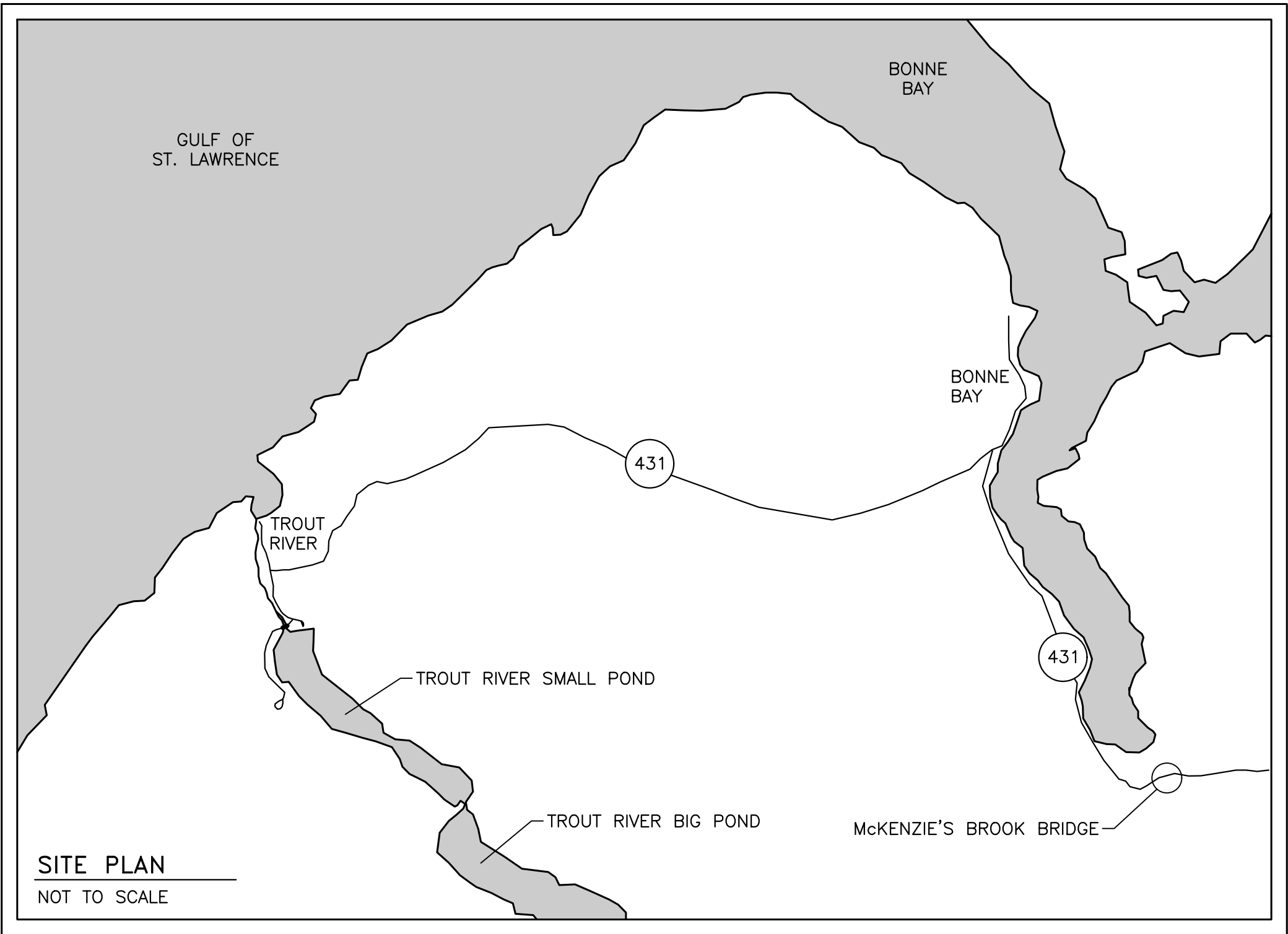
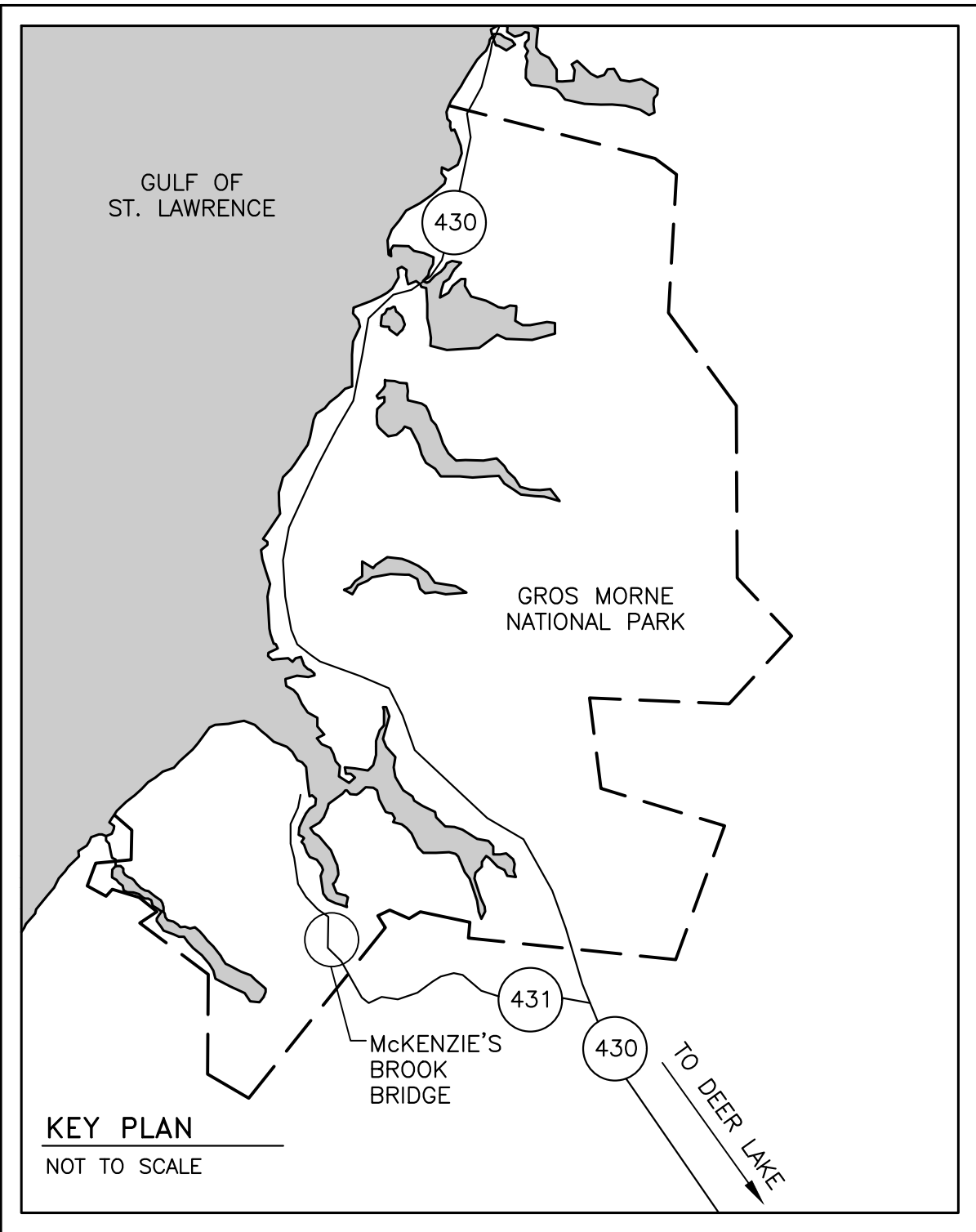


Parcs
Canada

Parks
Canada



McKENZIE'S BROOK BRIDGE REPLACEMENT GROS MORNE NATIONAL PARK

NEWFOUNDLAND & LABRADOR

PROJECT NO. 1268

DRAWING LIST

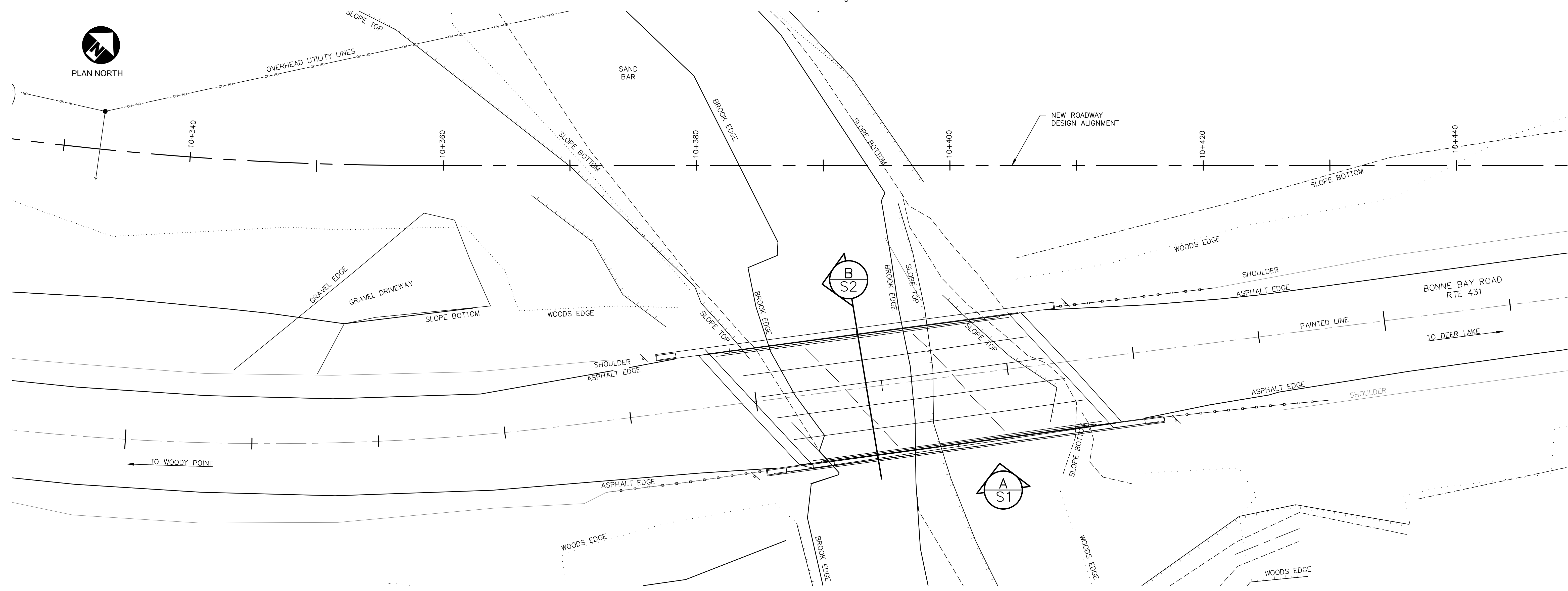
DRAWING NO.	TITLE
S1 of 17	EXISTING CONDITONS – GENERAL ARRANGEMENT
S2 of 17	NEW BRIDGE GENERAL ARRANGEMENT – PLAN AND PROFILE
S3 of 17	NEW BRIDGE GENERAL ARRANGEMENT – CROSS SECTION AND NOTES
S4 of 17	WEST ABUTMENT PLANS
S5 of 17	EAST ABUTMENT PLANS
S6 of 17	ABUTMENT AND WINGWALL ELEVATIONS
S7 of 17	ABUTMENT SECTIONS AND DETAILS
S8 of 17	GIRDER LAYOUT PLAN, ELEVATIONS AND DETAILS
S9 of 17	DECK PLAN AND SCREED ELEVATIONS
S10 of 17	BARRIER AND CRASH BLOCK DETAILS
S11 of 17	DECK DRAINAGE DETAILS
S12 of 17	TYPICAL DETAILS
S13 of 17	ABUTMENT REINFORCEMENT DETAILS
S14 of 17	WINGWALL REINFORCEMENT DETAILS
S15 of 17	DECK REINFORCEMENT PLAN AND DETAILS
S16 of 17	BOREHOLE LAYOUT AND DATA LOGS BH-1 to BH-3
S17 of 17	BOREHOLE DATA LOGS BH-4 to BH-7
C01 of 11	BONNE BAY ROAD REALIGNMENT PLAN AND PROFILE STA 10+120 TO 10+470
C02 of 11	BONNE BAY ROAD REALIGNMENT PLAN AND PROFILE STA 10+470 TO 10+705
C03 of 11	TYPICAL SECTION, ALIGNMENT GEOMETRY AND SUPERELEVATION
C04 of 11	ENVIRONMENTAL CONTROL PLAN
C05 of 11	NEW CULVERT SECTIONS
C06 of 11	CROSS SECTIONS – STATION 10+100 TO STATION 10+200
C07 of 11	CROSS SECTIONS – STATION 10+225 TO STATION 10+325
C08 of 11	CROSS SECTIONS – STATION 10+350 TO STATION 10+475
C09 of 11	CROSS SECTIONS – STATION 10+500 TO STATION 10+575
C10 of 11	CROSS SECTIONS – STATION 10+600 TO STATION 10+675
C11 of 11	CROSS SECTIONS – STATION 10+700

Canada

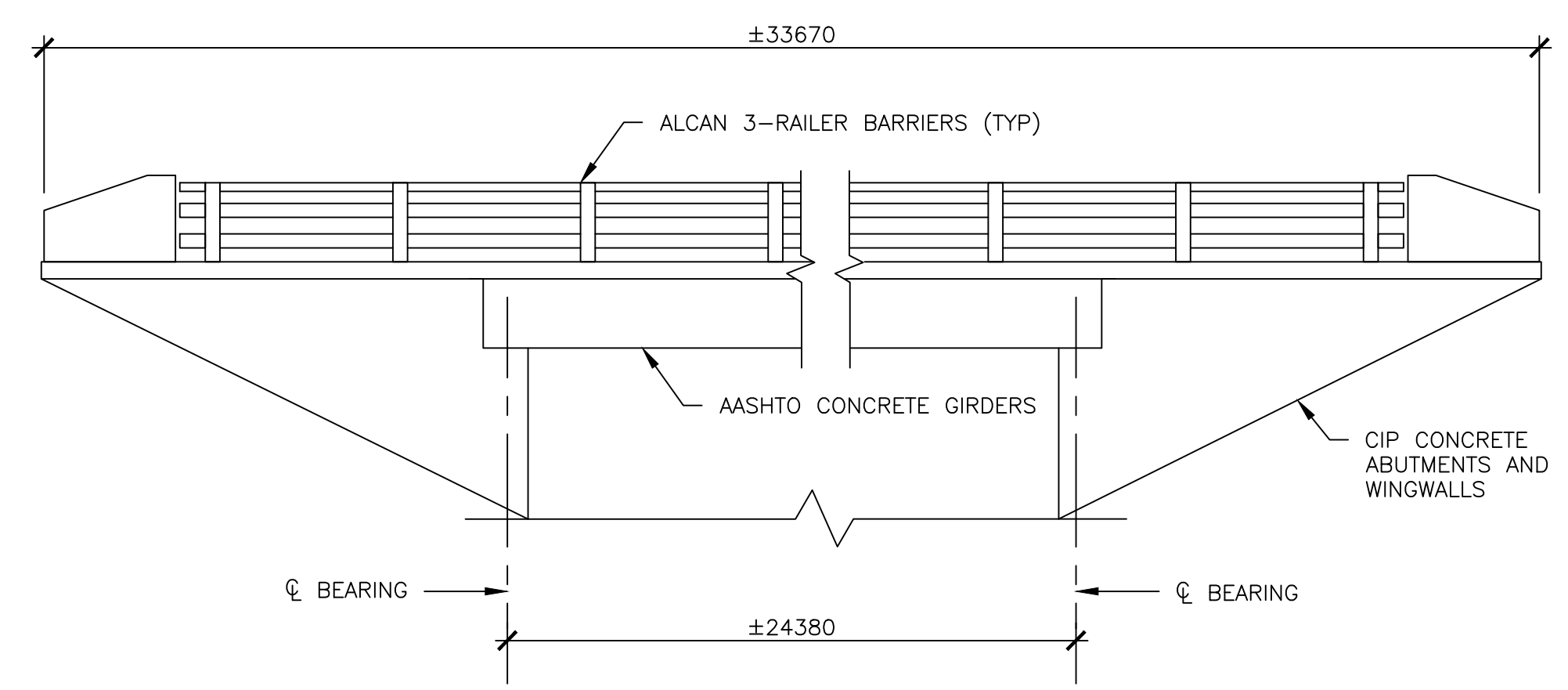
1	ISSUED FOR TENDER	APR 11 2019
revisions		date
project	McKENZIE'S BROOK BRIDGE REPLACEMENT	
	GROS MORNE NATIONAL PARK	

EXISTING CONDITIONS
GENERAL ARRANGEMENT

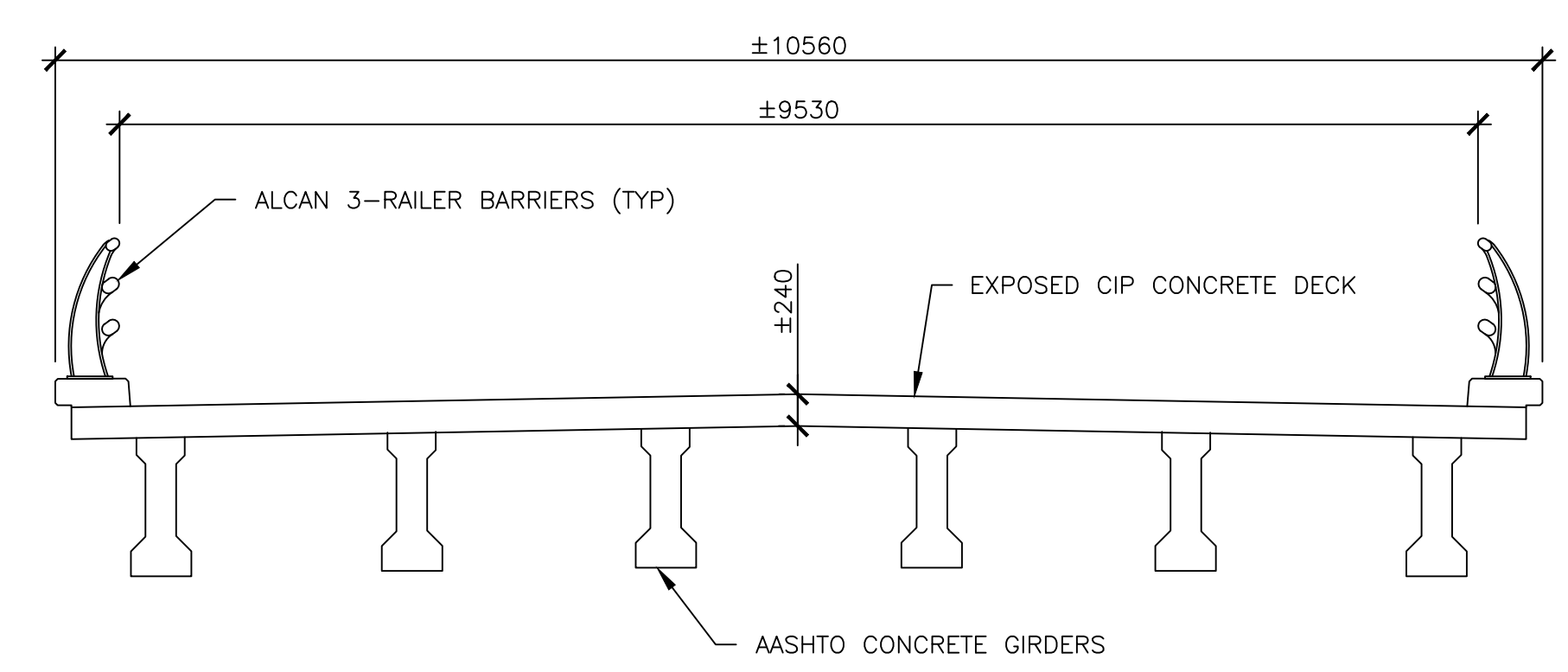
designed	W. ENMAN	conçu
date	2018/10	
drawn	D. BEAMAN	dessiné
date	2018/10	
approved		approuvé
date		
Tender		Soumission
Project Manager		Administrateur de projets
project number	1268	no. du projet
drawing no.	S1	no. du dessin



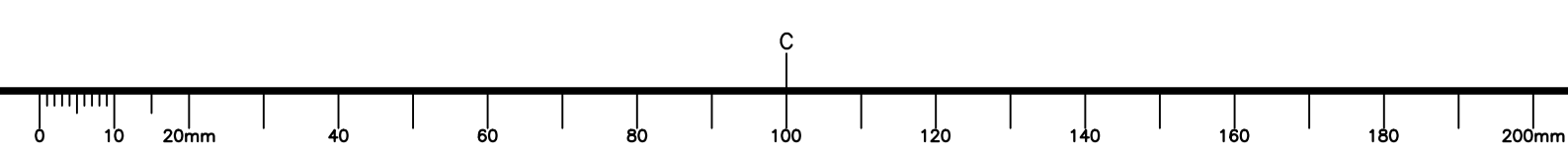
EXISTING BRIDGE PLAN
SCALE : 1:150
0m 5m 10m 15m
1
S1



EXISTING BRIDGE PROFILE
NOT TO SCALE
A
S1



EXISTING BRIDGE CROSS-SECTION
NOT TO SCALE
B
S1

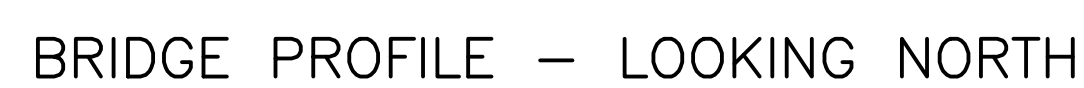




PLAN NORTH



SCALE : 1:150



SCALE : 1:150



BRIDGE PROFILE – LOOKING NORTH

SCALE : 1:150

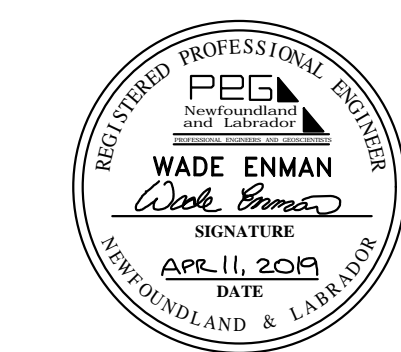
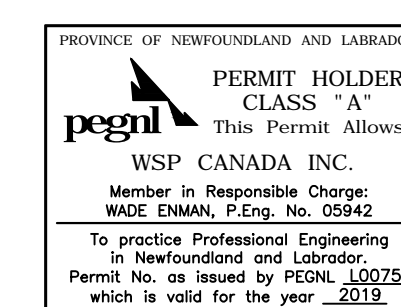


BRIDGE WORKING POINTS

WORKING POINT	ALIGNMENT STATION	ELEV. TOP OF ASPHALT	NORTHING	EASTING
WP-1	1+370.000	5.631m	5475996.142	436836.447
WP-2	1+398.000	6.090m	5476015.099	436857.053



WSP Canada Inc.
195 MacEwen Road
Summerside, Prince Edward Island, Canada C1N 5Y4
T 902-436-2669 F 902-436-8601 www.wsp.com



1	ISSUED FOR TENDER	APR 11 2019
revisions		date

project	project
---------	---------

McKENZIE'S BROOK BRIDGE REPLACEMENT

GROS MORNE
NATIONAL PARK

drawing	dessin
---------	--------

NEW BRIDGE GENERAL ARRANGEMENT PLAN AND PROFILE

designed W. ENMAN conçu

date 2018/10

drawn	D. BEAMAN	dessiné
-------	-----------	---------

date 2018/10

approved	approuvé
----------	----------

date _____

Tender	Soumission
--------	------------

Project Manager	Administrateur de projets
-----------------	---------------------------

project number	no. du projet
1000	

1268

drawing no.	no. du dessin
-------------	---------------

S2

1	ISSUED FOR TENDER	APR 11 2019
revisions		date

project projet
**McKENZIE'S BROOK
BRIDGE REPLACEMENT**
**GROS MORNE
NATIONAL PARK**

drawing dessin
**NEW BRIDGE
GENERAL ARRANGEMENT
CROSS SECTION
AND NOTES**

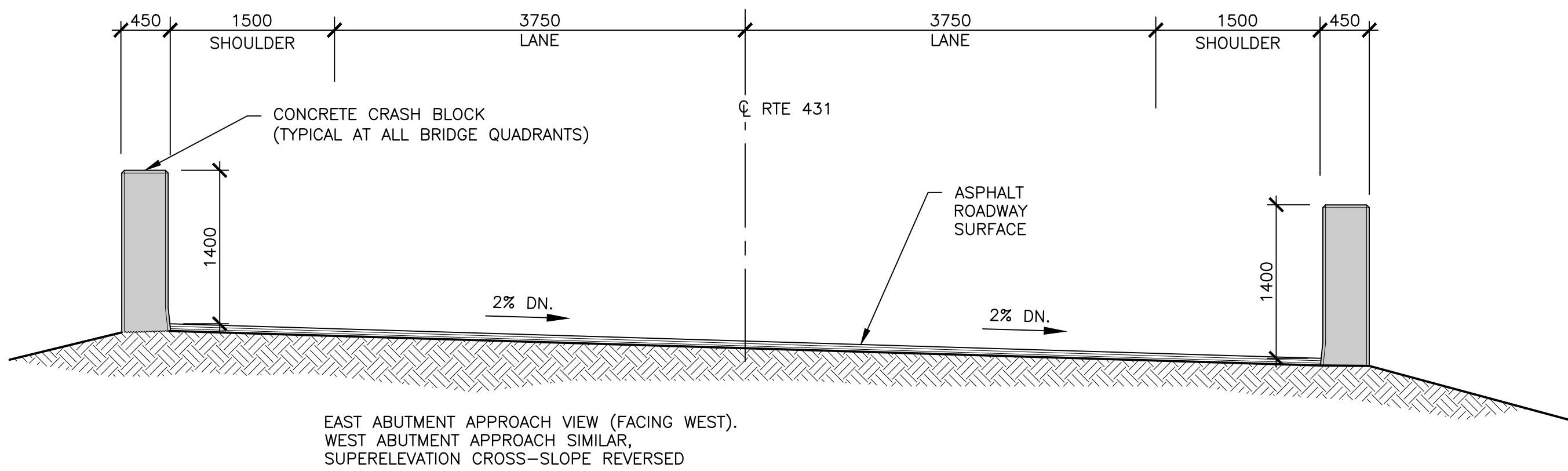
designed W. ENMAN	conçu
date 2018/10	
drawn D. BEAMAN	dessiné
date 2018/10	
approved	approuvé
date	
Tender	Soumission

Project Manager	Administrateur de projets
project number	no. du projet

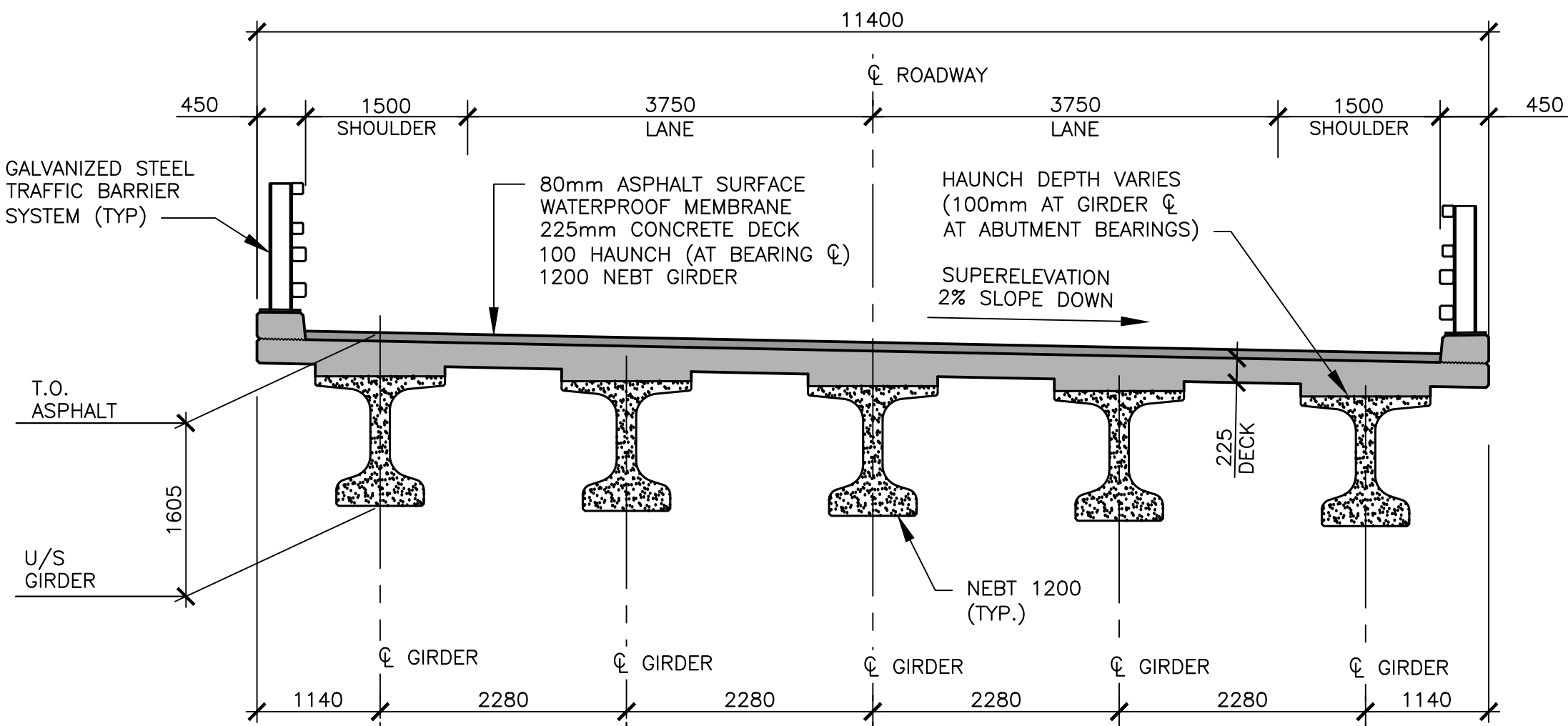
1268

drawing no.	no. du dessin
-------------	---------------

S3



TYPICAL BRIDGE APPROACH VIEW



TYPICAL BRIDGE CROSS SECTION



B

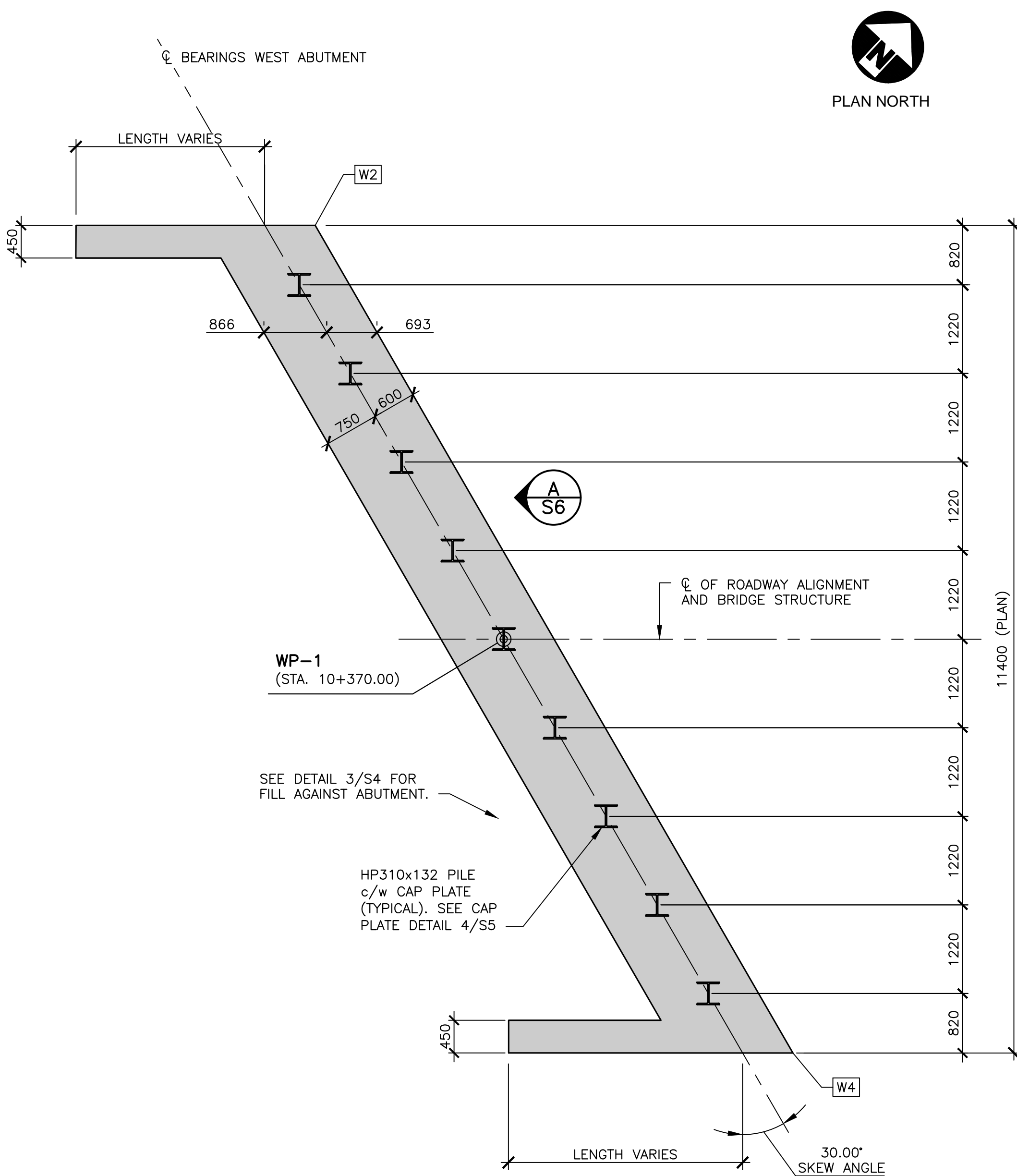
S2

1	ISSUED FOR TENDER	APR 11 2019
revisions		date

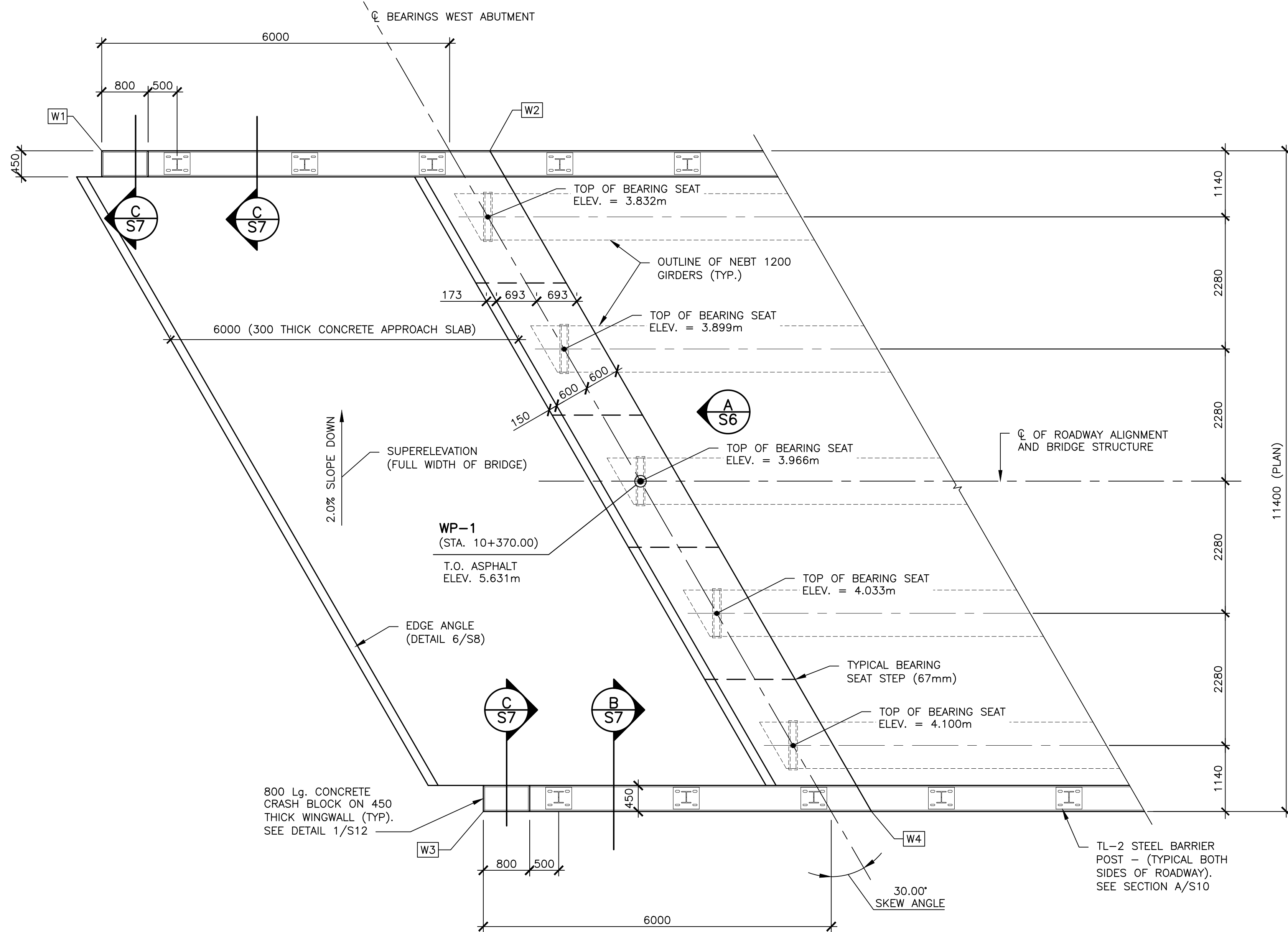
project
**McKENZIE'S BROOK
BRIDGE REPLACEMENT**
**GROS MORNE
NATIONAL PARK**
drawing
desain

WEST ABUTMENT PLANS

designed	W. ENMAN	conçu
date	2018/10	
drown	D. BEAMAN	dessiné
date	2018/10	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	no. du projet	
	1268	
drawing no.	no. du dessin	
	S4	



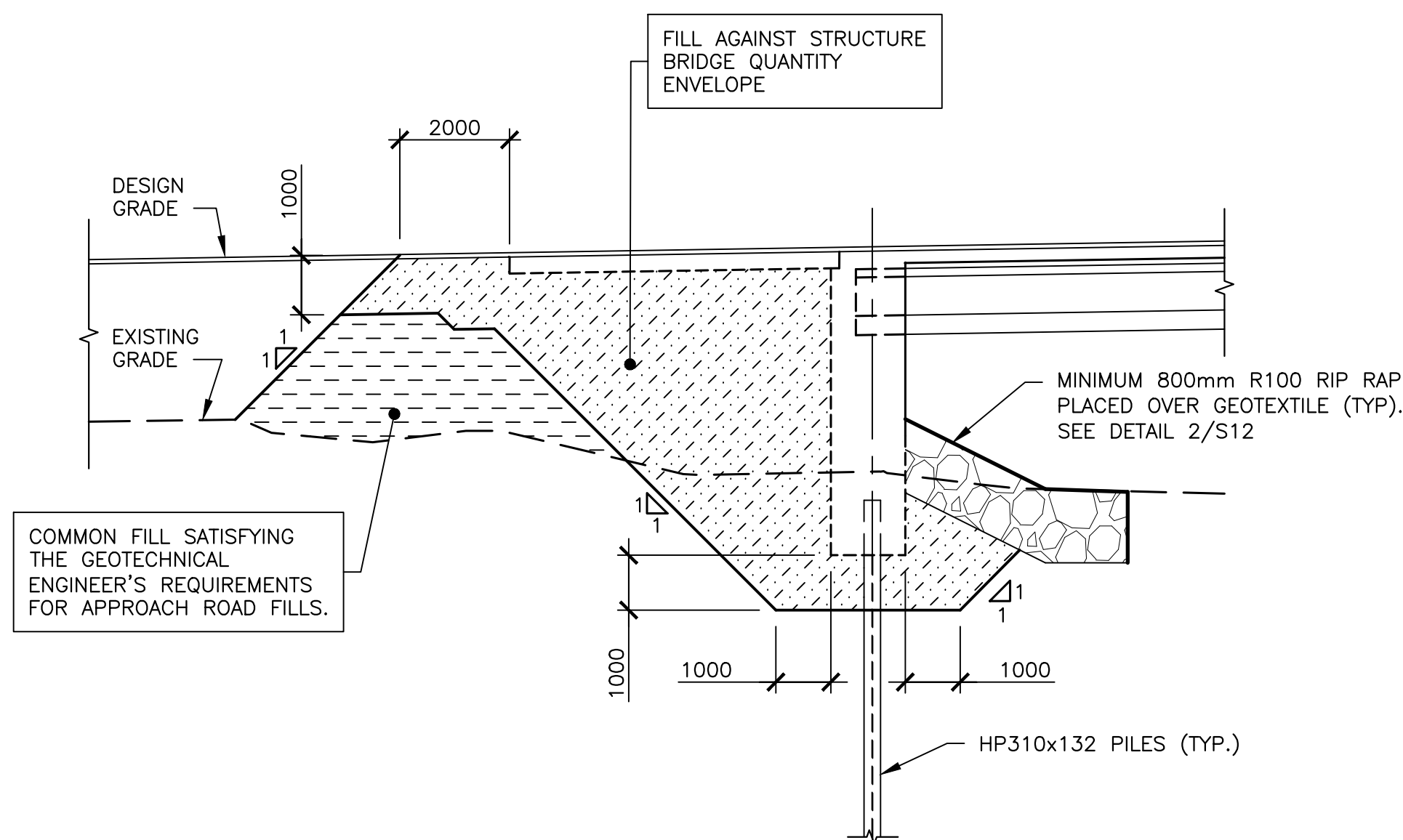
WEST ABUTMENT PILE PLAN
SCALE: 1:50
1
S4



WEST ABUTMENT TOP PLAN
SCALE: 1:50
2
S4

WEST ABUTMENT LAYOUT COORDINATES

LAYOUT POINT	NORTHING	EASTING
WP-1	5475996.142	436836.447
W1	5475994.046	436825.751
W2	5475998.578	436830.676
W3	5475990.112	436838.312
W4	5475994.643	436843.238



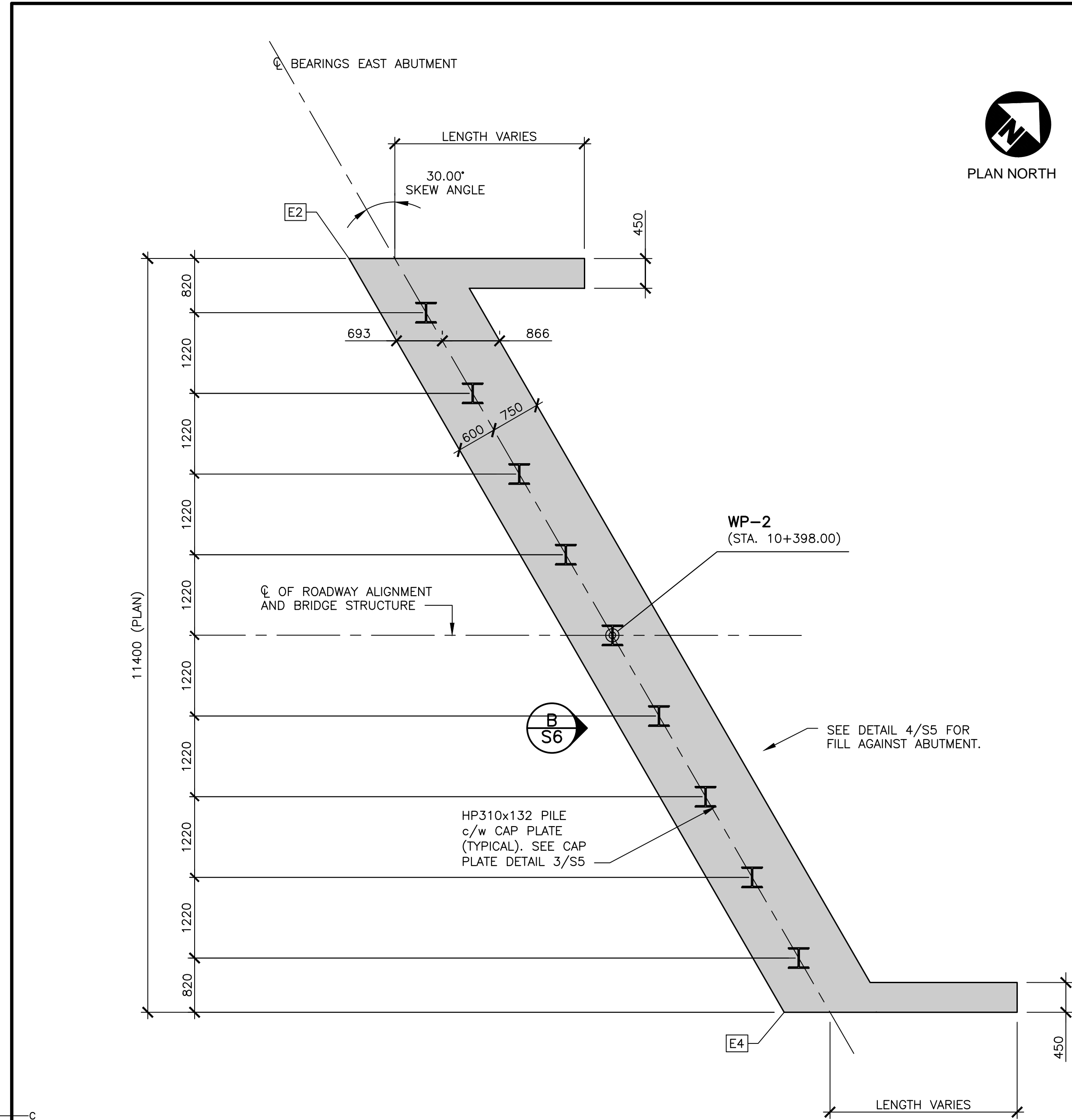
BACKFILL AGAINST
WEST ABUTMENT
SCALE: 1:100
3
S4

C.I.P. CONCRETE NOTES

- ALL CAST-IN-PLACE CONCRETE SHALL CONFORM TO CSA STANDARD A23.1, AND TEST METHODS FOR CONCRETE TO CSA STANDARD A23.2.
- ALL EXPOSED CORNERS OF CONCRETE TO HAVE 25mm CHAMFERS.
- LOCATION OF CONSTRUCTION JOINTS AND SEQUENCE OF CONCRETE PLACEMENT TO BE APPROVED BY THE ENGINEER.
- CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS:
A) ABUTMENTS, WINGWALLS, APPROACH SLABS AND BARRIERS; 45 MPa WITH 20mm MAX. AGGREGATE SIZE AND 6% ± 1% AIR ENTRAINMENT, MAX. WATER-CEMENT RATIO 0.35
- CONCRETE COVER TO REINFORCEMENT AS NOTED ON DRAWINGS.
- REINFORCING STEEL TO BE GALVANIZED WITH YIELD STRENGTH OF 400 MPa (WELDABLE).
- BENT REINFORCING BAR TYPES IN SCHEDULE REFER TO R.S.I.C. "STEEL MANUAL OF STANDARD PRACTICE" TYPICAL BAR BENDS.
- ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING PILES, FORMWORK OR PLACING CONCRETE.
- EACH PHASE OF WORK TO BE INSPECTED BY THE ENGINEER PRIOR TO PROCEEDING TO THE NEXT PHASE OF WORK.
- BACKFILL PLACED IMMEDIATELY BEHIND ABUTMENTS TO BE "FILL AGAINST STRUCTURES" MATERIAL AS PER DETAILS SHOWN ON THESE DRAWINGS AND AS PER SPECIFICATIONS.
- BACKFILLING BEHIND ABUTMENTS SHALL NOT BE UNDERTAKEN UNTIL ABUTMENT CAP AND DECK IS CAST AND STRENGTH REACHES 35 MPa. BACKFILLING SHALL BE ACCOMPLISHED IN EQUAL LIFTS BEHIND EACH ABUTMENT TO ENSURE DIFFERENTIAL IN FILL HEIGHTS BEHIND EACH ABUTMENT DOES NOT EXCEED 300mm.
- COMPACTING IMMEDIATELY ADJACENT TO BACK OF ABUTMENT WALL SHALL BE ACCOMPLISHED WITH LIGHT COMPACTING EQUIPMENT. MODERATE COMPACTING WITH A TRENCH ROLLER IN 300mm LIFTS ELSEWHERE (ALL COMPACTION SHALL BE TO 95% STD. PROCTOR DENSITY). WHEEL LOADS SHALL BE KEPT 5.0m MINIMUM CLEAR OF ABUTMENTS UNTIL CONCRETE REACHES DESIGN STRENGTH AND BACKFILLING IS COMPLETED BEHIND BOTH ABUTMENTS.

