

MUNICIPALITY OF PORT HOPE

SYLVAN GLEN BRIDGE REPLACEMENT CONTRACT No.: 05P-ENG-2022



MUNICIPALITY OF
PORT HOPE



BENCHMARK NOTES

DESCRIPTION:	BM#1 NAIL IN ASPHALT
STATION:	0+009.55
OFFSET:	3.20m EAST
NORTHING:	4874252.567
EASTING:	714231.629
ELEVATION:	108.186

WP#1		WP#2
N	4874310.731	N 487428
E	714244.770	E 714252
ELEV.	105.656	ELEV. 105.08
STA.	0+053.26	STA. 0+076

DESCRIPTION: BM#2 NAIL
STATION: 0+134.95
OFFSET: 6.70m WEST
NORTHING: 4874232.293
EASTING: 714268.719
ELEVATION: 104.982

WP#2
N 4874289.224
E 714252.924
ELEV. 105.081
STA. 0+076.26

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

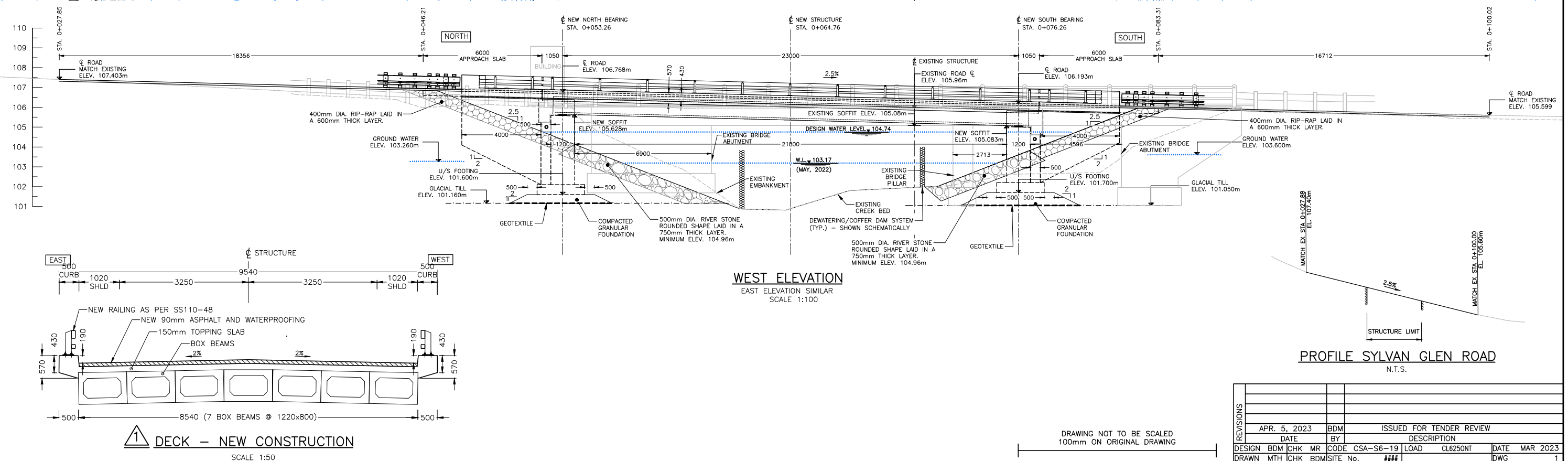
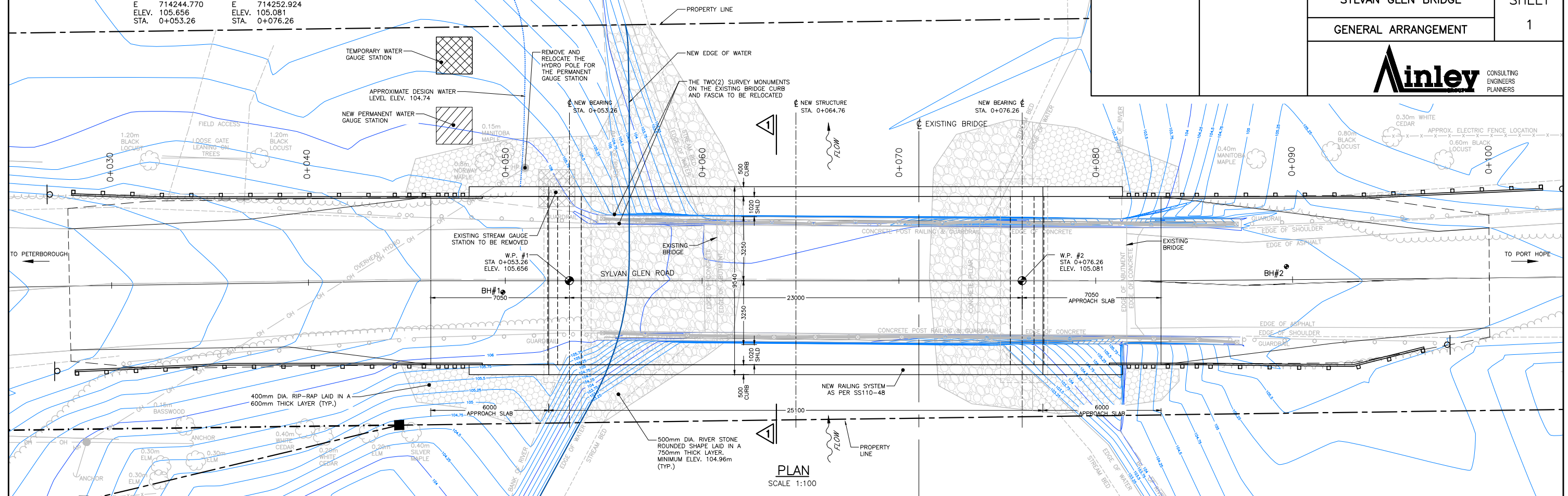
CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

GENERAL ARRANGEMENT

SHEET |

1



REVISIONS									
	APR. 5, 2023	BDM		ISSUED FOR TENDER REVIEW					
	DATE	BY		DESCRIPTION					
DESIGN	BDM	CHK	MR	CODE	CSA-S6-19	LOAD	CL6250NT	DATE	MAR 2023
DRAWN	MTH	CHK	BDM	SITE	No. ###			DWG	1

SCOPE OF WORK

THE FOLLOWING SCOPE OF WORK IS NOT INTENDED TO BE AN EXHAUSTIVE LIST OF ALL ITEMS REQUIRED TO THE WORK, WHICH SHALL BE CARRIED OUT AS SPECIFIED ELSEWHERE IN THE CONTRACT, NOR IS IT INTENDED TO BE A SEQUENCE OF WORK.

1. ERECT SIGNAGE AND INSTALL ENVIRONMENTAL PROTECTION MEASURES.
2. INSTALL TEMPORARY CONCRETE BARRIERS TO CLOSE THE ROAD AND DETOUR THE TRAFFIC ONTO THE DETOUR ROADS. REMOVE GUIDERAIL AT THE APPROACHES.
3. INSTALL COFFERDAMS AS REQUIRED FOR EXCAVATION AND DEWATERING. DEWATER.
4. REMOVE THE EXISTING STRUCTURE. EXCAVATE FOR THE CONSTRUCTION OF THE NEW BRIDGE FOUNDATION.
5. CONSTRUCT GRANULAR BASE FOUNDATION, NEW ABUTMENT FOOTINGS AND SUBSTRUCTURE.
6. INSTALL NEW BEARINGS AND PRESTRESSED BOX BEAMS. FORM AND PLACE REINFORCING STEEL FOR DECK. SEMI-SIMULTANEOUSLY POUR CONCRETE IN NEW DECK AND SIMULTANEOUSLY POUR CONCRETE IN BACKFILL THE STRUCTURE.
7. CONSTRUCT THE NEW DECK RAILING SYSTEM.
8. CONSTRUCT NEW APPROACH SLABS.
9. COMPLETE GRADING ON THE ROADWAY APPROACHES AND INSTALL NEW APPROACH GUIDERAIL AND DRAINAGE FEATURES.
10. WATERPROOF AND PAVE THE DECK. PAVE THE APPROACHES TO THE PROJECT LIMITS.
11. REMOVE TRAFFIC CONTROL MEASURES AND ENVIRONMENTAL SYSTEMS.
12. OPEN ROADWAY TO NORMAL TRAFFIC.

GENERAL NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTIONS WITH ALL OTHER APPLICABLE CONTRACT DRAWINGS.
2. CLASS OF CONCRETE:

PRESTRESSED BOX GIRDERS	40MPa
REMAINDER	30MPa
3. DESIGN LOADING: CHBDC 2019. CAN/CSA-S6-19. CL-625-ONT TRUCK.
4. CLEAR COVER REINFORCING SHALL BE:

FOOTINGS	100 ± 25mm
BARRIER WALLS	60 ± 10mm
REMAINDER	70 ± 20mm

UNLESS NOTED OTHERWISE
5. REINFORCING STEEL SHALL BE GRADE 400.
PREFIX 'S' DENOTES STAINLESS STEEL REINFORCING.

UNLESS SHOWN OTHERWISE TENSION LAP SPLICES FOR BLACK OR COATED REINFORCING STEEL BARS SHALL BE CLASS B.

STAINLESS STEEL REINFORCEMENT SHALL BE TYPE 316LN, DUPLEX 2205 OR XM028 AND HAVE A MINIMUM YIELD STRENGTH OF 50MPa. UNLESS OTHERWISE SPECIFIED.

BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS, WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS.
6. ALL DIMENSIONS ARE IN MILLIMETERS.

CONSTRUCTION NOTES

1. BACKFILL SHALL NOT BE PLACED BEHIND THE ABUTMENT UNTIL THE DECK SLAB AND SEMI INTEGRAL DECK ENDS ARE IN PLACE AND HAVE REACHED 75% OF ITS DESIGN STRENGTH.

THE FILL AT BOTH ENDS OF THE BRIDGE, ABOVE THE BEARING LEVEL SHALL BE PLACED AND COMPACTED SIMULTANEOUSLY. THE DIFFERENCE IN THE FILL DEPTH AT THE OPPOSITE ENDS OF THE BRIDGE SHALL NOT EXCEED 300mm AT ANY TIME.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS SHOWN ON THIS DRAWING PRIOR TO ANY FABRICATION OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE CONTRACT ADMINISTRATOR.
3. THE CONTRACTOR SHALL OBTAIN APPROVAL FOR ENVIRONMENTAL PROTECTION SCHEMES FROM ALL AUTHORITIES HAVING JURISDICTION.
4. THE USE OF EARTHEN COFFERDAMS IS NOT PERMITTED. COFFERDAM SYSTEM DESIGNED AND CONSTRUCTED BY CONTRACTOR. REMOVE COFFERDAMS ENTIRELY WHEN NOT REQUIRED.
5. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ADEQUATE PROTECTION OF ALL UTILITIES, SERVICES, AND ROADWAYS DURING CONSTRUCTION OPERATIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY STRUCTURES AND CONSTRUCTION PLATFORMS AND DEBRIS CONTAINMENT SYSTEMS ETC.
7. THE CONTRACTOR SHALL CONTROL OPERATIONS TO PREVENT ENTRY OF DELETERIOUS MATERIAL IN THE WATER COURSE.
8. ALL ELEVATIONS ARE TO GEODETIC DATUM.

LIST OF ABBREVIATIONS

W.L.	WATER LINE
W.P.	WORKING POINT
T/P	TOP OF PAVEMENT
U/FTG	UNDERSIDE OF FOOTING
CJ	CONSTRUCTION JOINT
ABUT.	ABUTMENT
BRGS.	BEARINGS
TPFS	TEMPORARY FLOW PASSAGE SYSTEM
SHLD	SHOULDER
FTG	FOOTING
AVG.	AVERAGE
TCB	TEMPORARY CONCRETE BARRIER
SBGR	STEEL BEAM GUIDERAIL
I.F.	INSIDE FACE
O.F.	OUTSIDE FACE
C	CENTERLINE
EL	ELEVATION (METRES)
STA.	STATION
D/S	DOWNSTREAM
U/S	UPSTREAM

METRIC

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OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

GENERAL ARRANGEMENT NOTES AND BOREHOLE LOGS

SHEET

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APPLICABLE STANDARD DRAWINGS

OPSD 3101.150 WALLS ABUTMENT, BACKFILL MINIMUM GRANULAR REQUIREMENTS

OPSD 3102.100 WALL ABUTMENT BACKFILL DRAIN

OPSD 3190.100 WALLS RETAINING AND ABUTMENT WALL DRAIN

OPSD 3370.100 DECK WATERPROOFING HOT APPLIED ASPHALT MEMBRANE WITH PROTECTION BOARD DETAILS

OPSD 3370.101 DECK WATERPROOFING HOT APPLIED ASPHALT MEMBRANE AT ACTIVE
CRACKS GREATER THAN 2mm WIDE AND CONSTRUCTION JOINTS

OPSD 3419.100 BARRIERS AND RAILINGS STEEL GUIDERAIL AND CHANNEL ANCHORAGE

OPSD 3950.100 JOINTS, CONCRETE EXPANSION AND CONSTRUCTIONS ON
STRUCTURE

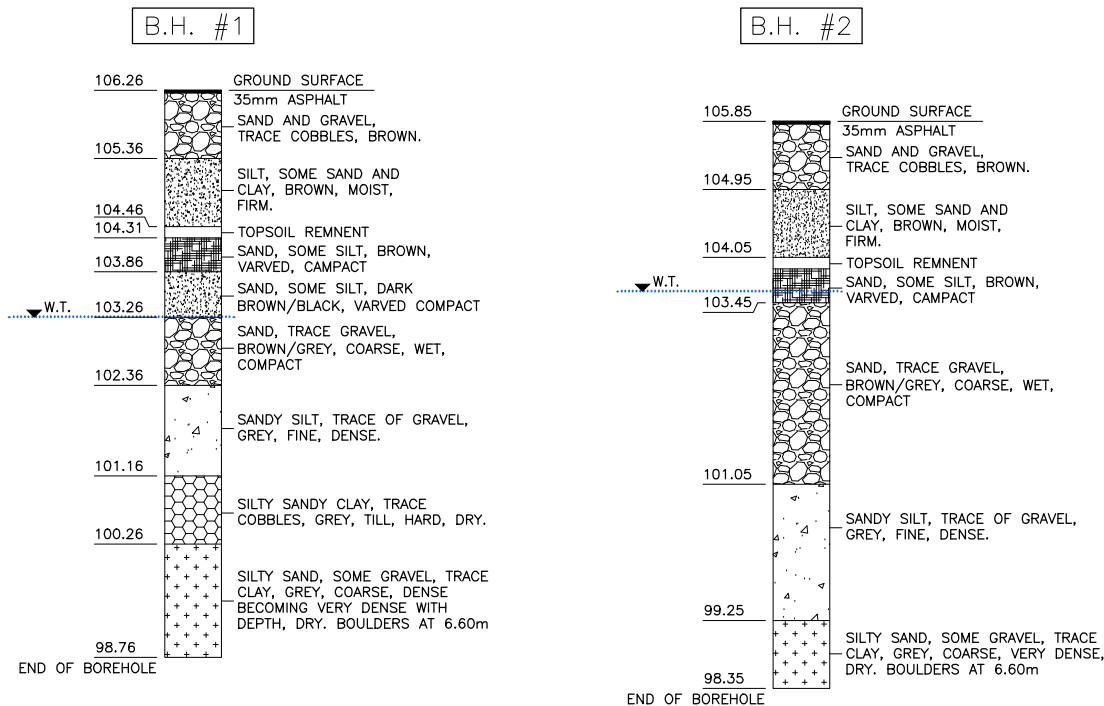
OPSD 3329.100 DECK, REINFORCEMENT, SUPPORTS FOR REINFORCING STEEL FOR
SLAB DEPTH 300MM OR LESS

SSD 110-48 TWO TUBE RAILING CURB - TL4 (WITH CONCRETE END WALL)

SSD 110-66 CONCRETE END WALL FOR BOX BEAM RAILING

LIST OF DRAWINGS

- 1 COVER
- 2 GENERAL ARRANGEMENT
- 3 GENERAL ARRANGEMENT NOTES AND BOREHOLE LOGS
- 4 REMOVALS AND EXCAVATION
- 5 NORTH ABUTMENT – DIMENSIONS
- 6 SOUTH ABUTMENT – DIMENSIONS
- 7 FOOTING REINFORCING DETAILS
- 8 ABUTMENT REINFORCING DETAILS
- 9 WINGWALL REINFORCING DETAILS
- 10 PRESTRESSED BOX GIRDERS AND BEARINGS
- 11 PRESTRESSED BOX GIRDERS DETAILS
- 12 DECK DIMENSIONS
- 13 DECK REINFORCING DETAILS
- 14 BOX BEAM RAILING SYSTEM
- 15 CONCRETE END WALL FOR BOX BEAM RAILING
- 16 6000mm APPROACH SLAB
- 17 ENVIRONMENTAL PROTECTION
- 18 GRADING AND PAVING
- 19 CROSS SECTIONS 1
- 20 CROSS SECTIONS 2
- 21 CROSS SECTIONS 3
- 22 CROSS SECTIONS 4
- 23 CROSS SECTIONS 5
- 24 NAVIGATION ENVELOPE
- 25 DETOUR PLAN – HWY 28
- 26 DETOUR PLAN – CTY RD 10
- 27 GAUGE STATION DETAILS



BOREHOLE LOGS

AINLEY GROUP LTD.
PROJECT No. 05P-ENG-2022 AG FILE No. 22549-1
DRILL DATE: JUNE 8, 2022

THE ACCURACY OF THE SOILS REPORT OR THE ABRIDGED
VERSIONS SHOWN ON THIS DRAWING IS NOT GUARANTEED.
DATA APPLIES ONLY TO ACTUAL BOREHOLE LOCATION.
CONDITIONS MAY DIFFER AT OTHER PARTS OF THE SITE.
BOREHOLE LOCATIONS ARE APPROXIMATE ONLY.

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

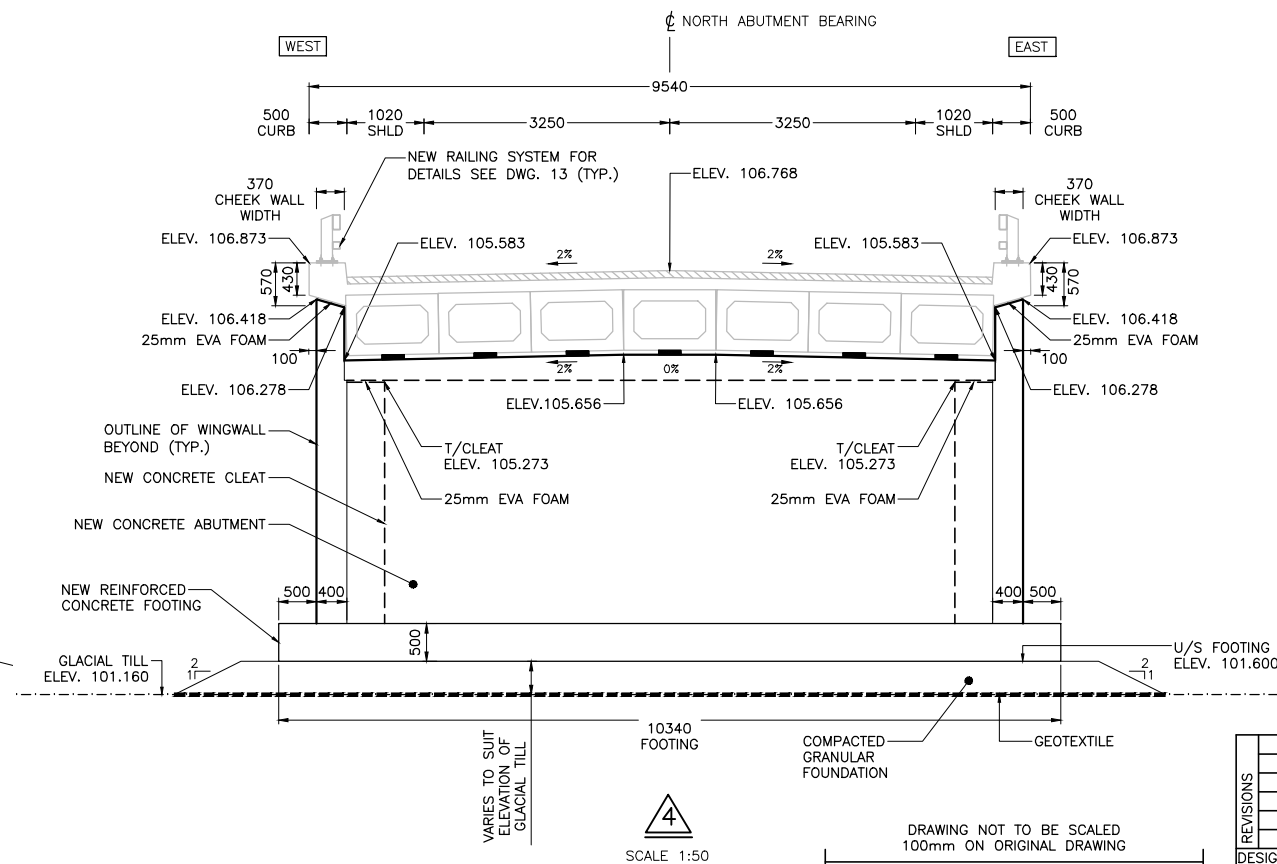
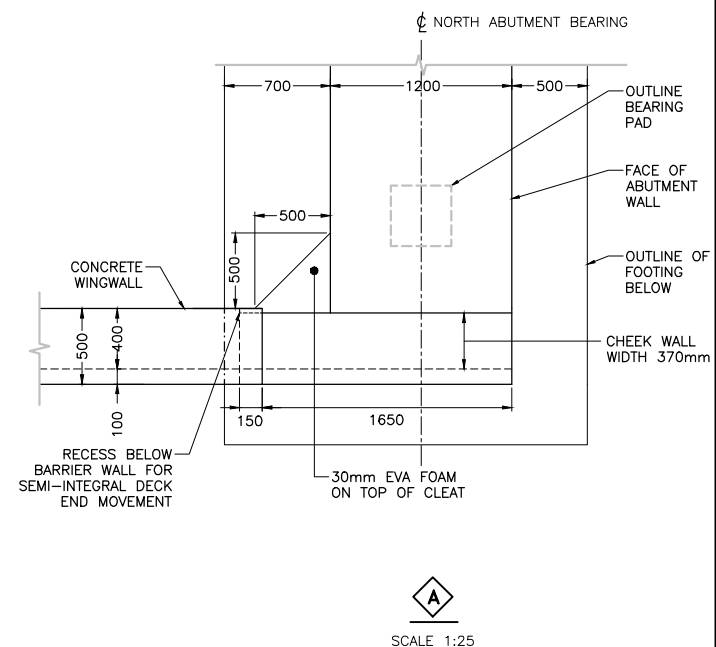
[illegible]



- ## CONSTRUCTION NOTES:
1. ALL REMOVALS ARE TO BE COORDINATED WITH THE CONTRACT ADMINISTRATOR.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS.
 3. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN READING THE CONTRACT REMOVAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO CONDUCT HIS OWN SURVEY OF THE STRUCTURE TO CONFIRM DIMENSIONS ON THE SITE.
 4. ANY REMAINING PORTION OF FOOTINGS SHALL NOT OBSTRUCT THE WATERCOURSE, OR CREATE HYDRAULIC INSTABILITY.
 5. THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY STRUCTURES/DEWATERING AS WELL AS DEBRIS CONTAINMENT REQUIRED FOR REMOVAL OF EXISTING STRUCTURE.
 6. THE CONTRACTOR SHALL CONTROL OPERATIONS TO PREVENT THE INFILTRATION OF DELETERIOUS MATERIAL IN TO THE WATERCOURSE.
 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE RELOCATION OF THE EMERGENCY SUCTION POINT WITH STAKEHOLDERS.
 8. THE EXISTING CONDITIONS SHOWN ON THIS DRAWING HAVE BEEN TAKEN FROM THE ORIGINAL CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS SHOWN ON THIS DRAWING PRIOR TO ANY REMOVAL OR EXCAVATION WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE CONTRACT ADMINISTRATOR.

