROPOSED CONSTRUCTION STAGING PLAN STAGE 5 TO 8

| | |
|----------------------------|-------------------------------|
| Drawn by / Dessiné par | Designed by / Conçu par |
| MAITE GARCIA | KARINA SETO |
| Approved by / Approuvé par | Drawing Date / Date du dessin |
| GENTI DHAMKO | FEBRUARY 2018 |

Project manager / Administrateur de projet

NICHOLAS READ

HCEW Number / Numéro de CHTI

1361-30029431

Project Number / Numéro du projet

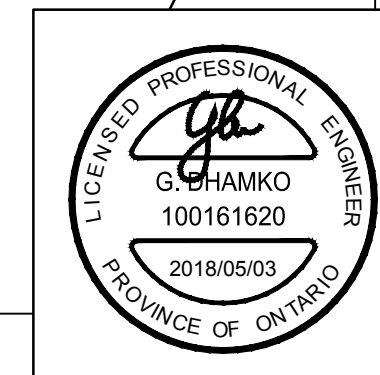
161-05116-00

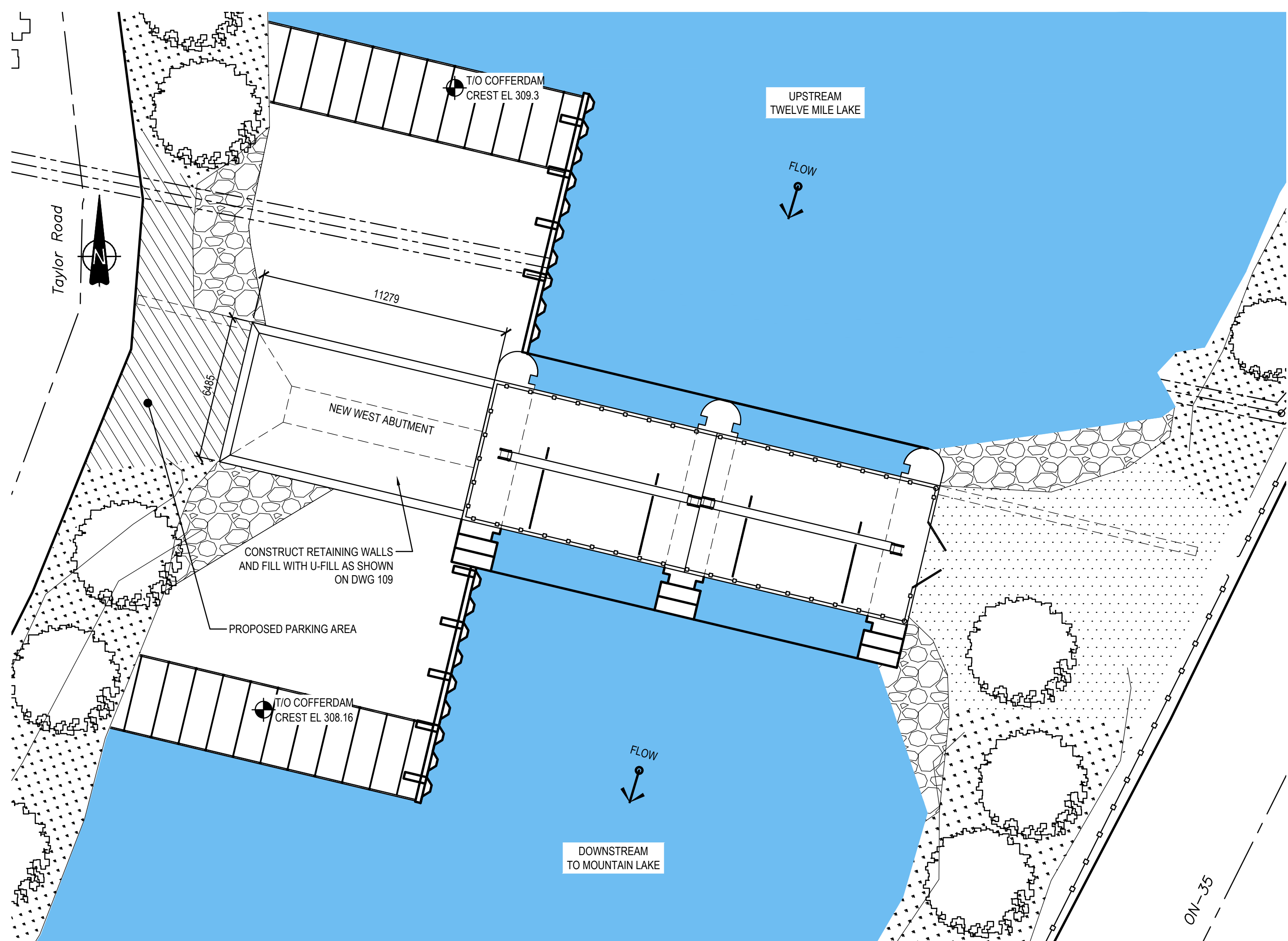
Drawing Number / Numéro du Dessin

105

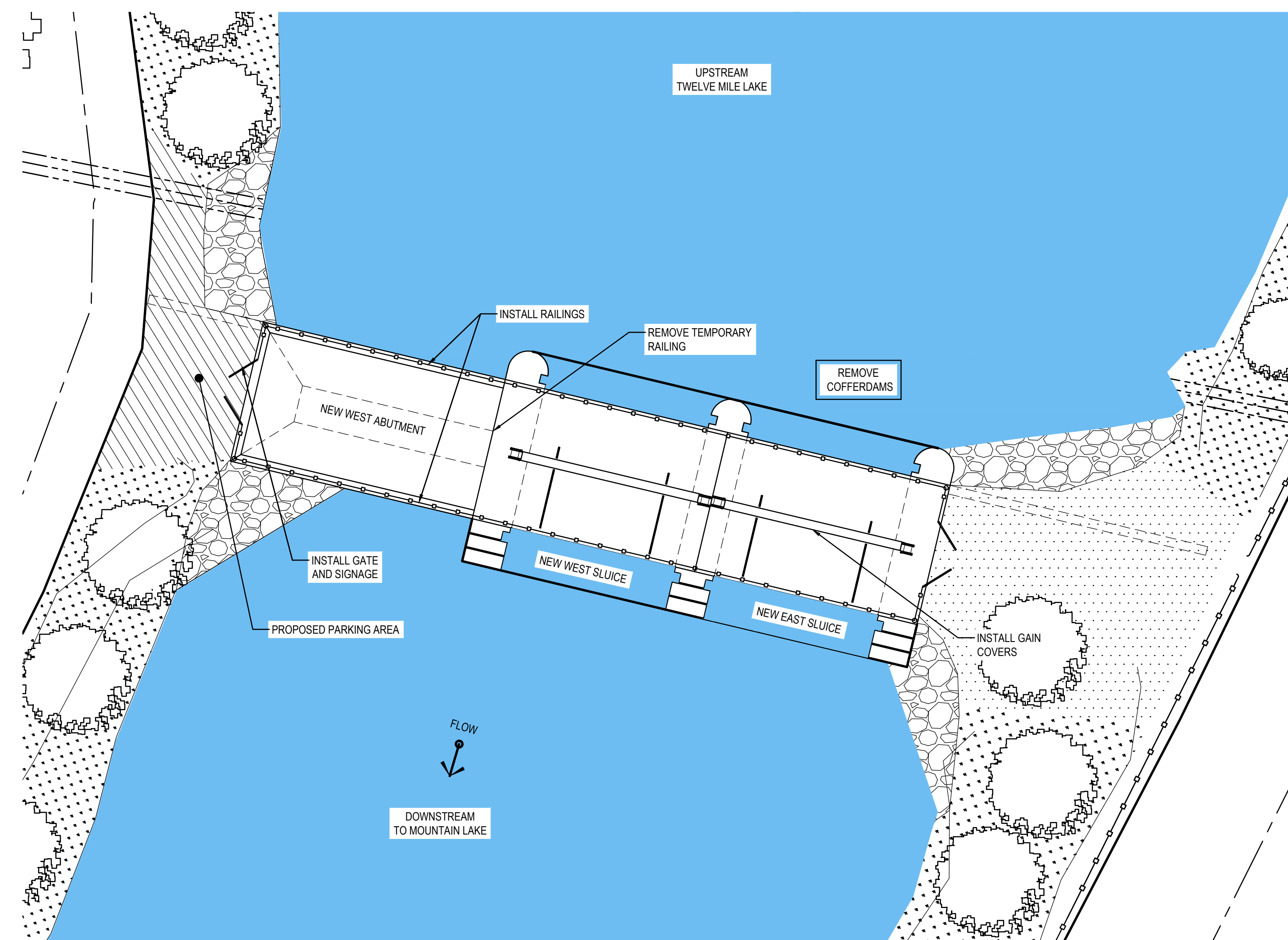
Sheet / Feuille

1 of 1





STAGE 9 - CONSTRUCTION - WEST SIDE OF DAM
1:150



STAGE 10 - FINAL STAGE
1:150

NOTES:

1. THE PROPOSED STAGING AND COFFERDAM CONFIGURATION IS FOR PLANNING AND PERMITTING PURPOSES ONLY. CONTRACTOR TO PROVIDE FINAL STAGING AND COFFERDAM DESIGN TO DEPARTMENTAL REPRESENTATIVE FOR APPROVAL AT LEAST 14 DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

FOR TENDER

LEGEND:

- DIRECTION OF WATER FLOW
- TREES
- HYDRAULIC SEEDING & GRANULAR FILL
- ROCK FRAGMENTS / RIP-RAP
- WATER
- REMOVALS

| No. | Description | Drawn By [Des.Pur] | Date |
|-----|-------------------|-----------------------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

- A Detail number / Numéro du détail
- B Location dwg. number / Numéro sur dessin

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Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
**PROPOSED CONSTRUCTION STAGING PLAN
STAGE 9 TO 10**

| | |
|--|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 106 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |



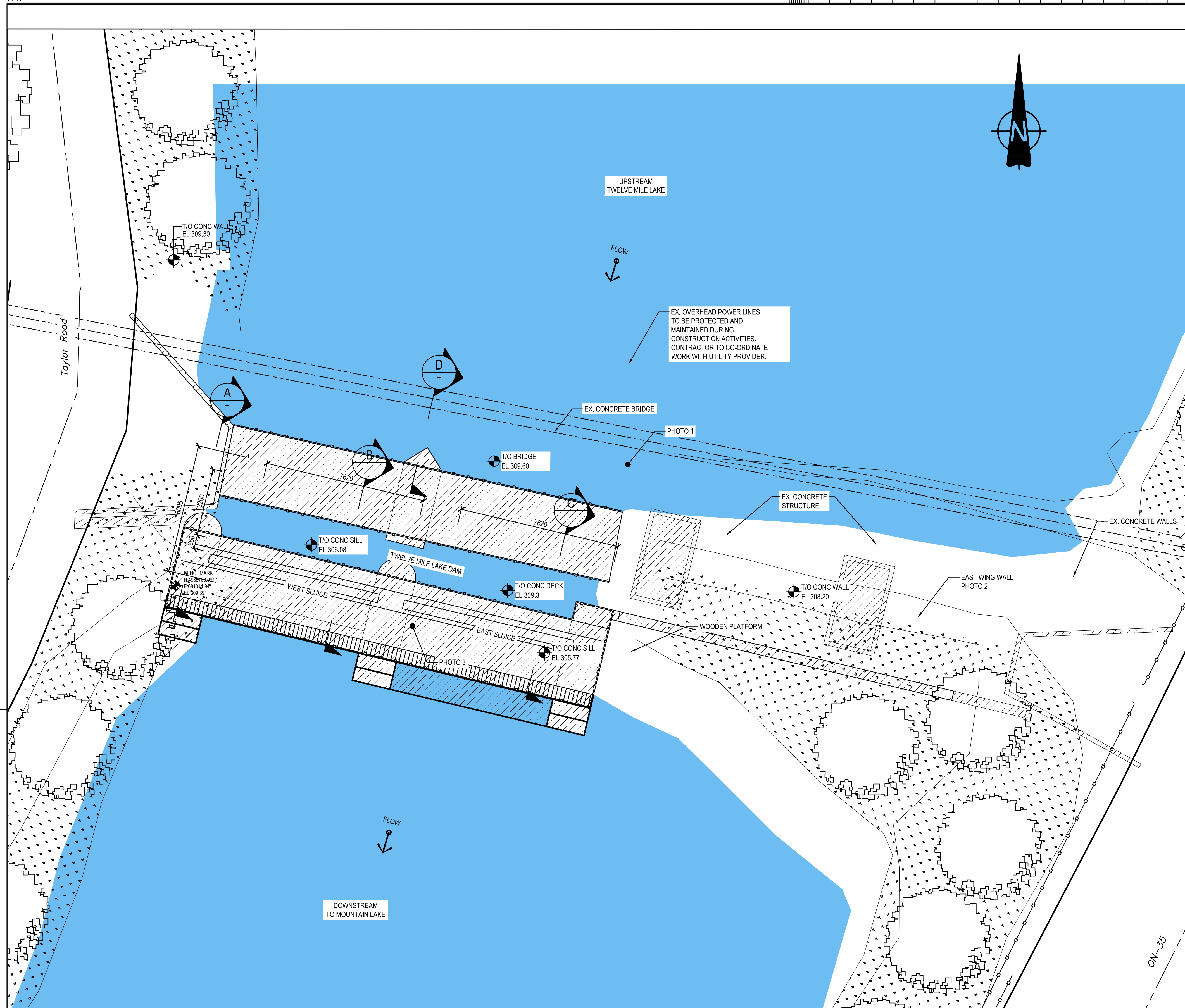


PHOTO 1



PHOTO 2

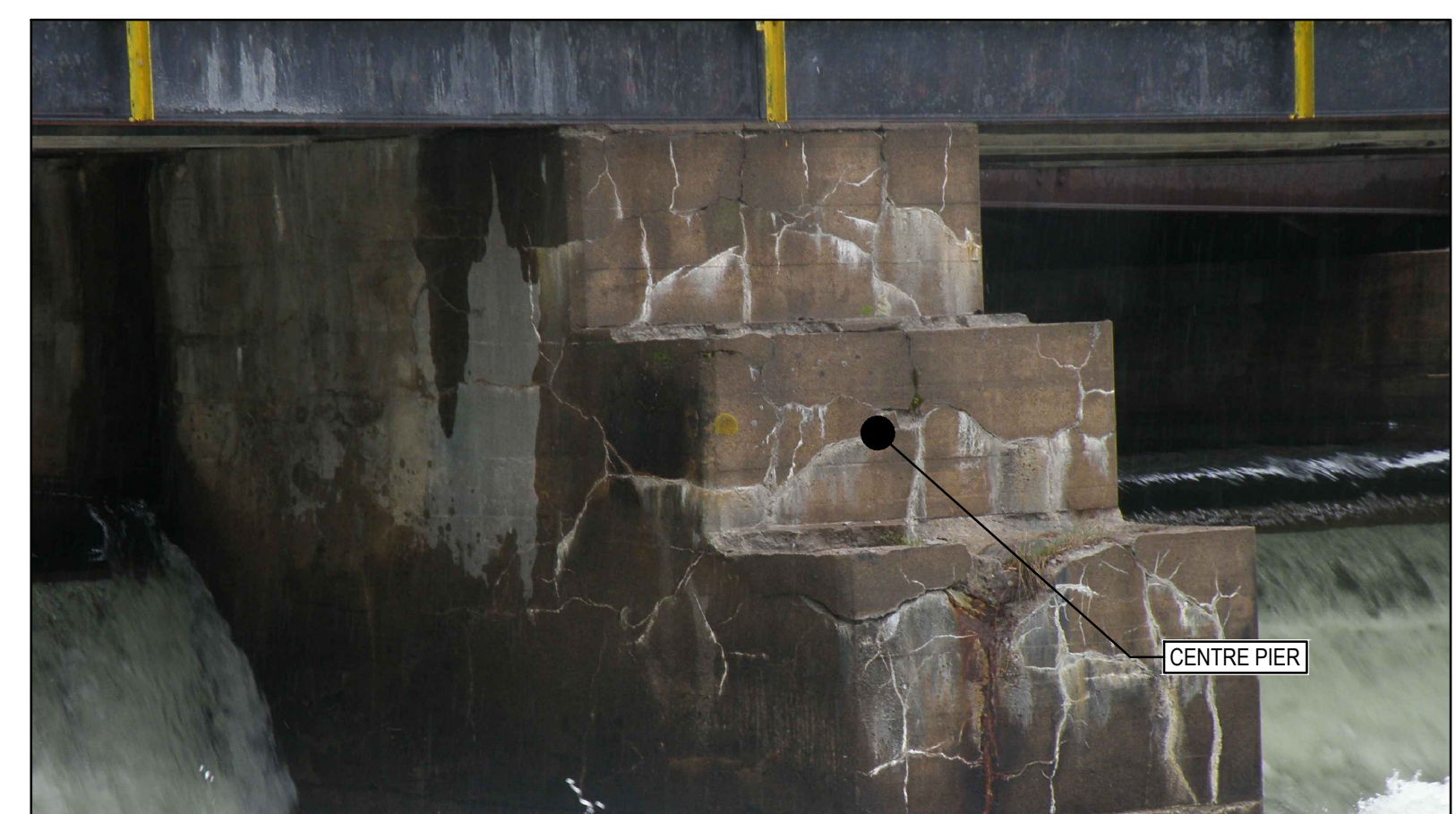


PHOTO 3

Canada

- NOTES:
- EXISTING CRAB WINCHES TO BE PROTECTED AND LEFT ON THE EXISTING SLUICE UNTIL DEMOLISHED IN ORDER TO MAINTAIN STAGED OPERATIONS OF THE DAM. PRIOR TO DEMOLITION OF EXISTING SLUICE, CONTRACTOR TO REMOVE EXISTING CRAB WINCHES AND DELIVER THEM TO PCA. NEW LOG LIFTING EQUIPMENT MUST BE INSTALLED AND OPERATIONAL FOR NEW SLUICE PRIOR TO DEMOLITION OF EXISTING SLUICE. DAM OPERATORS MUST BE PROVIDED ACCESS TO THE OPERATING EQUIPMENT AT ALL TIMES.
 - PRIOR TO DEMOLITION OF EXISTING STRUCTURE, CONTRACTOR TO ESTABLISH REFERENCE POINTS (MIN. 4) TO ALLOW TRANSFER OF COORDINATES AND ELEVATIONS OF THE EXISTING GEODETIC BENCHMARK TO THE NEW GEODETIC BENCHMARK ON THE NEW STRUCTURE.
 - REFER TO PROPOSED CONSTRUCTION STAGING FOR REMOVAL PHASES
 - CONTRACTOR TO MAINTAIN SAFE WORKING DISTANCE FROM OVERHEAD POWER LINES.

FOR TENDER

- LEGEND:
- DIRECTION OF WATER FLOW
 - TREES
 - BRUSH (PLAN VIEW)
 - EARTH (SECTION)
 - ROCK (SECTION)
 - WATER
 - REMOVALS

| No. | Description | Drawn By | Date |
|-----|-------------------|----------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

- A Detail number Numéro du détail
- B Location dwg. number Numéro sur dessin

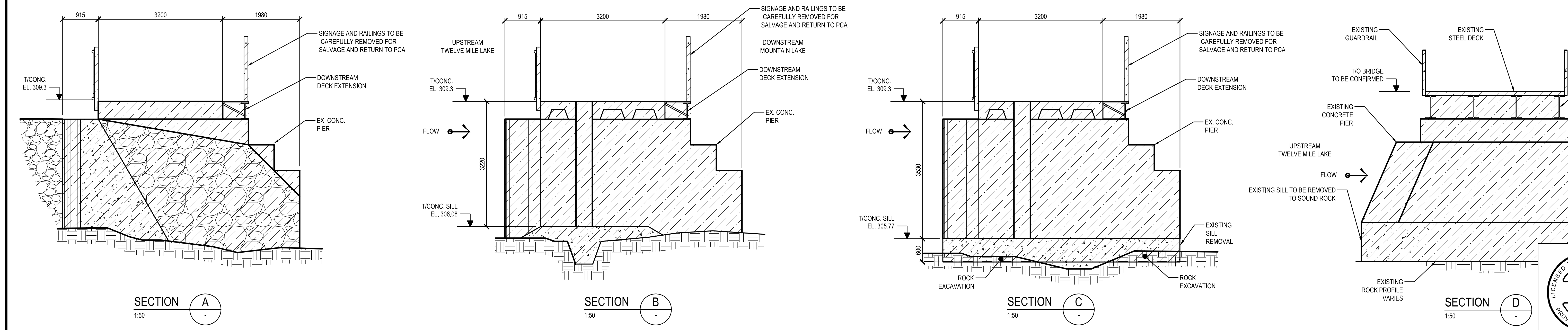


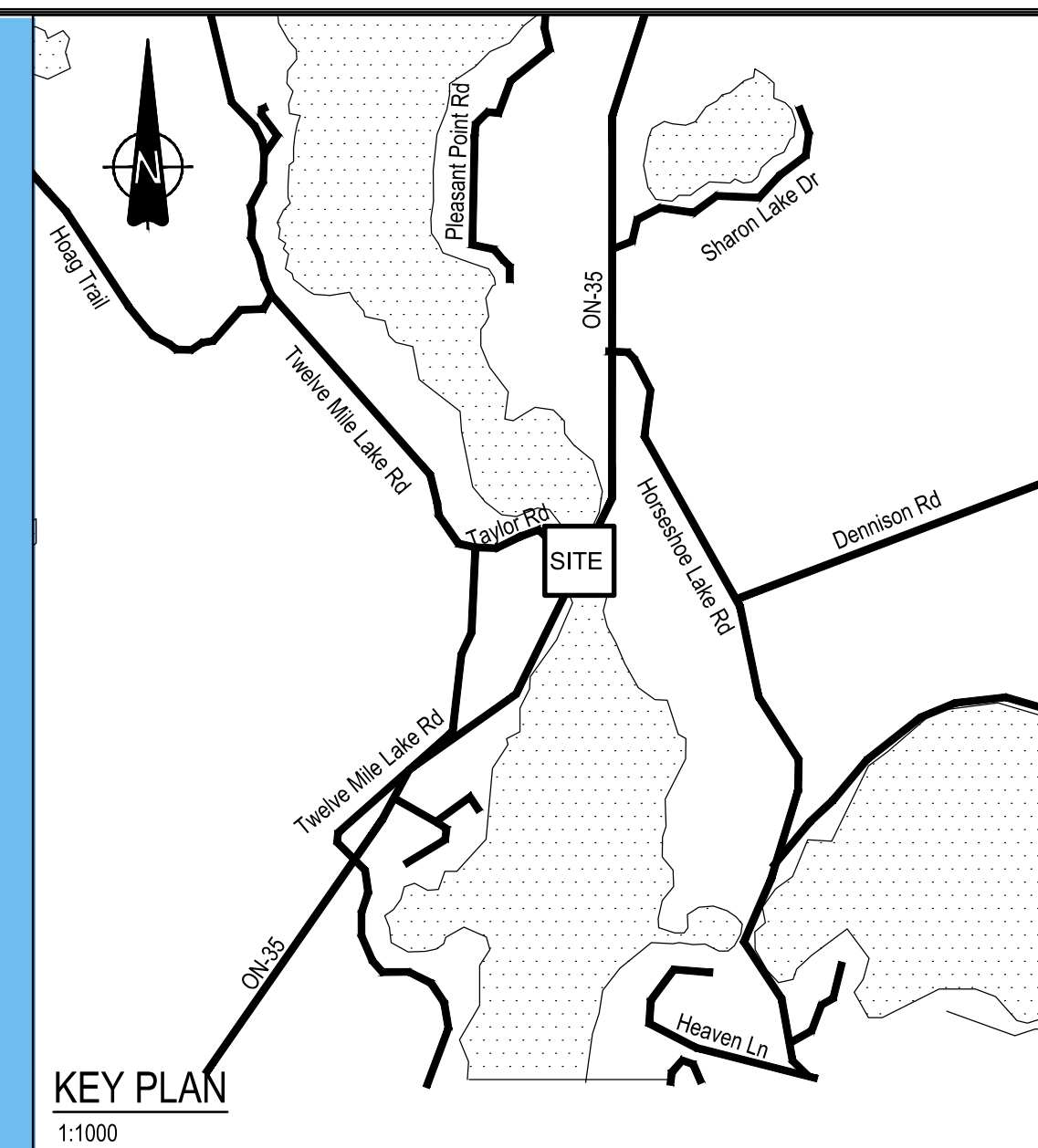
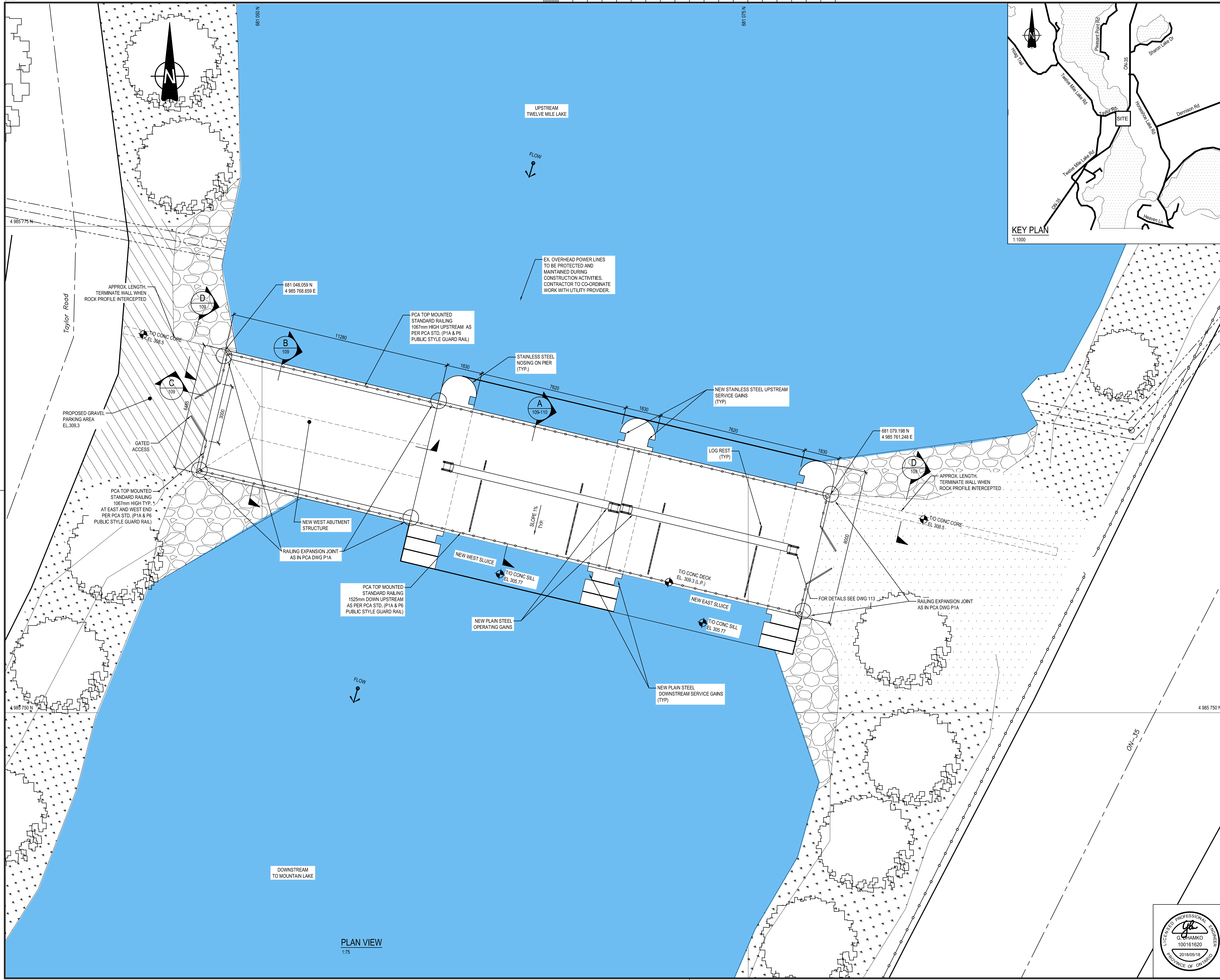
Project title / Titre du projet

TWELVE MILE LAKE DAM REPLACEMENT

REMOVALS

| | |
|---|--|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 107 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |





Canada

- NOTES:
- REFER TO DRAWING 113 FOR LOG REST DETAILS
 - CONTRACTOR TO ESTABLISH TWO PERMANENT BENCHMARKS ON THE NEW STRUCTURE REFERENCED TO ESTABLISHED BENCHMARKS.
 - RAILINGS SHOWN AS VISUAL REPRESENTATION ONLY. FOR DETAILS TO BE USED FOR QUANTITY ESTIMATION REFER TO PCA STANDARD DETAILS.