PILE NOTES

- SEE DRAWING S5 FOR PILE NOTES.



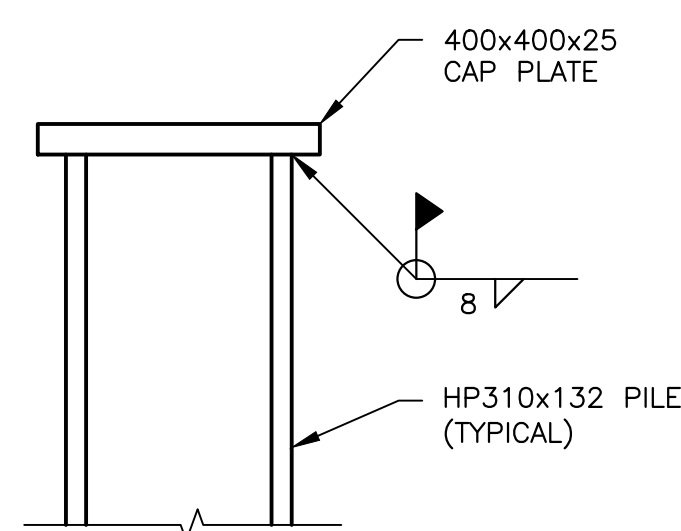
EAST ABUTMENT PILE PLAN

SCALE: 1:50
0m 1m 2m 3m 4m 5m

1
S5

EAST ABUTMENT LAYOUT COORDINATES

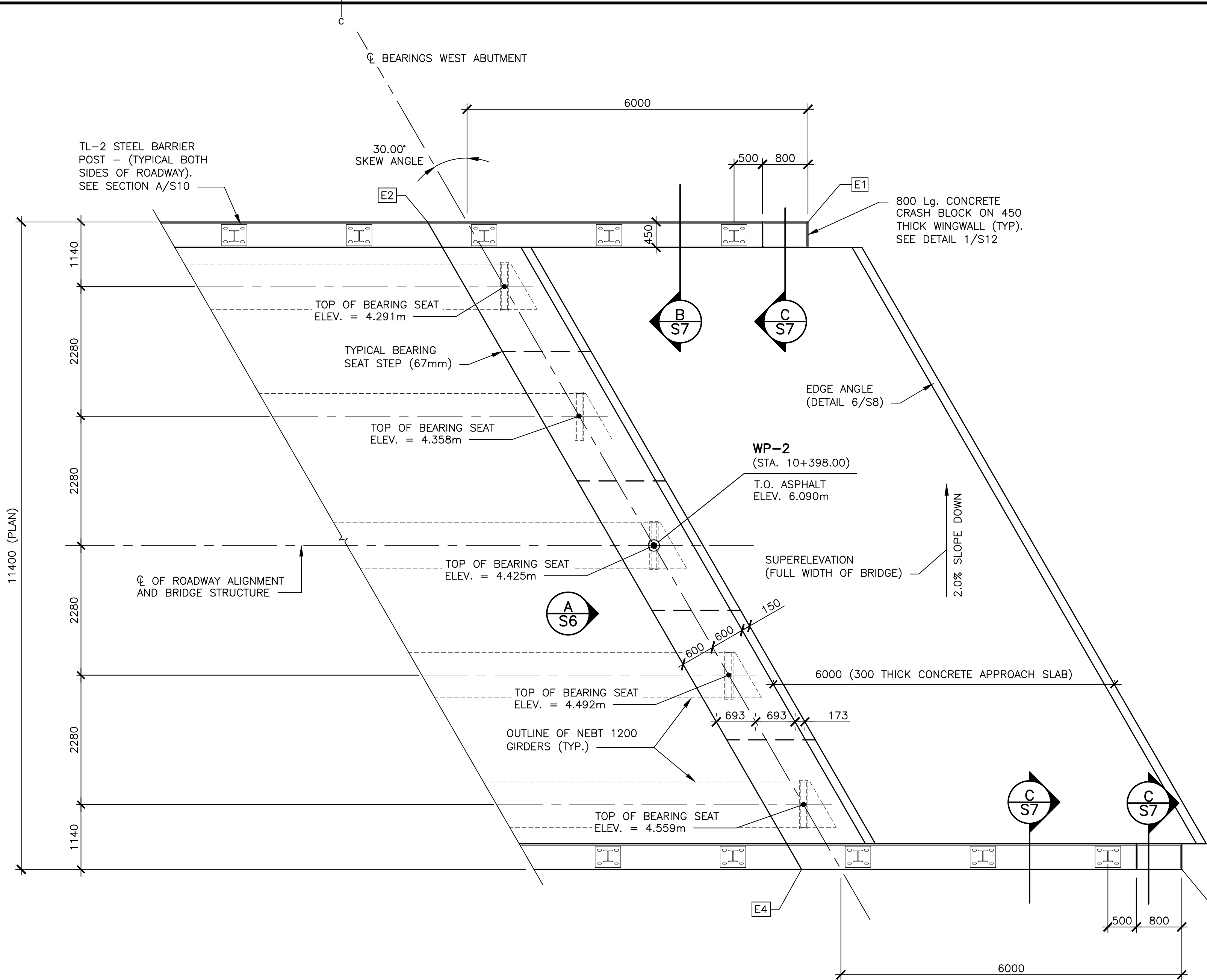
LAYOUT POINT	NORTHING	EASTING
WP-2	5476015.099	436857.053
E1	5476021.126	436855.191
E2	5476016.595	436850.265
E3	5476017.191	436867.752
E4	5476012.660	436862.826



PILE CAP PLATE DETAIL

NOT TO SCALE

3
S5



EAST ABUTMENT TOP PLAN

SCALE: 1:50
0m 1m 2m 3m 4m 5m

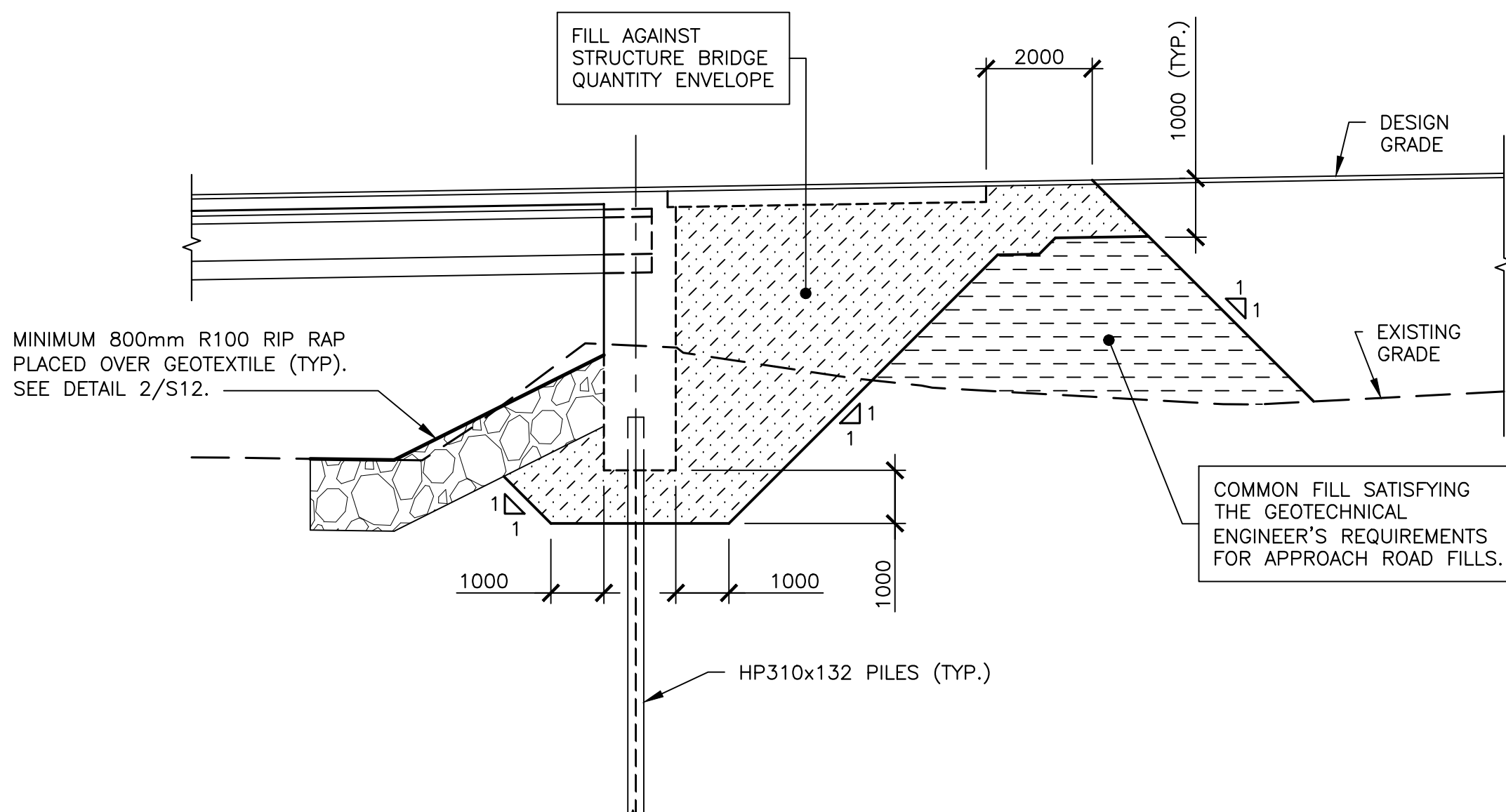
2
S5

CAST-IN-PLACE CONCRETE NOTES

- SEE DRAWING S4 FOR CAST-IN-PLACE CONCRETE NOTES.

TYPICAL STEEL PILE NOTES

- PILE MATERIAL
 - STEEL H-PILES IN ABUTMENT, HP310x132, $F_y = 350 \text{ MPa}$ (MIN.)
 - CAP PLATE, $F_y = 350 \text{ MPa}$ MINIMUM
 - WELDING MATERIAL TO CSA G40.1 - LATEST EDITION
 - WELDING TO BE IN ACCORDANCE TO CSA W59 - LATEST EDITION
- PILE SET CRITERIA SHALL BE AS PER GEOTECHNICAL REPORT BY WSP, PROJECT #171-08067, DATED 2017-11-24:
 - RATED HAMMER ENERGY OF AT LEAST 350 (AND LESS THAN 450) J/cm sq. OF STEEL CROSS SECTION-SECTIONAL AREA
 - REFUSAL TAKEN AS PILE PENETRATION OF LESS THAN 25mm FOR 15 BLOWS. ALL PILES SHALL BE DRIVEN TO REFUSAL AT THE SPECIFIED DEPTH.
 - ALL PILES SHALL BE DRIVEN WITH A PROTECTIVE H-PILE POINT SHOE SUCH AS APF HARD-BITE POINTS, MODEL HP-77600, O.A.E. ALL POINTS SHALL MATCH PILE SIZE AND SHALL BE WELDED TO PILE TIP AS PER MANUFACTURERS RECOMMENDATIONS. PILE TIP DETAILS SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO DRIVING PILES. WELDED STEEL PLATES WILL NOT BE ACCEPTED.
 - RE-STRIKING OF AT LEAST TWO REPRESENTATIVE PILES PER ABUTMENT SHALL BE UNDERTAKEN TO ASSESS THE EFFECTS OF SOIL SET-UP AND RELAXATION, AS PER GEOTECHNICAL ENGINEER RECOMMENDATIONS. A WAITING PERIOD OF AT LEAST 24 HOURS SHALL BE ALLOWED BEFORE RE-STRIKING OPERATIONS ARE UNDERTAKEN
 - THE REQUIRED FACTORED PILE COMPRESSION LOAD OF 1145 kN SHALL BE CONFIRMED BY PDA TESTING. REFERENCE SPECIAL PROVISIONS FOR PDA TESTING REQUIREMENTS
 - FULL TIME INSPECTION SHALL BE UNDERTAKEN DURING PILE DRIVING AND COMPLETE DRIVING RECORDS SHALL BE KEPT.



BACKFILL AGAINST EAST ABUTMENT

SCALE: 1:100
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

4
S5

1	ISSUED FOR TENDER	APR 11 2019
---	-------------------	-------------

revisions		date
-----------	--	------

project		projet
---------	--	--------

McKENZIE'S BROOK
BRIDGE REPLACEMENT

GROS MORNE
NATIONAL PARK

drawing dessin

WEST ABUTMENT
PLANS

designed W. ENMAN conçu

date 2018/10

drown D. BEAMAN dessiné

date 2018/10

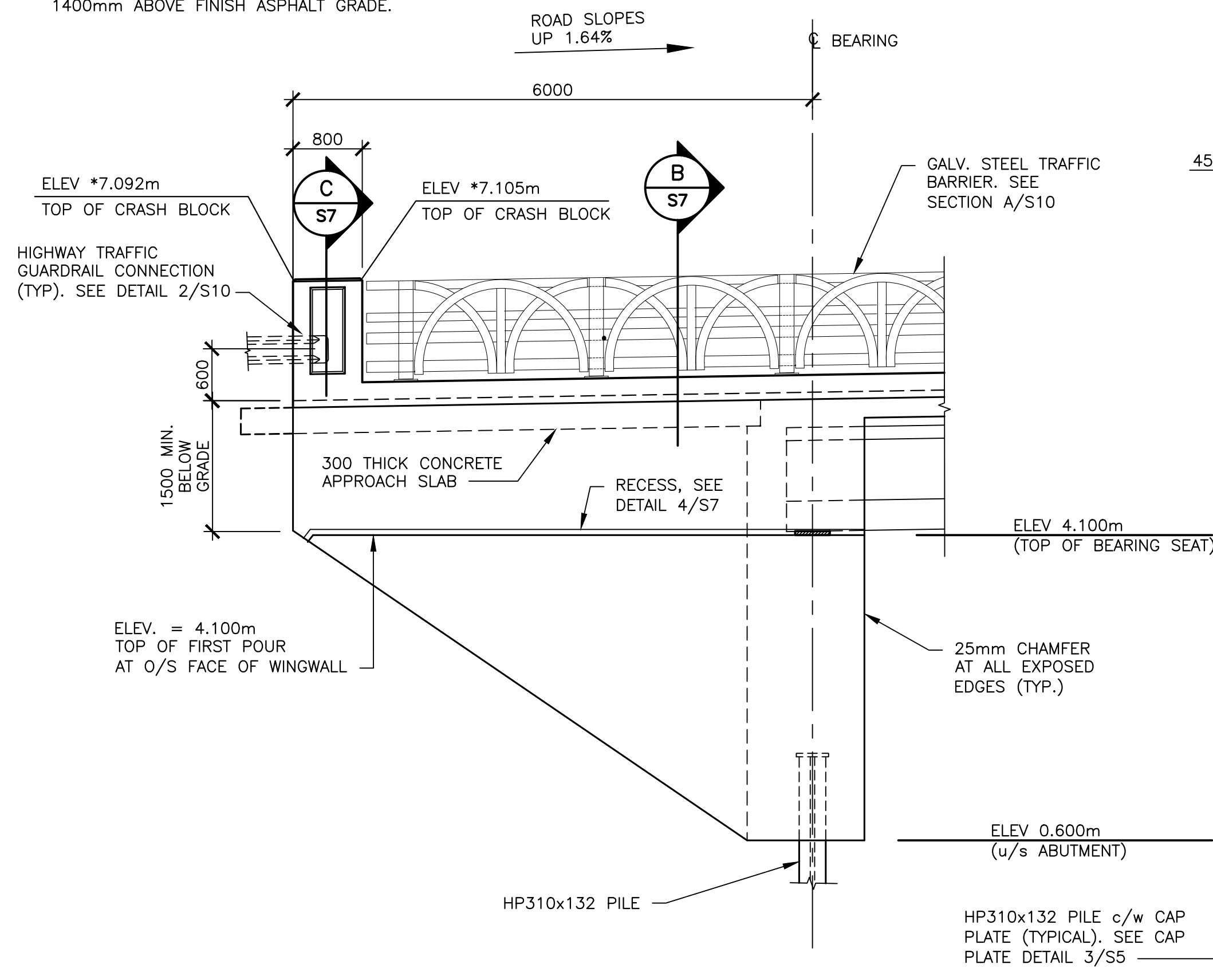
approved approuvé

date

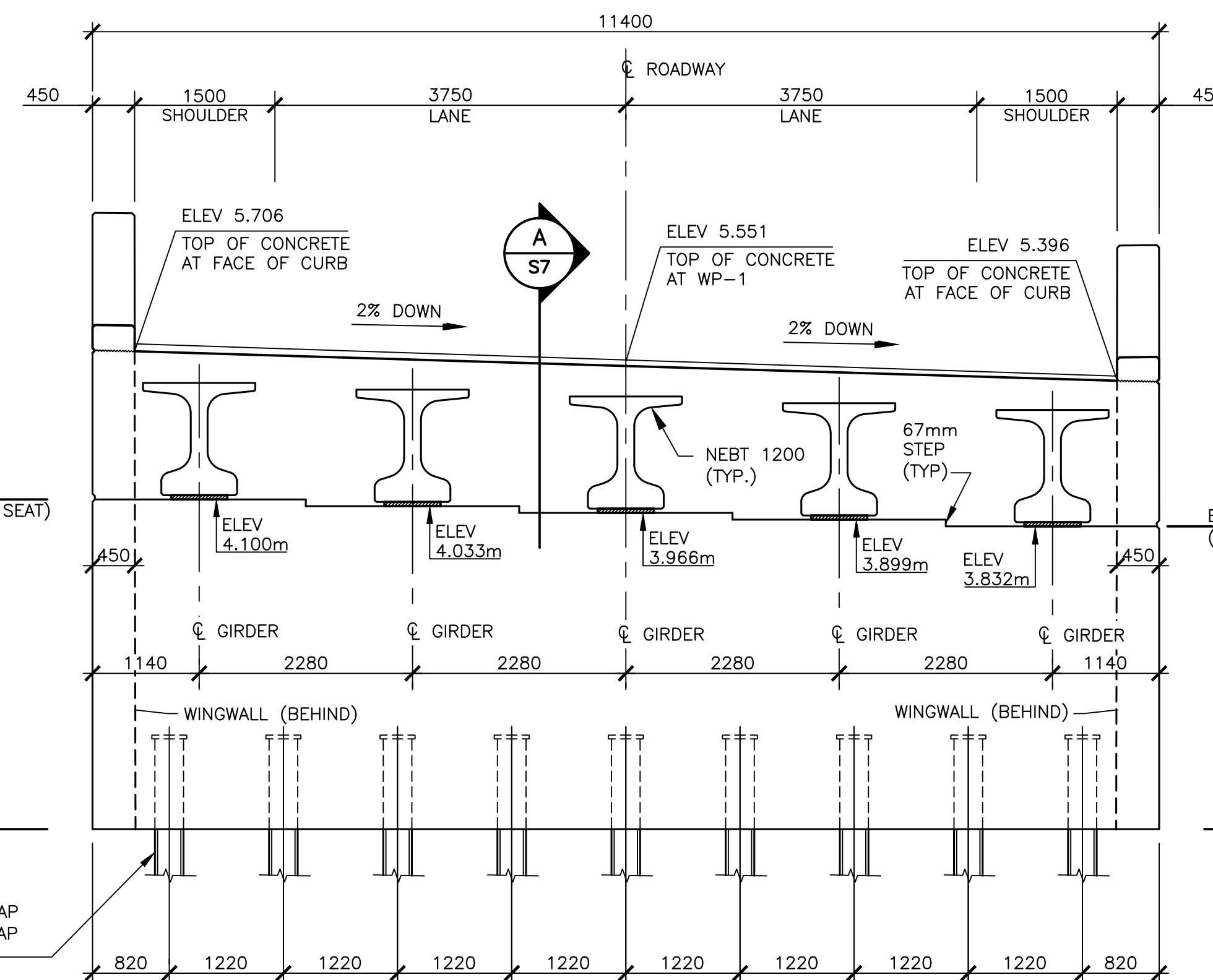
Tender Soumission

Project Manager Administrateur de projets
project number no. du projet
1268
drawing no. no. du dessin
S5

* ELEVATIONS GIVEN AT TOP OF CRASH BLOCK ARE FOR REFERENCE ONLY. CONTRACTOR TO ENSURE ACTUAL TOP OF CRASH BLOCK ELEVATIONS TO BE 1400mm ABOVE FINISH ASPHALT GRADE.

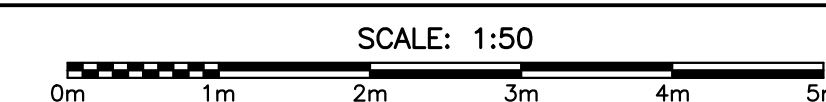


SOUTH WEST WINGWALL

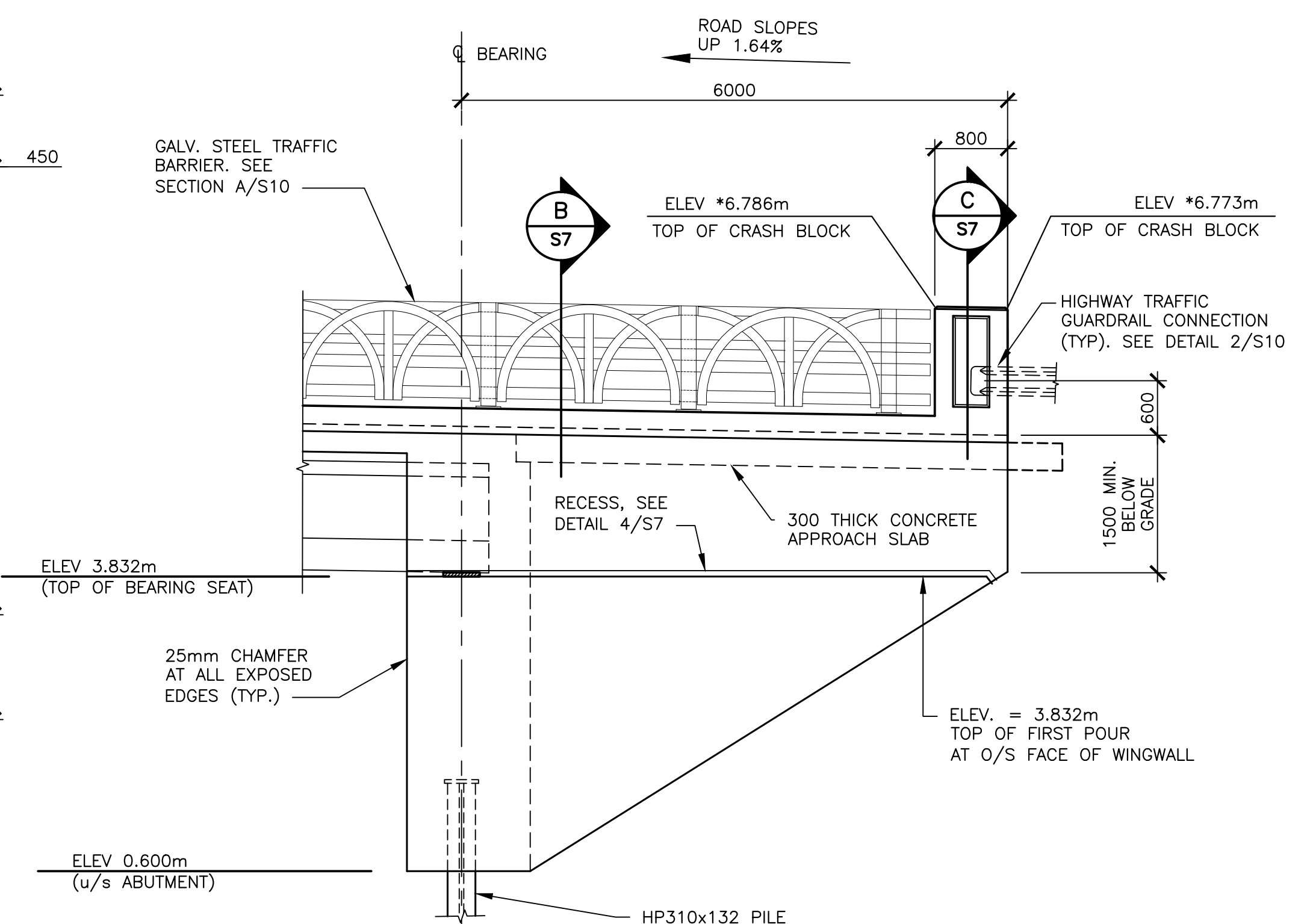


FRONT ELEVATION - FACING WEST

WEST ABUTMENT ELEVATIONS

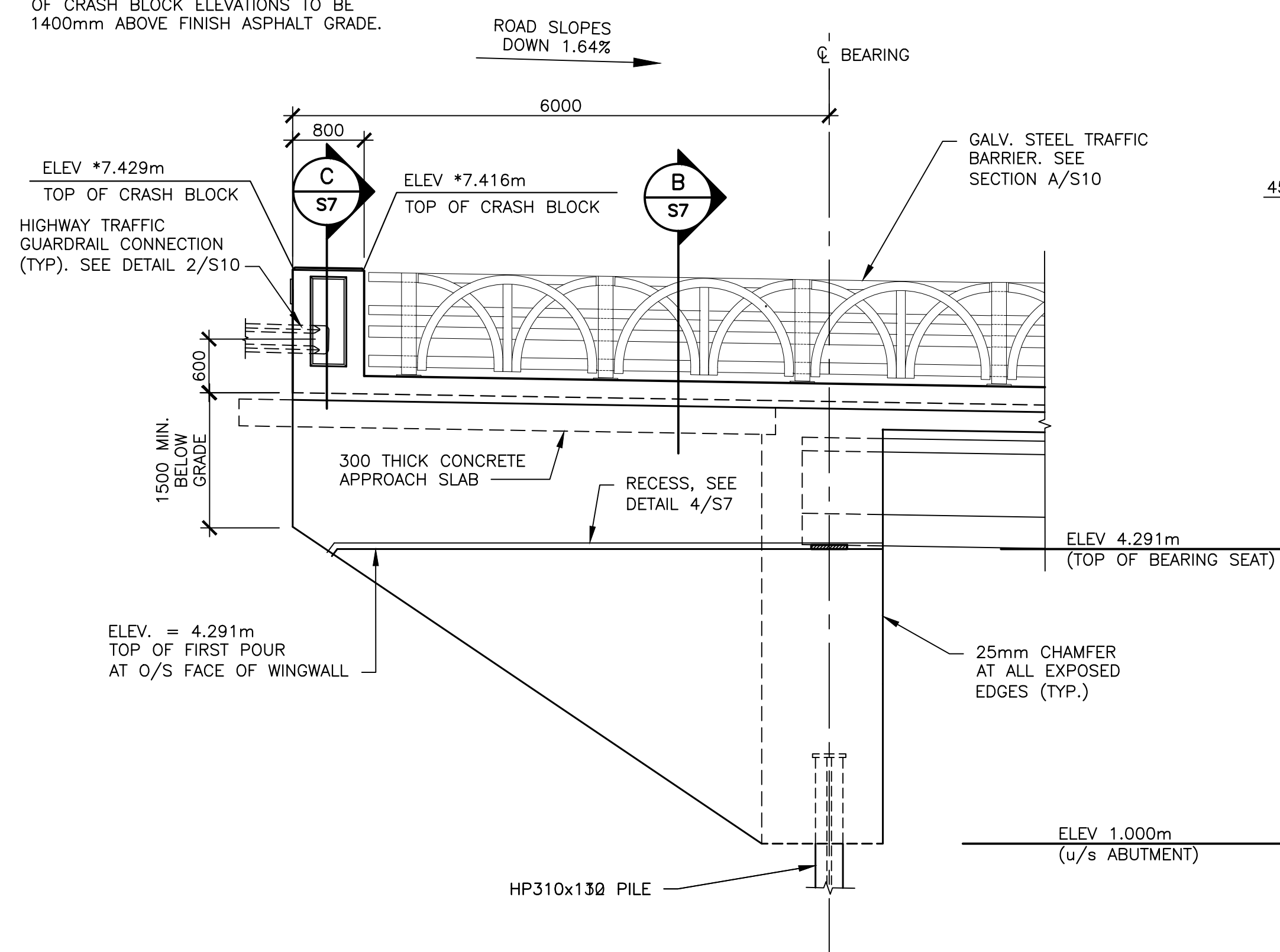


A
S6

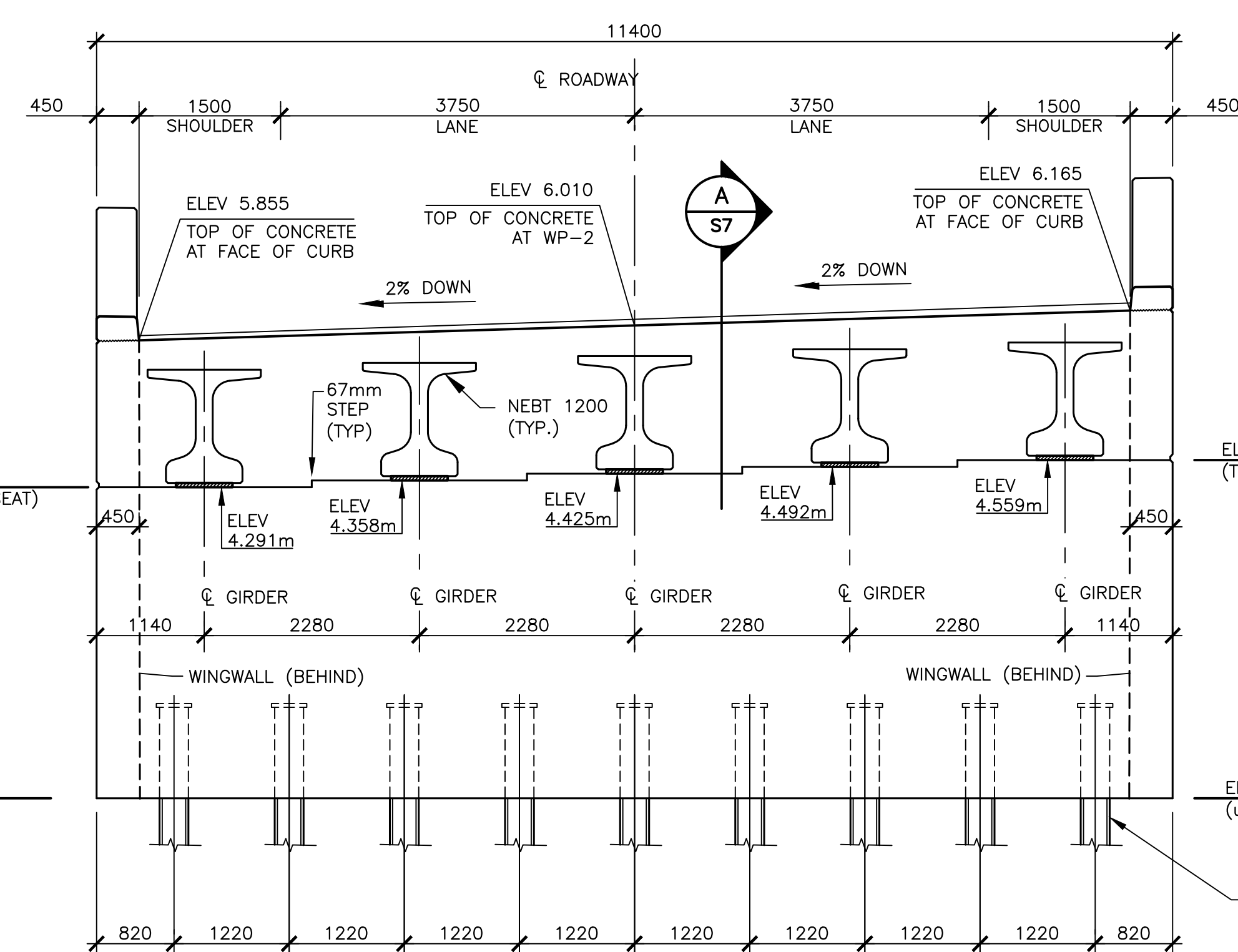


NORTH WEST WINGWALL

* ELEVATIONS GIVEN AT TOP OF CRASH BLOCK ARE FOR REFERENCE ONLY. CONTRACTOR TO ENSURE ACTUAL TOP OF CRASH BLOCK ELEVATIONS TO BE 1400mm ABOVE FINISH ASPHALT GRADE.

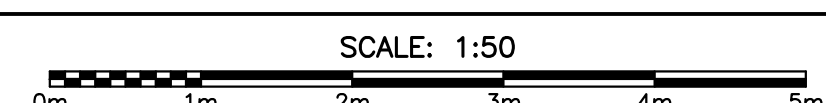


NORTH EAST WINGWALL

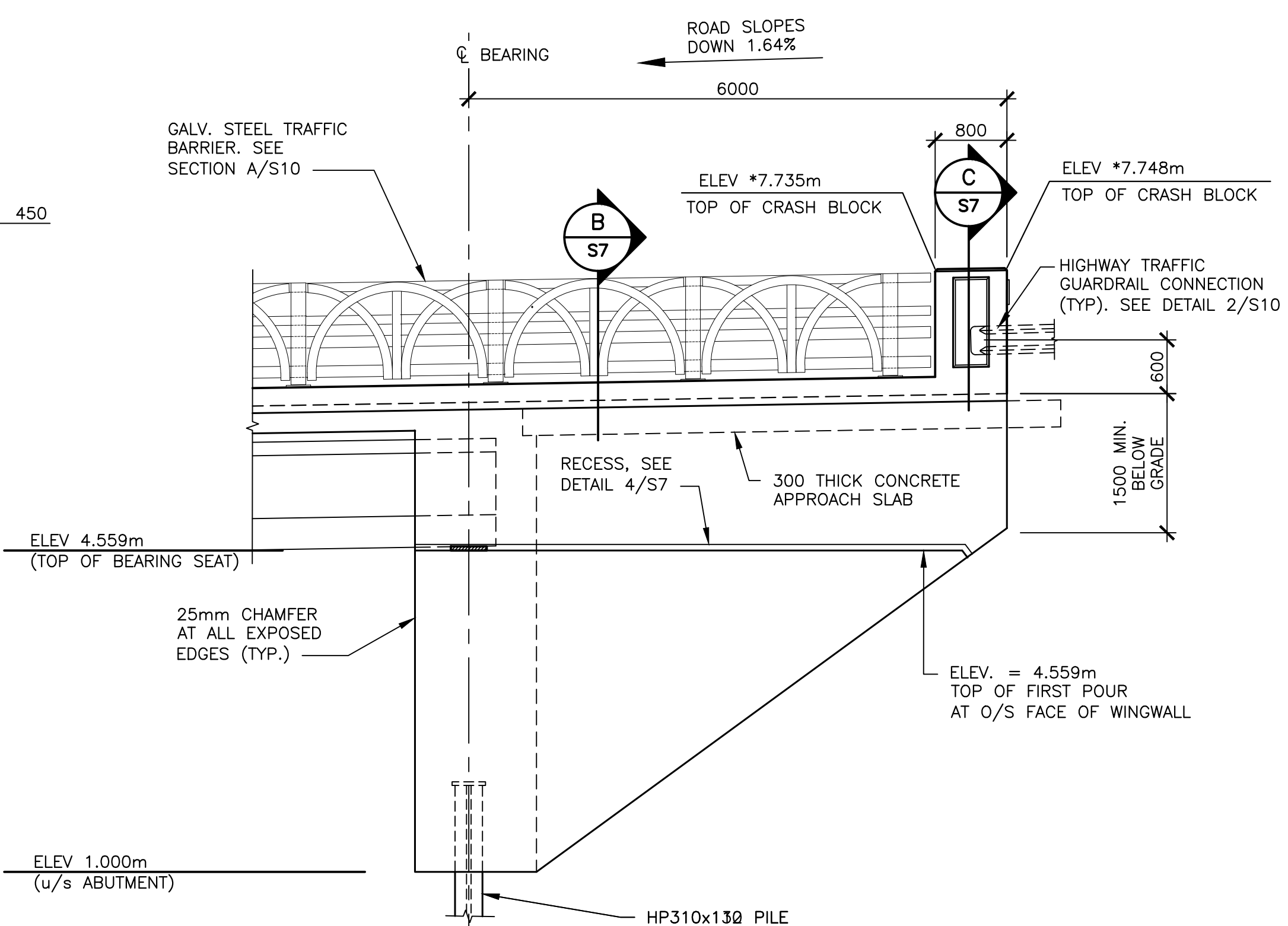


FRONT ELEVATION - FACING EAST

EAST ABUTMENT ELEVATIONS



B
S6



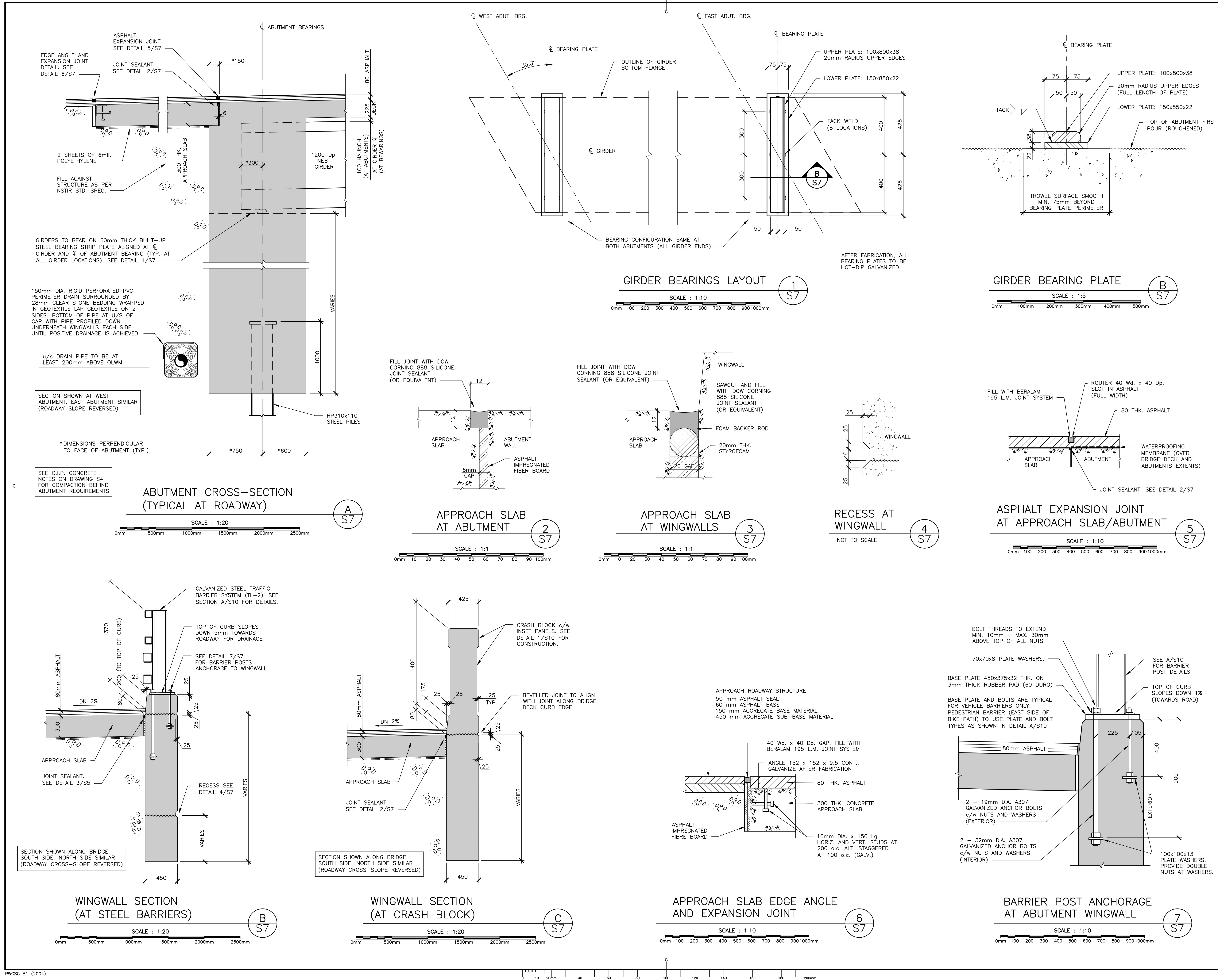
SOUTH EAST WINGWALL

1	ISSUED FOR TENDER	APR 11 2019
revisions		date

project
**McKENZIE'S BROOK
BRIDGE REPLACEMENT**
**GROS MORNE
NATIONAL PARK**
drawing
desain