[illegible]

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

CONSULTING
ENGINEERS
PLANNERS

LAYOUT: 4-NORTH ABUT
FILE NAME: C:\Users\rmuszczy\Desktop\22549-sylwanien\22549-1 - 01 - 02 - 04 - 05 - 06 - 07 - 08 - 11 - 12 - 20230324.dwg

LAYOUT: 6-FOOTING REINF
FILE NAME: C:\Users\mhuszcz\Desktop\22549-sylvan\22549-1 - 01 - 02 - 04 - 05 - 06 - 07 - 08 - 11 - 12 - 20230324.dwg

LIST OF ABBREVIATIONS

I.F. INSIDE FACE
O.F. OUTSIDE FACE
N.F. NEAR FACE
C.J. CONSTRUCTION JOINT
F.F. FAR FACE
E.F. EACH 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

LEGEND

— NEW REINFORCING STEEL

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

FOOTING REINFORCING DETAILS

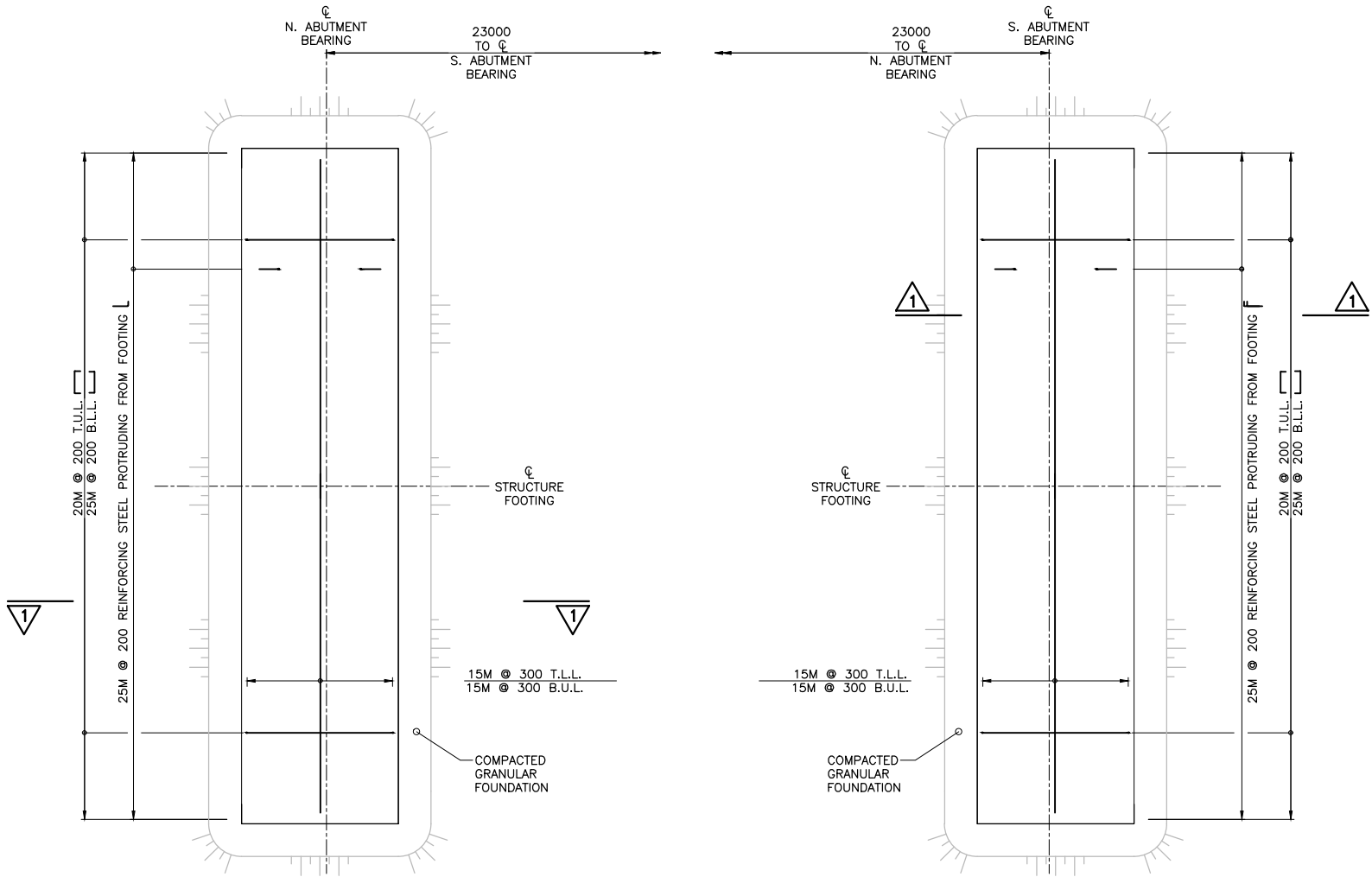
SHEET

6



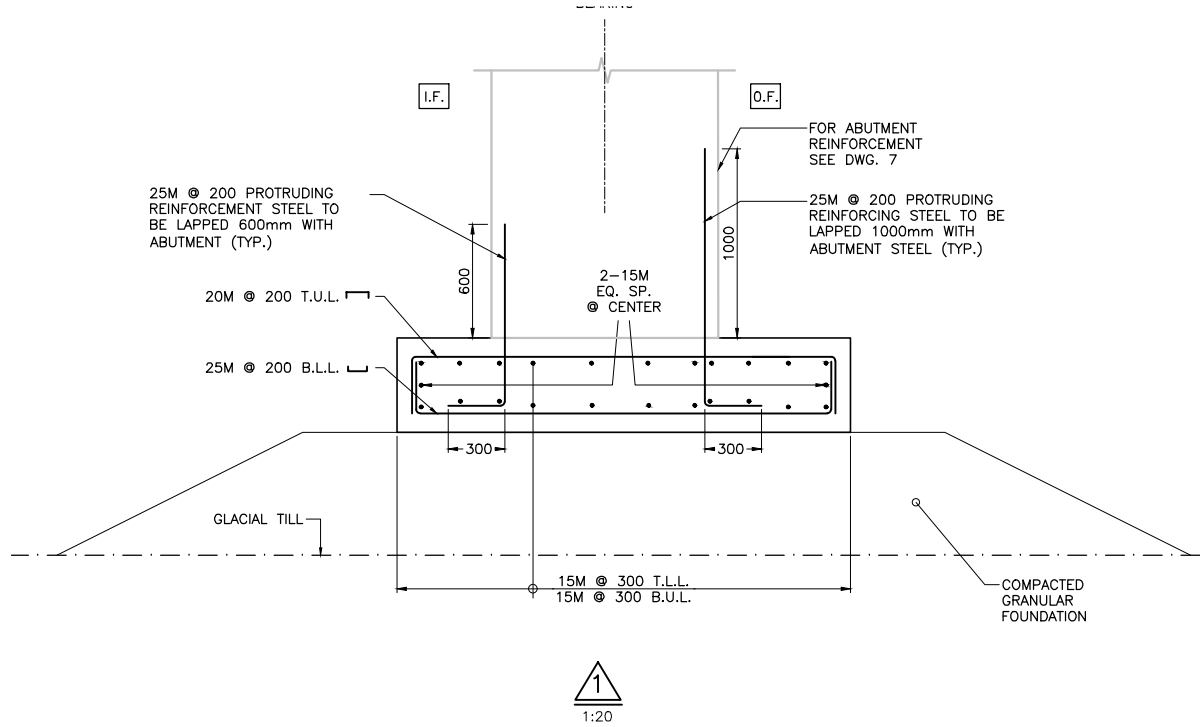
NOTES:

- CLEAR COVER TO REINFORCING STEEL:
FOOTING: 100mm± 25mm
REMAINING, UNLESS NOTED 70mm± 20mm
- THIS DRAWING IS TO BE READ IN CONJUNCTION
WITH ALL OTHER APPLICABLE CONTRACT DRAWINGS.



PLAN – FOOTING REINFORCEMENT

SCALE 1:50



DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISIONS								
	DATE	BY	DESCRIPTION		DATE	BY	DESCRIPTION	
	APR. 5, 2023	BDM	ISSUED FOR TENDER REVIEW					
DESIGN	BDM	CHK	MR	CODE	CSA-S6-19	LOAD	CL6250NT	DATE
DRAWN	MTH	CHK	BDM	SITE	No.	###	DWG	4

1. CLEAR COVER TO REINFORCING STEEL:
FOOTING: 100mm± 25mm
REMAINING, UNLESS NOTED 70mm± 20mm
2. THIS DRAWING IS TO BE READ IN CONJUNCTION
WITH ALL OTHER APPLICABLE CONTRACT DRAWINGS.

———— NEW REINFORCING STEEL



REVISIONS									
	APR. 5, 2023	BDM	ISSUED FOR TENDER REVIEW						
	DATE	BY	DESCRIPTION						
	DESIGN BDM CHK MR	CODE	CSA-S6-19	LOAD	CL6250NT	DATE	MAR 2023		
	DRAWN MTH CHK BDM	SITE No.	###			DWG		7	

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

LAYOUT: 8-WINGWALL REINF
FILE NAME: C:\Users\mhuszcz\Desktop\22549-sylvan\22549-1 - 01 - 02 - 04 - 05 - 06 - 07 - 08 - 11 - 12 - 20230324.dwg

LIST OF ABBREVIATIONS

I.F.	INSIDE FACE
O.F.	OUTSIDE FACE
N.F.	NEAR FACE
C.J.	CONSTRUCTION JOINT
F.F.	FAR FACE
E.F.	EACH 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

METRIC

DIMENSIONS ARE IN METRES
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OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

WINGWALL REINFORCING DETAILS

SHEET

8

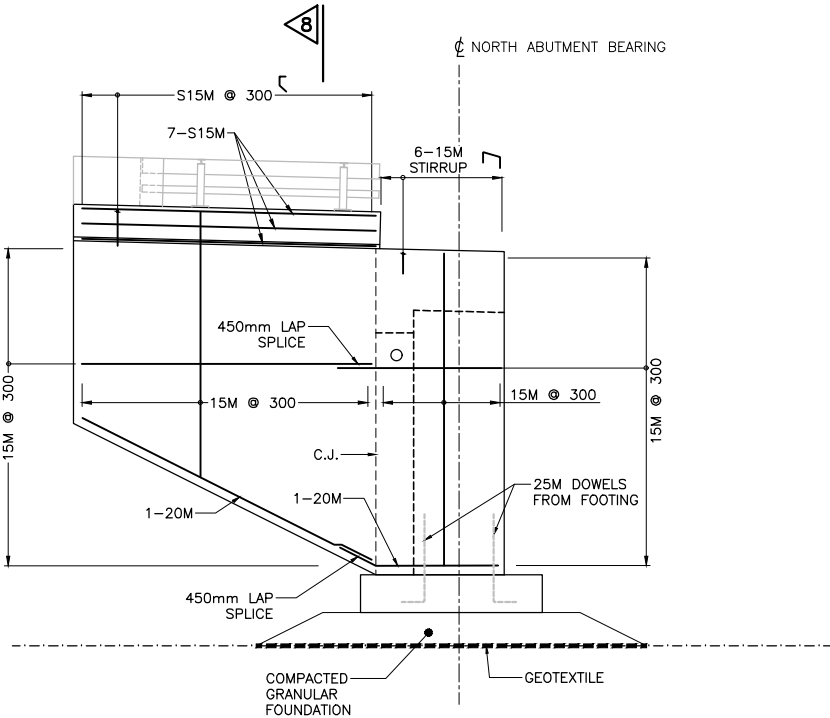


NOTES:

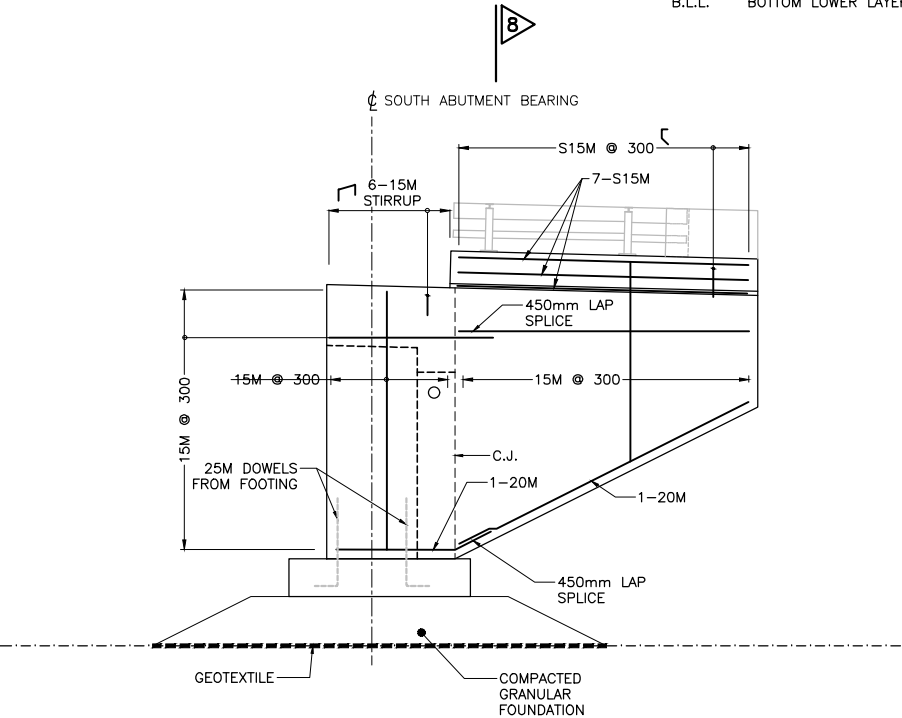
1. THIS DRAWING IS TO BE RED IN CONJUNCTION
WITH THE PREVIOUS.

LEGEND

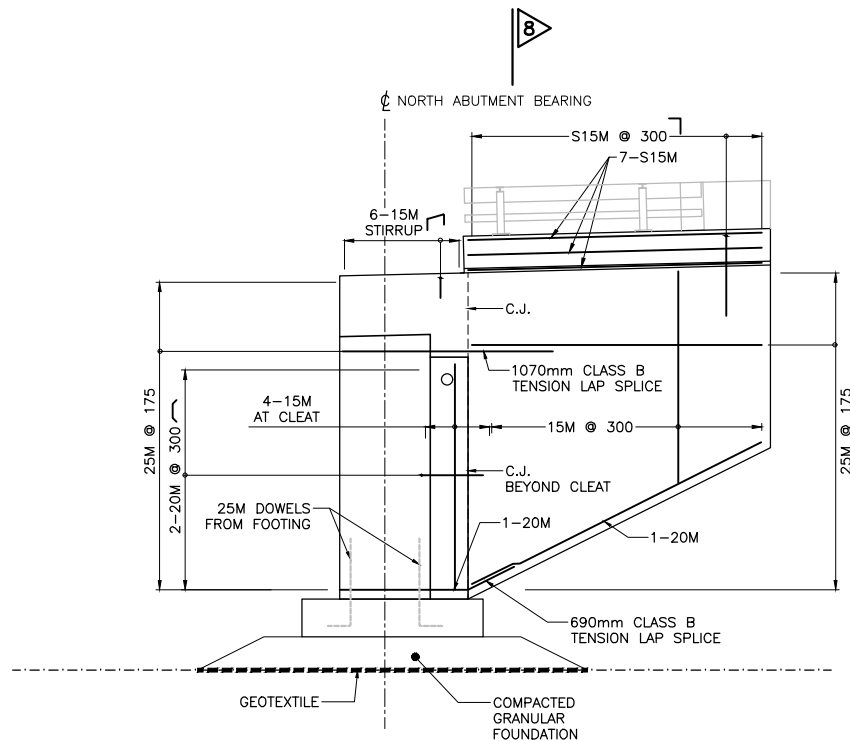
— NEW REINFORCING STEEL



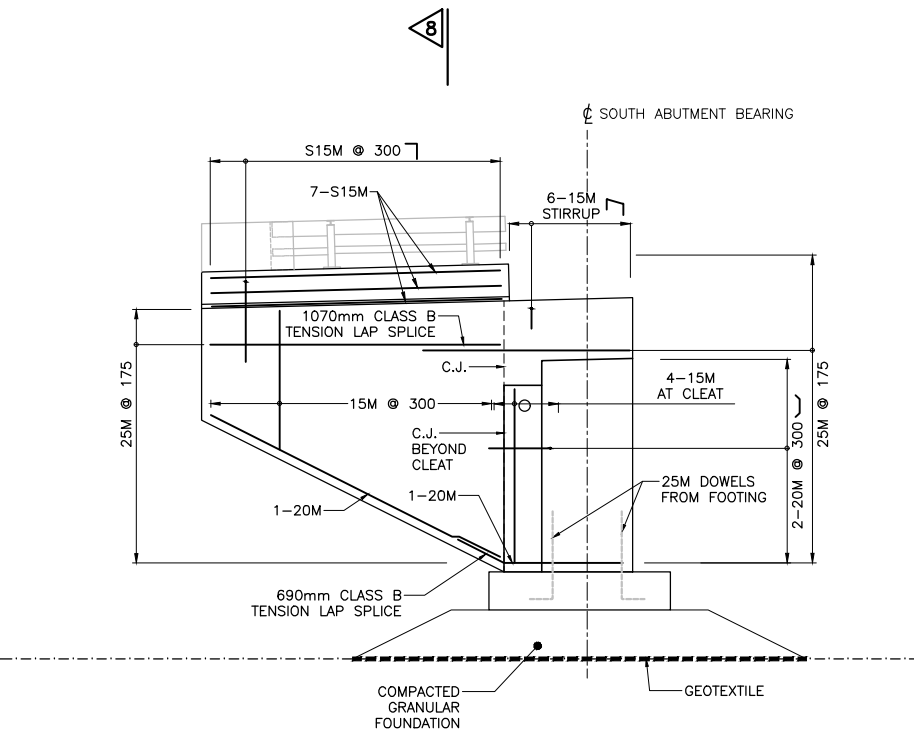
4 NORTH ABUTMENT (OUTSIDE FACE)
1:50



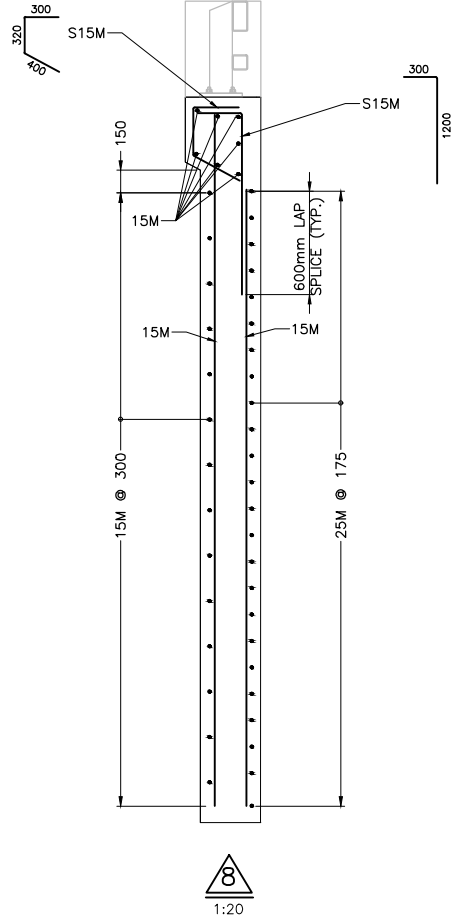
6 SOUTH ABUTMENT (OUTSIDE FACE)
1:50



5 NORTH ABUTMENT (INSIDE FACE)
1:50



7 SOUTH ABUTMENT (INSIDE FACE)
1:50



8
1:20

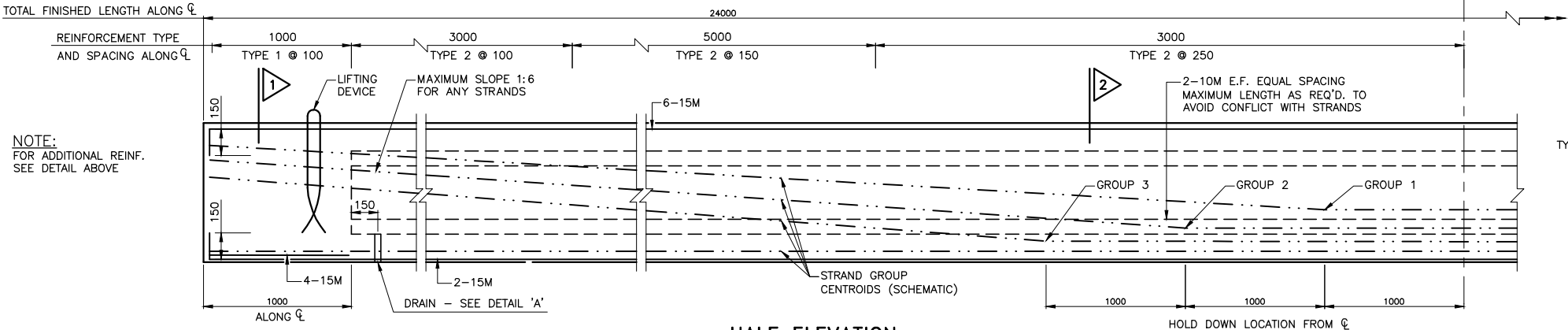
DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISIONS		DATE	BY	DESCRIPTION
		APR. 5, 2023	BDM	ISSUED FOR TENDER REVIEW
DESIGN	BDM	CHK	MR	CODE CSA-S6-19
DRAWN	MTH	CHK	BDM	SITE No. ###
		LOAD	CL6250NT	DATE MAR 2023
		DWG		8

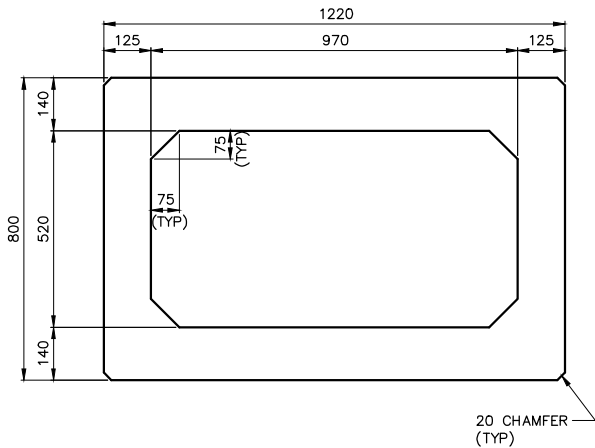
LOCATION		ABUTMENTS
TYPE		NEOPRENE
SIZE (mm)		400x300x60
NUMBER REQUIRED		7*
SERVICEABILITY LIMIT STATES	DEAD LOAD (kN)	390
	TOTAL LOAD (kN)	540
	MOVEMENT (mm)	15 +/-
	ROTATION (radian)	0.01681
	MAX. SHEAR RATE (kN/mm)	1.62
ULTIMATE LIMIT STATES	DEAD LOAD (kN)	460
	TOTAL LOAD (kN)	730

