



LOCATION MAP
N.T.S



Ministry of
Transportation
and Infrastructure

PROJECT NO. 14007

**DAY ROAD
DFAA FLOOD DAMAGE
ENVIRONMENTAL PERMITS**

STA. 100+08.000- STA. 103+30.000

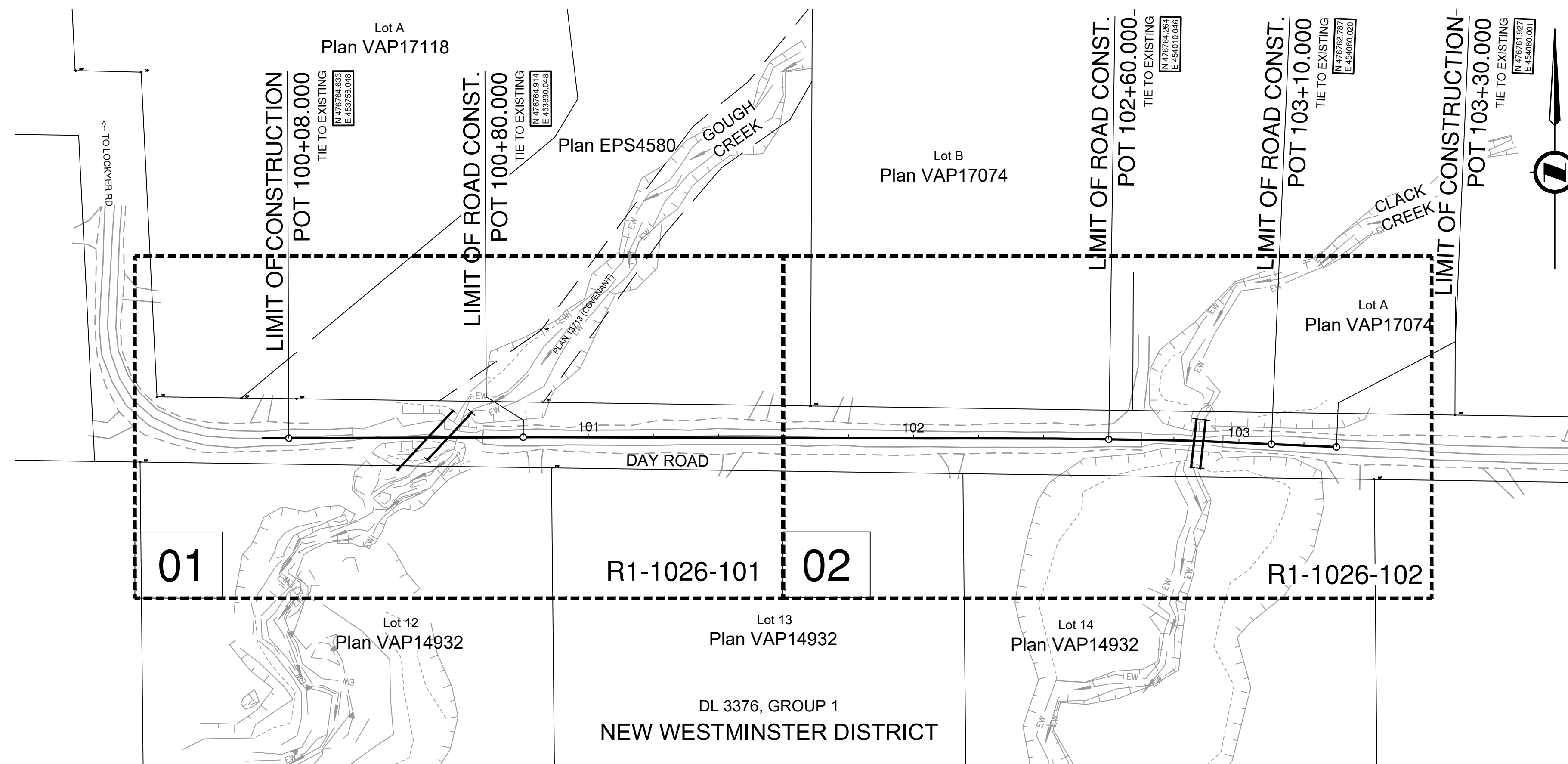
0.322 km

GOUGH CREEK: N: 476764.8236, E: 453810.048

CLACK CREEK: N: 476763.810, E: 454035.616

GRADING AND DRAINAGE CONTRACT

DRAWING INDEX	
R1-1026-001	KEY PLAN
R1-1026-002	LEGEND
R1-1026-101 & 102	PLAN
R1-1026-701 & 702	DRAINAGE AND DETAILS



KEY PLAN

0 10 1:1000 50m

PLOT DATE: 2023/03/01 U:\Projects_SUR\1961\0480\13\0-Design\CAD\DrawingProduction\Environment\Drawing\R1-1026-000-Enviro.dwg



DRAWING NUMBER REV
R1-1026-001-ENVIRO

LEGEND

SYMBOLS (EXISTING)

AERIAL UTILITIES	DRAINAGE & UTILITIES
POWER POLE	CULVERT OUTLET
POWER POLE WITH TRANSFORMER	SANITARY MANHOLE
POWER / TELEPHONE POLE WITH TRANSFORMER	UTILITY MANHOLE
POWER GUY POLE	WATER MANHOLE
POWER / TELEPHONE POLE	MANHOLE UNKNOWN
POWER / TELEPHONE GUY POLE	
ANCHOR OR GUY WIRE	
DEADMAN	
TELEPHONE POLE	
TELEPHONE GUY POLE	
HIGH TENSION POLE	
HIGH TENSION TOWER	
UTILITY POLE	
	ELECTRICAL
	JUNCTION BOX
	UTILITY VAULT
	LAMP STANDARD
	UTILITY KIOSK
	UTILITY PEDESTAL
	TRAFFIC COUNTER
	TRAFFIC SIGNAL
	TRAFFIC SIGNAL CONTROLLER
	METERS
	VALVE
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	WELL
	STANDPIPE / WATER BLOW OFF
	AIR VALVE
	GAS VALVE
	SERVICE METER
	UNDERGROUND
	VENT/BREATHING PIPE
	FILLER CAP
	FUEL / GAS PUMP
	FUEL TANK
	SEPTIC TANK
	UNDERGROUND MARKER (MISC)
	ROAD SIGNS
	STANDARD SIGN
	COMMERCIAL SIGN
	SIGN BRIDGE STRUCTURE
	CANTILEVER STRUCTURE
	TWO POST SIGN
	TWO POST SIGN (BREAKAWAY)
	STANDARD DAVIT POLE - TYPE 3
	STANDARD COMBINATION POLE - TYPE 1
	HEAVY DUTY DAVIT POLE - TYPE 6
	HEAVY DUTY COMBINATION POLE - TYPE 7
	HEAVY POLE - TYPE H
	HEAVY COMBINATION POLE - TYPE H
	CANTILEVER STRUCTURE
	SIGN BRIDGE STRUCTURE
	UNDERGROUND
	VENT/BREATHING PIPE
	FILLER CAP
	FUEL / GAS PUMP
	FUEL TANK
	SEPTIC TANK
	UNDERGROUND MARKER (MISC)
	IRRIGATION JUNCTION BOX
	IRRIGATION SPRINKLER HEAD
	ROAD SIGNS
	STANDARD SIGN
	COMMERCIAL SIGN
	SIGN BRIDGE STRUCTURE
	CANTILEVER STRUCTURE
	TWO POST SIGN
	TWO POST SIGN (BREAKAWAY)
	STANDARD DAVIT POLE - TYPE 3
	STANDARD COMBINATION POLE - TYPE 1
	HEAVY DUTY DAVIT POLE - TYPE 6
	HEAVY DUTY COMBINATION POLE - TYPE 7
	HEAVY POLE - TYPE H
	HEAVY COMBINATION POLE - TYPE H

