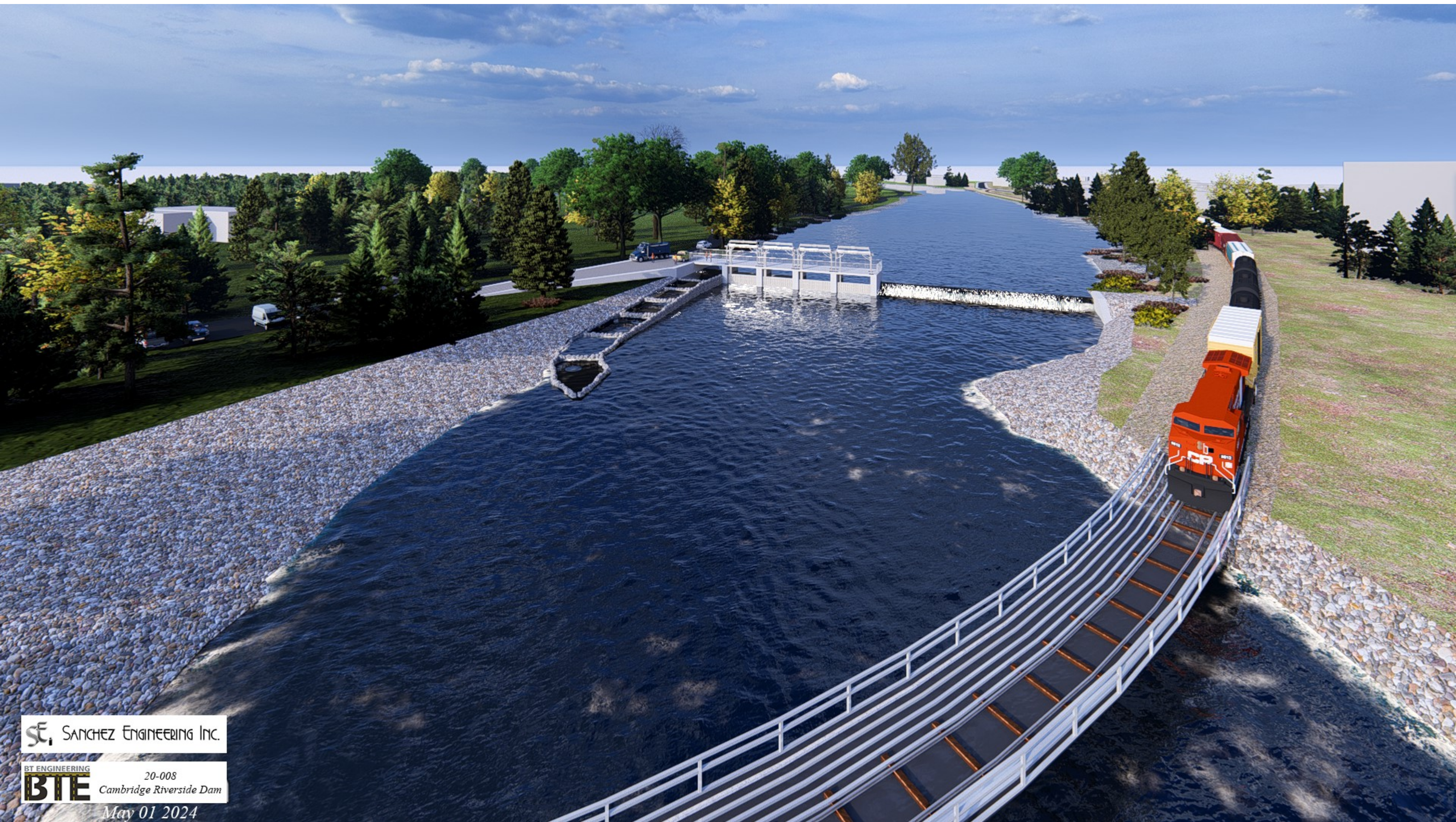




SE, SANCHEZ ENGINEERING INC.

BT ENGINEERING
BTE

20-008
Cambridge Riverside Dam

May 01 2024



SE, SANCHEZ ENGINEERING INC.

BT ENGINEERING
BTE

20-008
Cambridge Riverside Dam

May 01 2024

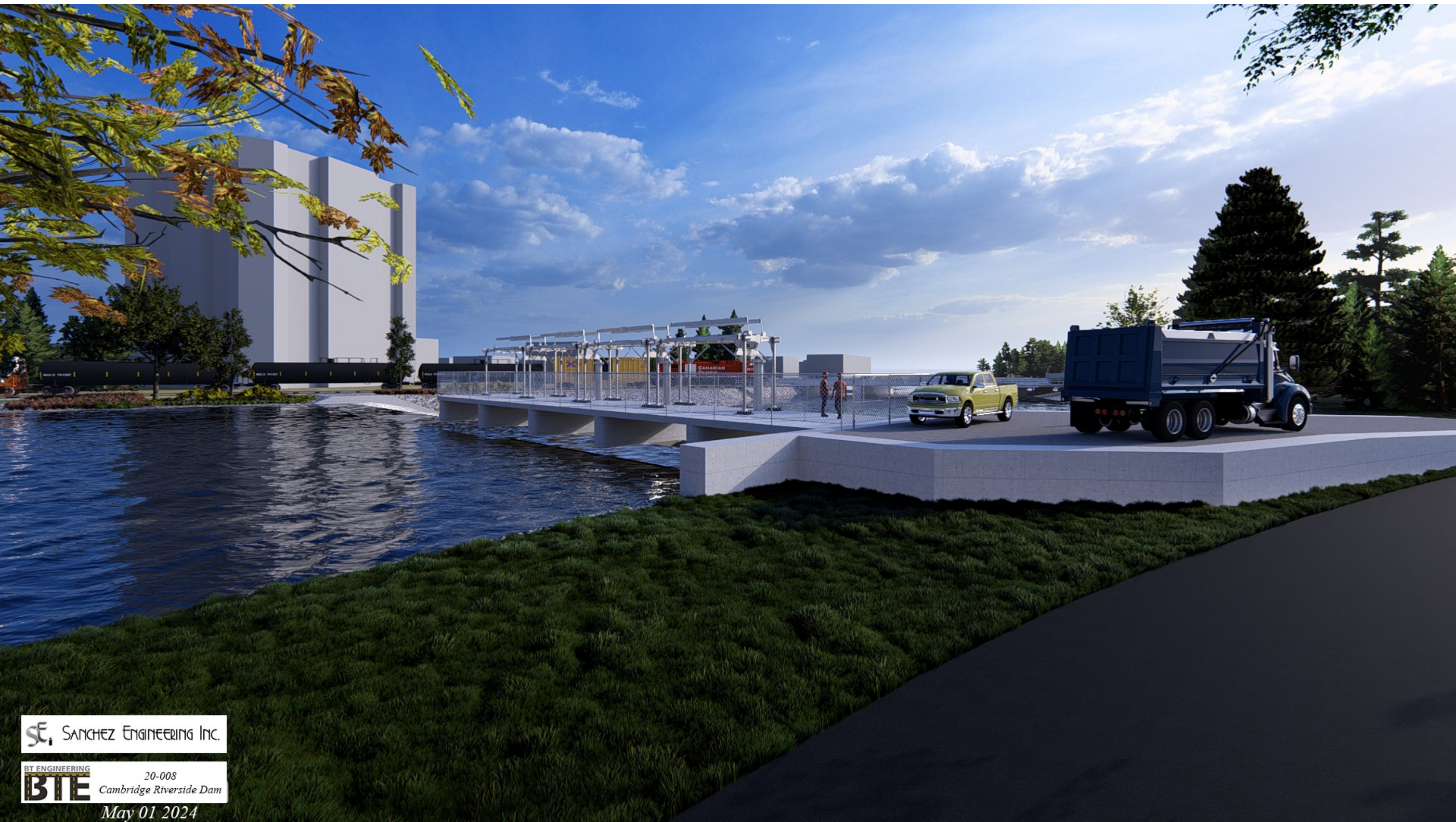


SE, SANCHEZ ENGINEERING INC.