**ABUTMENT AND
WINGWALL ELEVATIONS**

designed	W. ENMAN	conçu
date	2018/10	
drawn	D. BEAMAN	dessiné
date	2018/10	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	no. du projet	
	1268	
drawing no.	no. du dessin	
	S6	



1	ISSUED FOR TENDER	APR 11 2019
revisions		date

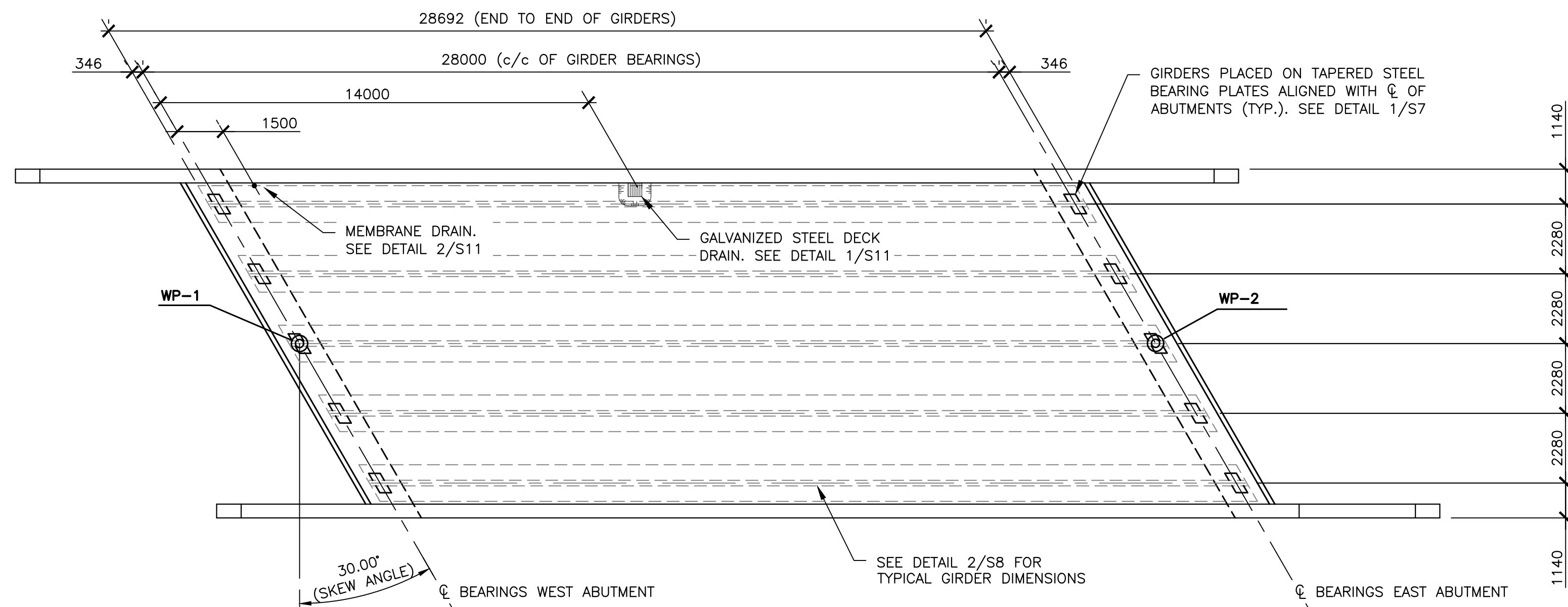
project
**McKENZIE'S BROOK
BRIDGE REPLACEMENT**
**GROS MORNE
NATIONAL PARK**
drawing
dessin

**ABUTMENT SECTIONS
AND DETAILS**

designed	W. ENMAN	conçu
date	2018/10	
drown	D. BEAMAN	dessiné
date	2018/10	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	1268	no. du projet
drawing no.	S7	no. du dessin



PLAN NORTH



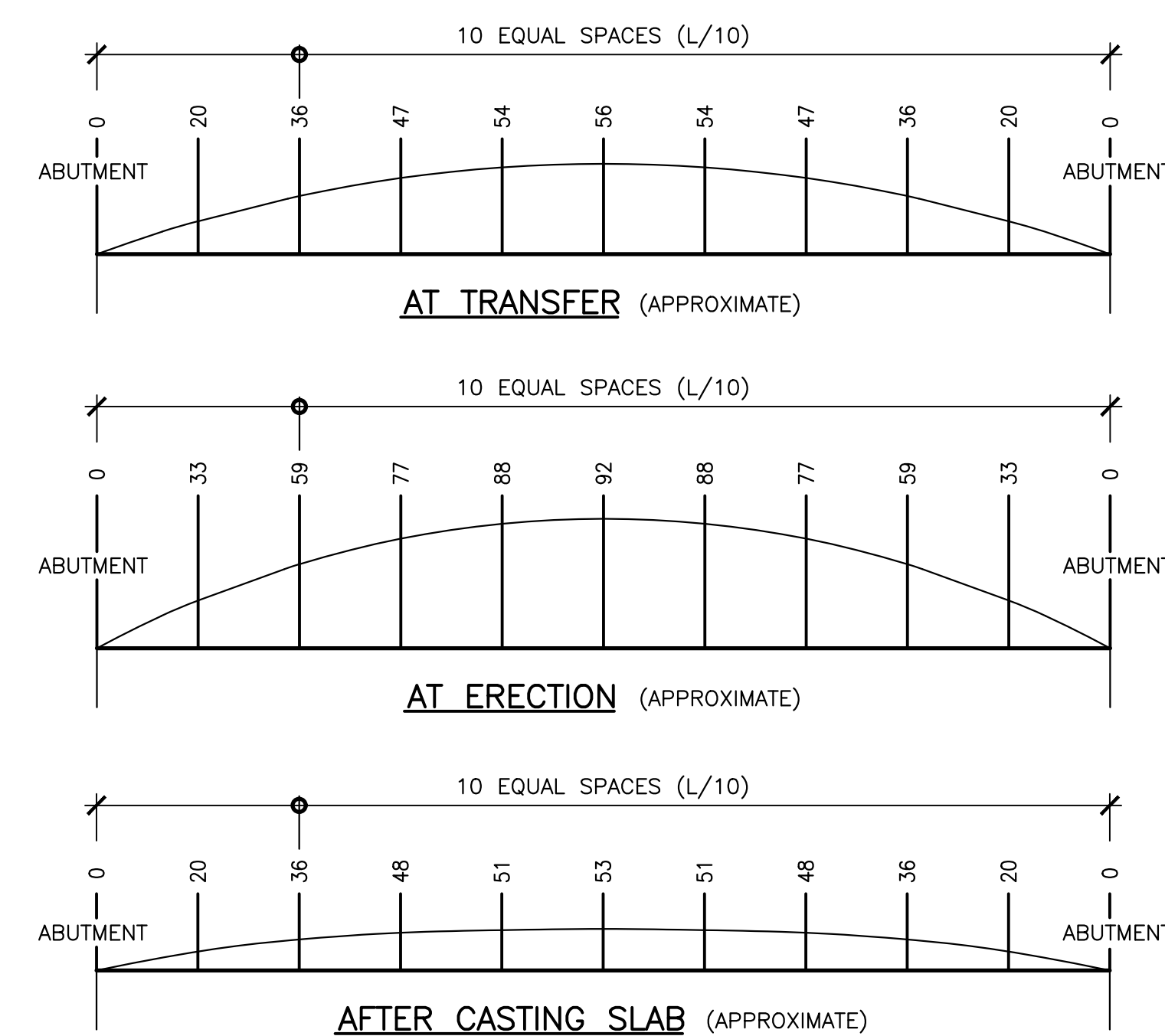
GIRDER LAYOUT PLAN

SCALE : 1:125

1
S8

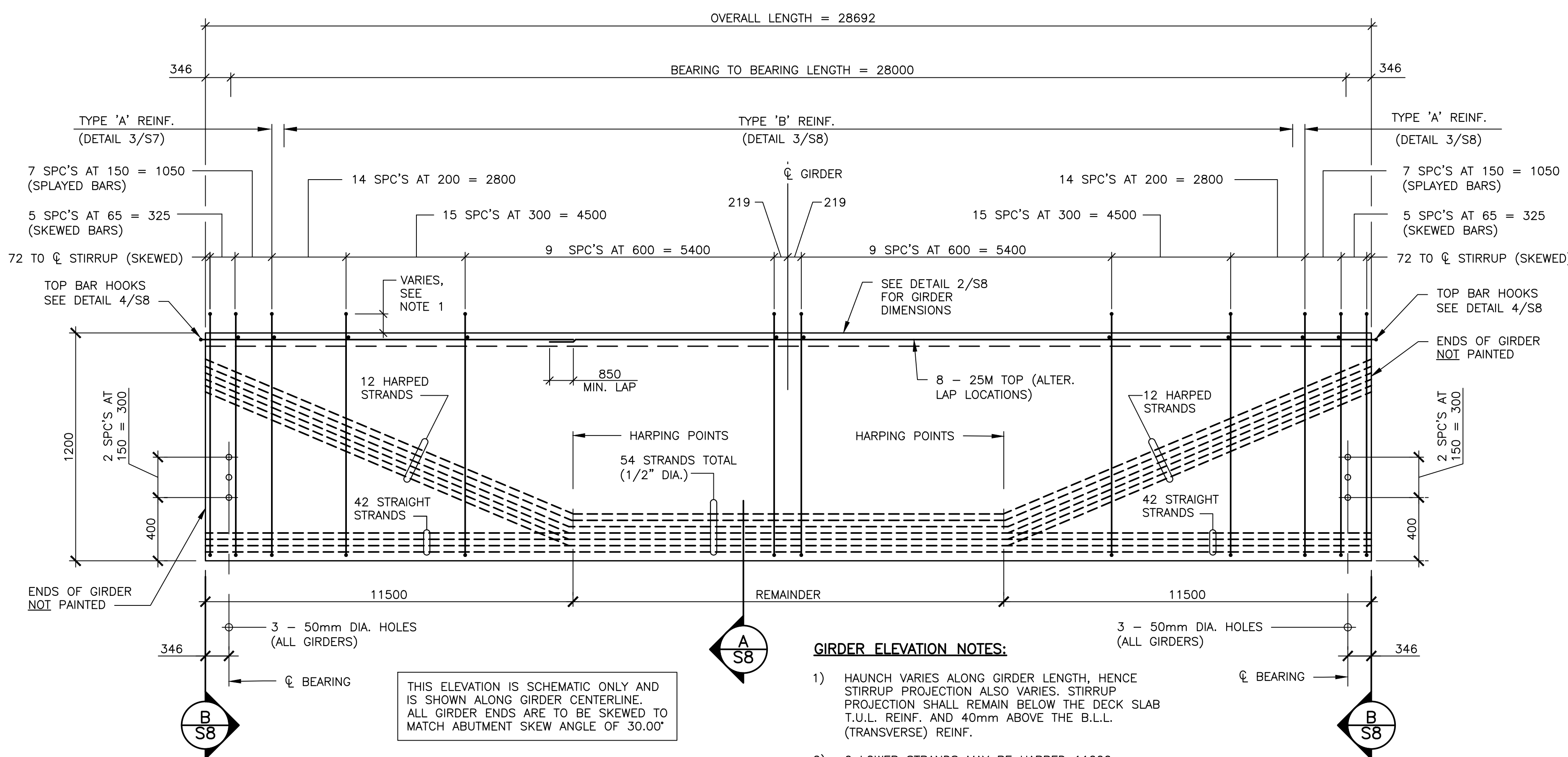
PRECAST GIRDER NOTES:

- ALL GIRDERS TO BE NE BULB TEE 1200 STANDARD SECTIONS.
- CONCRETE COMPRESSIVE STRENGTH:
A) AT 28 DAYS - 55 MPa
B) AT TIME OF PRESTRESS TRANSFER - 40 MPa
- PRESTRESSING STEEL: SEVEN WIRE LOW RELAXATION STRANDS (GRADE 1860), SIZE 13 WITH ULTIMATE STRENGTH OF 1860 MPa. STRANDS TO CONFORM TO A.S.T.M. A416.
- STRAND FORCES:
A) AT JACKING (0.78 fpu) - 144 kN
- TRANSFER OF PRESTRESS RELEASE SEQUENCE:
A) DEFLECTED STRANDS
B) HOLD DOWN DEVICES
C) STRAIGHT STRANDS
- LIFTING DEVICES TO BE LOCATED AT THE GIRDER BEARING POINTS AND SHALL MEET ENGINEERS APPROVAL.
- CONCRETE COVER TO STIRRUPS AS NOTED ON DETAIL 3/S8.
- ROUGHEN TOP OF GIRDER WHERE IT WILL CONTACT HAUNCH TO 5MM AMPLITUDE, SPACING OF 15mm ± & REMOVE LAITANCE PRIOR TO CASTING DECK AND HAUNCHES.
- NO BITUMINOUS OR ASPHALT COATING TO BE APPLIED TO EITHER END OF NEBT GIRDERS.
- CONTRACTOR TO ENSURE GIRDER STABILITY DURING ALL PHASES OF CONSTRUCTION.
- AFTER ALL GIRDERS ARE ERECTED, AND PRIOR TO COMMENCEMENT OF FORMWORK CONSTRUCTION, THE CONTRACTOR SHALL TAKE A PROFILE ALONG THE CENTERLINE OF ALL GIRDERS AT THE LOCATIONS WHERE SCREED ELEVATIONS ARE SHOWN ON THE PLANS. THE PROFILES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE ENGINEER SHALL ADVISE THE CONTRACTOR (WITHIN THREE WORKING DAYS OF HAVING RECEIVED THE GIRDER PROFILES) THAT THE SCREED ELEVATIONS AND GIRDER PROFILES ARE CORRECT, OR THE CONTRACTOR WILL BE PROVIDED WITH REVISED SCREED ELEVATIONS AT THAT TIME.
- SEE DETAIL 1/S12 FOR LATERAL STABILITY TIES FOR GIRDERS.



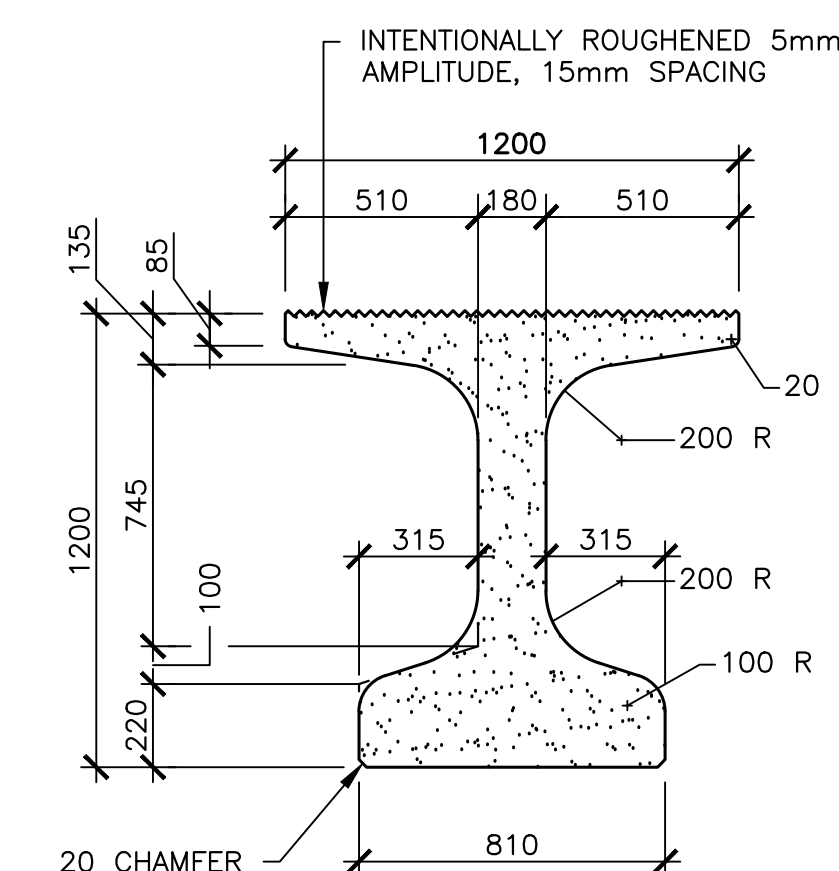
CAMBER PROFILES

N.T.S.



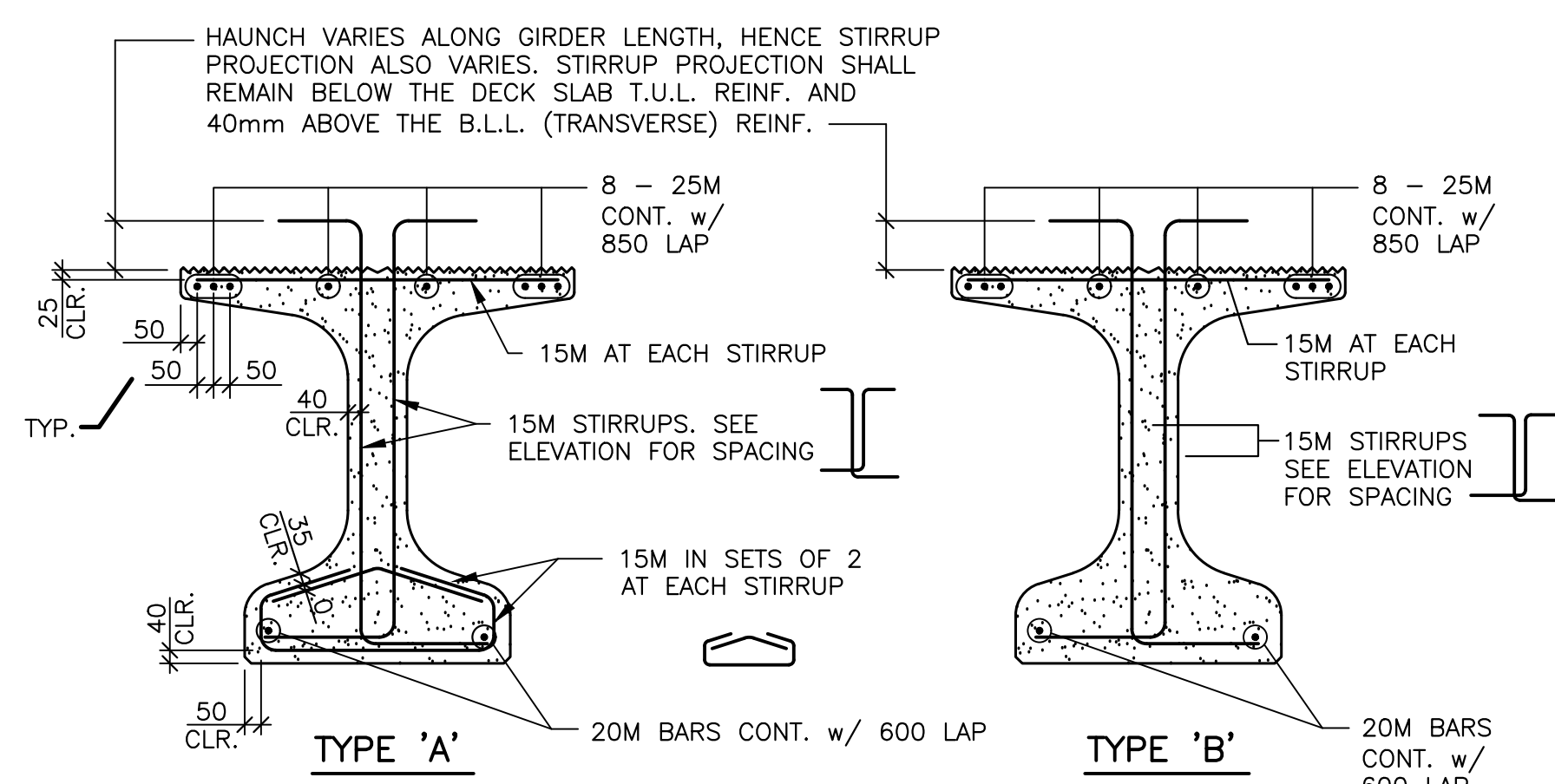
TYPICAL GIRDER ELEVATION

NOT TO SCALE



NEBT 1200 GIRDER TYPICAL DIMENSIONS

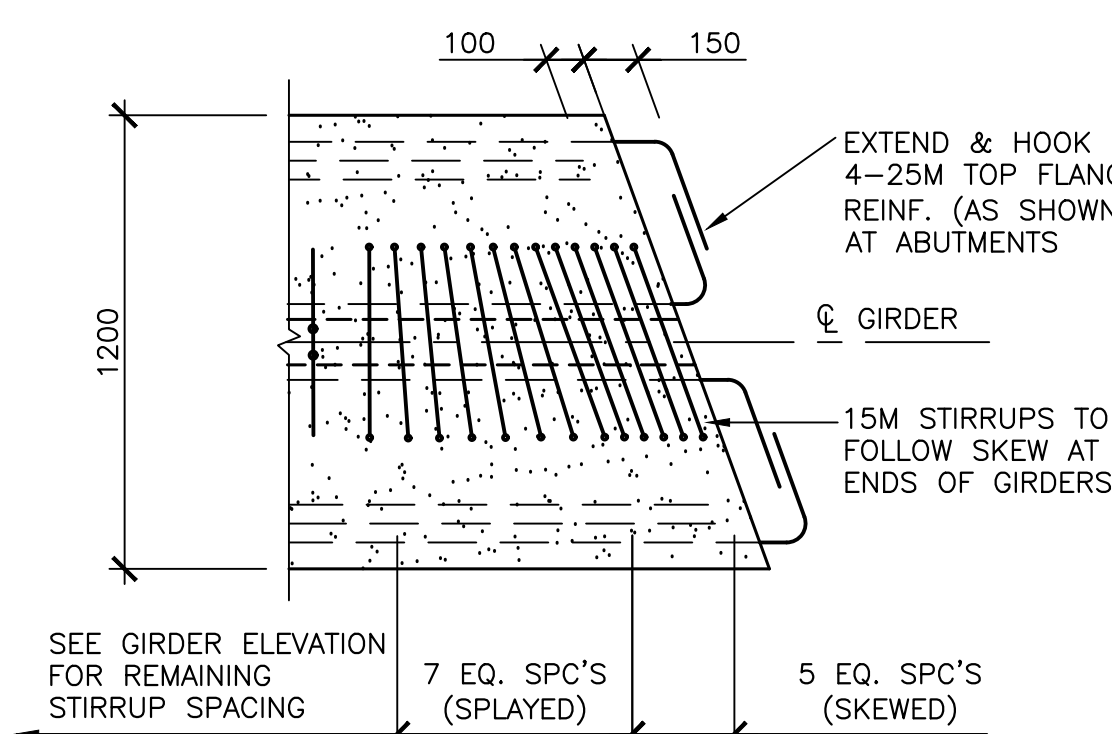
2
S8



NEBT 1200 GIRDER STIRRUP REINFORCEMENT

SCALE : 1:20

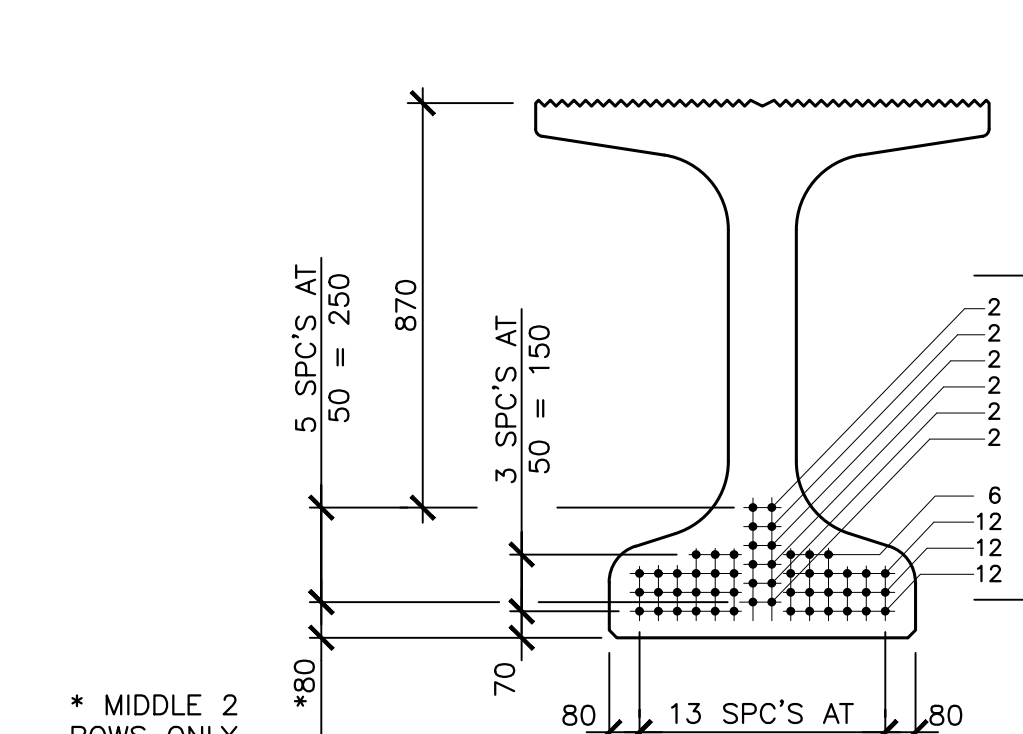
3
S8



GIRDER TOP FLANGE PLAN AT GIRDER ENDS

SCALE : 1:20

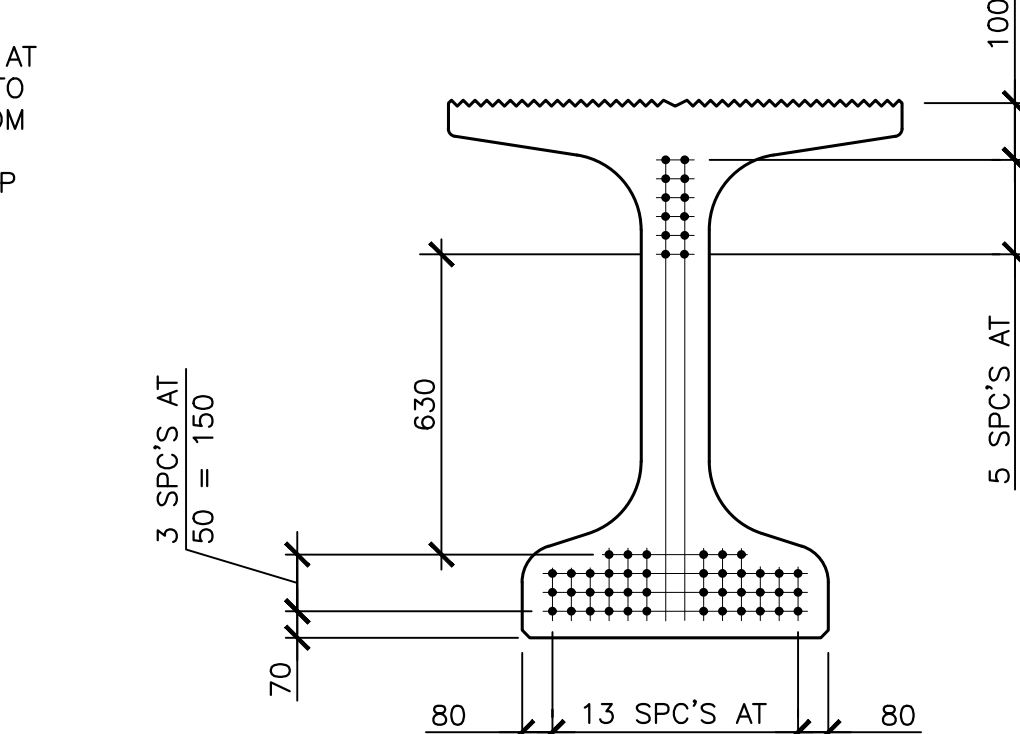
4
S8



TYPICAL SECTION MID-SPAN LAYOUT

SCALE : 1:20

A
S8



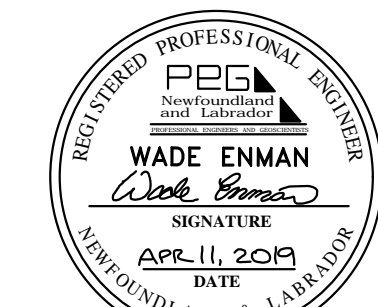
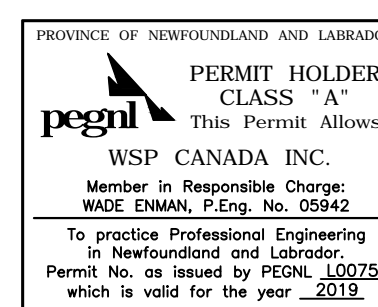
TYPICAL SECTION END-SPAN LAYOUT

SCALE : 1:20

B
S8



WSP Canada Inc.
135 MacEwen Road
Summerside, Prince Edward Island, Canada C1N 5Y4
T 902-436-2669 F 902-436-8601 www.wsp.com



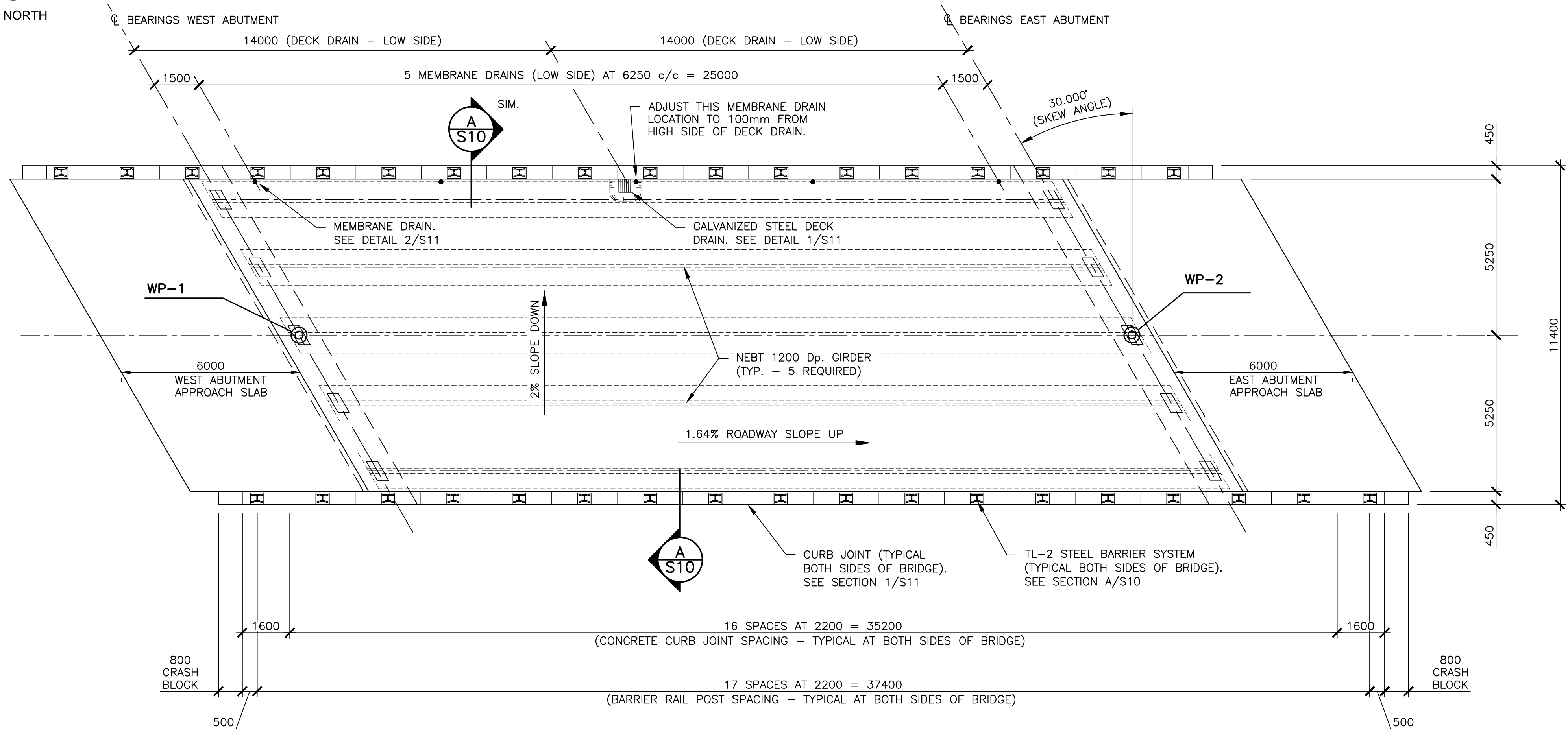
1 ISSUED FOR TENDER APR 11 2019
revisions
project
McKENZIE'S BROOK
BRIDGE REPLACEMENT
GROS MORNE
NATIONAL PARK

GIRDER LAYOUT PLAN,
ELEVATION AND DETAILS

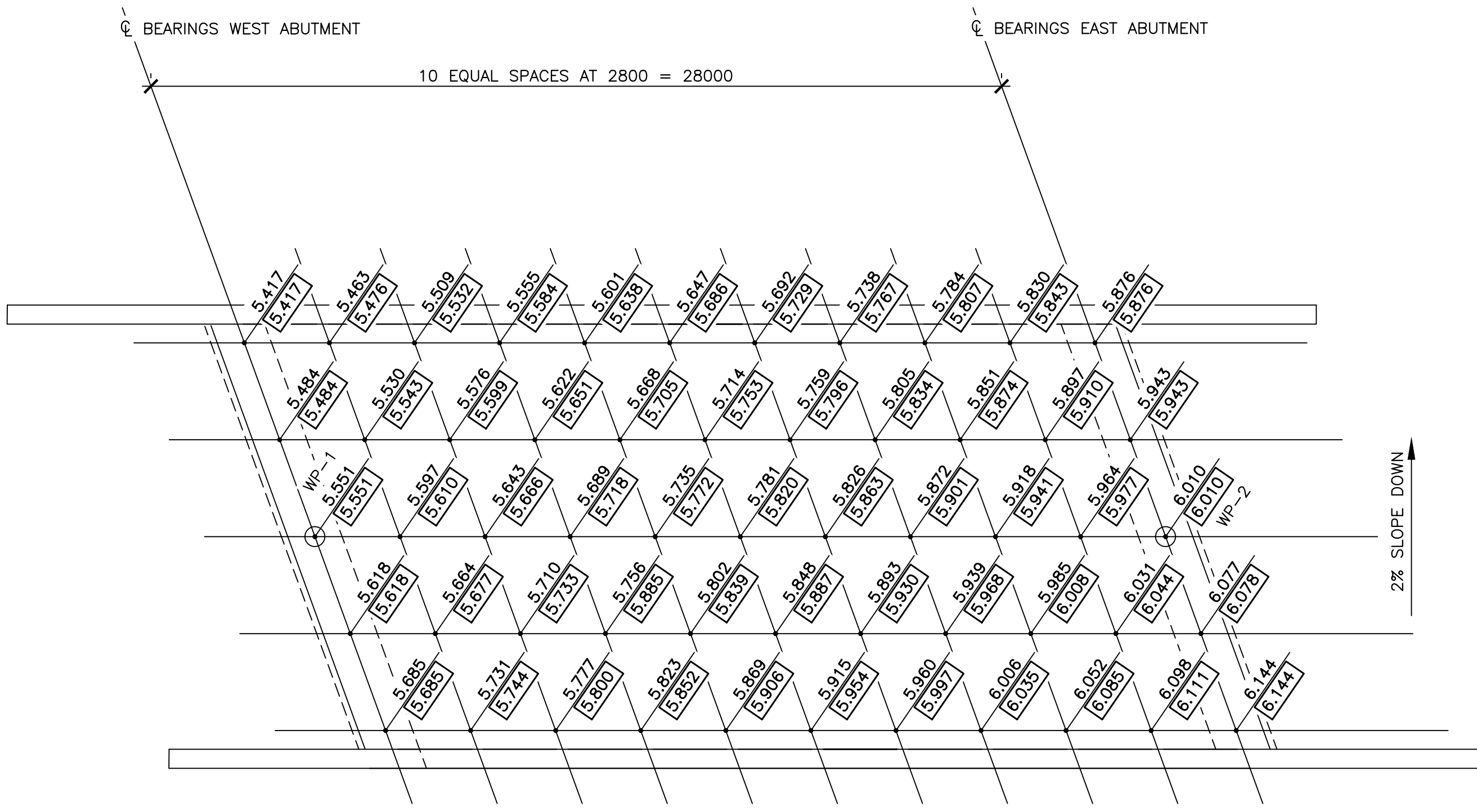
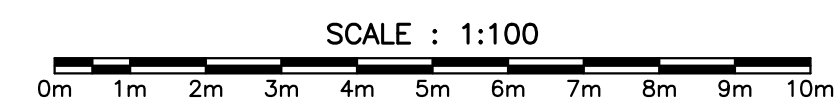
designed W. ENMAN
date 2018/10
drawn D. BEAMAN
date 2018/10
approved
date
Tender
Project Manager
project number 1268
drawing no. S8



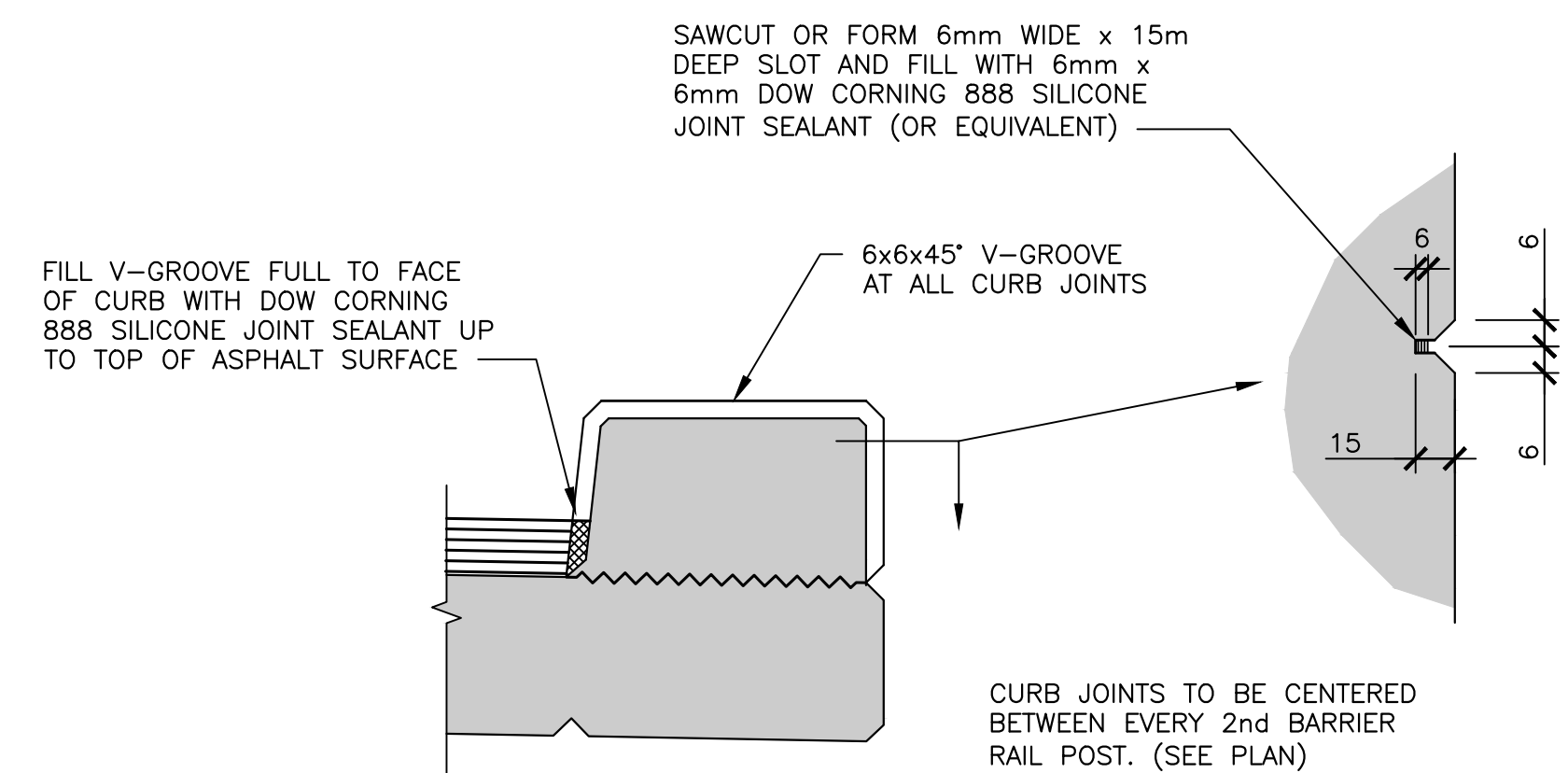
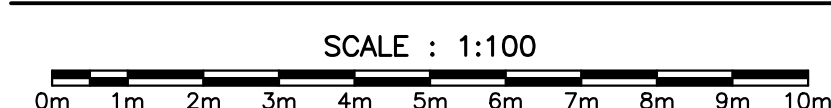
PLAN NORTH



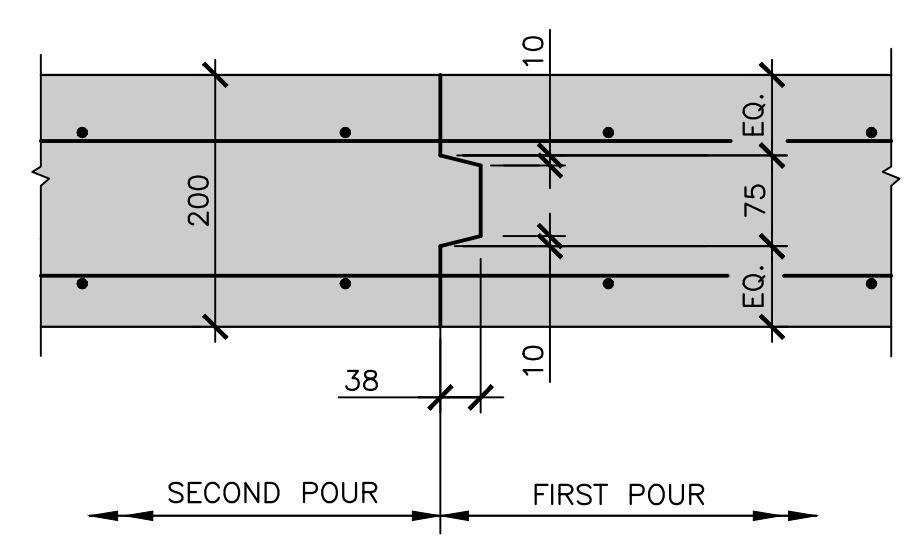
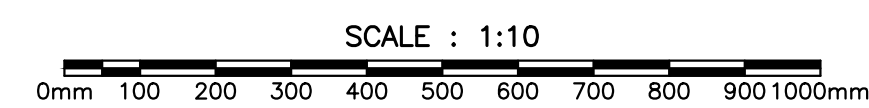
BRIDGE DECK PLAN



SCREED ELEVATIONS LAYOUT



TYPICAL CURB JOINT



NOTE:
TERMINATE KEY 75mm IN FROM
EDGE OF DECK (BOTH SIDES)

TYPICAL BRIDGE DECK
CONSTRUCTION JOINT

NOT TO SCALE

BRIDGE DECK CAST-IN-PLACE CONCRETE NOTES

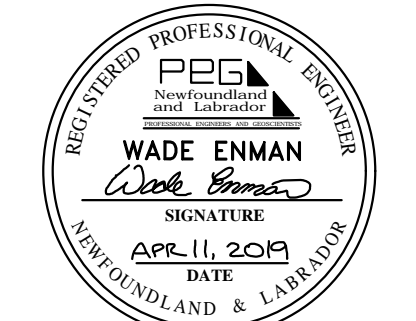
- ALL CAST-IN-PLACE CONCRETE SHALL CONFORM TO CSA STANDARD A23.1, AND TEST METHODS FOR CONCRETE TO CSA STANDARD A23.2.
- ALL EXPOSED CORNERS OF CONCRETE TO HAVE 25mm CHAMFERS.
- LOCATION OF CONSTRUCTION JOINTS AND SEQUENCE OF CONCRETE PLACEMENT TO BE APPROVED BY THE ENGINEER.
- CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS:
ALL CAST-IN-PLACE CONCRETE; 45 MPa WITH 20mm MAX. AGGREGATE SIZE AND 5% TO 8% AIR ENTRAINMENT. MAXIMUM WATER-CEMENT RATIO 0.40.
- ALL REINFORCEMENT OF CONCRETE DECK, CURBS, AND CRASH BLOCKS TO BE GLASS-FIBER REINFORCED POLYMER BARS (GFRP). SEE REINFORCEMENT DRAWINGS FOR DETAILS.
- CONCRETE COVER TO REINFORCEMENT AS NOTED ON REINFORCEMENT DRAWINGS.
- ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO PLACING CONCRETE.