LINE TYPES (EXISTING)

LOT BOUNDARIES
SECTION LINE / DISTRICT LOT
1/4 SECTION BOUNDARY
LOT BOUNDARY
EASEMENTS

LINE TYPES (EXISTING)

MAN-MADE FEATURES
RAILWAY TRACKS
RAILWAY BALLAST
ROAD MARKING - YELLOW
ROAD MARKING - WHITE
ROAD MARKING - BROKEN
CROSSWALK
STOP LINE
EDGE OF ROAD - PAVED
EDGE OF ROAD GRAVEL
GRAVEL SHOULDER
DIRT ROAD
GRAVEL ROAD
EDGE OF GRAVEL
SIDEWALK
CONCRETE PAD
FENCE
TOP OF CURB
CL OF GUTTER
CONCRETE ROAD BARRIER
TOP OF FILL
RIP RAP
BUILDING
TREE LINE
LAWN LINE
HYDRAULIC
CULVERT
DITCH CENTER
DITCH EDGE
CENTER OF CREEK
HIGH WATER
EDGE OF WATER
HIGH WATER MARK (EXTREME)
SEEPAGE LINE
TOPOGRAPHY
BASE OF SLOPE
MARSH
SLIDE
TALUS
TRAIL
TOP OF SLOPE
UTILITIES
OVERHEAD UTILITY
PIPELINE (GAS)
UG ELECTRIC
UG COMMUNICATION
STORM SEWER
SANITARY SEWER
WATER MAIN
MISCELLANEOUS UNDERGROUND



SYMBOLS (PROPOSED)

AERIAL UTILITIES	METERS
POWER POLE	VALVE
POWER POLE WITH TRANSFORMER	WATER VALVE
POWER / TELEPHONE POLE WITH TRANSFORMER	WATER METER
POWER GUY POLE	FIRE HYDRANT
POWER / TELEPHONE POLE	STANDPIPE / WATER BLOW OFF
POWER / TELEPHONE GUY POLE	AIR VALVE
ANCHOR OR GUY WIRE	GAS VALVE
DEADMAN	SERVICE METER
TELEPHONE POLE	
TELEPHONE GUY POLE	
HIGH TENSION POLE	
HIGH TENSION TOWER	
	UNDERGROUND
	VENT/BREATHING PIPE
	FILLER CAP
	FUEL / GAS PUMP
	FUEL TANK
	SEPTIC TANK
	UNDERGROUND MARKER (MISC)
	ROAD SIGNS
	STANDARD SIGN
	BARRIER MOUNTED DELINEATOR
	RELOCATED OVERHEAD SIGN
	TWO POST SIGN
	TWO POST SIGN (BREAKAWAY)
	STANDARD DAVIT POLE - TYPE 3
	STANDARD COMBINATION POLE - TYPE 1
	HEAVY DUTY DAVIT POLE - TYPE 6
	HEAVY DUTY COMBINATION POLE - TYPE 7
	HEAVY POLE - TYPE H
	HEAVY COMBINATION POLE - TYPE H
	CANTILEVER STRUCTURE
	SIGN BRIDGE STRUCTURE
	PATTERNS
	LEVELLING COURSE
	PAVEMENT REMOVAL
	RIPRAP
	TURF REINFORCEMENT MATTING
	REMOVALS / RELOCATES
	POWER POLE
	TELEPHONE POLE
	HIGHWAY SIGNS
	DETAIL
	GATE POST
	MAILBOX
	POST
	POST MOUNTED DELINEATOR
	FLAGPOLE
	DIRECTIONAL ARROW
	DRAINAGE & UTILITIES
	MANHOLE
	STORM MANHOLE
	STANDARD CATCH BASIN
	VARIABLE DEPTH CATCH BASIN
	SPILLWAY
	HEADWALL
	DRYWELL
	TELEPHONE MANHOLE
	POWER MANHOLE
	SANITARY MANHOLE
	UTILITY MANHOLE
	WATER MANHOLE
	MANHOLE UNKNOWN
	ELECTRICAL
	JUNCTION BOX
	UTILITY VAULT
	LAMP STANDARD
	UTILITY KIOSK
	UTILITY PEDESTAL
	TRAFFIC SIGNAL
	TRAFFIC SIGNAL CONTROLLER
	UNDERGROUND ELECTRICAL TRANSFORMER

LINE TYPES (PROPOSED)

FEATURES
HIGHWAY CONTROL LINE
MINOR CONTROL LINE
CLEARING AND GRUBBING
PAVEMENT EDGE
SHOULDER EDGE
CURB AND GUTTER
RAISED ISLAND
SAWCUT
RUMBLE STRIP
RETAINING WALL
FENCE
TOP OF CUT / BOTTOM OF FILL (TOES)
100mm - YELLOW PAINT LINE (SOLID)
100mm - WHITE PAINT LINE (SOLID)
100mm - CONTINUITY PAINT LINE (BROKEN)
100mm - LANE PAINT LINE (BROKEN)
CONCRETE BARRIER
DITCH CENTER / ADDITIONAL DITCHING
DITCH EDGE
BOUNDARIES
RIGHT OF WAY
TEMPORARY LICENCE TO CONSTRUCT
UTILITIES
OVERHEAD UTILITY
PIPELINE (GAS)
SERVICE LINE (GAS)
UG ELECTRIC
UG COMMUNICATION
STORM SEWER
SUB DRAIN
CULVERT
SANITARY SEWER
WATER MAIN
MISCELLANEOUS UNDERGROUND