* ONE EXTRA BEARING WILL BE PURCHASED FOR TESTING

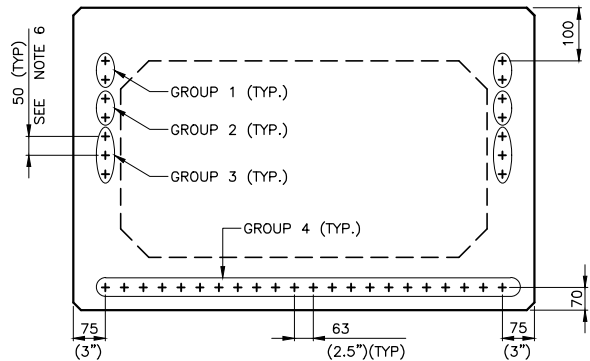
BEARING DATA



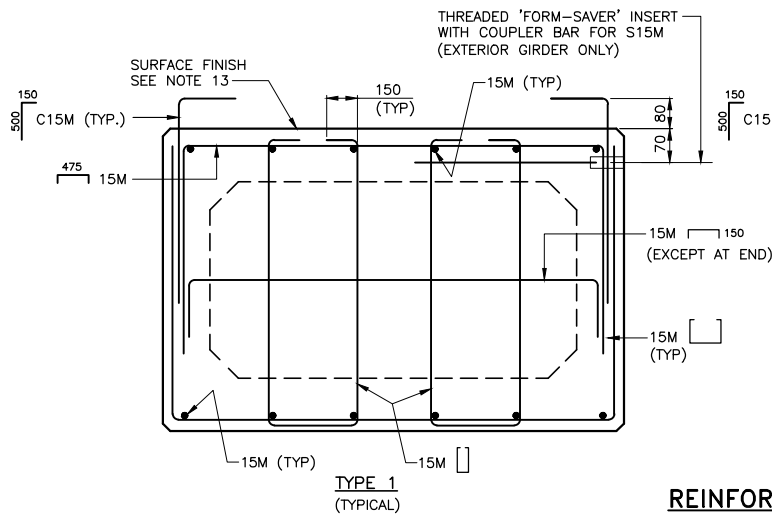
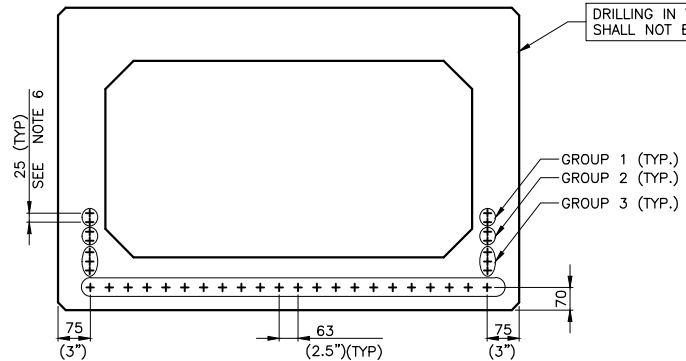
NOTE:
FOR ADDITIONAL REINF.
SEE DETAIL ABOVE



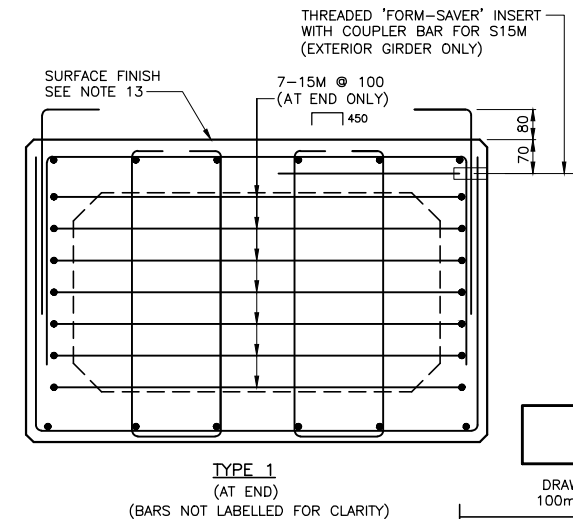
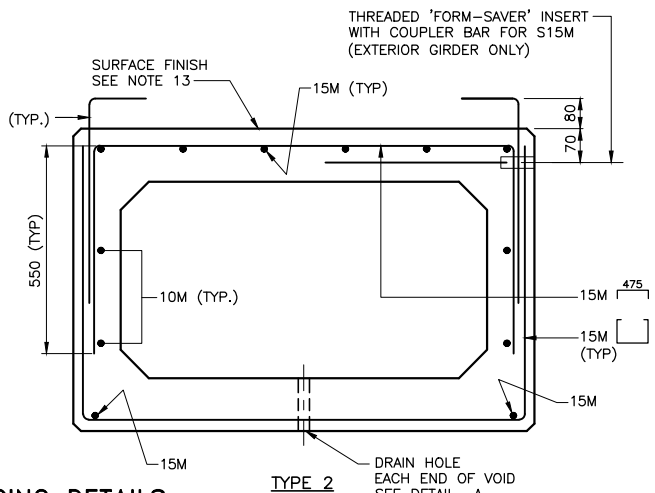
TYPICAL SECTION



STRAND GRID ARRANGEMENT



REINFORCING DETAILS



B800

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

METRIC

DIMENSIONS ARE IN METRES
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OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE
PRESTRESSED BOX GIRDERS AND
BEARINGS

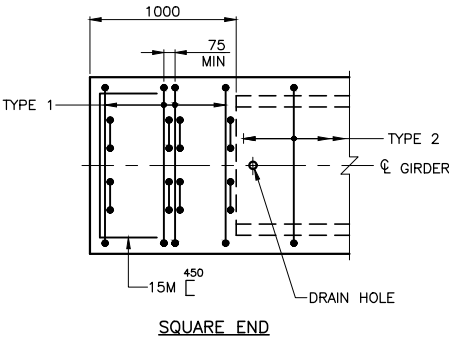
Anley CONSULTING
ENGINEERS
PLANNERS

SHEET

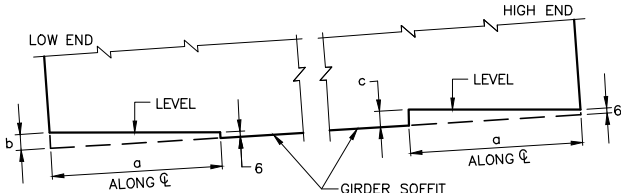
9

NOTES:

- PRESTRESSING STEEL SHALL BE LOW-RELAXATION SEVEN WIRE STRANDS, SIZE DESIGNATION 12.7, GRADE 1860.
- MINIMUM BREAKING STRENGTH OF STAND 184 kN.
- JACKING FORCE PER STRAND 142 kN.
- FORCE PER STRAND AFTER ALL LOSSES 121 kN.
- THE ELAPSED TIME INTERVAL BETWEEN JACKING OF STRANDS AND TRANSFER SHALL NOT BE LESS THAN 15 HOURS.
- THE VERTICAL SPACING OF PRESTRESSING STRANDS IN THE WEB BETWEEN LOCATIONS OF HOLD-DOWN POINTS SHOWN ON THIS DRAWING MAY BE INCREASED TO SUIT THE FABRICATOR'S HARDWARE CAPABILITIES TO A MAXIMUM OF 50mm. IF THE SPECIFIED STRAND SPACING IS CHANGED, THE FABRICATOR SHALL BE RESPONSIBLE FOR ADJUSTING THE NUMBER OF STRANDS TO ENSURE THAT THE SAME FORCE EFFECT IS PRODUCED AS REQUIRED BY THE DESIGN.
- CLASS OF CONCRETE 40 MPa.
- CONCRETE STRENGTH AT TRANSFER 30 MPa.
- REINFORCING STEEL SHALL BE ACCORDING TO CAN/CSA-G30.18-09, GRADE 400W.
- CLEAR COVER TO REINFORCING STEEL:
SOFFIT OF BOTTOM SLAB (EXCEPT UNDERCUT) 48 +15mm/-5mm
UNDERCUT AND ELSEWHERE 30 +15mm/-5mm
- REINFORCING STEEL WITH A CLEAR COVER OF LESS THAN 125mm AND LOCATED WITHIN 3000mm FROM THE GIRDER ENDS AT EXPANSION JOINT SHALL BE EPOXY COATED EXCEPT THAT ALL STIRRUPS AND BURSTING/SPLITTING REINFORCEMENT WITHIN 1000mm FROM THE GIRDER END AT EXPANSION JOINT SHALL BE STAINLESS.
- FOR BRIDGES ON GRADES EXCEEDING 3%, THE ENDS OF GIRDERS SHALL BE CAST SO THAT THEY ARE VERTICAL WHEN ERECTED.
- THE TOP OF PRECAST BEAM SHALL BE GIVEN ROUGH FINISH OF ABOUT 5mm AMPLITUDE ACROSS THE WIDTH.
- DRAWING TO BE READ IN CONJUNCTION WITH SS107-15.
- DURING FABRICATION NO WELDING OF REINFORCEMENT CAGE SHALL BE ALLOWED.



TYPICAL END REINFORCING



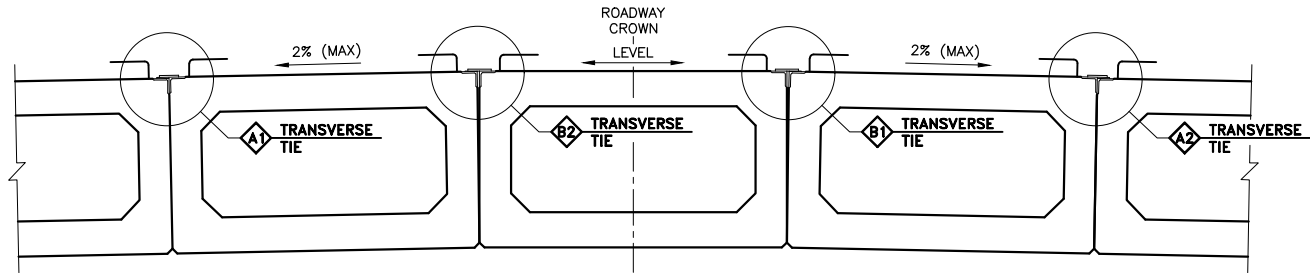
a	b	c
800	26	26

GIRDER SOFFIT DETAIL
AT BEARINGS

STANDARD DRAWING JULY 2019		MODIFIED SS107-12
PRESTRESSED BOX GIRDERS AND BEARINGS (B800)		

REVISIONS	DATE	BY	DESCRIPTION
APR. 5, 2023	BDM	ISSUED FOR TENDER REVIEW	
DESIGN MR	CHK BDM	CODE CSA-S6-14	LOAD CL6250NT
DRAWN MTH	CHK BDM	SITE No. ###	DWG

9

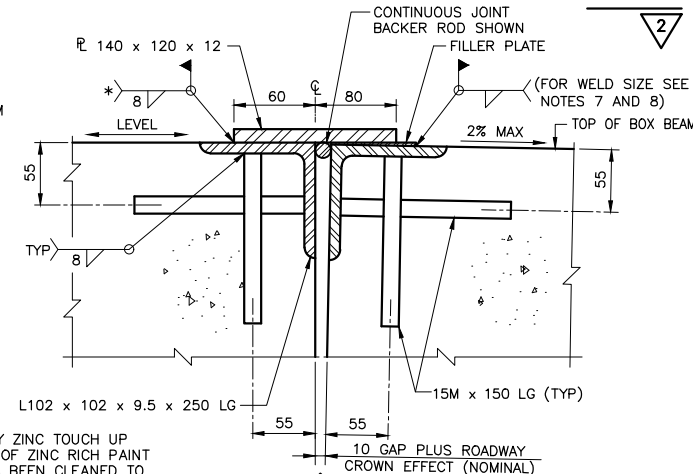
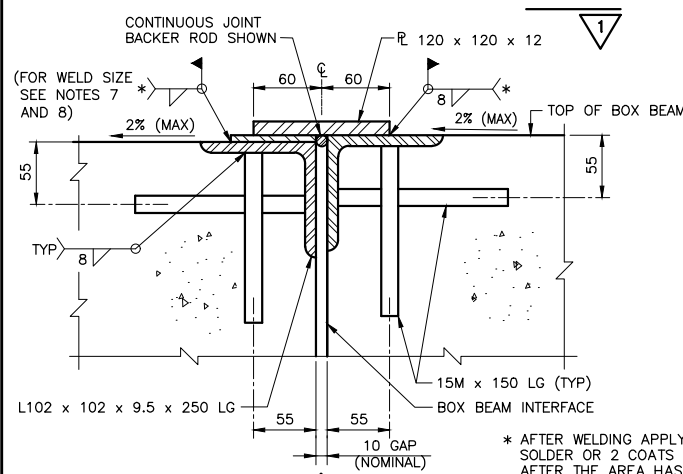
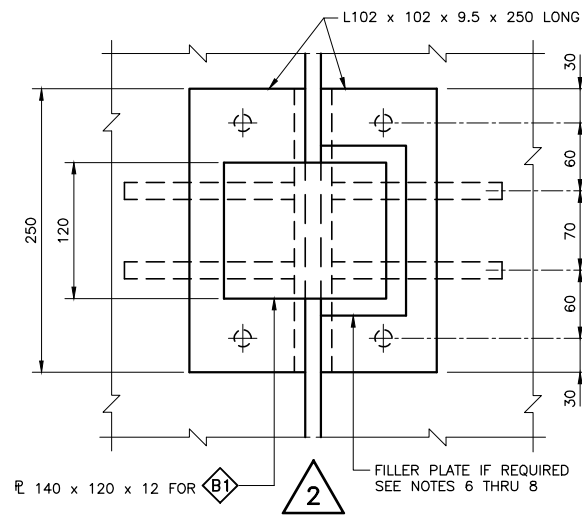
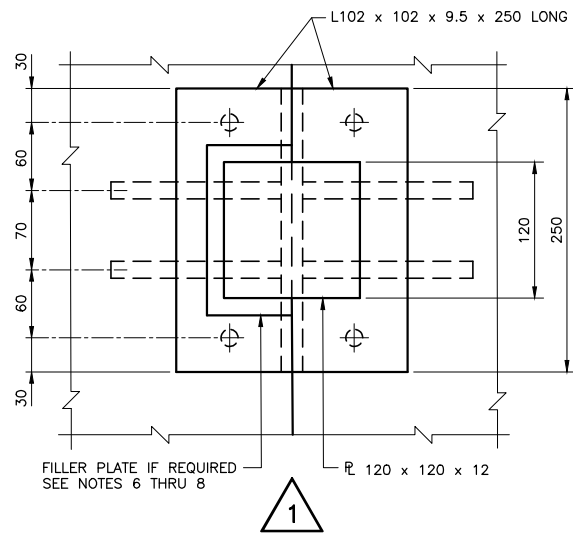


JOINT OFFSET FROM ROADWAY CROWN

*GAP SHALL BE SEALED WITH POLYURETHANE OR EVA-FOAM OR BACKER ROD (OR OTHER APPROVED SEALER)

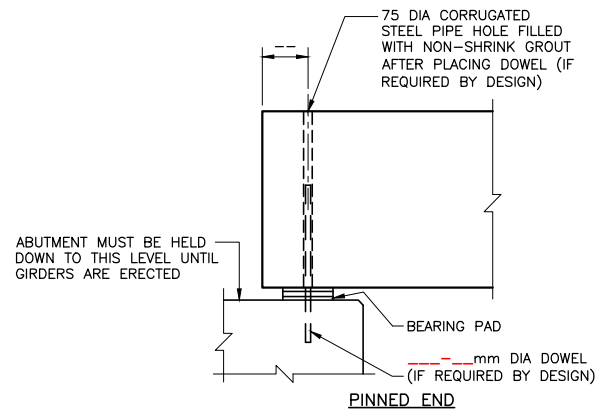
TRANSVERSE TIE LOCATIONS

SPAN LENGTH	TIE LOCATIONS AT		
	1/4 SPAN	1/3 SPAN	MIDSPAN
≤24M	—	X	—
>24M	X	—	X

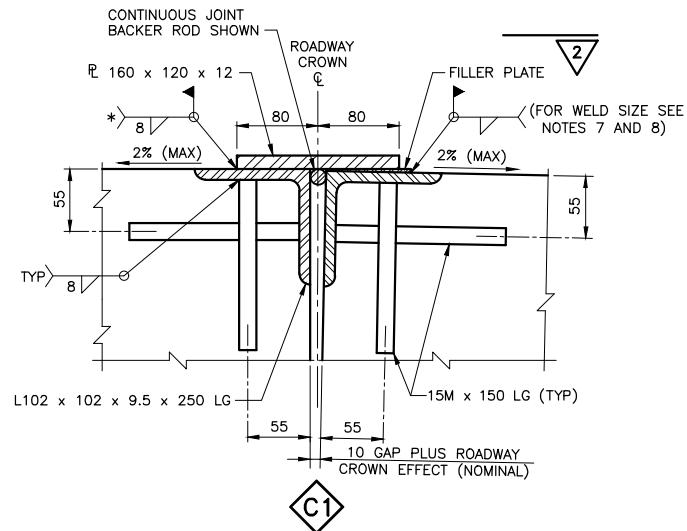


(A2) SIMILAR BUT OPPOSITE HAND

(B2) SIMILAR BUT OPPOSITE HAND



BEAM TO ABUTMENT



METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

PRESTRESSED BOX GIRDER
DETAILS

Anley CONSULTING
ENGINEERS
PLANNERS

SHEET

10

NOTES:

- THIS DRAWING SHOWS TYPICAL DETAILS FOR PRECAST CONCRETE BOX GIRDERS AND IS TO BE READ IN CONJUNCTION WITH DRAWING SS107-12.
- STEEL PLATES AND ANGLES SHALL BE ACCORDING TO CSA G40.20-13/G40.21-13, GRADE 300W.
- STEEL PLATES AND ANGLES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- IF ANCHORED EMBEDDED STEEL BEARING PLATES ARE REQUIRED AT GIRDER ENDS, THEY SHALL HAVE A THICKNESS OF 20mm. THEY SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION. ALL DAMAGED GALVANIZED SURFACES SHALL BE COATED WITH TWO COATS OF ZINC-RICH PAINT.
- AT ENDS OF GIRDERS WHICH ARE NOT TO BE ENCASED IN CONCRETE, STRAND ENDS SHALL BE RECESSED AND GROUTED, AND GIRDER END FACE SHALL BE PAINTED WITH TWO COATS OF ASPHALTIC PAINT.
- STEEL FILLER PLATES SHALL BE PROVIDED WHENEVER THE TOP OF BOX ELEVATIONS, AT THE TRANSVERSE TIE LOCATIONS, DIFFER MORE THAN 2mm.
- IF THE THICKNESS OF THE REQUIRED STEEL FILLER PLATE, t_f , IS LESS THAN OR EQUAL TO 5mm, THE FILLER PLATE SIZE SHALL BE 120x60x t_f . THE SIZE OF THE WELD CONNECTING THE COMBINATION OF PLATES TO THE ANGLE SHALL BE INCREASED BY THE THICKNESS OF THE FILLER PLATE.
- IF THE THICKNESS OF THE REQUIRED STEEL FILLER PLATE, t_f , IS GREATER THAN 5mm, THE FILLER PLATE SIZE SHALL BE 150x75x t_f AND SHALL BE WELDED TO THE ANGLE WITH A WELD SIZE OF 2mm LESS THAN THE THICKNESS OF THE PLATE BUT NOT LESS THAN 6mm. THE 120x120x12mm PLATE SHALL BE WELDED ALL AROUND WITH AN 8mm WELD AS SHOWN.
- IF ANCHORED EMBEDDED STEEL BEARING PLATES ARE REQUIRED THE REINFORCING MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE THE SHEAR CONNECTORS.
- THE CIRCLED STRANDS ON DETAIL 'D' SHALL BE EXTENDED AND BENT.
- LIFTING DEVICES SHALL NOT BE CUT WITHOUT APPROVAL OF THE CONTRACT ADMINISTRATOR.

STANDARD DRAWING
OCTOBER 2020

MODIFIED

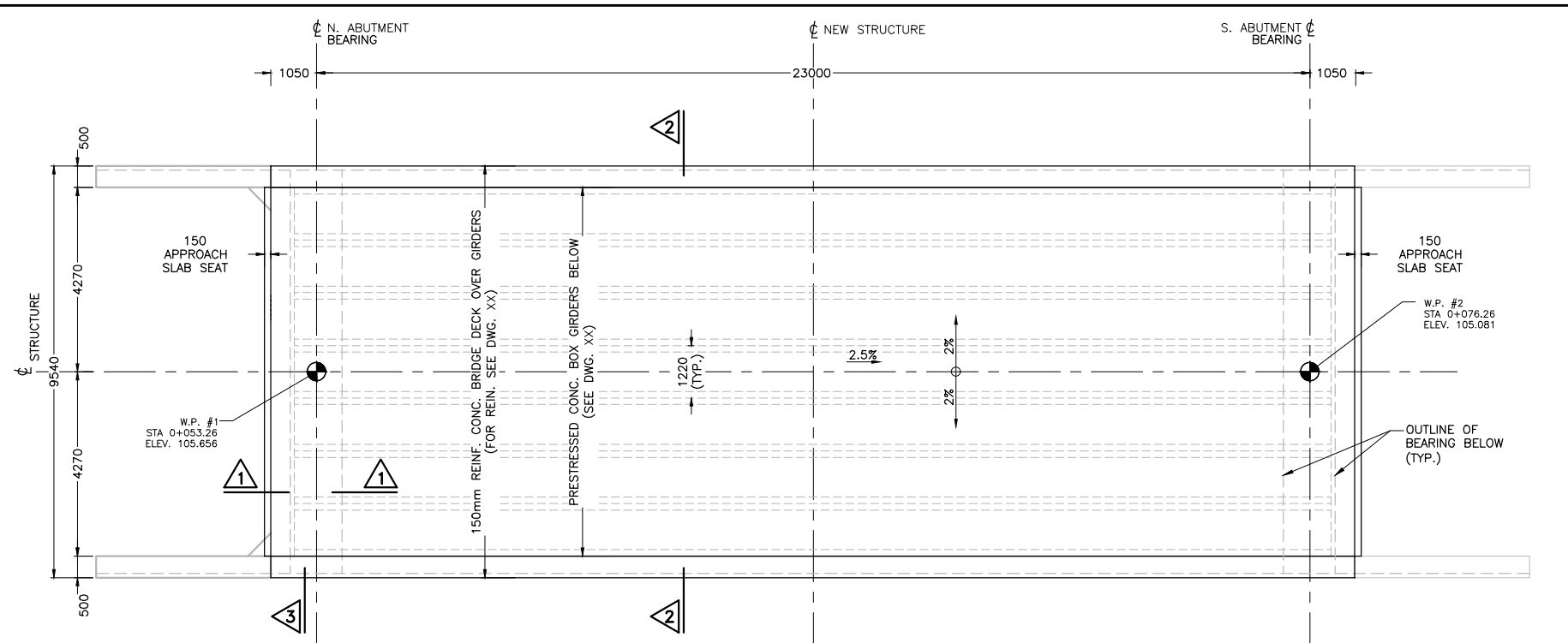
SS107-15

PRESTRESSED BOX GIRDERS
DETAILS

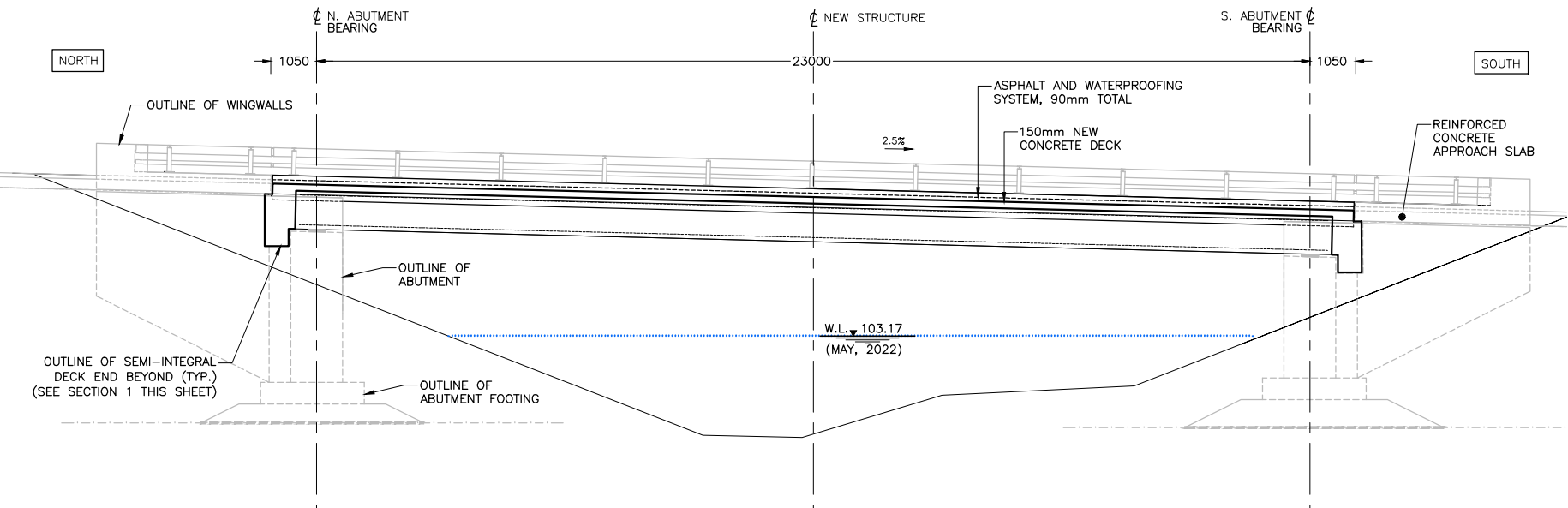
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DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