FOR TENDER

- LEGEND:
- DIRECTION OF WATER FLOW
 - TREES
 - HYDRAULIC SEEDING & GRANULAR FILL
 - CRUSHED STONE LAYER
 - ROCK FRAGMENTS / RIP-RAP
 - WATER

| No. | Description | Drawn By (Des.P) | Date |
|-----|--------------------|------------------|-------------|
| C | REVISED FOR TENDER | B.R. | MAY-18-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

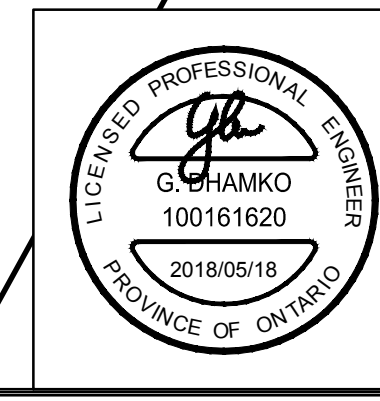
| | |
|--|---|
| | A Detail number Numéro du détail |
| | B Location dwg. number Numéro sur dessin |

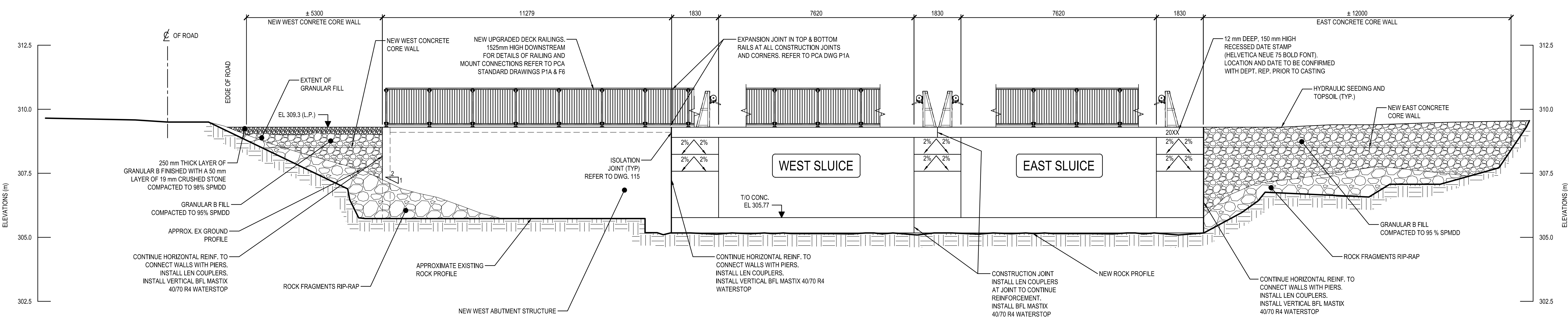
600 COCHRANE DRIVE, 5TH FLOOR
MARKHAM, ONTARIO CANADA L3R 5K3
TEL: 1-905-475-7270 | FAX: 1-905-475-5994 | WWW.WSPGROUP.COM

Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
**CONSTRUCTION
NEW GENERAL
ARRANGEMENT**

| | |
|--|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| PCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 108 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |





DOWNSTREAM ELEVATION VIEW
1:75

- CONCRETE:**
- CONCRETE TO BE CLASS C-1 (MODIFIED). SEE SPECS.
 - FOR SPECIFIC COMPRESSIVE STRENGTH REFER TO DIV 03 OF TECHNICAL SPECIFICATIONS.
 - CONCRETE EDGES IN DAM PIERS, WALLS EDGE AND TOP OF DECK TO HAVE A 75 mm RADIUS FILLET. UNLESS NOTED OTHERWISE, USE 25 mm CHAMFER STRIP ON EXTERNAL CORNERS AND BOTTOM EDGES OF DECK UNLESS NOTED OTHERWISE. USE 25 mm CHAMFER WHERE DECK OR WALL ABUTS SLAB.
 - CONTRACTOR TO REFER TO ALL SECTION OF DIV 03 OF TECHNICAL SPECIFICATION FOR CONCRETE FORMING AND ACCESSORIES, CAST IN PLACE CONCRETE, CONCRETE REINFORCING, ETC.
 - FOR DECK DETAILS REFER TO DWG 111.

FOR TENDER

- LEGEND:**
- DIRECTION OF WATER FLOW
 - EARTH (SECTION)
 - ROCK (SECTION)
 - GRANULAR B
 - ROCK FILL
 - CONCRETE / U-FILL

| No. | Description / Révision | Drawn By / Dessiné par | Date |
|-----|------------------------|------------------------|-------------|
| D | REVISED FOR TENDER | M.G. | JUL-24-2018 |
| C | REVISED FOR TENDER | B.R. | MAY-18-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

| | |
|---|---|
| A | A Detail number Numéro du détail |
| B | B Location dwg. number Numéro sur dessin |

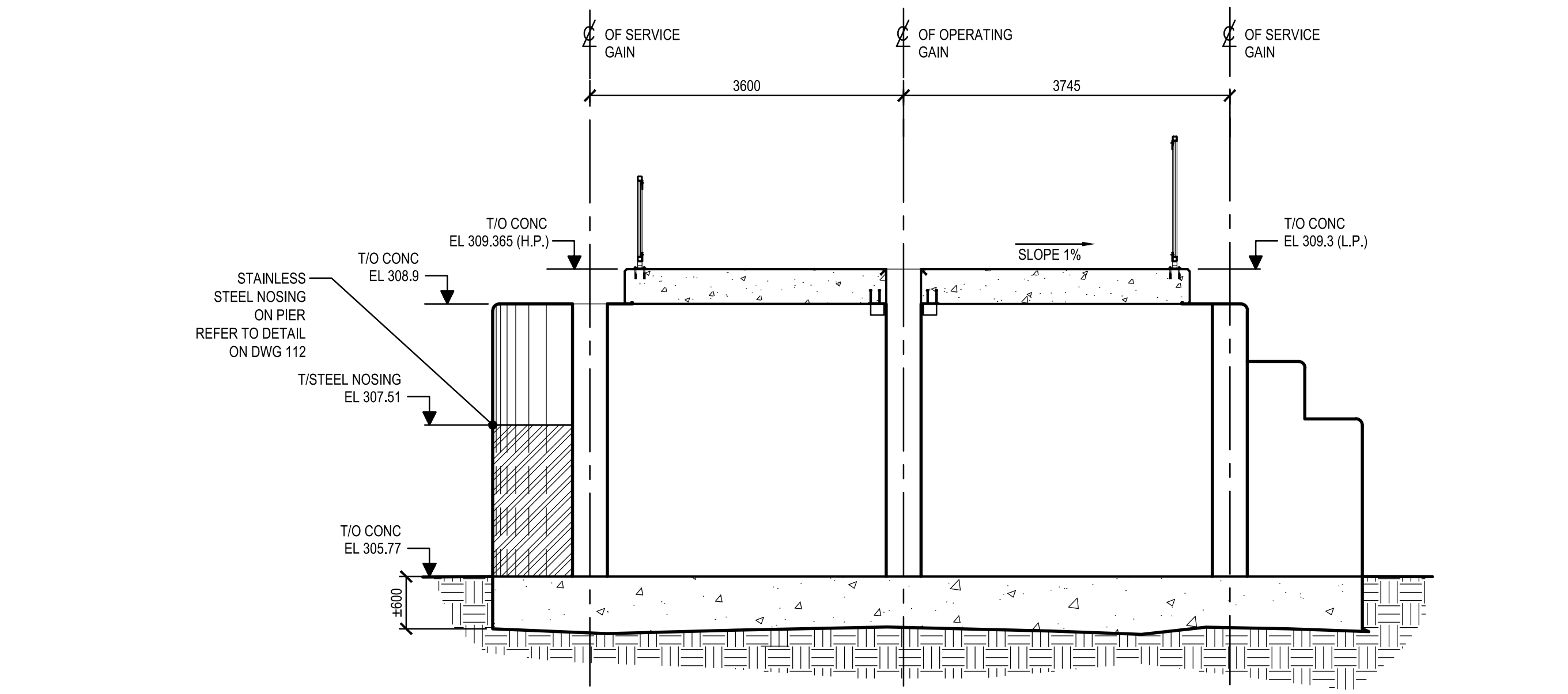


TWELVE MILE LAKE DAM REPLACEMENT

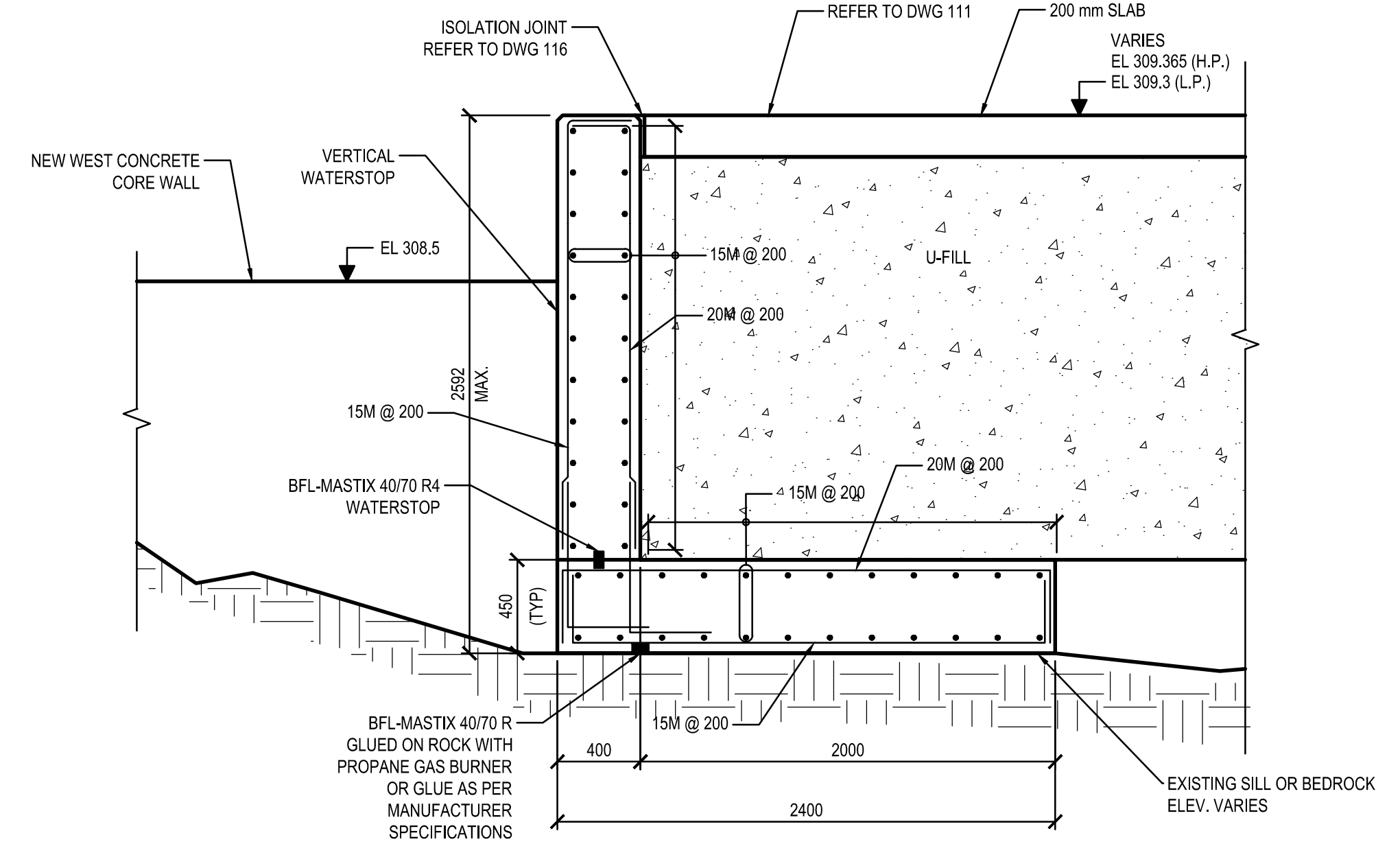
CONSTRUCTION ELEVATION AND SECTIONS

Drawn by / Dessiné par: MAITE GARCIA
 Designed by / Conçu par: KARINA SETO
 Approved by / Approuvé par: GENTI DHAMKO
 Drawing Date / Date du dessin: FEBRUARY 2018

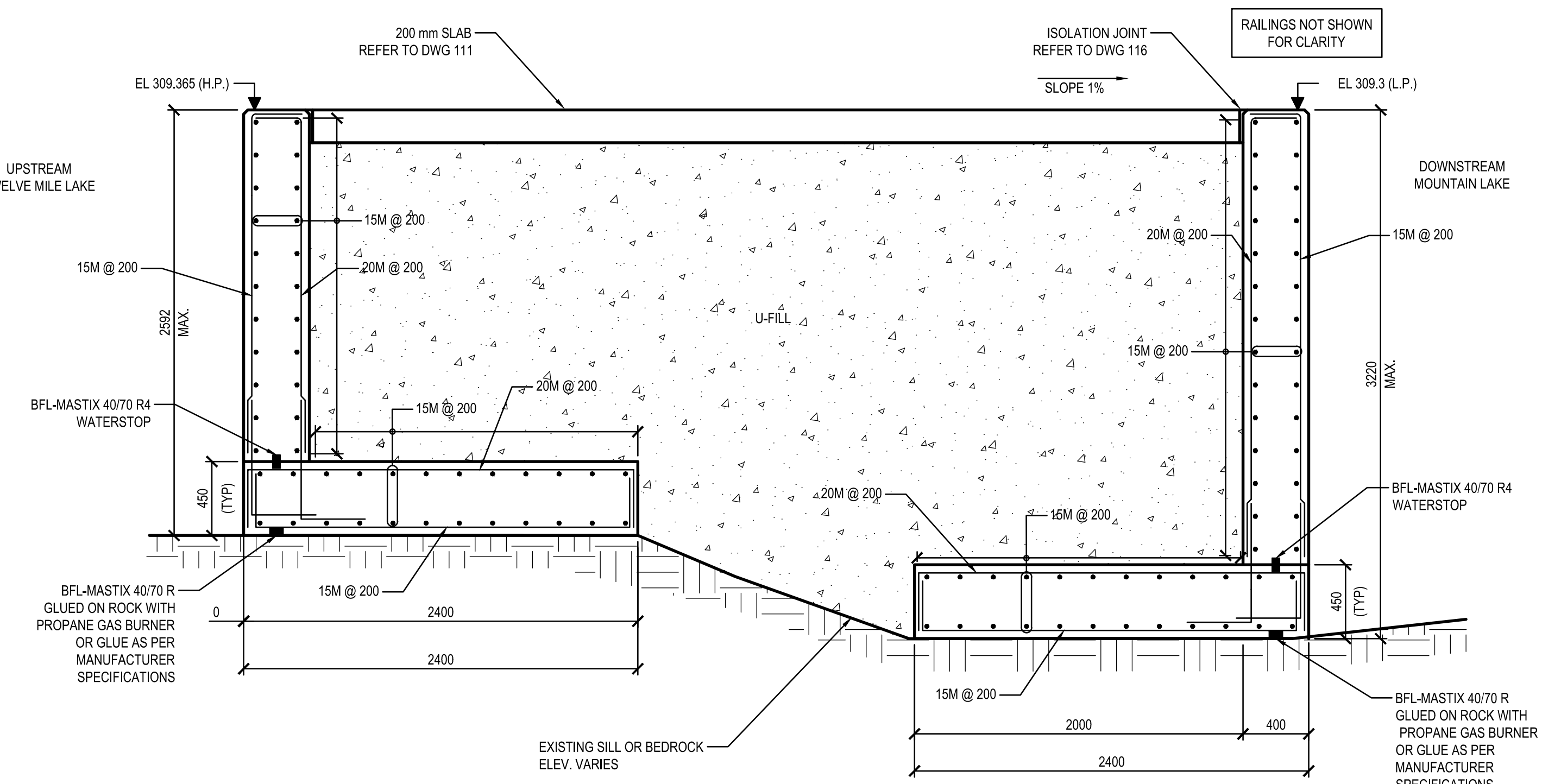
Project manager / Administrateur de projet: NICHOLAS READ
 HCEW Number / Numéro de CHTI: 1361-30029431
 Project Number / Numéro du projet: 161-05116-00
 Drawing Number / Numéro du Dessin: 109
 Sheet / Feuille: 1 of 1



SECTION A
1:50

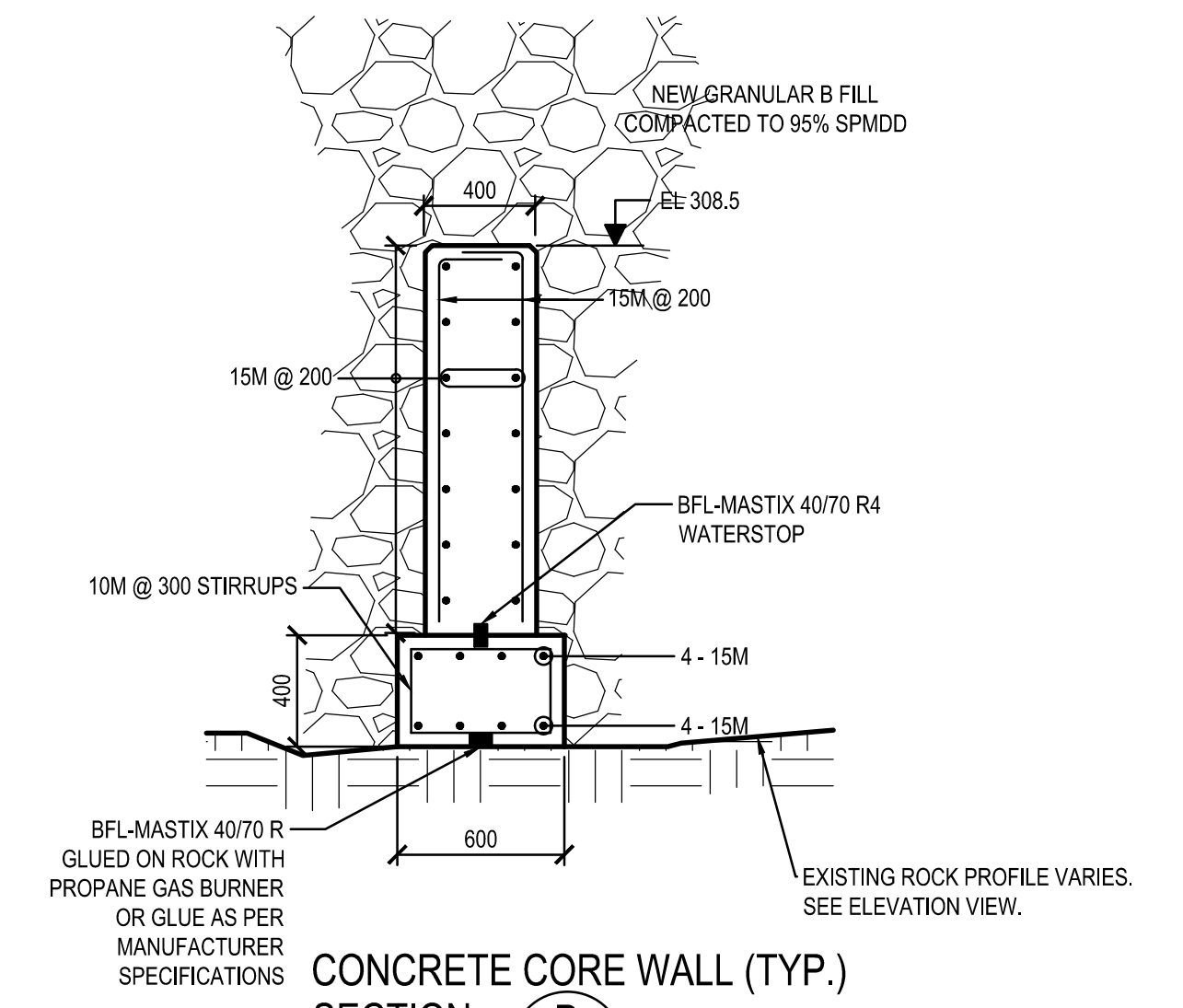


SECTION C
1:25



SECTION B
1:25

NOTE:
 1. PLACE U-FILL IN 1.5 m LIFTS MAX. POUR SUBSEQUENT LIFTS ONLY ONCE PREVIOUS LIFT HAS SET.



SECTION D
1:25

NOTE:

- REINFORCING TO BE MODIFIED TO ACCOMMODATE EMBEDDED PARTS
- REINFORCING TO CSA G30.18M GRADE 400 U.N.O.
- FOR CONCRETE COVER REQUIREMENTS REFER TO TABLE 17 A 23.3 OR TABLE 17 A 23.1
- PROVIDE CLASS B LAP LENGTHS IN ACCORDANCE WITH RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE.
- REINFORCEMENT REQUIREMENTS ARE SHOWN ON DETAIL DRAWINGS. WHERE DETAILS OF BAR SIZING AND SPACING ARE NOT SHOWN, ALLOW FOR MINIMUM REINFORCEMENT IN ACCORDANCE WITH CAN/CSA A23.3 ALL REINFORCEMENT SHOWN SHALL BE CONTINUOUS UNLESS AS DETAILED OTHERWISE. BUT SHALL NOT BE LESS THAN THAT SHOWN FOR SIMILAR ITEM. ALL CONCRETE ITEMS ARE REINFORCED CONCRETE UNLESS SPECIFICALLY NOTED OTHERWISE. WHERE BAR SIZE NOT SHOWN, USE MAXIMUM SIZE OF BARS WHICH ARE LAPPED.
- CONTRACTOR TO REFER TO ALL SECTIONS OF DIV 03 FOR CONCRETE REINFORCING REQUIREMENTS.