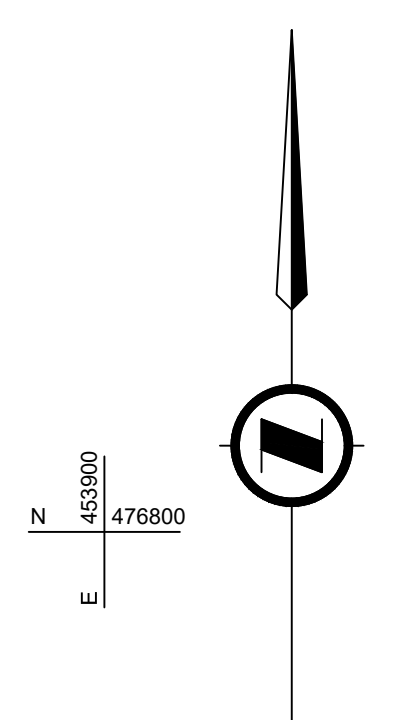
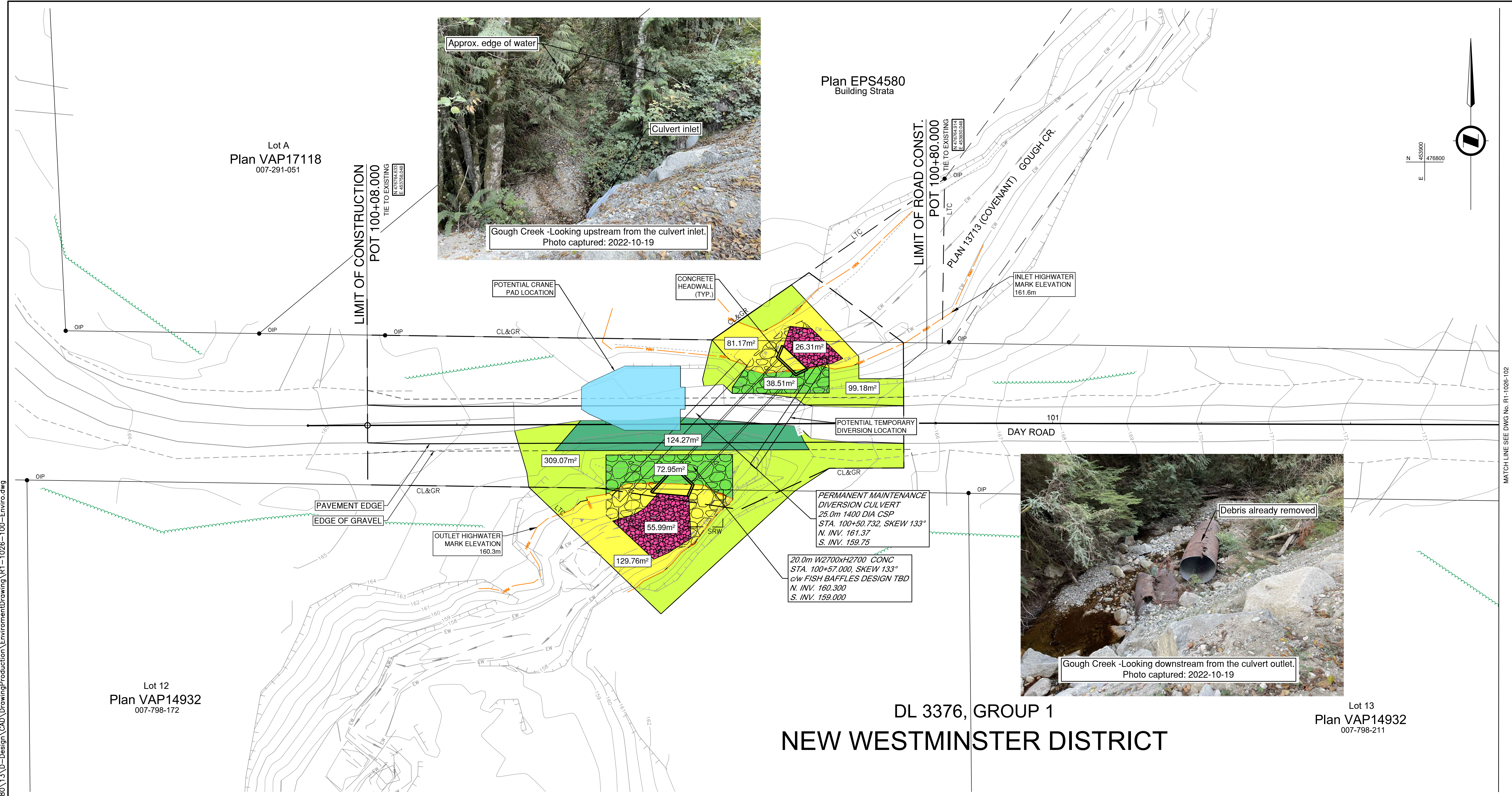
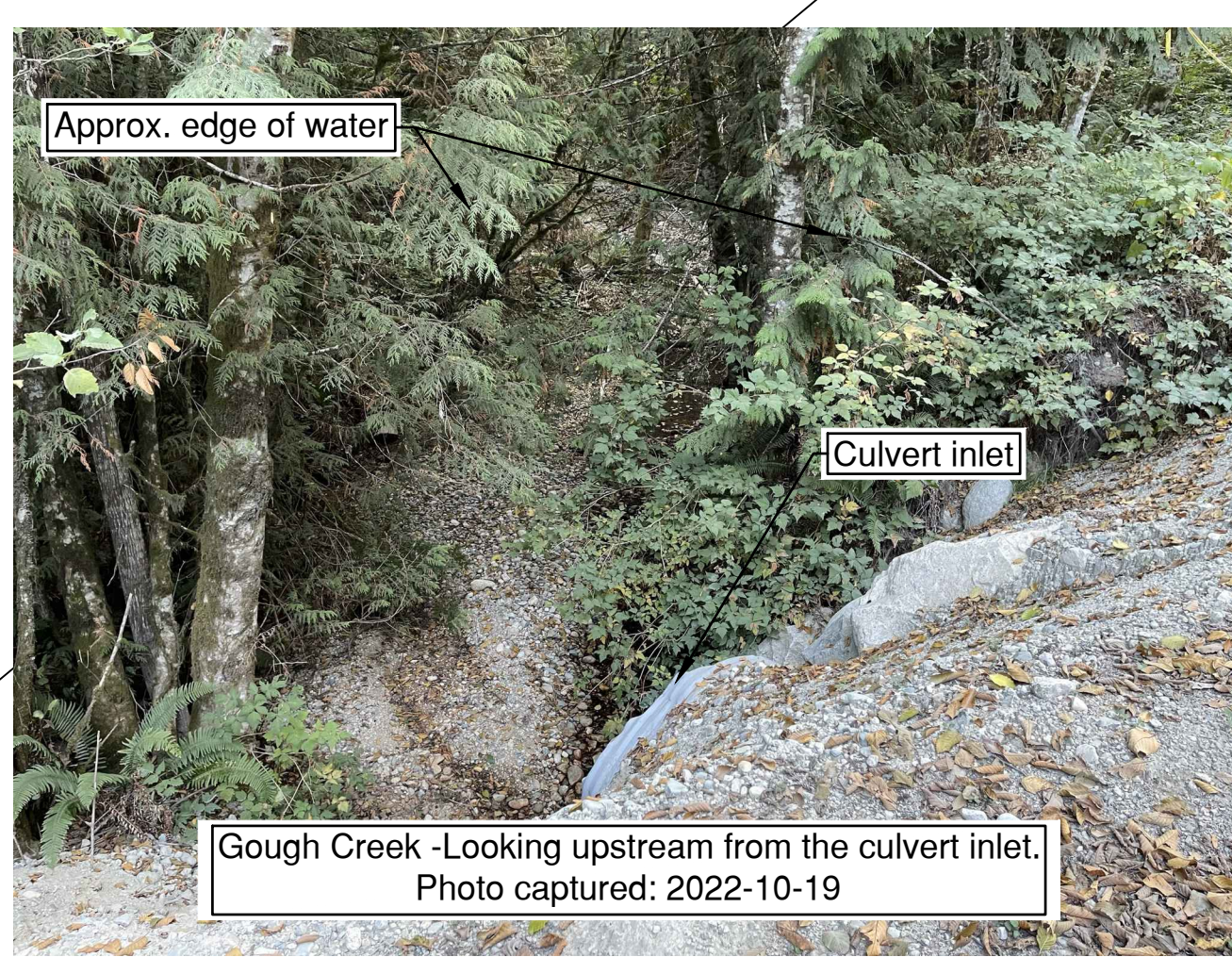
NOTE:
NOT ALL SYMBOLS AND LINE TYPES ILLUSTRATED IN THIS LEGEND ARE UTILIZED IN THE FOLLOWING DESIGN