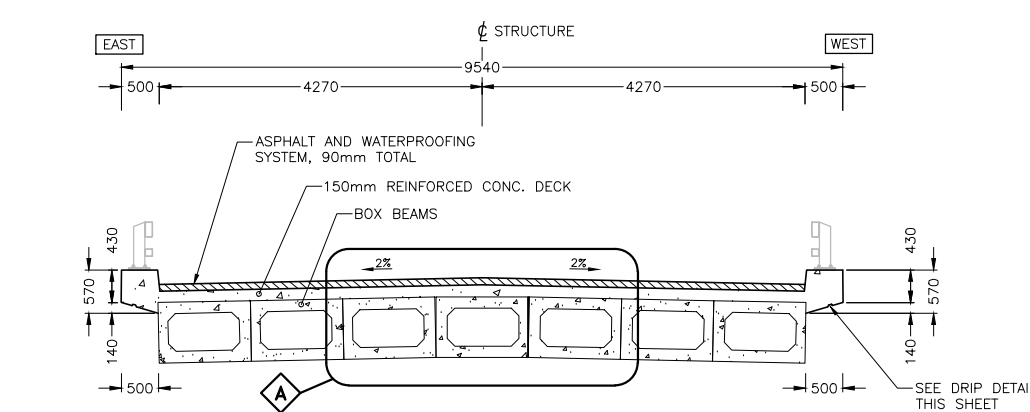
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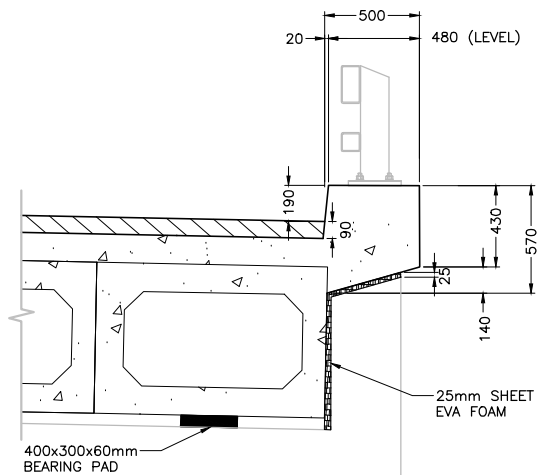
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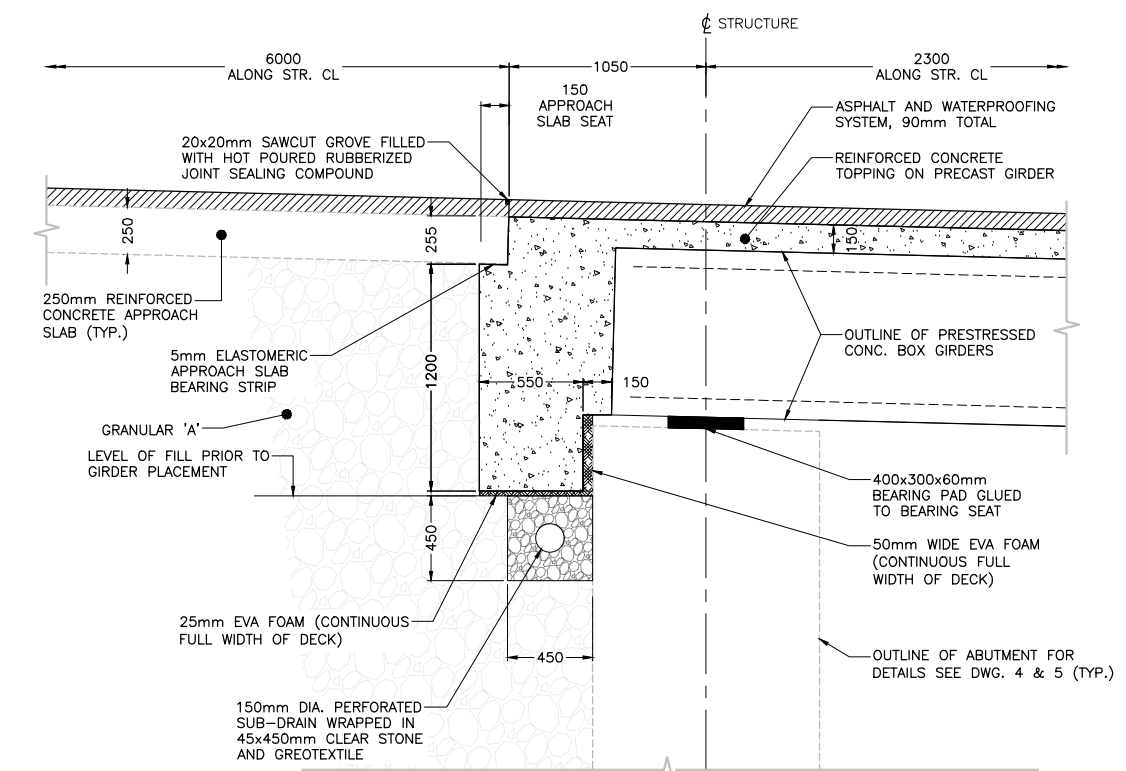
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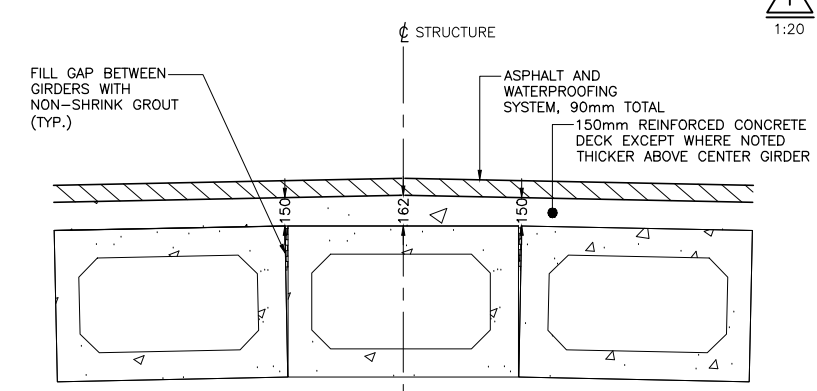
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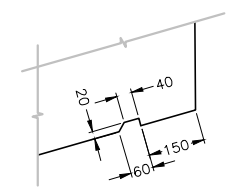
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1
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A GIRDER DETAIL
SCALE 1:25



DRIP DETAIL
N.T.S.

NOTES:

- ALL NEW CONCRETE EDGES TO HAVE 25x25 CHAMFERS.
- ALL GAPS OF LESS THAN 50mm BETWEEN SEMI-INTEGRAL, DECK END AND ABUTMENT/WINGWALLS TO BE FILLED WITH 'CEREMAR' CLOSED CELL FOAM OR AS APPROVED.
- GROUT TO BE ONE OF THE MATERIALS LISTED ON THE MTO DSM APPROVED CONCRETE PATCHING MATERIAL LIST SUITABLE FOR:
 - HORIZONTAL APPLICATION
 - 65mm THICKNESS APPLICATION
 - FLOWABLE.
 - SUITABLE FOR EXTENDED WITH AGGREGATE IF AGGREGATE USED
- GROUT POCKETS TO BE AIR BLASTED TO REMOVE DUST AND LOOSE PARTICLES. MIX AND PLACE GROUT AS PER MANUFACTURER'S INSTRUCTIONS.
- CONCRETE IN THE DECK SLAB AND SEMI-INTEGRAL DECK ENDS SHALL BE RETARDED USING A TYPE B OR D ADMIXTURE TO ENSURE THAT THE CONCRETE REMAINS PLASTIC FOR THE DURATION OF EACH PLACEMENT.
- CONCRETE IN THE CURBS SHALL NOT BE PLACED UNTIL ALL CONCRETE IN DECK SLAB HAS REACHED A STRENGTH OF 20 MPa.
- THE SEMI-INTEGRAL DECK ENDS SHALL BE CAST INTEGRAL WITH THE DECK SLAB AND VIBRATED THOROUGHLY.

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

DECK DIMENSIONS

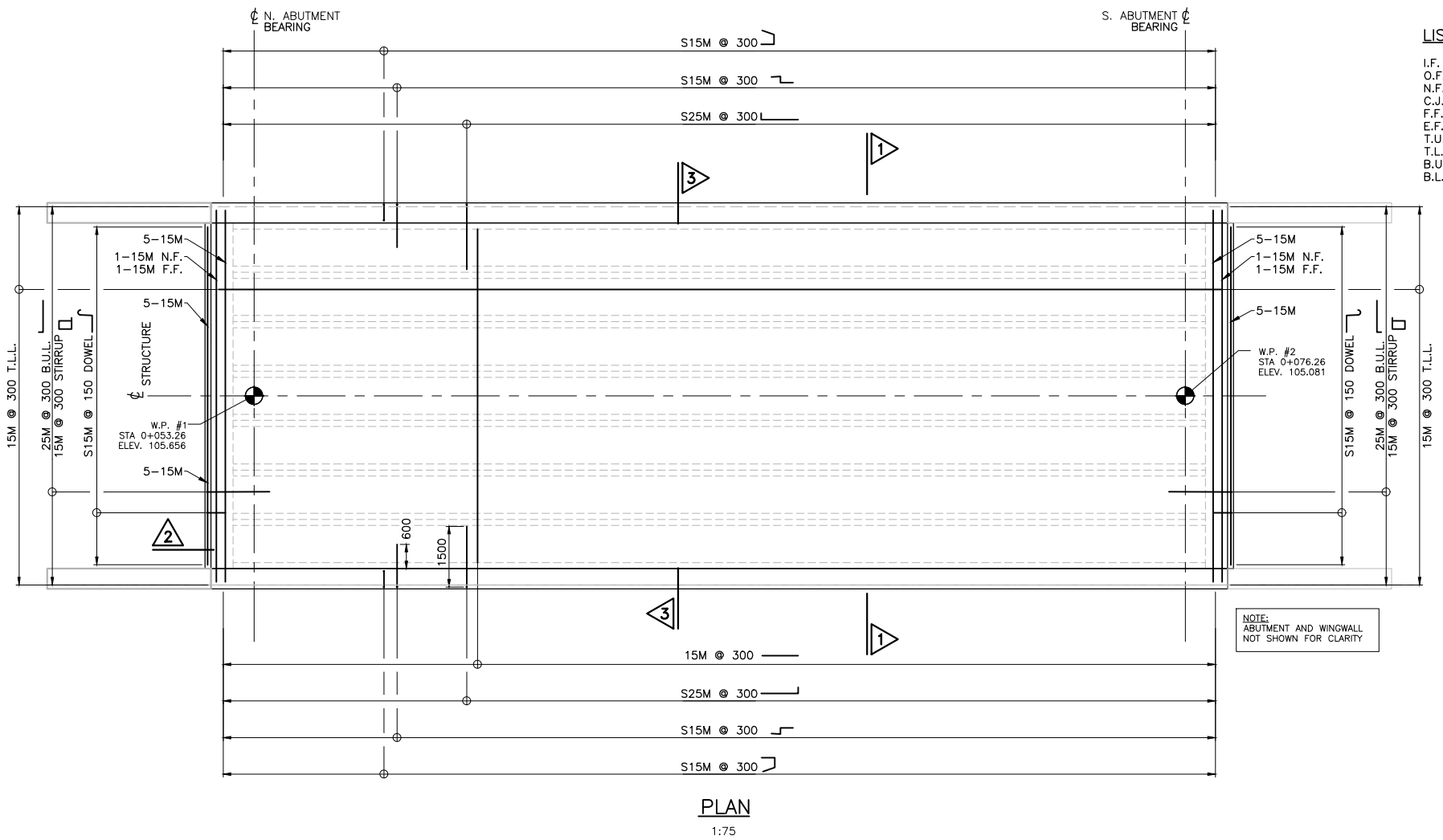
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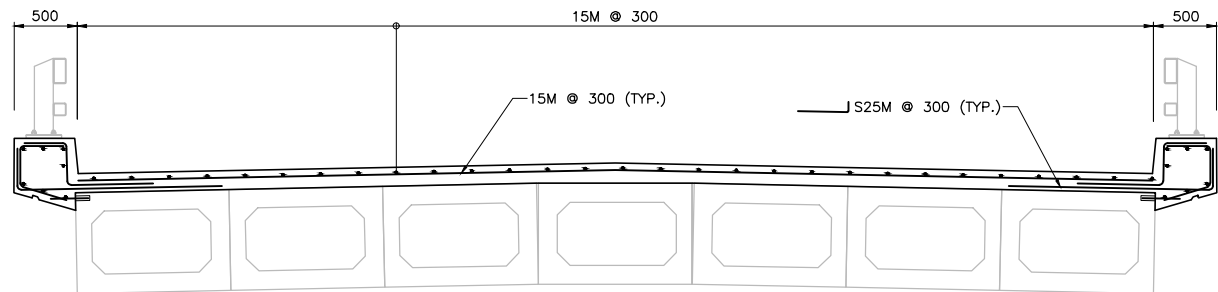
DRAWING NOT TO BE SCALED
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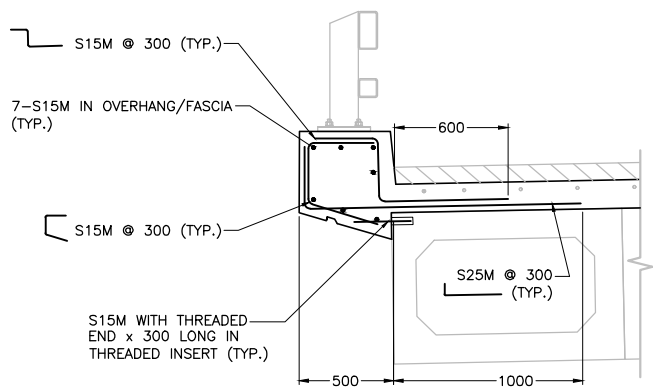
LAYOUT: 12-DECK REINF
FILE NAME: C:\Users\mhuszcz\Desktop\22549-sylvan\22549-1 - 01 - 02 - 04 - 05 - 06 - 07 - 08 - 11 - 12 - 20230324.dwg



PLAN
1:75



1
1:30



3
1:20

LIST OF ABBREVIATIONS

I.F.	INSIDE FACE
O.F.	OUTSIDE FACE
N.F.	NEAR FACE
C.J.	CONSTRUCTION JOINT
F.F.	FAR FACE
E.F.	EACH 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

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

DECK REINFORCING DETAILS

SHEET

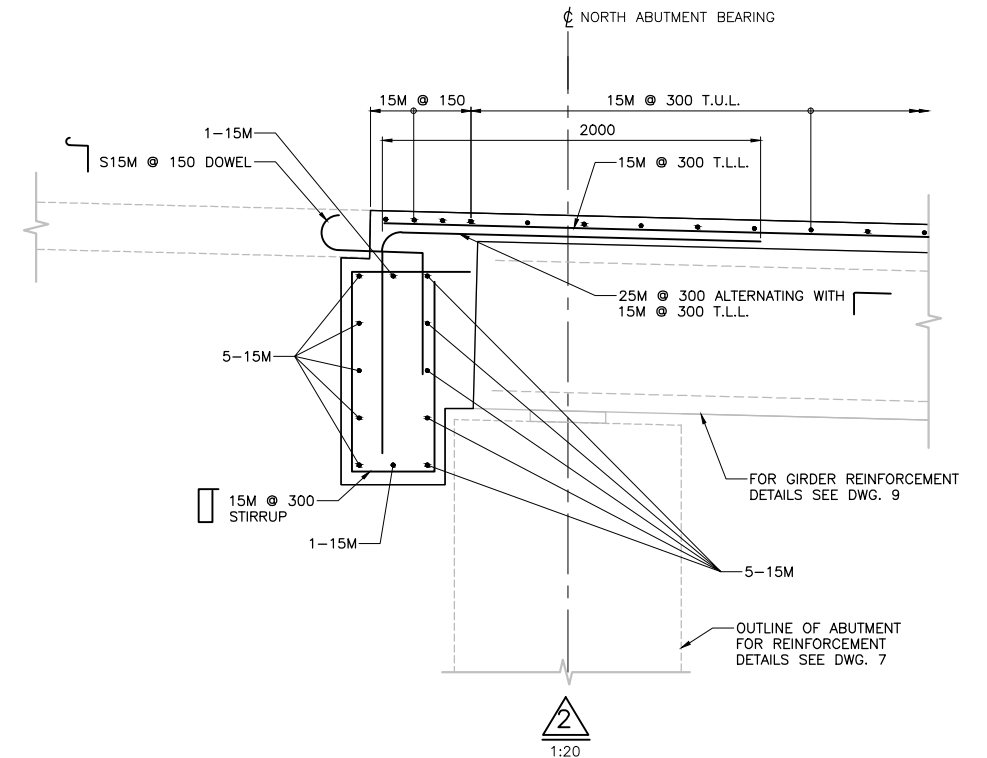
12



LEGEND

NOTES:

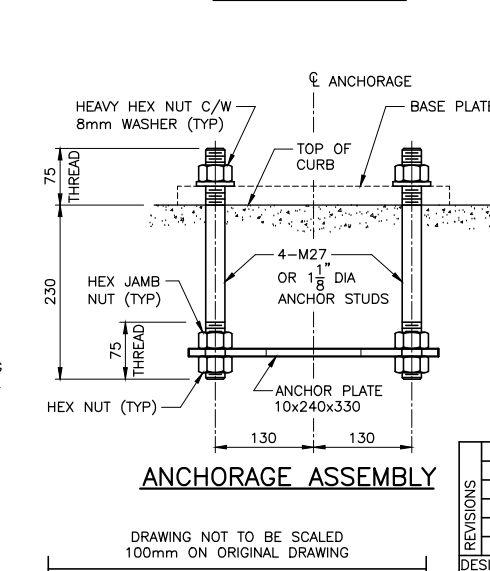
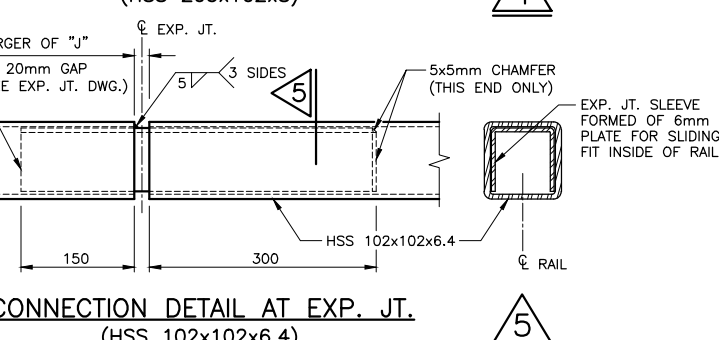
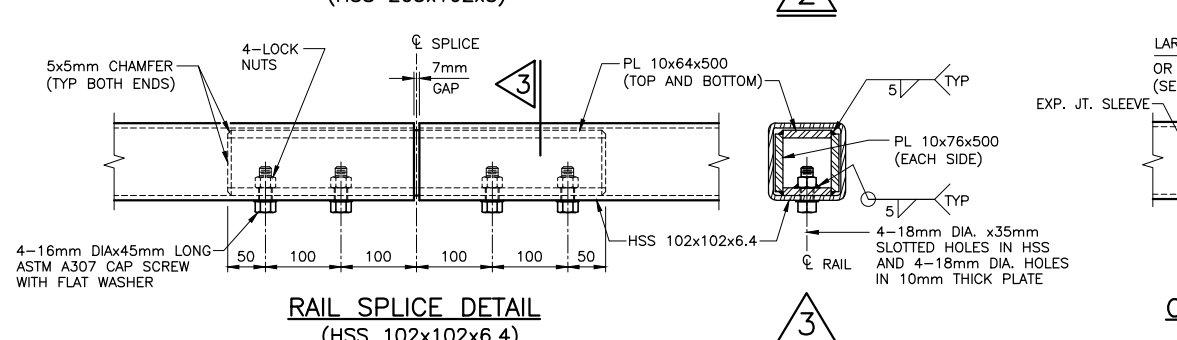
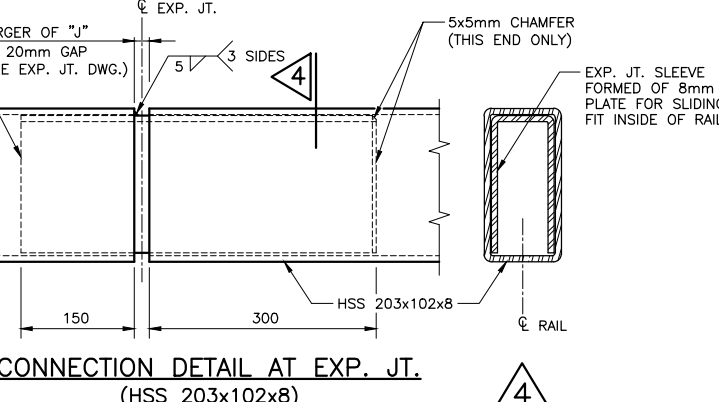
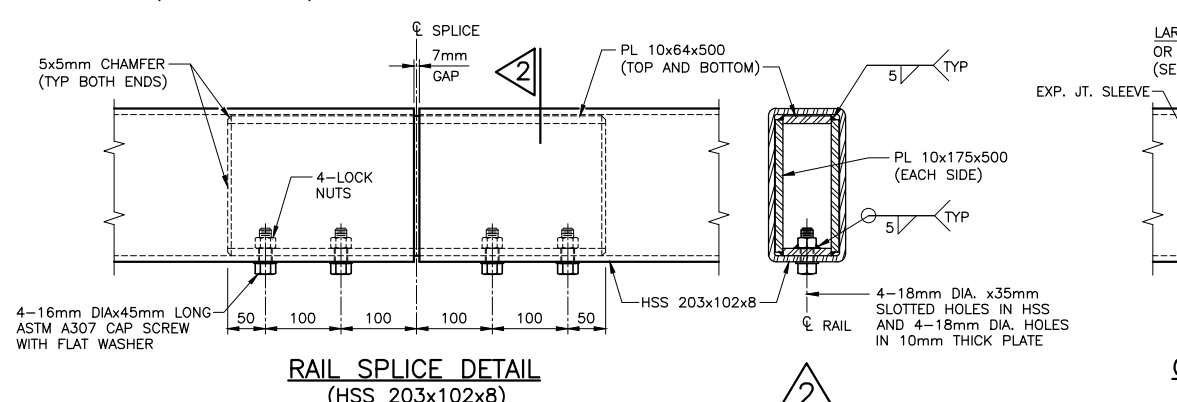
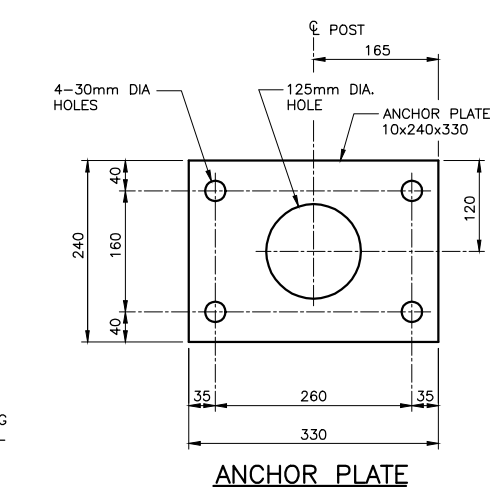
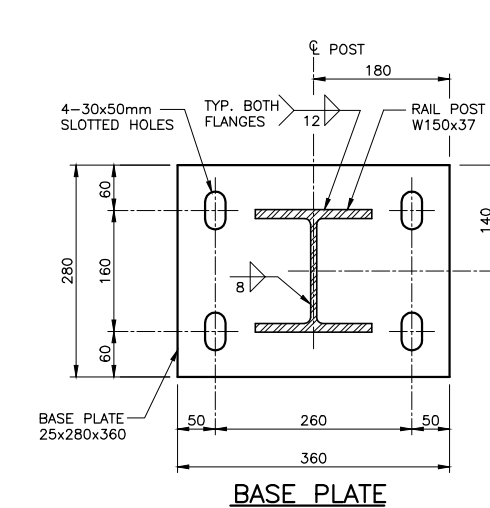
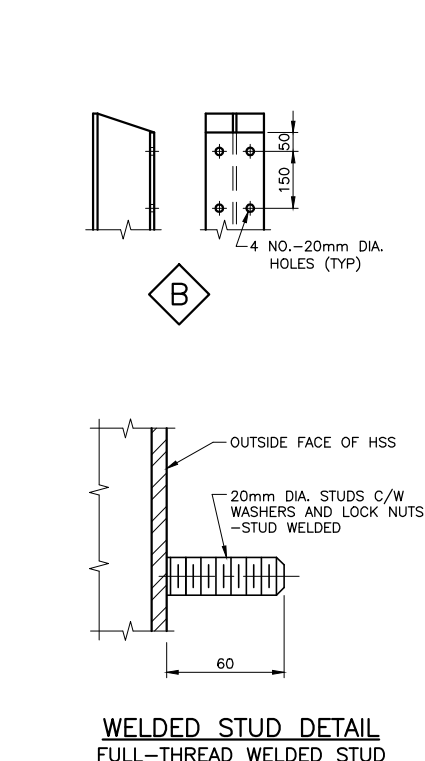
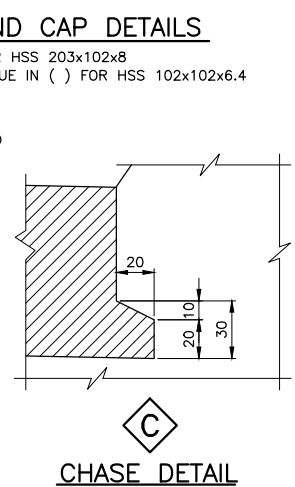
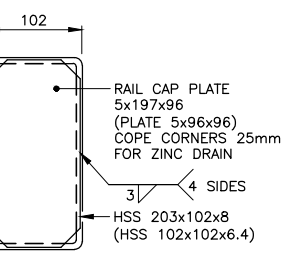
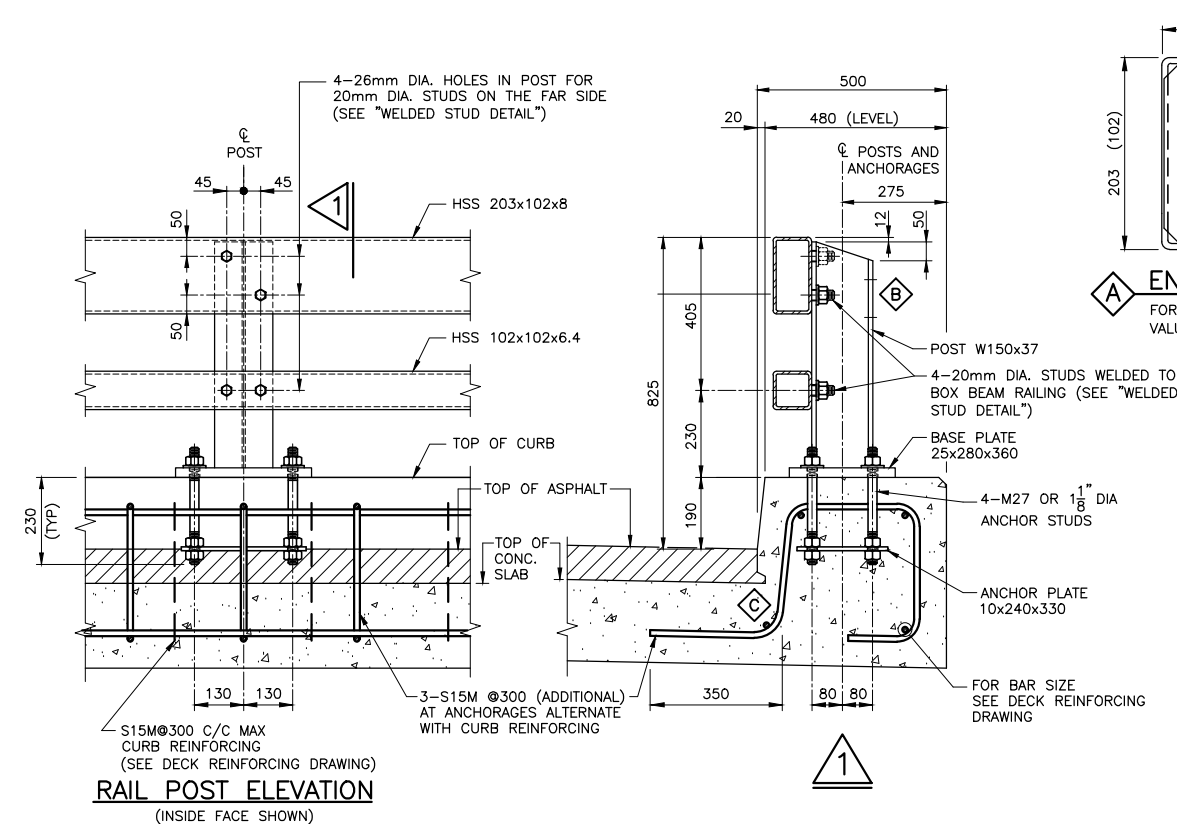
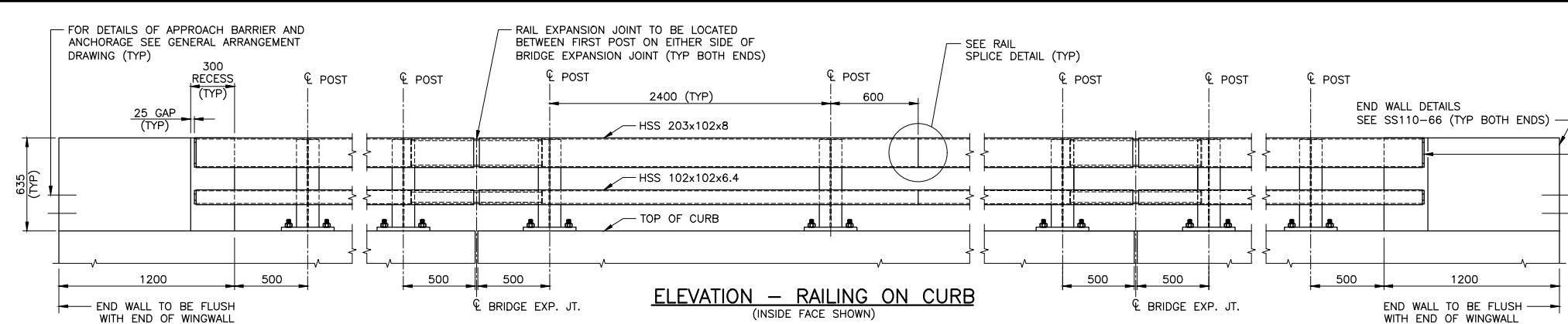
- CLEAR COVER TO REINFORCING STEEL:
REINFORCED CONCRETE TOPPING 70mm± 20mm
- INSTALL S15M DOWELS SUPPLIED BY CONTRACTOR INTO MATCHING.
INSERT IN PRESSESSED BOX GIRDERS INSTALLED BE MANUFACTURE.
FIELD ADJUST TO SUIT SOFFIT ELEVATION. DO NOT DRILL INTO GIRDER.



2
1:20

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISIONS	DATE	BY	DESCRIPTION
APR. 5, 2023	BDM	ISSUED FOR TENDER REVIEW	
DESIGN	BDM	CHK	MR
DRAWN	MTH	CHK	BDM
CODE	CSA-S6-19	LOAD	CL6250NT
SITE No.	###	DATE	MAR 2023
		DWG	12

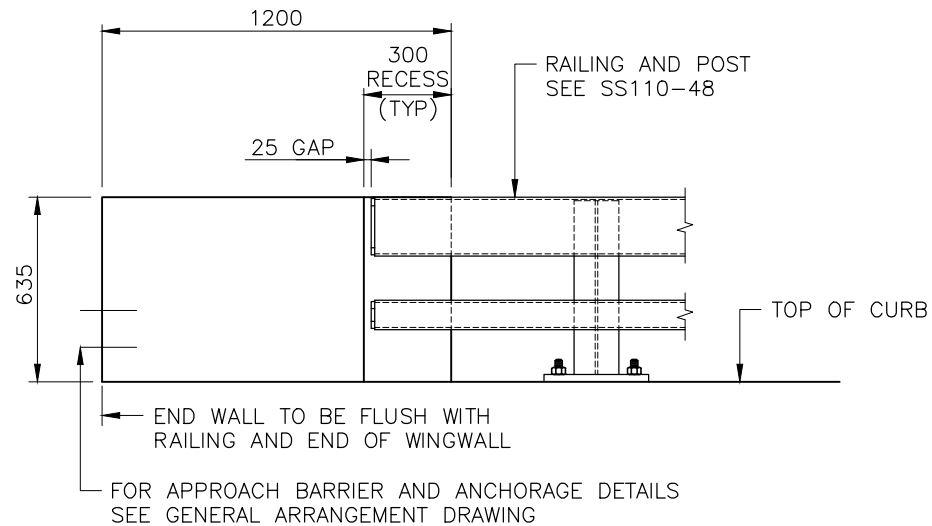


- NOTES:
- SYSTEM CONFIGURATION MEETS THE REQUIREMENTS OF NCHRP 350.
 - RAIL ELEMENTS SHALL BE HOLLOW STRUCTURAL SECTIONS GRADE 350WT, CLASS C. RAIL ELEMENT SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH IMPACT TEST REQUIREMENTS OF 27 JOULES AT TEST TEMPERATURE OF -45 °C.
(ASTM A500 GRADE B OR C STEEL MAY BE SUBSTITUTED FOR GRADE 350WT PROVIDED THAT THE CHARPY V-NOTCH IMPACT TEST REQUIREMENTS ARE VERIFIED BY THE SUBMISSION OF TEST DOCUMENTATION).
 - POSTS AND PLATES SHALL BE GRADE 350WT.
 - THE NOTCH TOUGHNESS REQUIREMENTS FOR POSTS AND PLATES SHALL BE THE SAME AS THOSE SPECIFIED IN NOTE 2.
 - ANCHOR STUDS, WASHERS, AND NUTS SHALL CONFORM TO ASTM A449.
 - FULL THREAD STUDS, WASHERS, AND NUTS FOR FASTENING GUIDE RAILS TO POST SHALL CONFORM TO ASTM A108.
 - RAIL SHALL BE SUPPLIED IN LENGTH TO BE ATTACHED TO A MINIMUM OF THREE (3) RAIL POSTS EXCEPT WHEN THE WINGWALL LENGTH OF A BRIDGE WITH EXPANSION JOINT DOES NOT PERMIT THIS. IN THIS CASE, THE RAIL LENGTH SHALL BE ATTACHED TO TWO (2) POSTS ON THE WINGWALL.
 - GALVANIZING ON MATING SURFACES OF RAILS TO HAVE UNIFORM THICKNESS NOT EXCEEDING 0.15mm TO ENSURE SLIDING FIT.
 - RAILS, POSTS, RAIL SPLICES, AND END CAPS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
 - BOLTS, ANCHOR STUDS, PLATES, WASHERS, AND NUTS SHALL BE HOT-DIP GALVANIZED. LOCK NUTS SHALL BE ZINC PLATED ACCORDING TO ASTM-B695.
 - RAILS SHALL BE PREBENT TO FOLLOW ROAD CURVATURE WHERE RADIUS IS LESS THAN 150m.
 - RAIL POSTS SHALL BE SET PERPENDICULAR TO GRADE.
 - RAILS MAY BE CUT AS REQUIRED IN THE FIELD, CUT TO BE SURFACE TREATED WITH A ZINC TOUCH-UP SOLDER, GALVAGUARD OR AN APPROVED EQUIVALENT.
 - WHEN CONNECTING TO EXISTING RAILING, RAILS MUST BE MADE CONTINUOUS AND POST SPACINGS TO BE DETERMINED WITH REFERENCE TO EXISTING POSTS.
 - GROUT SHALL NOT BE USED UNDER BASE PLATES. THIN PAD OF EPOXY GROUT MAY BE USED WHEN REQUIRED FOR FILLING THE VOIDS UNDER THE BASE PLATE.
 - POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT CONDITION AND GIVEN AN ADDITIONAL 1/3 OF A TURN.
 - BOLTS IN RAIL SPLICES SHALL BE TIGHTENED TO A CONDITION THAT WILL ALLOW RAIL MOVEMENT.
 - STAINLESS STEEL BARS SHALL BE TYPE 316 LN OR DUPLEX 2205 WITH A MINIMUM YIELD STRENGTH OF 500 MPA.
 - CHASES ARE REQUIRED ON HIGH AND LOW SIDE OF CROSS FALL.
 - RAILS, POSTS, RAIL SPLICES, END CAPS AND PLATES TO BE COATED WITH DARK BROWN PAINT, ON TOP OF THE GALVANIZED SURFACE. THE PAINT COLOUR AND SPECIFICATIONS TO BE CONFIRMED WITH THE CONTRACT ADMINISTRATOR BEFORE THE FABRICATION OF THE ELEMENTS. REFERENCE MADE TO COLOUR 10045 BROWN ACCORDING TO THE FEDERAL STANDARD 595C COLOUR.

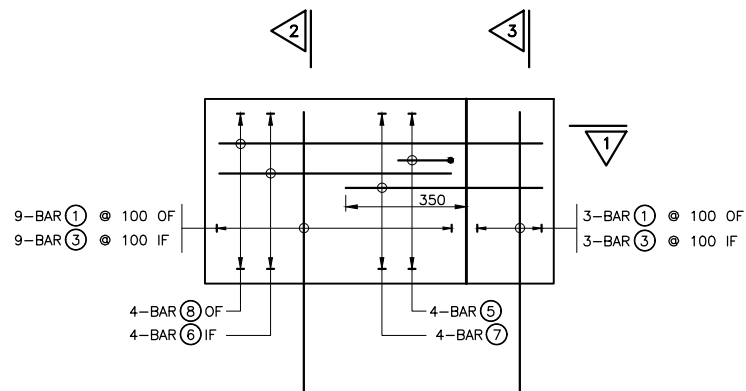
STANDARD DRAWING MARCH 2016		MODIFIED SS110-48	
TWO TUBE RAILING ON CURB - TL4 (WITH CONCRETE END WALL)			
PR. 5, 2023		BDM ISSUED FOR TENDER REVIEW	
DATE		BY DESCRIPTION	
BDM	CHK MR	CODE CSA-S6-19	LOAD CL6250NT
MTH	CHK BDM	SITE No. ###	DATE MAR 2023
			DWG 13

LAYOUT: Layout1
FILE NAME: C:\Users\mhuszcz\Desktop\22549-sylvan\22549-1 - 13 - SSD 0110.0048 - BOX BEAM RAILING SYSTEM.dwg

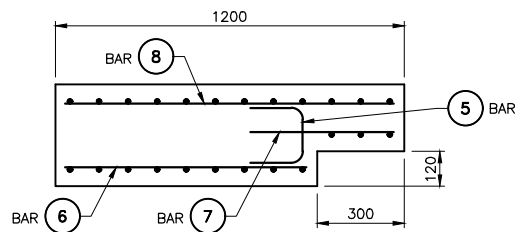
LAYOUT: ANSI-D technical
FILE NAME: C:\Users\mhuszcz\Desktop\22549-sylvan\22549-1 - 14 - SSD 0110.0066 - CONCRETE ENDWALL FOR BOX BEAM RAILING.dwg



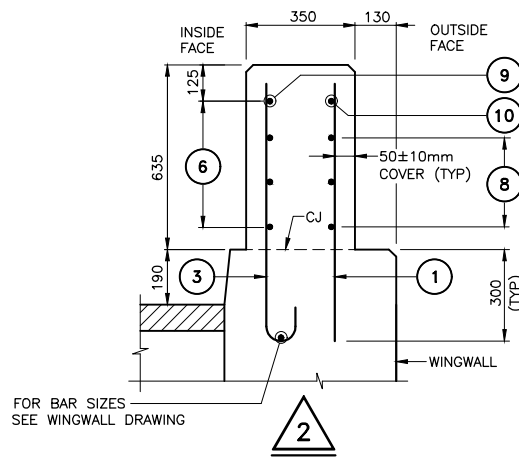
ELEVATION
END WALL ON CURB
(2 TUBE RAILING)



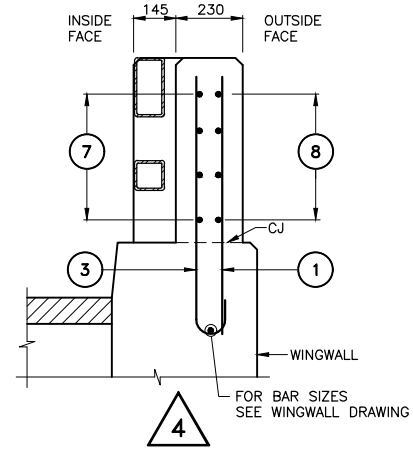
REINFORCING ARRANGEMENT - 2 TUP RAILING



1



2



4

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

CONCRETE END WALL FOR BOX
BEAM RAILING

Ainley CONSULTING
ENGINEERS
PLANNERS

SHEET

14

NOTES:

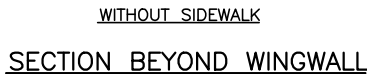
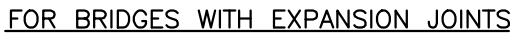
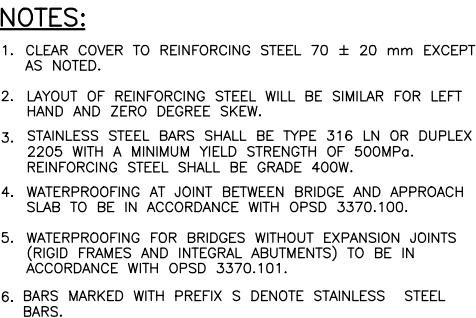
- CONCRETE COVER TO REINFORCING STEEL 60±10mm EXCEPT AS NOTED.
- REINFORCING STEEL SHALL BE STAINLESS TYPE 316LN OR DUPLEX 2205 WITH A MINIMUM YIELD STRENGTH OF 500 MPa.
- LEGEND:
EF - DENOTES EACH FACE OF - DENOTES OUTSIDE FACE
IF - DENOTES INSIDE FACE CJ - DENOTES CONSTRUCTION JOINT

BAR MARK	SIZE	SHAPE
1	S10M	STRAIGHT
2	S10M	STRAIGHT (VARIES)
3	S15M	
4	S15M	
5	S15M	
6	S15M	STRAIGHT
7	S15M	STRAIGHT
8	S15M	STRAIGHT
9	S15M	
10	S15M	

STANDARD DRAWING MAY 2018	MODIFIED SS110-66
CONCRETE END WALL FOR BOX BEAM RAILING (STAINLESS STEEL REBAR)	

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

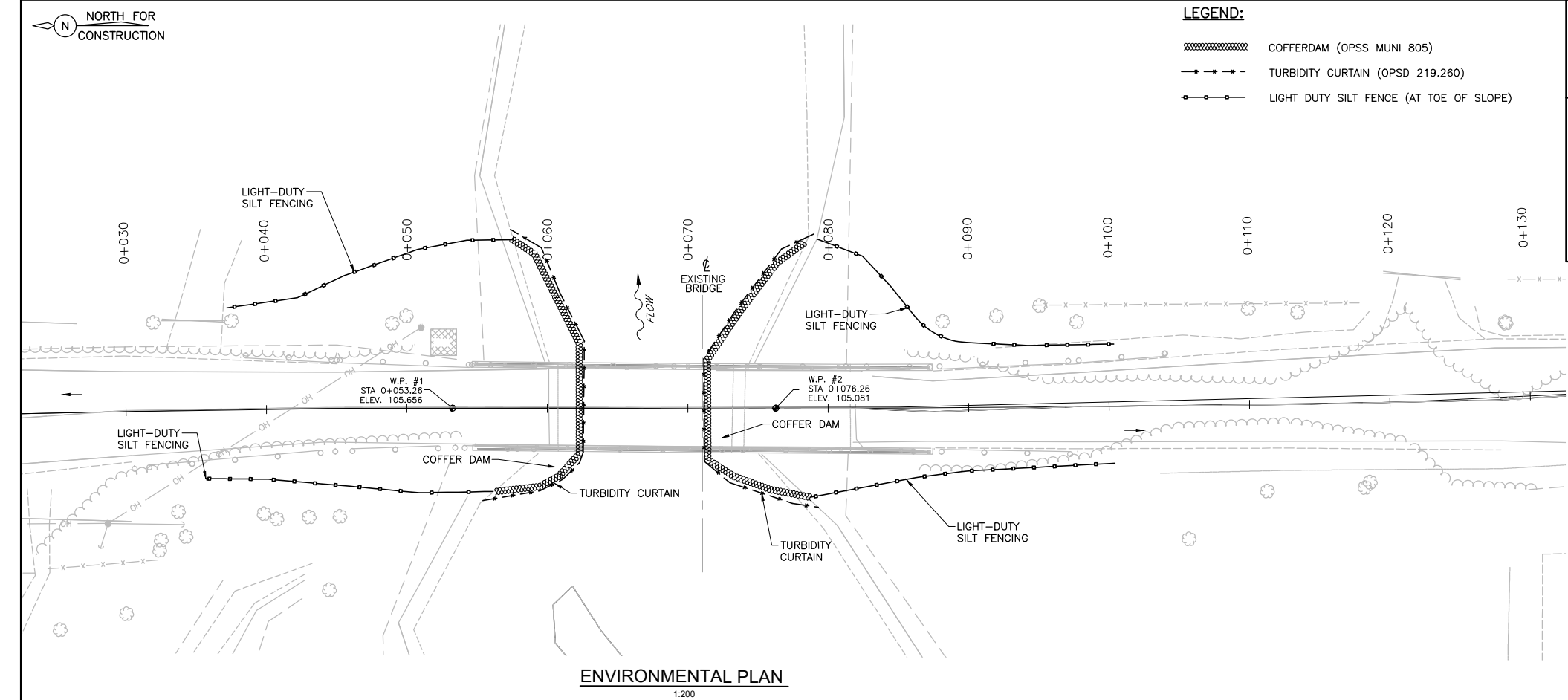
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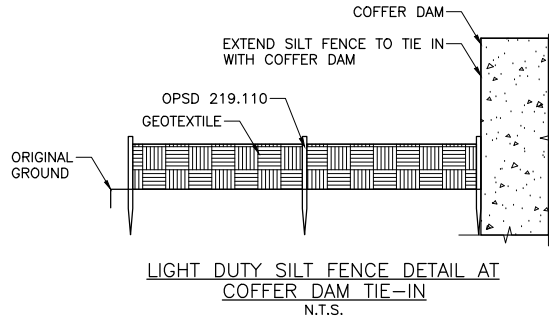
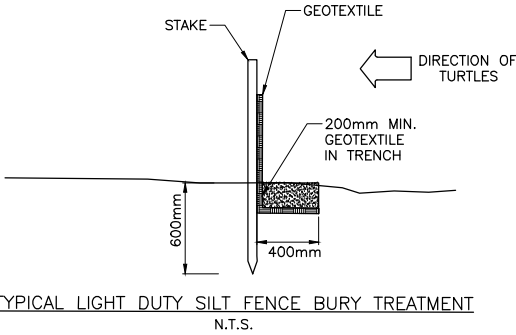
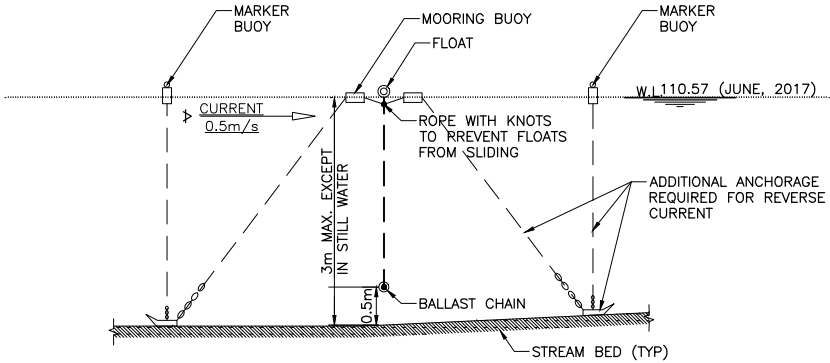
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METRIC DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN		CONTRACT No. 05P-ENG-2022	
		SYLVAN GLEN BRIDGE	SHEET
		ENVIRONMENTAL PROTECTION PLAN	16
		 Anley CONSULTING ENGINEERS PLANNERS	



SILT FENCING NOTES:

SILT FENCE BARRIERS TO BE IN ACCORDANCE WITH OPSS 805 AND OPSD 219.110 AND SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

STRAW BALE FLOW CHECK DAMS TO BE ACCORDANCE WITH OPSS 805 AND OPSD 219.180 AND SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

EXTEND SILT FENCE TO MAKE GOOD THE CLOSURE OF INTERFACE BETWEEN THE SILT FENCE AND COFFER DAM SUCH THAT NO SEDIMENT CAN ENTER THE CREEK TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.