FOR TENDER

LEGEND:

2nd STAGE CONCRETE

| No. | Description | Drawn By (Des.P) | Date |
|-----|--------------------|------------------|-------------|
| C | REVISED FOR TENDER | B.R. | MAY-18-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

A Detail number
B Location dwg. number

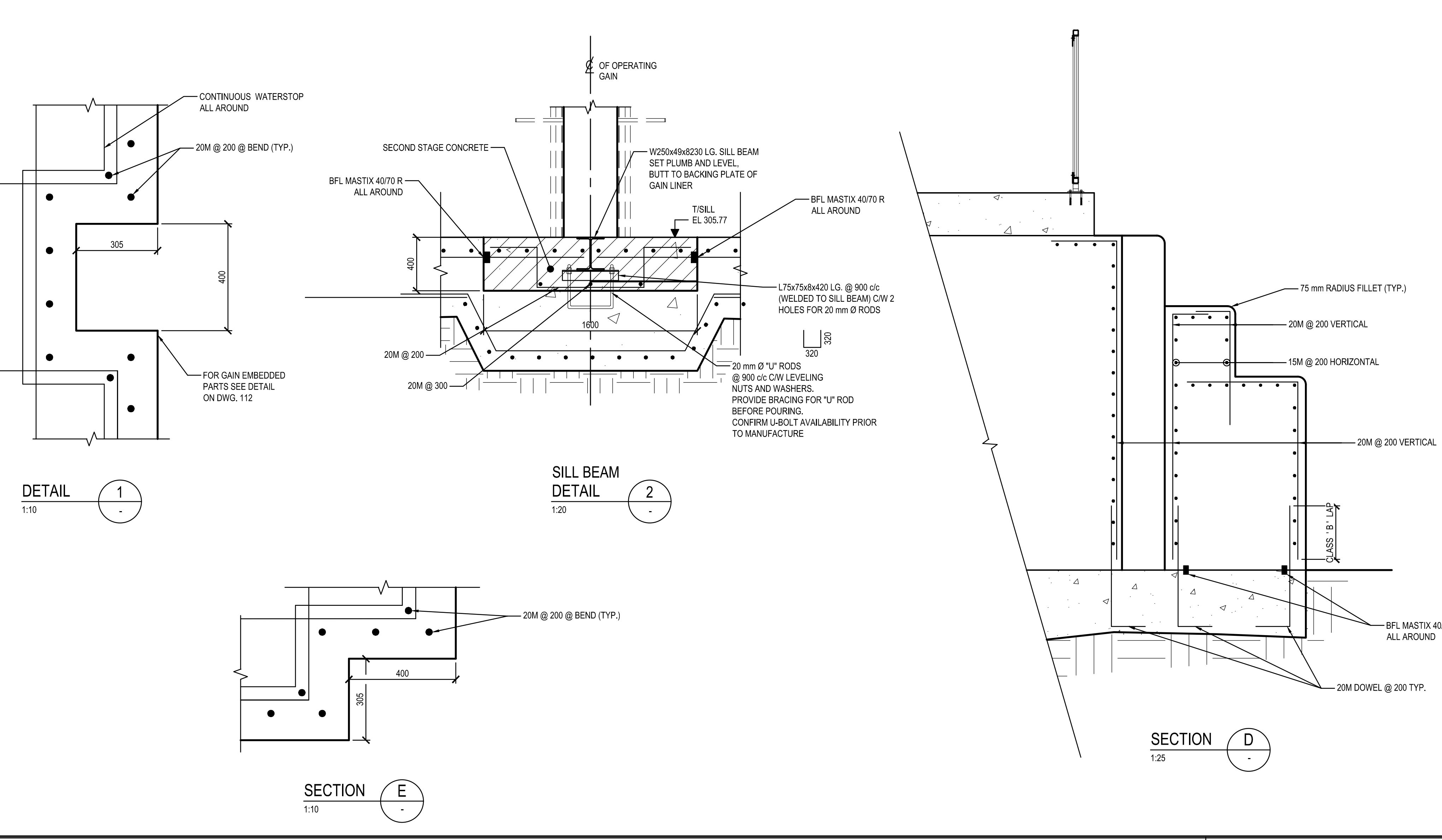
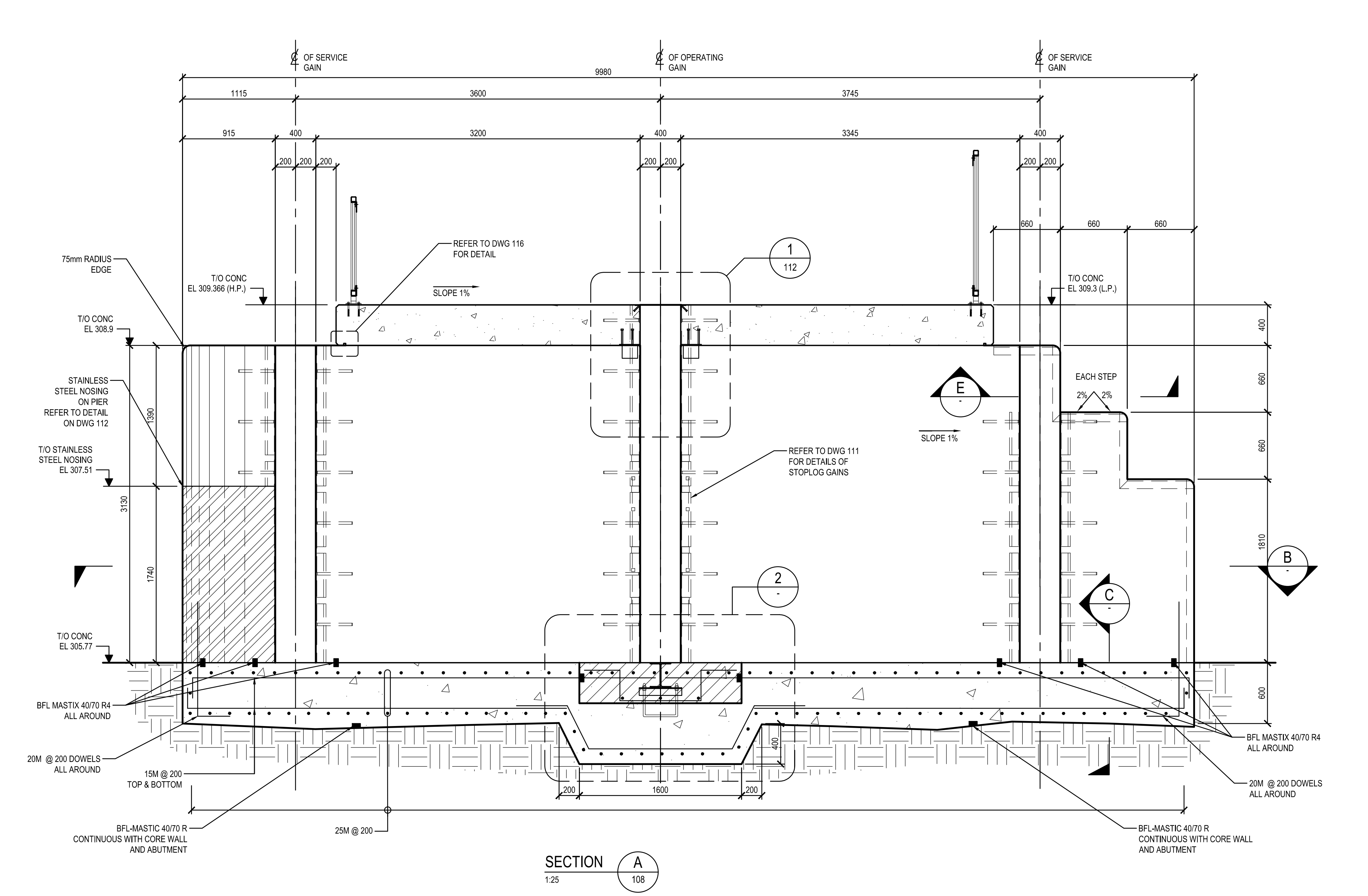
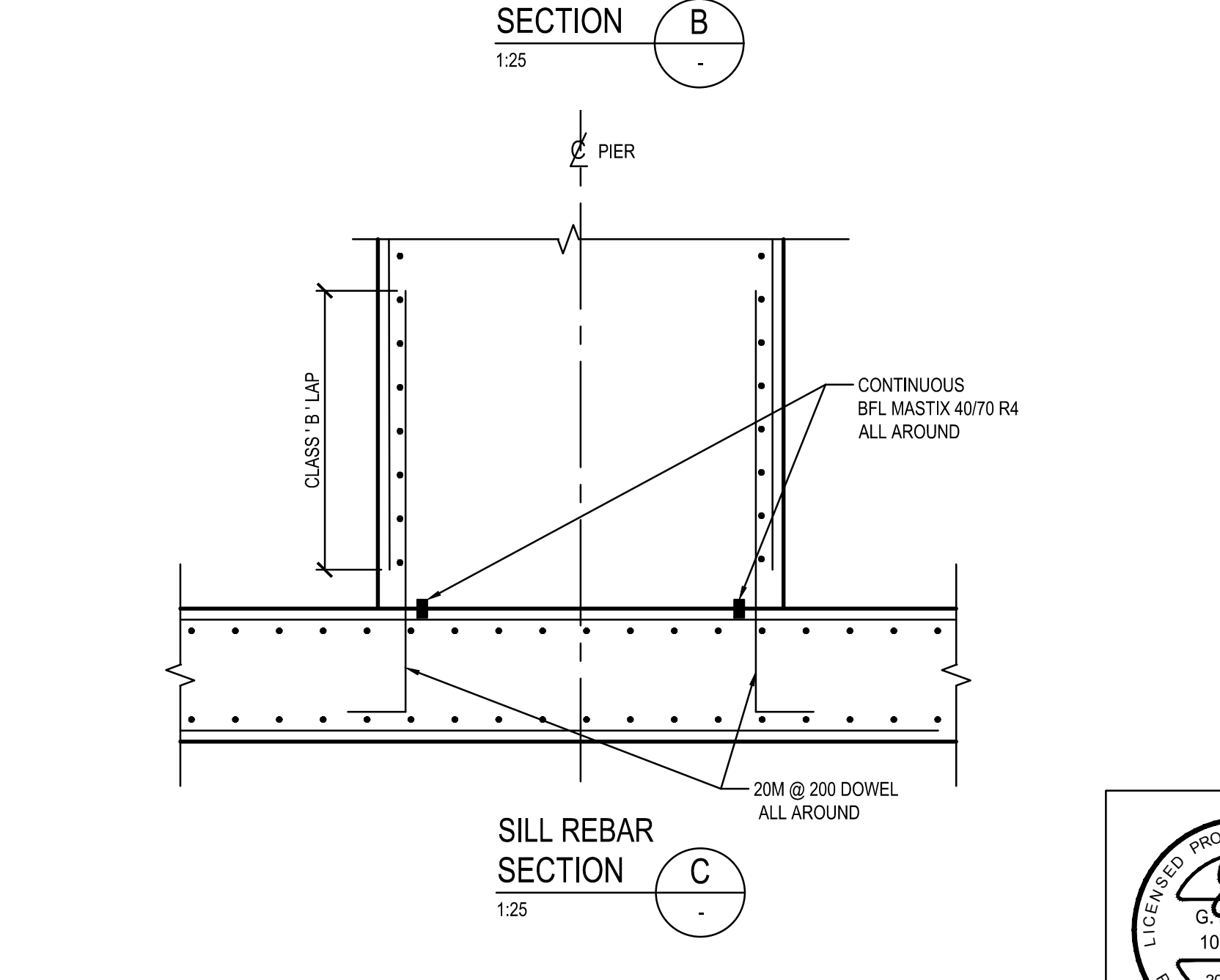
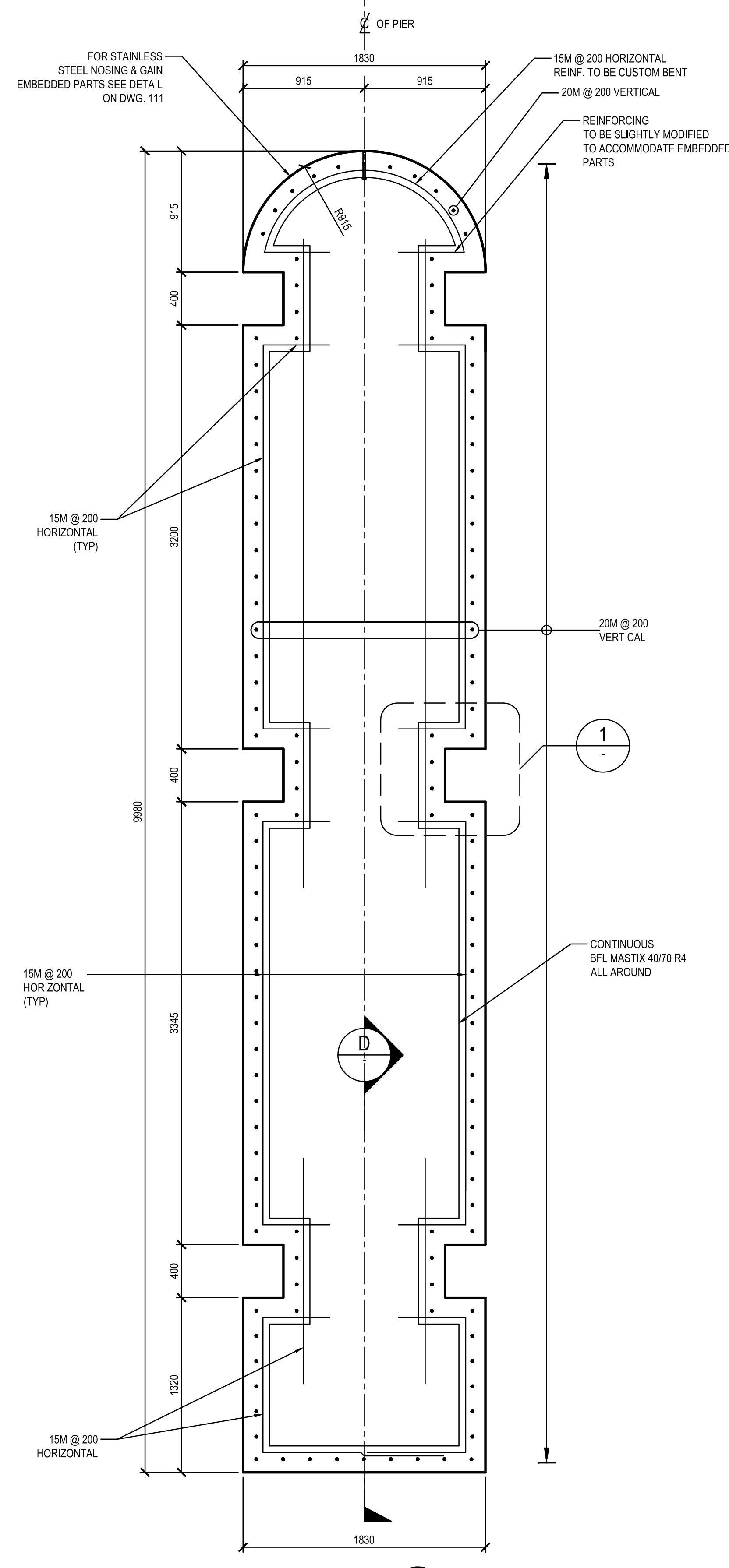
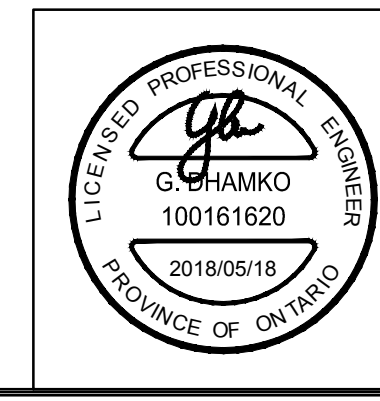


Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
REINFORCING PIER SECTIONS AND SILL SLAB

Drawn by / Dessiné par: MAITE GARCIA
Designed by / Conçu par: KARINA SETO
Approved by / Approuvé par: GENTI DHAMKO
Drawing Date / Date du dessin: FEBRUARY 2018

Project manager / Administrateur de projet: NICHOLAS READ
HCEW Number / Numéro de CHTI: 1361-30029431
Drawing Number / Numéro du Dessin: 110
Project Number / Numéro du projet: 161-05116-00
Sheet Number / Numéro de la feuille: 1 of 1



NOTE:

- WINCH ANCHORS NOT SHOWN FOR CLARITY.

REINFORCEMENT:

- REINFORCEMENT TO CSA G30.18M GRADE 400 U.N.O.
- FOR CONCRETE COVER REQUIREMENTS REFER TO TABLE 17 A 23.3 OR TABLE 17 A 23.1
- PROVIDE CLASS B LAP LENGTHS IN ACCORDANCE WITH RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE
- REINFORCEMENT REQUIREMENTS ARE SHOWN ON DETAIL DRAWINGS. WHERE DETAILS OF BAR SIZING AND SPACING ARE NOT SHOWN, ALLOW FOR MINIMUM REINFORCEMENT IN ACCORDANCE WITH CANCSA A23.3 ALL REINFORCEMENT SHOWN SHALL BE CONTINUOUS UNLESS AS DETAILED OTHERWISE BUT SHALL NOT BE LESS THAN THAT SHOWN FOR SIMILAR ITEM. ALL CONCRETE ITEMS ARE REINFORCED CONCRETE UNLESS SPECIFICALLY NOTED OTHERWISE. WHERE BAR SIZE NOT SHOWN, USE MAXIMUM SIZE OF BARS WHICH ARE LAPPED.
- CONTRACTOR TO REFER TO ALL SECTIONS OF DIV 03 FOR CONCRETE REINFORCING REQUIREMENTS.
- PROVIDE LEN COUPLERS AS REQUIRED AND SHOWN ON DRAWINGS.

FOR TENDER

| No. | Description | Drawn By (Des.Par) | Date |
|-----|-------------------|--------------------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

| | |
|---|---|
| A | Detail number Numéro du détail |
| B | Location dwg. number Numéro sur dessin |

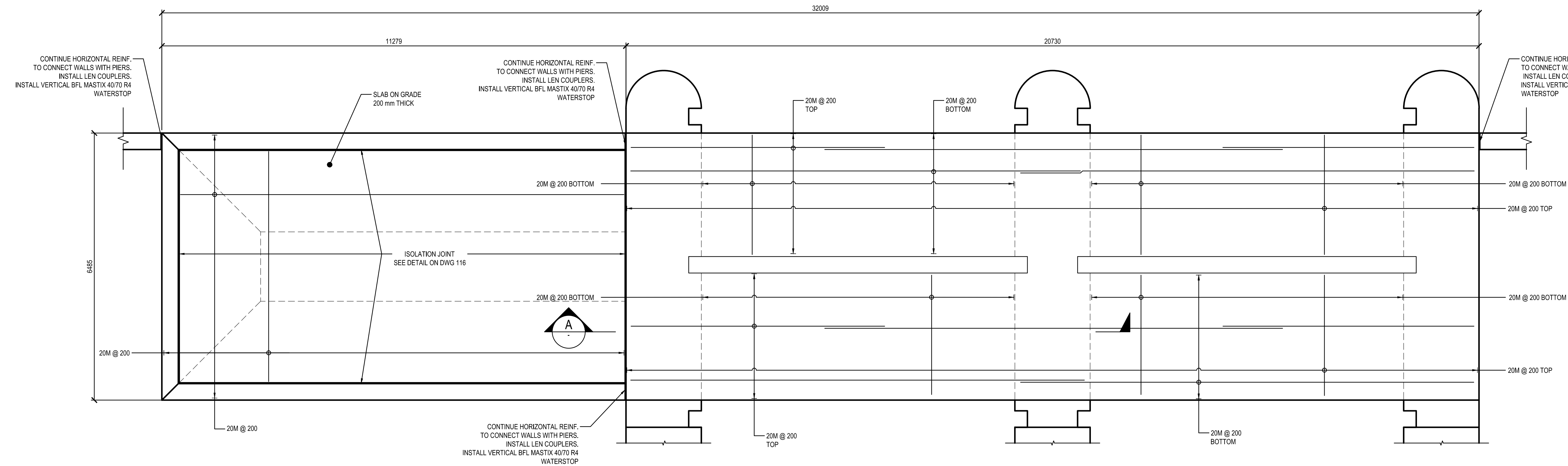


Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

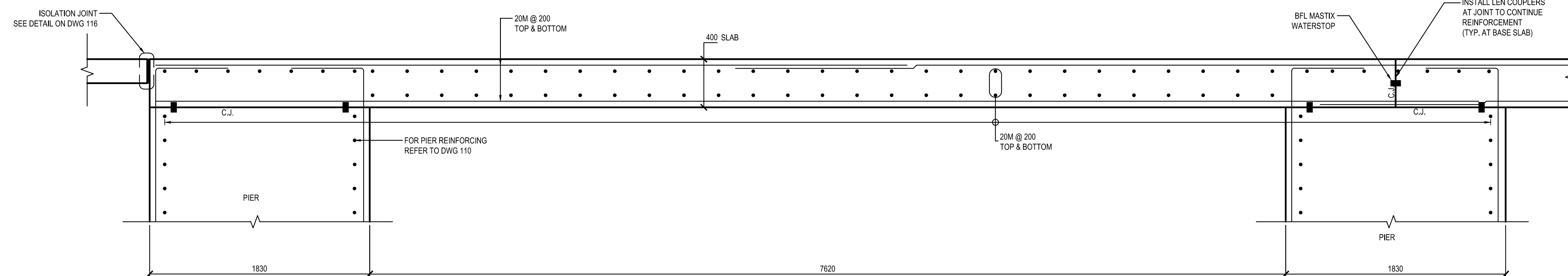
Drawing title / Titre du dessin
REINFORCING DECK

| | |
|---|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |

| | | |
|--|---|---|
| Project manager / Administrateur de projet NICHOLAS READ | Drawing Number / Numéro de CHTI 1361-30029431 | Sheet Number / Numéro du Dessin 111 |
| Project Number / Numéro du projet 161-05116-00 | Sheet 1 of 1 | |



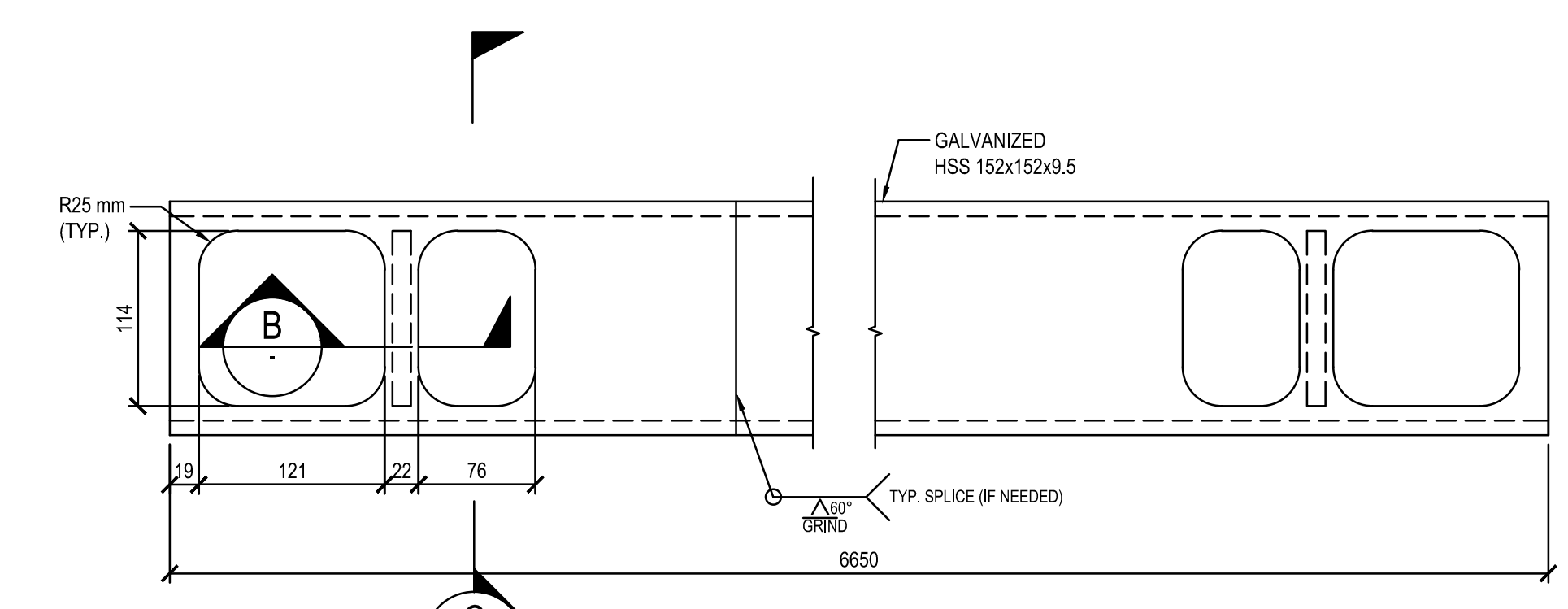
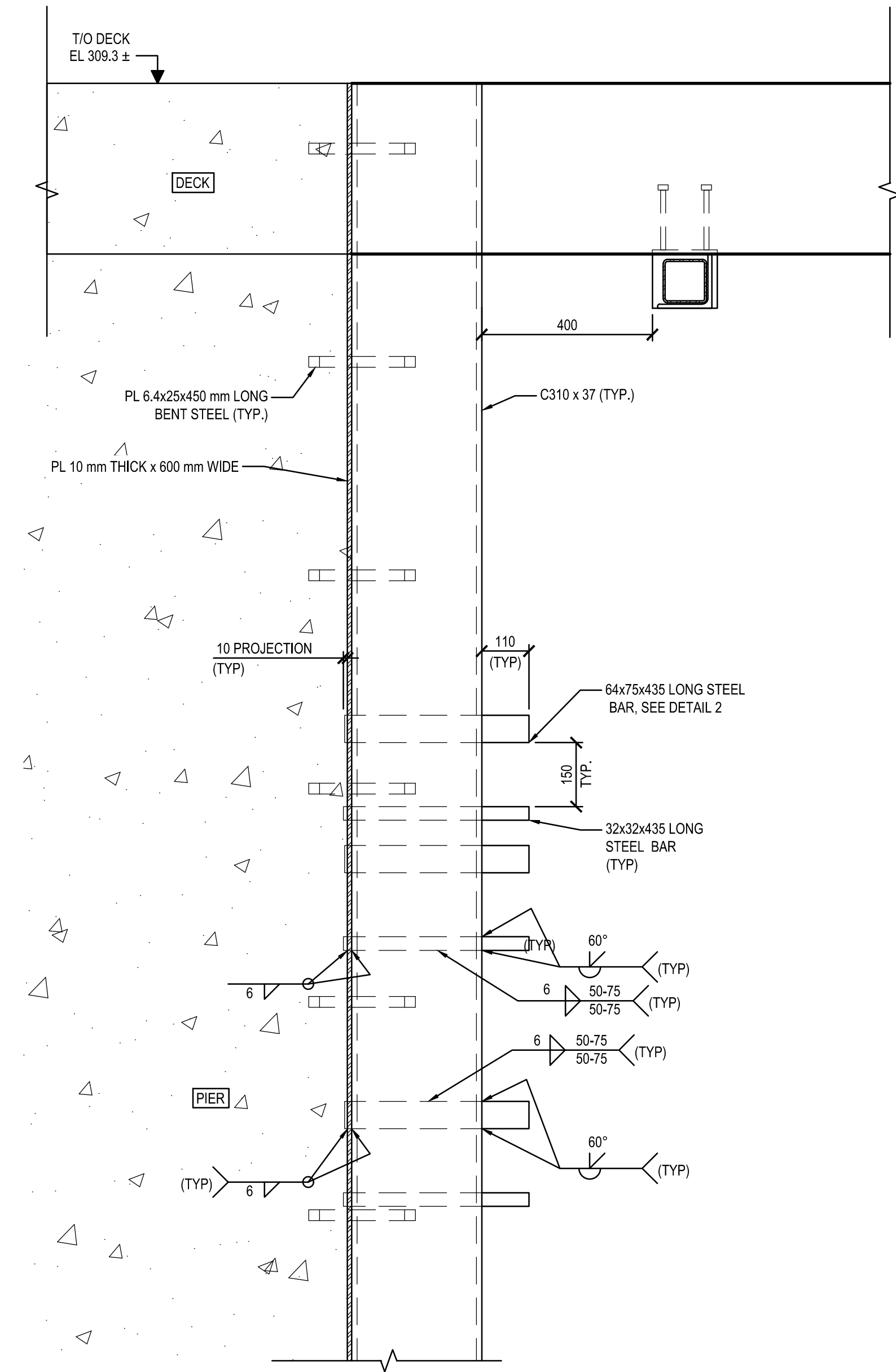
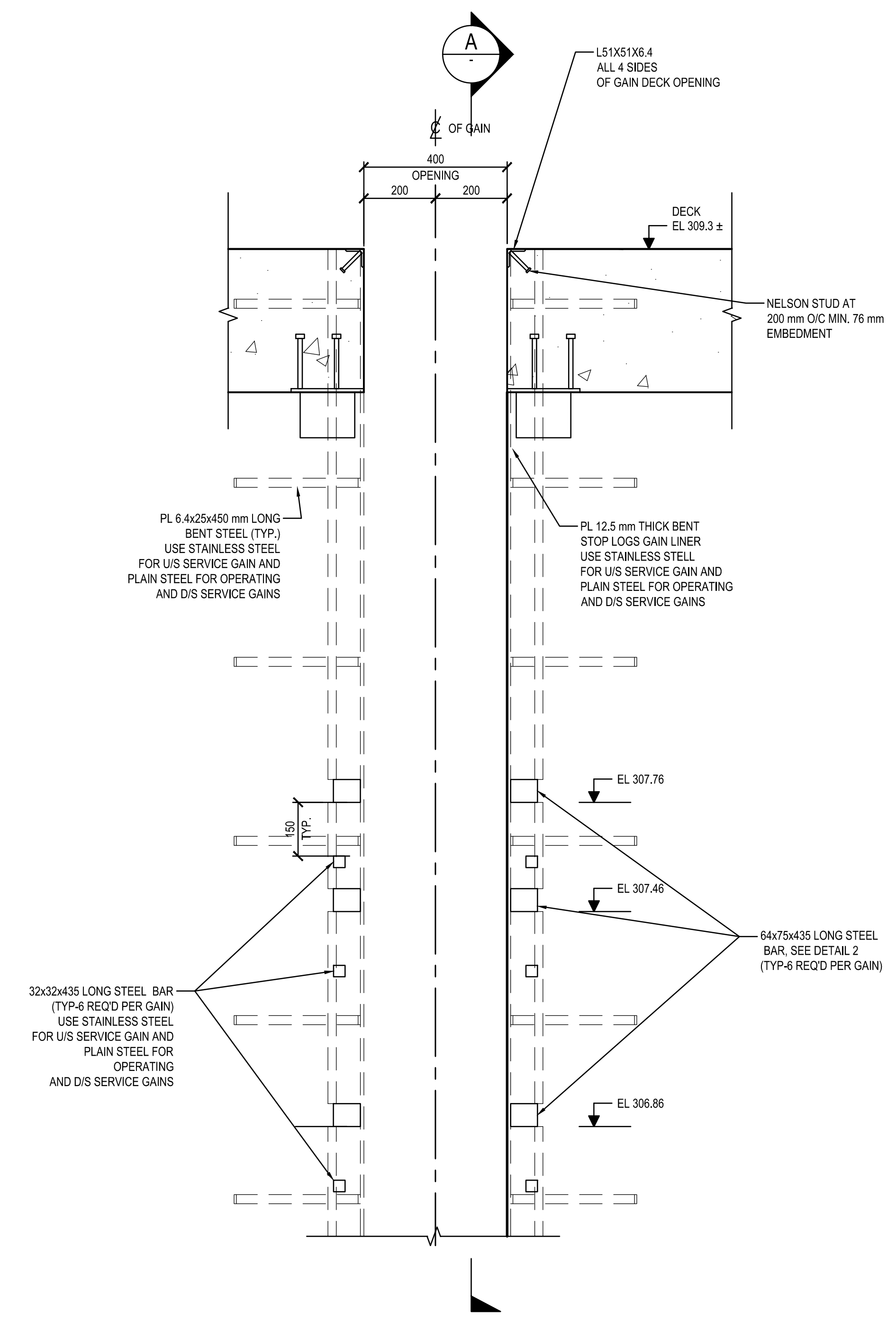
DECK PLAN VIEW
1:50



