



CITY OF COQUITLAM

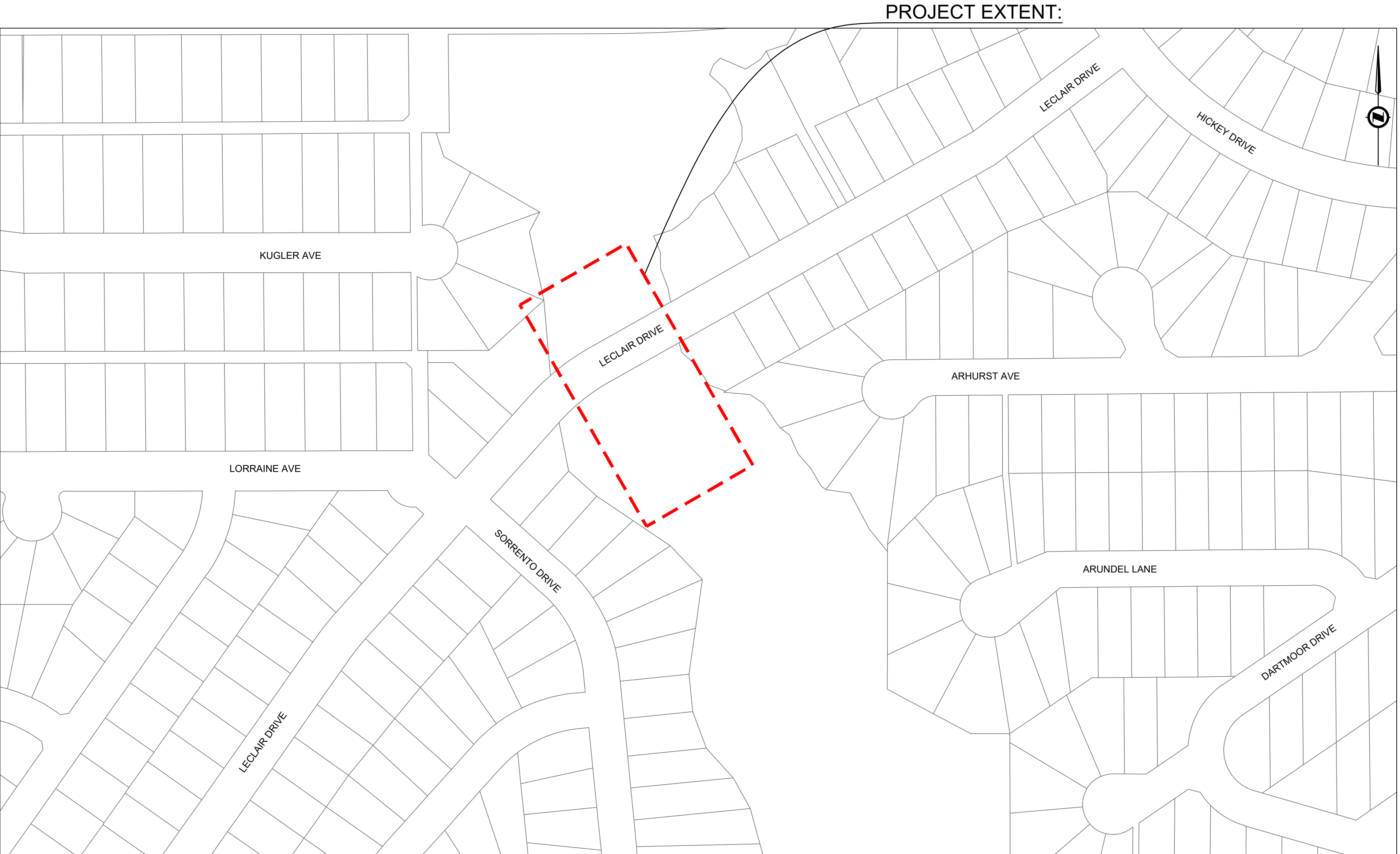
CULVERT REHABILITATION

LECLAIR DRIVE

DRAWING REF: 34136

DRAWING SCHEDULE		
SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
00	LECLAIR DRIVE CULVERT	COVER
01	LECLAIR DRIVE CULVERT	GENERAL NOTES
02	LECLAIR DRIVE CULVERT	CULVERT REHABILITATION

PROJECT SURVEY CONTROL				
NAME	TYPE	EASTING	NORTHING	ELEVATION
C1	CONTROL NAIL	512726.331	5456684.147	103.33



LOCATION PLAN  
NTS

ISSUED: JULY 07, 2025  
ISSUED FOR TENDER

GENERAL NOTES:

1.

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:

- MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (2019);

- MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT AND/OR FEDERAL DEPARTMENT OF FISHERIES AND OCEANS; AND

- WORKSAFEBC, LATEST EDITION

- MINISTRY OF TRANSPORTATION "BC TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS", LATEST EDITION

THE CONTRACTOR SHALL BE FAMILIAR WITH THE ABOVE DOCUMENTS AND SHALL ENSURE THAT ALL SUB CONTRACTORS ARE THOROUGHLY FAMILIAR WITH THE APPLICABLE SECTIONS OF THE DOCUMENTS.
2.