BT ENGINEERING
BTE

20-008
Cambridge Riverside Dam

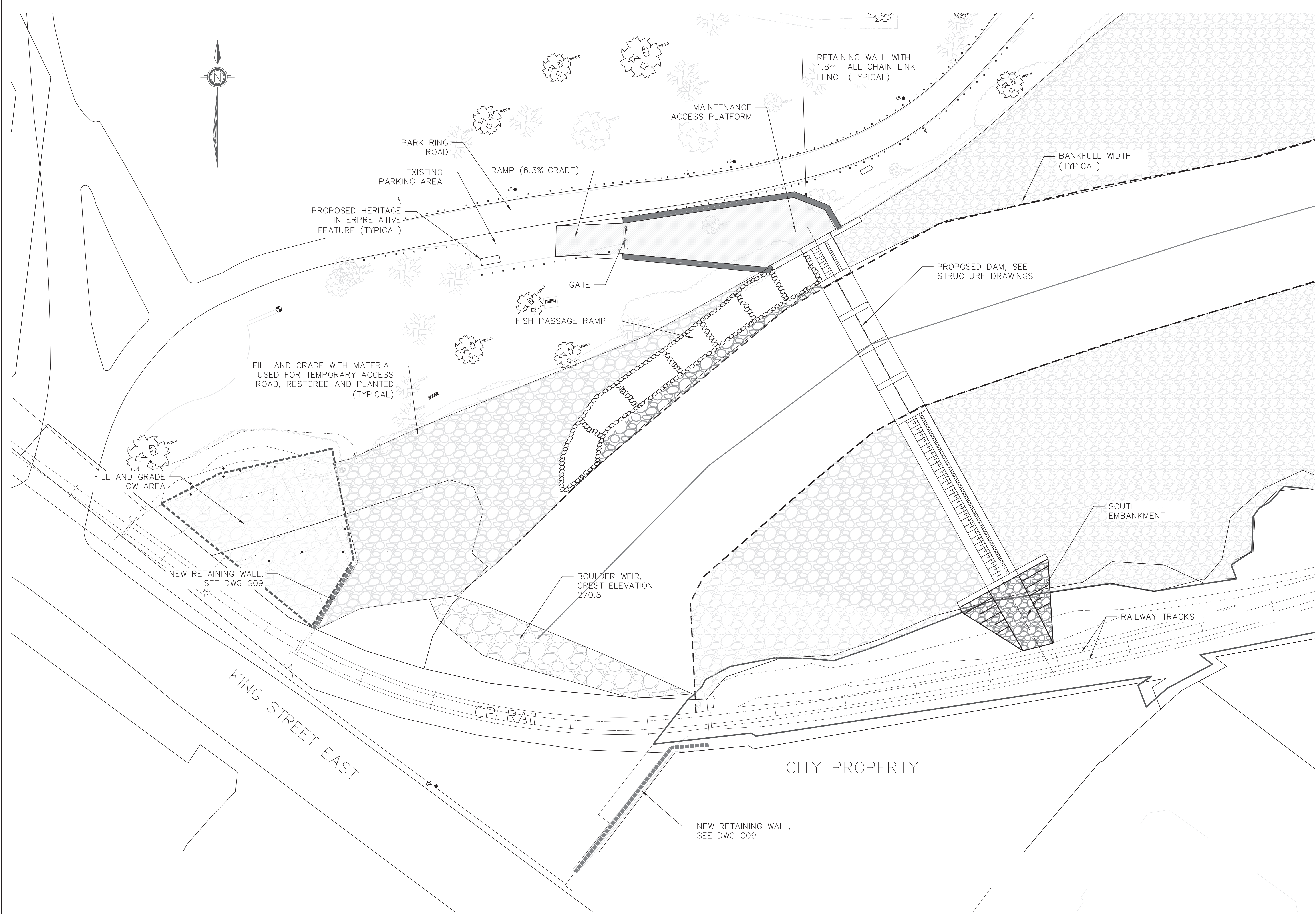
May 01 2024



SE, SANCHEZ ENGINEERING INC.

BT ENGINEERING
BTE 20-008
Cambridge Riverside Dam

May 01 2024



TEMPORARY BENCHMARK

TBM
TOP OF NORTH CONCRETE WINGWALL ON BY-PASS
STRUCTURE.
ELEVATION = 273.421 m
NORTHING = 4809455.981
EASTING = 551365.231

REVISIONS

SE SANCHEZ ENGINEERING INC.

CITY OF CAMBRIDGE

SPEED RIVER

RIVERSIDE DAM
RECONSTRUCTION

DWG. TITLE DAM SITE PLAN

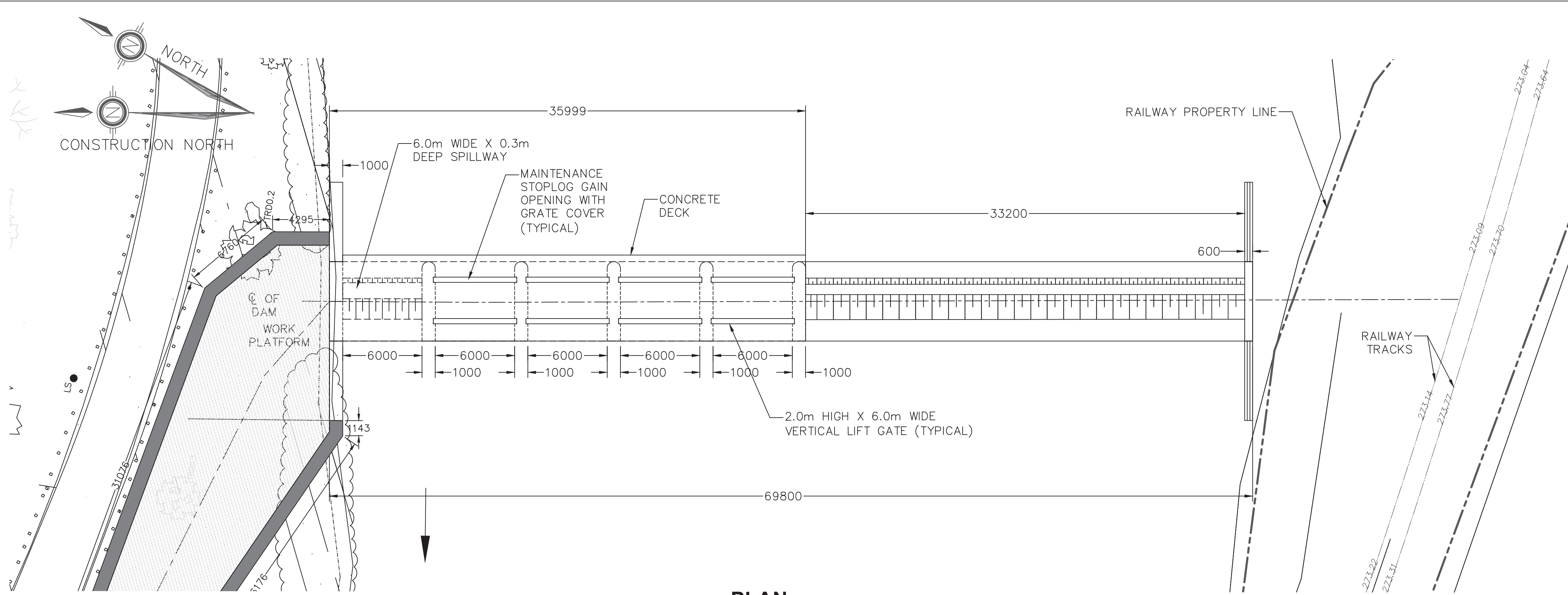
PROJECT
NO: SN0426

DRAWN BY: L.S.C.
DESIGNED BY: L.S.
CHECKED BY: L.S.