FOR ENVIRONMENTAL PERMITTING

PLOT DATE: 2023/03/01 U:\Projects_SUR\1961\0480\13\0-Design\CAD\DrawingProduction\Environment\Drawing\R1-1026-000-Enviro.dwg

SCALE		CAD FILENAME: R1-1026-000-ENVIRQ PLOT DATE: 2023-03-01				MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE SOUTH COAST REGION HIGHWAY ENGINEERING AND GEOMATICS		DESIGNED: S.FUGCO DATE: 2022-02-10 QUALITY CONTROL: C.BAGG DATE: 2022-02-10 QUALITY ASSURANCE: J.BORCH DATE: 2022-02-10 DRAWN: S.FUGCO DATE: 2022-02-10		PLAN DAY ROAD DFAA FLOOD DAMAGE	
REV	DATE	REVISIONS	NAME	CODY BAGG, P.ENG. SENIOR DESIGNER		FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV	
						872CS1714	14007	1	R1-1026-002-ENVIRQ		

PLOT DATE: 2023/03/01 U:\Projects_SUR\1961\0480\13\0-Design\CAD\DrawingProduction\Environment\Drawing\R1-1026-100-Enviro.dwg



MATCH LINE SEE DWG No. R1-1026-102

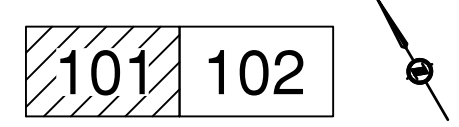
**DL 3376, GROUP 1
NEW WESTMINSTER DISTRICT**

- RETAINED AND ENHANCED INSTREAM AREA = 83 m²
- WORK BELOW HWM = 211 m²
- PERMANENT DISTURBANCE ON WASHED OUT AREAS = 125 m²
- PERMANENT RIPARIAN DISTURBANCE = 112 m²
- TEMPORARY RIPARIAN DISTURBANCE = 409 m²
- TOTAL PROJECT AREA = 2051 m²
- CL & GR TOTAL THIS DWG = 1275 m²

FOR DRAINAGE AND UTILITIES
SEE DWG R1-1026-701 to R1-1026-702

LEGEND

RIPRAP	
CHANNEL BOTTOM - RIPRAP TOP DRESSED WITH FISHERIES GRAVELS	
HIGH WATERMARK	



SCALE 0 2 1:250 12m

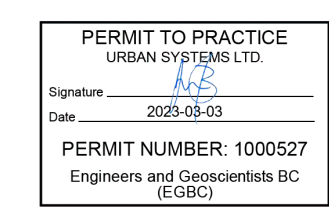
CAD FILENAME R1-1026-100-ENVIRO
PLOT DATE 2023-03-01

REV	DATE	REVISIONS	NAME

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
SOUTH COAST REGION
HIGHWAY ENGINEERING AND GEOMATICS

DESIGNED: S.FUGCO DATE: 2022-02-10
QUALITY CONTROL: C.BAGG DATE: 2022-02-10
QUALITY ASSURANCE: J.BORCH DATE: 2022-02-10
DRAWN: E.PROULX DATE: 2022-02-10

CODY BAGG, P.ENG.
SENIOR DESIGNER



FOR ENVIRONMENTAL PERMITTING

PLAN
DAY ROAD
DFAA FLOOD DAMAGE
STA. 100+08.000 TO 101+60.000

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
872CS1714	14007	1	R1-1026-101-ENVIRO	

DL 3376, GROUP 1 NEW WESTMINSTER DISTRICT



Clack Creek -Looking upstream from the culvert inlet.
Photo captured: 2022-10-19



Clack Creek -Looking downstream from the culvert outlet.
Photo captured: 2022-10-19



- RETAINED AND ENHANCED INSTREAM AREA = 89 m²
- WORK BELOW HWM = 210 m²
- PERMANENT DISTURBANCE ON WASHED OUT AREAS = 95 m²
- PERMANENT RIPARIAN DISTURBANCE = 127 m²
- TEMPORARY RIPARIAN DISTURBANCE = 522 m²
- TOTAL PROJECT AREA = 1409 m²
- CL & GR TOTAL THIS DWG = 1231 m²

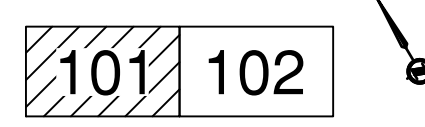
FOR DRAINAGE AND UTILITIES
SEE DWG R1-1026-701 TO R1-1026-702

LEGEND

RIPRAP

CHANNEL BOTTOM - RIPRAP TOP DRESSED WITH FISHERIES GRAVELS

HIGH WATERMARK



SCALE 0 2 1:250 12m

CAD FILENAME R1-1026-100-ENVIRQ
PLOT DATE 2023-03-01

REV	DATE	REVISIONS	NAME

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
SOUTH COAST REGION
HIGHWAY ENGINEERING AND GEOMATICS

DESIGNED: S.FUGCO DATE: 2022-02-10
QUALITY CONTROL: C.BAGG DATE: 2022-02-10
QUALITY ASSURANCE: J.BORCH DATE: 2022-02-10
DRAWN: E.PROULX DATE: 2022-02-10