TURBIDITY CURTAIN NOTES:

TURBIDITY CURTAINS SHALL BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING CONSTRUCTION TO PREVENT ENTRY OF SEDIMENT INTO THE WATER COURSE.

TURBIDITY CURTAIN SHALL BE CONFIGURED AND INSTALLED IN A MANNER THAT ENCOMPASSES ALL WORKS NOT LIMITED TO WORKS ASSOCIATED WITH DEWATERING, CONCRETE PATCH REPAIR, SLAB INVERT INSTALLATION AND ALL ASSOCIATED IN-WATER WORKS.

FOR THE TURBIDITY CURTAIN SYSTEM, FLOTATION DEVICES SHALL BE RIGID PLASTIC FOAM, RIGID MOLDED PLASTIC, STYROFOAM OR OTHER SUITABLE MATERIAL AND OF SUFFICIENT SIZE AND SPACING TO PROVIDE CONTINUOUS SUPPORT TO THE CURTAIN AT THE WATER SURFACE. ANCHORS AT THE BASE OF THE TURBIDITY CURTAIN SHALL BE OF SUFFICIENT SIZE AND SPACING TO PROVIDE CONTINUOUS CONTACT OF CURTAIN ON THE WATERCOURSE BOTTOM. FLOTATION AND ANCHOR DEVICES TO BE IN ACCORDANCE WITH GUIDELINES IN MTO DRAINAGE MANAGEMENT MANUAL, PARTS 1 AND 2, CHAPTER 6, REFLECTIVE MATERIAL AND MARKER BUOYS SHALL INSTALLED PER 7P 14779E (07/2008), (AN OWNERS GUIDE TO PRIVATE BUOYS)

SEDIMENT CONTROL NOTES:

SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING CONSTRUCTION TO PREVENT ENTRY OF SEDIMENT INTO THE WATERCOURSE.

SEDIMENT CONTROL FENCE SHALL BE INSTALLED TO PREVENT THE ENTRY OF SEDIMENT INTO THE WATERCOURSE. SILT FENCE BARRIERS TO BE IN ACCORDANCE WITH OPSS 577 AND OPSD 219.110 AND SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

ALL SEDIMENT LADEN WATER FROM DEWATERING SHALL BE PUMPED INTO A SEDIMENT BAG CONSISTING OF A ULTRAVIOLET STABILIZED GEOTEXTILE MATERIAL SEWN INTO A RECTANGULAR BAG STRUCTURE.

SEDIMENT BAGS SHALL BE LOCATED WITHIN THE CONFINES OF AN EROSION AND SEDIMENT CONTROL SYSTEM. THE SEDIMENT BAG MUST BE ROUTINELY MONITORED FOR EFFICIENCY (I.E. OUTFLOW) AND DEFICIENCIES IN THE BAG HOSE CLAMP, REPLACE OR REPAIRED ACCORDINGLY.

GENERAL NOTES:

THE COMPLETENESS AND ACCURACY OF UTILITIES INFORMATION SHOWN ON THIS DRAWING IS NOT GUARANTEED. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE APPROPRIATE AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING UTILITIES AND PROVIDING ADEQUATE PROTECTION FROM DAMAGE.

CONTRACTOR SHALL SUPPLY AND MAINTAIN M.O.E. APPROVED "SPILL KITS" ON SITE AT ALL TIMES

ALL EQUIPMENT MAINTENANCE AND REFUELLING WILL BE CONTROLLED TO PREVENT ANY DISCHARGE OR PETROLEUM PRODUCTS INCLUDING HYDRAULIC PRODUCTS INTO ENVIRONMENTALLY SENSITIVE AREAS. VEHICULAR MAINTENANCE AND REFUELLING SHALL BE CONDUCTED AT LEAST 30m DISTANCE FROM THE WATERCOURSE BANKS.

THE CONTRACTOR WILL BE CONFINED TO THE MINIMUM AREA NECESSARY TO PERFORM THE WORK. NAVIGABILITY SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION.

THE CONTRACTOR SHALL DETERMINE THE LOCATION FOR THE TEMPORARY PUMP AND WETLAND FILTER BAG REQUIRED TO COMPLETE THE WORK AND SHALL REFER TO THE MANUFACTURER'S SPECIFICATIONS FOR CAPACITY AND SIZING DETAILS AS WELL AS PROPER INSTALLATION (I.E. CLAMPING PROCEDURES).

ALL SEDIMENT CONTROL MEASURES MEET THE REQUIREMENTS OF THE GOVERNING AUTHORITIES. MAKE ALL CHANGES TO THE SEDIMENTATION CONTROL WORKS AS REQUESTED BY THE THESE AUTHORITIES AND AT NO ADDITIONAL COST TO THE CONTRACT.

THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED AND/OR AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASES TO THE NATURAL ENVIRONMENT. THE CONTRACT ADMINISTRATOR SHOULD BE IMMEDIATELY CONTACTED SHOULD THE EROSION AND SEDIMENT CONTROL PLANS CHANGE. FAILED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REPAIRED IMMEDIATELY AND/OR UPGRADED AS REQUIRED.

FOLLOWING CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED AFTER APPROVAL HAS BEEN GIVEN BY THE CONTRACT ADMINISTRATOR. DISTURBED AREAS MUST HAVE STABILIZED WITH VEGETATION TO PRECONSTRUCTION STANDARDS.

THE CONTRACTOR SHALL CONTROL OPERATIONS TO PREVENT ENTRY OF DELETERIOUS MATERIAL INTO THE WATERCOURSE.

NO IN-WATER WORKS ARE PERMITTED BETWEEN SEPTEMBER 16 AND JULY 14 IN ANY CALENDAR YEAR.

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REVISIONS								
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AND/OR MILLIMETRES UNLESS
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CONTRACT No.
05P-ENG-2022

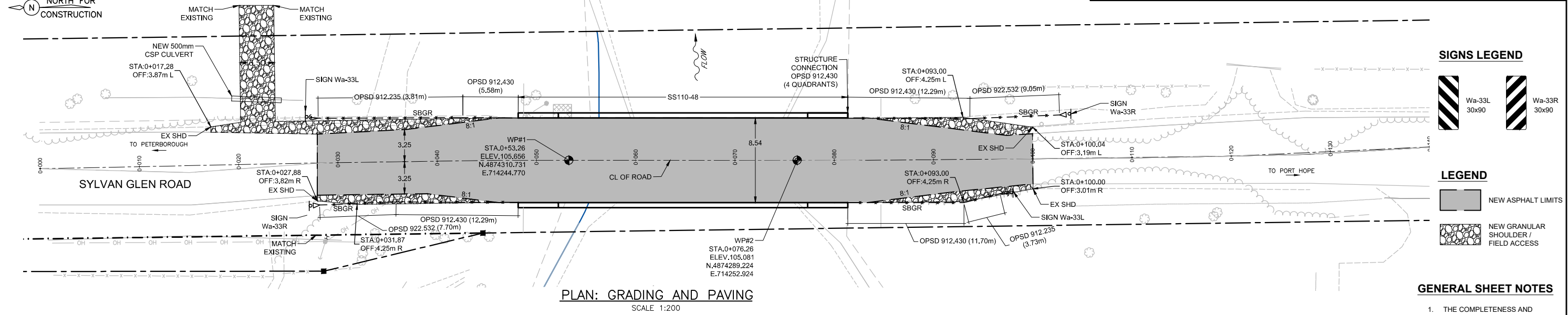
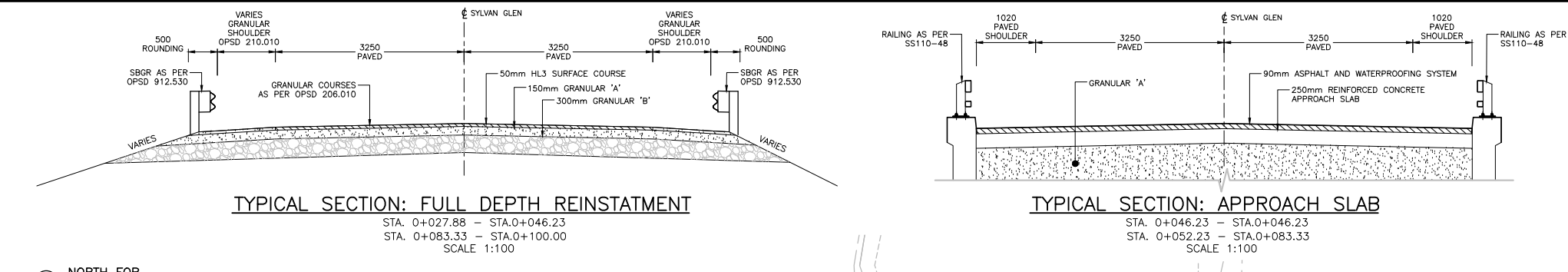
SYLVAN GLEN BRIDGE

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SIGNS LEGEND

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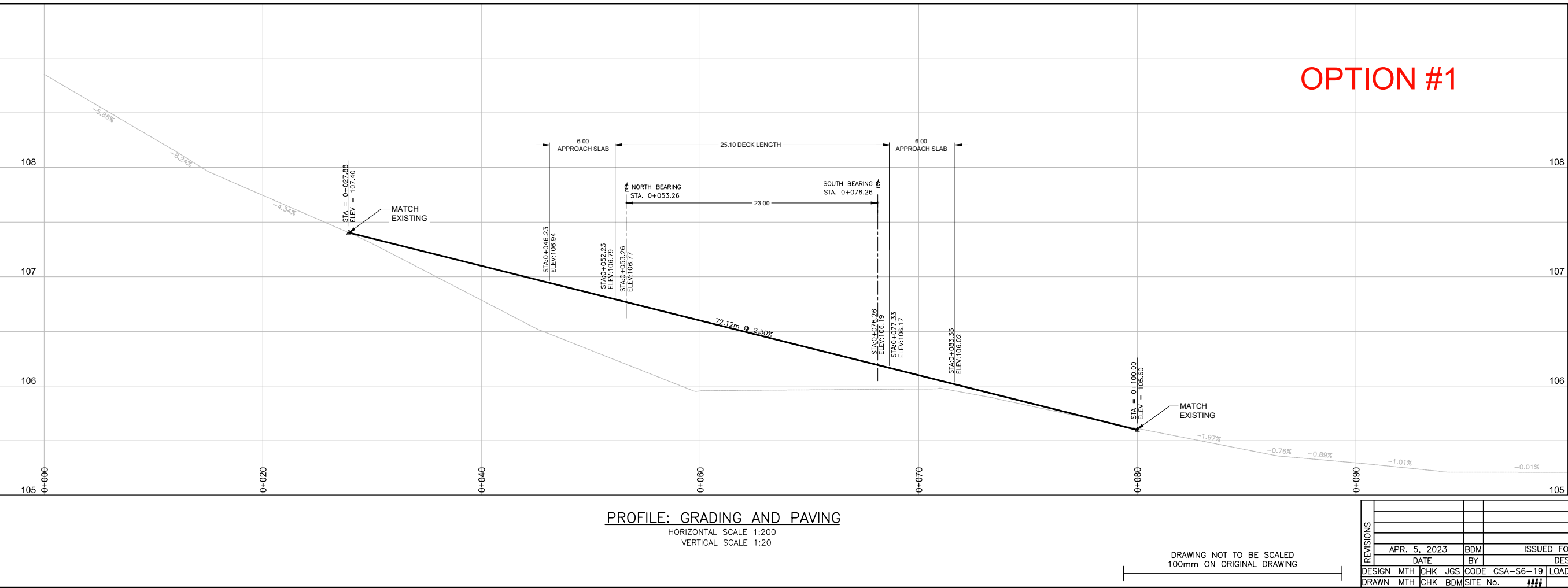
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LEGEND

NEW ASPHALT LIMITS

NEW GRANULAR SHOULDER / FIELD ACCESS

- GENERAL SHEET NOTES
- THE COMPLETENESS AND ACCURACY OF UTILITY INFORMATION SHOWN ON THESE DRAWINGS IS NOT GUARANTEED. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE APPROPRIATE AUTHORITIES CONCERNED. THE CONTRACTOR SHALL PROVIDE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE.
 - CONTRACTOR IS RESPONSIBLE FOR ALL SURVEY CONTROL ON THE PROJECT AND ESTABLISH ALL LAYOUT POINTS, BENCHMARKS