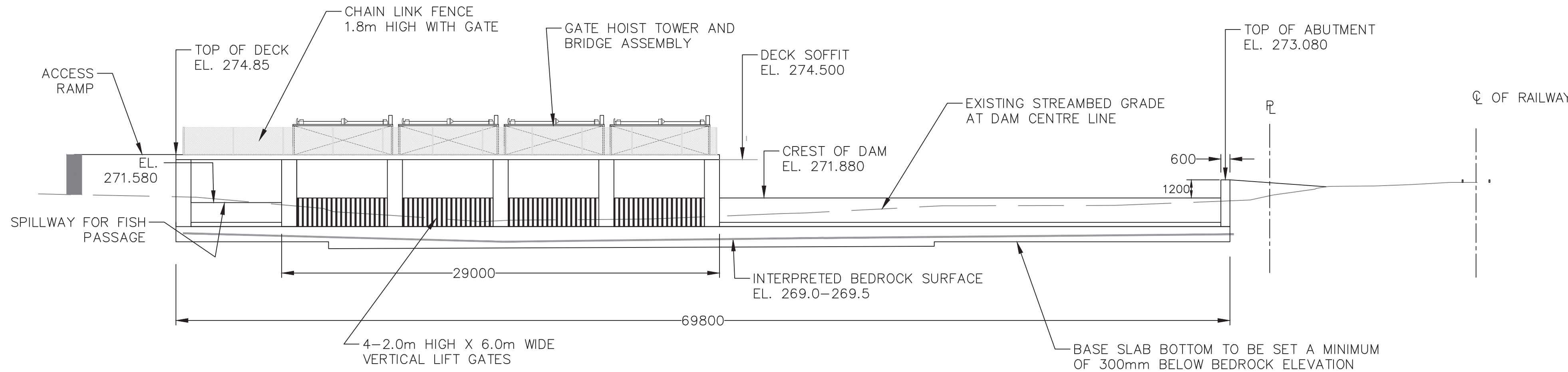
DATE: APRIL 2024

SCALE: AS NOTED

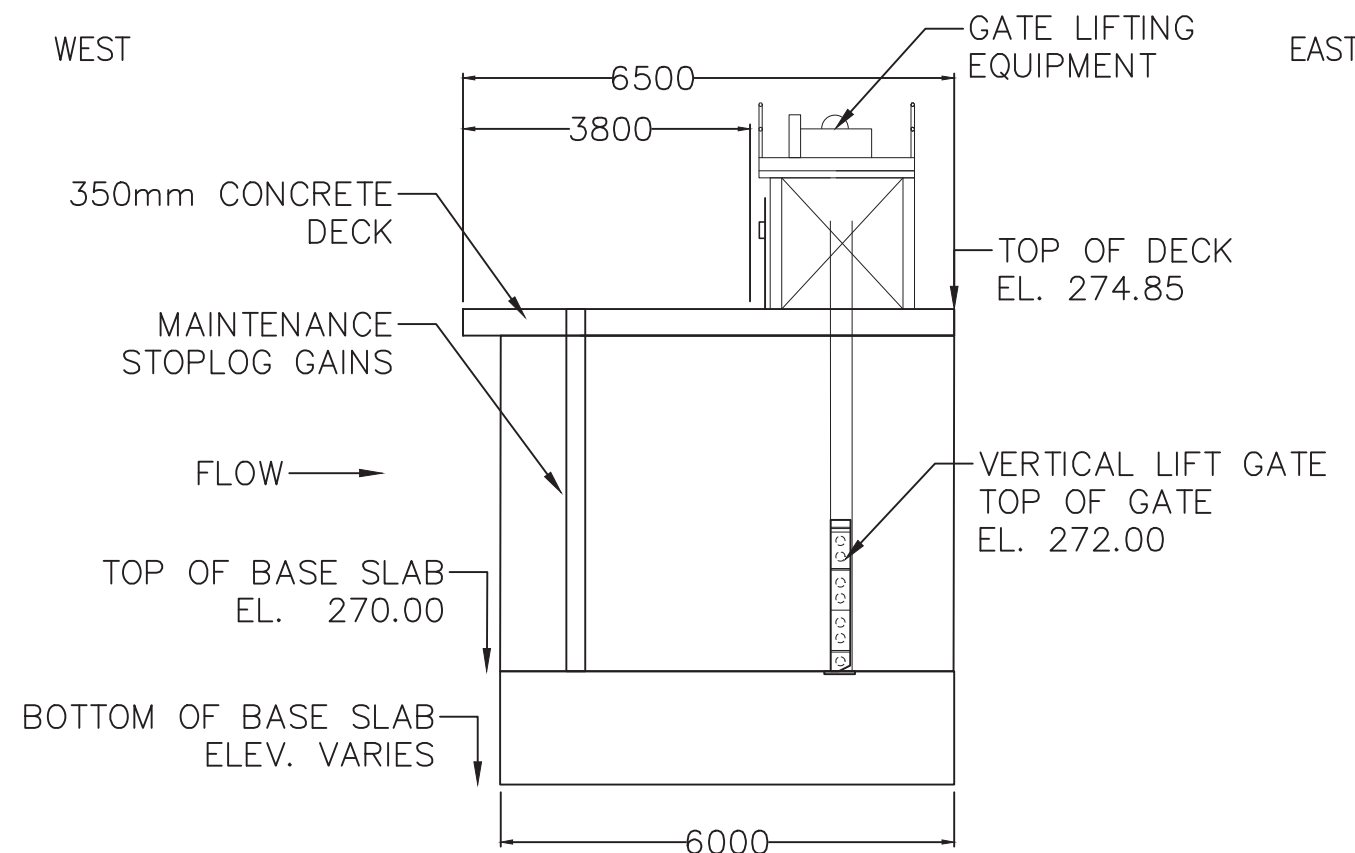
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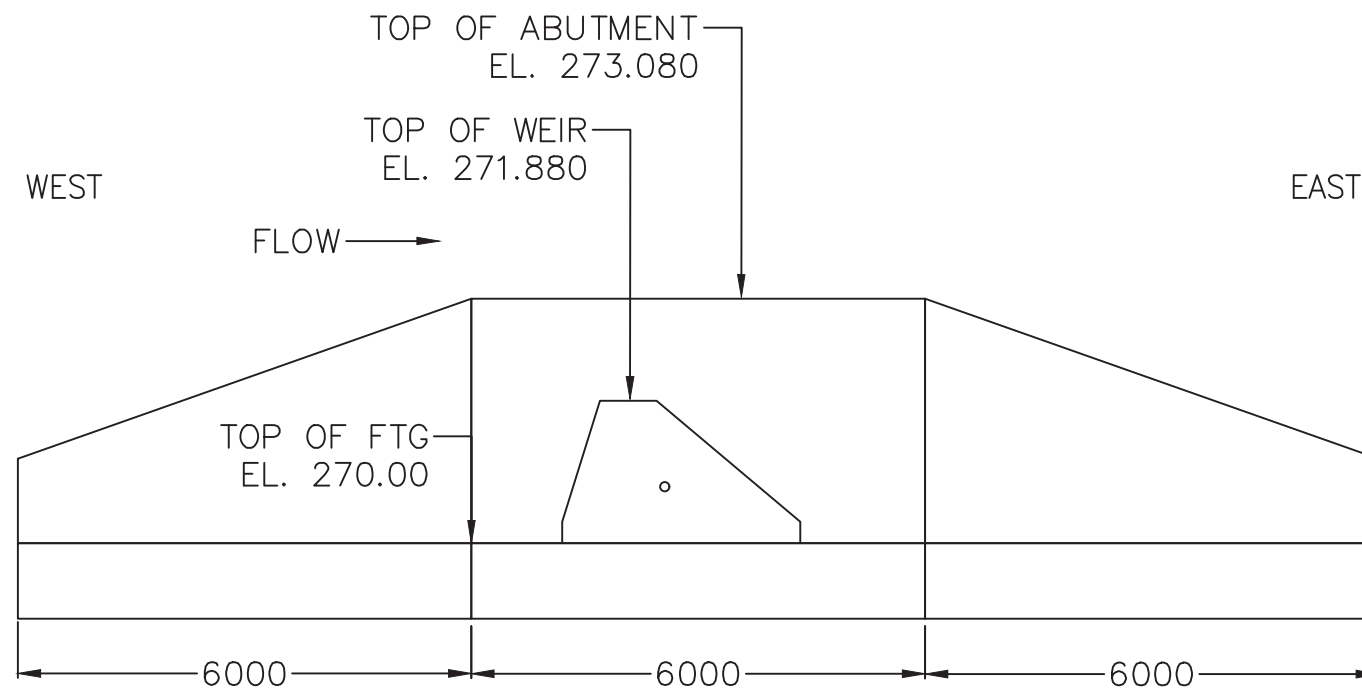
PLAN
SCALE 1:200