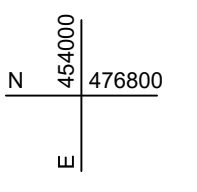
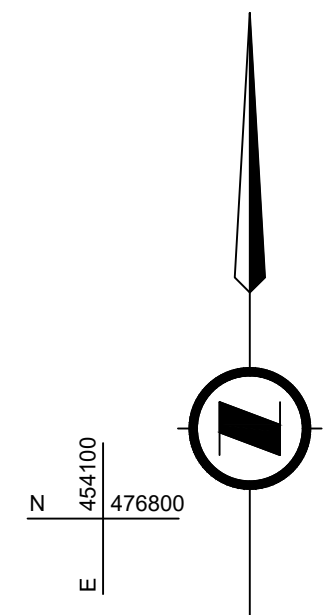
CODY BAGG, P.ENG.
SENIOR DESIGNER

FOR ENVIRONMENTAL PERMITTING

PLAN
DAY ROAD
DFAA FLOOD DAMAGE
STA. 100+08.000 TO 103+30.000

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
872CS1714	14007	1	R1-1026-102-ENVIRQ	

PLOT DATE: 2023/03/01 U:\Projects_SUR\1961\0480\13\0-Design\CAD\DrawingProduction\Environment\Drawing\R1-1026-100-Enviro.dwg

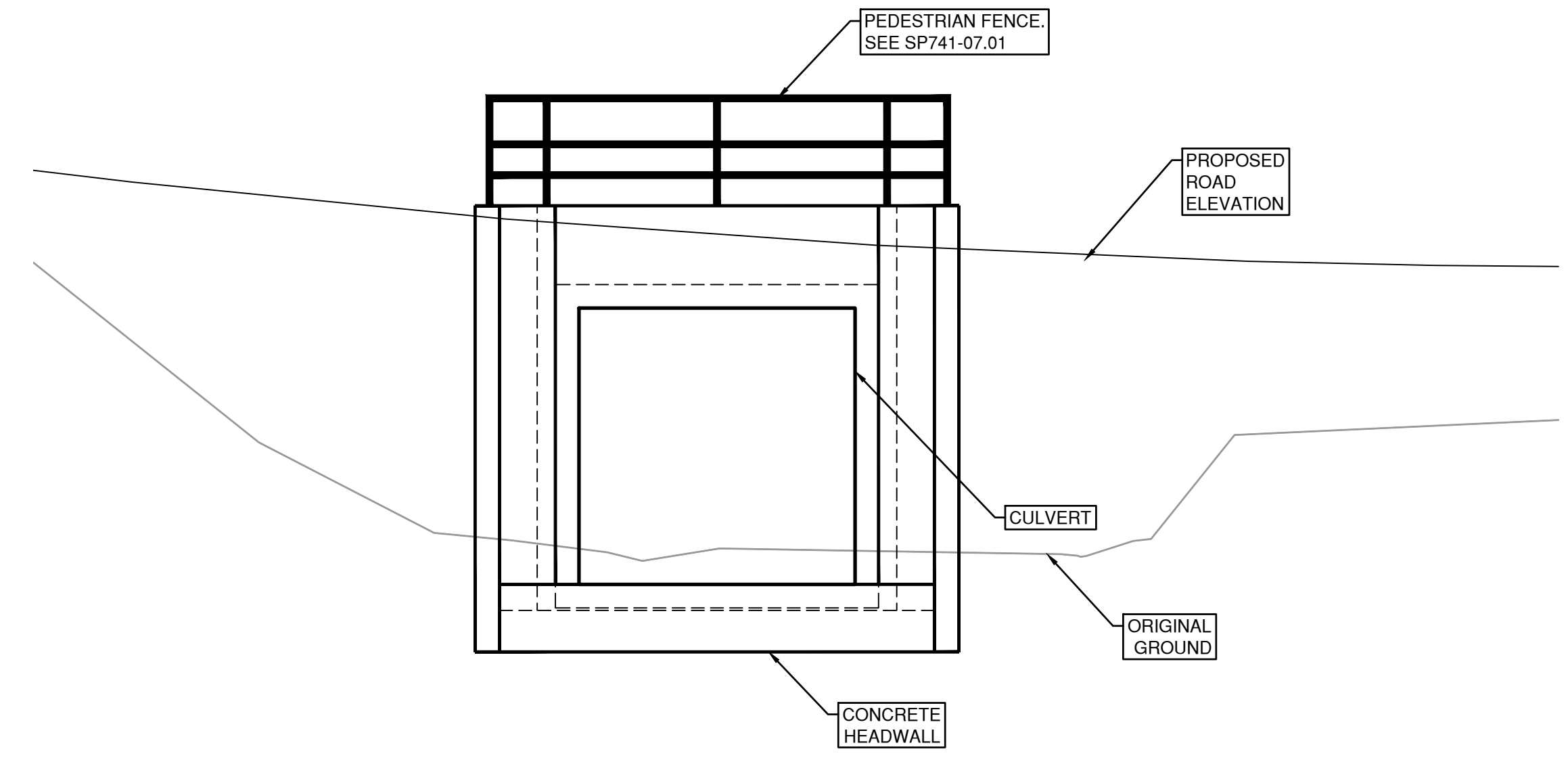
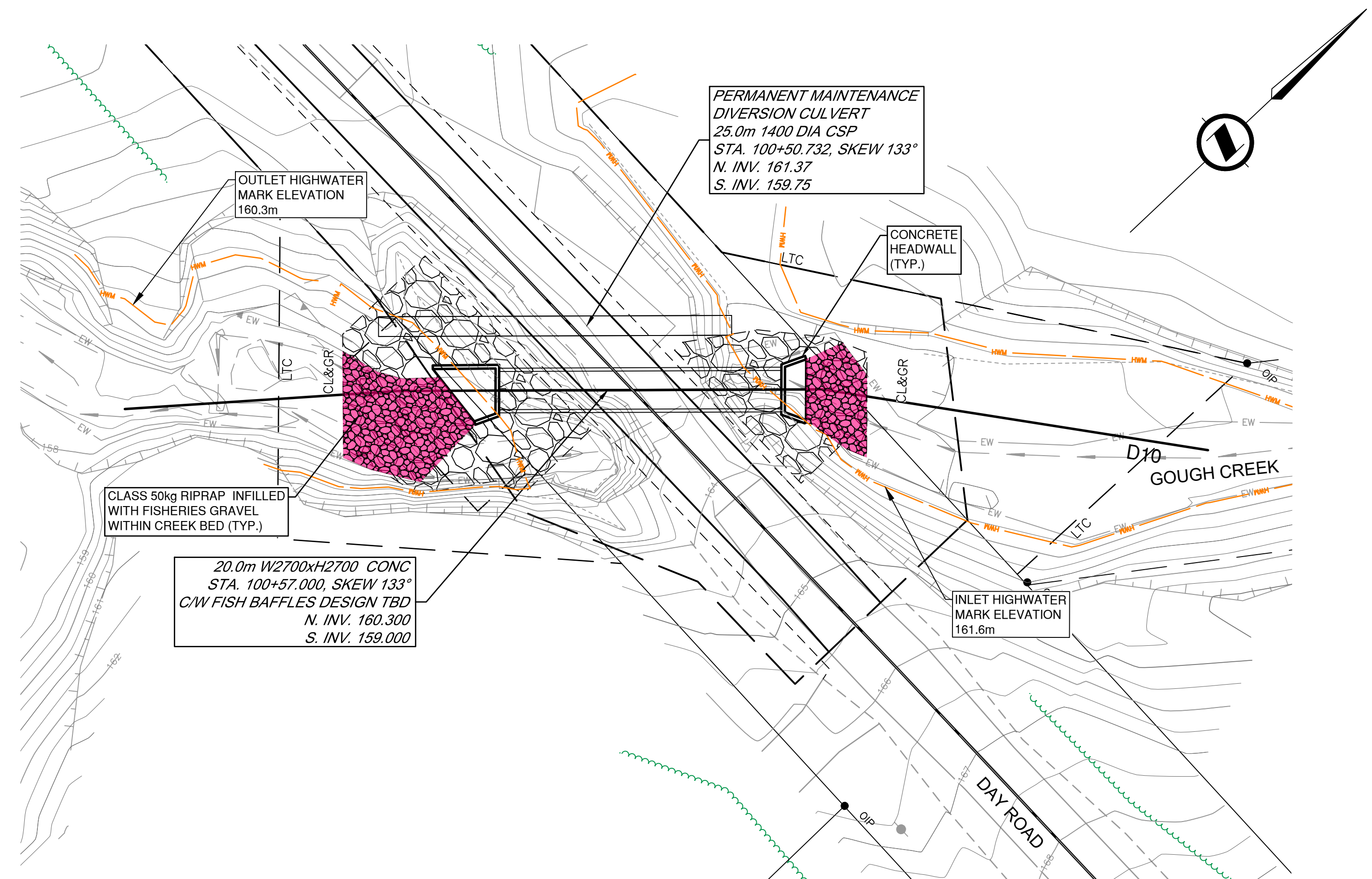