BRIDGE DECK CASTING SEQUENCE NOTES

- IT IS ASSUMED THAT ENTIRE DECK FORMWORK IS PLACED AND SET TO SCREED ELEVATIONS PRIOR TO CASTING DECK.
- IT IS ASSUMED THAT ENTIRE DECK IS CAST MONOLITHICALLY. IF DECK IS POURED IN SEGMENTS, THE END PORTIONS OF THE DECK TO 3.0m OUT FROM EACH ABUTMENT SHALL BE CAST LAST AND THE DECK JOINTS SHALL BE DETAILED AS PER THE CONSTRUCTION JOINT DETAIL PROVIDED. TO DO THIS, THE SCREED ELEVATIONS MUST BE ADJUSTED ACCORDINGLY BY THE CONTRACTOR.
- IT IS ASSUMED THAT THE ENTIRE DECK IS CAST AND HAS REACHED 35 MPa PRIOR TO CASTING BARRIERS AND WATERPROOFING/PAVING DECK.
- CASTING SEQUENCE DURING MONOLITHIC DECK CASTING OPERATION:
PLACE CONCRETE IN ALL AREAS OF THE DECK PRIOR TO CASTING INTEGRAL ABUTMENTS. TO ACHIEVE THIS, LEAVE 3.0m OF DECK AT EACH END OF THE BRIDGE/ADJACENT TO ABUTMENTS UNTIL THE CONCRETE IS PLACED IN THE REMAINDER OF THE DECK. THE 3.0m SECTION AT EACH ABUTMENT MUST BE CAST BEFORE REMAINDER OF DECK HAS HARDENED.



WSP Canada Inc.
195 MacEwen Road
Summerside, Prince Edward Island, Canada C1N 5Y4
T 902-436-2669 F 902-436-8601 www.wsp.com

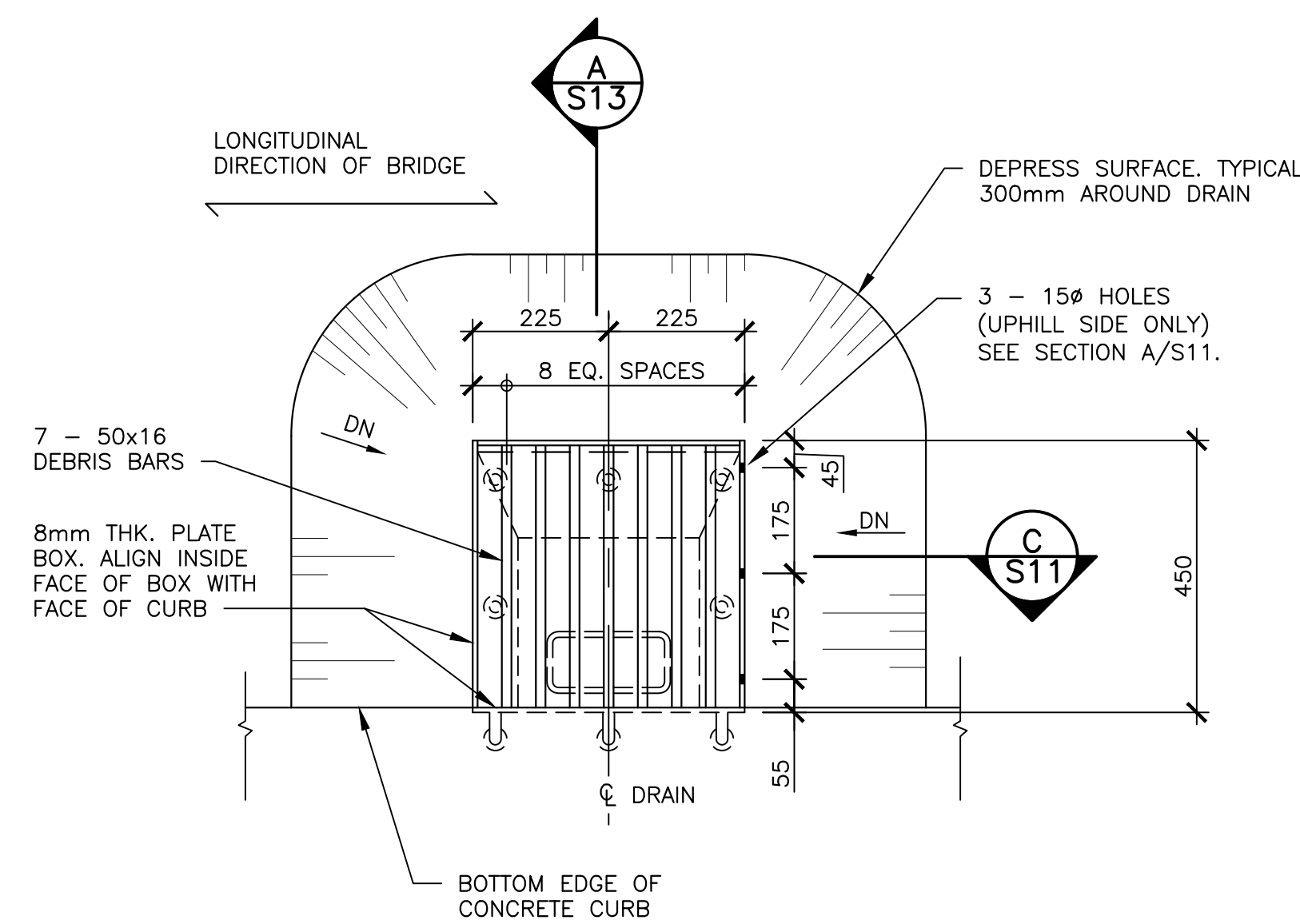


1	ISSUED FOR TENDER	APR 11 2019
revisions		date
project	McKENZIE'S BROOK BRIDGE REPLACEMENT	
drawing	GROS MORNE NATIONAL PARK	
designed	W. ENMAN	
drawn	D. BEAMAN	
approved		
date		
Tender	Soumission	
Project Manager	Administrateur de projets	
project number	1268	
drawing no.	S9	

1	ISSUED FOR TENDER	APR 11 2019
revisions		date
project	McKENZIE'S BROOK BRIDGE REPLACEMENT	
	GROS MORNE NATIONAL PARK	
drawing	dessein	

TRAFFIC BARRIER AND DECK DRAINAGE DETAILS

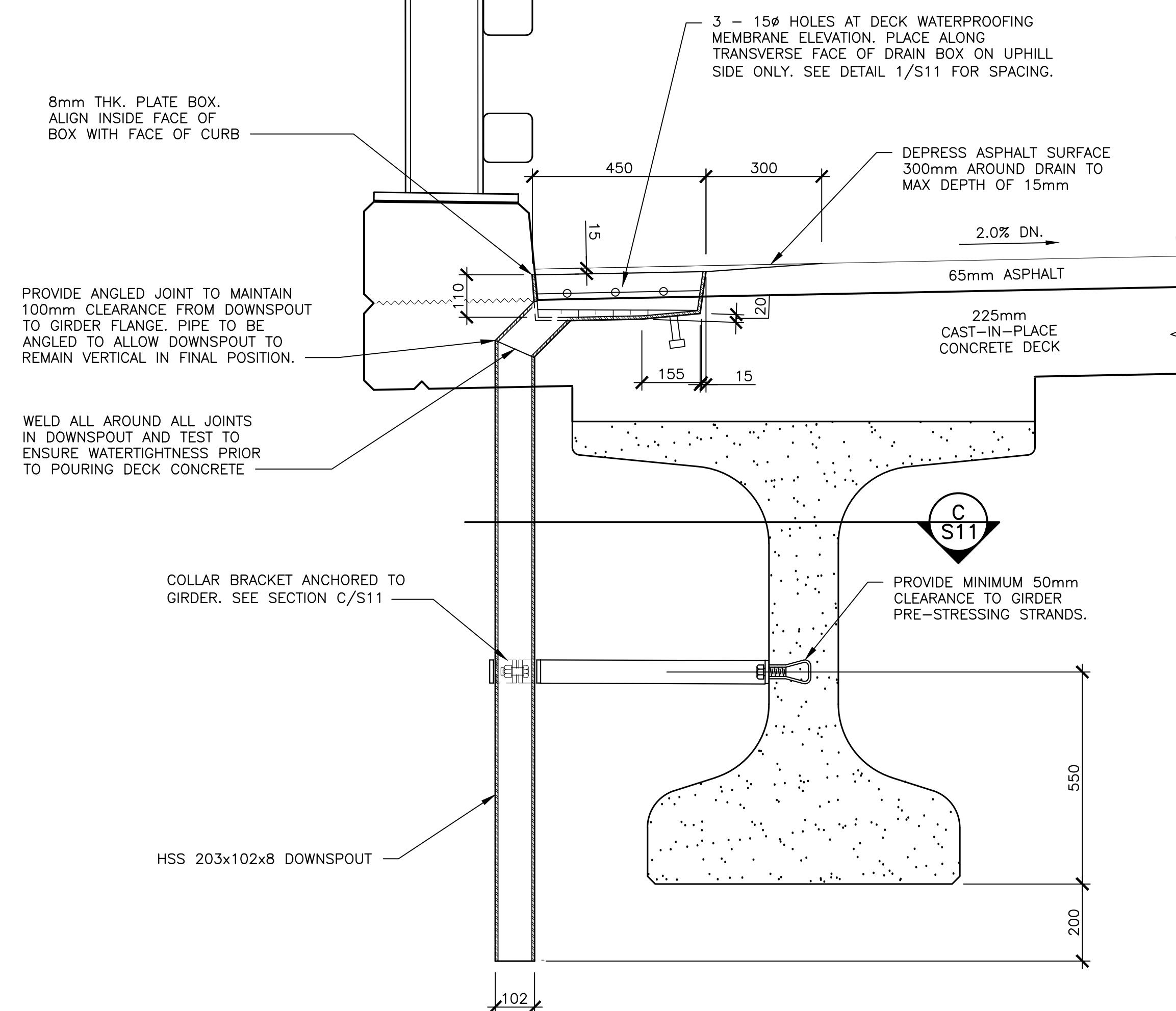
designed	W. ENMAN	conçu
date	2018/10	
drawn	D. BEAMAN	dessiné
date	2018/10	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	1268	no. du projet
drawing no.	S11	no. du dessin



TYPICAL DECK DRAIN PLAN

SCALE : 1:10

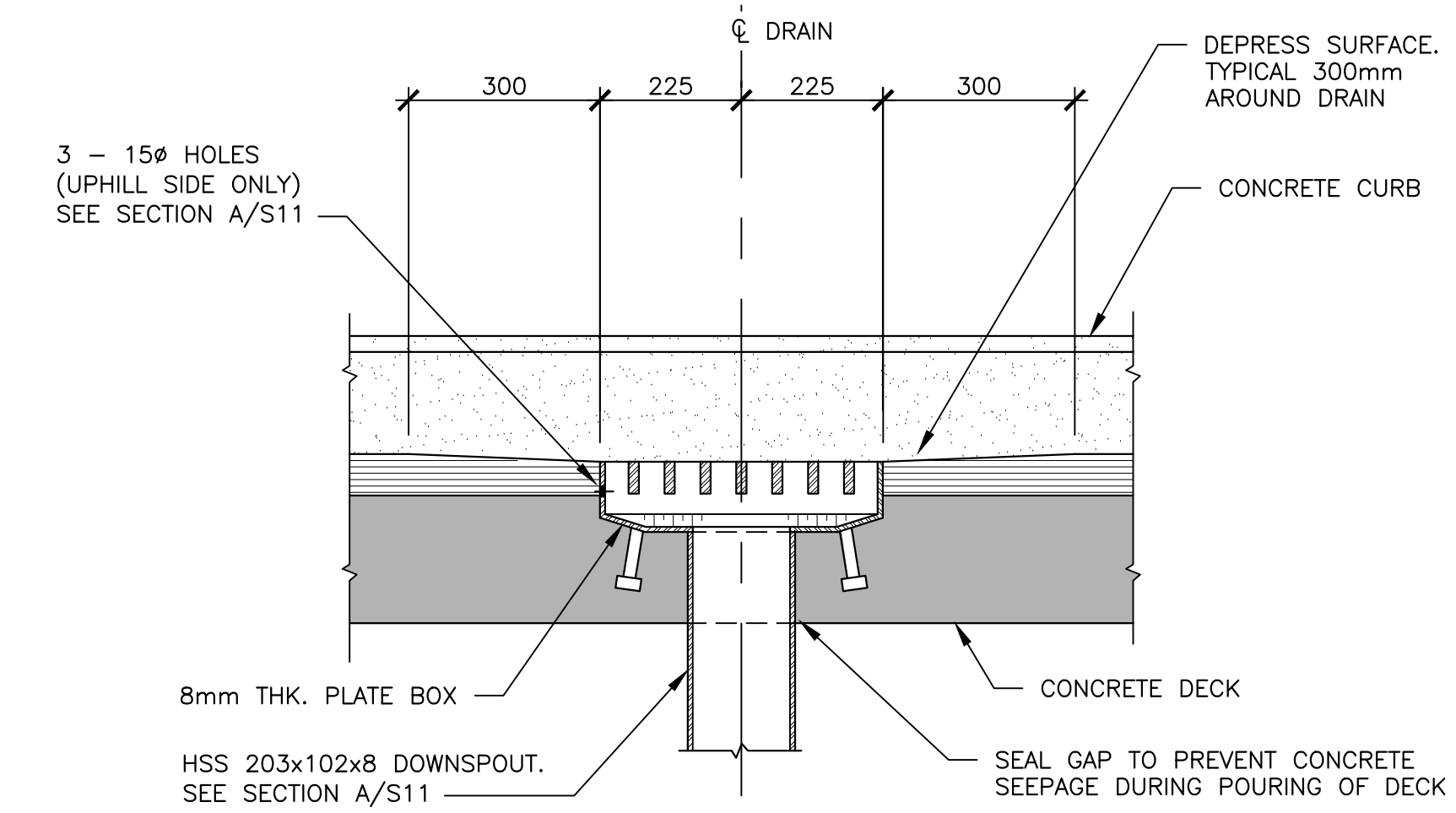
1/S11



TYPICAL DECK DRAIN SECTION

SCALE : 1:10

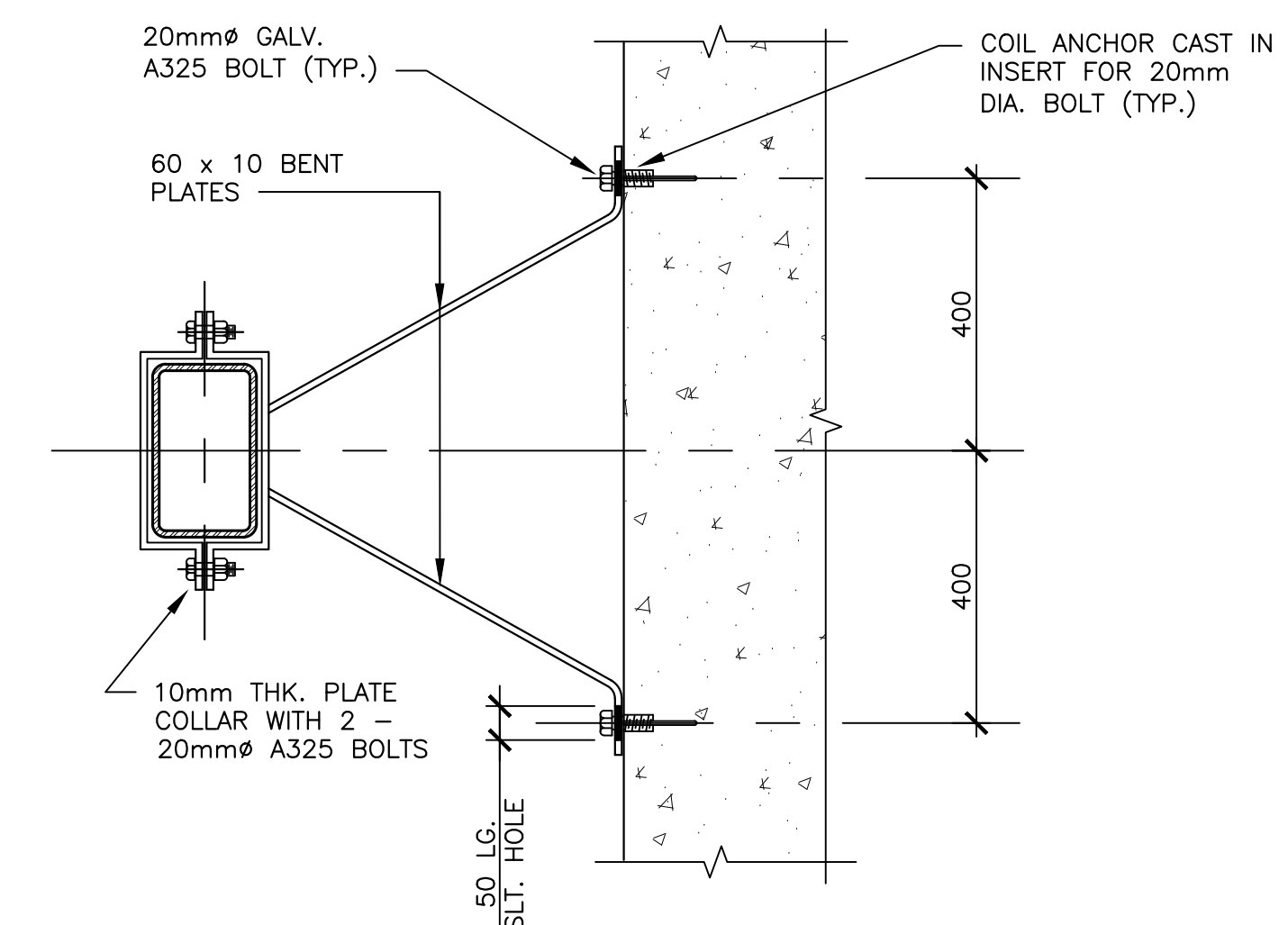
A/S11



TYPICAL DECK DRAIN SECTION

SCALE : 1:10

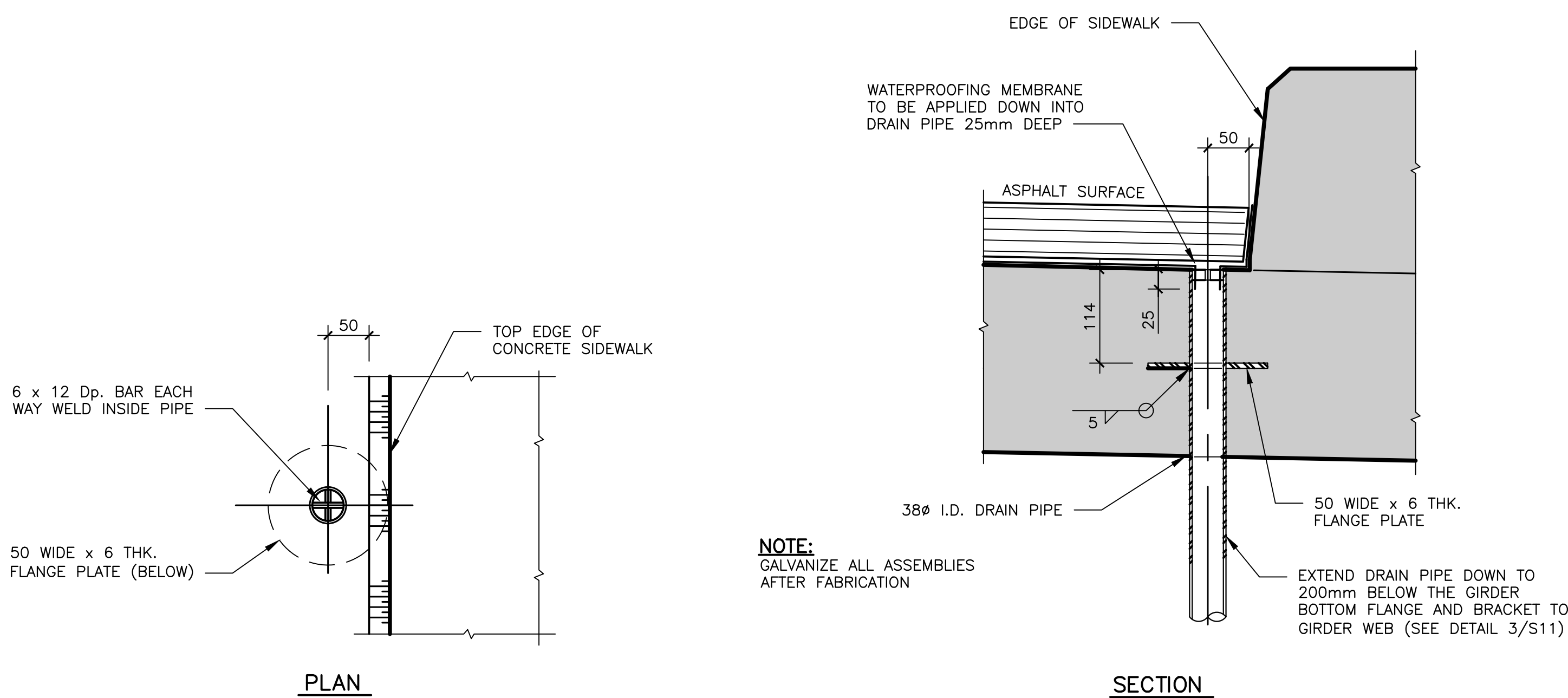
B/S11



DECK DRAIN DOWNSPOUT BRACKET

SCALE : 1:10

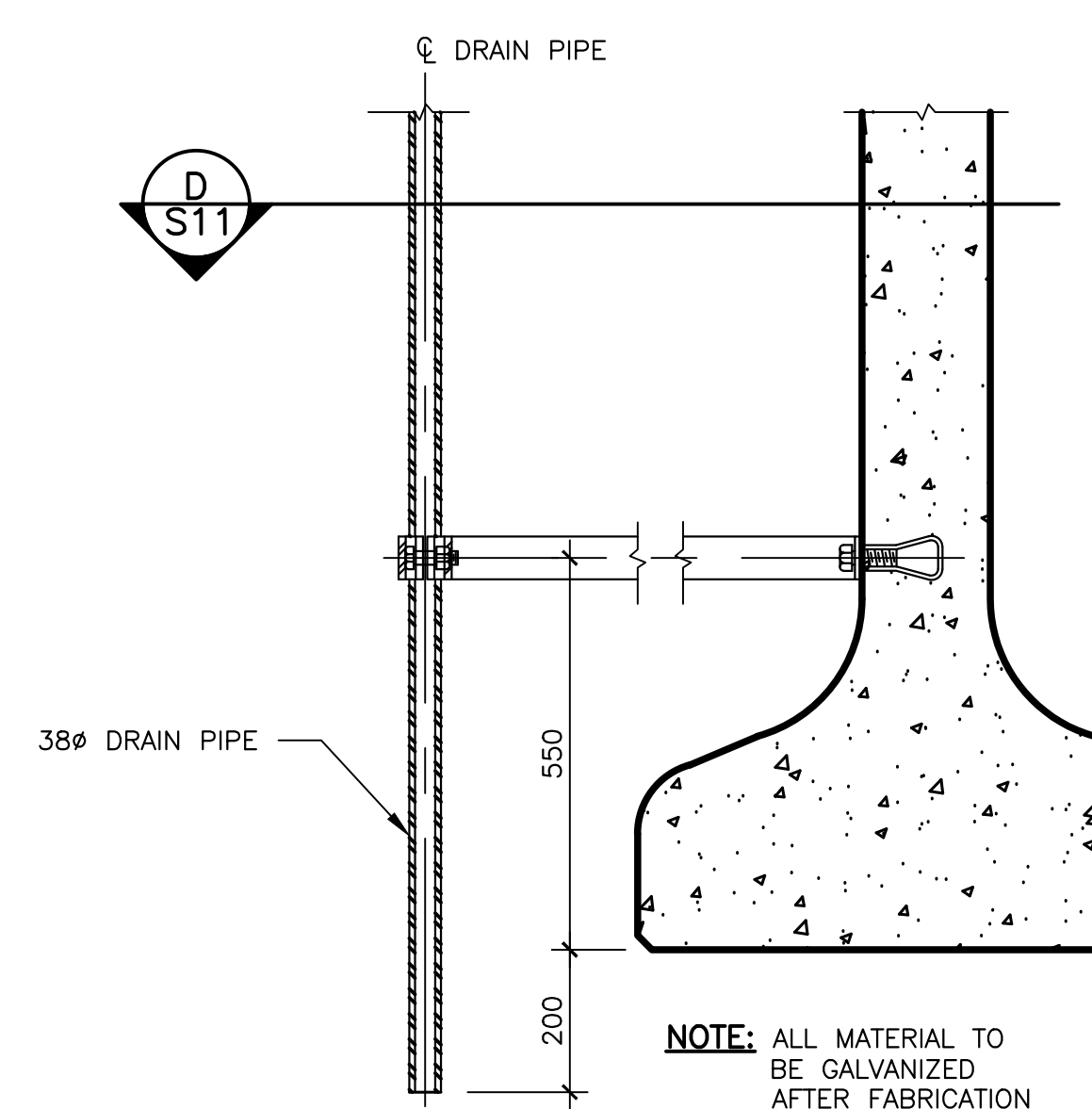
C/S11



MEMBRANE DRAIN DETAIL

SCALE : 1:5

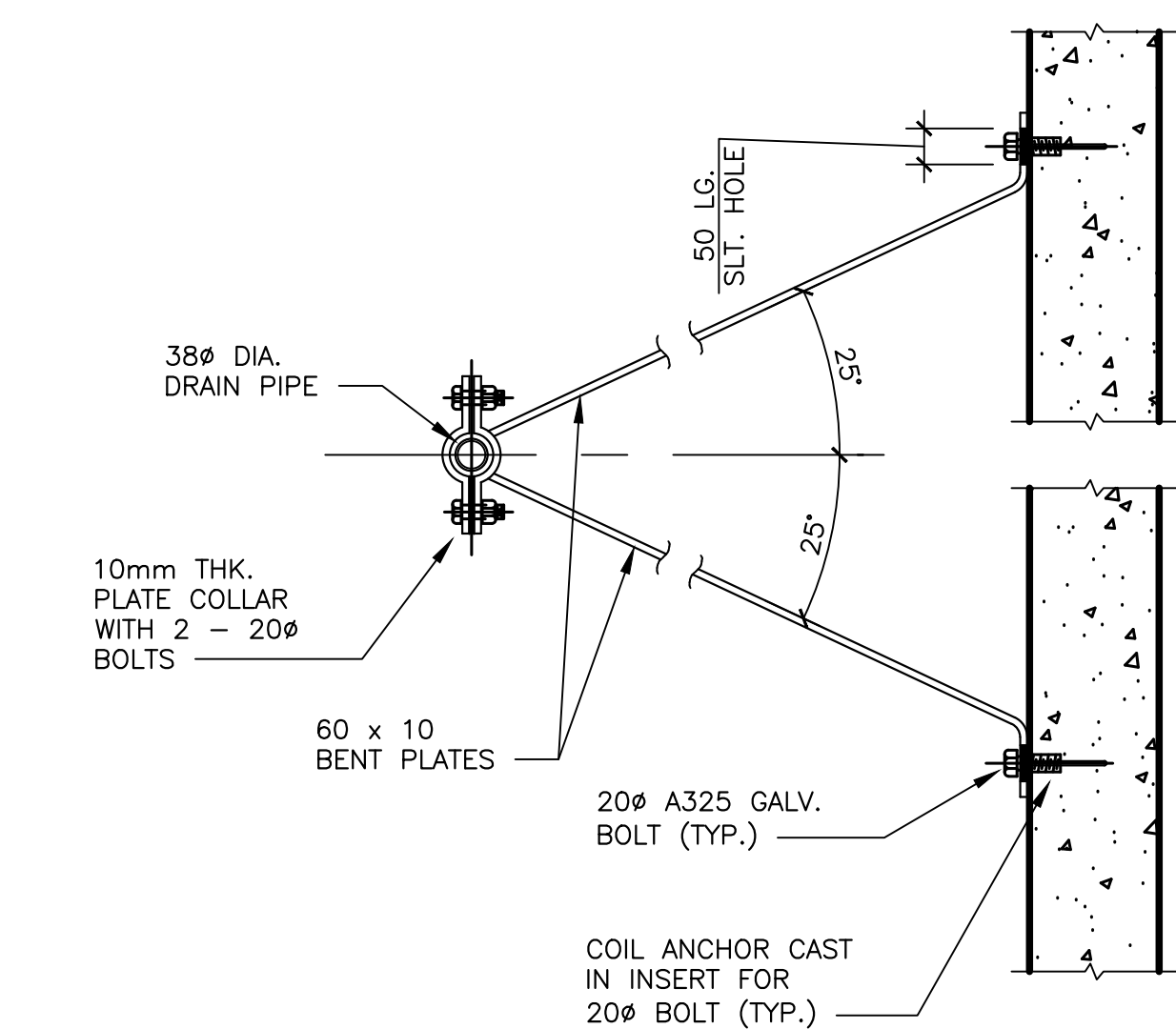
2/S11



MEMBRANE DRAIN DOWNSPOUT DETAIL

SCALE : 1:10

3/S11



MEMBRANE DRAIN DOWNSPOUT SECTION

SCALE : 1:10

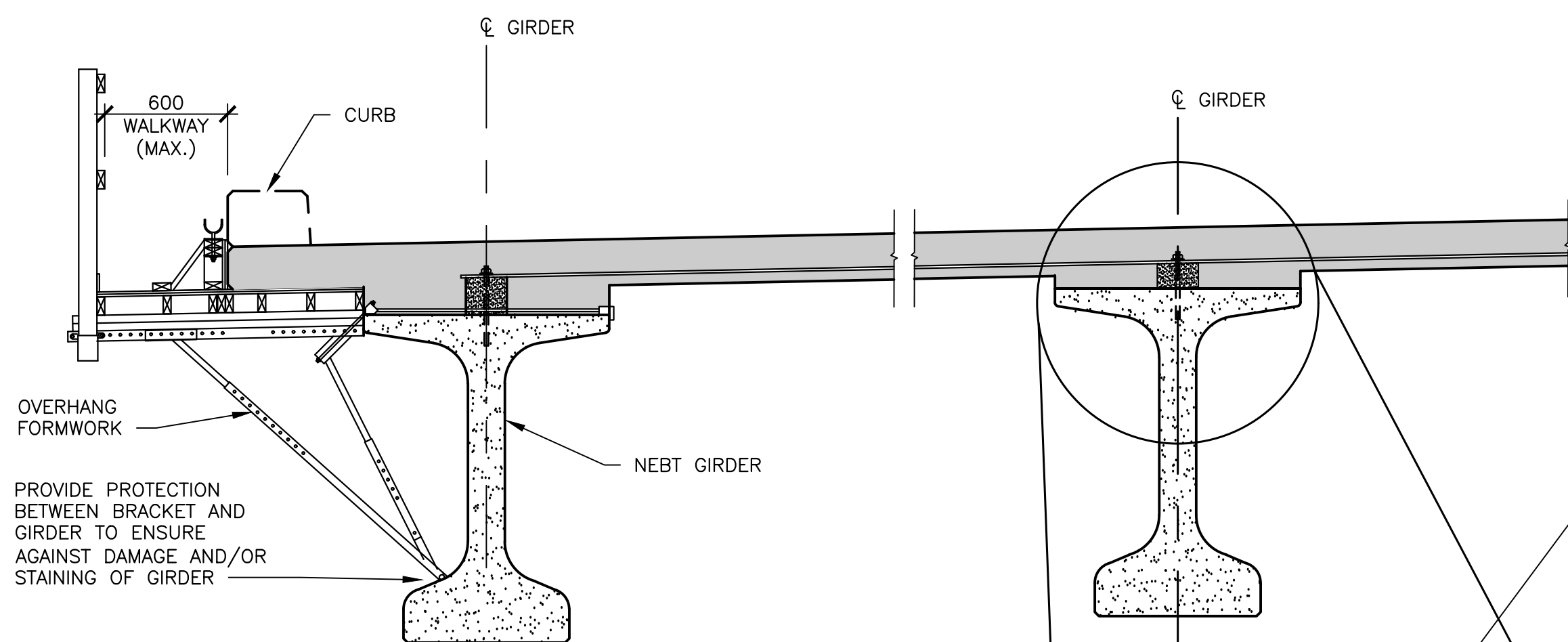
D/S11

1	ISSUED FOR TENDER	APR 11 2019
revisions		date

project
**McKENZIE'S BROOK
BRIDGE REPLACEMENT**
**GROS MORNE
NATIONAL PARK**
drawing
desin

TYPICAL DETAILS

designed	W. ENMAN	conçu
date	2018/10	
drown	D. BEAMAN	dessiné
date	2018/10	
approved		approuvé
date		
Tender		Soumission
Project Manager		Administrateur de projets
project number		no. du projet
	1268	
drawing no.		no. du dessin
	S12	



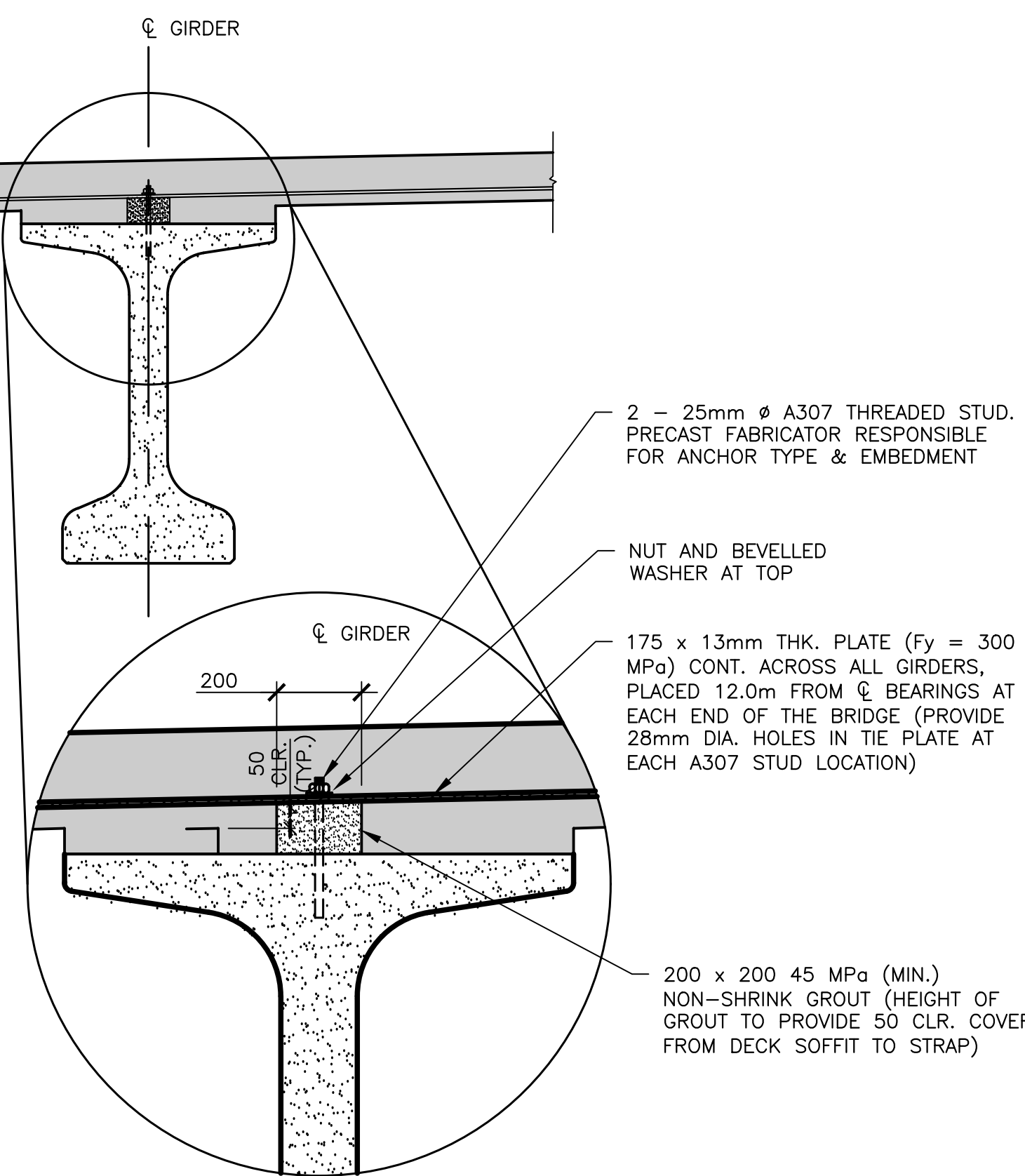
TYPICAL DECK OVERHANG FORMWORK
AND GIRDER STABILITY DETAIL

SCALE : N.T.S.

1
S12

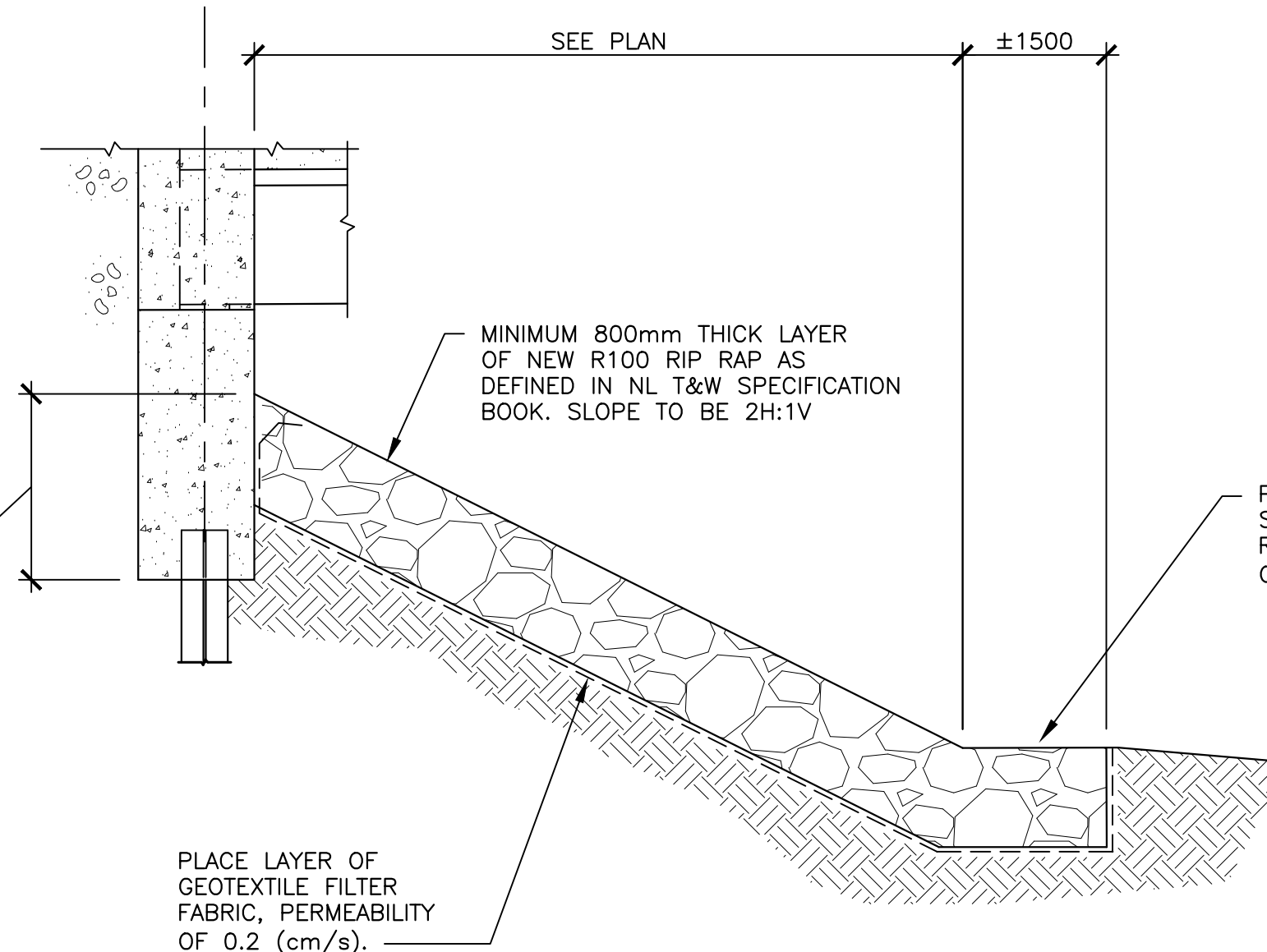
NOTES

1. ALL DECK FORMWORK SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN NEWFOUNDLAND AND LABRADOR FOR THE CURRENT CALENDAR YEAR.
2. THE OVERHANG BRACKETS SHALL BE ORIENTED AS INDICATED UNLESS AN ALTERNATE DETAIL IS ACCEPTED IN WRITING BY THE ENGINEER.
3. OVERHANG BRACKET SPACING SHALL BE LESS THAN OR EQUAL TO 1200mm o.c.
4. TOP FLANGE LATERAL TIES SHALL BE FULLY INSTALLED AS SHOWN PRIOR TO CASTING ANY DECK CONCRETE.
5. MAXIMUM FACTORED SCREED LOAD PER SIDE OF BRIDGE ASSUMED TO BE 15kN.
6. DECK CASTING SHALL PROGRESS IN A BALANCED FASHION BY ESSENTIALLY BALANCING THE WET CONCRETE WEIGHT ON EACH SIDE OF THE GIRDERS. TO ACCOMPLISH THIS, CASTING SHALL PROGRESS ACROSS THE FULL WIDTH OF THE BRIDGE DECK WITH CASTING ADVANCING A MAXIMUM OF 3.0m± ON ONE SIDE OF A GIRDER VERSUS THE OTHER SIDE OF THE SAME GIRDER. THIS BALANCED PROCEDURE IS ESSENTIAL TO PREVENT OVER TURNING EFFECTS RESULTING FROM OVERHANG LOADS.
7. THESE DETAILS ARE PROVIDED TO THE CONTRACTOR FOR GUIDANCE ONLY. AS STATED ON GIRDER DRAWINGS, THE STABILITY OF GIRDERS DURING ALL PHASES OF CONSTRUCTION REMAINS THE CONTRACTOR'S RESPONSIBILITY.
8. ALL STABILITY TIE ASSEMBLIES SHALL BE GALVANIZED AFTER FABRICATION AS PER THE NSTIR STANDARD SPECIFICATION.



TYP. GIRDER STABILITY TIE CONNECTION
N.T.S.