SECTION A
1:20

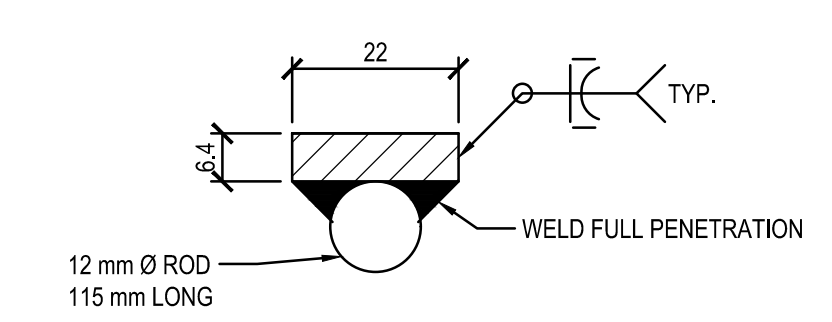
- STEEL:**
- DIMENSIONS ARE IN mm UNLESS INDICATED OTHERWISE.
 - ALL COMPONENT DIMENSIONS INDICATED SHALL BE KEPT AS SHOWN. ANY MODIFICATIONS SHALL BE APPROVED BY PCA REPRESENTATIVE.
 - WINCH SUPPORT RACK SURFACE PREPARATION AND PAINTING AS PER SPECIFICATION.
 - WINCH SUPPORT RACK COMPONENTS SHALL BE JOINED TOGETHER WITH CONTINUOUS WELDS. OVERLAPPING COMPONENTS SHALL BE FILLET WELDED AND BUTTING COMPONENTS SHALL BE GROOVE WELDED. ALL WELDING AS PER CSA W59.
 - BOLTING AND ANCHORING DETAILS AS PER SPECIFICATION.
 - WINCH DRAWING SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR TO ENSURE PROPER ASSEMBLY OF ACTUAL WINCH AND SUPPORT RACK BEFORE ON-SITE INSTALLATION.

FOR TENDER



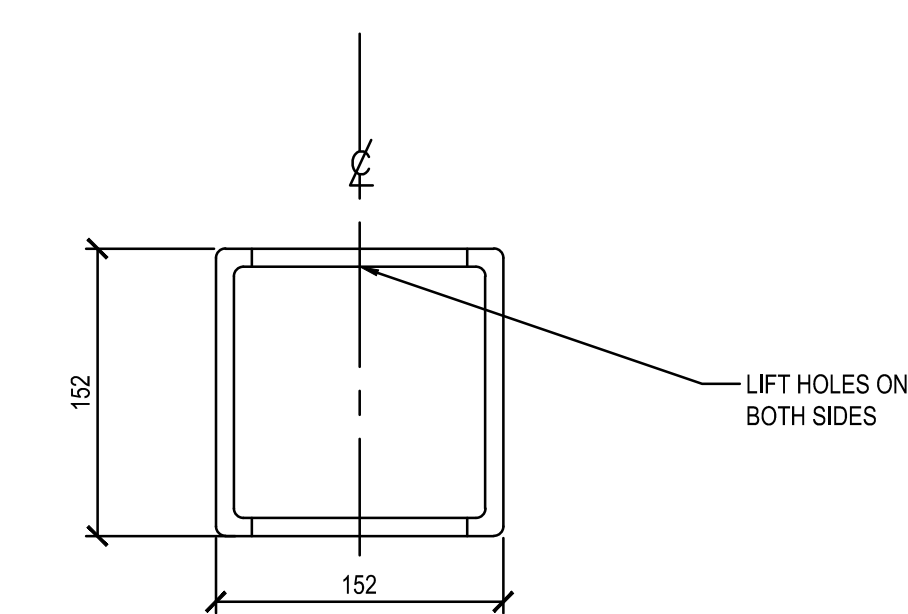
STEEL HALF LOG PLAN VIEW

1:4



SECTION B

1:4



SECTION C

1:4

| No. | Description | Drawn By | Date |
|-----|--------------------|----------|-------------|
| D | REVISED FOR TENDER | M.G. | JUL-24-2018 |
| C | REVISED FOR TENDER | B.R. | MAY-18-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

A Detail number
B Location dwg. number



Project title / Titre du projet

TWELVE MILE LAKE DAM REPLACEMENT

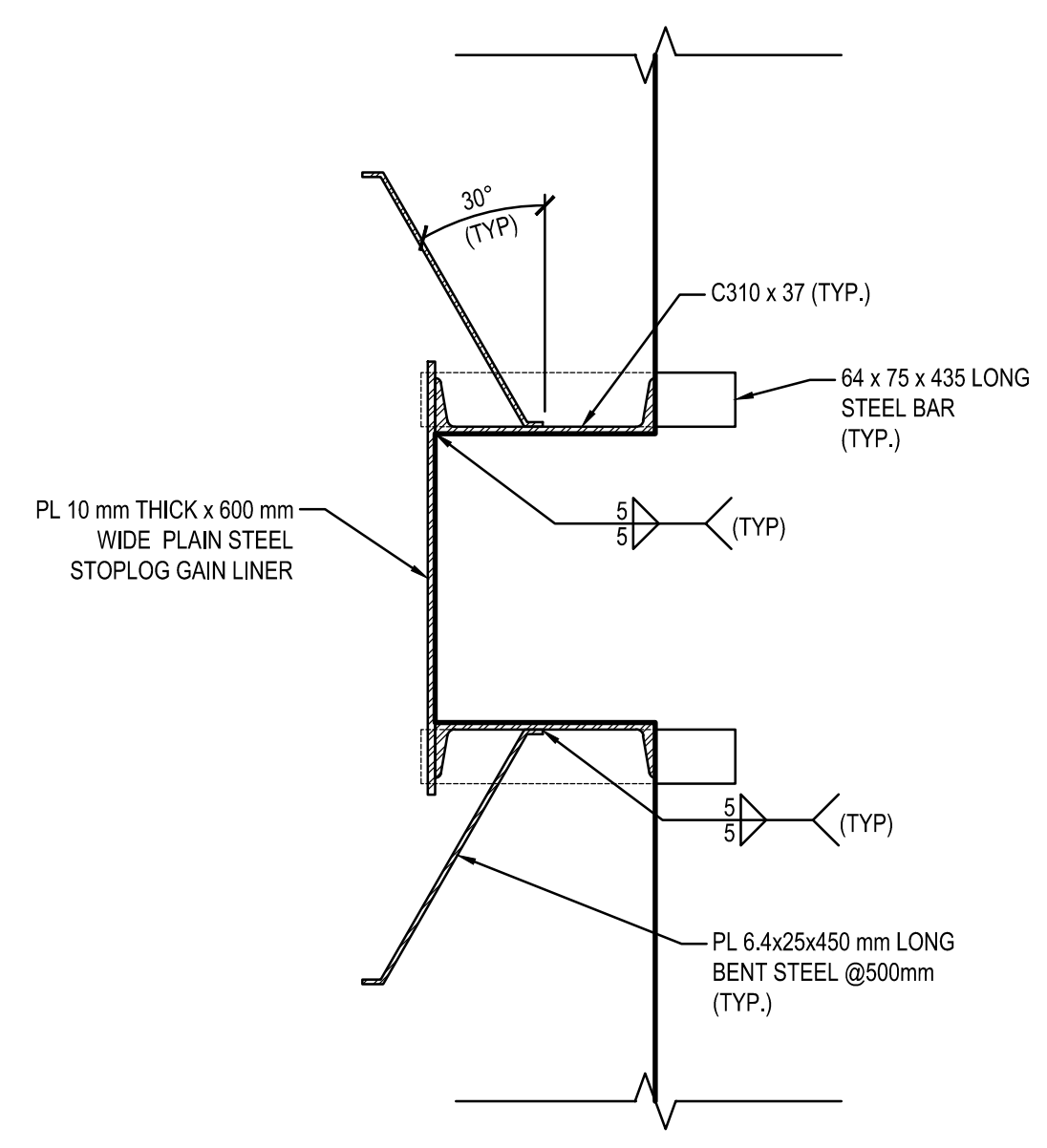
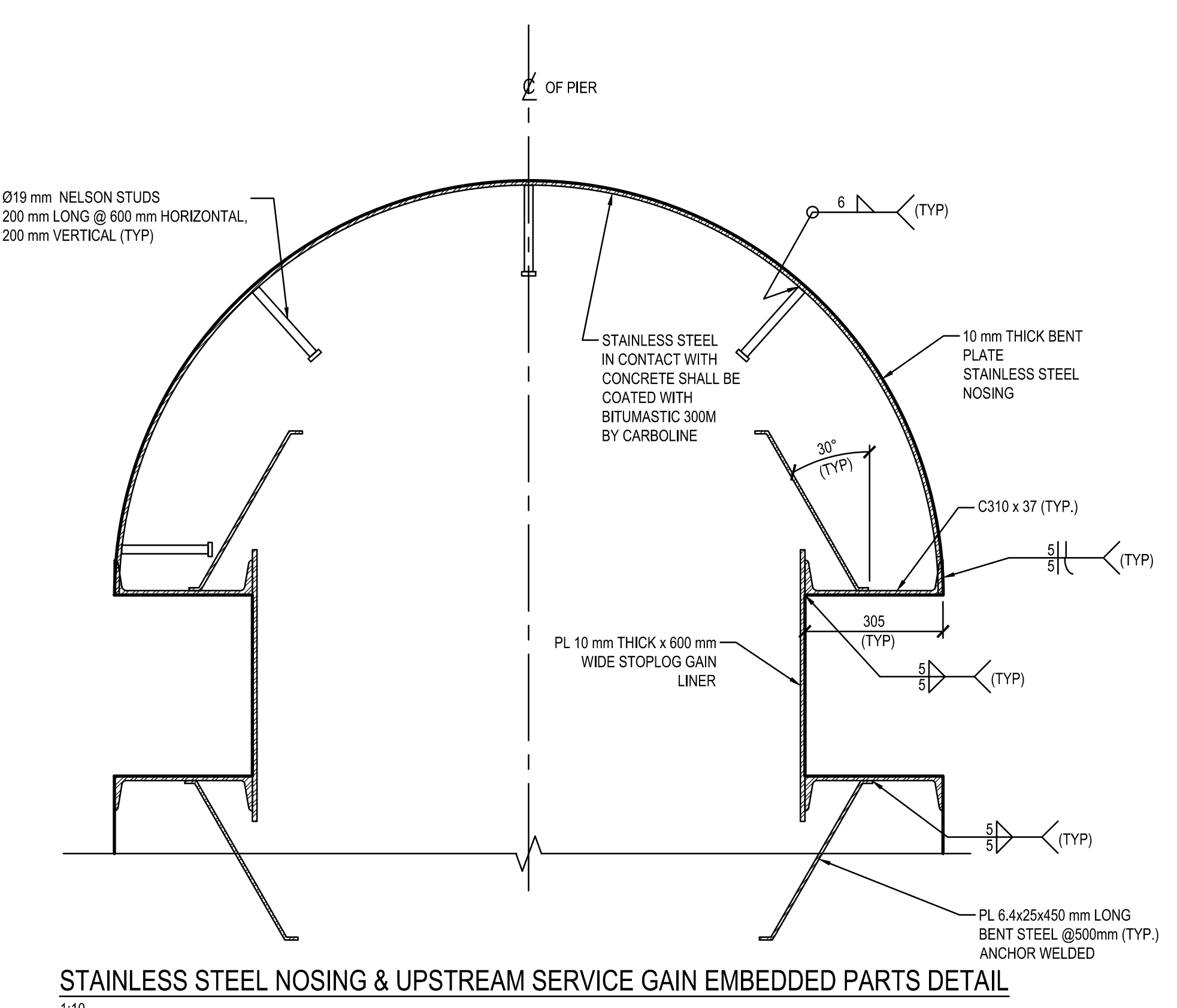
TYPICAL DETAILS GAIN EMBEDDED PARTS

Drawing title / Titre du dessin

Drawn by / Dessiné par: MAITE GARCIA
Designed by / Conçu par: KARINA SETO
Approved by / Approuvé par: GENTI DHAMKO
Drawing Date / Date du dessin: FEBRUARY 2018

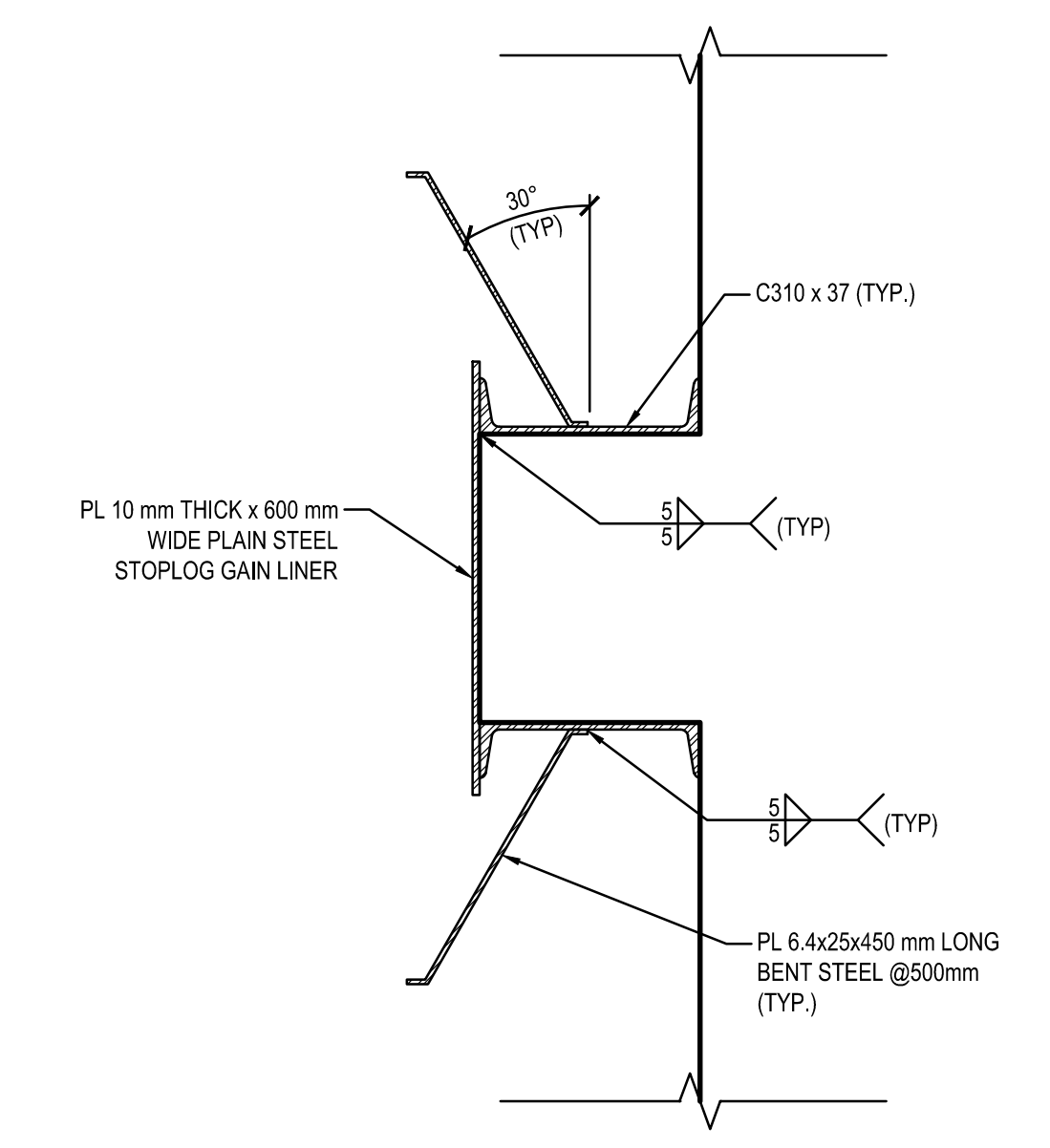
Project manager / Administrateur de projet: NICHOLAS READ
HCEW Number / Numéro de CHTI: 1361-30029431
Drawing Number / Numéro du Dessin: 112

Project Number / Numéro du projet: 161-05116-00
Sheet / Feuille: 1 of 1



OPERATING GAIN EMBEDDED PARTS DETAIL

1:10

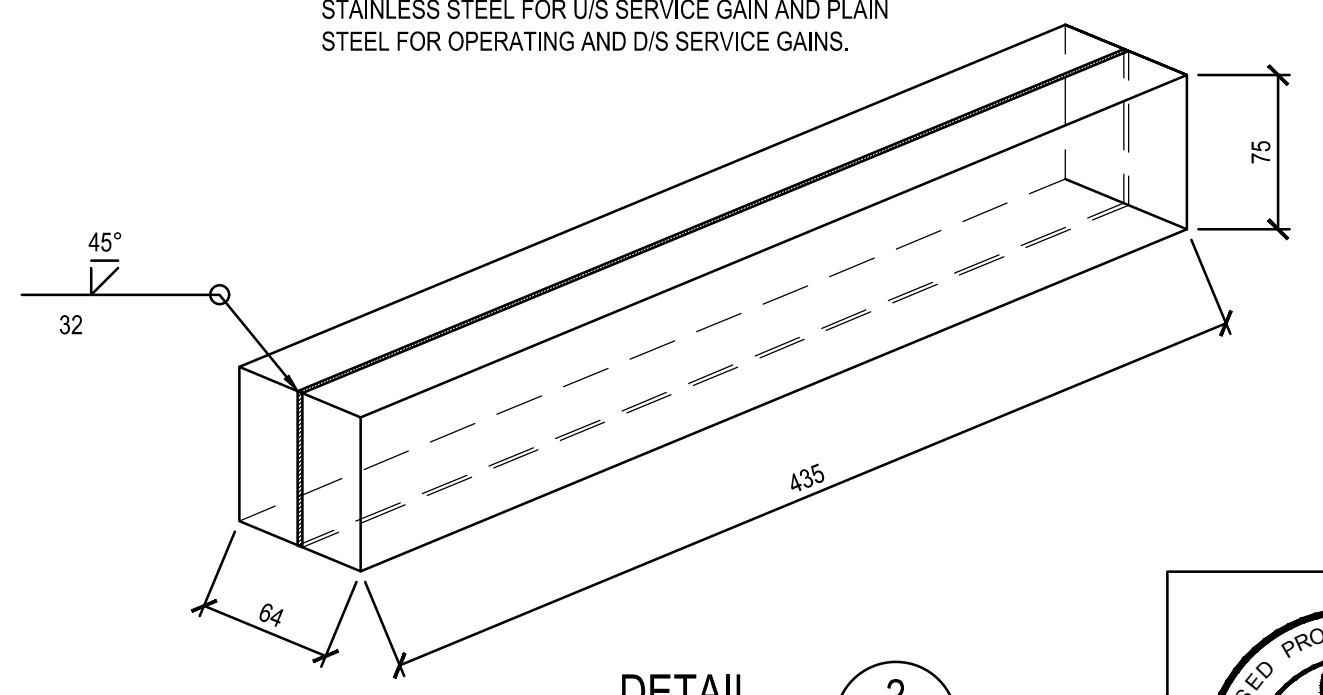


DOWNSTEAM SERVICE GAIN EMBEDDED PARTS DETAIL

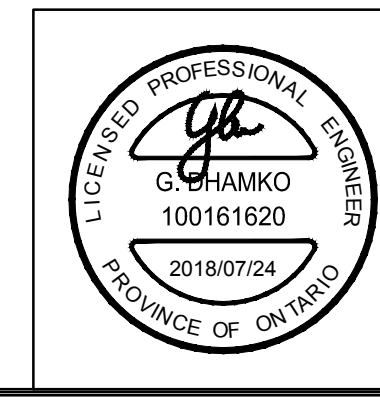
1:10

NOTE: PROVIDE JACKING POSTS FOR TOP STOPLOGS. LOCATE JACKING POSTS 450mm ABOVE TOP OF STOPLOGS.

- NOTES:**
- DRAWING SHOWS JACKING BRACKET TO BE 64x75 BAR (DEPENDING ON AVAILABILITY) ALTERNATIVELY THE BRACKET COULD BE FABRICATED FROM 2-32 mm (1/2") PLATES WELDED TOGETHER AS FOLLOWS. USE STAINLESS STEEL FOR U/S SERVICE GAIN AND PLAIN STEEL FOR OPERATING AND D/S SERVICE GAINS.

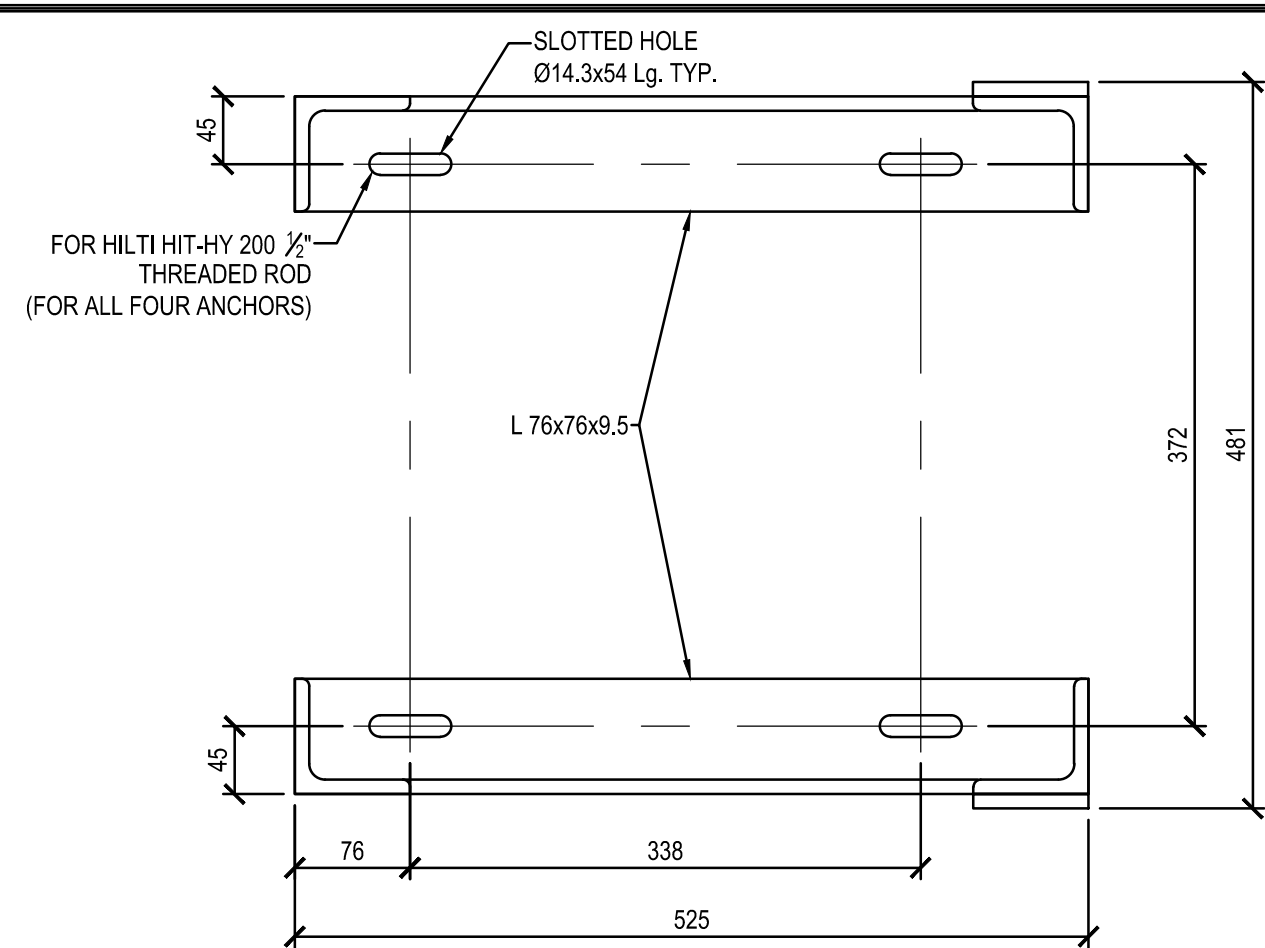


DETAIL 2
N.T.S.