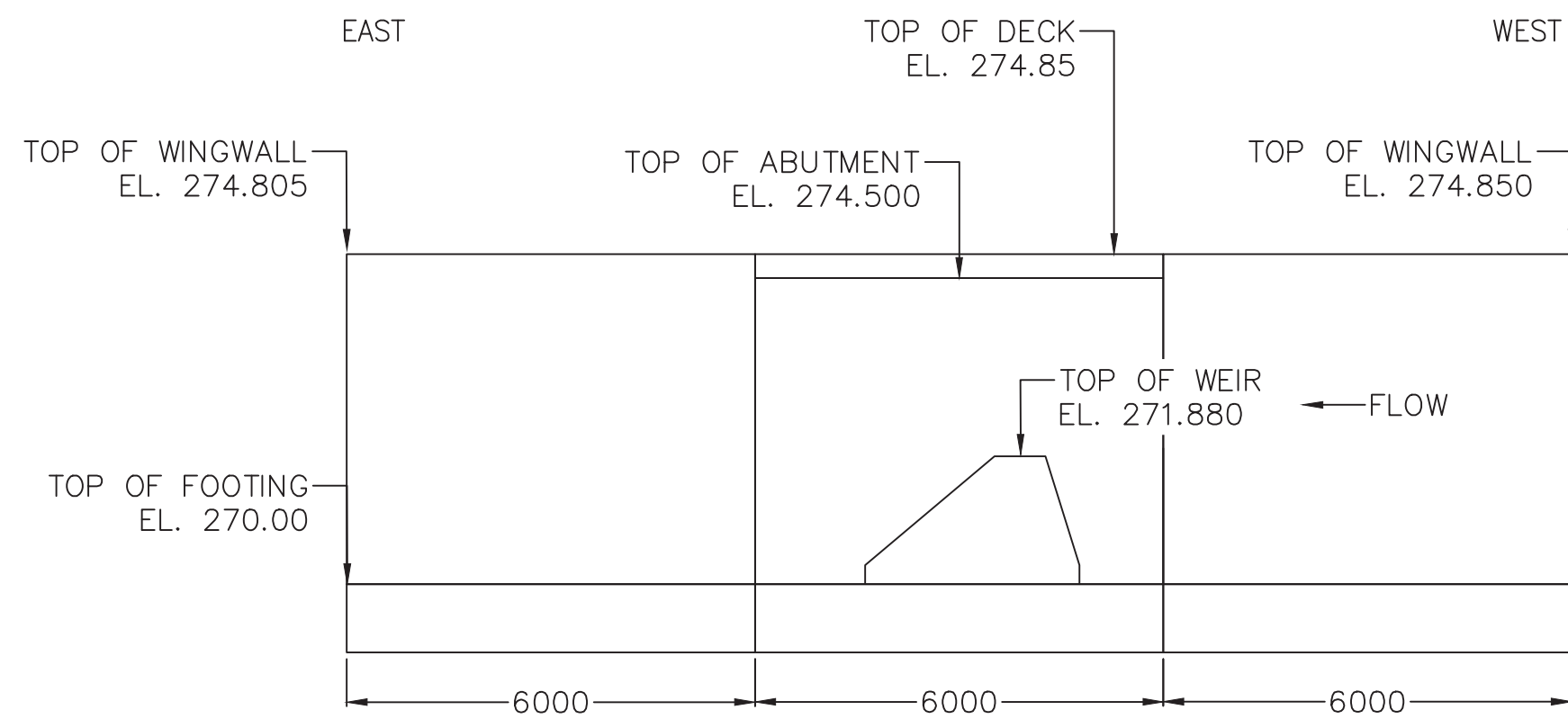
DOWNSTREAM ELEVATION
SCALE 1:200



SECTION THROUGH GATE SLUICE
SCALE 1:100



SOUTH ABUTMENT ELEVATION
SCALE 1:100



NORTH ABUTMENT ELEVATION
SCALE 1:100

GENERAL NOTES:

DIMENSIONS IN MILLIMETRES AND ELEVATIONS IN METRES
CONTRACTOR TO VERIFY ALL DIMENSIONS AND TO ALERT THE
ENGINEER OF ANY DISCREPANCIES.

REFER TO DRAWING G05 - SITE PLAN.

CLASS OF CONCRETE

ALL CONCRETE TO BE EXPOSURE CLASS C-1
COMPRESSIVE STRENGTH 35 MPa

CLEAR COVER TO REINFORCING STEEL

FOOTINGS 100 ± 15
DECK TOP 70 ± 10
DECK BOTTOM 50 ± 10
REMAINDER 70 ± 10 UNLESS OTHERWISE NOTED

REINFORCING STEEL

REINFORCING STEEL SHALL BE GRADE 400W UNLESS OTHERWISE
SPECIFIED.

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

STAINLESS REINFORCING STEEL SHALL BE TYPE 316LN, DUPLEX 2205
OR XM-28 AND HAVE A MINIMUM YIELD STRENGTH OF 500 MPa,
UNLESS OTHERWISE SPECIFIED.

BAR MARKS WITH PREFIX 'S' DENOTE STAINLESS STEEL BARS.

BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING
MINIMUM BEND DIAMETERS, WHILE STIRRUPS AND TIES SHALL HAVE
MINIMUM HOOK DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE
WITH THE STRUCTURAL STANDARD DRAWINGS SS12-1 AND SS12-2,
UNLESS INDICATED OTHERWISE.

CONSTRUCTION NOTES

BACKFILL SHALL NOT BE PLACED BEHIND THE ABUTMENTS UNTIL THE
CONCRETE HAS REACHED 70% OF ITS DESIGN STRENGTH.

NO CONSTRUCTION EQUIPMENT WILL BE PERMITTED ON THE
MAINTENANCE ACCESS RAMP UNTIL THE DECK CONCRETE HAS
ATTAINED 70% OF ITS DESIGN STRENGTH.

TEMPORARY BENCHMARK

TBM

TOP OF NORTH CONCRETE WINGWALL ON
BY-PASS STRUCTURE.
ELEVATION = 273.421 m
NORTHING = 4805455.981
EASTING = 551365.231

REVISIONS

SE, Sanchez Engineering Inc.