Lot A
Plan VAP17074
007-325-126

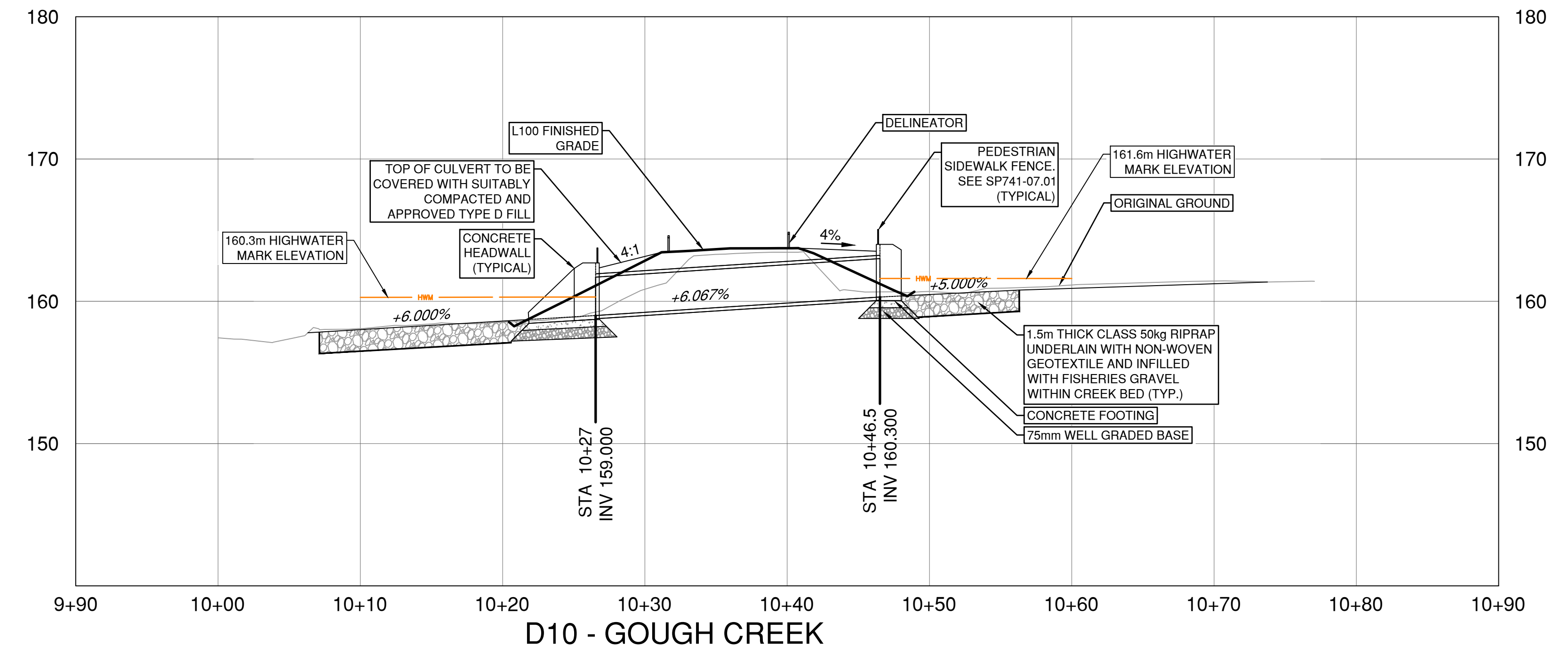
Lot 13
Plan VAP14932
007-798-211

Lot 14
Plan VAP14932
007-798-237

Lot 15
Plan VAP14932
007-798-261



INLET SECTION
0 0.5 1.50 2.5m



LEGEND

RIPRAP	
CHANNEL BOTTOM - RIPRAP TOP DRESSED WITH FISHERIES GRAVELS	
HIGH WATERMARK	



PERMIT TO PRACTICE
URBAN SYSTEMS LTD.
Signature: *[Signature]*
Date: 2023-03-03
PERMIT NUMBER: 1000527
Engineers and Geoscientists BC
(EGBC)



FOR ENVIRONMENTAL PERMITTING

SCALE 0 2 1:250 12m

CAD FILENAME: R1-1026-700-ENVIRQ
PLOT DATE: 2023-03-01

REV	DATE	REVISIONS	NAME

BRITISH COLUMBIA MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
SOUTH COAST REGION
HIGHWAY ENGINEERING AND GEOMATICS