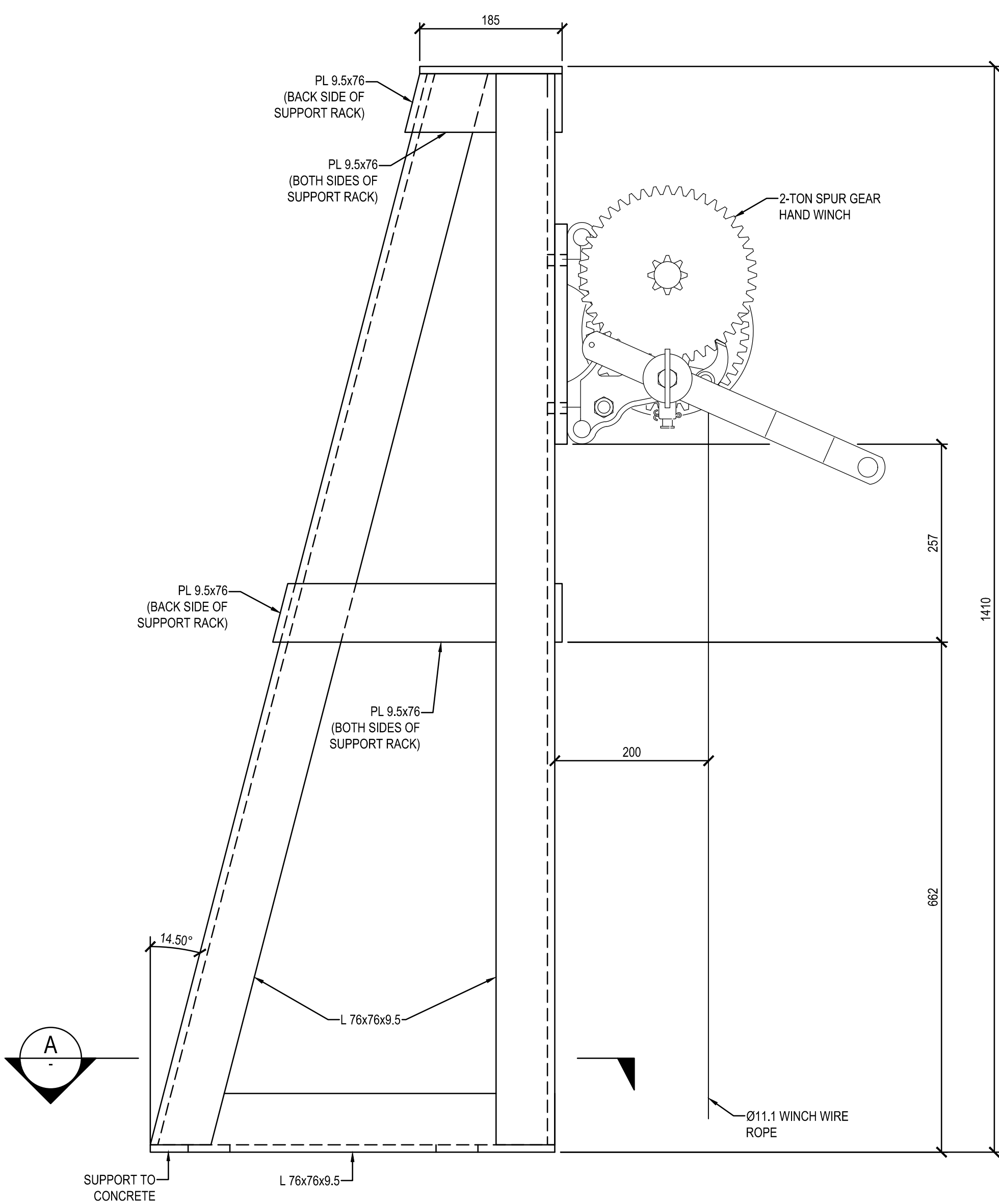


- NOTES:**
- DIMENSIONS ARE IN mm UNLESS INDICATED OTHERWISE.
 - ALL COMPONENT DIMENSIONS INDICATED SHALL BE KEPT AS SHOWN. ANY MODIFICATIONS SHALL BE APPROVED BY PCA REPRESENTATIVE.
 - WINCH SUPPORT RACK SURFACE PREPARATION AND PAINTING AS PER SPECIFICATION.
 - WINCH SUPPORT RACK COMPONENTS SHALL BE JOINED TOGETHER WITH CONTINUOUS WELDS. OVERLAPPING COMPONENTS SHALL BE FILLET WELDED AND BUTTING COMPONENTS SHALL BE GROOVE WELDED. ALL WELDING AS PER CSA W59.
 - BOLTING AND ANCHORING DETAILS AS PER SPECIFICATION.
 - WINCH DRAWING SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR TO ENSURE PROPER ASSEMBLY OF ACTUAL WINCH AND SUPPORT RACK BEFORE ON-SITE INSTALLATION.

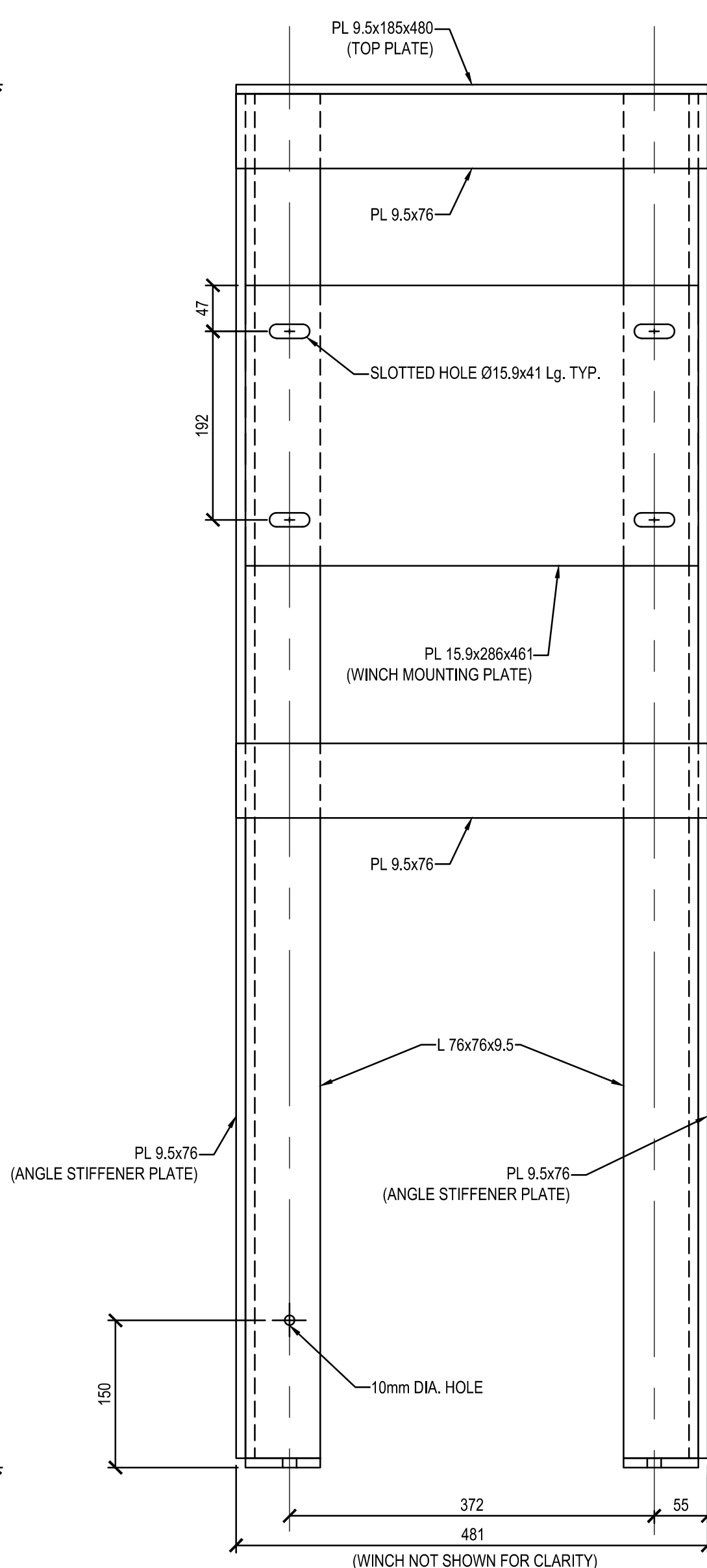
FOR TENDER



SECTION A
1:5

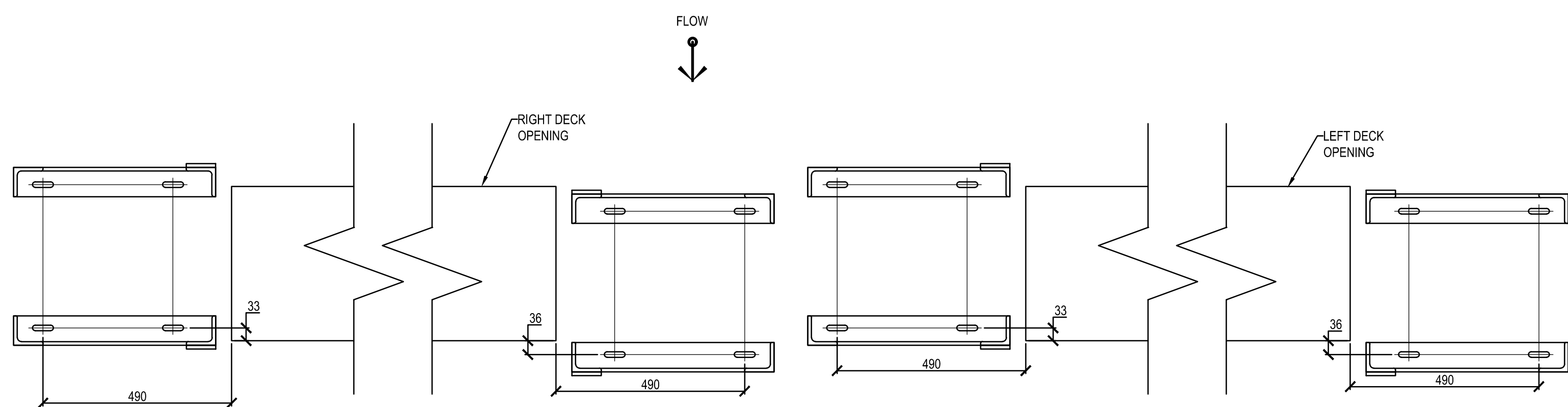


ELEVATION SIDE VIEW

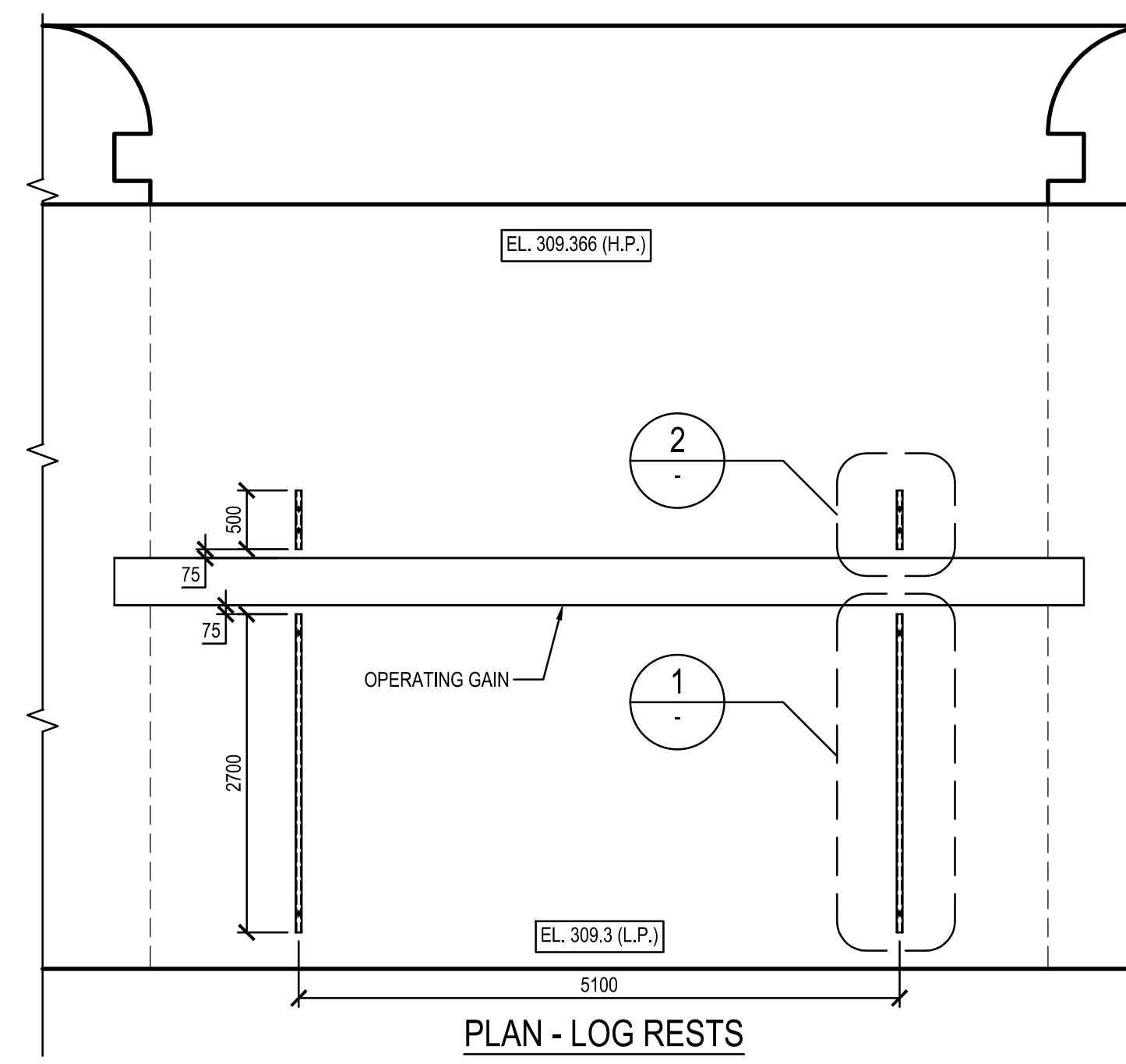


ELEVATION FRONT VIEW

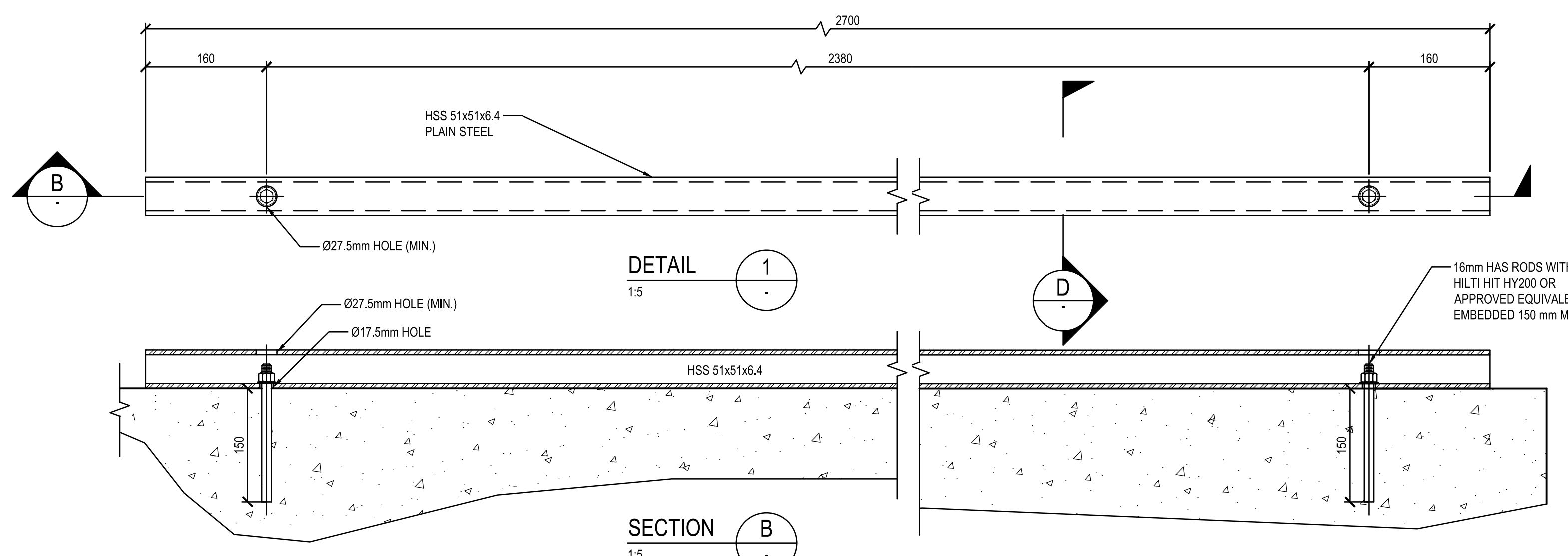
WINCH SUPPORTS
1:5



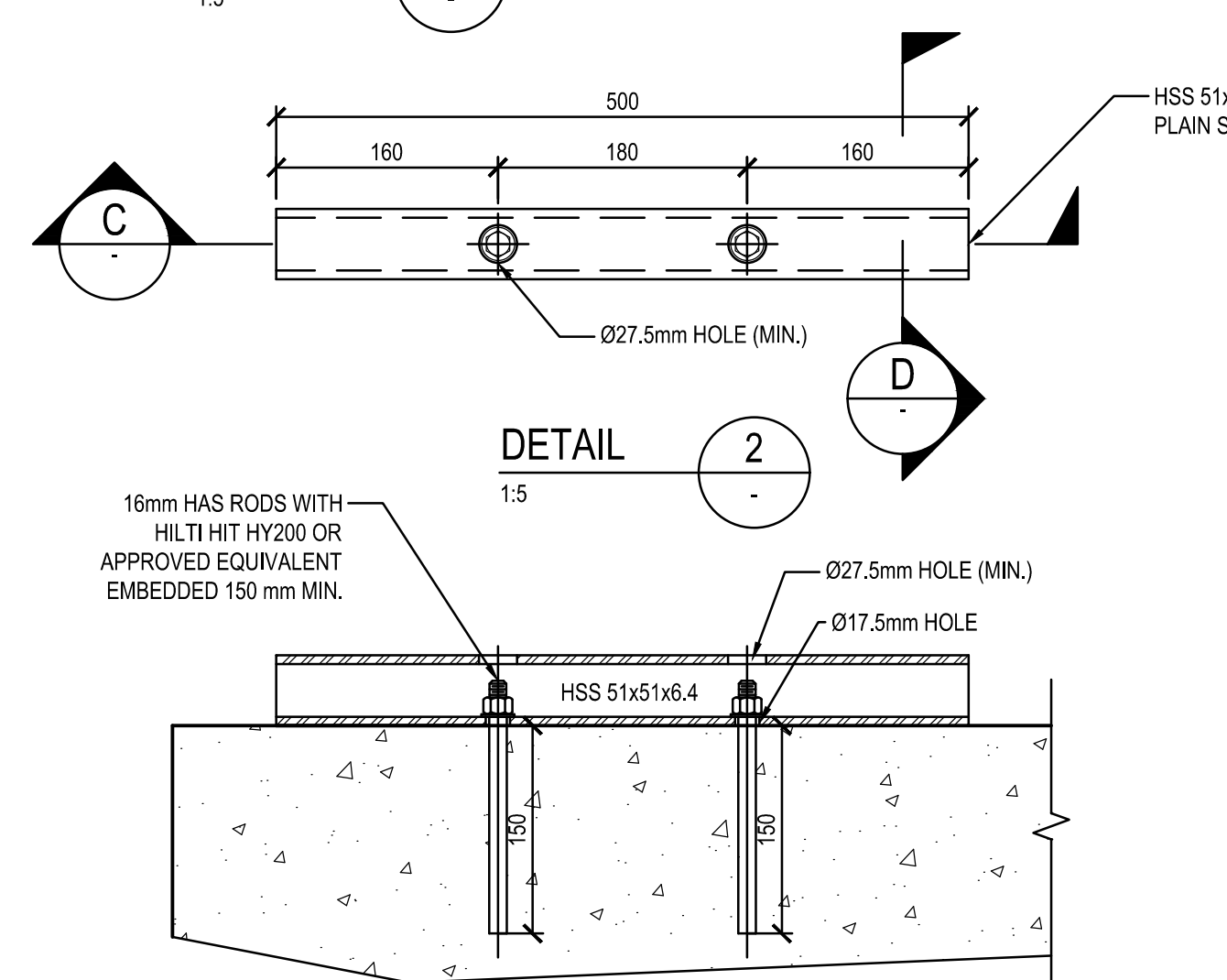
ANCHOR BOLT LOCATION
1:10



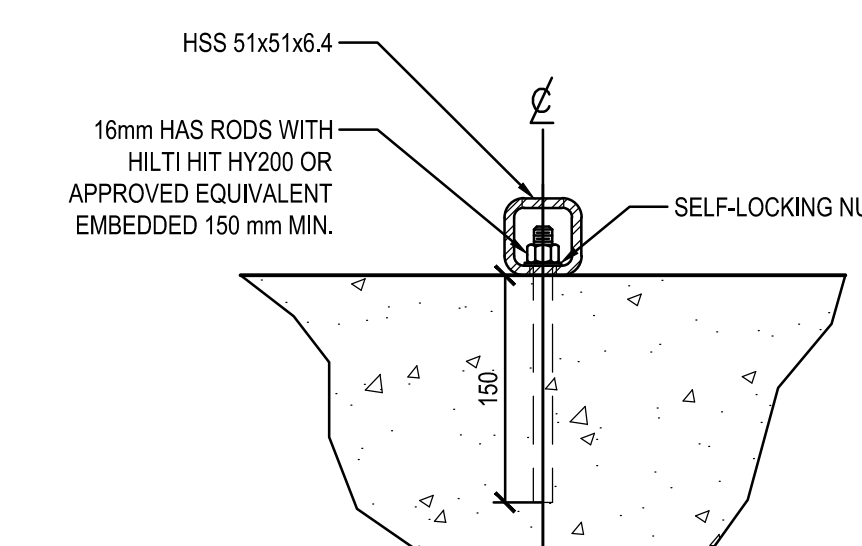
PLAN - LOG RESTS
1:50



SECTION B
1:5



SECTION C
1:5



SECTION D
1:5

| No. | Description | Drawn By | Date |
|-----|--------------------|----------|-------------|
| C | REVISED FOR TENDER | B.R. | MAY-18-2018 |
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

Revision / Révision

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

| | |
|---|---|
| A | A Detail number Numéro du détail |
| B | B Location dwg. number Numéro sur dessin |



600 COCHRANE DRIVE, 5TH FLOOR
MARKHAM, ONTARIO, CANADA L3R 5K3
TEL: 1-905-475-7270 | FAX: 1-905-475-5994 | WWW.WSPGROUP.COM