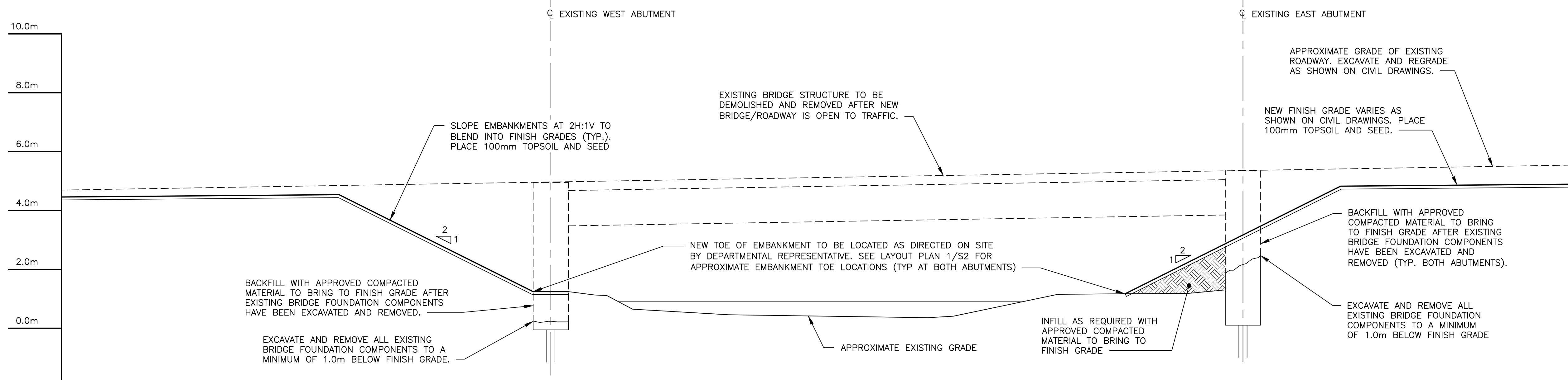
CONTRACTOR IS TO ENSURE
MINIMUM COVER OF 1600mm IS
OBTAINED (TOP OF RIP RAP TO
u/s ABUTMENT WALL) TO PROVIDE
ADEQUATE FROST PROTECTION



ABUTMENT RIP RAP
SLOPE PROTECTION

NOT TO SCALE

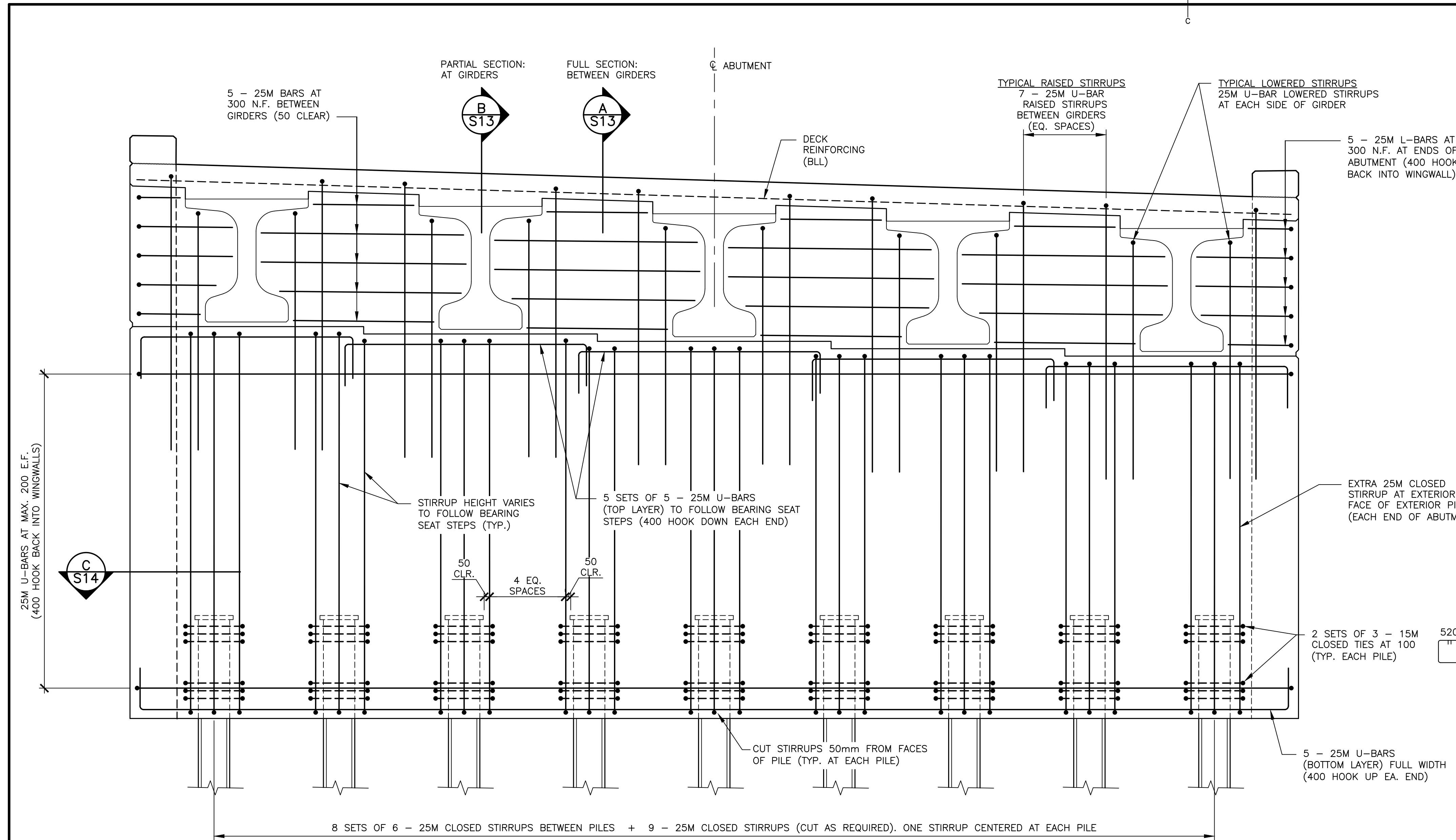
2
S12



EMBANKMENT REGRADING AT
REMOVED EXISTING BRIDGE

NOT TO SCALE

A
S12



REINFORCING LEGEND:

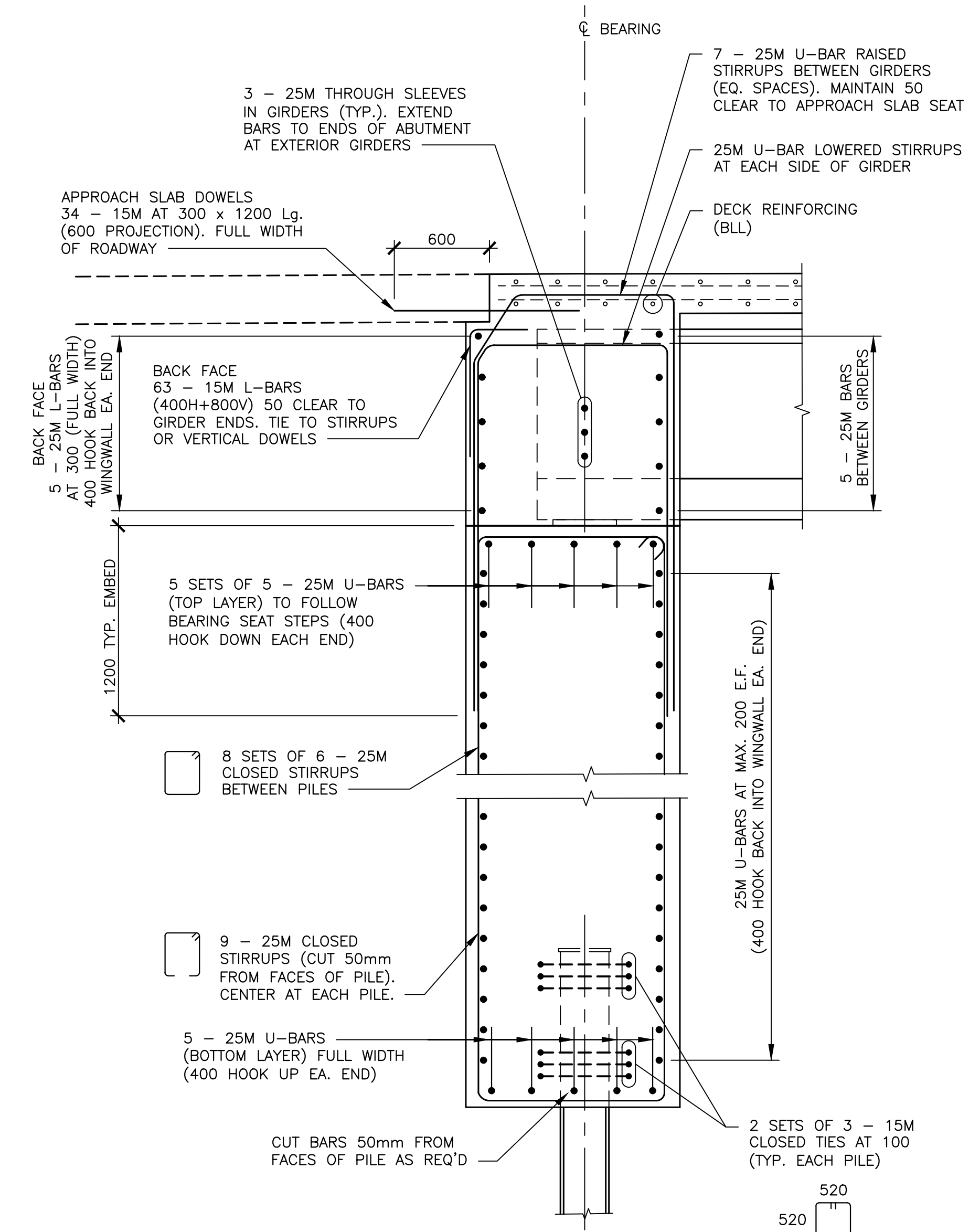
N.F. — NEAR FACE	T.U.L. — TOP UPPER LAYER
F.F. — FAR FACE	T.L.L. — TOP LOWER LAYER
E.F. — EACH FACE	B.U.L. — BOTTOM UPPER LAYER
E.W. — EACH WAY	B.L.L. — BOTTOM LOWER LAYER
I.F. — INSIDE FACE	CVR. — COVER
O.F. — OUTSIDE FACE	CLR. — CLEAR

TYPICAL ABUTMENT FRONT ELEVATION
SHOWING NEAR FACE REINFORCEMENT

1
S13

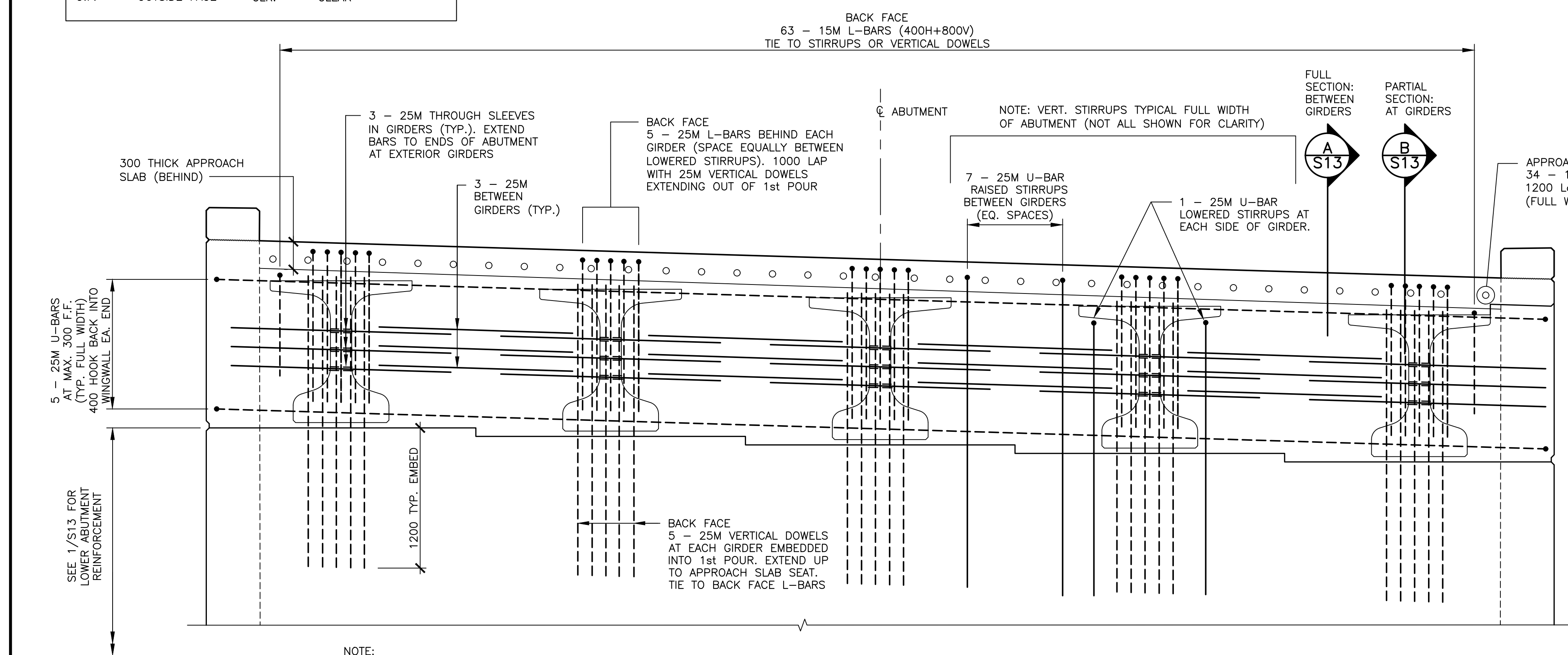
CONCRETE ABUTMENT REINFORCEMENT NOTES:

1. SEE TYPICAL NOTES ON DRAWING S14.



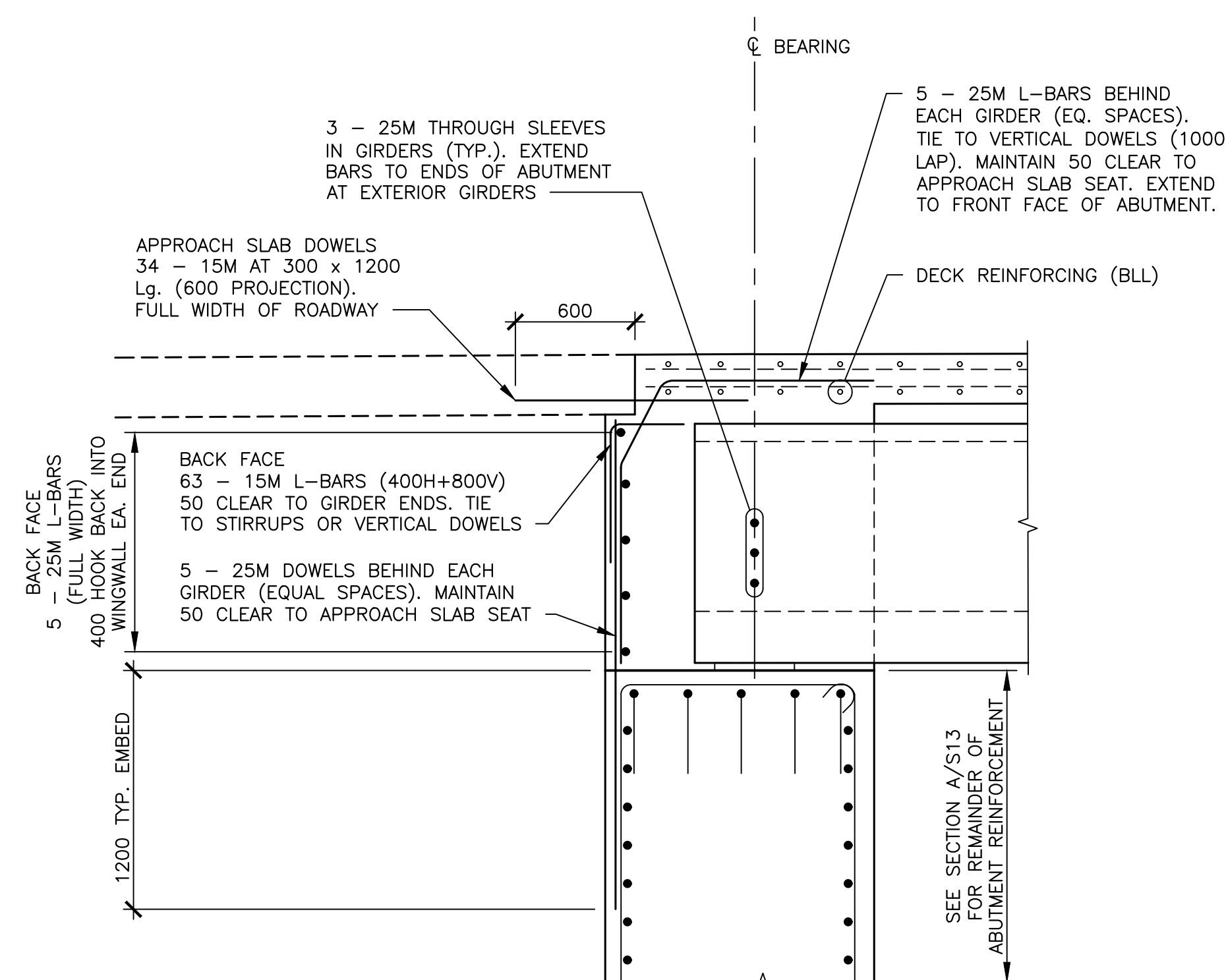
FULL ABUTMENT SECTION
(TYP. BETWEEN GIRDERS)

A
S13



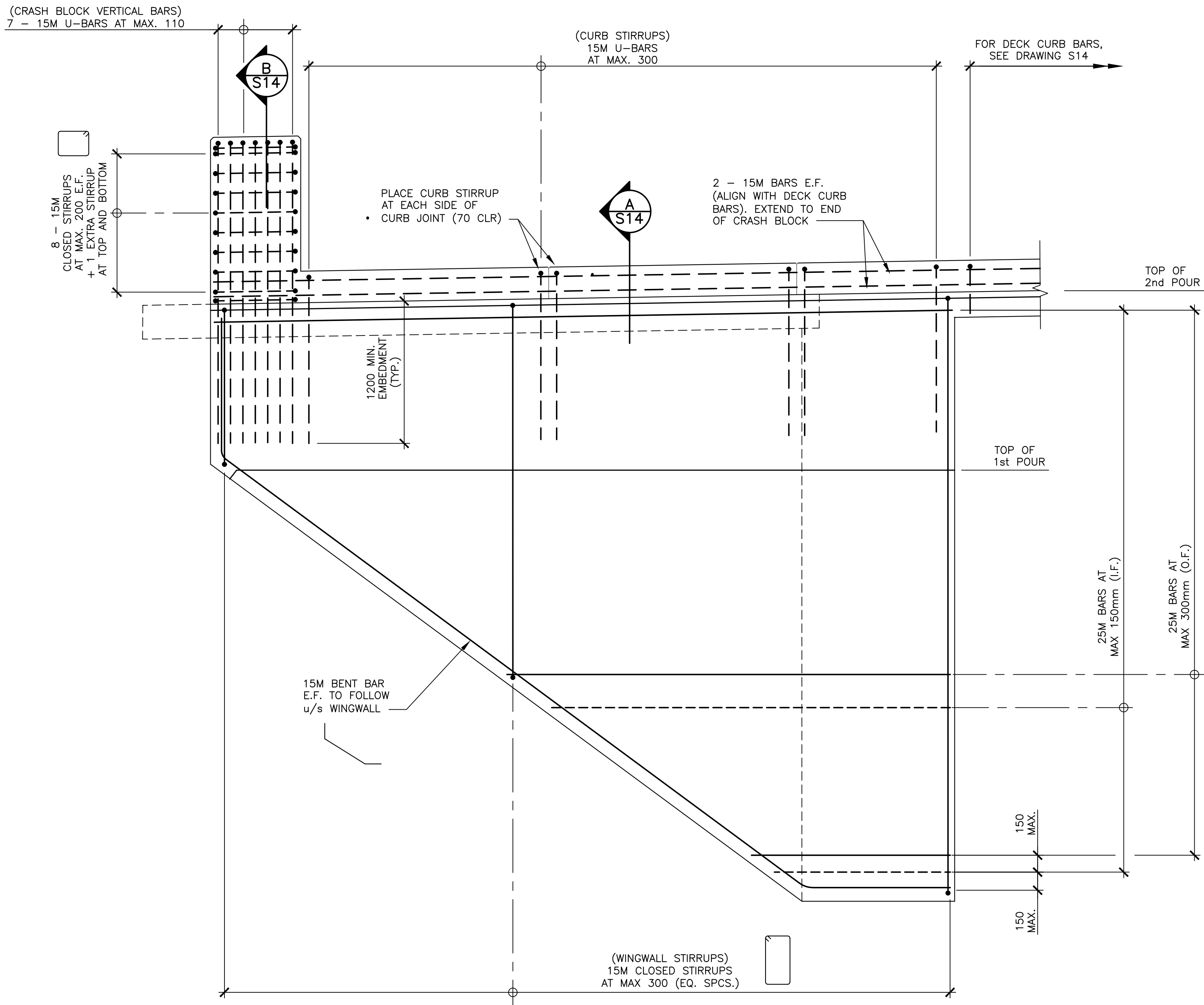
TYPICAL ABUTMENT FRONT ELEVATION
SHOWING MIDDLE & FAR FACE REINFORCEMENT

1A
S13

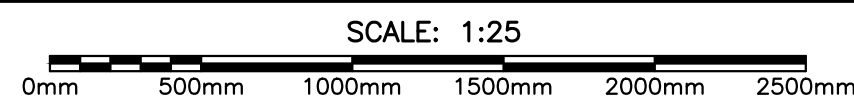


PARTIAL ABUTMENT SECTION
(TYP. AT GIRDERS)

B
S13



WINGWALL w/ CRASH BLOCK REINFORCEMENT
TYPICAL EACH SIDE OF ROADWAY

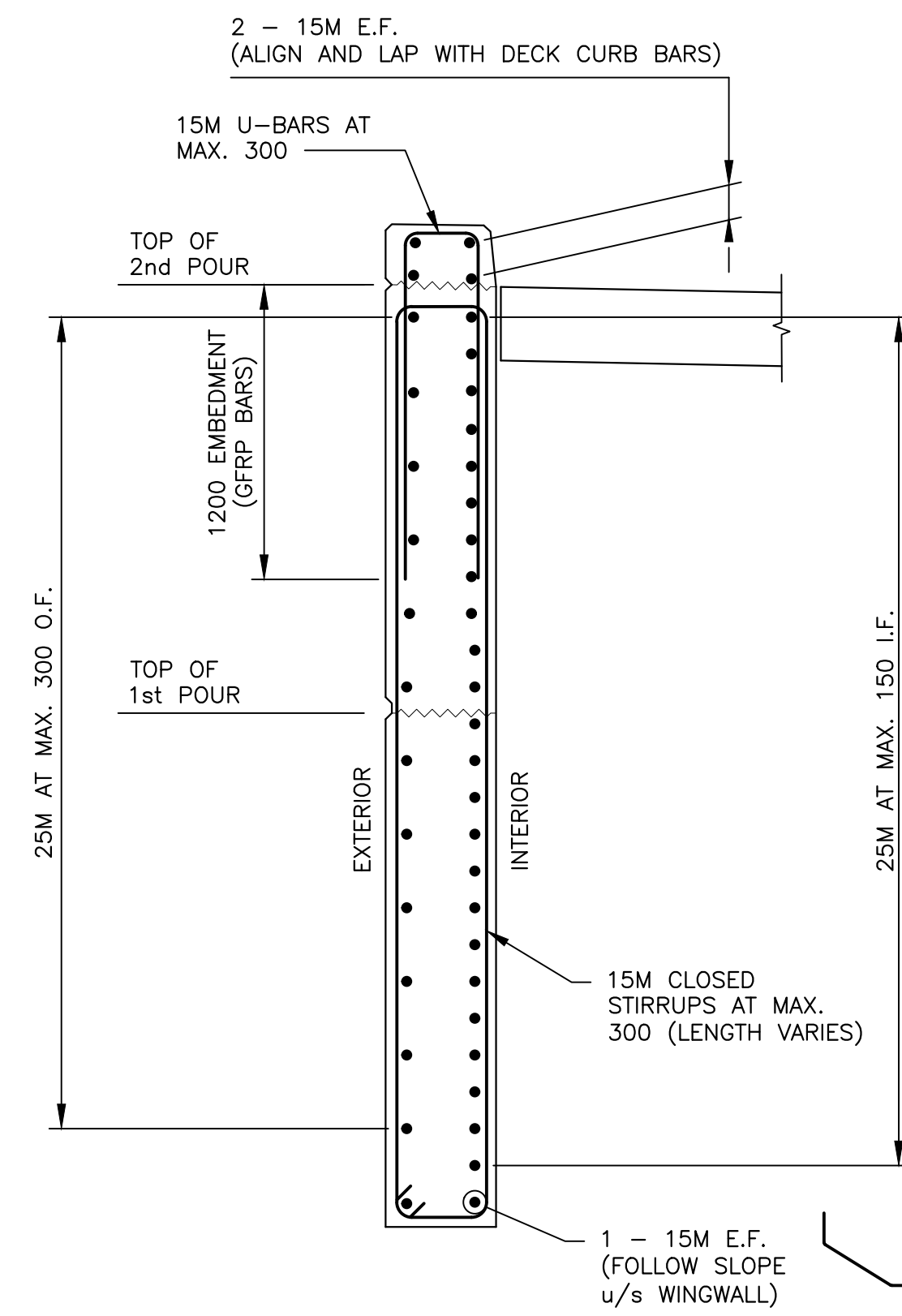


CONCRETE ABUTMENT, WINGWALL & CRASH BLOCK REINFORCEMENT NOTES:

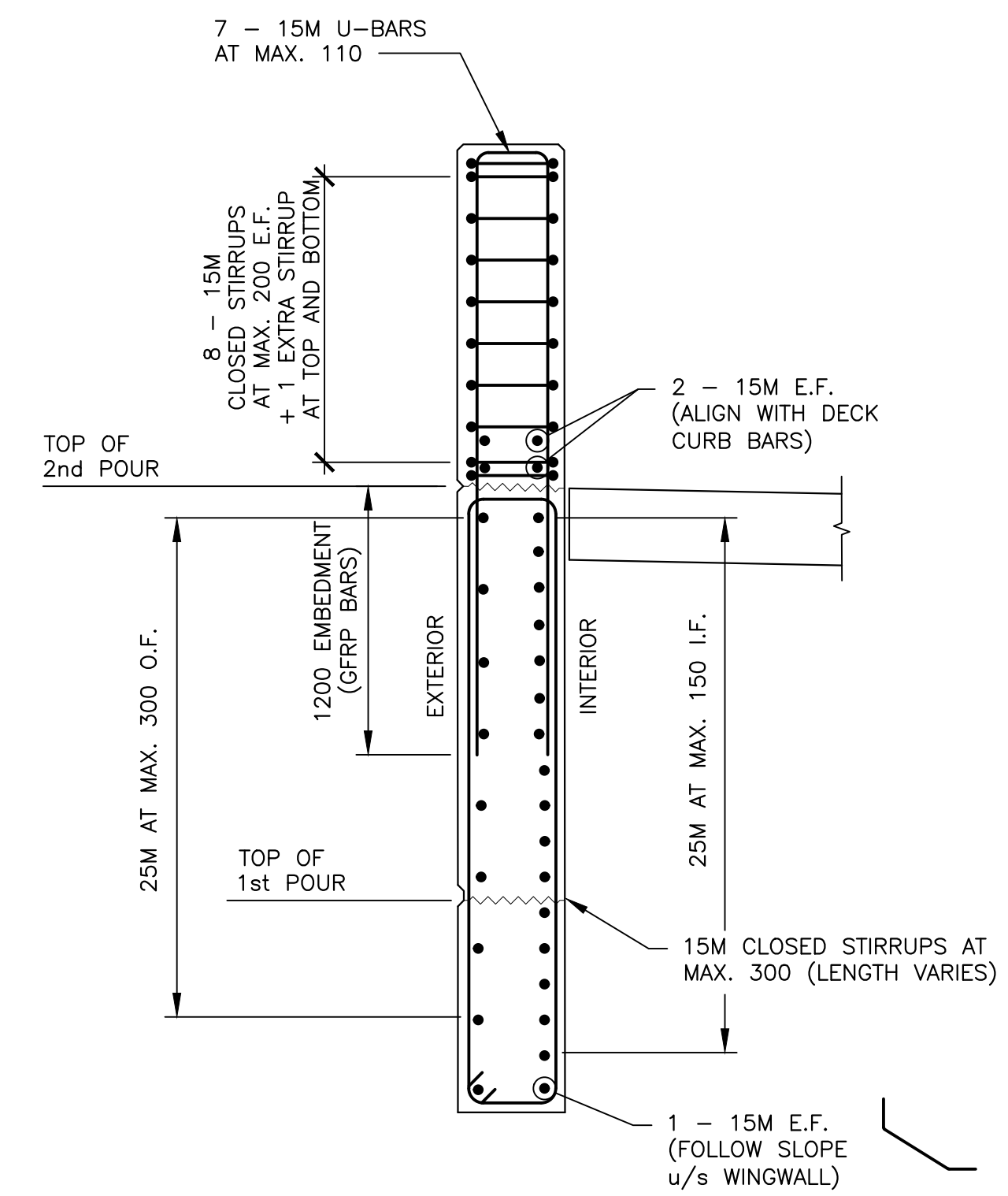
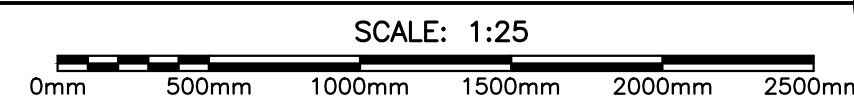
1. CONCRETE COVER TO REINFORCING STEEL TO BE AS FOLLOWS:
CAST AGAINST EARTH - 100mm
ALL OTHER - 70mm
2. REINFORCING STEEL TO SPECIFICATIONS WITH YIELD STRENGTH OF 400 MPa (WELDABLE).
3. UNLESS NOTED OTHERWISE, ALL C.I.P. REINFORCING TO BE HOT-DIPPED GALVANIZED STEEL DEFORMED BARS.
4. ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING FORMWORK OR PLACING CONCRETE.
5. BEND REINFORCING BARS TO R.S.I.C. "STEEL MANUAL OF STANDARD PRACTICE" TYPICAL BAR BENDS.
6. REINFORCING BARS SPLICE AND EMBEDMENT LENGTHS TO BE CLASS "B" AS PER THE CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEWFOUNDLAND AND LABRADOR.
7. ANY ADDITIONAL LAPS NOT SHOWN ON DRAWINGS WHICH ARE REQUIRED FOR CONSTRUCTION PURPOSES ARE TO BE CLASS "B" TENSION SPLICES DESIGNED BY THE CONTRACTOR AS PER THE LATEST EDITION OF THE CHBDC AND ARE TO BE DESIGNED AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEWFOUNDLAND AND LABRADOR.
8. ALL SPLICE AND EMBEDMENT INFORMATION SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW.

REINFORCING LEGEND:

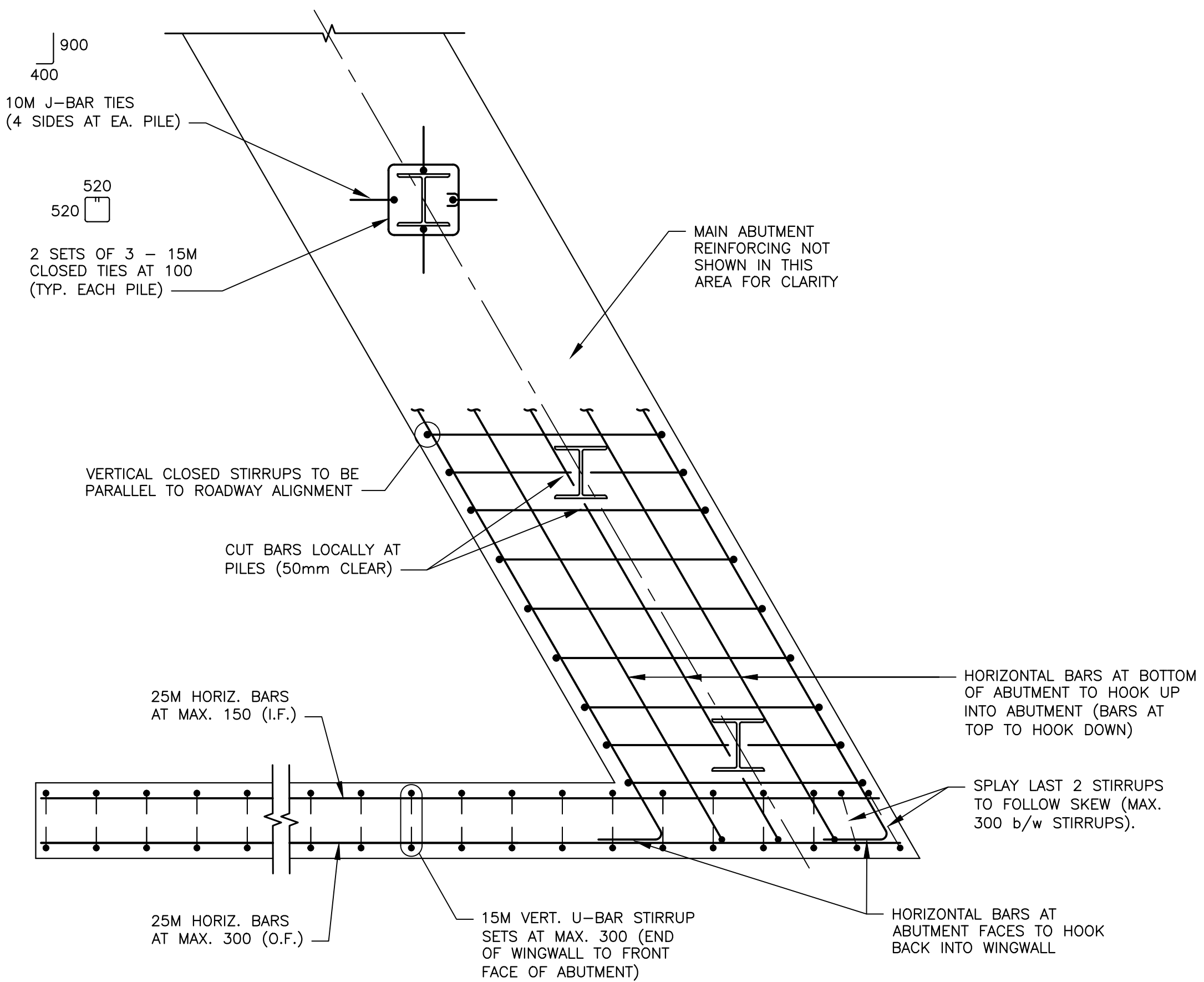
N.F. — NEAR FACE
F.F. — FAR FACE
E.F. — EACH FACE
E.W. — EACH WAY
I.F. — INSIDE FACE
O.F. — OUTSIDE FACE
T.U.L. — TOP UPPER LAYER
T.L.L. — TOP LOWER LAYER
B.U.L. — BOTTOM UPPER LAYER
B.L.L. — BOTTOM LOWER LAYER
CVR. — COVER
CLR. — CLEAR



WINGWALL SECTION AT CURB



WINGWALL SECTION
AT CRASH BLOCK



WINGWALL / ABUTMENT
INTERFACE LAYOUT PLAN



1	ISSUED FOR TENDER	APR 11 2019
revisions		date

project

McKENZIE'S BROOK
BRIDGE REPLACEMENT

GROS MORNE
NATIONAL PARK

drawing

desain

WINGWALL
REINFORCEMENT
DETAILS

designed W. ENMAN

conçu

date 2018/10

drawn D. BEAMAN

dessiné

date 2018/10

approved

approuvé

date

Tender

Soumission

Project Manager

Administrateur de projets

project number

no. du projet

1268

drawing no.

no. du dessin

S14

1	ISSUED FOR TENDER	APR 11 2019
revisions		date

project

McKENZIE'S BROOK
BRIDGE REPLACEMENT

GROS MORNE
NATIONAL PARK

drawing

DECK
REINFORCEMENT
PLAN AND DETAILS

designed W. ENMAN

date 2018/10

drawn D. BEAMAN

date 2018/10

approved

date

Tender

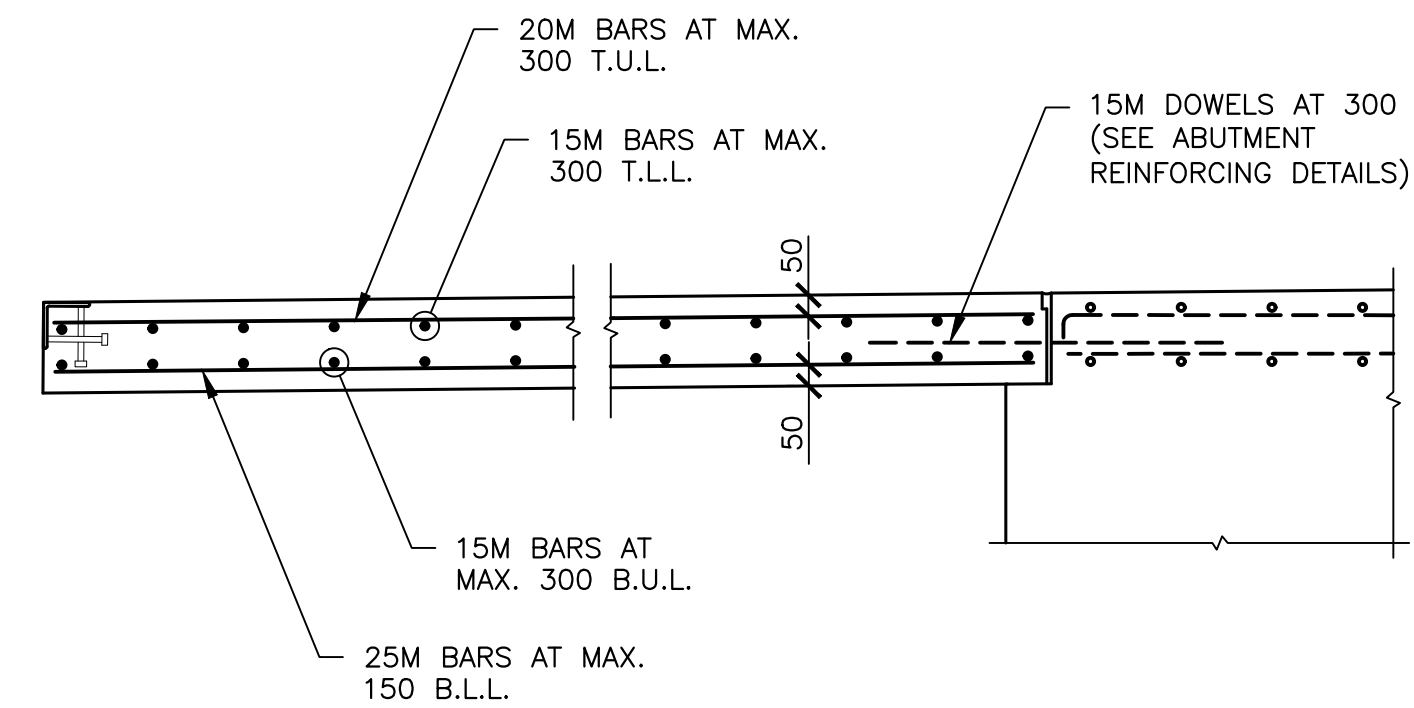
Project Manager

project number

1268

drawing no.

S15



APPROACH SLAB REINFORCEMENT

SCALE: 1:25

0mm 500mm 1000mm 1500mm 2000mm 2500mm

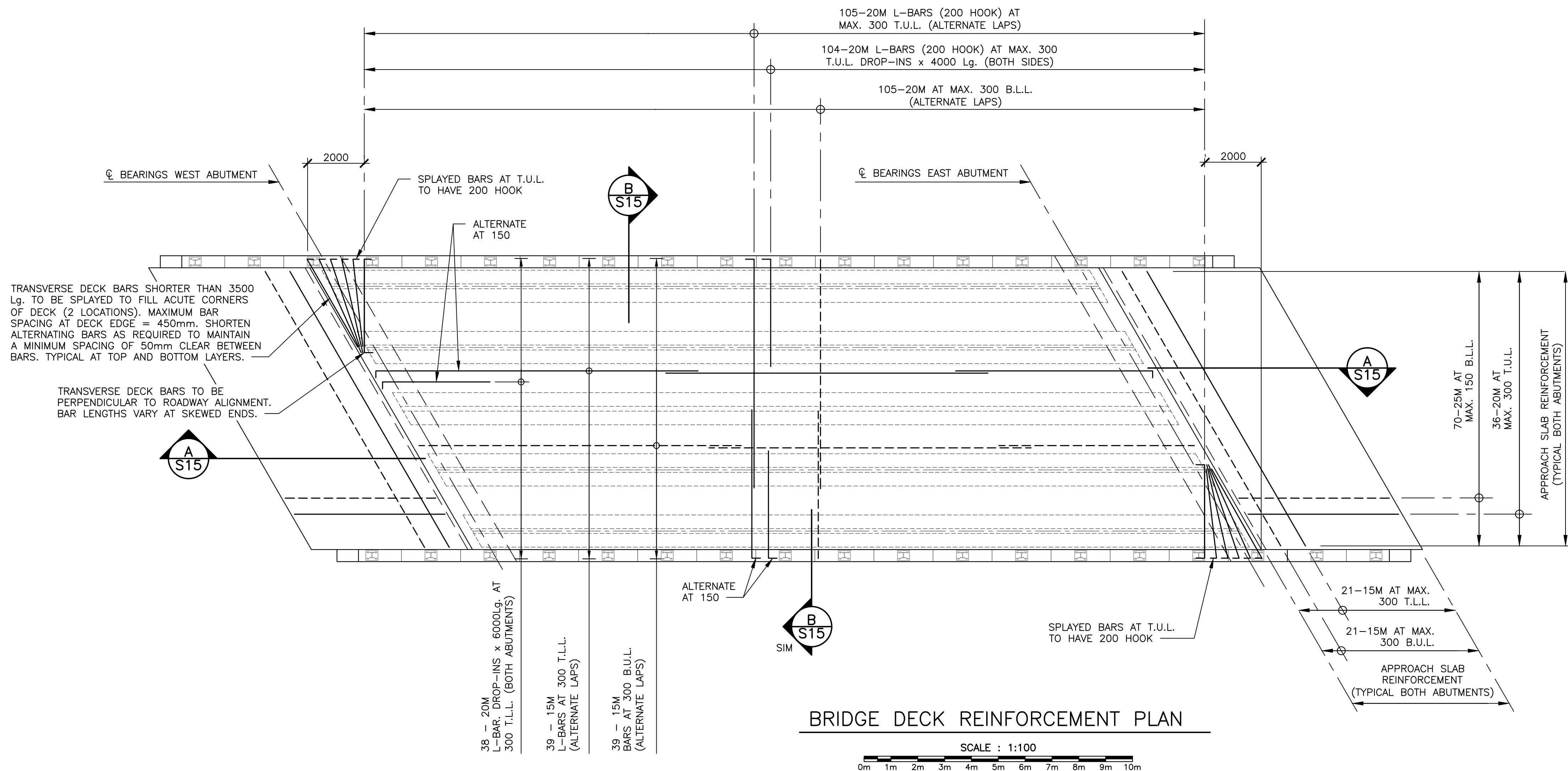
A
S15

CONCRETE DECK REINFORCEMENT NOTES:

- UNLESS NOTED OTHERWISE, ALL CONCRETE DECK, CURB AND APPROACH SLAB REINFORCING TO BE HOT-DIPPED GALVANIZED STEEL DEFORMED BARS.
- CONCRETE COVER TO REINFORCING STEEL TO BE AS FOLLOWS:
TOP OF DECK - 70mm
u/s DECK - 50mm
ALL OTHER - 70mm
- REINFORCING STEEL TO SPECIFICATIONS WITH YIELD STRENGTH OF 400 MPa (WELDABLE).
- ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING FORMWORK OR PLACING CONCRETE.
- BEND REINFORCING BARS TO R.S.I.C. "STEEL MANUAL OF STANDARD PRACTICE" TYPICAL BAR BENDS.
- REINFORCING BARS SPlice AND EMBEDMENT LENGTHS TO BE CLASS "B" AS PER THE CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEWFOUNDLAND AND LABRADOR.
- ANY ADDITIONAL LAPS NOT SHOWN ON DRAWINGS WHICH ARE REQUIRED FOR CONSTRUCTION PURPOSES ARE TO BE CLASS "B" TENSION SPLICES DESIGNED BY THE CONTRACTOR AS PER THE LATEST EDITION OF THE CHBDC AND ARE TO BE DESIGNED AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEWFOUNDLAND AND LABRADOR.
- ALL SPlice AND EMBEDMENT INFORMATION SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW.