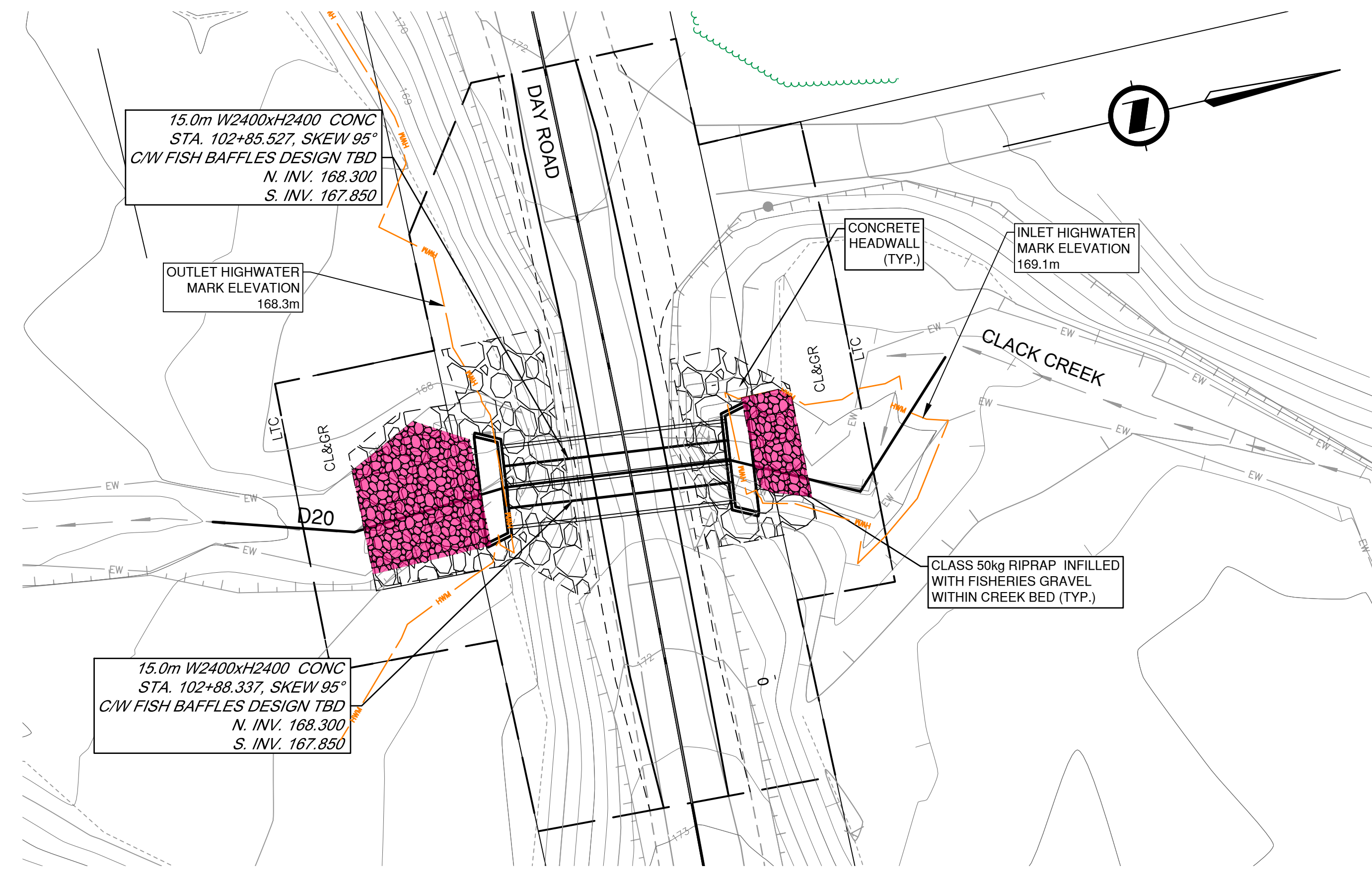
DESIGNED: S.FUGCO DATE: 2022-02-10
QUALITY CONTROL: C.BAGG DATE: 2022-02-10
QUALITY ASSURANCE: J.BORCH DATE: 2022-02-10
DRAWN: E.PROULX DATE: 2022-02-10

CODY BAGG, P.ENG.
SENIOR DESIGNER

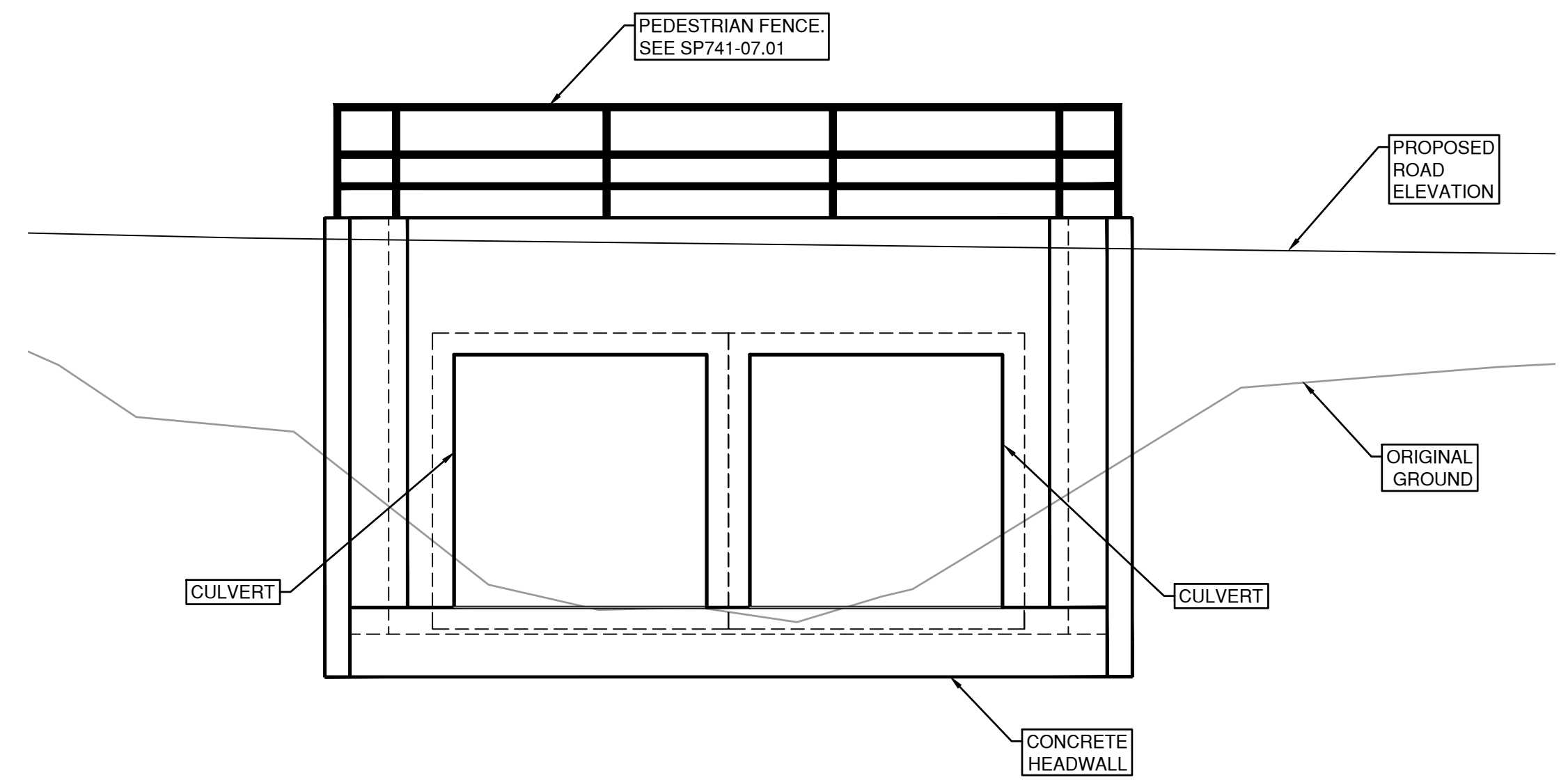
DRAINAGE DETAILS
DAY ROAD
DFAA FLOOD DAMAGE