Project title / Titre du projet

TWELVE MILE LAKE DAM
REPLACEMENT

Drawing title / Titre du dessin

DECK EQUIPMENT
DETAILS

| | |
|--|--|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |

Project manager / Administrateur de projet

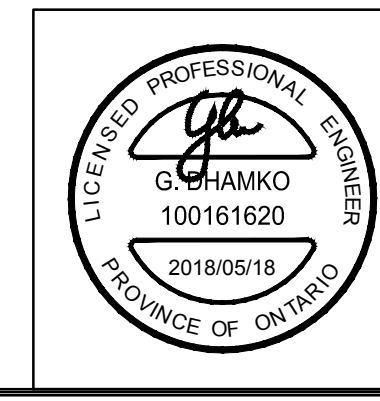
NICHOLAS READ

HCEW Number / Numéro de CHTI

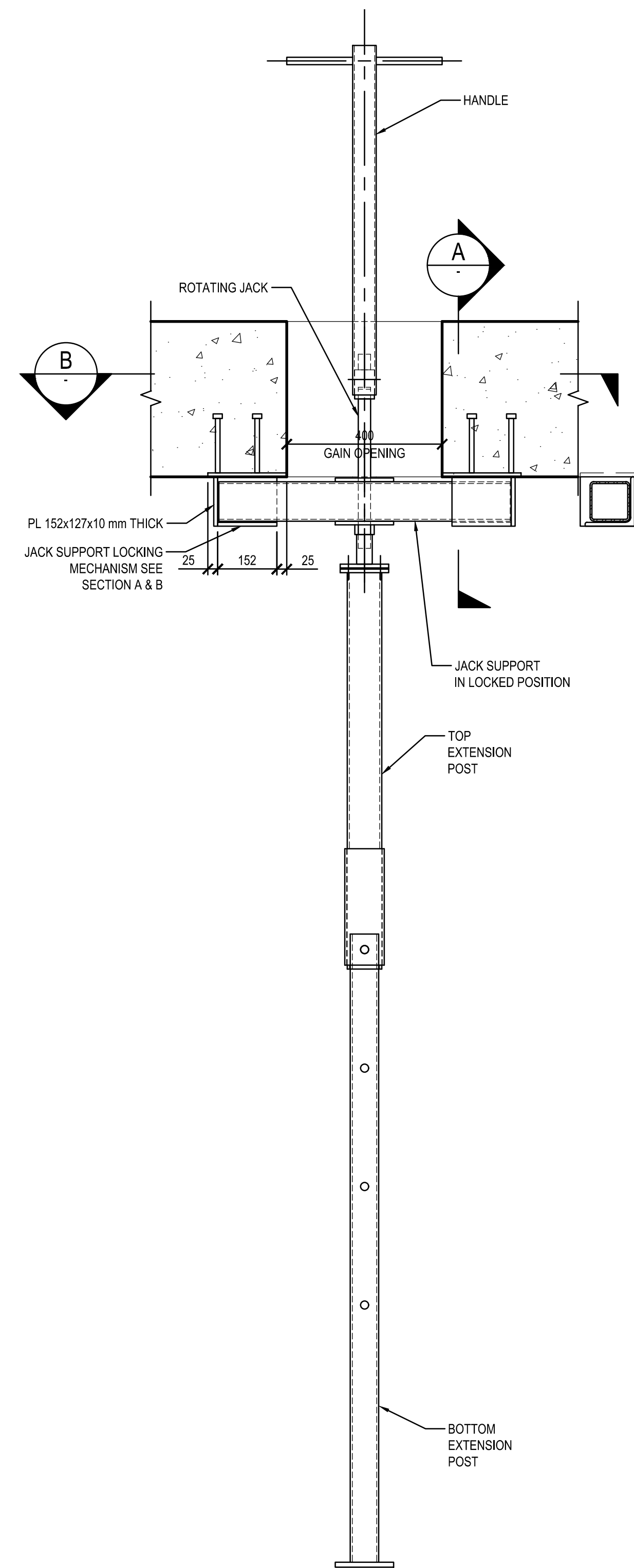
1361-30029431

Project Number / Numéro du projet

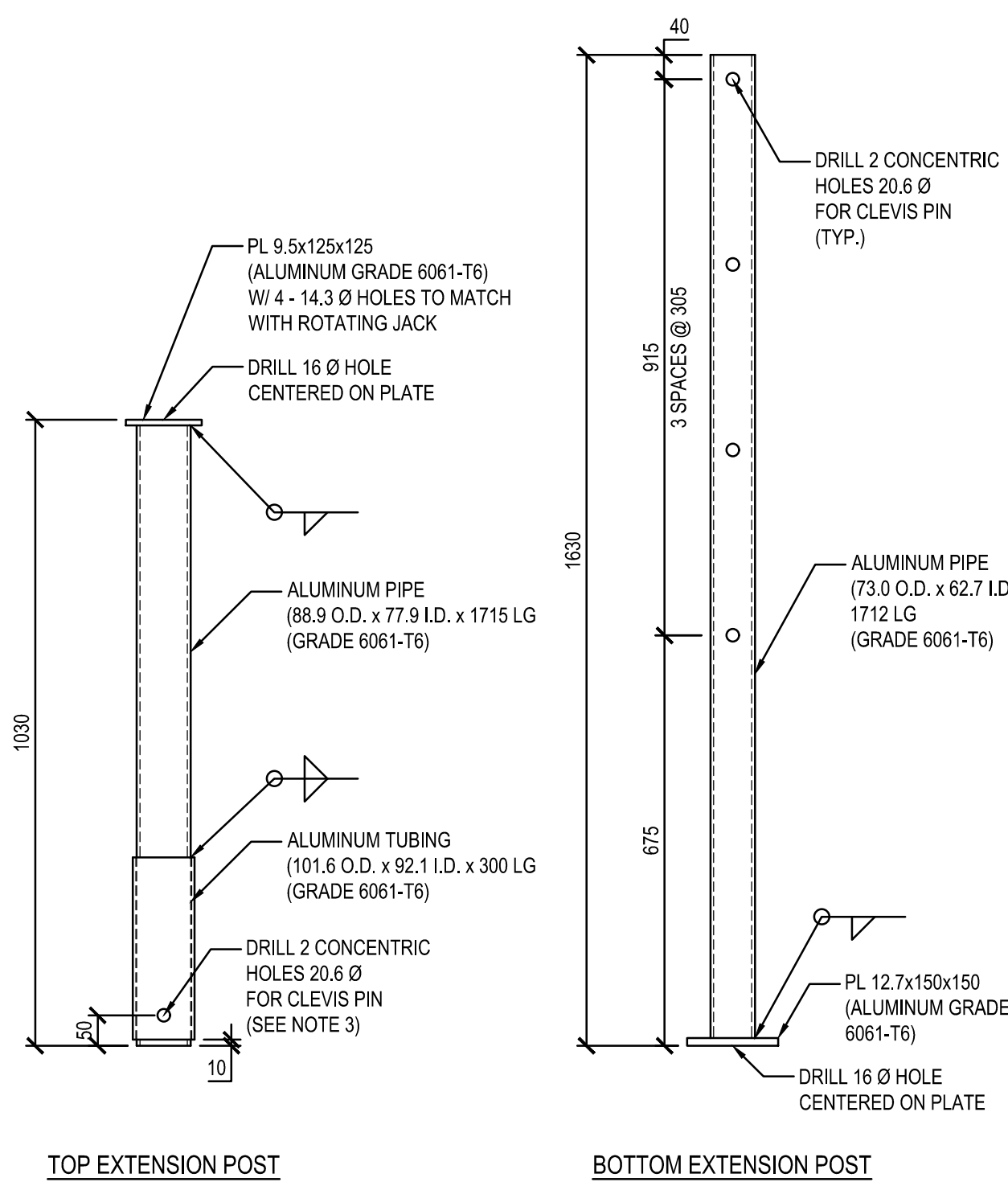
161-05116-00



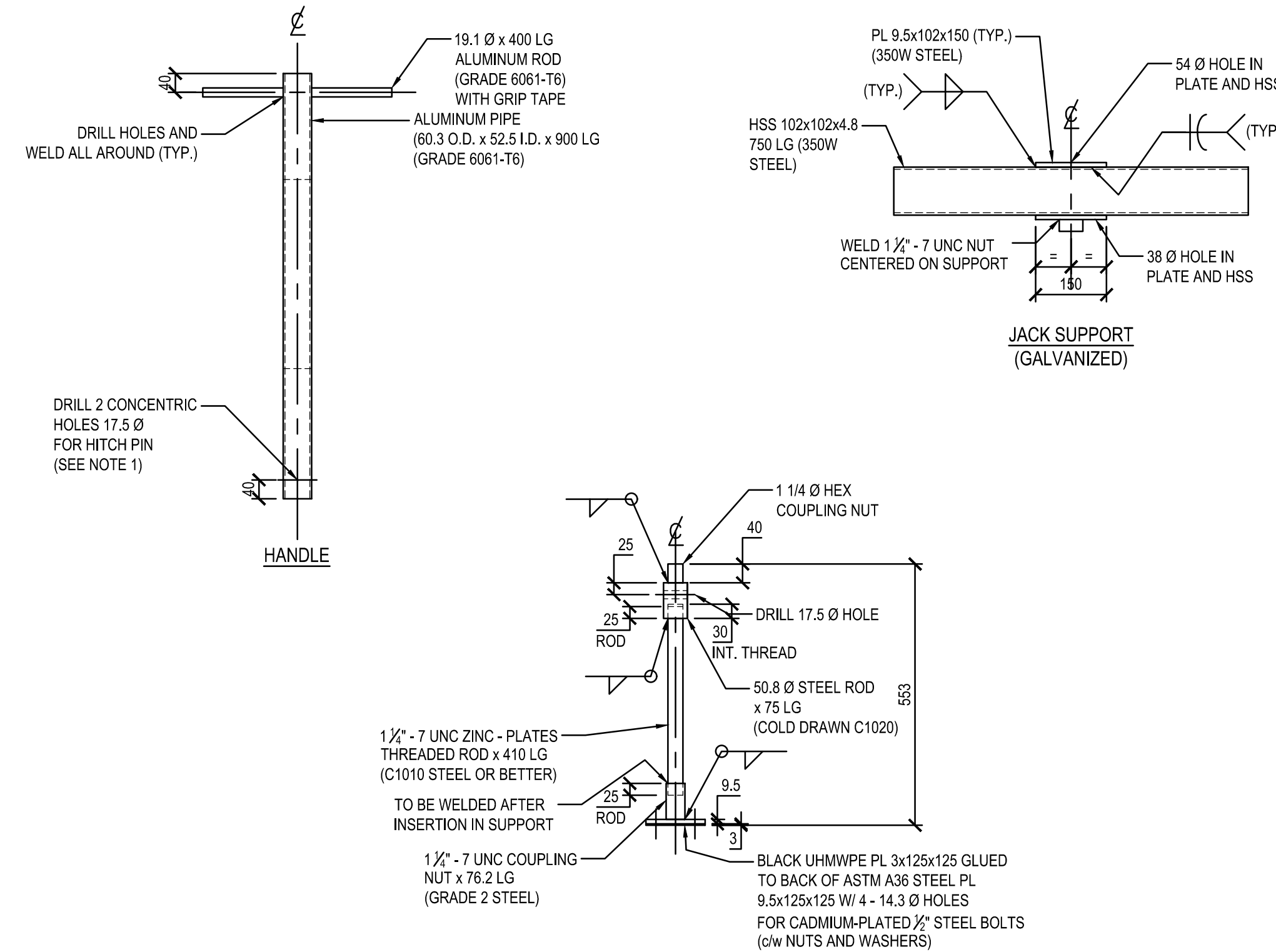
113
Sheet
1 of 1



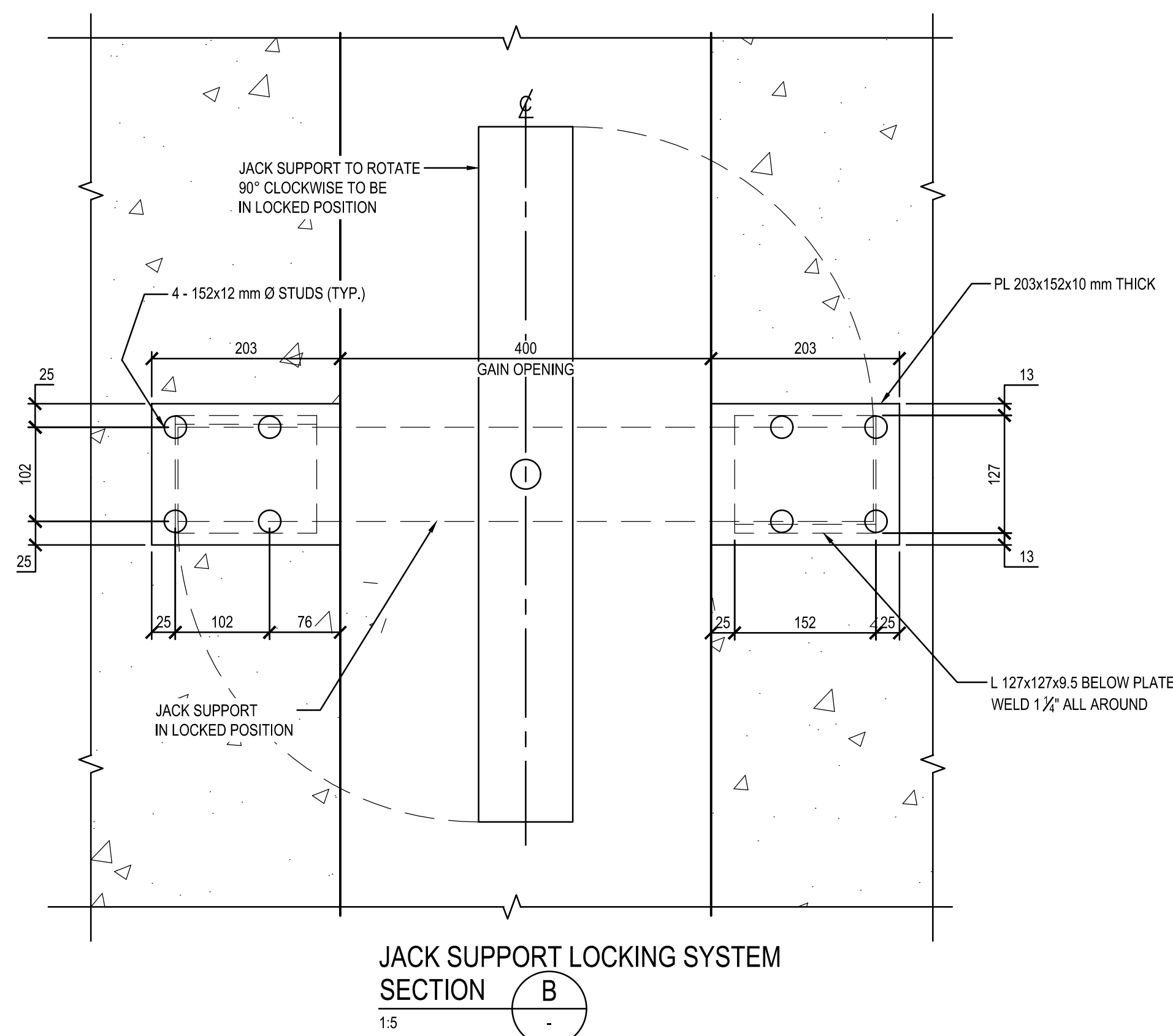
LOG PINNING SYSTEM-GENERAL ASSEMBLY
1:10



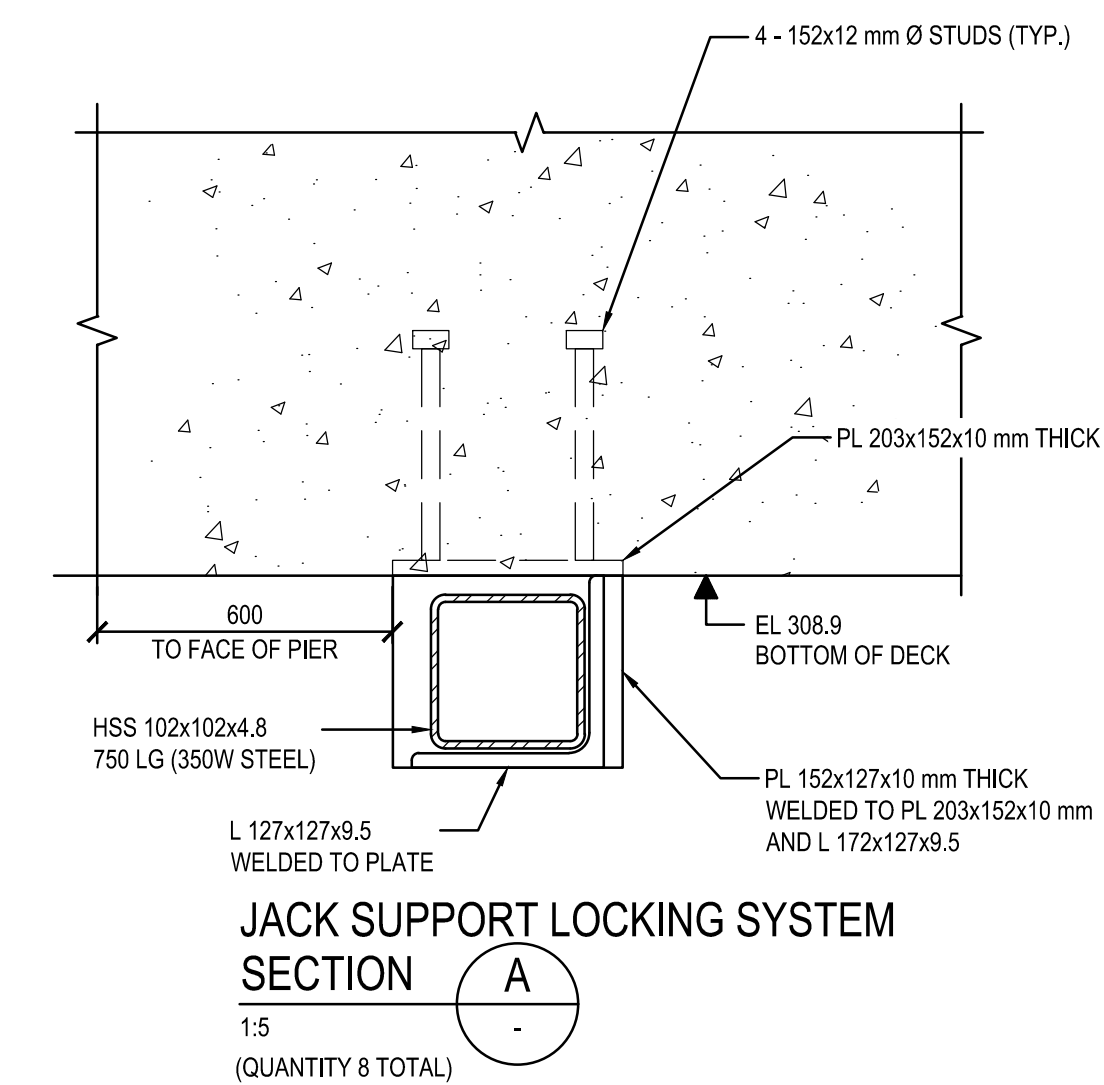
LOG PINNING EXTENSION DETAIL
1:10



ROTATING JACK
LOG PINNING DETAIL
1:10



JACK SUPPORT LOCKING SYSTEM
SECTION B
1:5



JACK SUPPORT LOCKING SYSTEM
SECTION A
1:5
(QUANTITY 8 TOTAL)

- STEEL:**
- STANDARD STRUCTURAL SECTIONS: TO CSA G40.21M GRADE 355W HOLLOW STRUCTURAL SECTIONS: TO CSA G40.21M GRADE 350W
 - ALL STRUCTURAL STEEL SECTIONS, HSS, WELDED PLATE MEMBERS TO BE DESIGNED ACCORDING TO CSA S16-09.
 - HOT ROLLED SECTIONS SHALL CONFORM TO CSA STANDARD G40.21 AND GR 350W (ASTM A992 OR A572 GR50).
 - HOT ROLLED STEEL SHEET, PLATE AND STRIP USED IN THE FABRICATION OF WELDED ASSEMBLIES TO CONFORM TO CSA STANDARD G40.21 GR 300W.
 - HOLLOW STRUCTURAL STEEL SECTIONS SHALL CONFORM TO CSA STANDARD G40.21 GR 350W CLASS H.
 - CONTRACTOR TO REFER TO ALL SECTIONS OF DIV 05 FOR ANCHORS, METAL, FABRICATION, ETC. REQUIREMENTS.
 - USE MARINE GRADE ON THREADS WHEN INSERTING ROTATING JACK.

FOR TENDER

| No. | Description | Drawn By | Date |
|-----|-------------------|----------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

| | |
|---|---|
| A | A Detail number Numéro du détail |
| B | B Location dwg. number Numéro sur dessin |

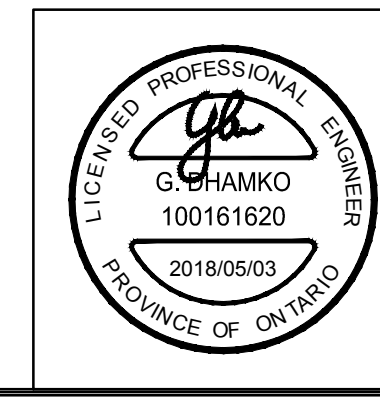
wsp
600 COCHRANE DRIVE, 5TH FLOOR
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TEL: 1-905-475-7270 | FAX: 1-905-475-5994 | www.wspgroup.com

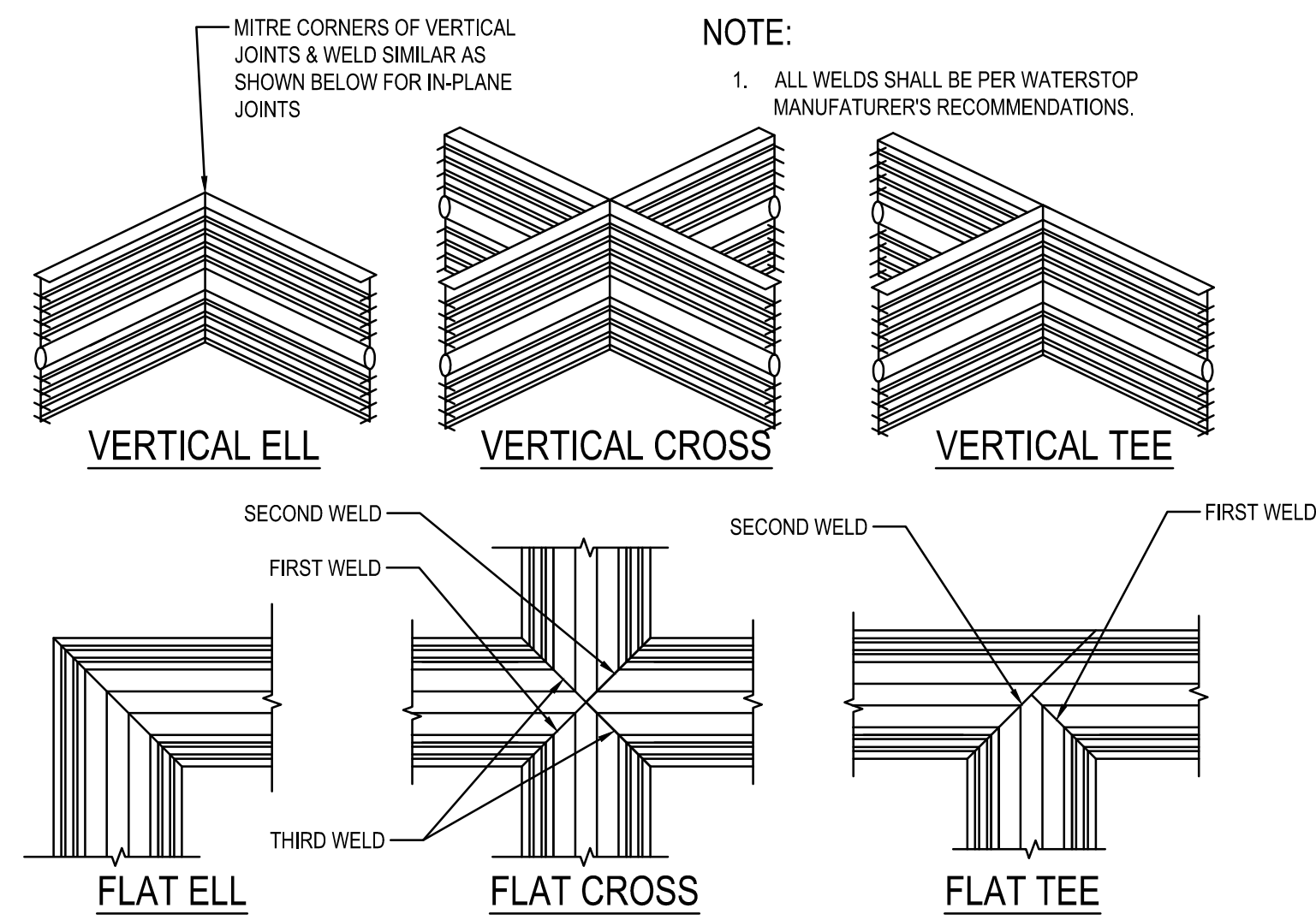
Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
LOG PINNING MECHANISM DETAILS AND GENERAL ASSEMBLY

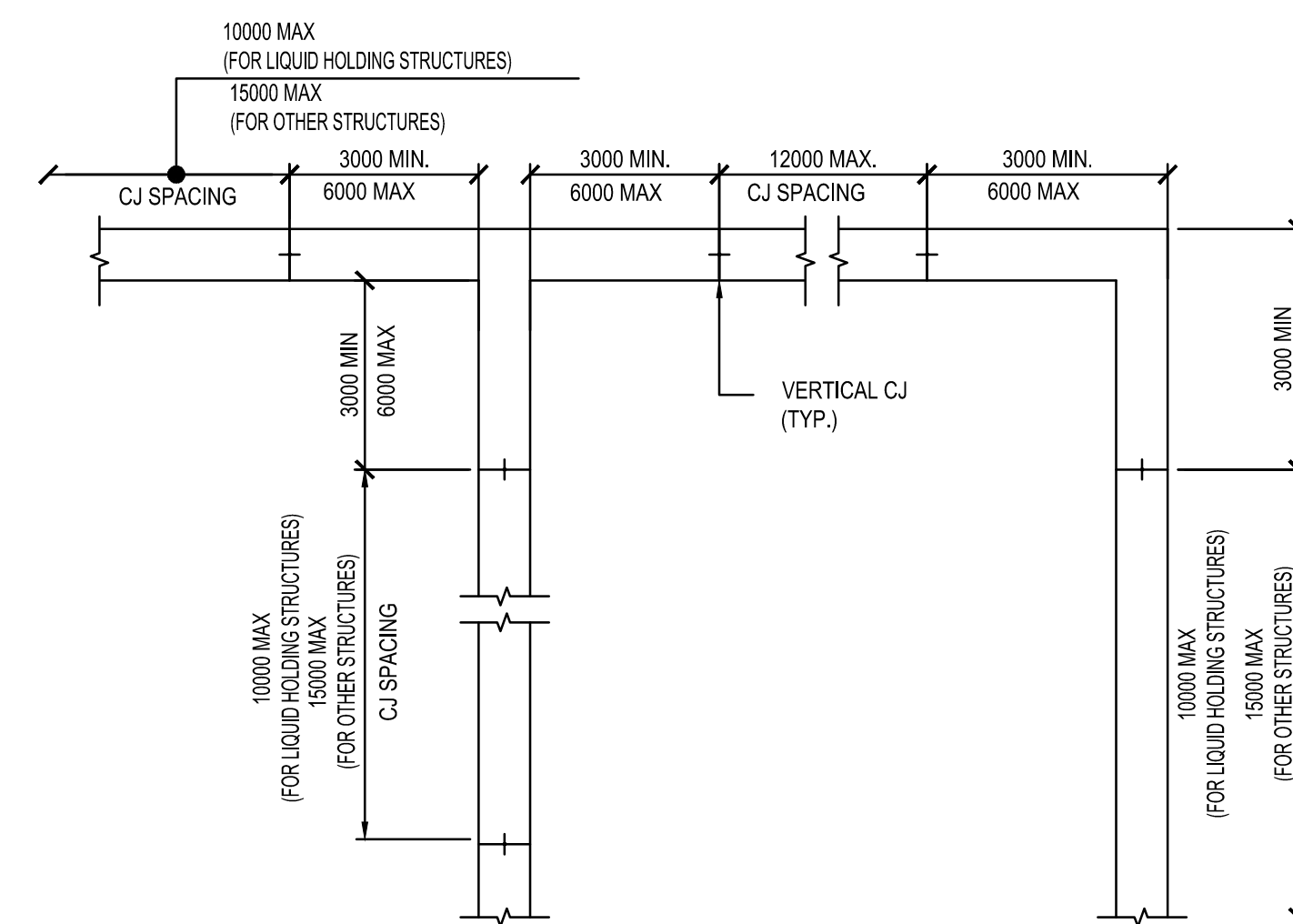
| | |
|--|--|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |

| | |
|---|---|
| Project manager / Administrateur de projet NICHOLAS READ | Drawing Number / Numéro de CHTI 1361-30029431 |
| HCEW Number / Numéro de Dessin 161-05116-00 | Sheet Number / Numéro de Dessin 114 1 of 1 |





WATERSTOP JOINTS
N.T.S.