REINFORCING LEGEND:

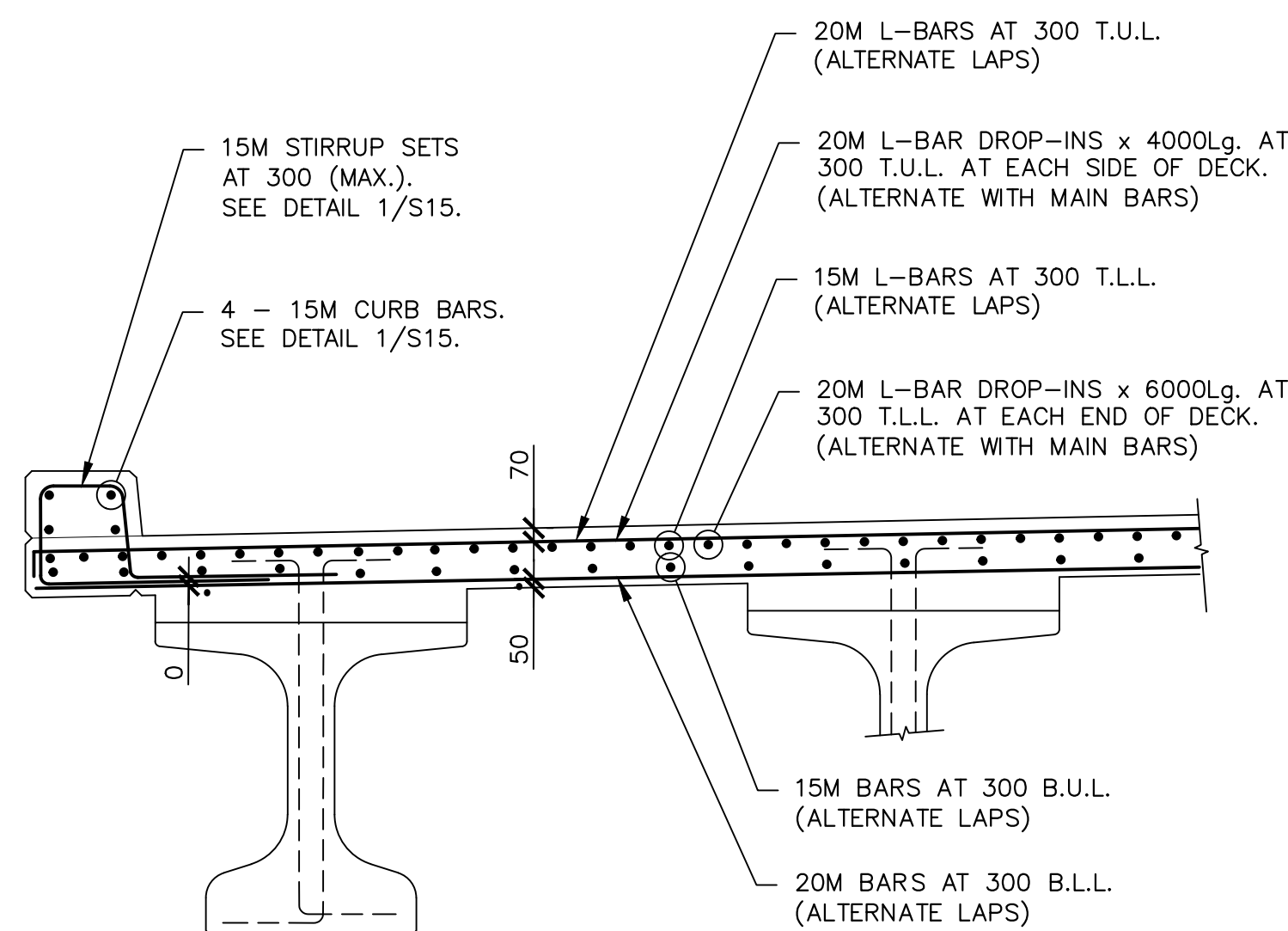
N.F. — NEAR FACE
F.F. — FAR FACE
E.F. — EACH FACE
E.W. — EACH WAY
I.F. — INSIDE FACE
O.F. — OUTSIDE FACE
T.U.L. — TOP UPPER LAYER
T.L.L. — TOP LOWER LAYER
B.U.L. — BOTTOM UPPER LAYER
B.L.L. — BOTTOM LOWER LAYER
CVR. — COVER
CLR. — CLEAR



BRIDGE DECK REINFORCEMENT PLAN

SCALE : 1:100

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

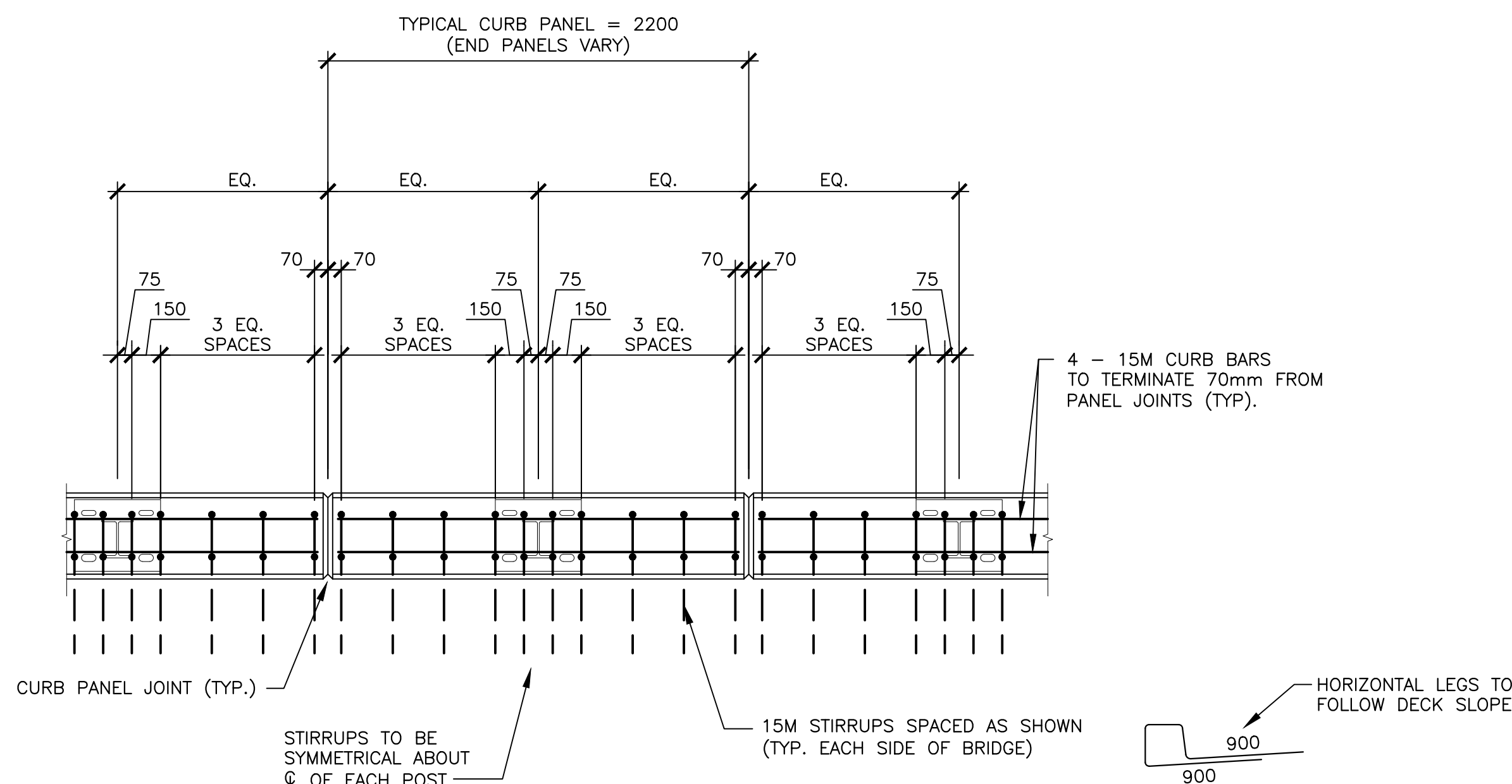


TYPICAL DECK AND CURB REINFORCEMENT

SCALE: 1:25

0mm 500mm 1000mm 1500mm 2000mm 2500mm

B
S15



TYPICAL CURB REINFORCEMENT LAYOUT

SCALE: 1:25

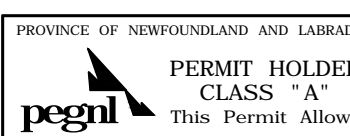
0mm 500mm 1000mm 1500mm 2000mm 2500mm

1
S15

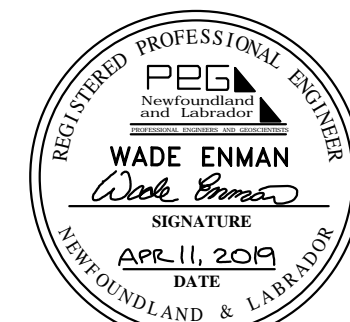




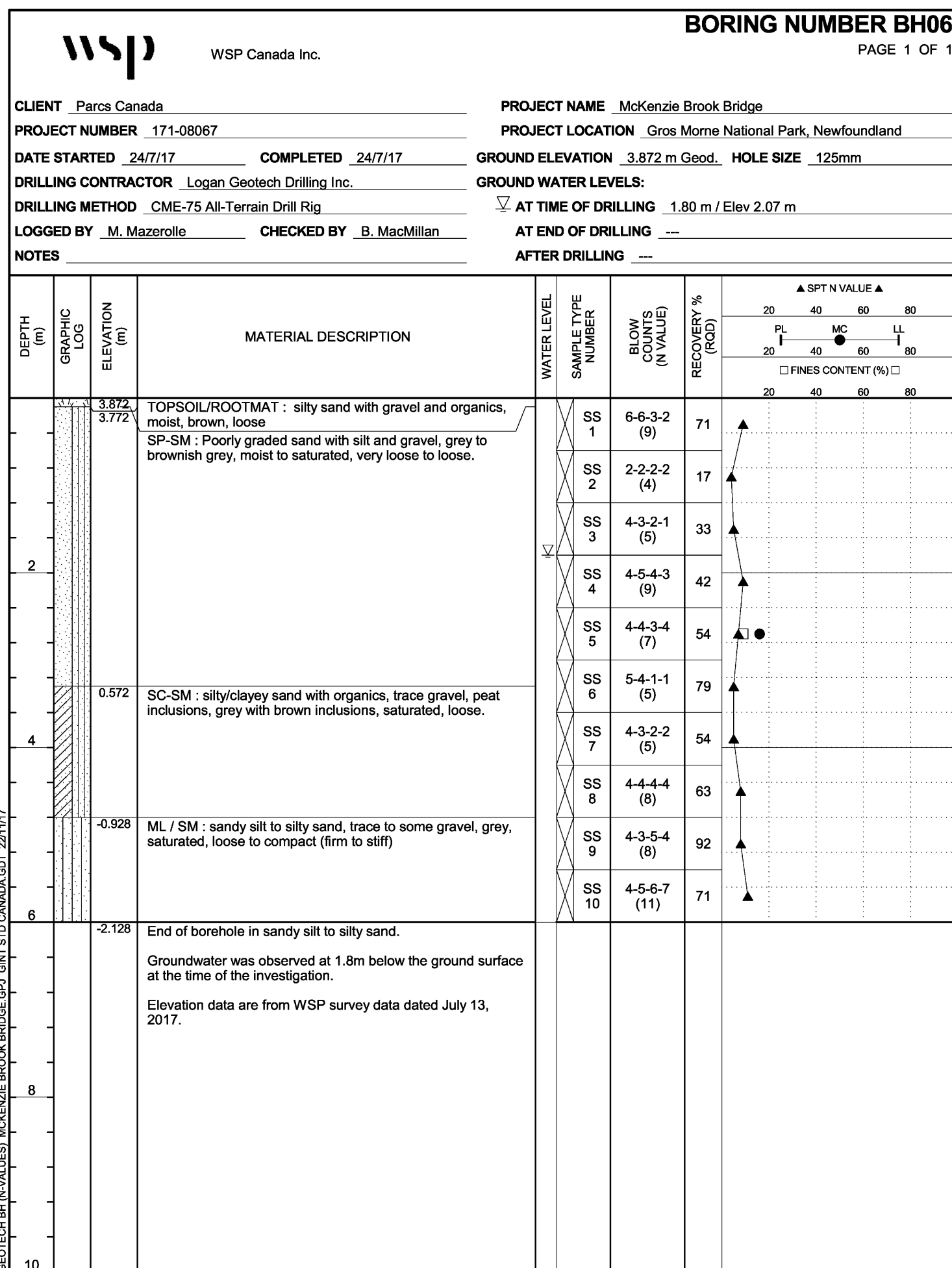
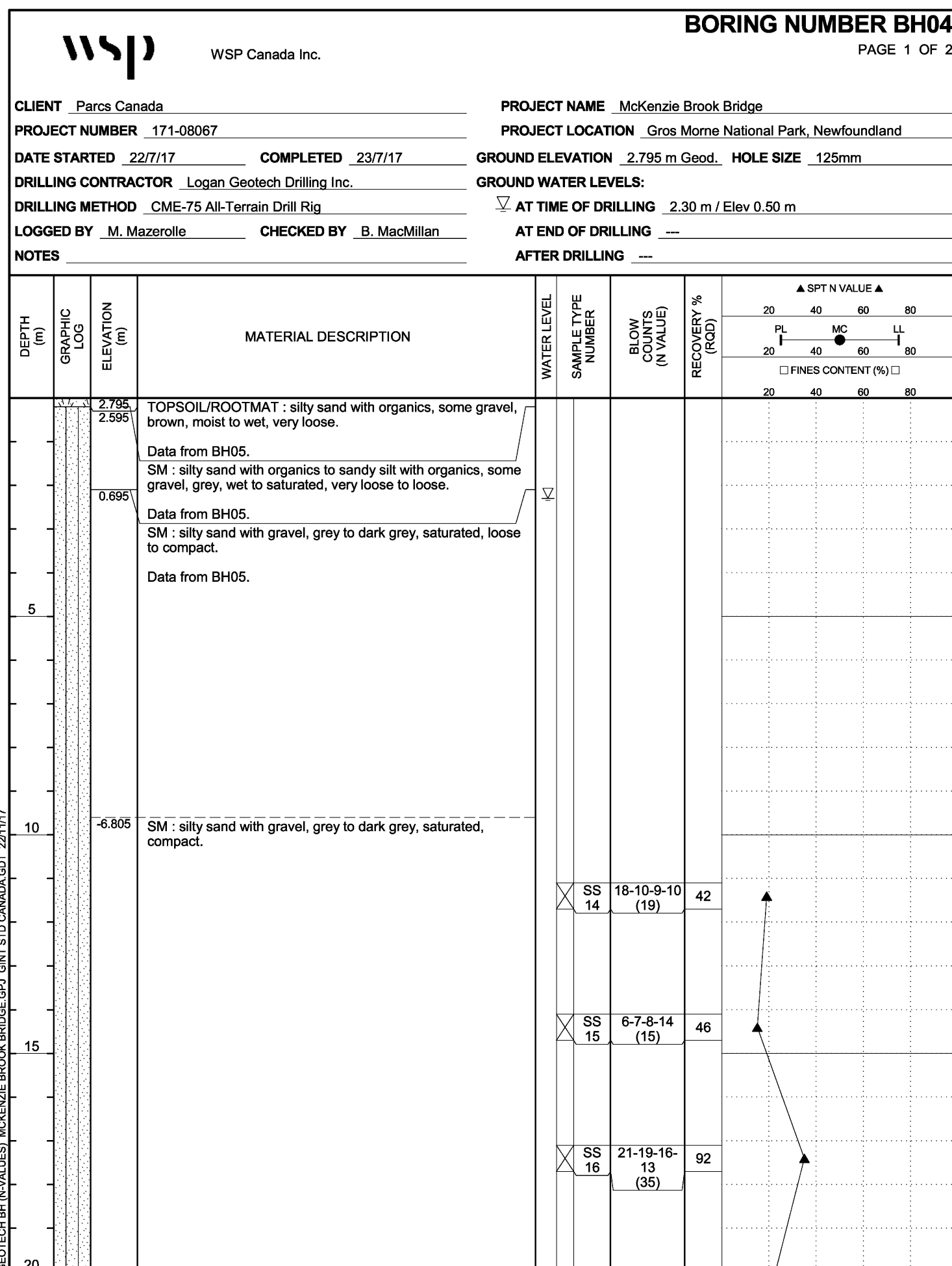
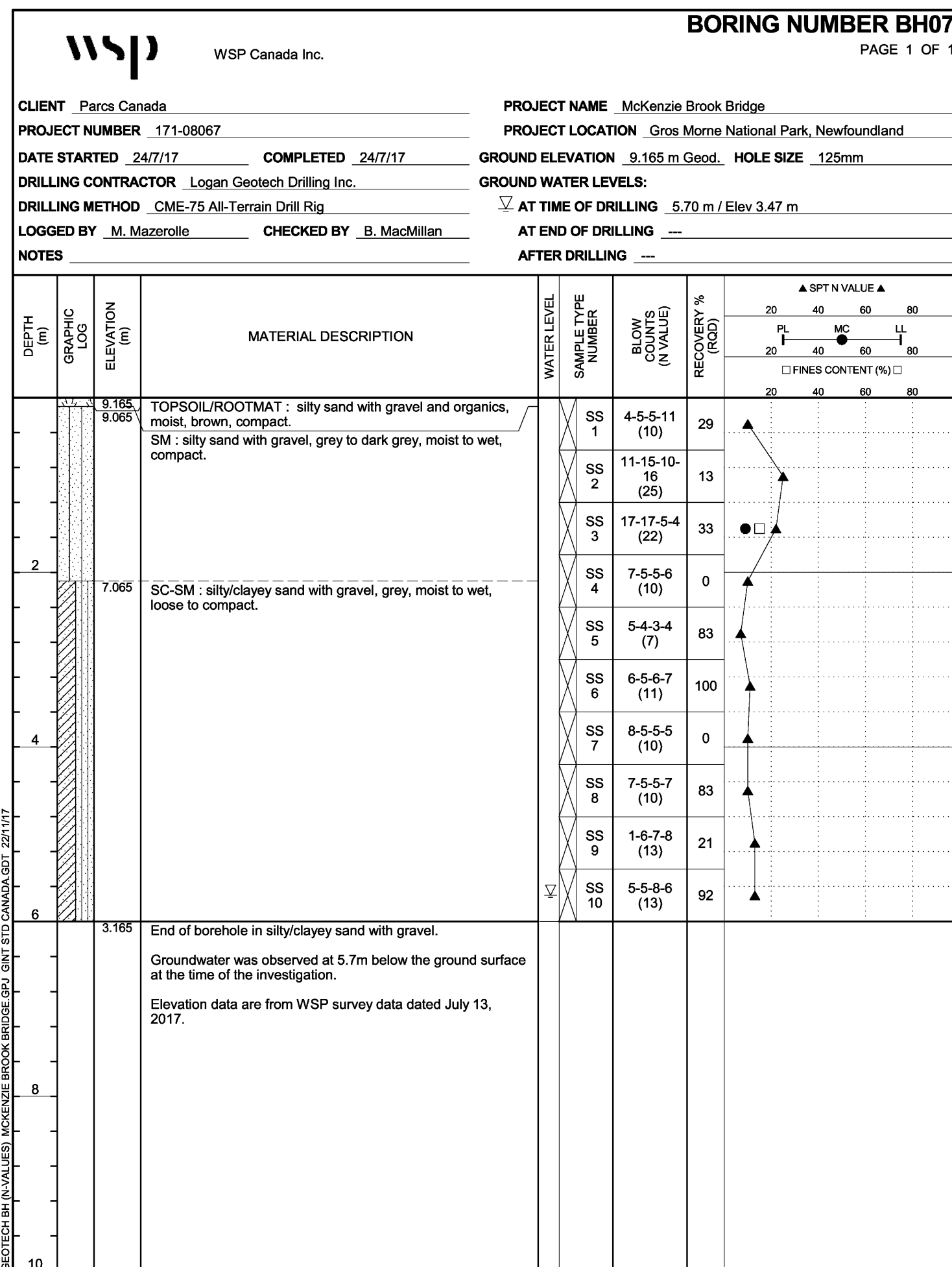
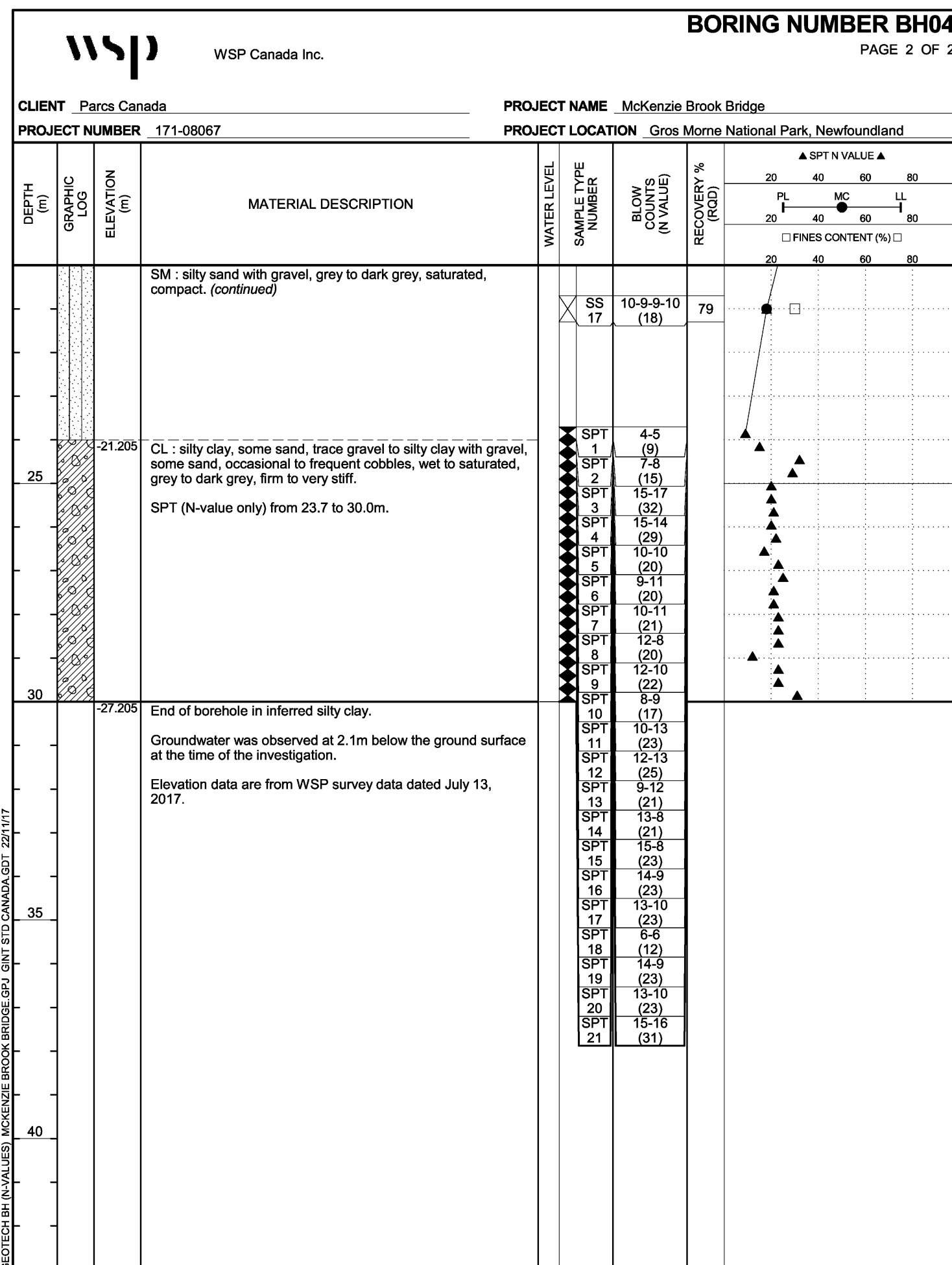
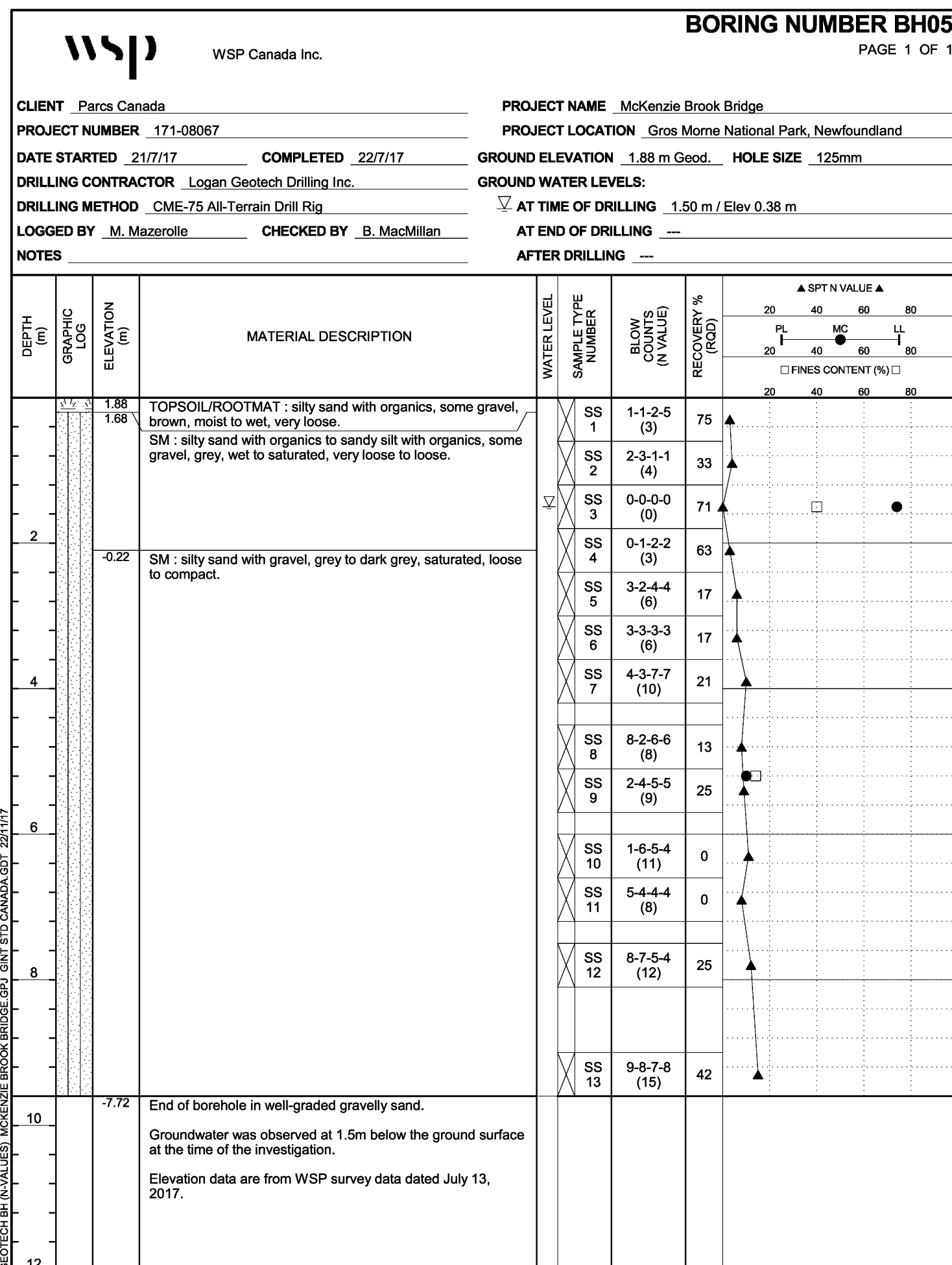
WSP Canada Inc.
195 MacEwen Road
Summerside, Prince Edward Island, Canada C1N 5Y4
T 902-436-2669 F 902-436-8601 www.wsp.com



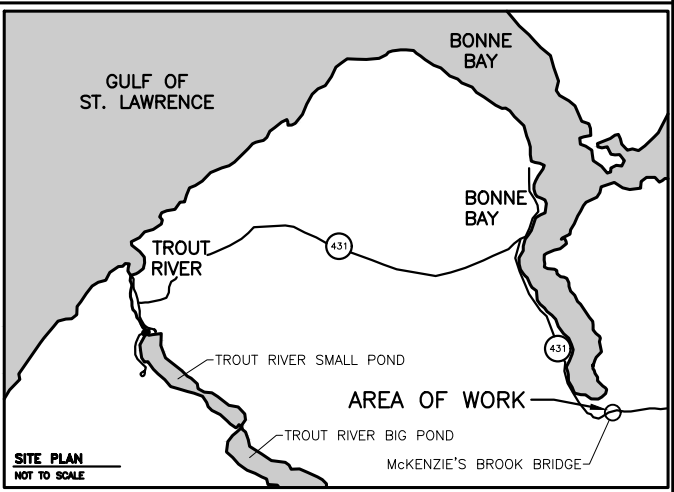
PERMIT HOLDER
CLASS "A"
This Permit Allows
WSP CANADA INC.
Member in Responsible Charge:
WADE ENMAN, P.Eng. No. 05942
To practice Professional Engineering
in Newfoundland and Labrador.
Permit No. as issued by PEOAL 10075,
which is valid for the year 2019.



1	ISSUED FOR TENDER	APR 11 2019
revisions		date
project	McKENZIE'S BROOK BRIDGE REPLACEMENT	projet
	GROS MORNE NATIONAL PARK	
drawing		dessin
	BOREHOLE DATA LOGS BH-4 to BH-7	
designed	W. ENMAN	conçu
date	2018/10	
drown	D. BEAMAN	dessiné
date	2018/10	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	no. du projet	
	1268	
drawing no.	no. du dessin	
	S17	



KEY PLAN



wsp

WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com

LEGEND

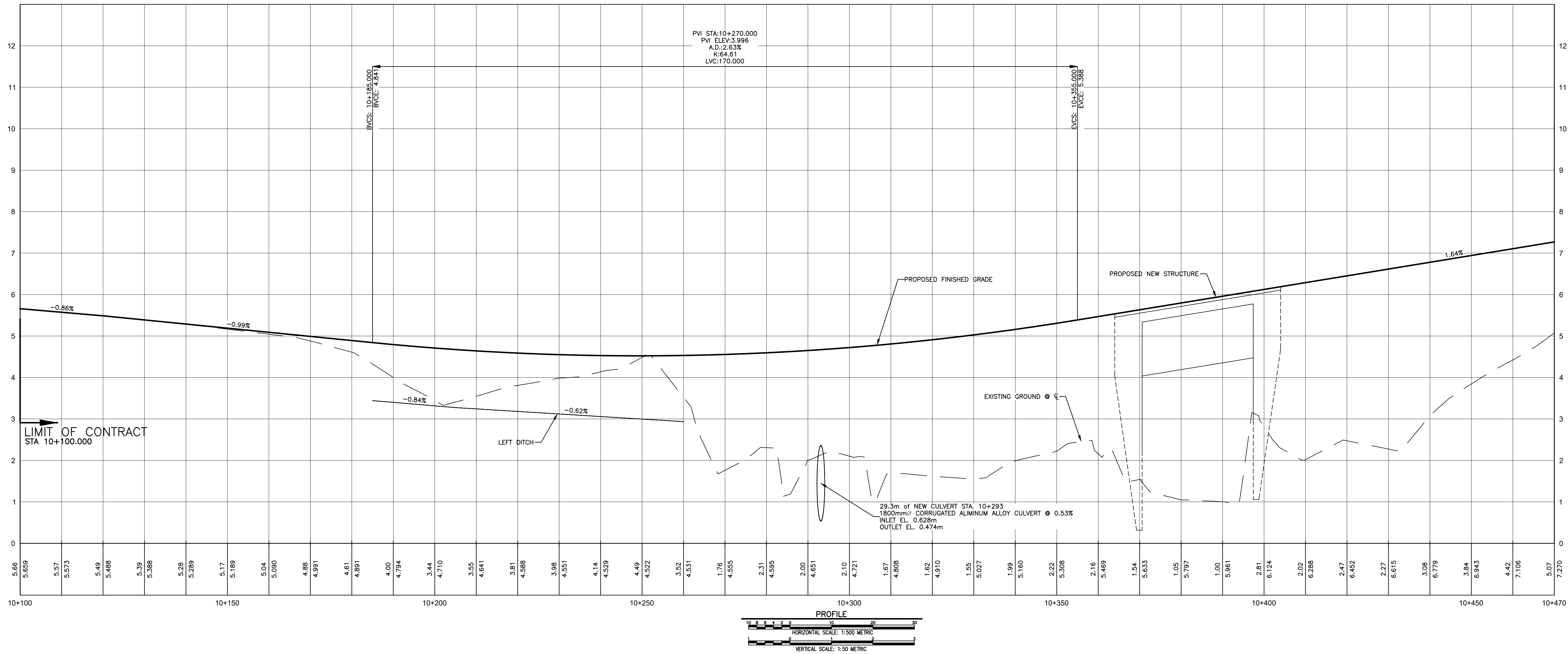
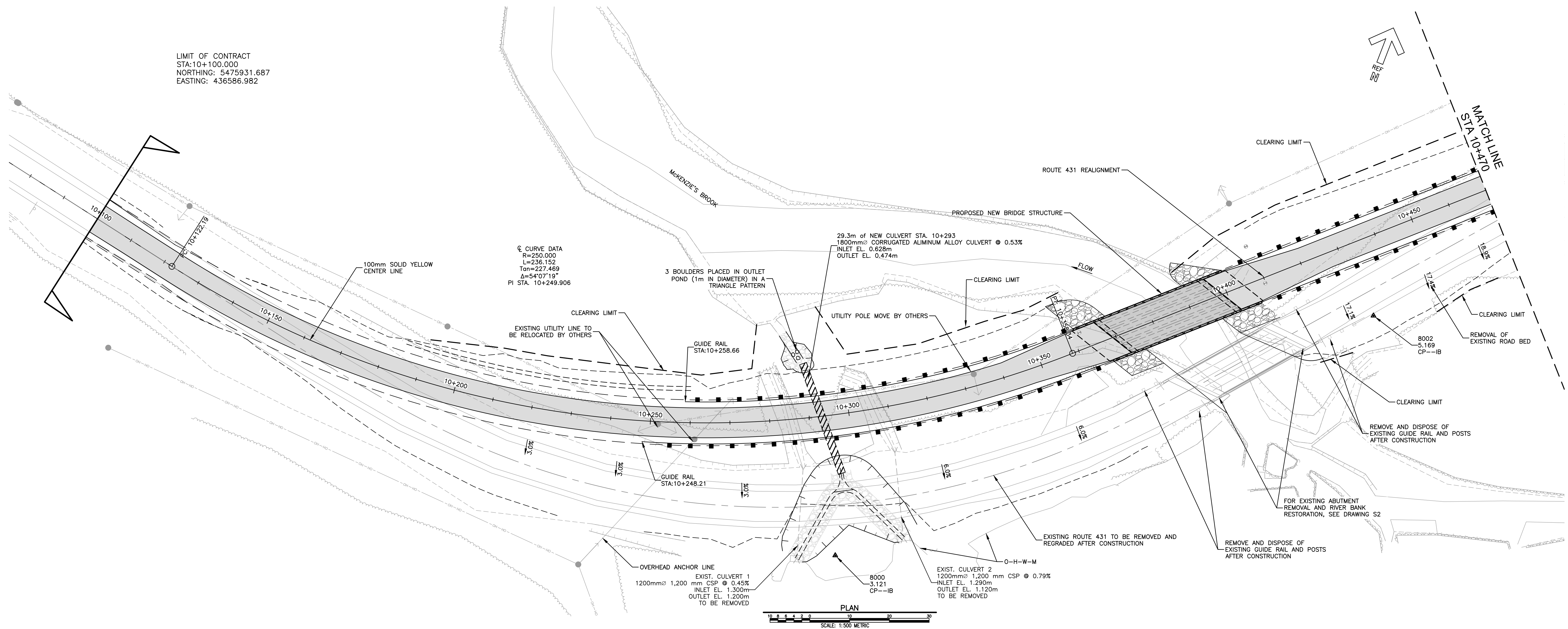
ROAD CENTRELINE	
TOP OF SLOPE	
BOTTOM OF SLOPE	
EXISTING SIGN	
EXISTING CULVERT	
NEW CULVERT	
NEW GUIDE RAIL	

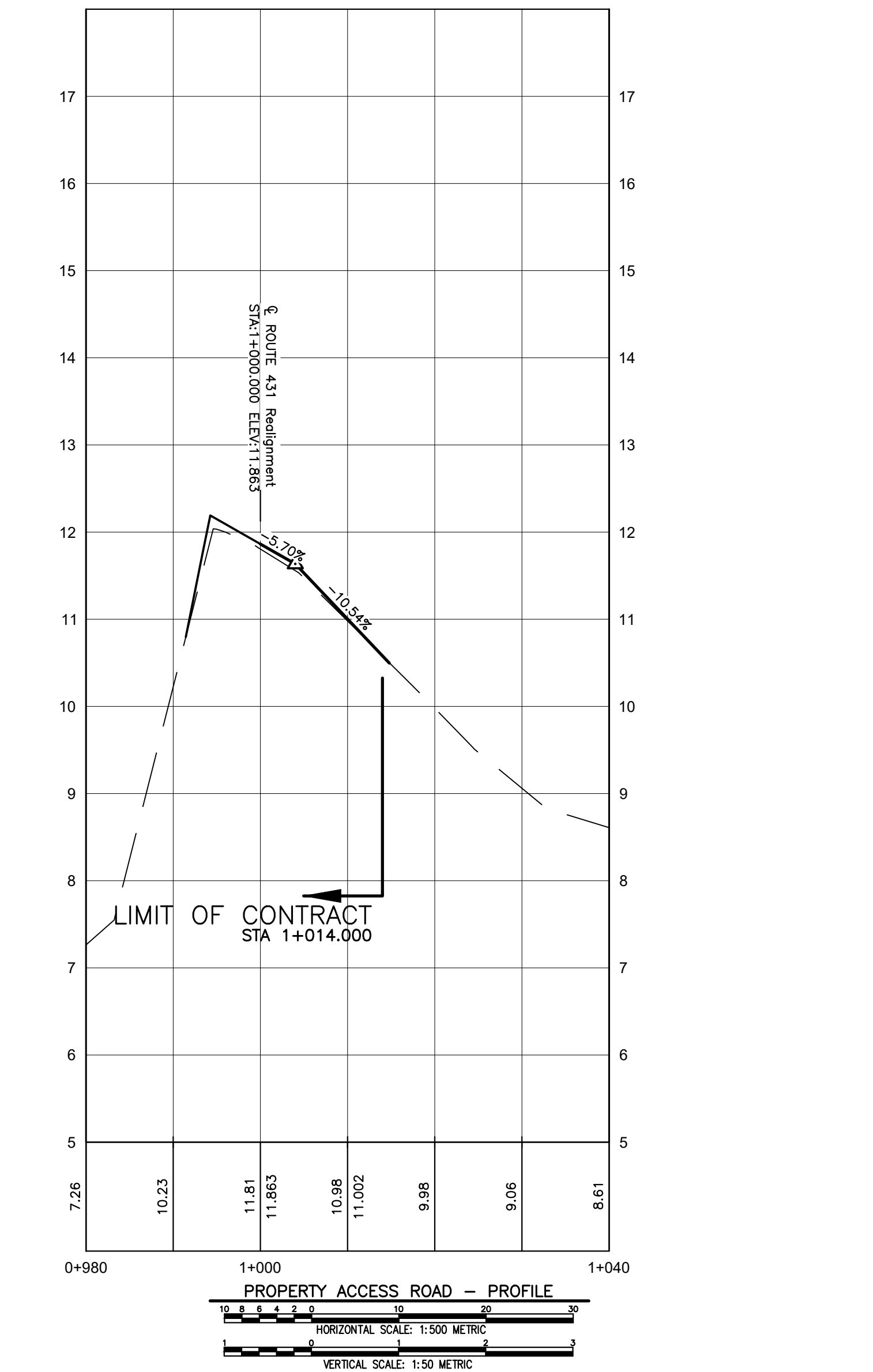
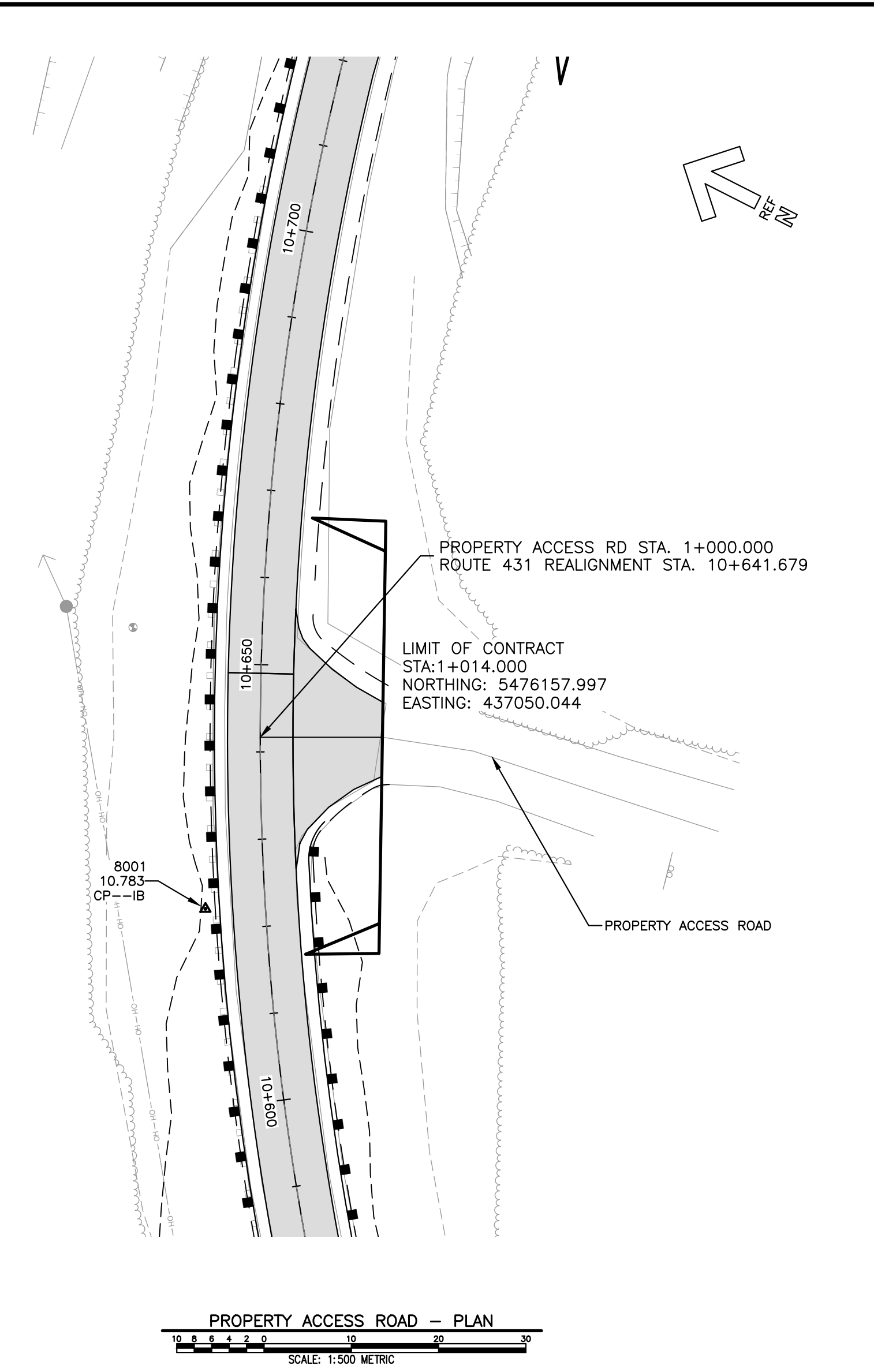
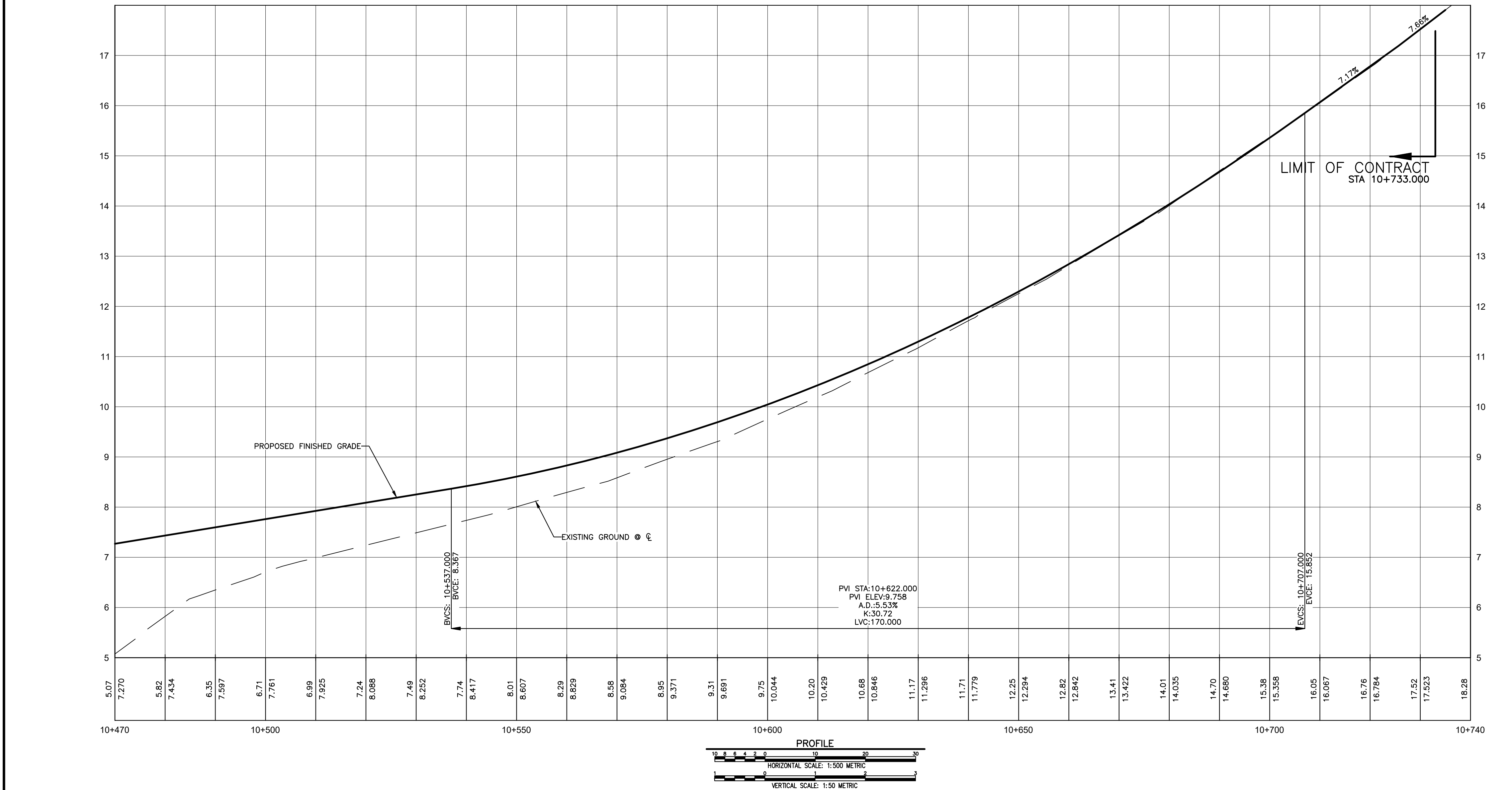
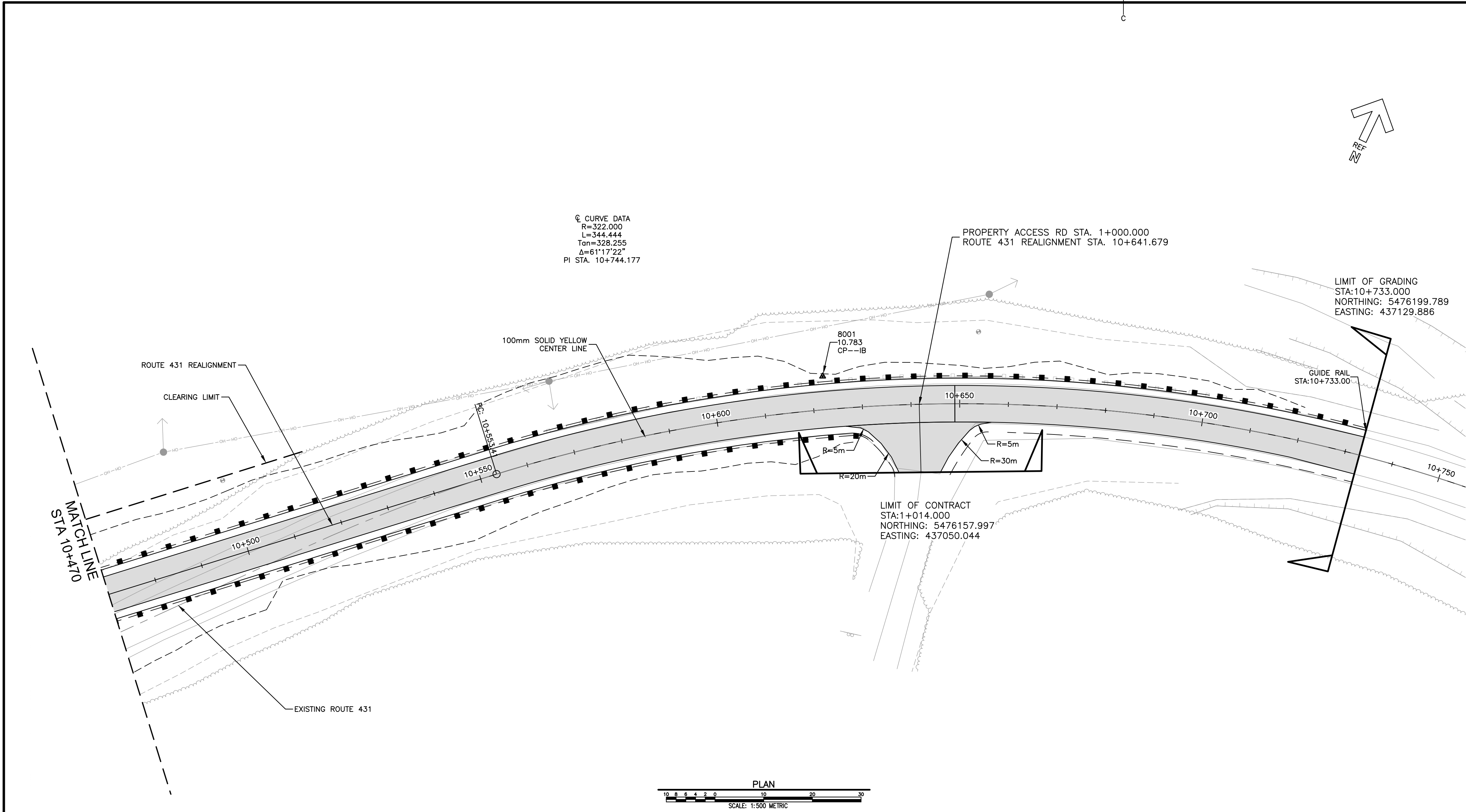