CITY OF CAMBRIDGE

SPEED RIVER

RIVERSIDE DAM
RECONSTRUCTION

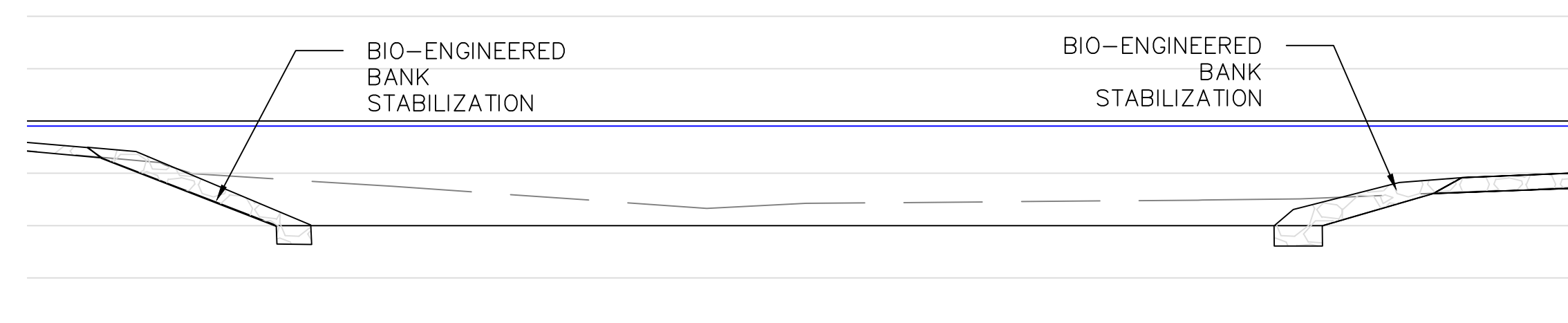
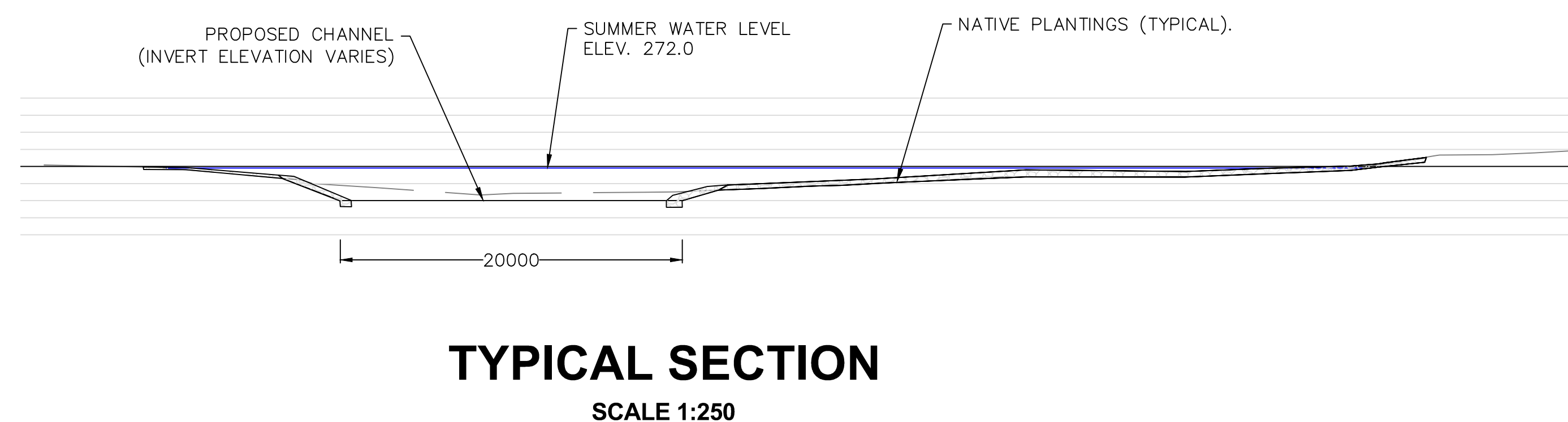
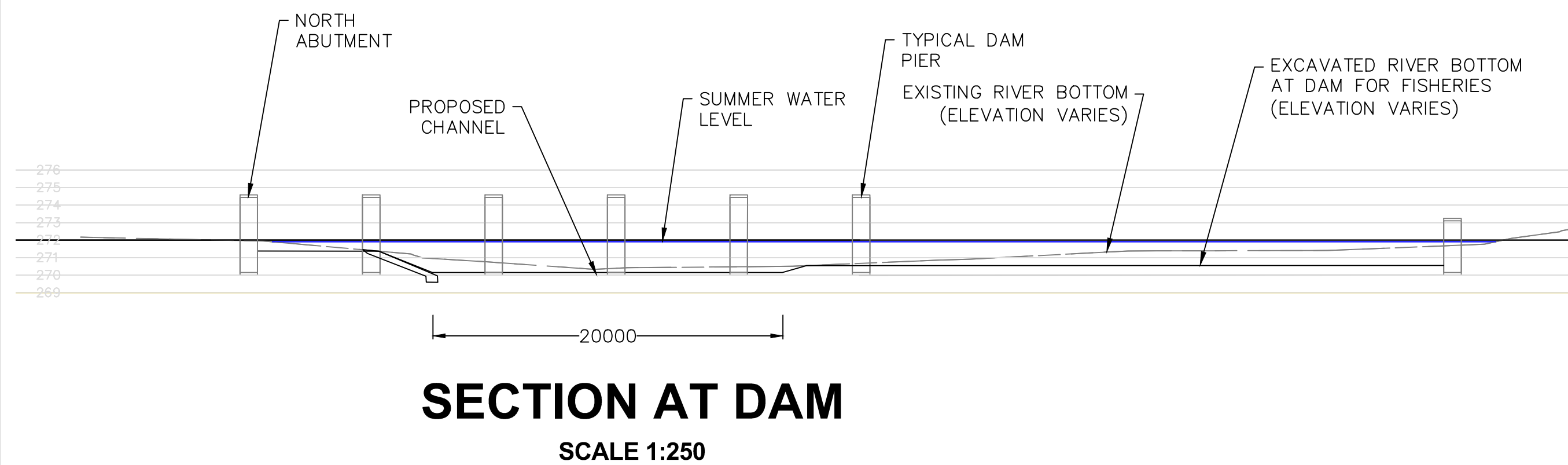
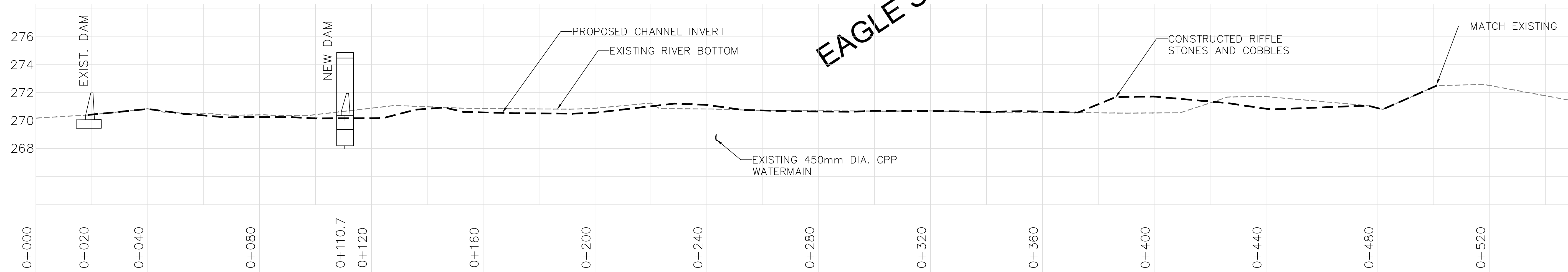
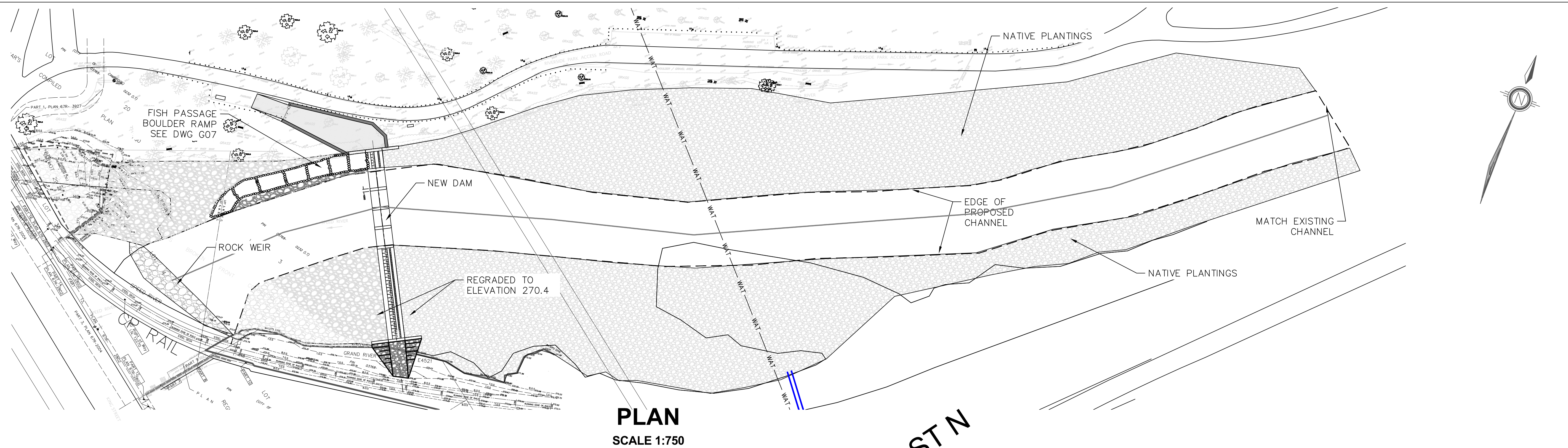
DWG. TITLE GENERAL
ARRANGEMENT

PROJECT NO: SN0426
DESIGNED BY: L.S.
CHECKED BY: L.S.

DATE: APRIL 2024

SCALE: AS SHOWN

DWG. NO.: D01



SEI SANCHEZ ENGINEERING INC.