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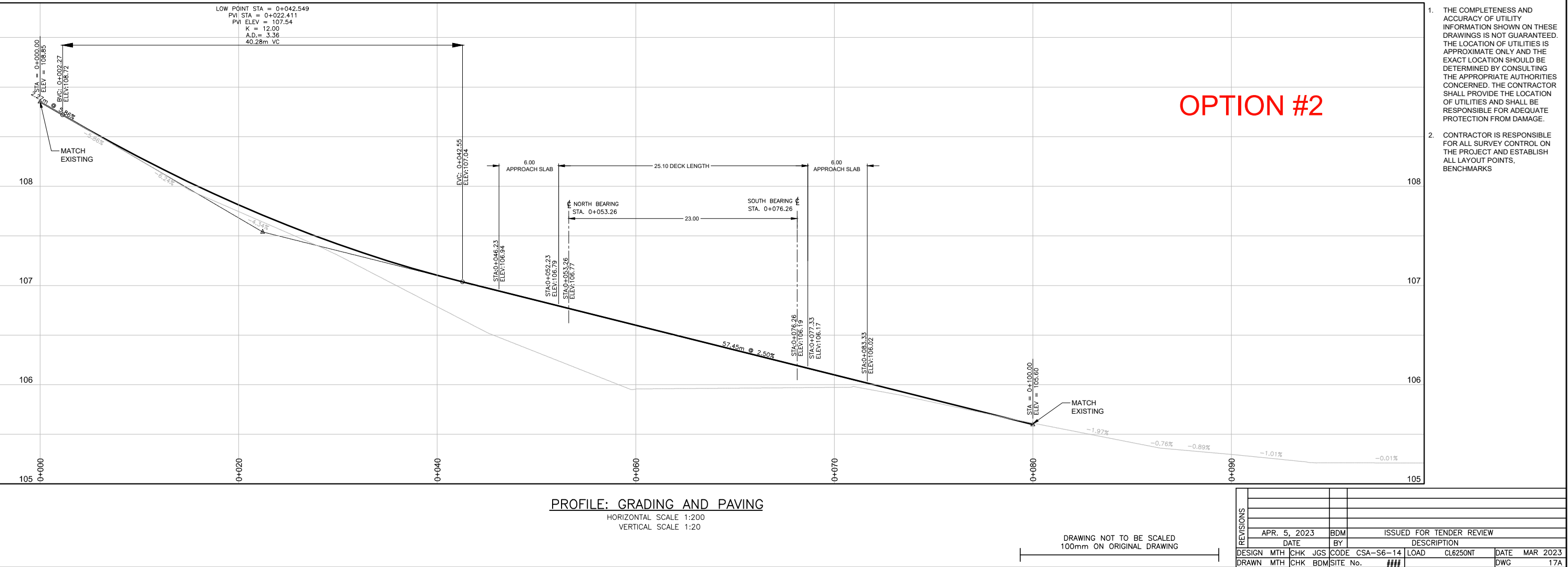
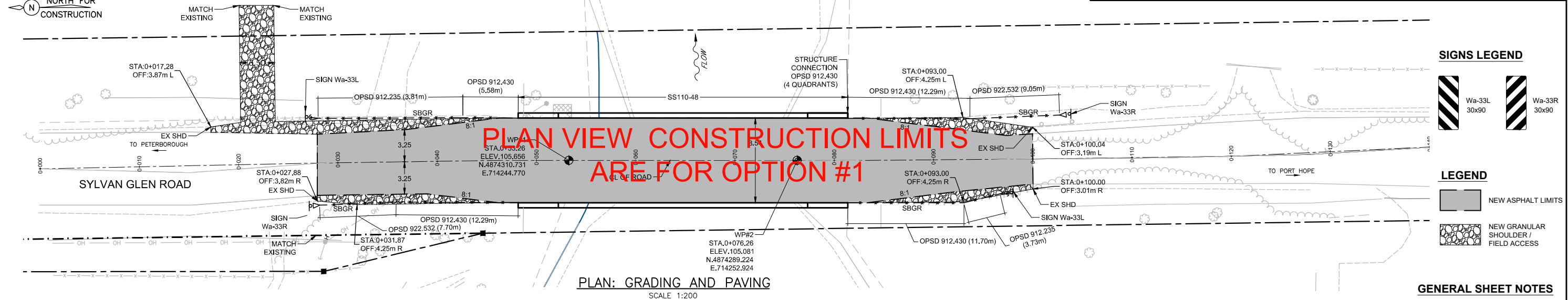
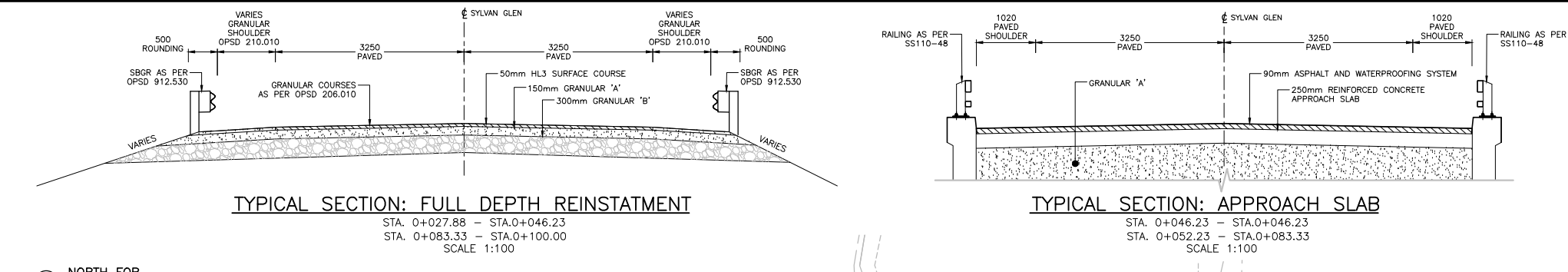
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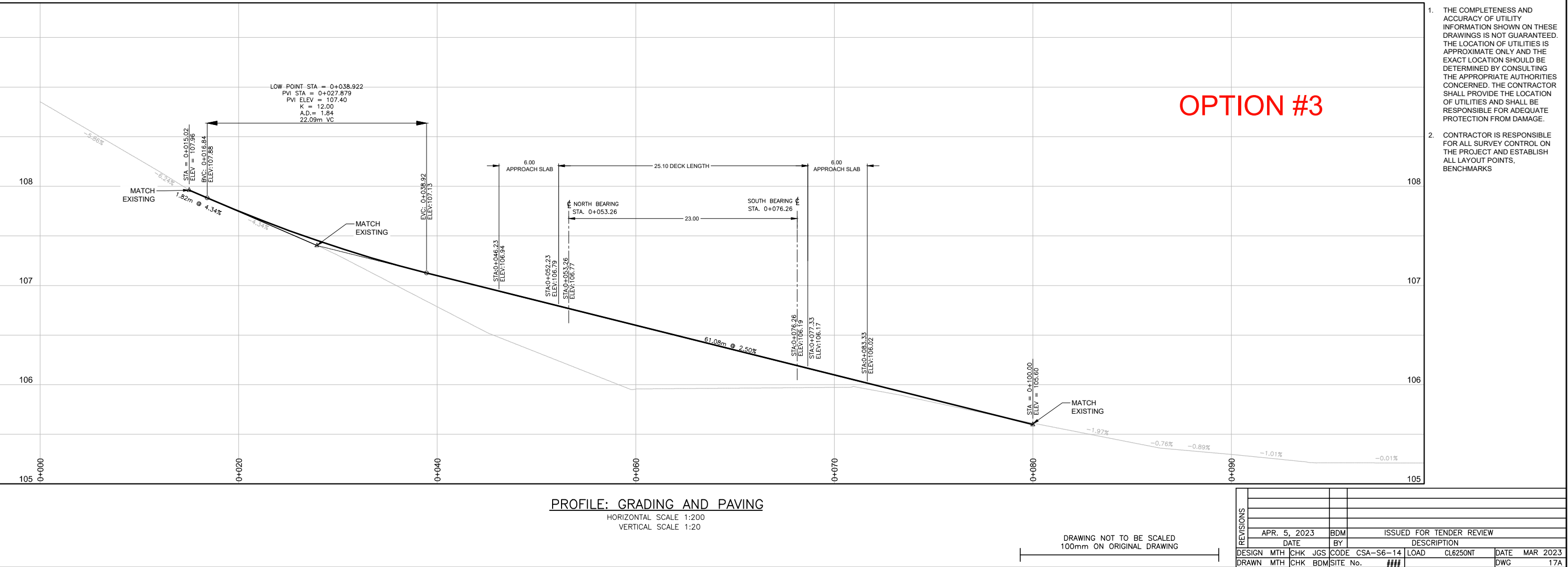
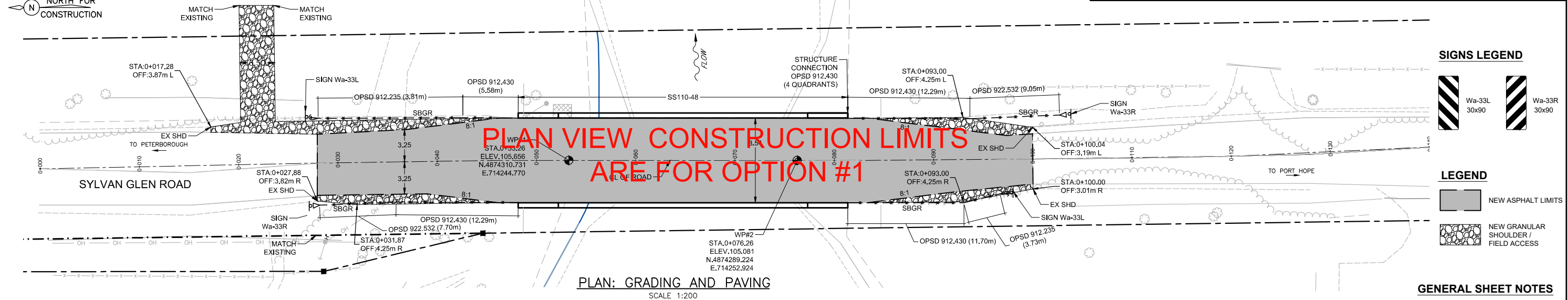
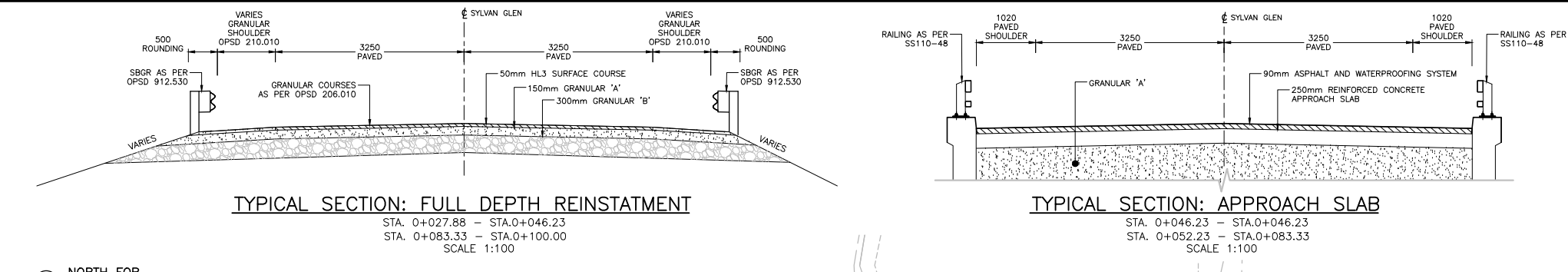
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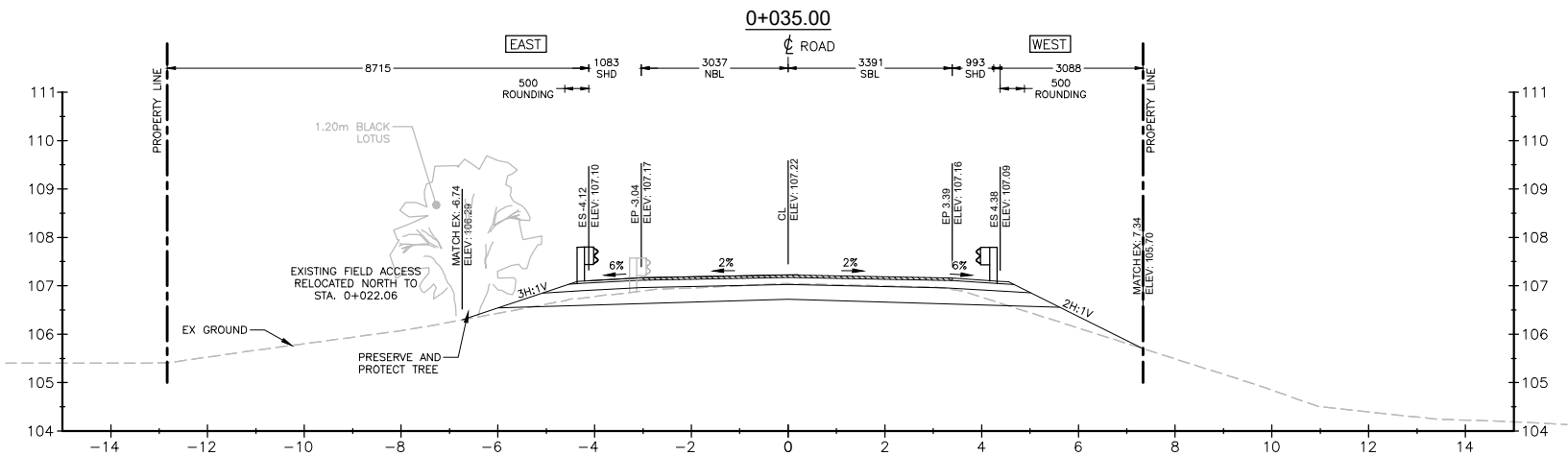
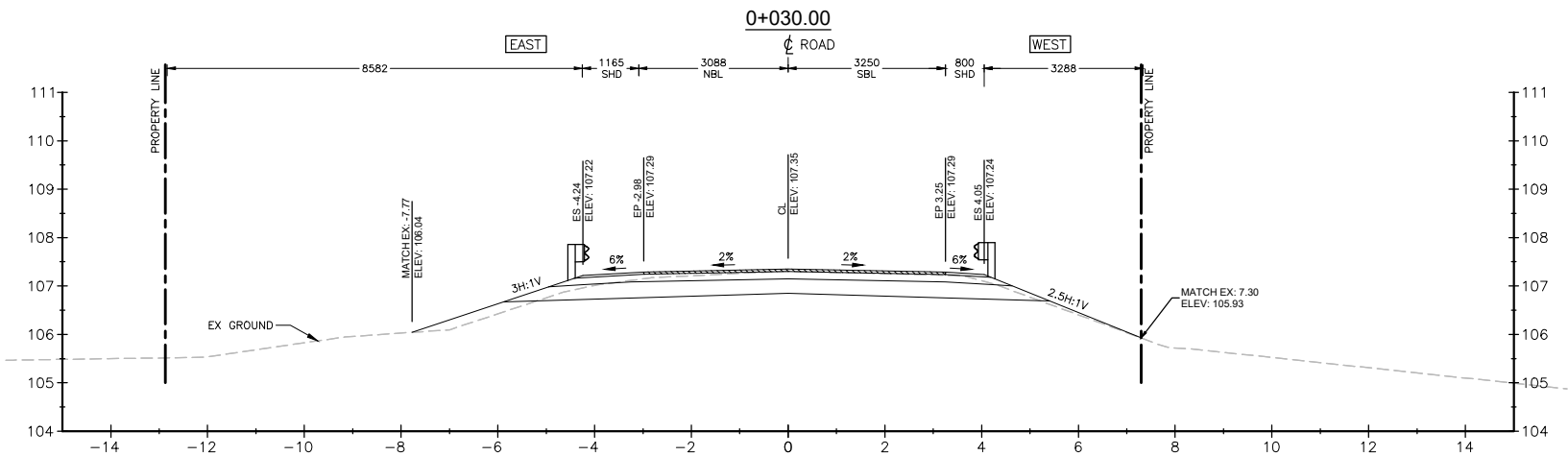
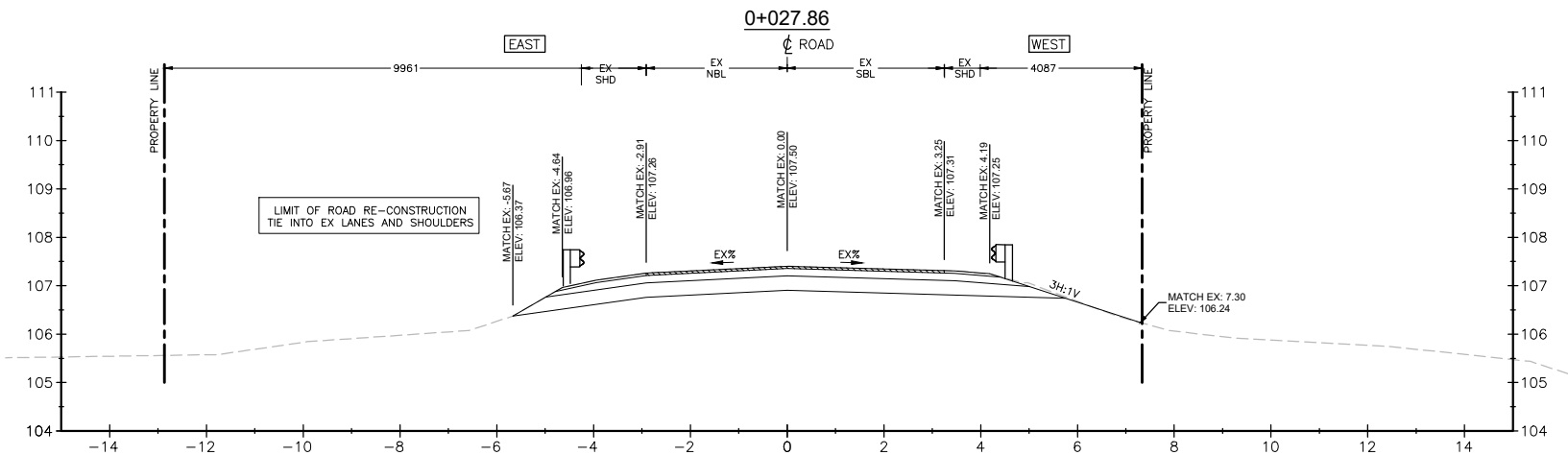
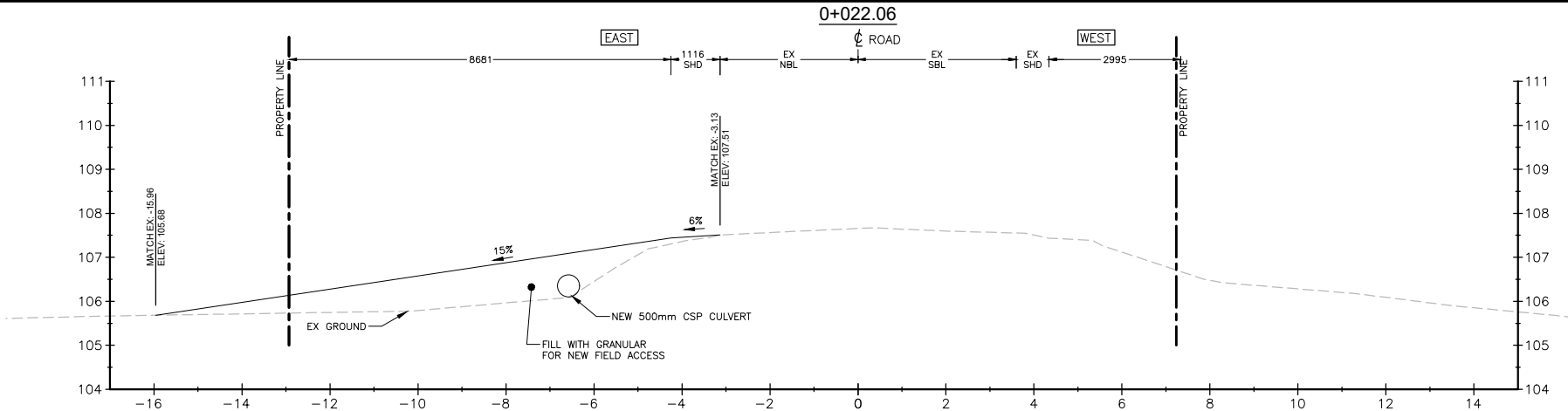
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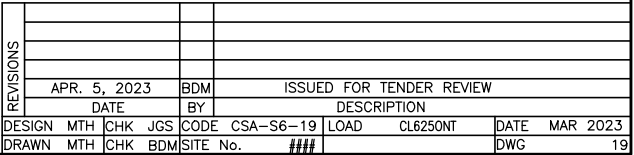
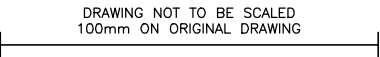
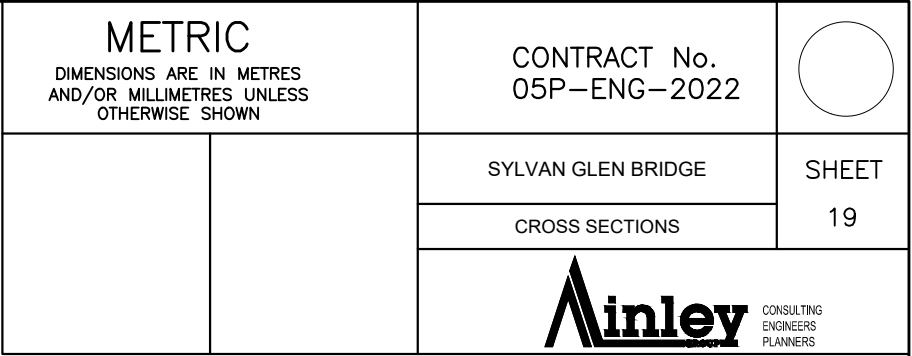
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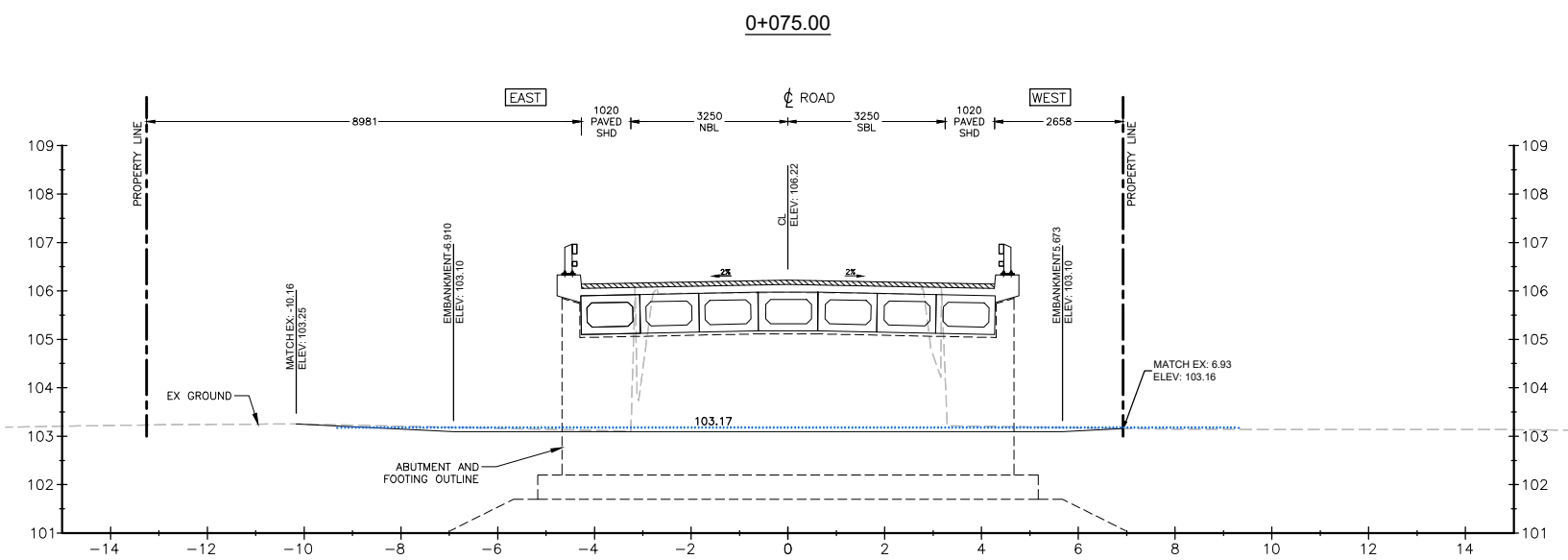
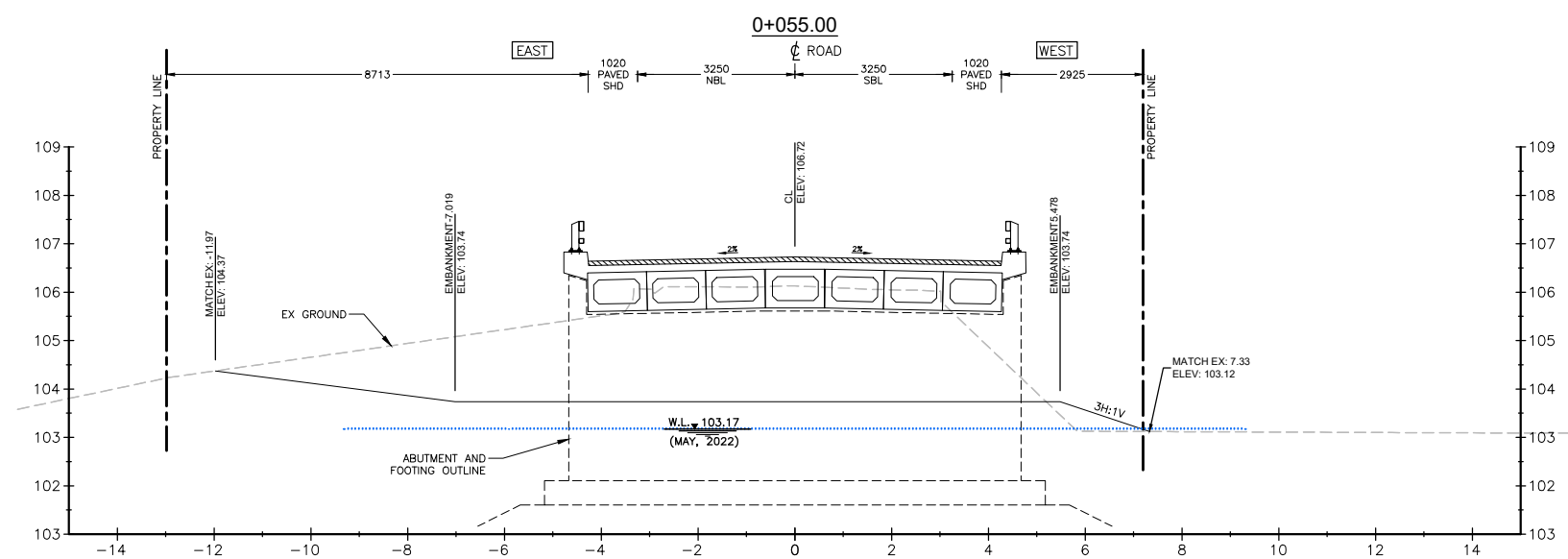
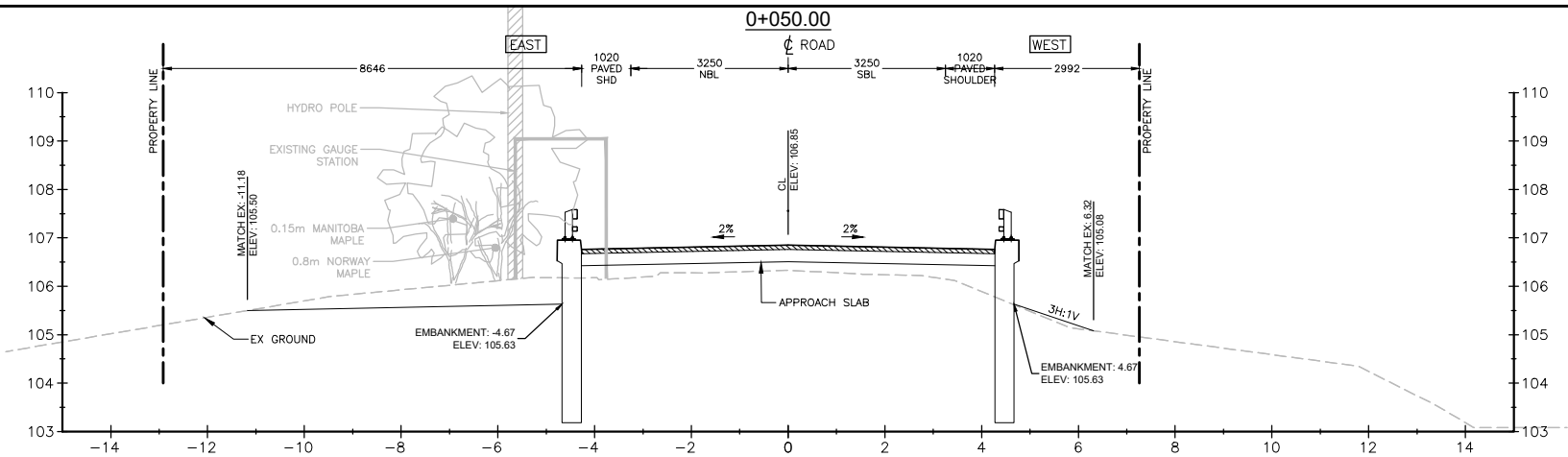
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AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

SYLVAN GLEN BRIDGE

CROSS SECTIONS

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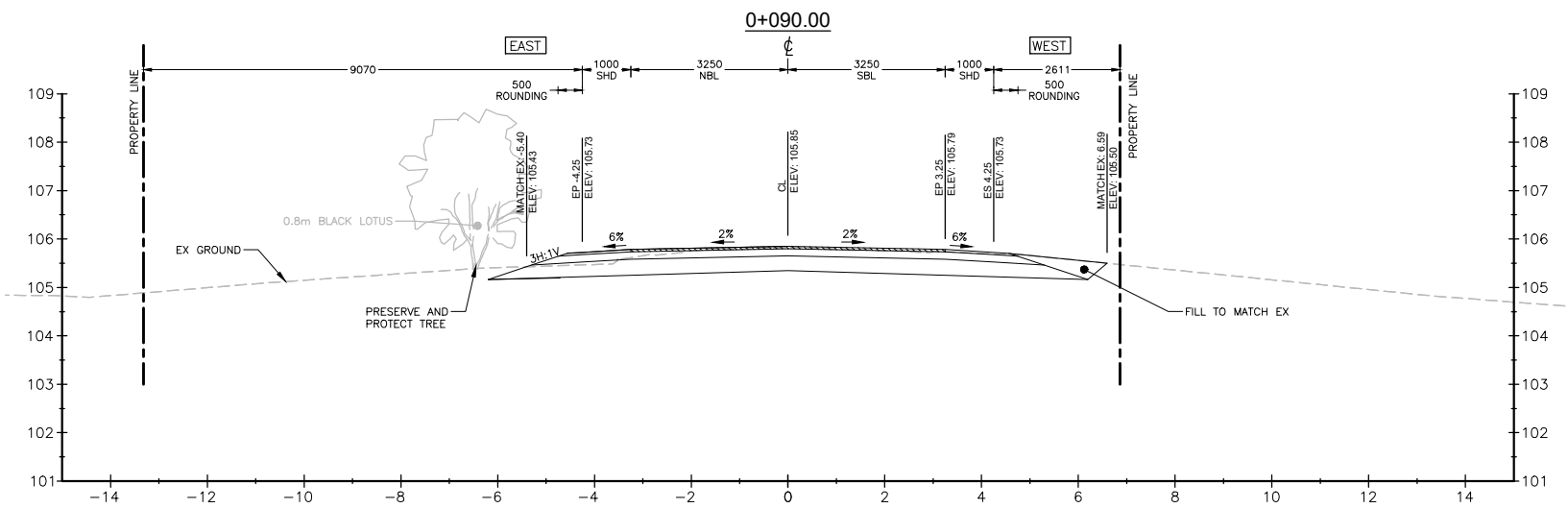
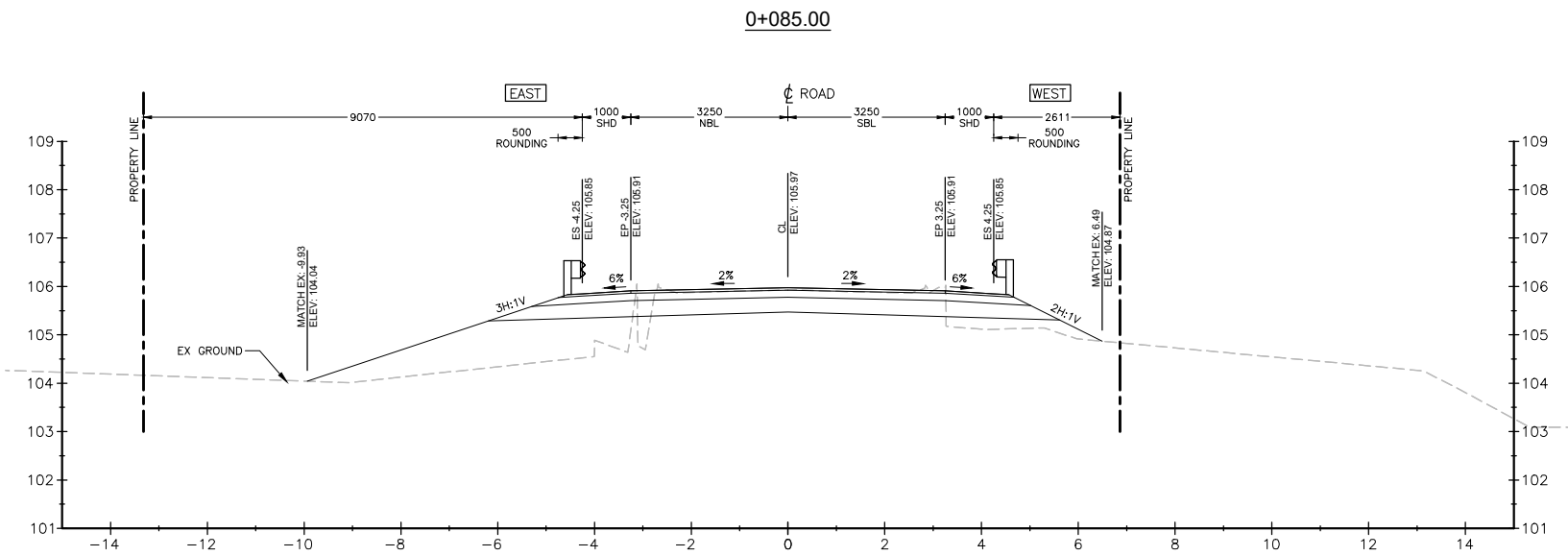
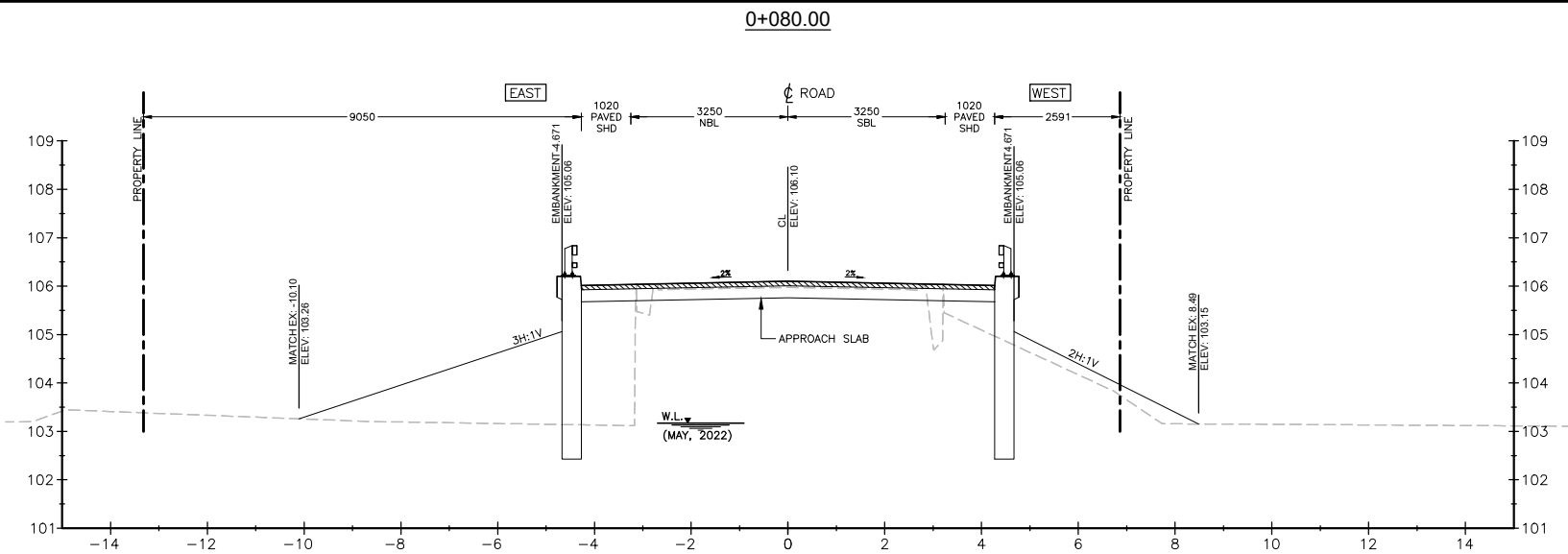
CONTRACT No.
05P-ENG-2022