0	ISSUED FOR TENDER	APR 2019
revisions		date
project	BRIDGE REPLACEMENT McKENZIE'S BROOK BRIDGE GROS MORNE NATIONAL PARK	
drawing	desain	

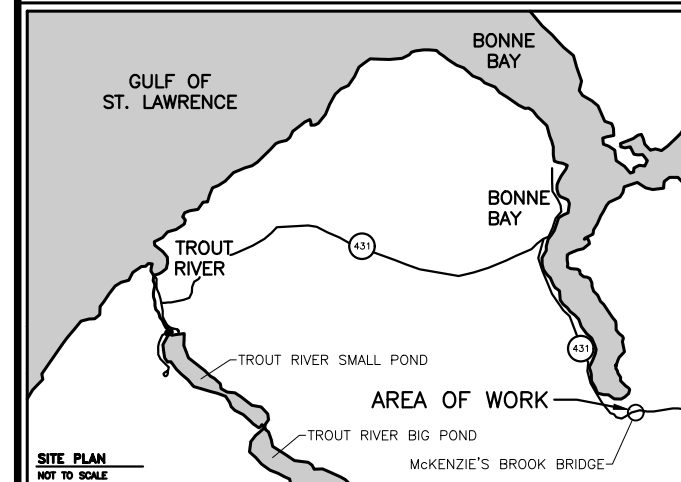
BONNE BAY ROAD
REALIGNMENT
PLAN AND PROFILE
STA. 10+100 TO 10+470

designed	S. WELLS/A.MILLIGAN	conçu
date	2019/04	
drawn	S. WELLS	dessiné
date	2019/04	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	1268	no. du projet
drawing no.	C01	no. du dessin





KEY PLAN

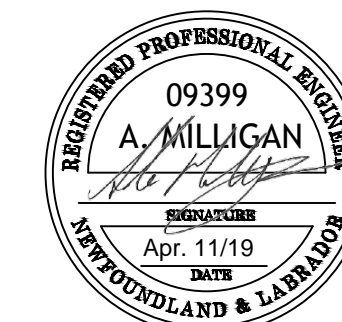


wsp

WSP Canada Inc.
 1070 St. George Boulevard, Suite 180
 Moncton, New Brunswick, Canada E1E 4K7
 T 506-857-1675 F 506-857-1679 www.wsp.com

LEGEND

ROAD CENTRELINE	---
TOP OF SLOPE	---
BOTTOM OF SLOPE	---
EXISTING SIGN	---
EXISTING CULVERT	---
NEW CULVERT	---
NEW GUIDE RAIL	---



0	ISSUED FOR TENDER	APR 2019
revisions		date

project
 BRIDGE REPLACEMENT
 MCKENZIE'S BROOK
 BRIDGE
 GROS MORNE NATIONAL PARK

drawing
 BONNE BAY ROAD
 REALIGNMENT
 PLAN AND PROFILE
 STA. 10+470 TO 10+740

designed	S. WELLS/A.MILLIGAN	conçu
date	2019/04	
drawn	S. WELLS	dessiné
date	2019/04	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	1268	no. du projet
drawing no.	C02	no. du dessin

GENERAL

- COORDINATES SHOWN HERE ON ARE REFERENCED TO THE UTM (NORTH) ZONE 21, CGVD2013 COORDINATE SYSTEM.
- EXISTING GROUND ELEVATIONS ARE BASED ON FIELD SURVEY DATA COLLECTED BY WSP CANADA INC. AND LIDAR SURVEY BY PARKS CANADA.
- ELEVATIONS ARE EXPRESSED IN METRES.
- ALL DIMENSIONS ARE EXPRESSED IN MILLIMETERS UNLESS OTHERWISE NOTED.
- STATIONING IS EXPRESSED IN METRES.
- COMPLY WITH ALL REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS BOUND SEPARATELY.

ENVIRONMENTAL

- WORK OPERATIONS SHALL BE CARRIED OUT AT ALL TIMES AS PER PCA BMP'S (APPENDIX A).
- USE SILT FENCE AND ALL OTHER APPROPRIATE MEANS TO PREVENT SEDIMENT FROM DISTURBED AREAS FROM ENTERING AND WATERCOURSE. LOCATE AS REQUIRED AND AS DIRECTED.
- MONITOR EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES DURING AND AFTER RAINFALL EVENTS. REPAIR AND REPLACE AS NECESSARY.
- REVEGETATE ALL DISTURBED AREAS WITH APPROVED SEED MIX TO THE SATISFACTION OF THE ENVIRONMENTAL PROTECTION OFFICER.

CLEARING

- CLEARING LIMITS AS SHOWN.
- DEPARTMENTAL REPRESENTATIVE TO IDENTIFY EXTENTS IN FIELD.

CONTROL POINTS

- CONTROL ESTABLISHED BY PERFORMING STATIC OBSERVATIONS ON CONTROL POINTS, THEN PROCESSING USING NATURAL RESOURCE CANADA'S PRECISE POINT POSITIONING SERVICE.

PT #	NORTHING	EASTING	ELEV	DESC.
8000	5475919.414	436790.438	3.121	CP--IB
8001	5476167.184	437023.336	10.783	CP--IB
8002	5476024.272	436895.033	5.169	CP--IB

SIGNAGE

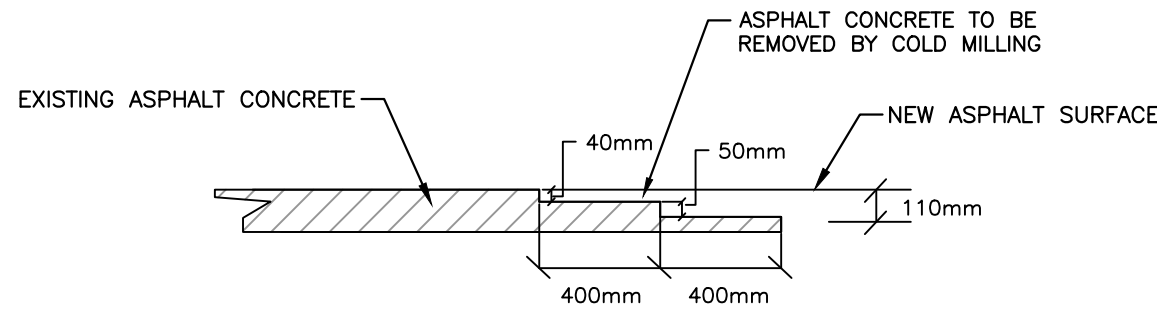
- ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE TRANSPORTATION ASSOCIATION OF CANADA (TAC) MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OF CANADA.
- PAVEMENT MARKINGS SHALL BE CONFIRMED AND APPROVED ON SITE BY THE DEPARTMENTAL REPRESENTATIVE. PRE-MARKING IS REQUIRED.

SUPERELEVATION DEVELOPMENT				
CURVE 1	RADIUS = 250.000			
STATION	LEFT LANE	CL ELEV	RIGHT LANE	DESCRIPTION
10+100.000	-2.00%	5.66	0.67%	MATCH to EXISTING
10+110.000	-2.00%	5.67	2.00%	Level Crown
10+120.000	-3.33%	5.488	3.33%	
10+130.000	-4.67%	5.388	4.67%	
10+140.000	-6.00%	5.289	6.00%	Begin Full Super
10+330.000	-6.00%	5.027	6.00%	End Full Super
10+340.000	-4.67%	5.160	4.67%	
10+350.000	-3.33%	5.308	3.33%	
10+360.000	-2.00%	5.469	2.00%	structure
10+370.000	-2.00%	5.633	2.00%	structure
10+380.000	-2.00%	5.797	2.00%	structure
10+390.000	-2.00%	5.961	2.00%	structure
10+400.000	-2.00%	6.124	2.00%	
10+410.000	-2.00%	6.288	2.00%	
10+420.000	-2.00%	6.452	1.00%	
10+430.000	-2.00%	6.615	0.00%	
10+440.000	-2.00%	6.779	-1.00%	
10+450.000	-2.00%	6.943	-2.00%	End Normal Crown

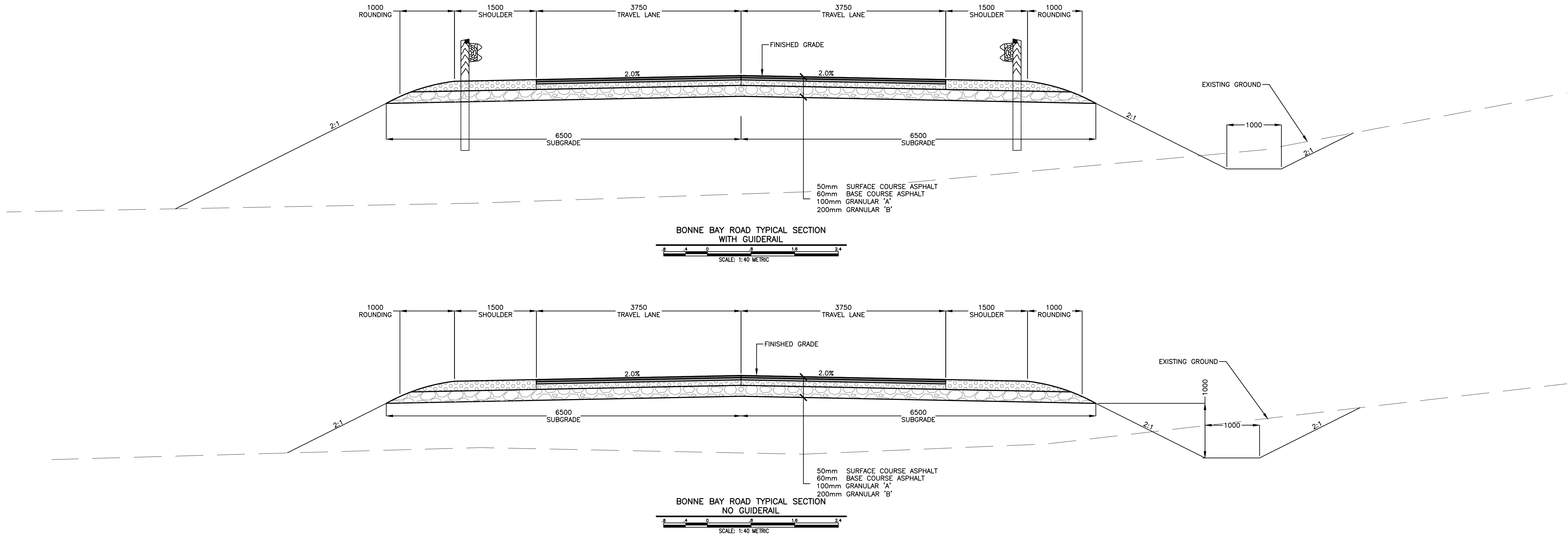
SUPERELEVATION DEVELOPMENT				
CURVE 2	RADIUS = 322.000			
STATION	LEFT LANE	CL ELEV	RIGHT LANE	DESCRIPTION
10+490.000	-2.00%	7.597	-2.00%	End Normal Crown
10+500.000	-1.33%	7.761	-2.00%	
10+510.000	-0.67%	7.925	-2.00%	
10+520.000	0.00%	8.088	-2.00%	Level Crown
10+530.000	1.12%	8.252	-2.00%	
10+540.000	2.24%	8.417	-2.24%	
10+550.000	3.36%	8.607	-3.36%	
10+560.000	4.48%	8.829	-4.48%	
10+570.000	5.60%	9.084	-5.60%	Begin Full Super
10+730.000	5.60%	17.52	-5.60%	End Full Super
10+733.000	5.00%	17.75	-5.40%	Match to Existing

McKENZIE'S BROOK REALIGNMENT				
CURVE 2	BACK	AZ 101° 30' 32.0"		AHEAD
	I =	54° 07' 19.1"		SPIRALS
R=	250.000m	L=	236.152m	T= 127.717m
STA	CHAINAGE	NORTHING	EASTING	
POT 1	10+000.000	5 475 951.639	436 488.993	
BC 2	10+122.189	5 475 927.260	436 608.725	
PI 2	10+249.906	5 475 901.778	436 733.874	
EC 2	10+358.341	5 475 988.248	436 827.866	
CC 2		5 476 172.233	436 658.605	

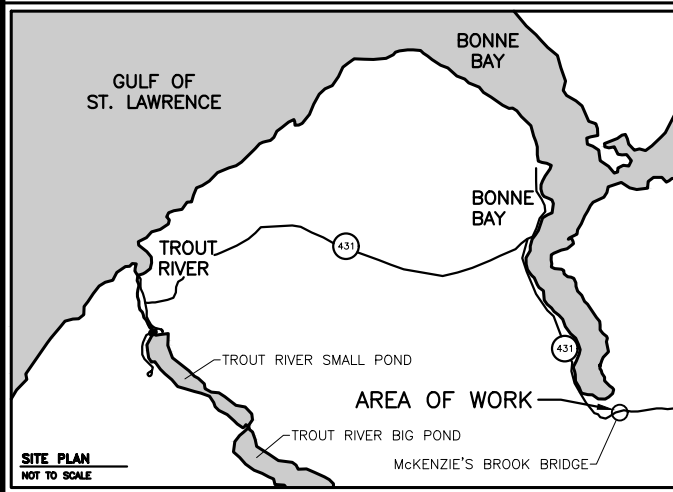
McKENZIE'S BROOK REALIGNMENT				
CURVE 3	BACK	AZ 47° 23' 12.9"		AHEAD
	I =	61° 17' 21.9"		SPIRALS
R=	322.000m	L=	344.444m	T= 190.777m
STA	CHAINAGE	NORTHING	EASTING	
BC 2	10+553.407	5 476 120.316	436 971.424	
PI 2	10+440.683	5 476 249.476	437 111.819	
EC 2	10+897.851	5 476 188.387	437 292.544	
CC 2		5 475 883.343	437 189.432	
POT 3	10+969.777	5 476 165.355	437 360.682	



ASPHALT KEY JOINT DETAIL
NTS



KEY PLAN



WSP Canada Inc.
1070 St. George Boulevard, Suite 180
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com

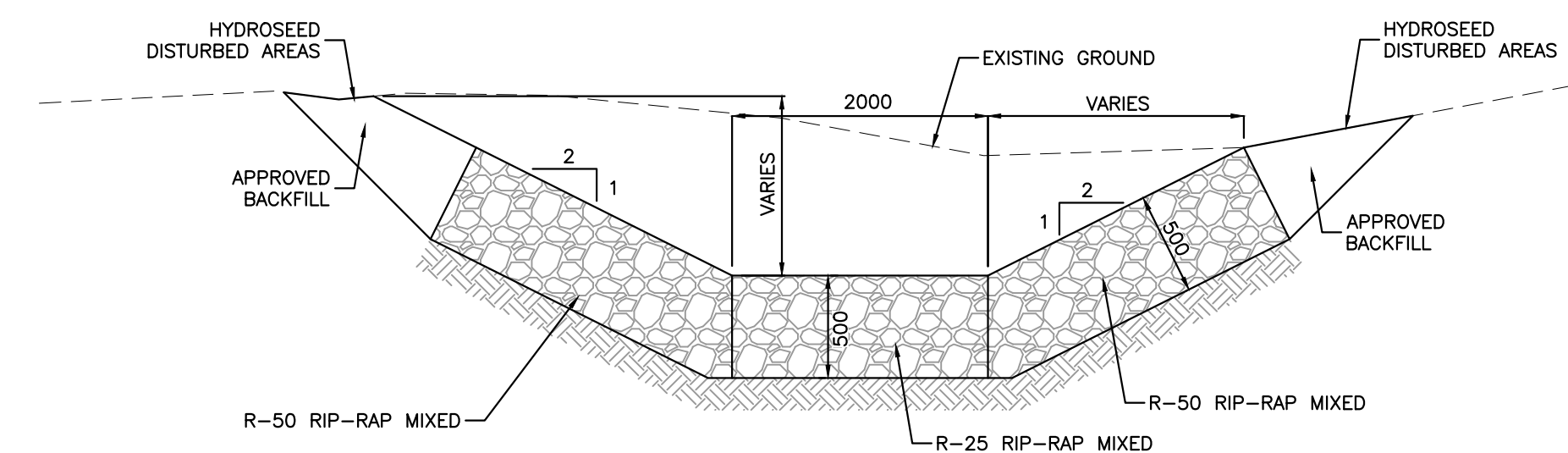
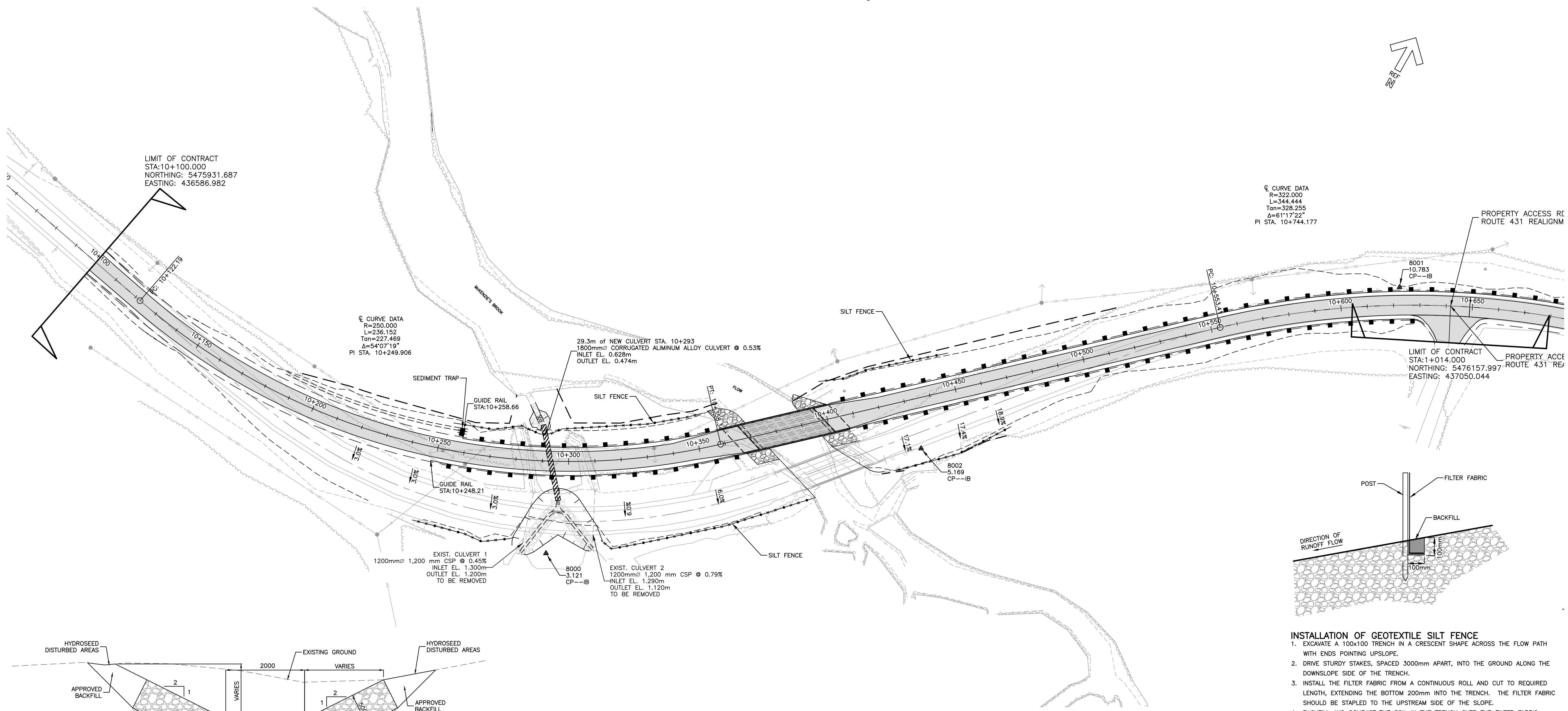


0	ISSUED FOR TENDER	APR 2019
revisions		date

project
**BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK**
project

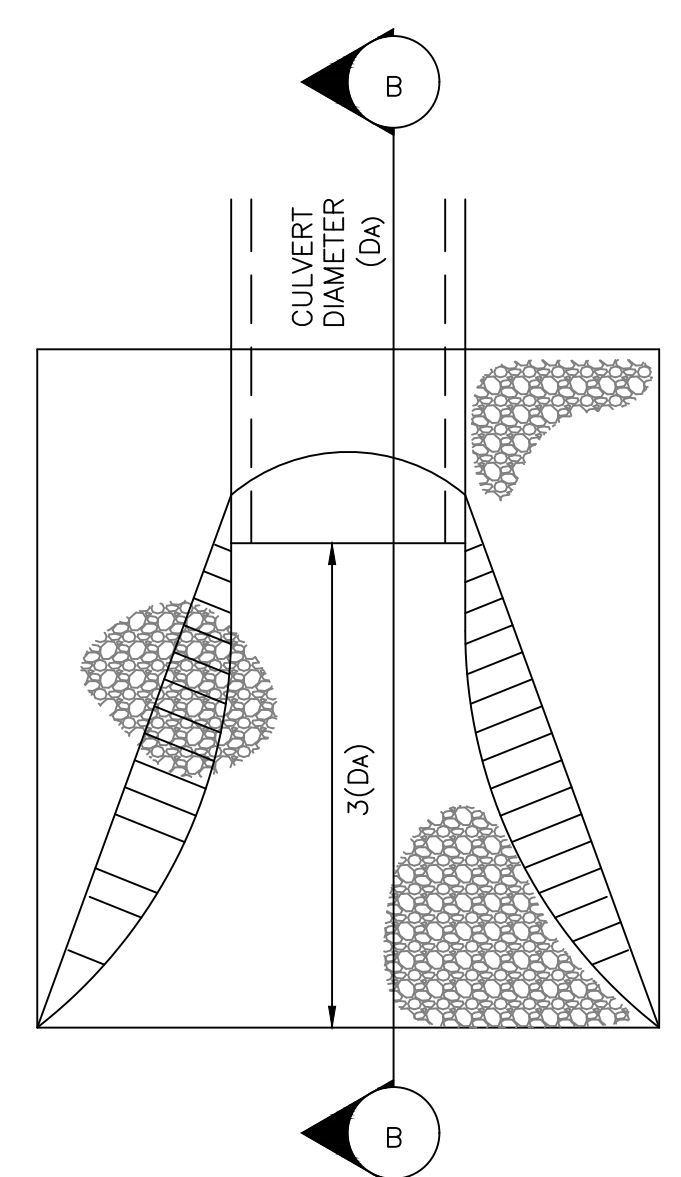
drawing
**TYPICAL SECTION,
ALIGNMENT GEOMETRY
AND SUPERELEVATION**
dessin

designed S. WELLS/A.MILLIGAN	conçu
date 2019/04	
drawn S. WELLS	dessiné
date 2019/04	
approved	approuvé
date	
Tender	Soumission
Project Manager	Administrateur de projets
project number	no. du projet
1268	
drawing no.	no. du dessin
C03	

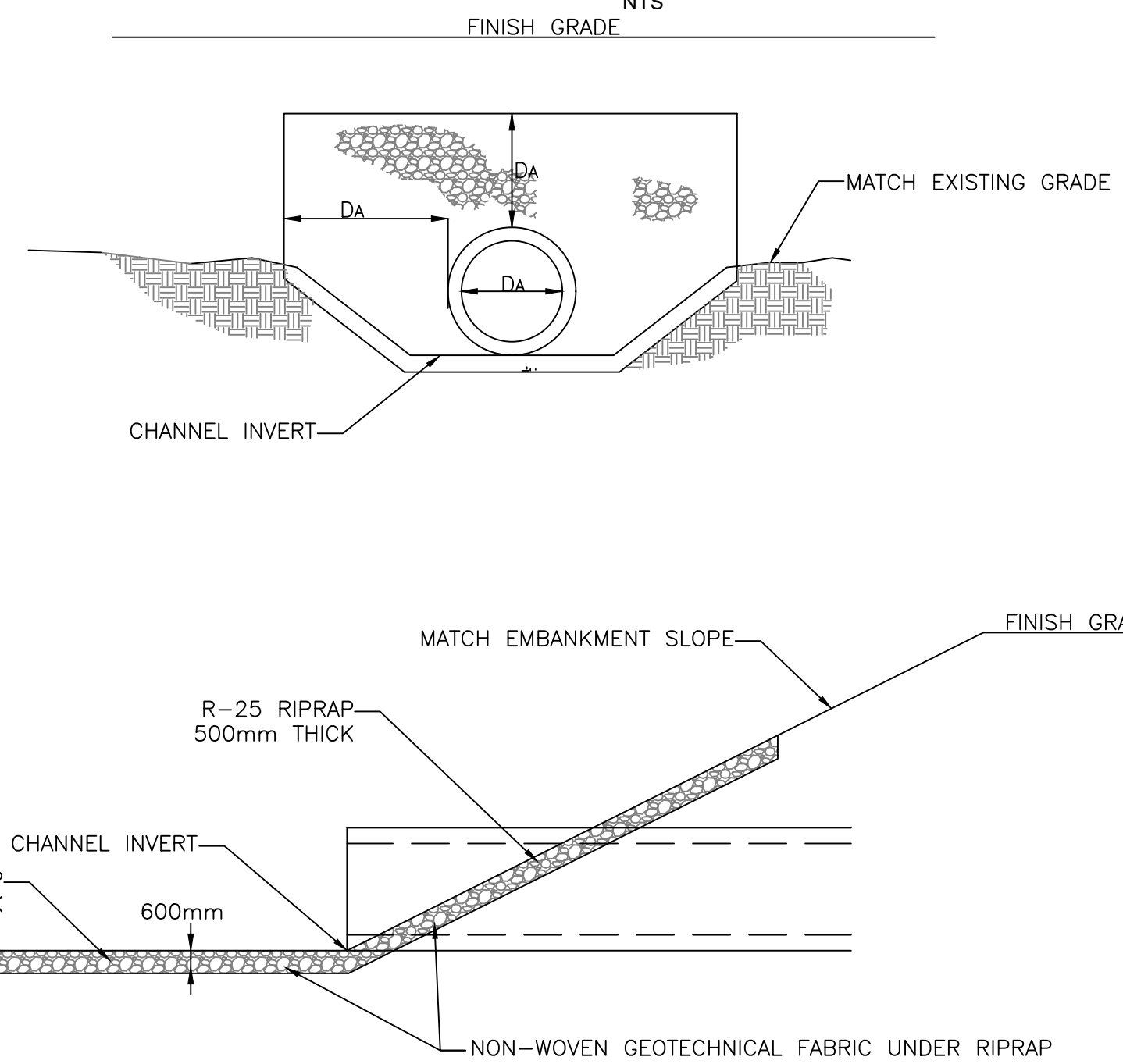


CHANNEL SECTION
NTS

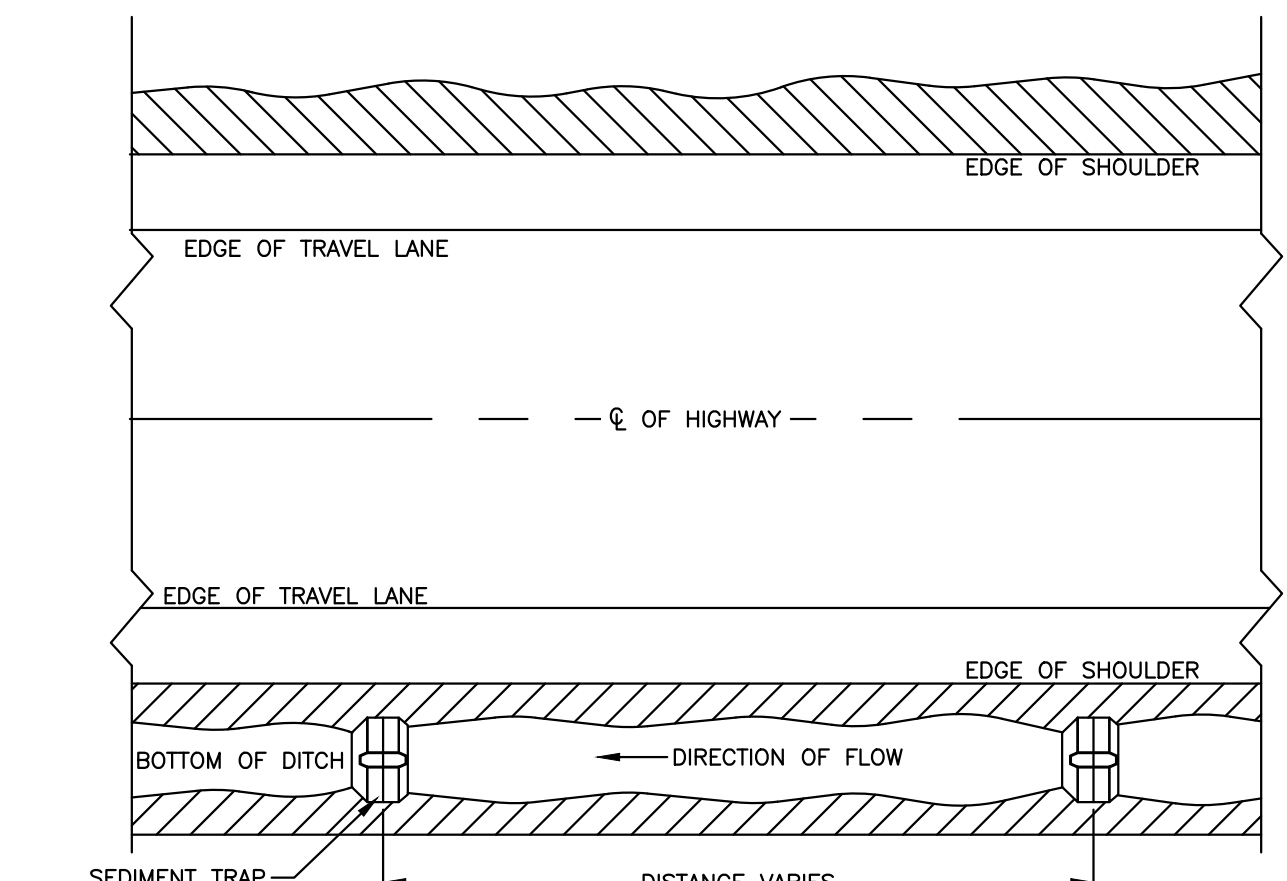
CULVERT INLET END TREATMENT DETAIL
NTS



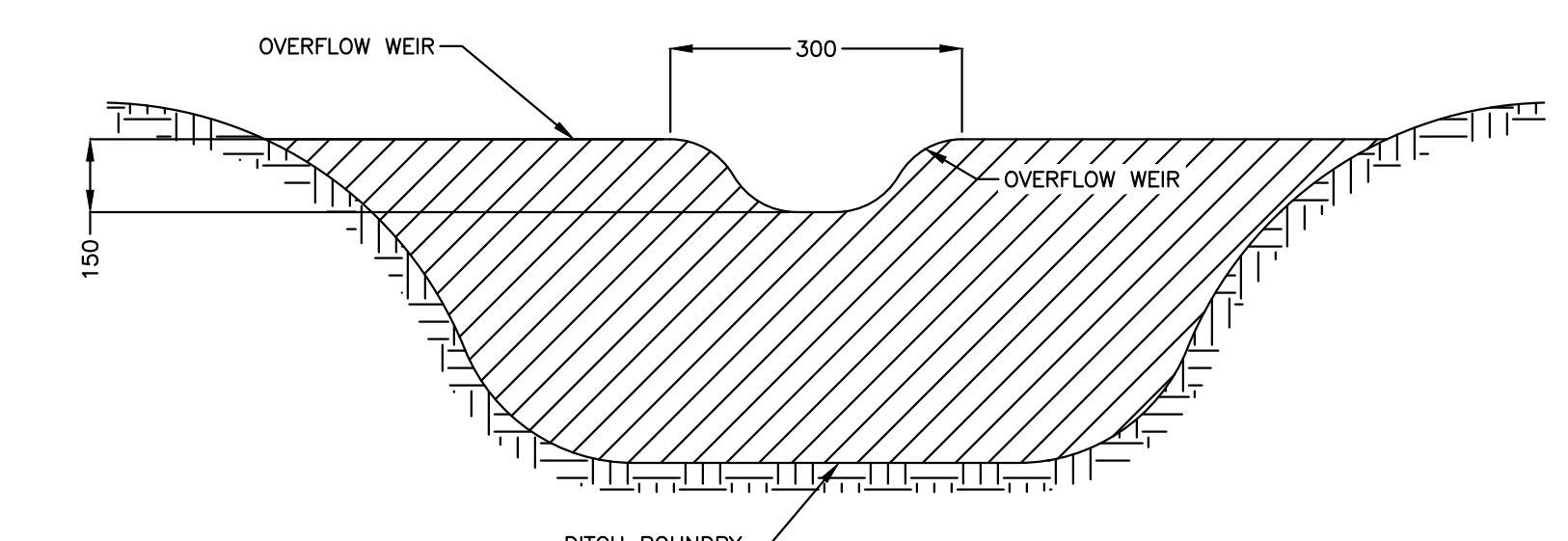
FRONT VIEW
NTS



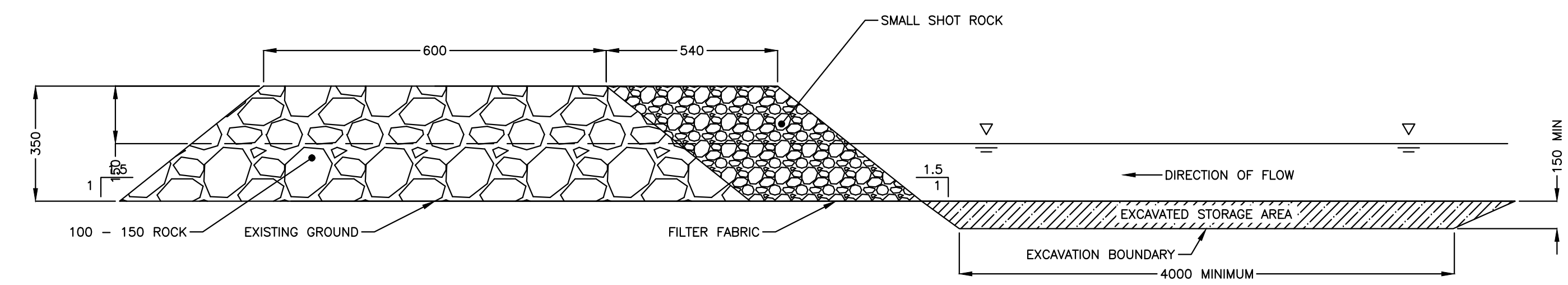
SECTION B-B
NTS



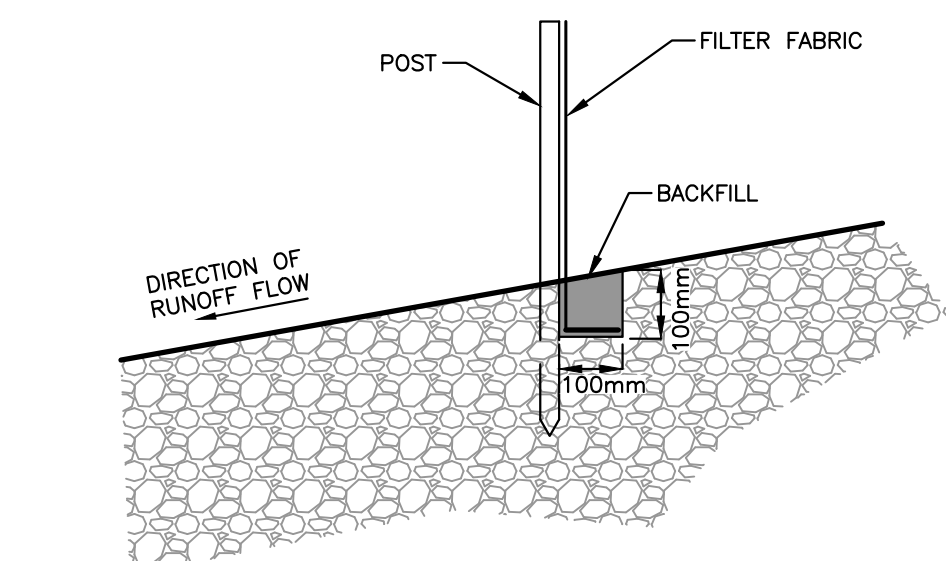
SEDIMENT TRAP PLAN
NTS



SEDIMENT TRAP PLAN
OVERFLOW WEIR DETAIL
NTS



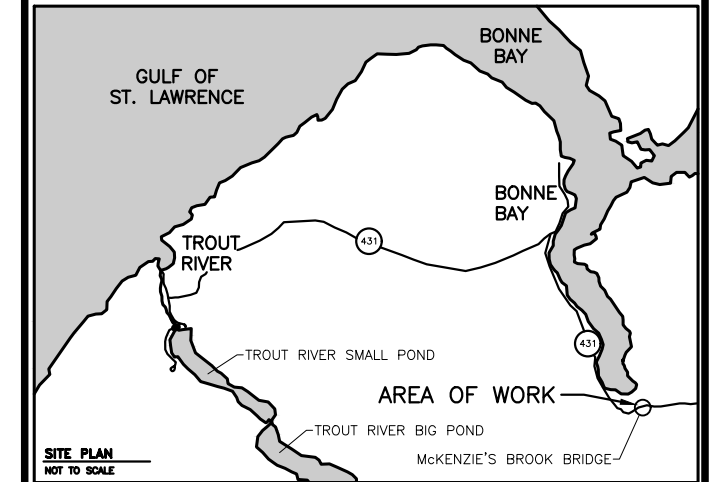
DETAIL OF FINISHED SEDIMENT TRAP
NTS



- INSTALLATION OF GEOTEXTILE SILT FENCE**
1. EXCAVATE A 100x100 TRENCH IN A CRESCENT SHAPE ACROSS THE FLOW PATH WITH ENDS POINTING UPSLOPE.
 2. DRIVE STURDY STAKES, SPACED 3000mm APART, INTO THE GROUND ALONG THE DOWNSLOPE SIDE OF THE TRENCH.
 3. INSTALL THE FILTER FABRIC FROM A CONTINUOUS ROLL AND CUT TO REQUIRED LENGTH, EXTENDING THE BOTTOM 200mm INTO THE TRENCH. THE FILTER FABRIC SHOULD BE STAPLED TO THE UPSLOPE SIDE OF THE SLOPE.
 4. BACKFILL AND COMPACT THE SOIL IN THE TRENCH OVER THE FILTER FABRIC.