CITY OF CAMBRIDGE

SPEED RIVER

RIVERSIDE DAM RECONSTRUCTION

DWG. TITLE	PROPOSED CHANNEL
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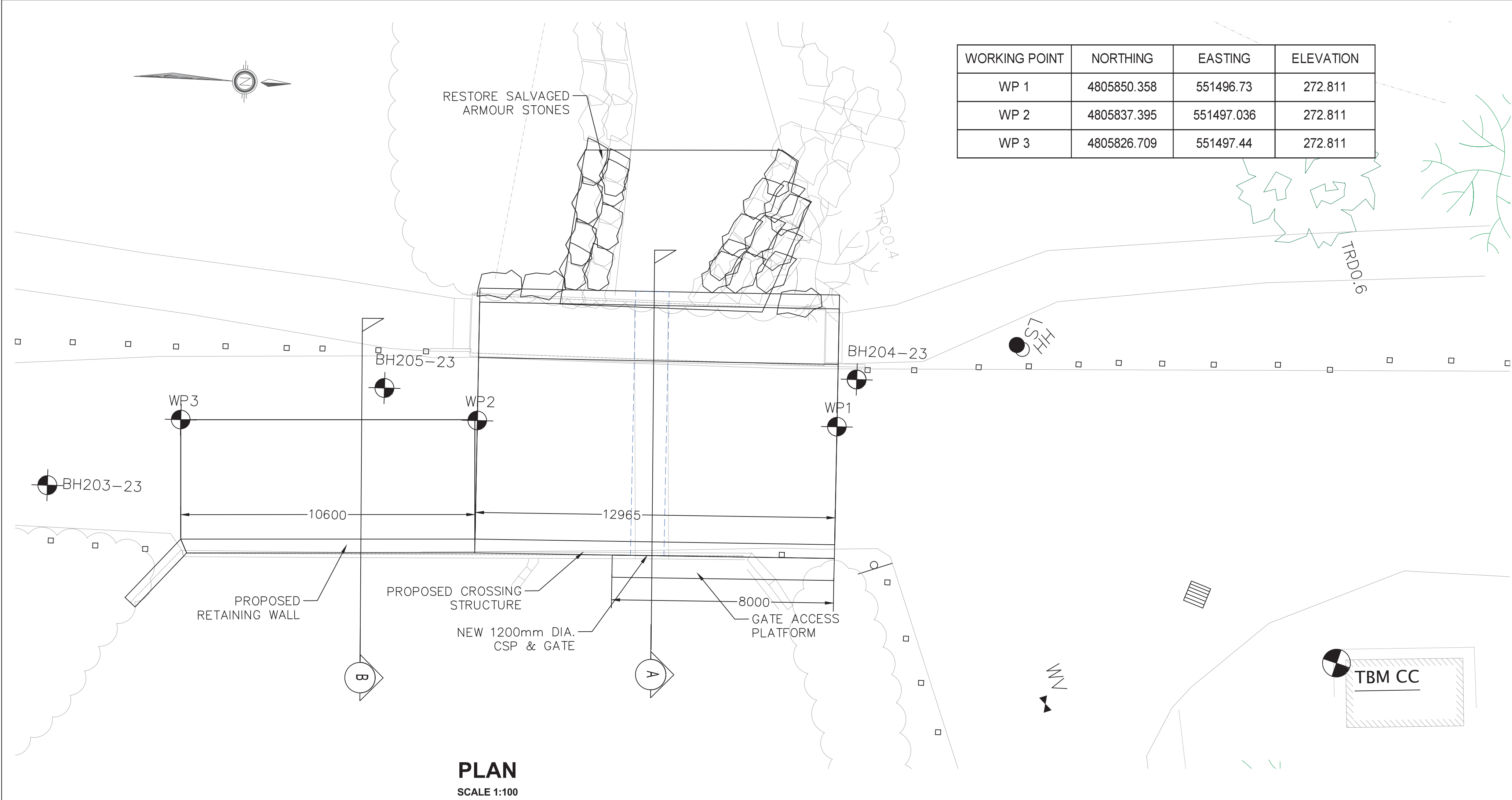
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DRAWN BY:	L.S.C.
DESIGNED BY:	L.S.
CHECKED BY:	L.S.