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
872CS1714	14007	1	R1-1026-701-ENVIRQ	

PLOT DATE: 2023/03/01 U:\Projects_SUR\1961\0480\13\0-Design\CAD\DrawingProduction\Environment\Drawing\R1-1026-700-Enviro.dwg

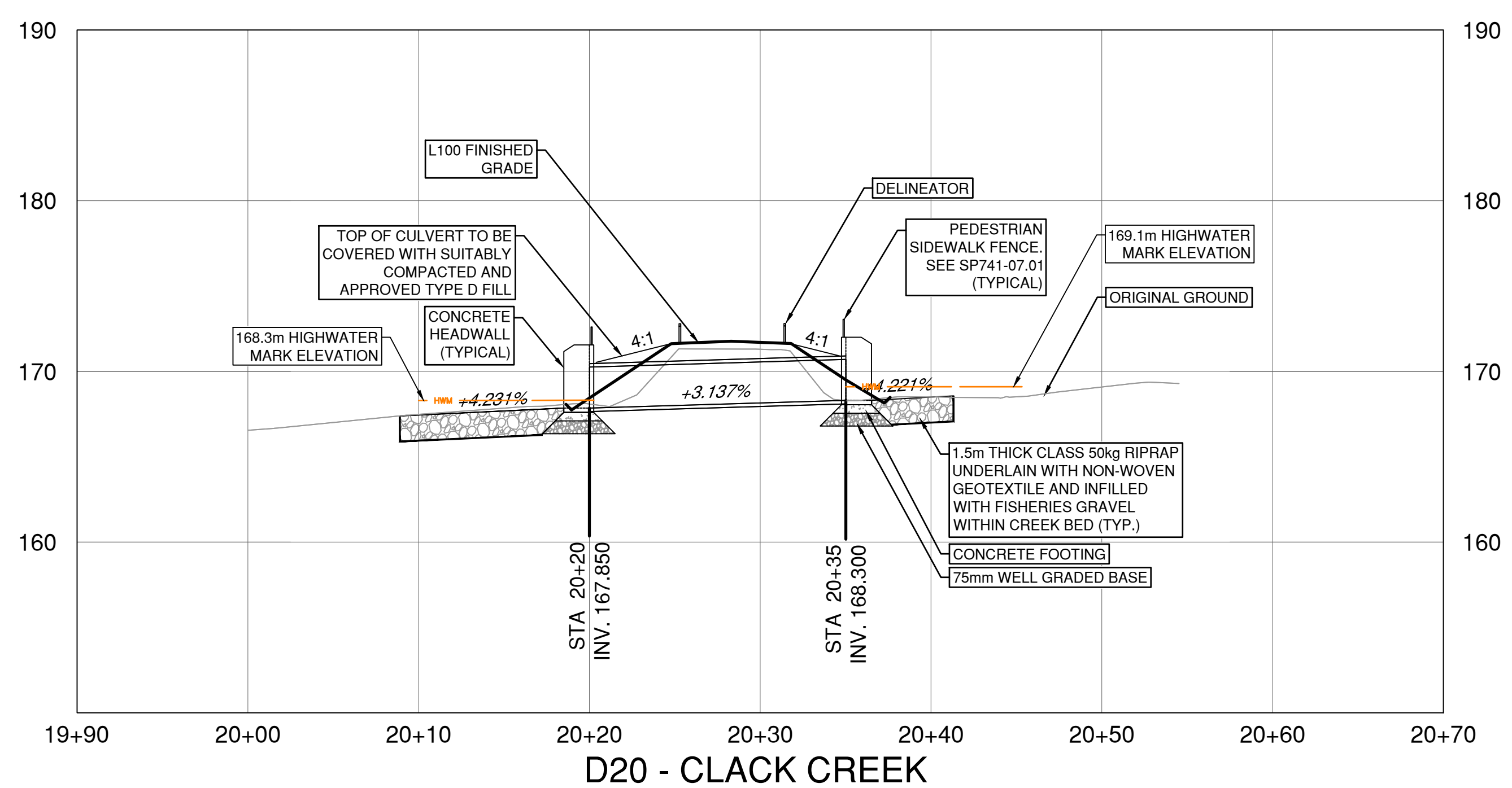


D20 - CLACK CREEK



INLET SECTION

0 0.5 1.50 2.5m



LEGEND

RIPRAP	
CHANNEL BOTTOM - RIPRAP TOP DRESSED WITH FISHERIES GRAVELS	
HIGH WATERMARK	



SCALE 0 2 1:250 12m

CAD FILENAME R1-1026-700-ENVIRQ

PLOT DATE 2023-03-01

REV	DATE	REVISIONS	NAME

BRITISH COLUMBIA

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

SOUTH COAST REGION

HIGHWAY ENGINEERING AND GEOMATICS

2023-03-02

CODY BAGG, P.ENG. SENIOR DESIGNER

DESIGNED S.FUGCO DATE 2022-02-10

QUALITY CONTROL G.BAGG DATE 2022-02-10

QUALITY ASSURANCE J.BORCH DATE 2022-02-10

DRAWN E.PROULX DATE 2022-02-10

PERMIT TO PRACTICE
URBAN SYSTEMS LTD.
Signature:
Date: 2023-03-03
PERMIT NUMBER: 1000527
Engineers and Geoscientists BC (EGBC)



FOR ENVIRONMENTAL PERMITTING

DRAINAGE DETAILS

DAY ROAD

DFAA FLOOD DAMAGE

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
872CS1714	14007	1	R1-1026-702-ENVIRQ	

PLOT DATE: 2023/03/01 U:\Projects_SUR\1961\0480\13\0-Design\CAD\DrawingProduction\Environment\Drawing\R1-1026-700-Enviro.dwg