TYPICAL SILT FENCE
NTS

KEY PLAN



WSP Canada Inc.
1070 St. George Boulevard, Suite 180
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com

LEGEND

- ROAD CENTRELINE
TOP OF SLOPE
BOTTOM OF SLOPE
EXISTING SIGN
EXISTING CULVERT
NEW CULVERT
NEW GUIDE RAIL



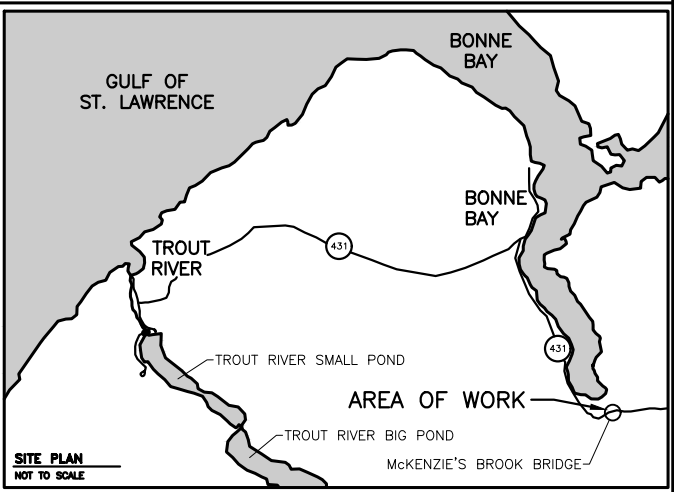
0	ISSUED FOR TENDER	APR 2019
revisions		date

project
**BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK**
project

drawing
**ENVIRONMENTAL CONTROL
PLAN**
dessin

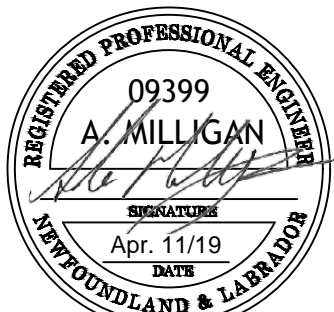
designed	S. WELLS/A.MILLIGAN	conçu
date	2019/04	
drawn	S. WELLS	dessiné
date	2019/04	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	1268	no. du projet
drawing no.	C04	no. du dessin

KEY PLAN



wsp

WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com

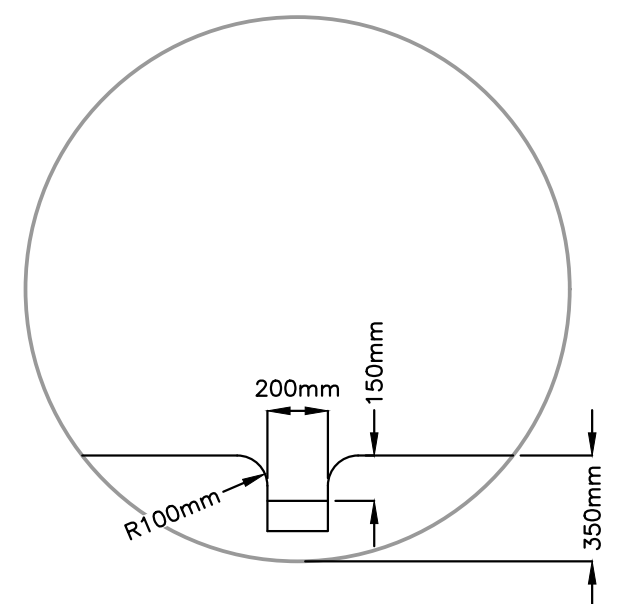
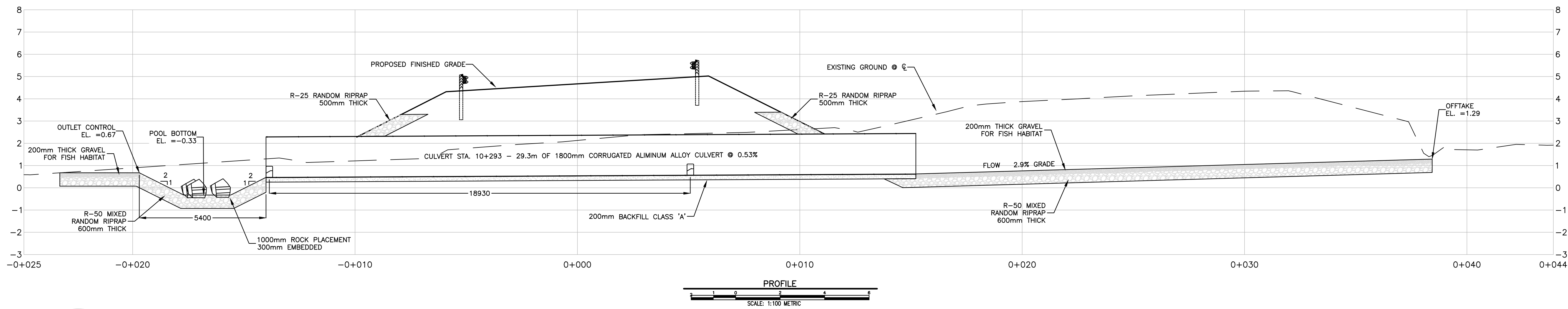
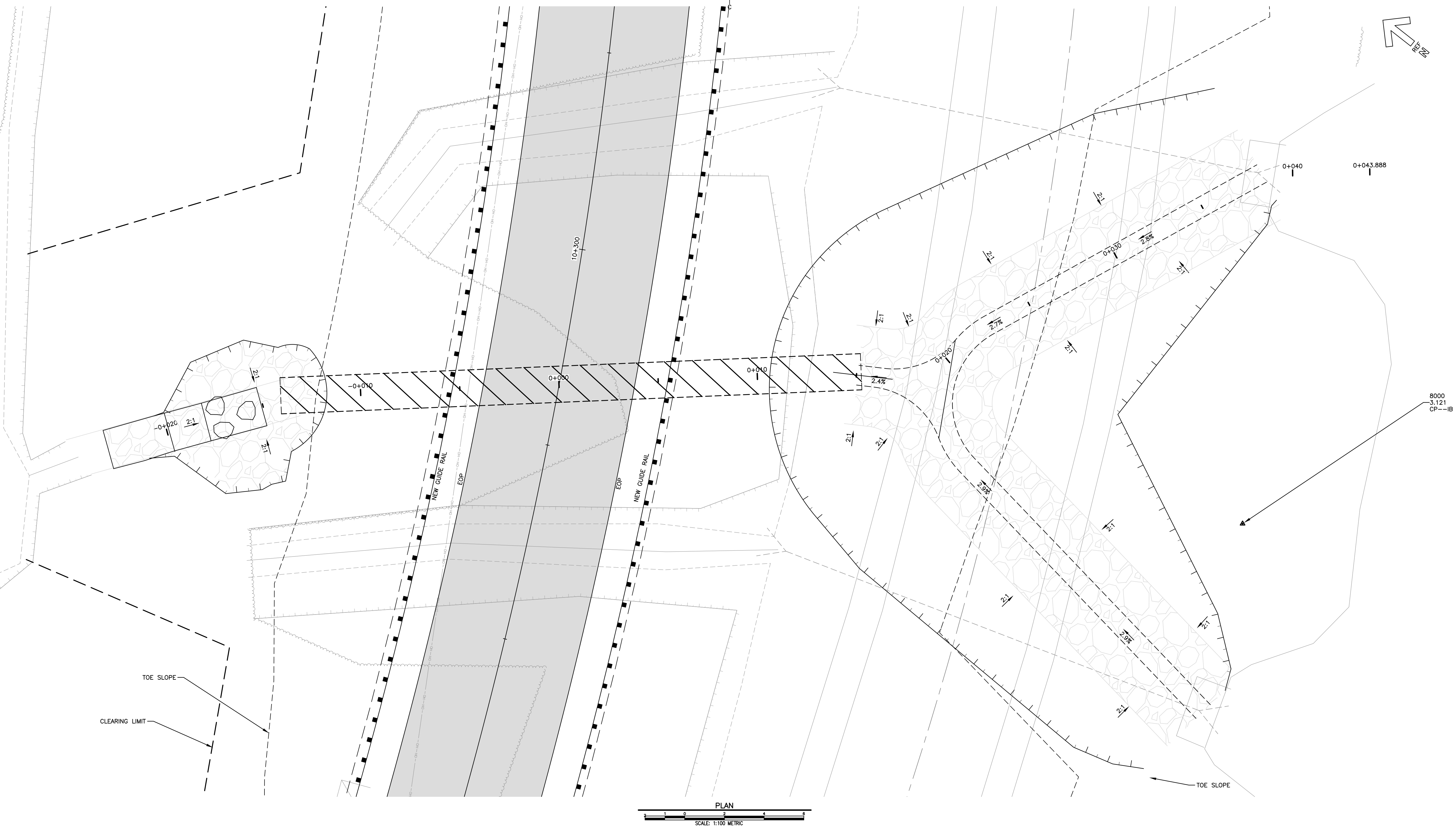


0	ISSUED FOR TENDER	APR 2019
revisions		date

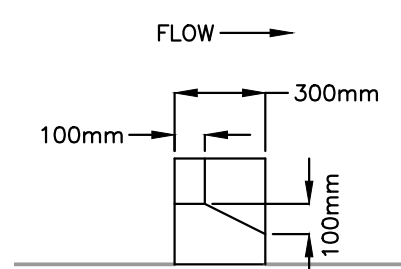
project
**BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK**

NEW CULVERT
SECTIONS

designed	S. WELLS/A.MILLIGAN	conçu
date	2019/04	
drawn	S. WELLS	dessiné
date	2019/04	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number		no. du projet
	1268	
drawing no.		no. du dessin
	C05	



FISH WIER/BAFFLE DETAIL
SCALE: 1:25 METRIC

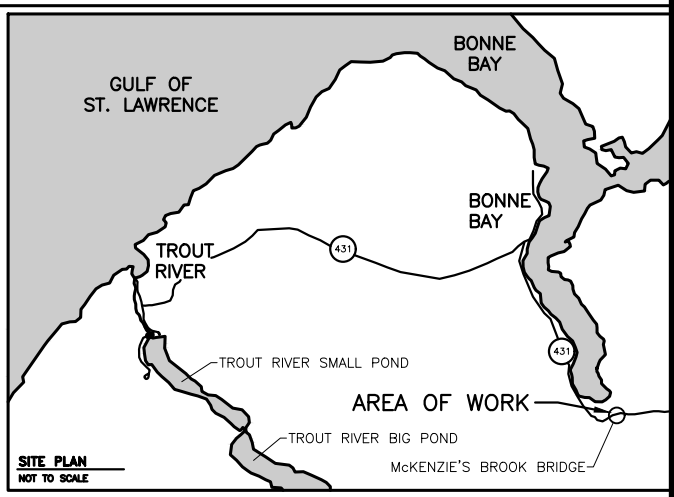


WIER CROSS SECTION
SCALE: 1:25 METRIC

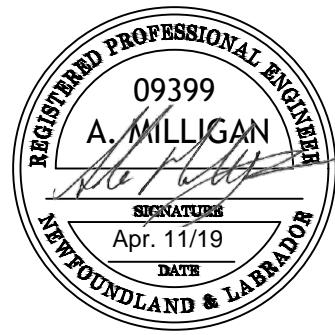
C

C

KEY PLAN



WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com



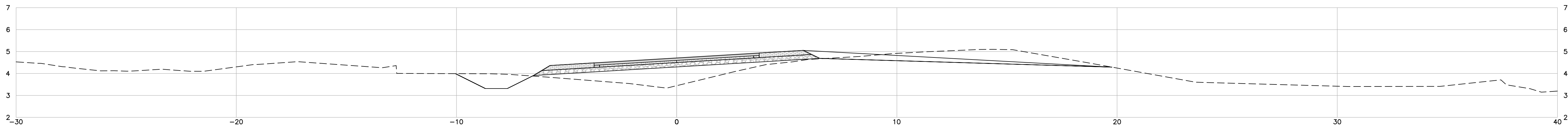
0	ISSUED FOR TENDER	APR 2019
revisions		date

project project
**BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK**

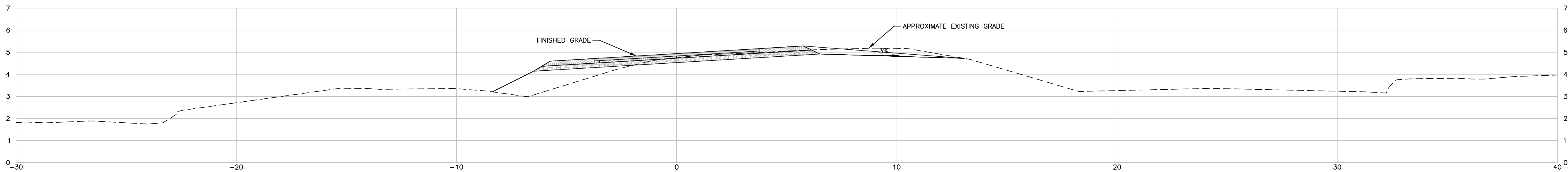
drawing dessin
**CROSS SECTIONS
STATION 10+100
TO STATION 10+200**

designed S. WELLS/A.MILLIGAN	conçu
date 2019/04	
drawn S. WELLS	dessiné
date 2019/04	
approved	approuvé
date	
Tender	Soumission
Project Manager	Administrateur de projets
project number	no. du projet
1268	
drawing no.	no. du dessin
C06	

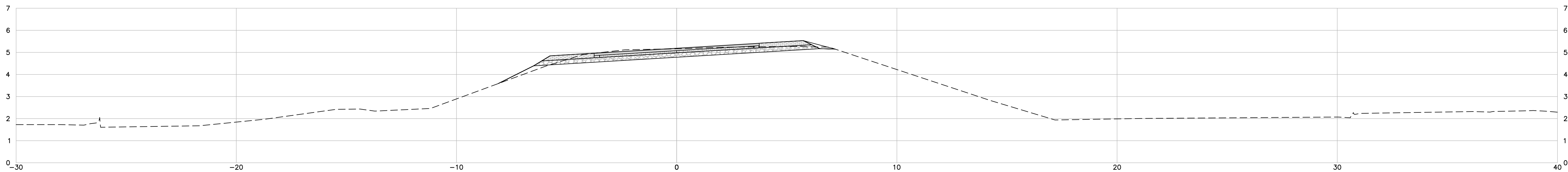
10+200



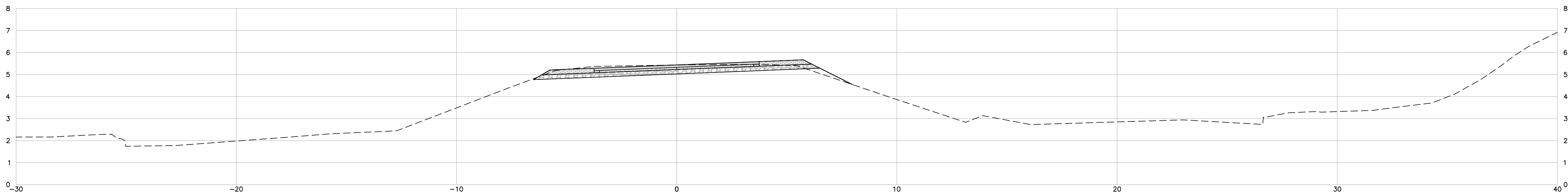
10+175



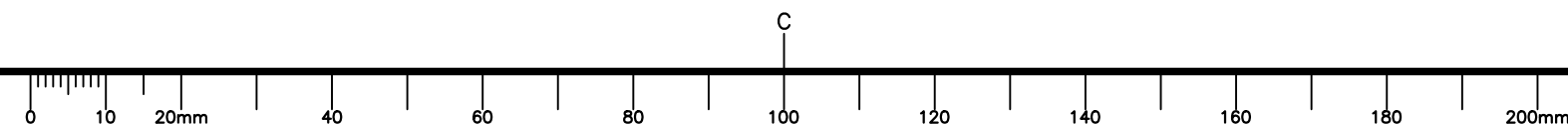
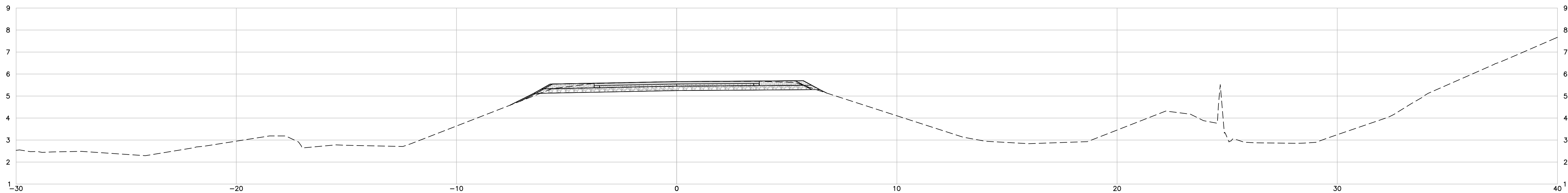
10+150



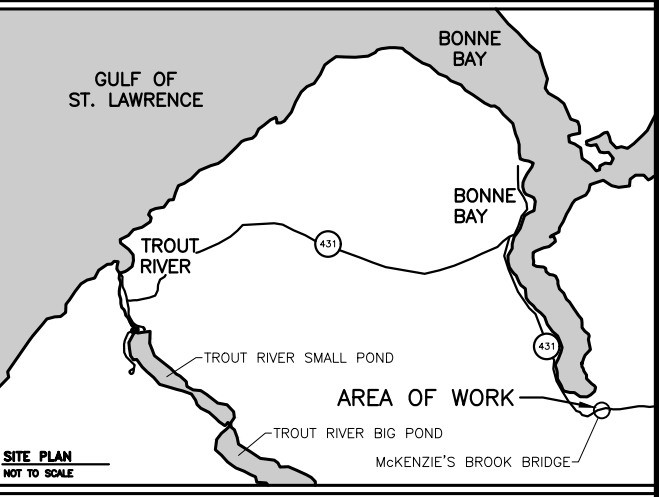
10+125



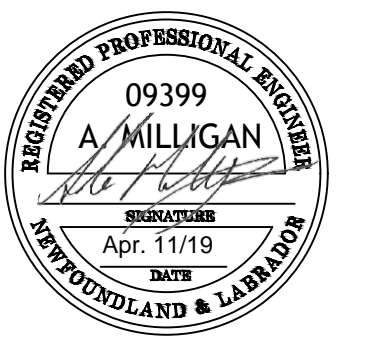
10+100



KEY PLAN



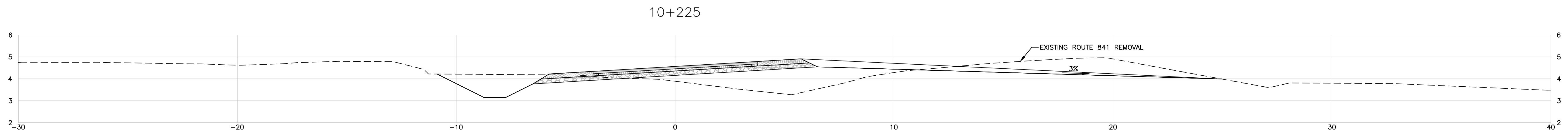
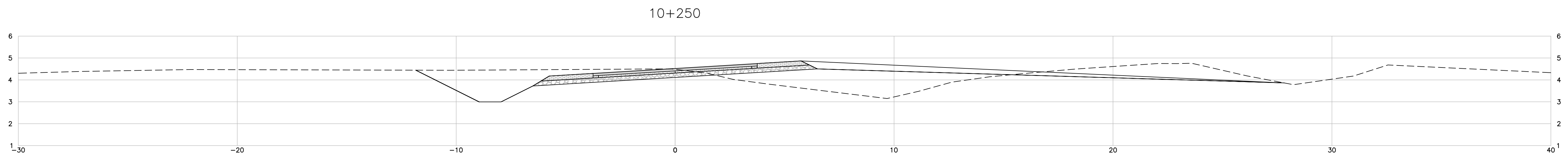
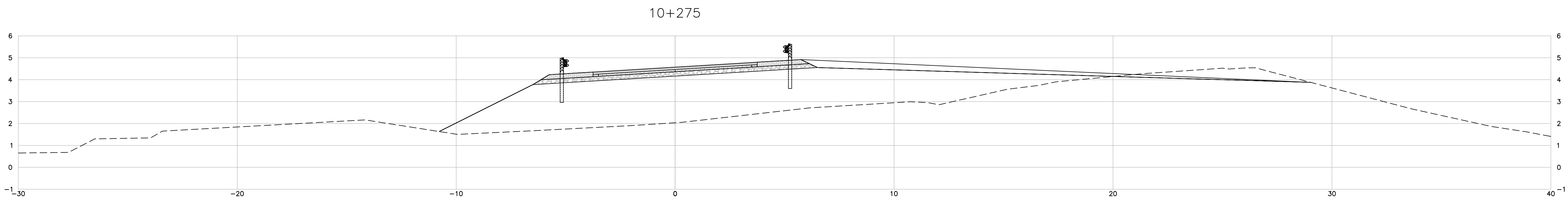
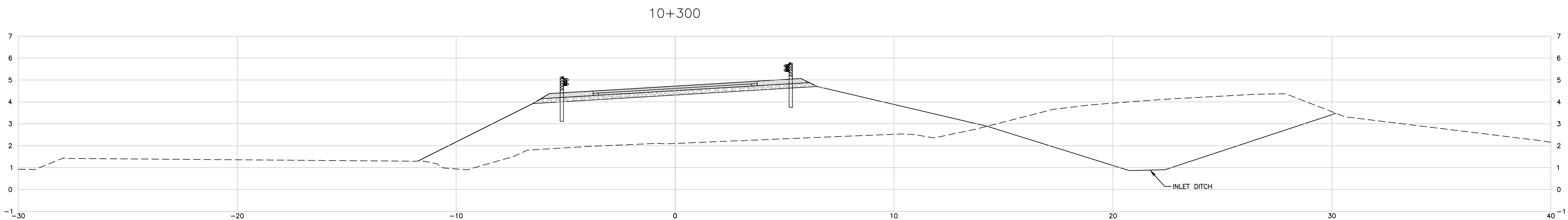
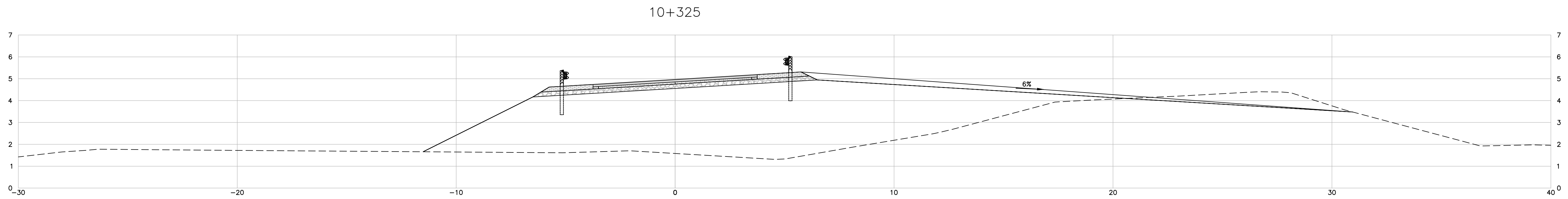
WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com



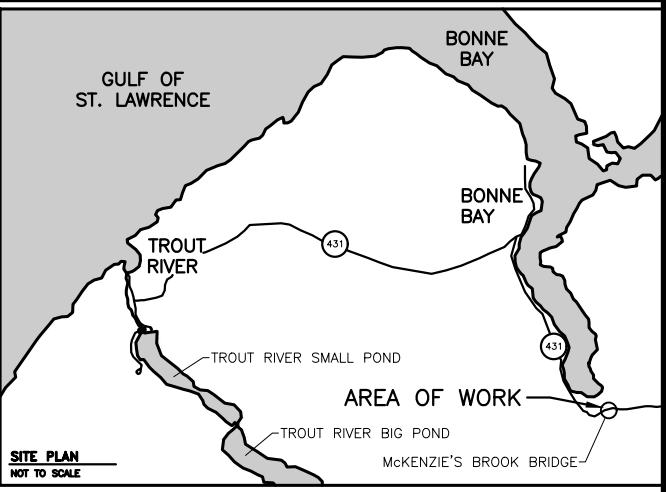
0	ISSUED FOR TENDER	APR 2019
revisions		date
project	project	
BRIDGE REPLACEMENT McKENZIE'S BROOK BRIDGE GROS MORNE NATIONAL PARK		

CROSS SECTIONS
STATION 10+225
TO STATION 10+325

designed	S. WELLS/A.MILLIGAN	conçu
date	2019/04	
drawn	S. WELLS	dessiné
date	2019/04	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	no. du projet	
	1268	
drawing no.	no. du dessin	
	C07	



KEY PLAN



WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.ca

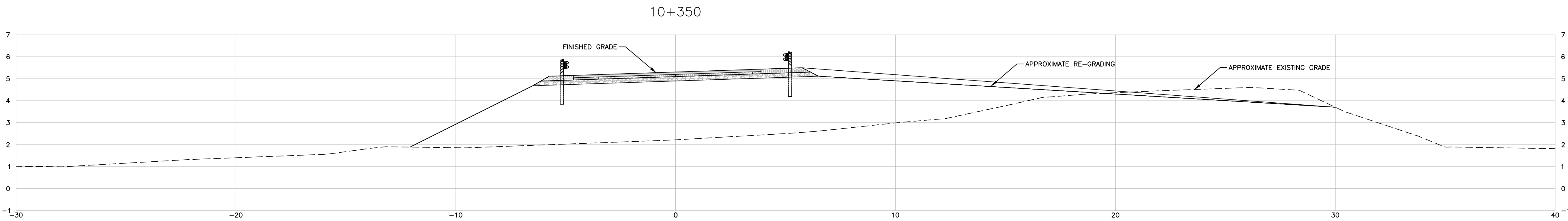
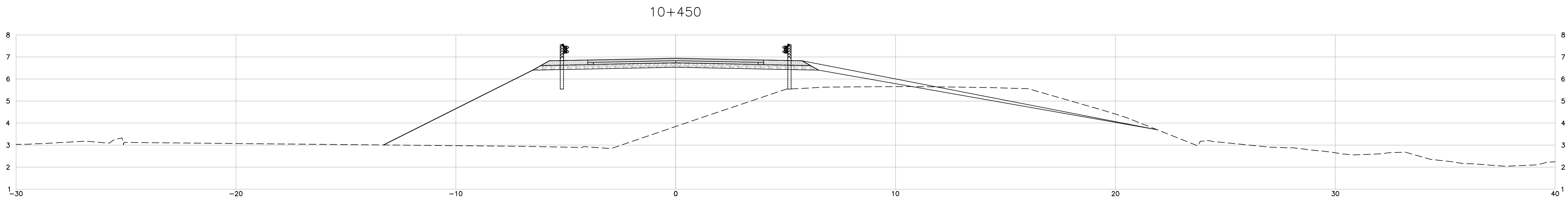
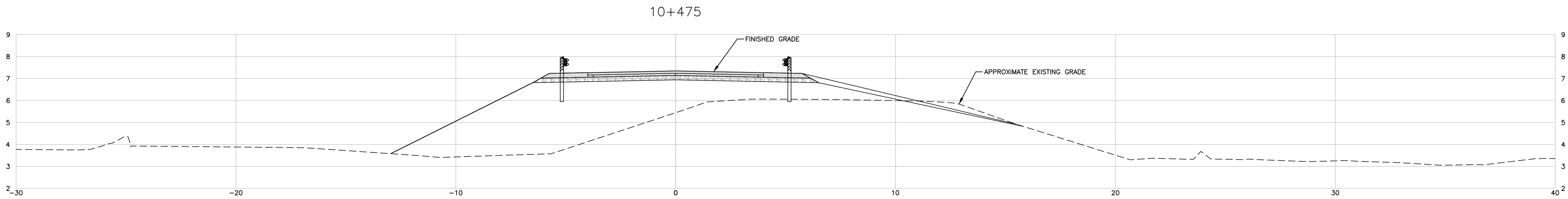


0	ISSUED FOR TENDER	APR 2019
revisions		date

project
BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK

drawing
CROSS SECTIONS
STATION 10+350
TO STATION 10+475

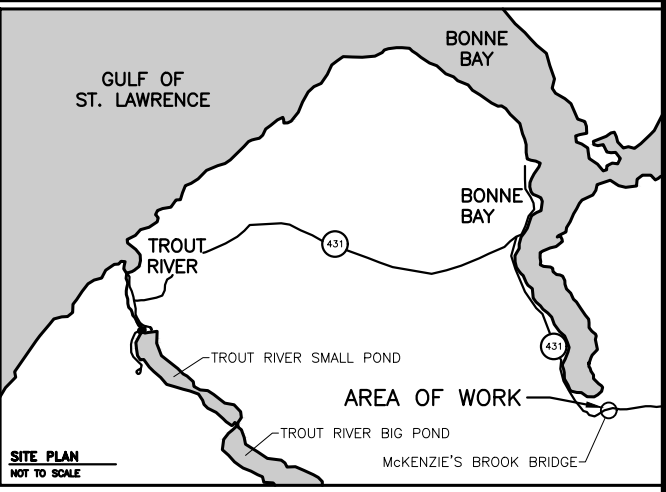
designed	S. WELLS/A.MILLIGAN	conçu
date	2019/04	
drawn	S. WELLS	dessiné
date	2019/04	
approved		approuvé
date		
Tender		Soumission
Project Manager	Administrateur de projets	
project number	1268	no. du projet
drawing no.	C08	no. du dessin



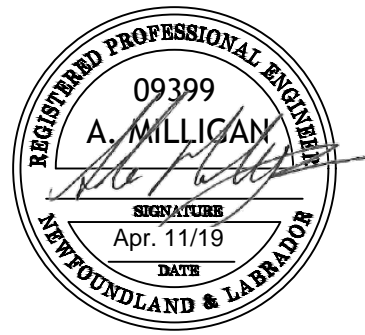
C

C

KEY PLAN



WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com

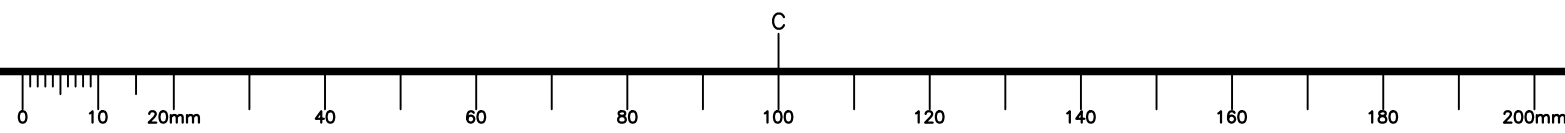
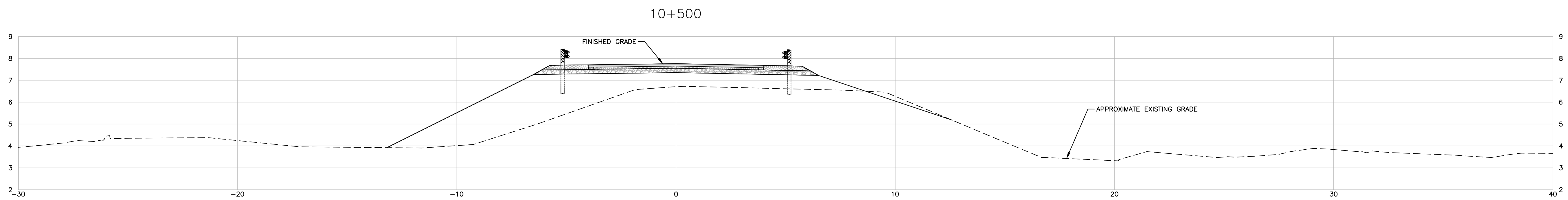
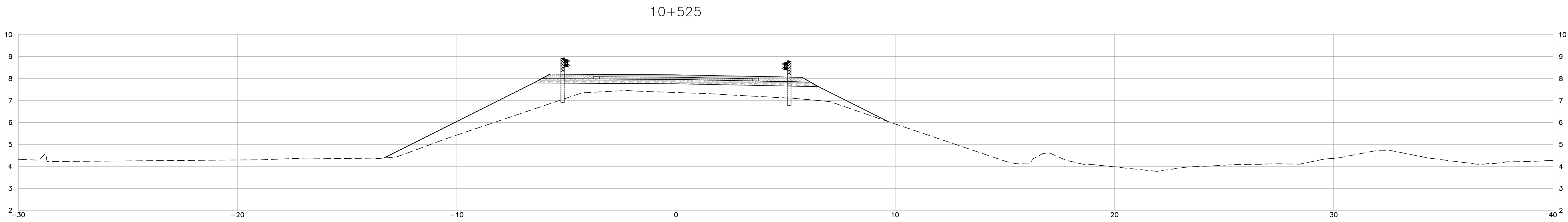
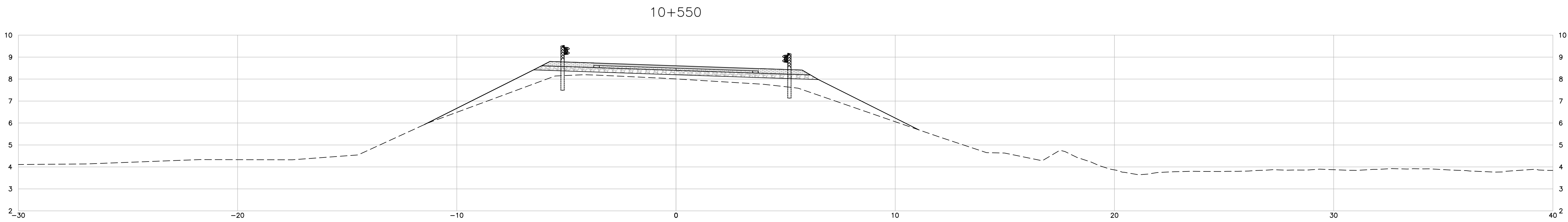
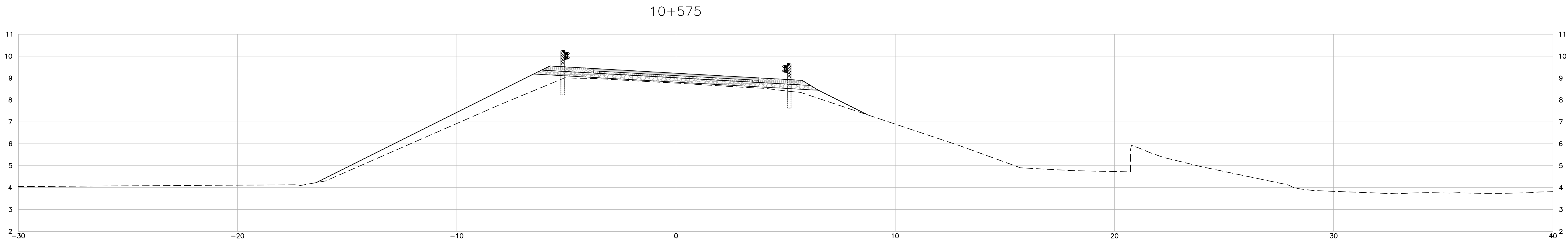


0	ISSUED FOR TENDER	APR 2019
revisions		date

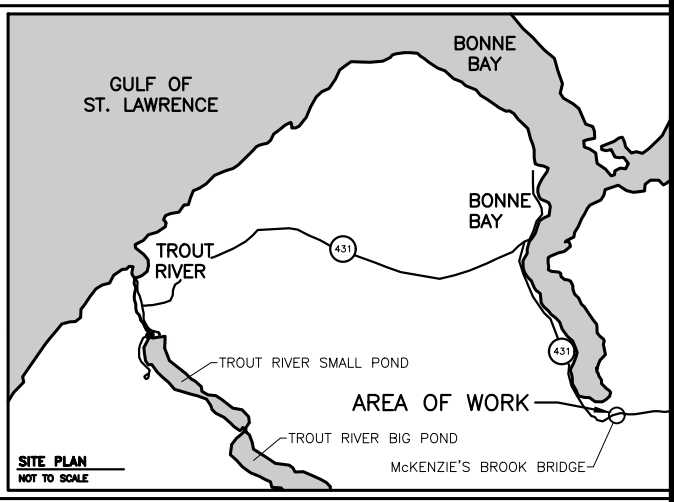
project project
**BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK**

drawing dessin
**CROSS SECTIONS
STATION 10+500
TO STATION 10+575**

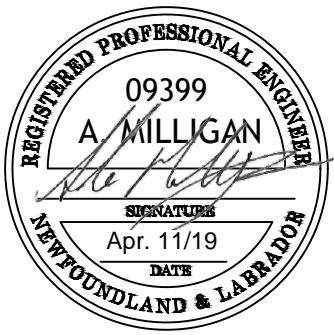
designed S. WELLS/A.MILLIGAN	conçu
date 2019/04	
drawn S. WELLS	dessiné
date 2019/04	
approved	approuvé
date	
Tender	Soumission
Project Manager	Administrateur de projets
project number	no. du projet
1268	
drawing no.	no. du dessin
C09	



KEY PLAN



WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com



0	ISSUED FOR TENDER	APR 2019
revisions		date

project
**BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK**
project

drawing
**CROSS SECTIONS
STATION 10+600
TO STATION 10+675**
dessin

designed S. WELLS/A.MILLIGAN conçu
date 2019/04
drawn S. WELLS dessiné
date 2019/04

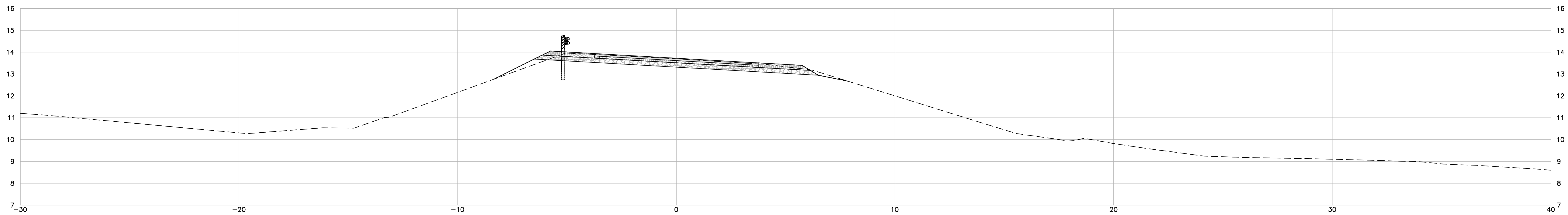
approved approuvé
date
Tender Soumission

Project Manager Administrateur de projets

project number no. du projet
1268

drawing no. no. du dessin
C10

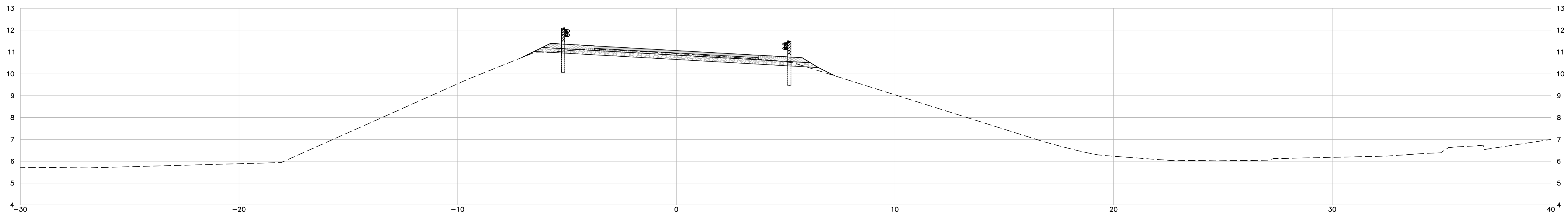
10+675



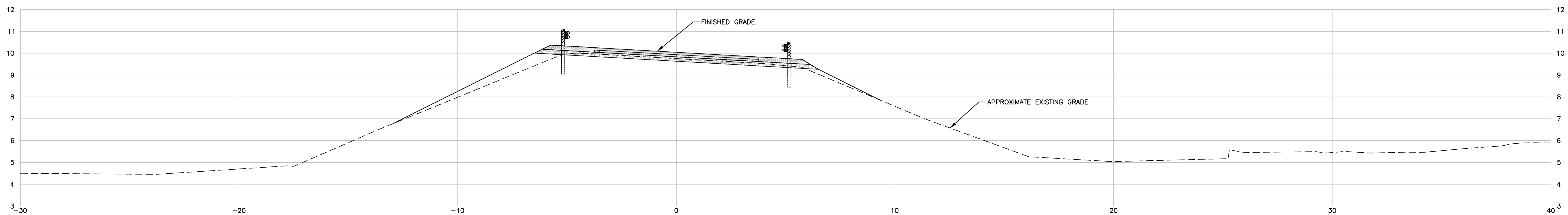
10+641.679

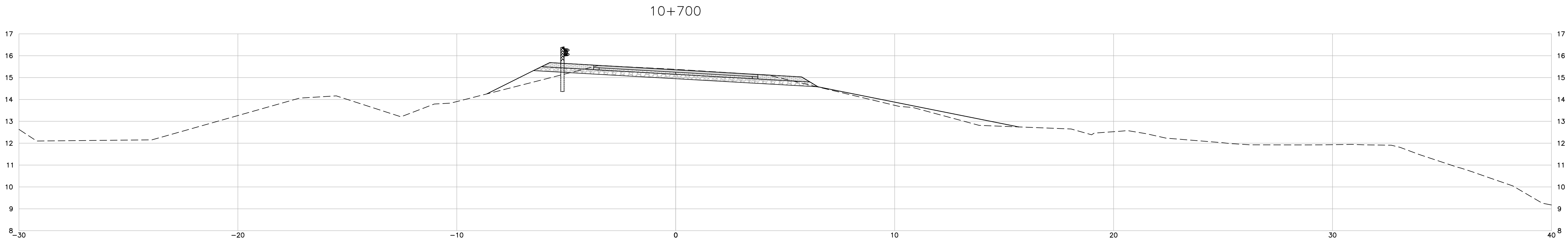
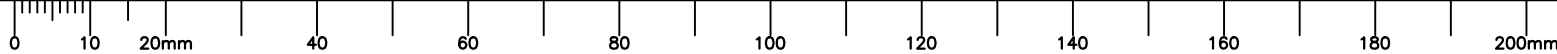


10+625

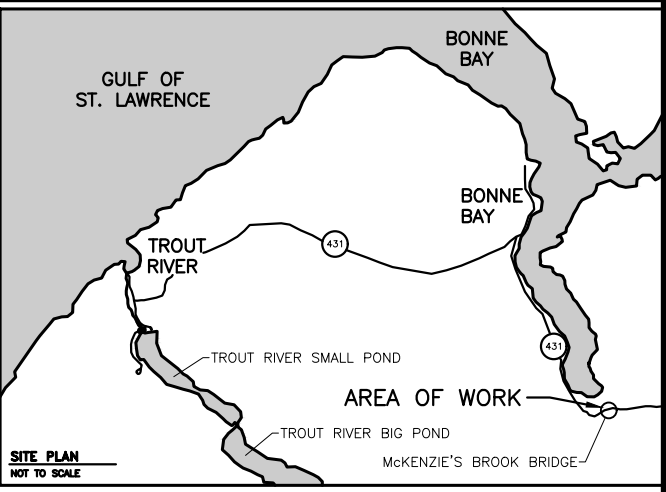


10+600

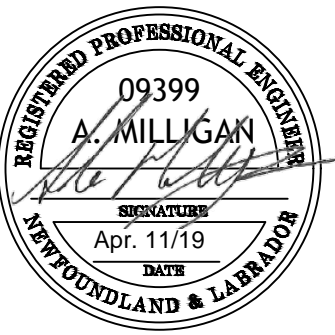




KEY PLAN



WSP Canada Inc.
1070 St. George Boulevard, Suite 100
Moncton, New Brunswick, Canada E1E 4K7
T 506-857-1675 F 506-857-1679 www.wsp.com



0	ISSUED FOR TENDER	APR 2019
revisions		date

project
BRIDGE REPLACEMENT
McKENZIE'S BROOK
BRIDGE
GROS MORNE
NATIONAL PARK

drawing
CROSS SECTIONS
STATION 10+700

designed S. WELLS/A.MILLIGAN	conçu
date 2019/04	
drawn S. WELLS	dessiné
date 2019/04	
approved	approuvé
date	
Tender	Soumission
Project Manager	Administrateur de projets
project number	no. du projet
1268	
drawing no.	no. du dessin
C11	