DATE: APRIL 2024

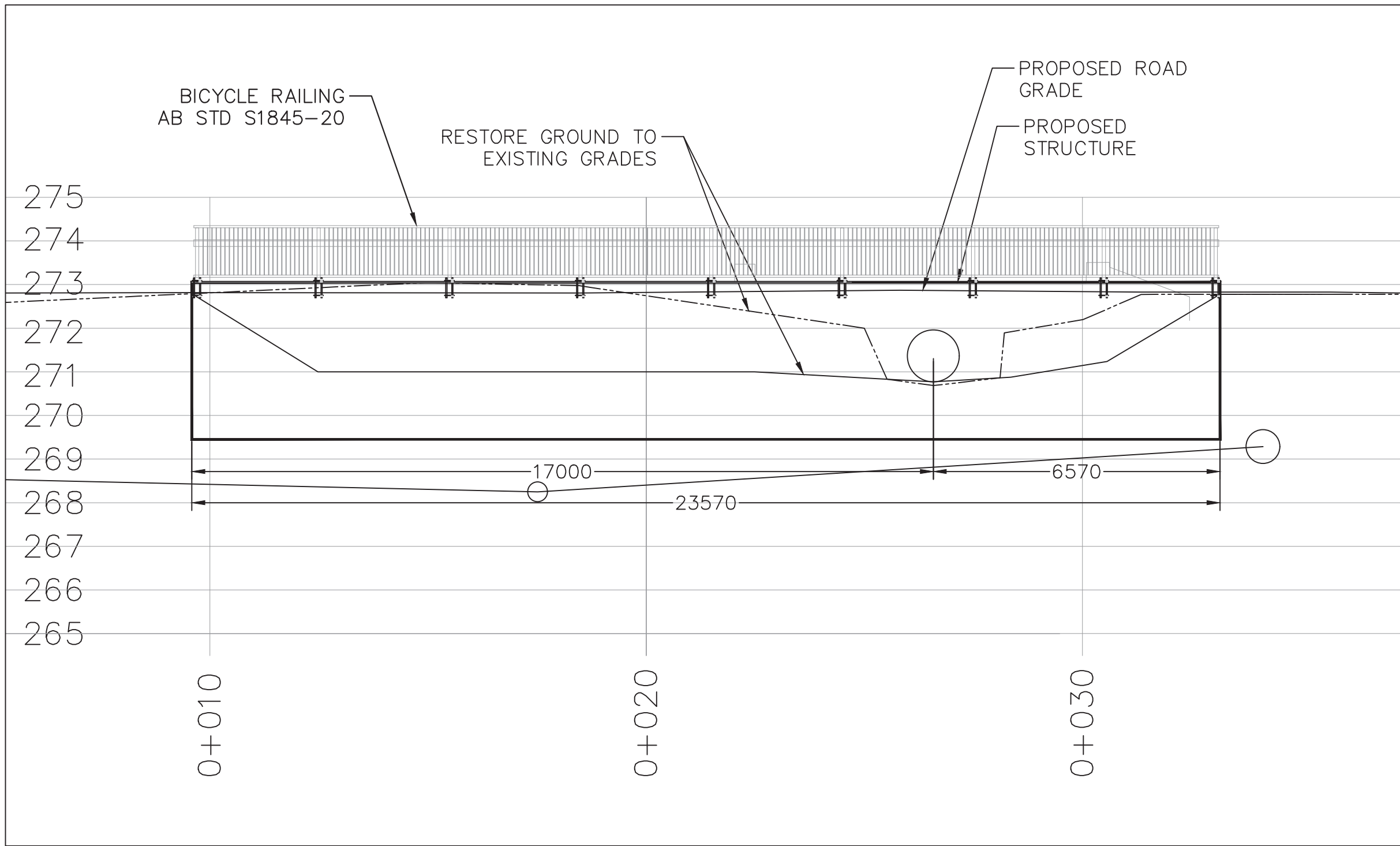
SCALE:
AS NOTED

DWG. NO.: **G08**

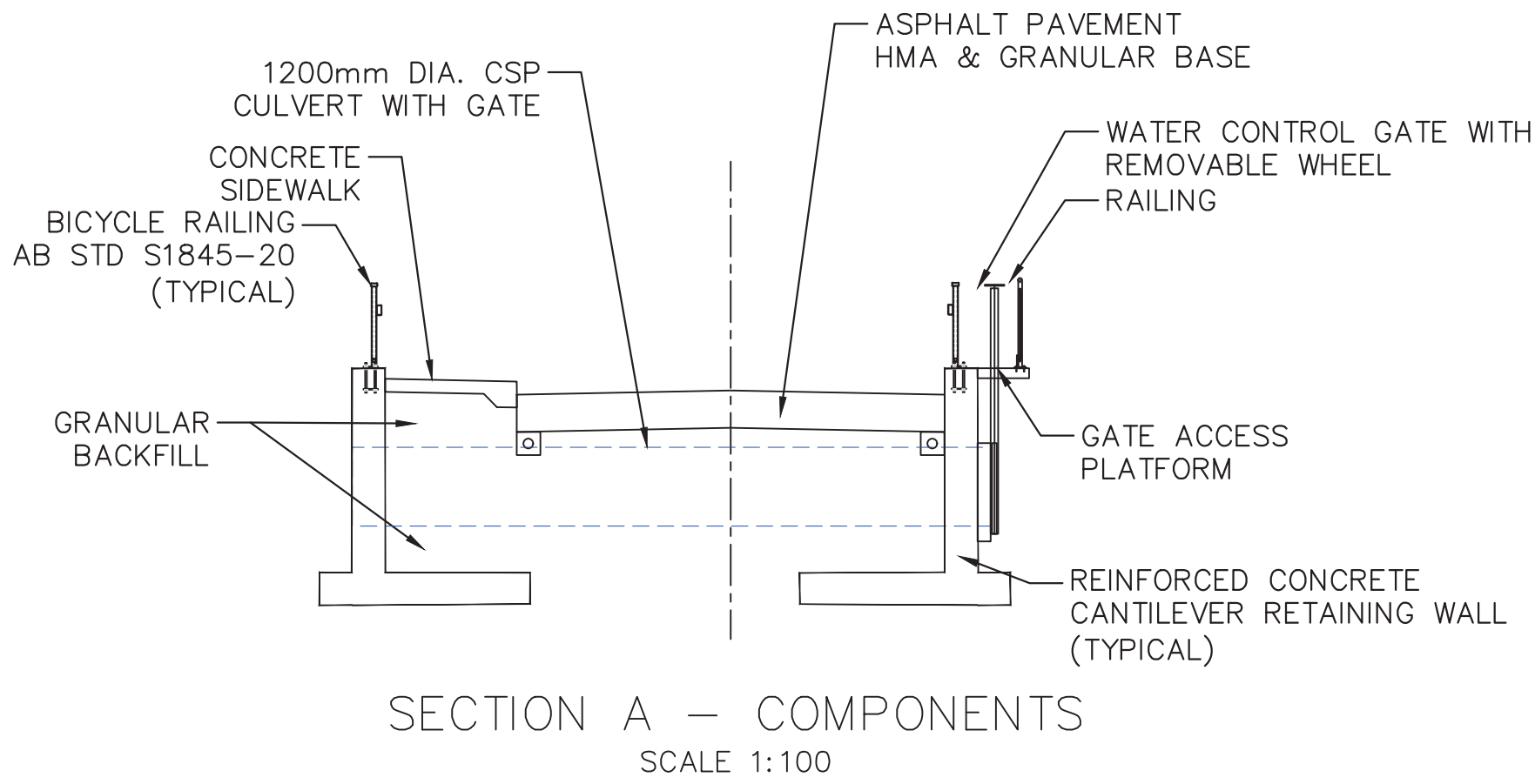


PLAN
SCALE 1:100

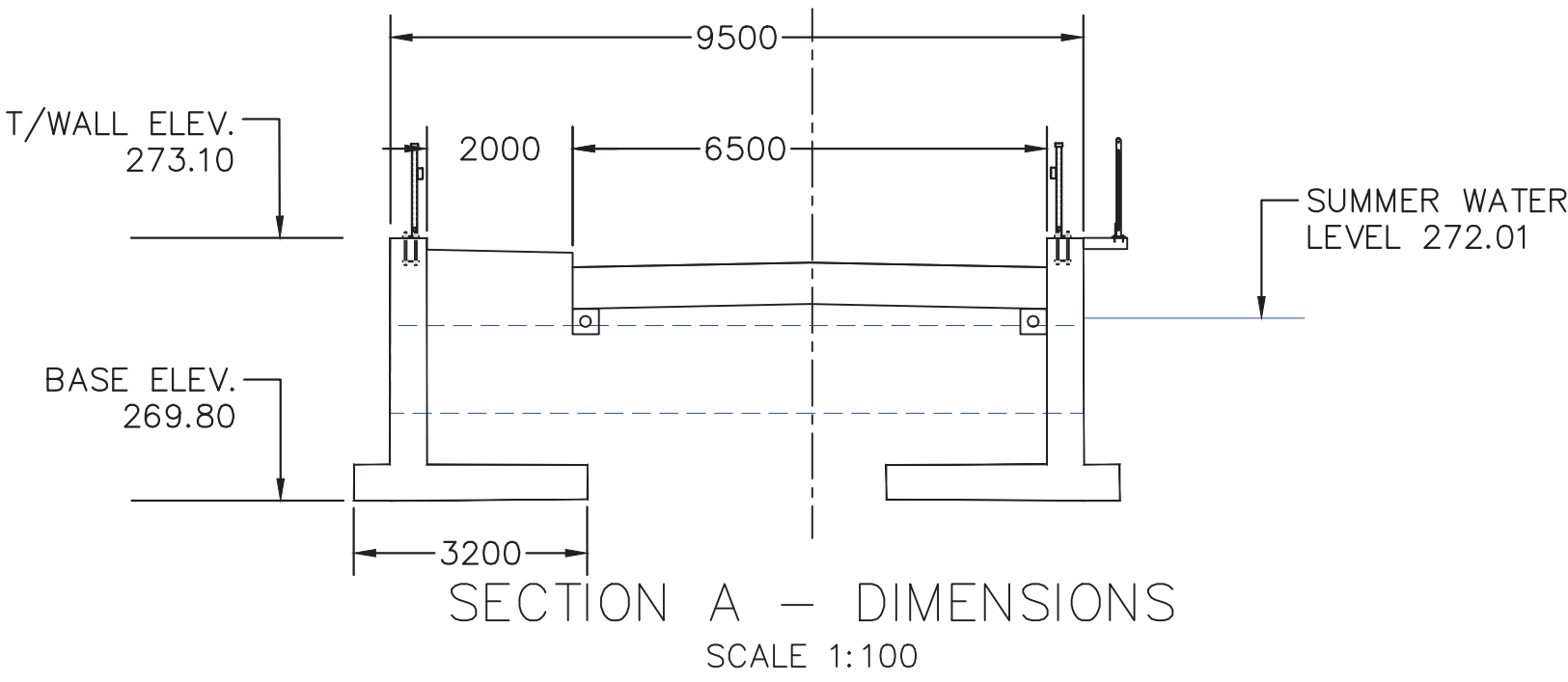
WORKING POINT	NORTHING	EASTING	ELEVATION
WP 1	4805850.358	551496.73	272.811
WP 2	4805837.395	551497.036	272.811
WP 3	4805826.709	551497.44	272.811