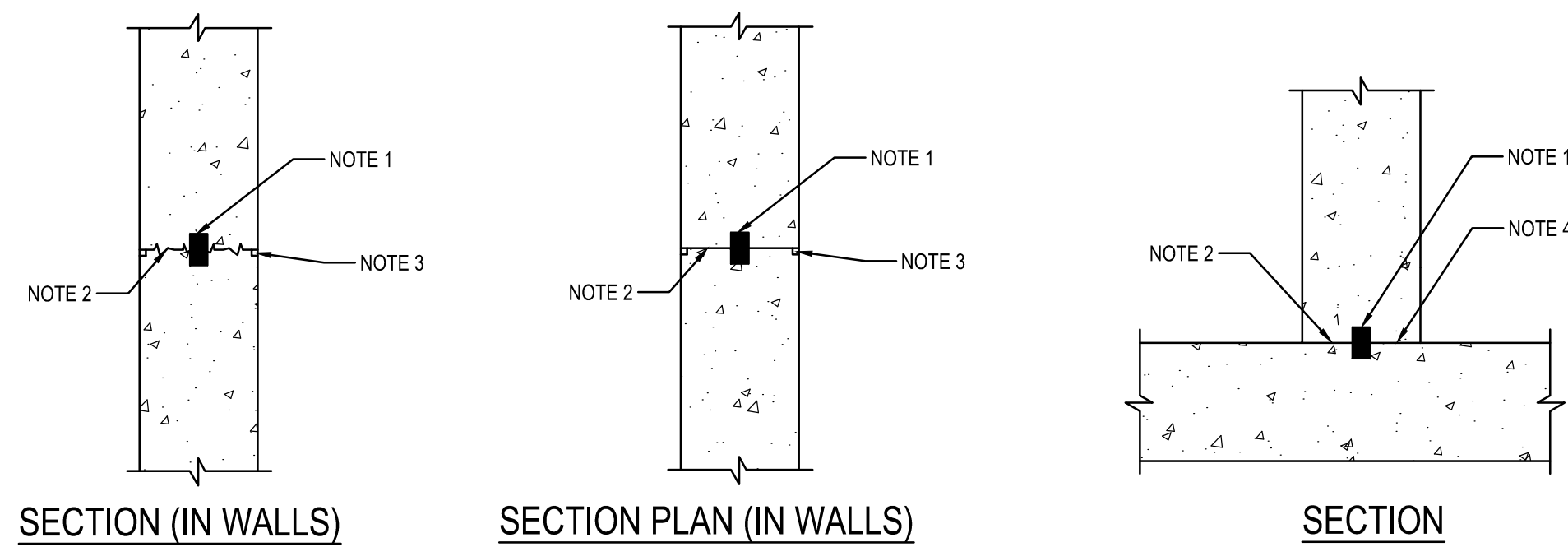


JOINT LOCATIONS
N.T.S.

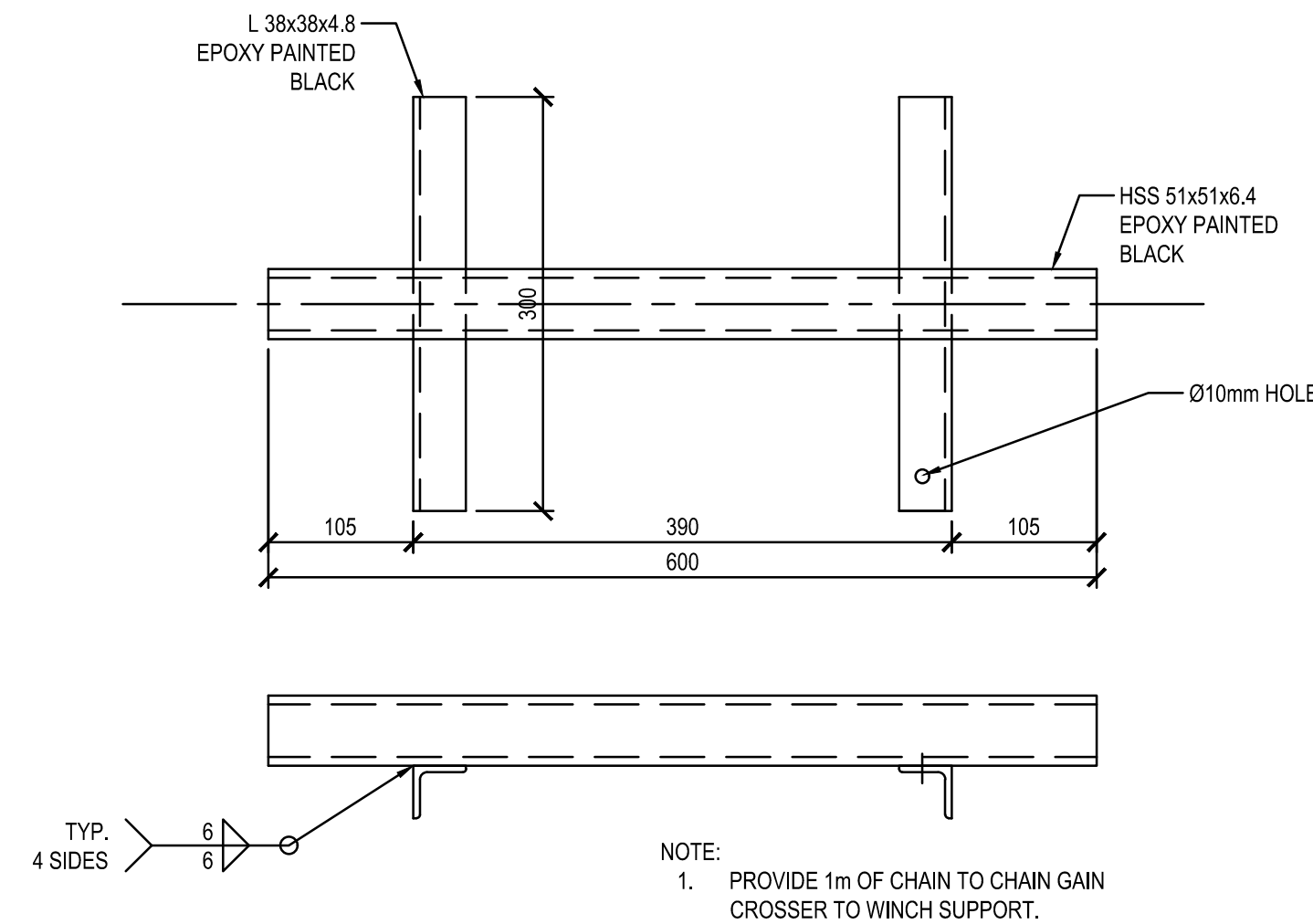
NOTES:

1. BFL MASTIX 40/70 R4 WATERSTOP.
2. CLEAN FIRST POUR SURFACE THOROUGHLY OF ALL CONTAMINANTS LAITANCE OR INFERIOR CONCRETE BEFORE SECOND POUR AND ROUGHEN TO FULL 5 mm AMPLITUDE.
3. 13 mm DEEP 20 mm WIDE REGLET FOR EXTERIOR FACE. APPLY CEMENTITIOUS MORTAR.
4. LEAVE SURFACE ROUGH BETWEEN POUR AT HORIZONTAL JOINTS.
5. LOCATE WALL CONSTRUCTION JOINTS AS SHOWN, UNLESS INDICATED OTHERWISE.

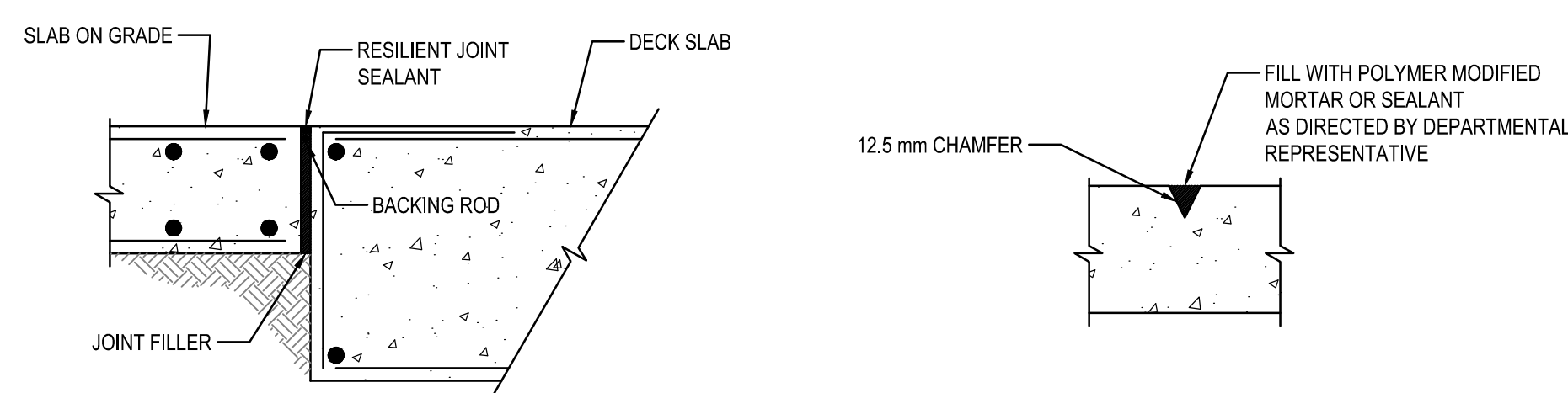
FOR TENDER



TYPICAL CONSTRUCTION JOINT
N.T.S.

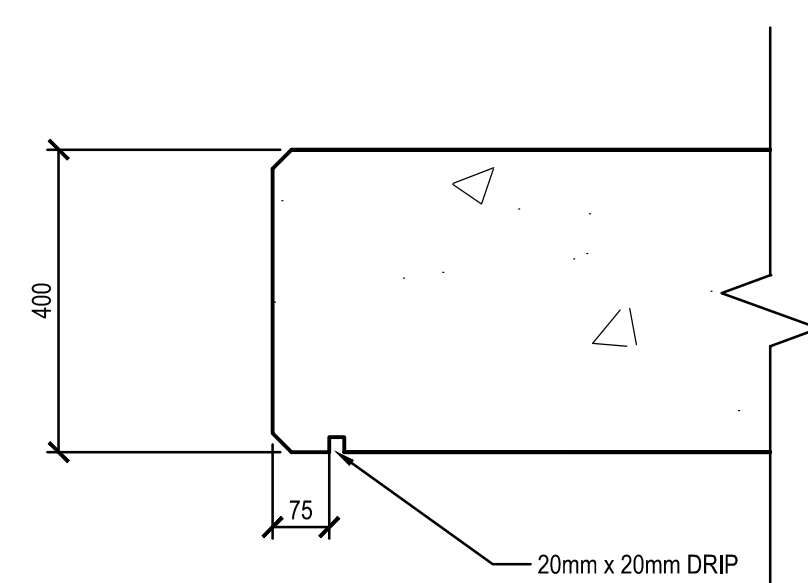


GAIN CROSSER DETAIL
1:5



TYPICAL ISOLATION JOINT - SECTION
N.T.S.

TYPICAL CONTROL JOINT - DETAIL
WEST SLAB ON GRADE
N.T.S.



EDGE REGLET
1:10

| No. | Description | M.G. | Date |
|-----|-------------------|------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

| | |
|---|---|
| A | A Detail number Numéro du détail |
| B | B Location dwg. number Numéro sur dessin |



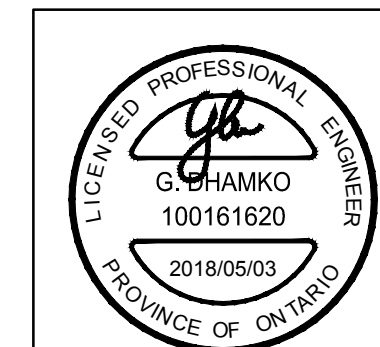
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Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
MISCELLANEOUS DETAILS

| | |
|--|--|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |

| | | |
|---|--|---------------|
| Project manager / Administrateur de projet NICHOLAS READ | Drawing Number / Numéro de CHTI 1361-30029431 | 116 1 of 1 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille | |



NOTE:
1. REFER TO PCA STANDARD DRAWINGS FOR DETAILS OF SIGNS, RAILINGS, AND LIFE RINGS.

FOR TENDER

LEGEND:

- DIRECTION OF WATER FLOW
- TREES
- HYDRAULIC SEEDING & GRANULAR FILL
- CRUSHED STONE LAYER
- ROCK FRAGMENTS / RIP-RAP
- WATER

| No. | Description / Révision | Drawn By / Dessiné Par | Date |
|-----|------------------------|------------------------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

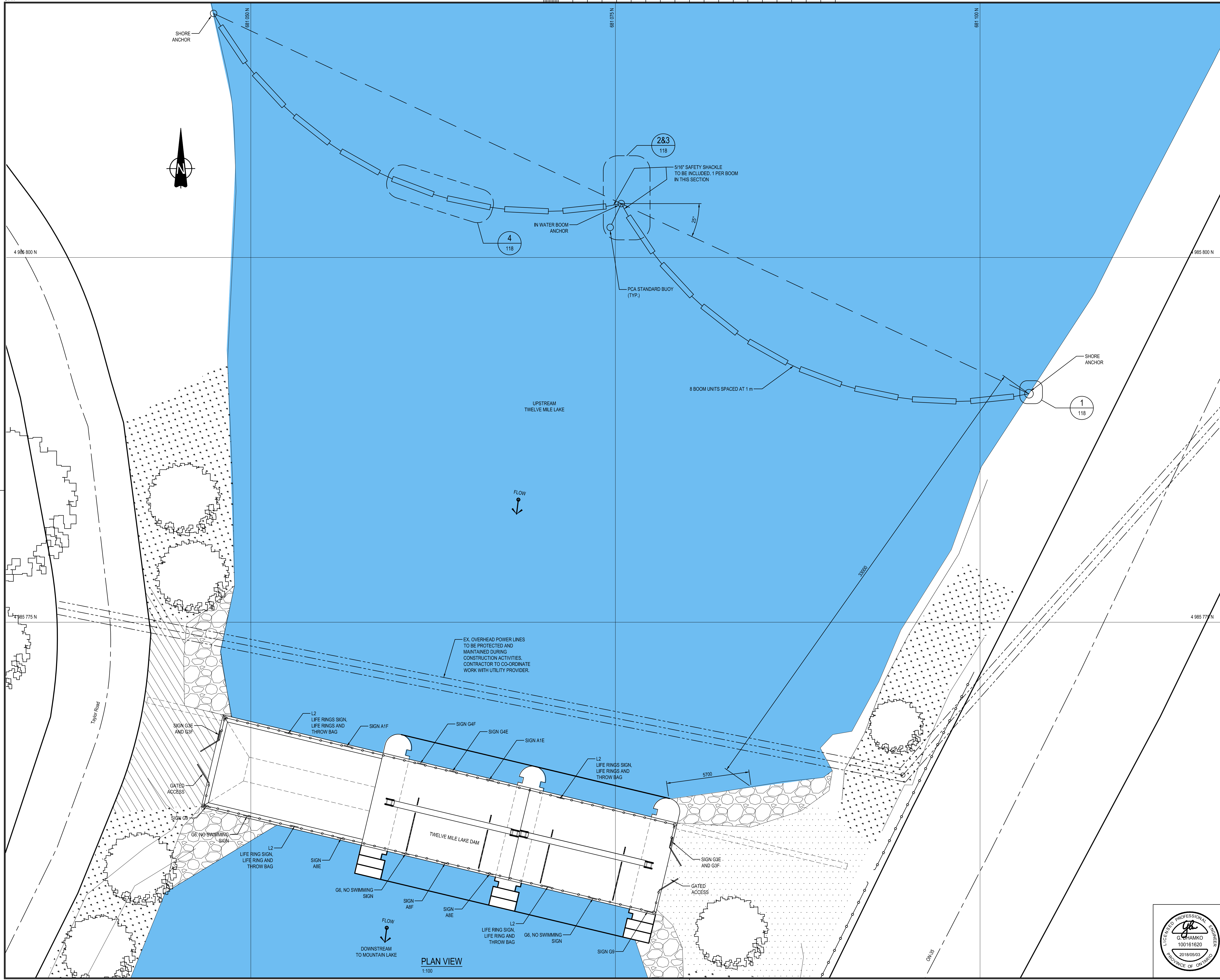
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|---|--|
| A | A Detail number / Numéro du détail |
| B | B Location dwg. number / Numéro sur dessin |

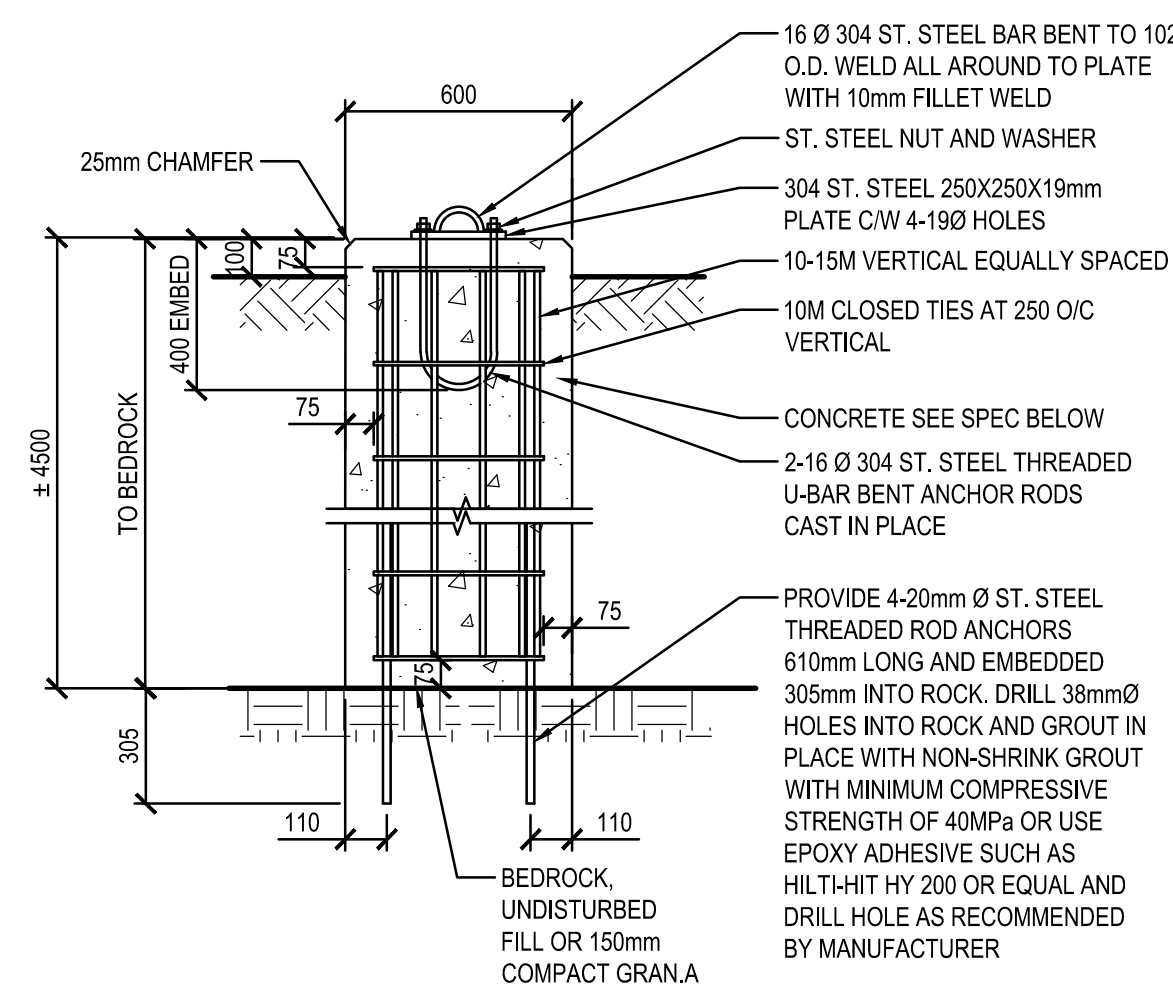
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Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

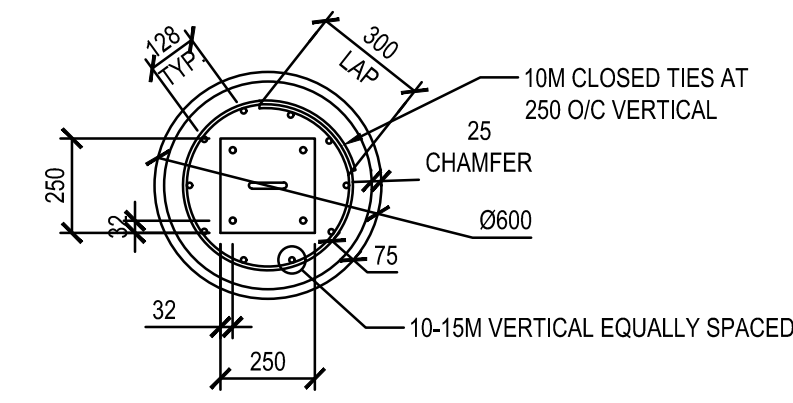
Drawing title / Titre du dessin
PUBLIC SAFETY MEASURES

| | |
|--|---|
| Drawn by / Dessiné par BRIAN RAMNARINE | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 117 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |

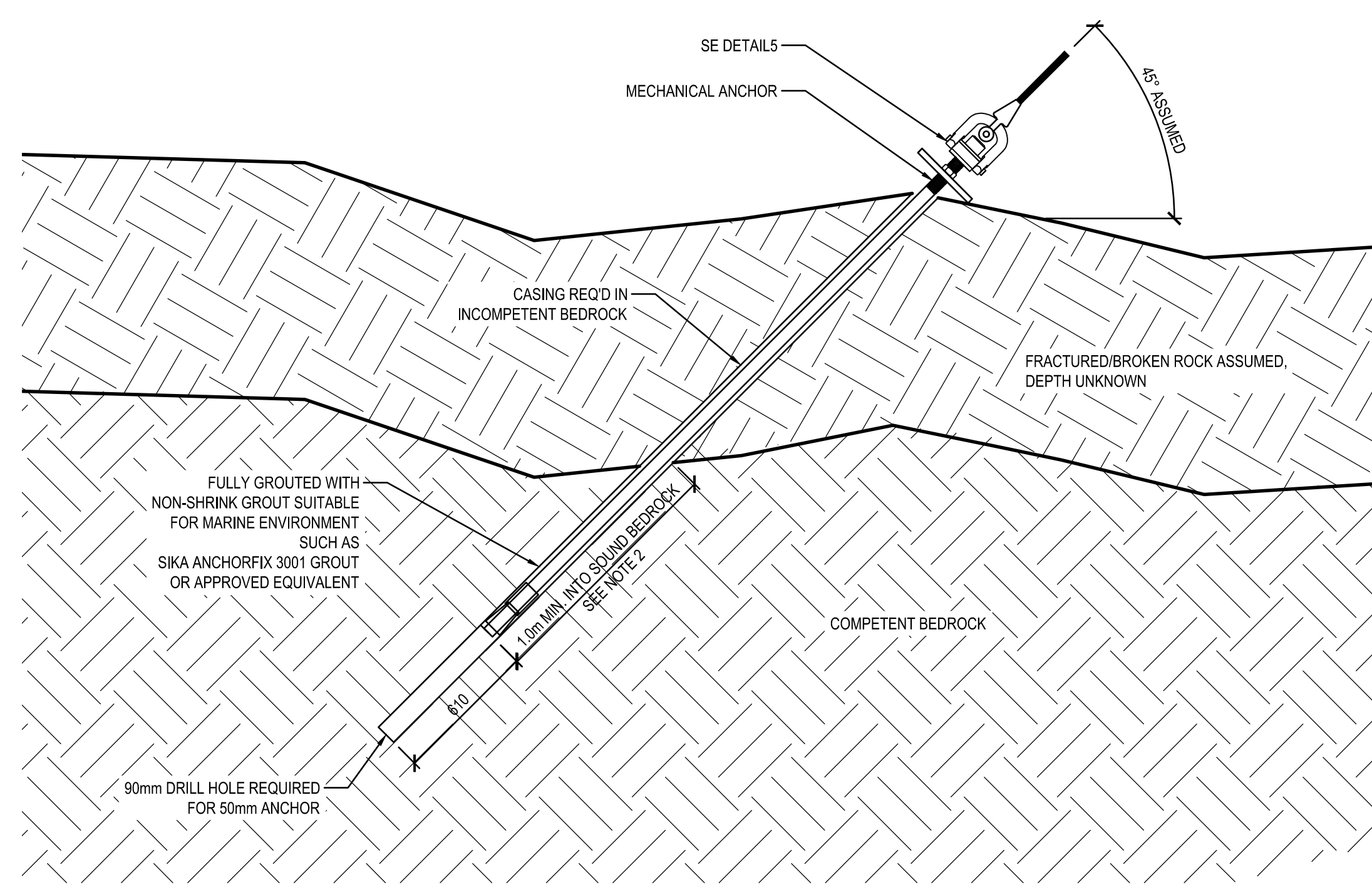




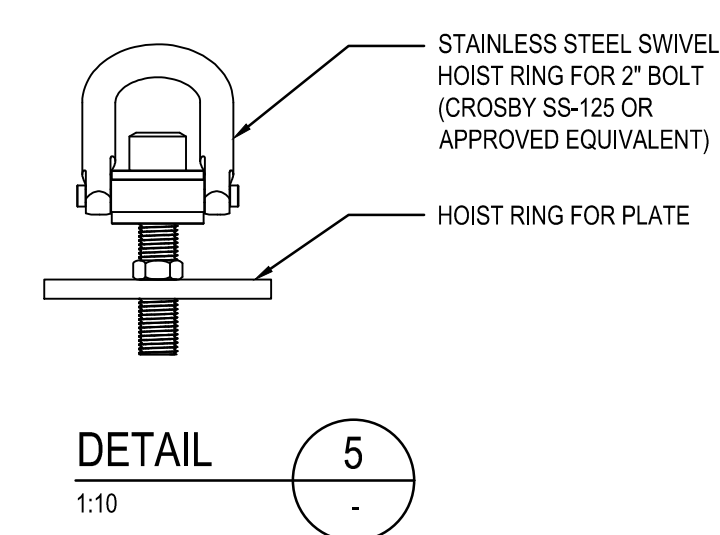
DETAIL 1
1:20



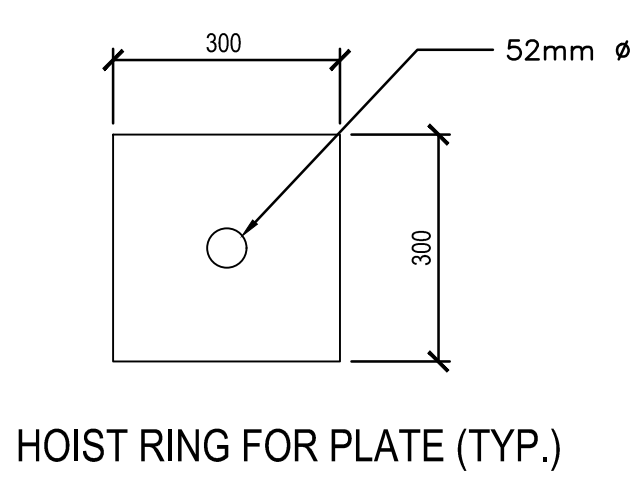
DETAIL 2
1:20



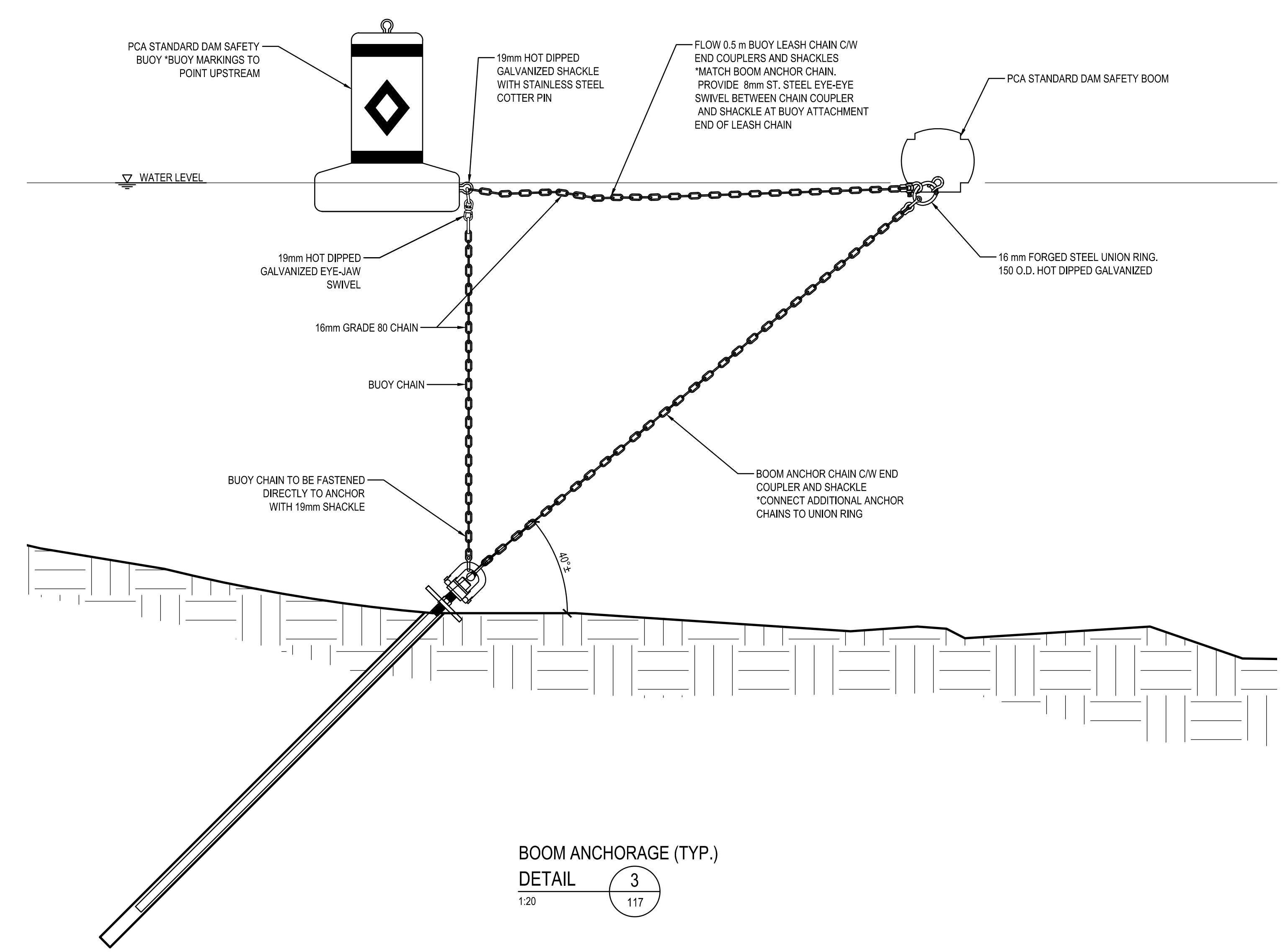
DETAIL 3
1:20



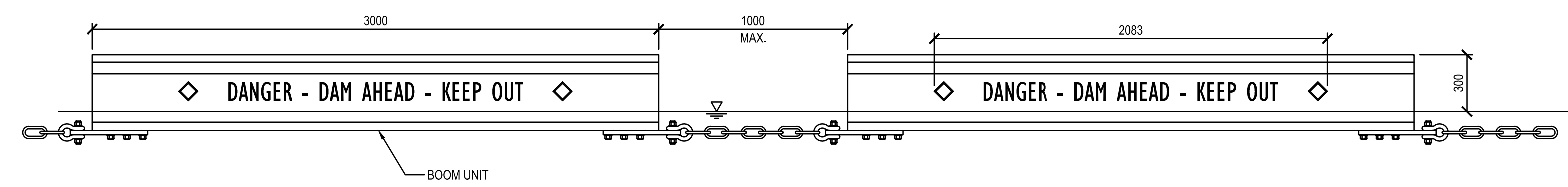
DETAIL 5
1:10



HOIST RING FOR PLATE (TYP.)



BOOM ANCHORAGE (TYP.)
DETAIL 3
1:20



BOOM ARRANGEMENT (TYP.)
DETAIL 4
1:20

- NOTES:
- REFER TO PCA STANDARD DRAWINGS FOR DETAILS OF SIGNS, RAILINGS, AND LIFE RINGS.
 - IN WATER ANCHORS TO BE NCA HDR OR B7 ANCHORS COMPLETE WITH AIR CONE AND SHELL, AND SWIVEL HOIST RIG. 2" HEAVY HEX NUT, 2" ROUND WASHER, ALL GALVANIZED, FULLY GROUTED OR APPROVED EQUIVALENT. ANCHORS TO BE EMBEDDED INTO COMPETENT BEDROCK TO SUFFICIENTLY RESIST 250kN.

FOR TENDER

| No. | Description | Drawn By | Date |
|-----|-------------------|----------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

| | |
|---|------------------------|
| A | A Detail number |
| B | B Location dwg. number |

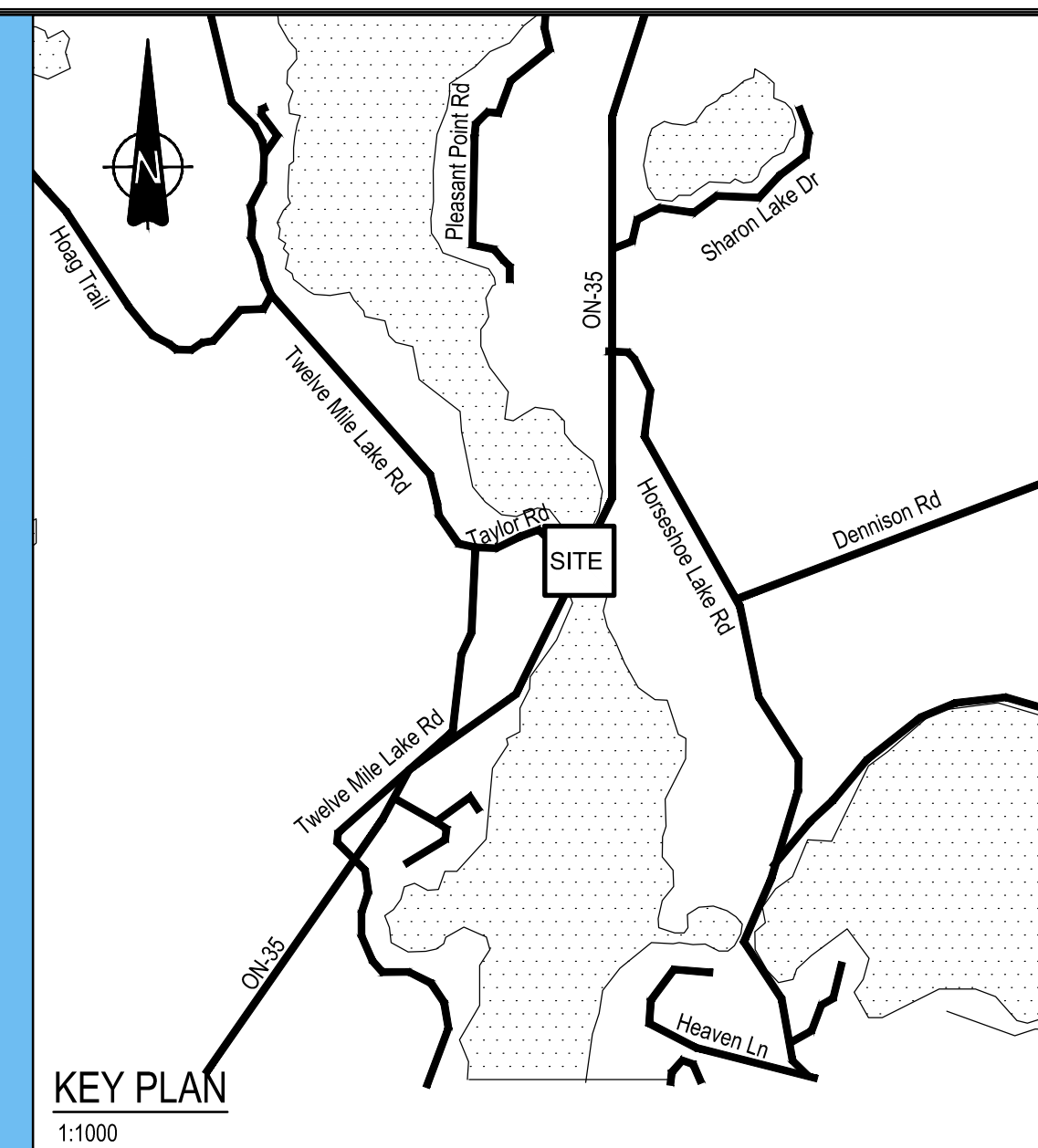
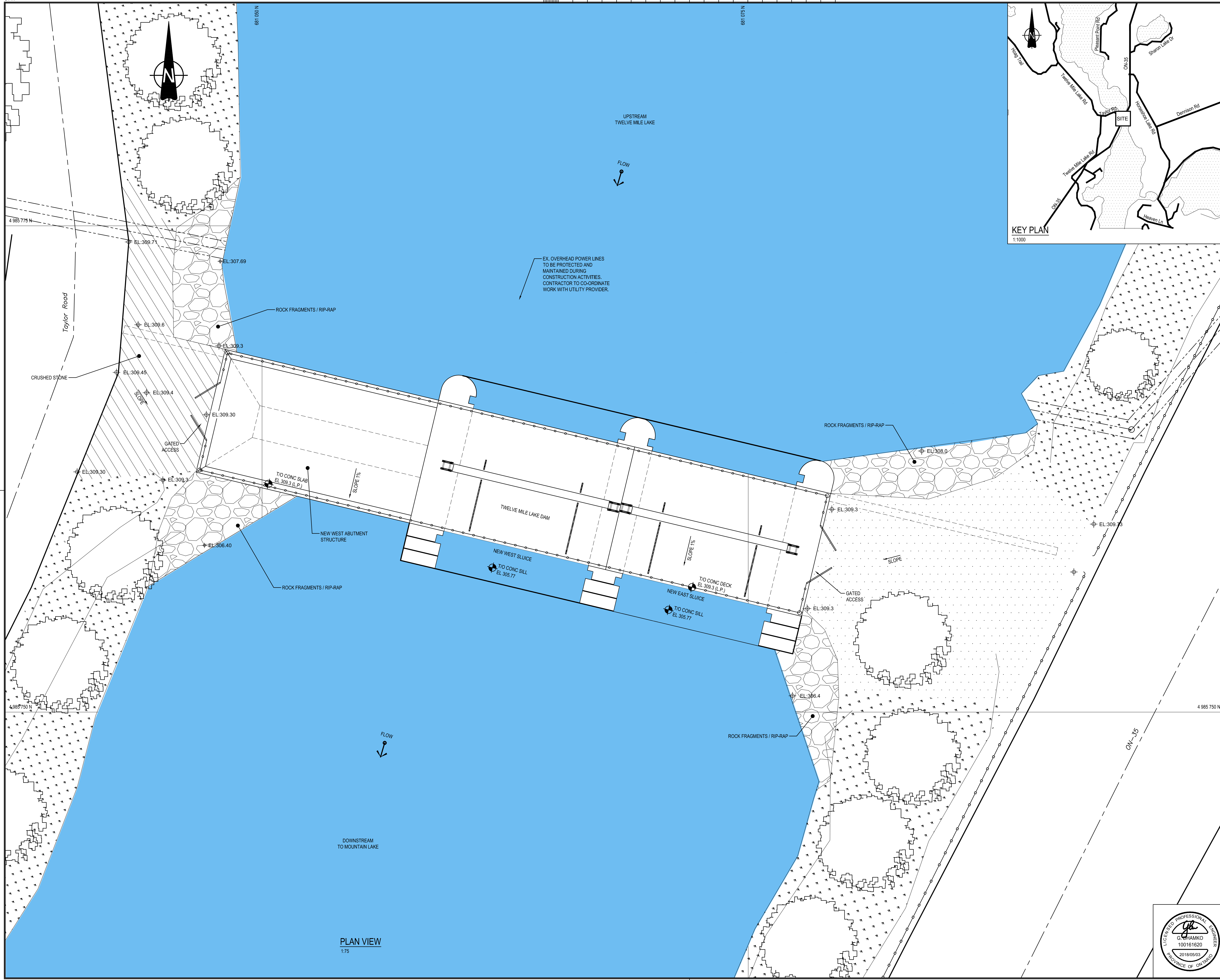
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Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
BOOM DETAILS

| | |
|---|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 118 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |





Canada

- EROSION PROTECTION OF EMBANKMENTS:**
- HEAVY RIP-RAP / ROCK FRAGMENTS TO DEPTH 0.7 m AND BELOW EL. 309 TO LAKE CHANNEL (EL. 306 m) BED. AS DIRECTED BY DEPARTMENTAL REPRESENTATIVE. MATERIAL TO BE ANGULAR, CLEAN, AND FREE OF SEDIMENTS.
 - CRUSHED STONE COMPACTED TO 98% SPMPD (LAYER OF 19 mm).
 - GRANULAR B FILL COMPACTED TO 95% SPMPD.
 - ALL FILL AREAS TO HAVE HYDRAULIC SEEDING.

FOR TENDER

- LEGEND:**
- DIRECTION OF WATER FLOW
 - TREES
 - HYDRAULIC SEEDING & TOPSOIL
 - CRUSHED STONE LAYER
 - ROCK FRAGMENTS / RIP-RAP
 - WATER
 - SPOT ELEVATIONS

| No. | Description | Drawn By | Date |
|-----|-------------------|----------|-------------|
| B | ISSUED FOR TENDER | M.G. | MAY-03-2018 |
| A | ISSUED FOR REVIEW | M.G. | MAR-28-2018 |

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

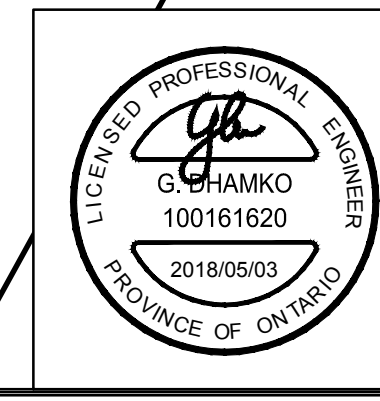
| | |
|---|---|
| A | A Detail number Numéro du détail |
| B | B Location dwg. number Numéro sur dessin |

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Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
GRADING AND RESTORATION PLAN

| | |
|--|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 119 |
| Project Number / Numéro du projet 161-05116-00 | Sheet 1 of 1 |





DANGER
Dam Outflow
Keep Out

Name of Dam
In An Emergency Call (XXX) XXX-XXXX

Parcs Canada

SCALE: 1:1.5
TYPICAL HOLE LAYOUT FOR A1 AND A8 SIZE DAM SAFETY SIGNS (See mounting details drawing also)

Office of the Executive Director, Waterways
Parcs Canada Agency
Government of Canada

Engineering Design and Materials and Fabrication Specifications for Public Safety Signs around Dams

Drawn: November 3, 2014
Checked: November 3, 2014
Approved: November 3, 2014

Drawn by: S.Gauthier
Checked by: M.McLay
Approved by: M.McLay

H1 REV.1



DANGER
Dam Outflow
Keep Out

Name of Dam
In An Emergency Call (XXX) XXX-XXXX

Parcs Canada

SCALE: 1:1.5
TYPE A8 TAILRACE DANGER SIGN - ENGLISH
SIZE 4x6 (1220x1830) - REFER TO G1 FOR SPECS

Office of the Executive Director, Waterways
Parcs Canada Agency
Government of Canada

Engineering Design and Materials and Fabrication Specifications for Public Safety Signs around Dams

Drawn: November 3, 2014
Checked: November 3, 2014
Approved: November 3, 2014

Drawn by: S.Gauthier
Checked by: S.Gauthier
Approved by: S.Gauthier

A8 REV.1



DANGER
Dam Ahead
Keep Out

Name of Dam
In An Emergency, Call 9-1-1

Parcs Canada

SCALE: 1:1.5
TYPE A1 HEADPOND DANGER SIGN - ENGLISH
SIZE 4x6 (1220x1830) - REFER TO G1 FOR SPECS

Office of the Executive Director, Waterways
Parcs Canada Agency
Government of Canada

Engineering Design and Materials and Fabrication Specifications for Public Safety Signs around Dams

Drawn: November 3, 2014
Checked: November 3, 2014
Approved: November 3, 2014

Drawn by: S.Gauthier
Checked by: S.Gauthier
Approved by: S.Gauthier

A1 REV.2



DANGER
Zone de décharge
du barrage
Accès interdit

Nom du barrage
En cas d'urgence, composez le (XXX) XXX-XXXX

Parcs Canada

SCALE: 1:1.5
TYPE A8 TAILRACE DANGER SIGN - FRENCH
SIZE 4x6 (1220x1830) - REFER TO G1 FOR SPECS

Office of the Executive Director, Waterways
Parcs Canada Agency
Government of Canada

Engineering Design and Materials and Fabrication Specifications for Public Safety Signs around Dams

Drawn: November 3, 2014
Checked: November 3, 2014
Approved: November 3, 2014

Drawn by: S.Gauthier
Checked by: S.Gauthier
Approved by: S.Gauthier

A8 REV.1



DANGER
Barrage devant
Accès interdit

Nom du barrage
En cas d'urgence, composez le 9-1-1

Parcs Canada

SCALE: 1:1.5
TYPE A1 HEADPOND DANGER SIGN - FRENCH
SIZE 4x6 (1220x1830) - REFER TO G1 FOR SPECS

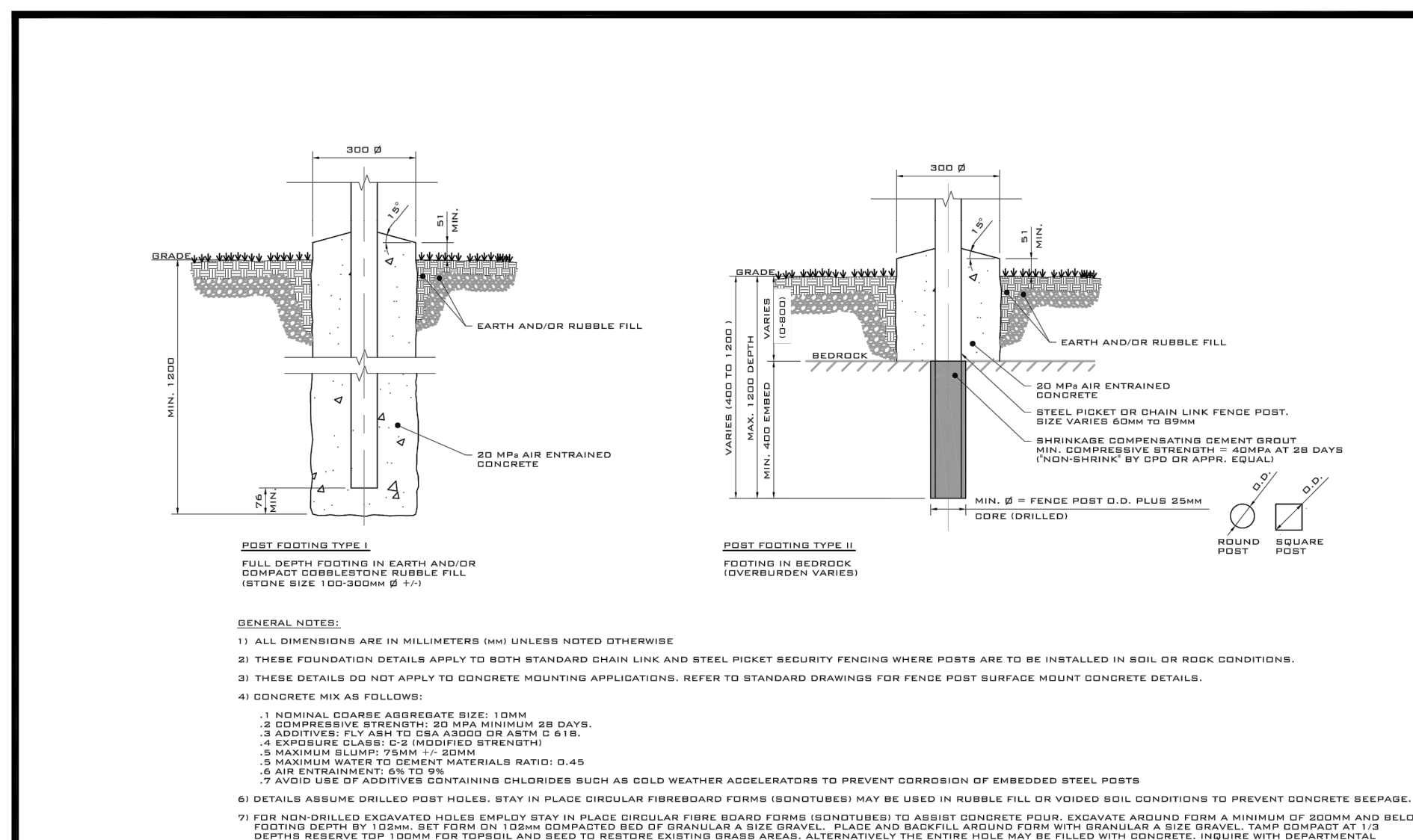
Office of the Executive Director, Waterways
Parcs Canada Agency
Government of Canada

Engineering Design and Materials and Fabrication Specifications for Public Safety Signs around Dams

Drawn: November 3, 2014
Checked: November 3, 2014
Approved: November 3, 2014

Drawn by: S.Gauthier
Checked by: S.Gauthier
Approved by: S.Gauthier

A1 REV.2



STANDARD DETAILS FOR PUBLIC AND OPERATOR SAFETY INSTALLATIONS ON DAMS

FOUNDATION DETAILS

Parcs Canada

Office of the Executive Director, Waterways
Parcs Canada Agency
Government of Canada

Drawn by: S.Gauthier
Drawing date: Jan.29, 2015
Checked by: Mike McLay
Check date: Jan.29, 2015
Approved date: Jan.29, 2015
Approved by: Mike McLay

1:16
1:1
Letter
F7
REVA

FOR TENDER

| No. | Description | M.G. | JUL-24-2018 |
|-----|-------------------|------|-------------|
| A | ISSUED FOR TENDER | | |

| Revision / Révision | |
|---------------------|--|
| A | Detail number / Numéro du détail |
| B | Location dwg. number / Numéro sur dessin |



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Project title / Titre du projet
TWELVE MILE LAKE DAM REPLACEMENT

Drawing title / Titre du dessin
STANDARD DETAILS 2

| | |
|---|---|
| Drawn by / Dessiné par MAITE GARCIA | Designed by / Conçu par KARINA SETO |
| Approved by / Approuvé par GENTI DHAMKO | Drawing Date / Date du dessin FEBRUARY 2018 |
| Project manager / Administrateur de projet NICHOLAS READ | |
| HCEW Number / Numéro de CHTI 1361-30029431 | Drawing Number / Numéro du Dessin 121 |
| Project Number / Numéro du projet 161-05116-00 | Sheet / Feuille 1 of 1 |