SHEET
21

SYLVAN GLEN BRIDGE

CROSS SECTIONS

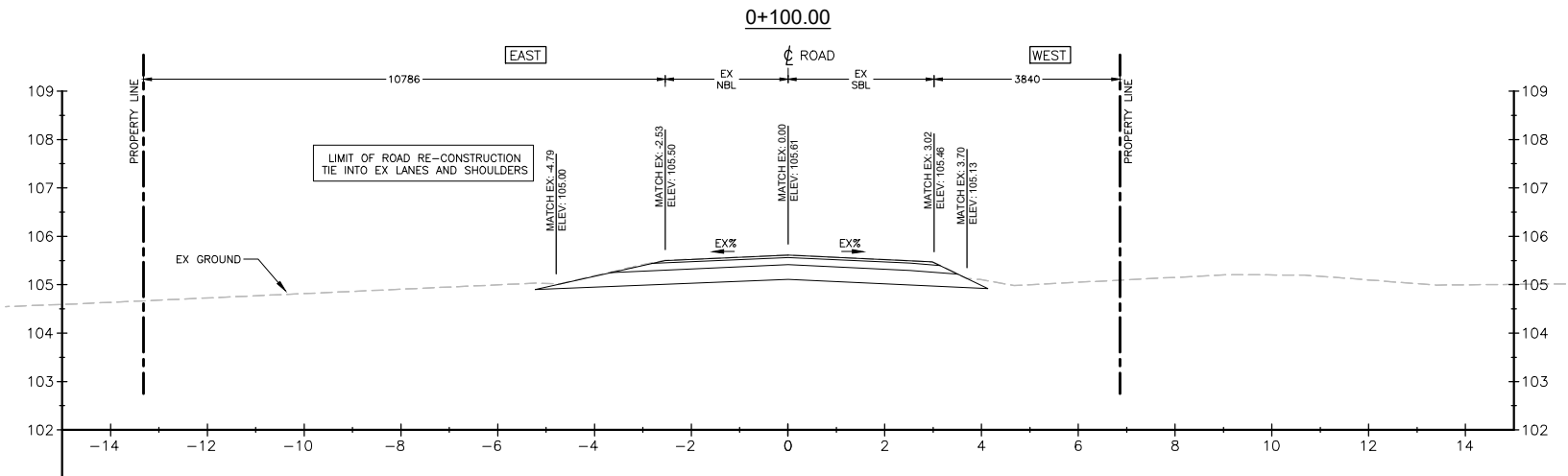
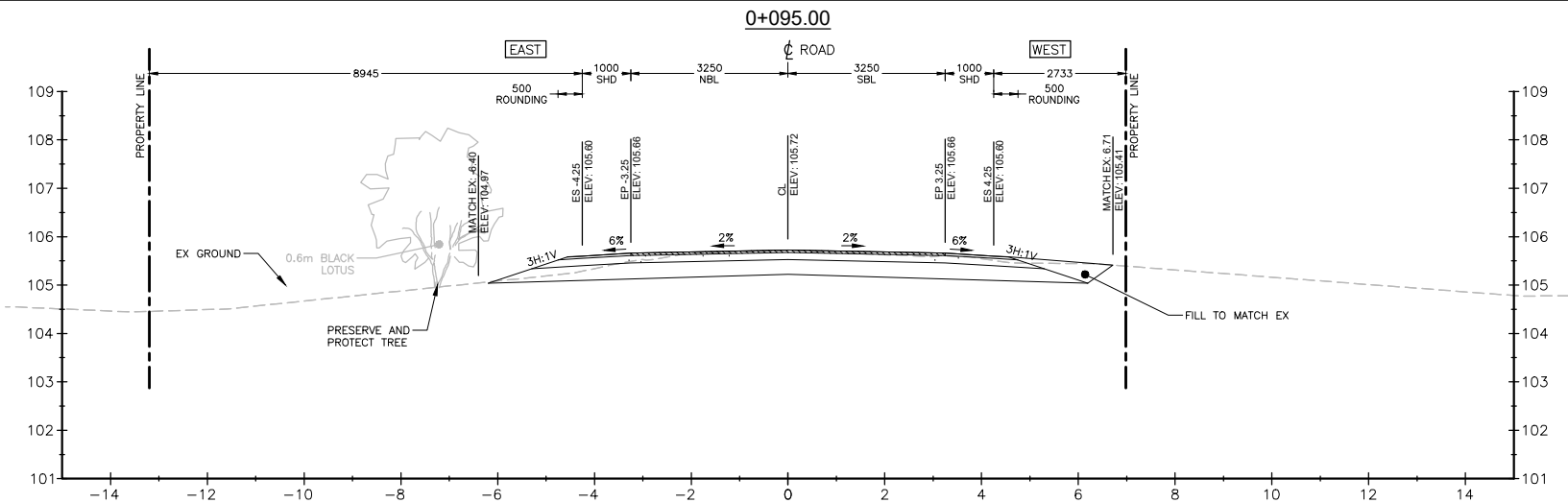
CONSULTING
ENGINEERS
PLANNERS



DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISIONS										
	APR. 5, 2023				BDM	ISSUED FOR TENDER REVIEW				
	DATE				BY	DESCRIPTION				
DESIGN	MTH	CHK	JGS	CODE	CSA—S6—19		LOAD	CL6250NT	DATE	MAR 2023
DRAWN	MTH	CHK	BDM	SITE No.	###				DWG	21

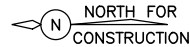
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METRIC DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN		CONTRACT No. 05P-ENG-2022	
		SYLVAN GLEN BRIDGE	SHEET
		CROSS SECTIONS	22
		 CONSULTING ENGINEERS PLANNERS	

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISIONS									
	APR. 5, 2023	BDM						ISSUED FOR TENDER REVIEW	
	DATE	BY						DESCRIPTION	
DESIGN	MTH	CHK	JGS	CODE	CSA-S6-19	LOAD	CL6250NT	DATE	MAR 2023
DRAWN	MTH	CHK	BDM	SITE No.	###			DWG	22



BENCHMARK NOTES

DESCRIPTION: BM#1 NAIL IN ASPHALT
STATION: 0+009.55
OFFSET: 3.20m EAST
NORTHING: 4874252.567
EASTING: 714231.629
ELEVATION: 108.186

WP#1
N 4874310.731
E 714244.770
ELEV. 105.656
STA. 0+053.26

WP#2
N 4874289.224
E 714252.924
ELEV. 105.081
STA. 0+076.26

DESCRIPTION: BM#2 NAIL
STATION: 0+134.95
OFFSET: 6.70m WEST
NORTHING: 4874232.293
EASTING: 714268.719
ELEVATION: 104.982

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

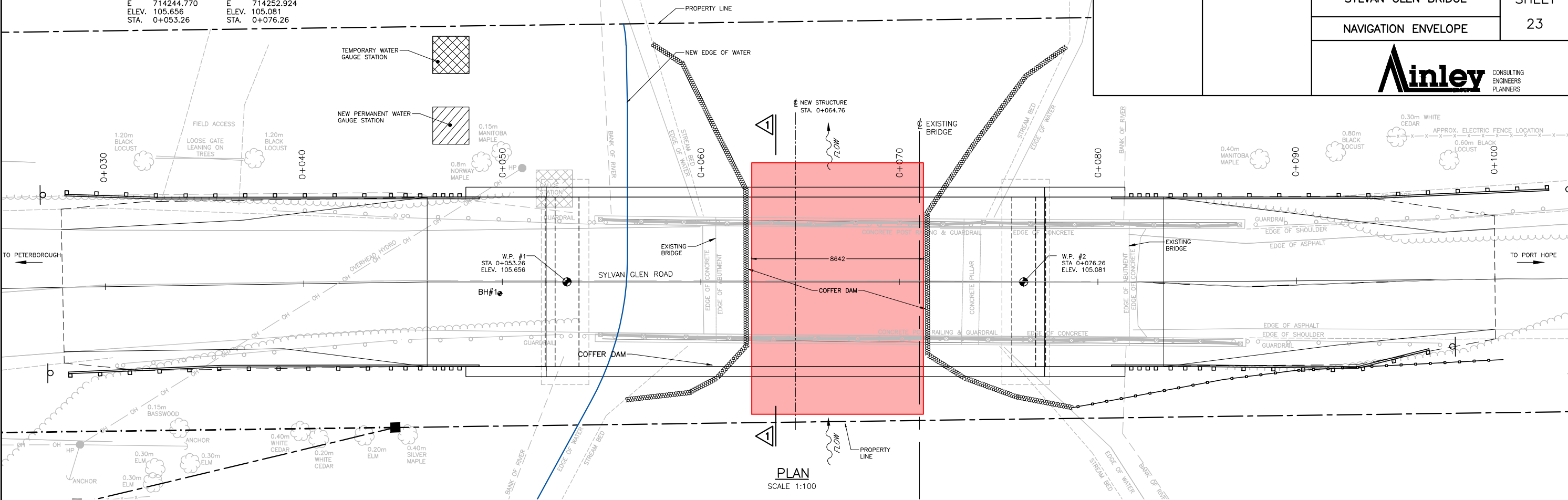
SYLVAN GLEN BRIDGE

NAVIGATION ENVELOPE



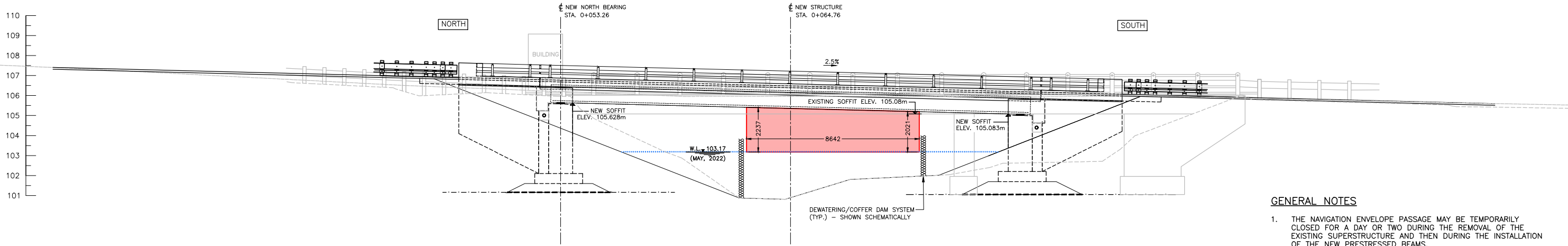
SHEET

23



PLAN

SCALE 1:100



WEST ELEVATION

EAST ELEVATION SIMILAR
SCALE 1:100

GENERAL NOTES

1. THE NAVIGATION ENVELOPE PASSAGE MAY BE TEMPORARILY CLOSED FOR A DAY OR TWO DURING THE REMOVAL OF THE EXISTING SUPERSTRUCTURE AND THEN DURING THE INSTALLATION OF THE NEW PRESTRESSED BEAMS.

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISONS								
	DATE	BY	DESCRIPTION		DATE	BY	DESCRIPTION	
DESIGN	BDM	CHK	MR	CODE	CSA-S6-14	LOAD	CL6250NT	DATE
DRAWN	MTH	CHK	BDM	SITE No.	###	DWG		23

NOTES

1. TRAFFIC SIGNING SHOWN IN THIS DRAWING SUPPLEMENTS THOSE REQUIRED UNDER ONTARIO TRAFFIC MANUAL (OTM) BOOK 7
2. PLACEMENT OF TEMPORARY CONDITIONS SIGNAGE SHALL NOT OBSTRUCT MOTORISTS VIEW OF EXISTING SIGNS.
3. ADVANCED NOTIFICATION OF CLOSURE TO BE IN PLACE A MINIMUM OF 14 DAYS PRIOR TO CLOSURE TO ALERT MOTORISTS TO THE CLOSURE.
4. THE FINAL LOCATION OF THE TC64s SHALL BE PROPOSED BY THE CONTRACTOR AND LOCATIONS SUBMITTED TO THE CONTRACT ADMINISTRATOR. THE CONTRACT ADMINISTRATOR SHALL APPROVE THE LOCATION PRIOR TO ERECTION.

LEGEND:

- SYLVAN GLEN RD DETOUR ROUTE
- TC-64 ADVANCED NOTIFICATION / DURING CLOSURE
- TC-(REFER TO PLAN)
- DIRECTION OF TRAFFIC

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES UNLESS
OTHERWISE SHOWN

CONTRACT No.
05P-ENG-2022

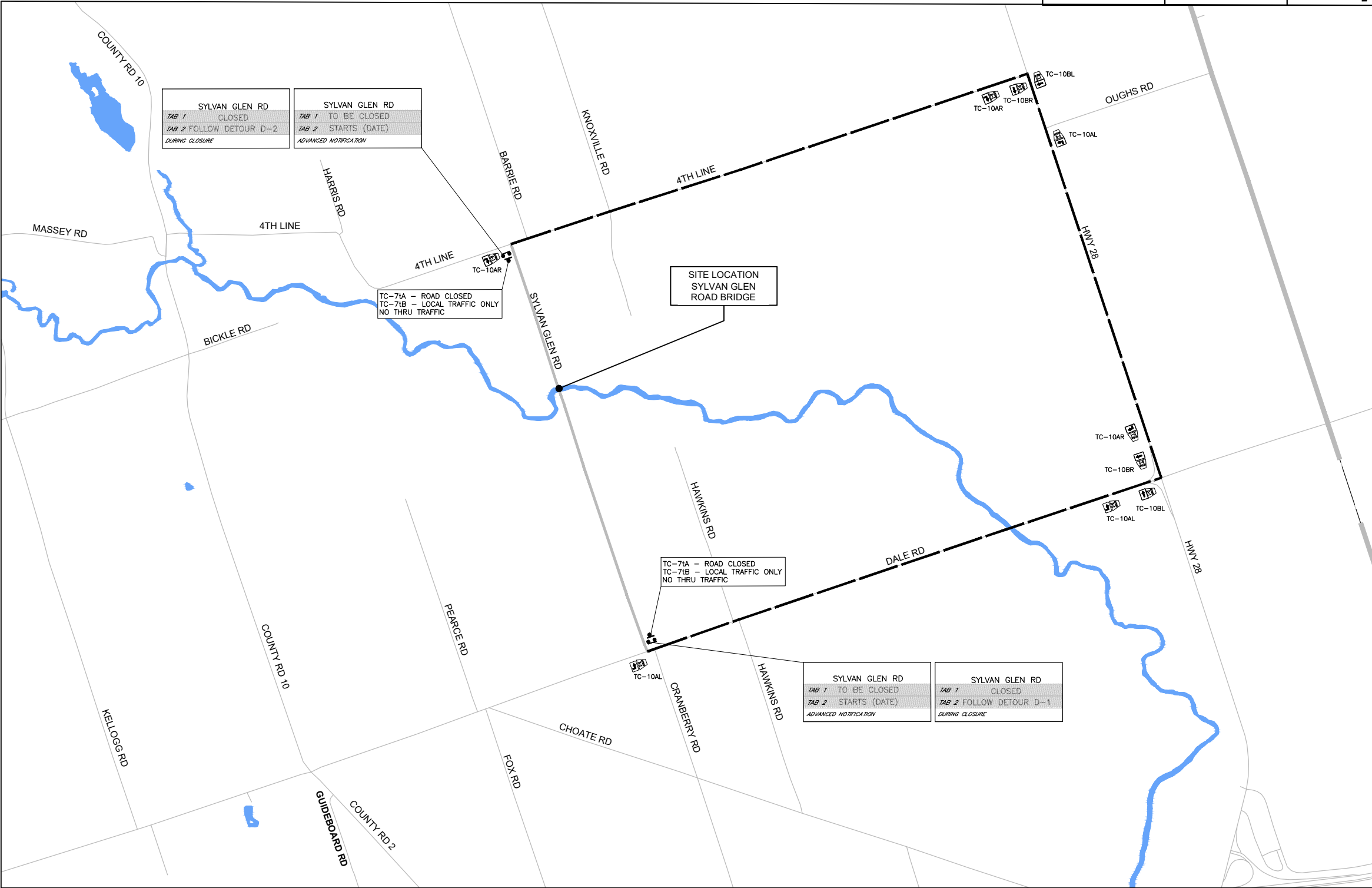


SYLVAN GLEN BRIDGE

SHEET

DETOUR PLAN - HWY 28

24



PLAN
N.T.S.

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISIONS									
	APR. 5, 2023	BDM						ISSUED FOR TENDER REVIEW	
	DATE	BY						DESCRIPTION	
DESIGN	MTH	CHK	KS	CODE	CSA-S6-14	LOAD	CL6250NT	DATE	MAR 2023
DRAWN	MTH	CHK	KS	SITE No.	###			DWG	24

NOTES

1. TRAFFIC SIGNING SHOWN IN THIS DRAWING SUPPLEMENTS THOSE REQUIRED UNDER ONTARIO TRAFFIC MANUAL (OTM) BOOK 7
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LEGEND:

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- TC-64 ADVANCED NOTIFICATION / DURING CLOSURE
- TC-(REFER TO PLAN)
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CONTRACT No.
05P-ENG-2022

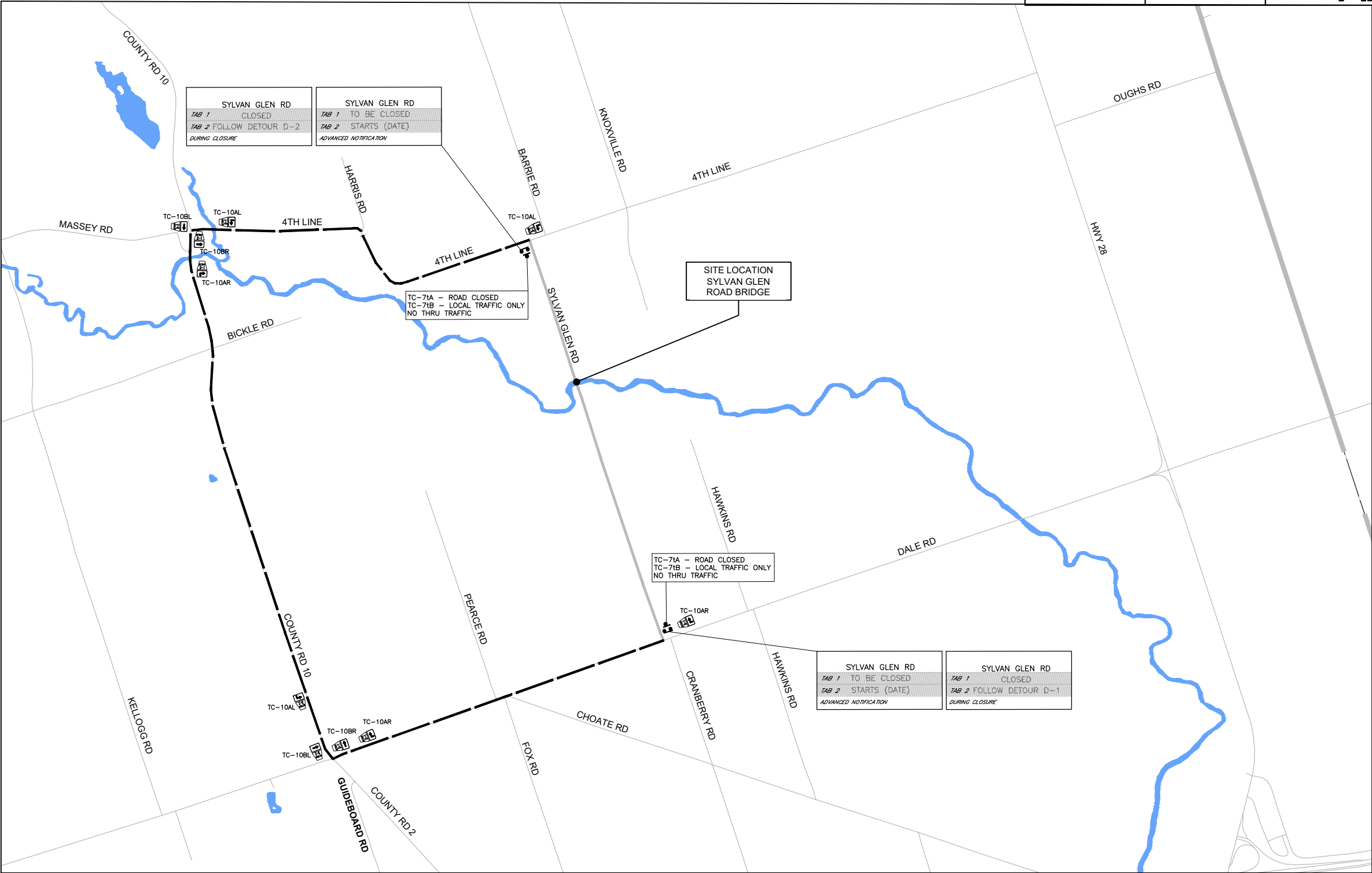


SYLVAN GLEN BRIDGE

SHEET

DETOUR PLAN - CTY RD 10

24



PLAN
N.T.S.

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

REVISIONS									
	APR. 5, 2023	BDM	ISSUED FOR TENDER REVIEW						
	DATE	BY	DESCRIPTION						
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DRAWN	MTH	CHK	KS	SITE No.	###				
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