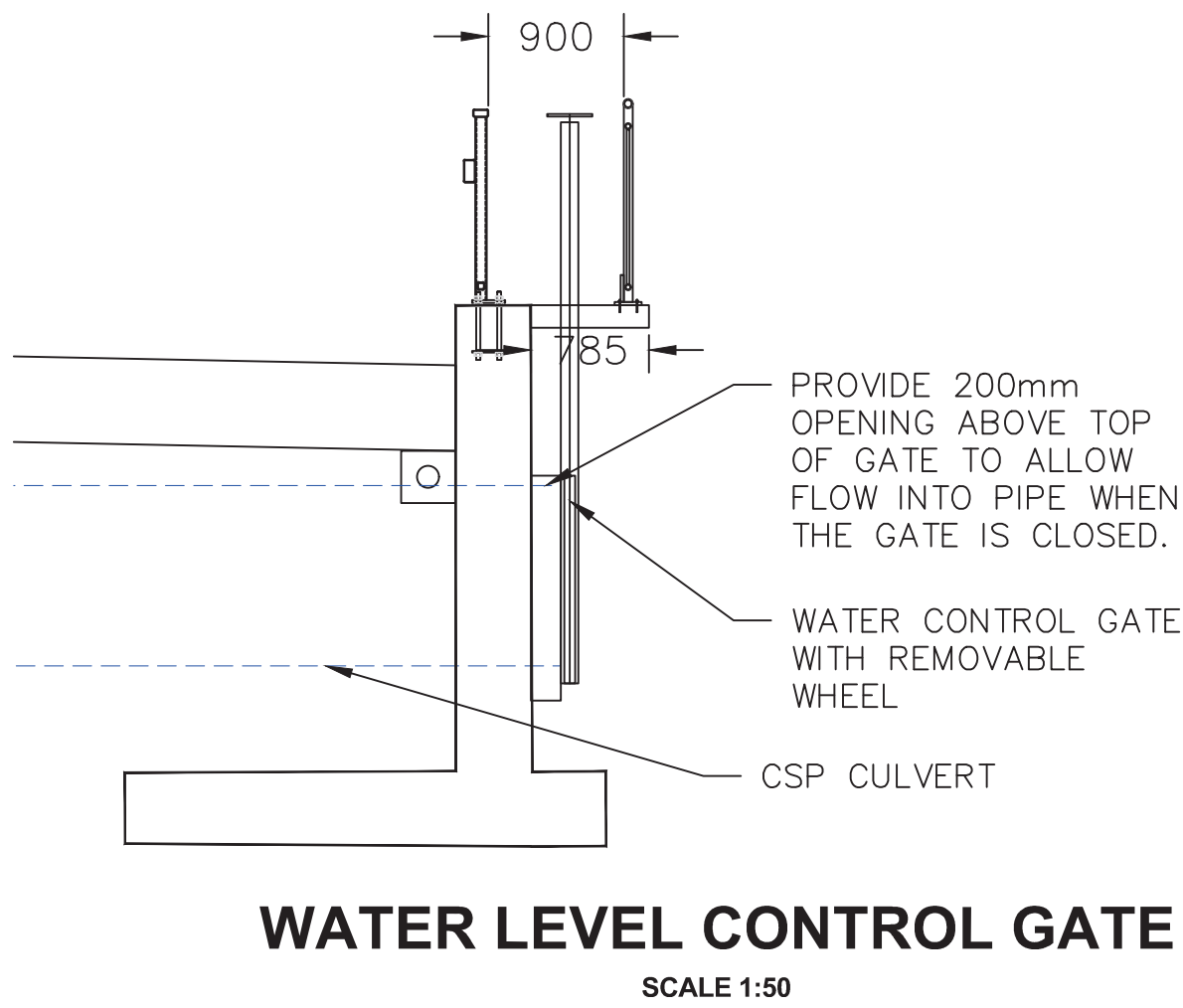
EAST ELEVATION
SCALE 1:100



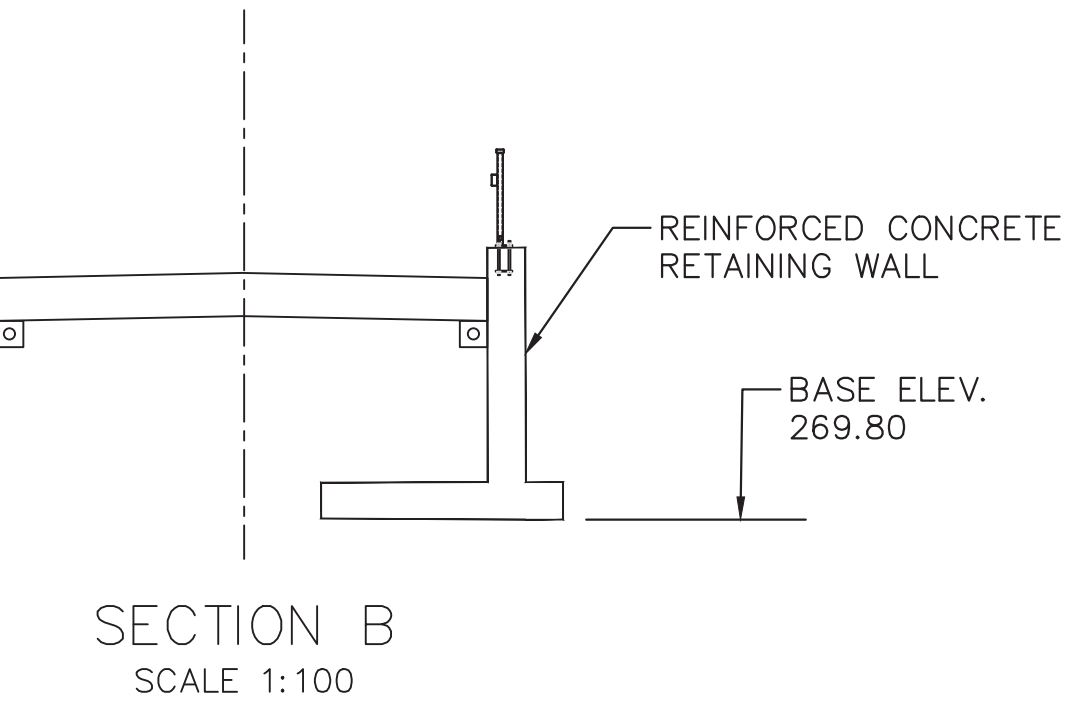
SECTION A — COMPONENTS
SCALE 1:100



SECTION A — DIMENSIONS
SCALE 1:100



WATER LEVEL CONTROL GATE
SCALE 1:50



SECTION B
SCALE 1:100

STAGING

- REFER TO DRAWING XX FOR OVERALL PROJECT STAGING
- INSTALL COFFERDAMS UPSTREAM AND DOWNSTREAM OF THE WORK AREA TO ISOLATE THE WORK AREA AND TO REMOVE THE TEMPORARY BRIDGE AND CONSTRUCT THE NEW STRUCTURE IN THE DRY.
- PUMP CREEK RUNOFF ACROSS WORK AREA TO DOWNSTREAM SIDE OF WORK AREA.
- ISOLATE THE TEMPORARY BRIDGE AREA TO PERMIT REMOVALS, DEMOLITION, AND NEW CONSTRUCTION TO PROCEED WITHOUT AFFECTING THE WATERCOURSE BEYOND THE WORK AREA.
- AFTER CONSTRUCTION OF THE NEW STRUCTURE AND STABILIZATION OF THE WATERCOURSE, LEAVE THE NEW GATE OPEN.

CAST IN PLACE CONCRETE

- CAST IN PLACE CONCRETE TO CONFORM TO ONTARIO PROVINCIAL STANDARD SPECIFICATIONS OPSS 904 AND THE FOLLOWING:
 - SOURCE OF SUPPLY OF READY-MIX CONCRETE SHALL BE A MEMBER OF READY MIX ASSOCIATION OF ONTARIO (RMAS).
 - DESIGN MIXES SHALL BE SUBMITTED FOR REVIEW.
 - CONCRETE SHALL BE EXPOSURE CLASS C-1
 - CONCRETE STRENGTH – $f'_c = 35 \text{ MPa}$
 - AIR CONTENT – 5% TO 8%
 - CEMENT CONTENT – PER C-1 REQUIREMENTS
- CLEAR COVER TO REINFORCING: $70 \pm 20 \text{ mm}$
- ALL EXPOSED EDGES AND CONSTRUCTION JOINTS TO BE CHAMFERED 25mm UNLESS OTHERWISE NOTED.
- CURE CONCRETE TO THE REQUIREMENTS OF OPSS 904.
- REINFORCING STEEL SHALL BE CARBON STEEL, CONFORMING TO OPSS 905 AND CSA 30.18-09, GRADE 400

CONSTRUCTION

- DESIGN BEARING PRESSURE
 - SLS = 150 kPa
 - ULS = 225 kPa
- PLACE ON NATIVE UNDISTURBED SAND/GRAVELLY SAND/SANDY GRAVEL AT ELEVATION 269.80m.
- PROTECT THE FOUNDATION SOIL BY PLACING A 50mm THICK MUD SLAB ON THE UNDISTURBED FOUNDATION SOIL.

GENERAL NOTES:

- THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE DRAWINGS BEFORE CONSTRUCTION. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
- ANY DAMAGE TO EXISTING STRUCTURES DURING REMOVALS OR CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND AT NO EXTRA COST TO THE OWNER.
- FEATURES OF CONSTRUCTION NOT FULLY SHOWN ARE OF THE SAME CHARACTER AS THOSE NOTED FOR SIMILAR WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THE TESTING OF CONCRETE AND INSPECTION OF STRUCTURAL REINFORCEMENT AND FOR THE PROMPT SUBMISSION OF ALL REPORTS TO THE ENGINEER.
- CONSTRUCTION LAYOUT BY CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES PRIOR TO AND DURING CONSTRUCTION. LOCATION OF EXISTING UTILITIES TO BE VERIFIED IN THE FIELD.

TEMPORARY BENCHMARK

TBM
TOP OF NORTH CONCRETE WINGWALL ON BY-PASS STRUCTURE.
ELEVATION = 273.421 m
NORTHING = 4805455.981; EASTING = 551365.231
SITE TBM
SET CUT CROSS ON TOP OF SOUTHWEST CORNER OF CONCRETE PAD FOR FRAME BUILDING
ELEVATION = 272.789 m
NORTHING = 4805868.707; EASTING = 551504.502

REVISIONS

SE, Sanchez Engineering Inc.

CITY OF CAMBRIDGE

RIVERSIDE DAM
RECONSTRUCTION

ROGERS DRIVE CROSSING

DWG. TITLE
GENERAL ARRANGEMENT

PROJECT NO: SN0426

DRAWN BY: L.S.C.
DESIGNED BY: L.S.
CHECKED BY: L.S.

DATE: APRIL 2024

SCALE: AS NOTED

DWG. NO.: R01



1. REFER TO DRAWING XX FOR OVERALL PROJECT STAGING
2. INSTALL COFFERDAMS UPSTREAM AND DOWNSTREAM OF THE WORK AREA TO ISOLATE THE WORK AREA AND TO REMOVE THE TEMPORARY BRIDGE AND CONSTRUCT THE NEW STRUCTURE IN THE DRY.
3. PUMP CREEK RUNOFF ACROSS WORK AREA TO DOWNSTREAM SIDE OF WORK AREA.
4. ISOLATE THE TEMPORARY BRIDGE AREA TO PERMIT REMOVALS, DEMOLITION, AND NEW CONSTRUCTION TO PROCEED WITHOUT AFFECTING THE WATERCOURSE BEYOND THE WORK AREA.

1. INSTALL COFFERDAMS AS REQUIRED FOR GROUNDWATER CONTROL.
2. TEMPORARY EXCAVATIONS BELOW THE WATER TABLE ARE CLASSIFIED AS TYPE 4 SOILS.
3. DESIGN AND INSTALL DEWATERING SYSTEMS TO MAINTAIN THE EXCAVATIONS TO MAINTAIN GROUNDWATER LEVELS AT LEAST 0.5m BELOW THE BASE OF THE EXCAVATION.



SCALE:	DWG. NO.:
1:50	P01



Cambridge
2022-08-24