THE LOCATION OF EXISTING UTILITIES IS COMPILED FROM OWNER AND UTILITY SUPPLIED RECORD DRAWINGS AND ARE CONSIDERED APPROXIMATE ONLY. THE EXACT LOCATION AND EXTENT OF UTILITIES SHOULD BE DETERMINED BY CONSULTING THE LOCAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND INVERT ELEVATION BY HAND OR HYDROVAC EXCAVATION BEFORE CONSTRUCTION OF UTILITY CROSSINGS AND SHALL BE RESPONSIBLE FOR RESTORATION OF ANY DAMAGE TO EXISTING UTILITIES. ANY COSTS ASSOCIATED WITH UTILITY CONFLICTS THAT WERE NOT PRELOCATED WILL BE THE CONTRACTOR'S RESPONSIBILITY.
3.

NOTIFY THE CITY OF COQUITLAM 48 HOURS IN ADVANCE OF ANY CONSTRUCTION OR UTILITY RELOCATION.
4.

REPORT ANY DISCREPANCIES TO THE DESIGN ENGINEER A MIN 72 HOURS PRIOR TO CONSTRUCTION.
5.

ALL SURVEY MONUMENTS WITHIN THE PROJECT BOUNDARIES SHALL BE PROTECTED DURING THE COURSE OF THE WORK. SHOULD ANY SURVEY MONUMENT REQUIRE RAISING OR RELOCATION, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEERING AND OPERATIONS DEPARTMENT AT LEAST 72 HOURS IN ADVANCE OF SCHEDULING WORK. ALL DISTURBED MONUMENTS WILL BE REPLACED BY A B.C. LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
6.

SURVEY PINS DISTURBED DURING THE COURSE OF CONSTRUCTION SHALL BE REPLACED BY A B.C. LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
7.

ALL PUBLIC ROADWAYS AFFECTED BY THE WORKS SHALL BE KEPT IN A CLEAN STATE AT ALL TIMES. DUST CONTROL MEASURES SHALL ALSO BE EMPLOYED DURING THE COURSE OF THE WORK.
8.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, AND FOR COORDINATING THE VARIOUS PARTS OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THERE IS NO DISRUPTION TO SERVICE, AND IF DISRUPTION IS ANTICIPATED, TO NOTIFY THE DESIGN ENGINEER A MINIMUM OF 72 HOURS PRIOR, AND OBTAIN APPROVAL FOR THE DISRUPTION.
9.

THE CONTRACTOR SHALL PROVIDE TEMPORARY UTILITY POLE SUPPORTS NECESSARY TO COMPLETE THE WORKS AS AN INCIDENTAL ITEM TO GENERAL CONTRACT REQUIREMENTS WHERE AND AS REQUIRED.
10.

CONTRACTOR TO MAINTAIN AN UP TO DATE SET OF AS-CONSTRUCTED DRAWINGS AT ALL TIMES. AS-CONSTRUCTED DRAWINGS TO BE DELIVERED TO THE ENGINEER AT SUBSTANTIAL PERFORMANCE FOR PREPARATION OF FINAL RECORD DRAWINGS. THE ENGINEER SHALL BE PROVIDED ACCESS TO REVIEW THE AS-CONSTRUCTED DRAWINGS AT ALL TIMES TO CONFIRM THEY ARE UP TO DATE.
11.

THE CONTRACTOR SHALL MAINTAIN THE PROVISIONS FOR EROSION AND SEDIMENT CONTROL.
12.

THE CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING STREETS, SIDEWALKS, WHEELCHAIR LETDOWNS, SERVICES, SIGNS, LANDSCAPING, DRIVEWAY LETDOWNS, PRIVATE LANDSCAPING, OR PRIVATE IMPROVEMENTS THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION. REPAIRS TO EXISTING CITY SERVICES SUCH AS WATER, SANITARY SEWER AND STORM SEWER, SHALL BE MADE BY THE CITY AT COST TO THE CONTRACTOR. REPAIRS TO EXISTING SURFACE WORKS MAY BE DONE BY THE CONTRACTOR AT THE DISCRETION OF THE CITY.
13.

RESTORATION OF EXISTING ROADWAYS, DRIVEWAYS, CURBS, STAIRS AND WALKWAYS TO CONFORM TO CITY SPECIFICATIONS AND BE INCIDENTAL TO THE UNIT PRICES IN THE CONTRACT. PROTECTION OF EXISTING UTILITIES, SHRUBS AND TREES TO BE INCIDENTAL TO THE UNIT PRICES IN THE CONTRACT.
14.

SURVEY IS BASED UPON NAD83 UTM GROUND COORDINATES. SURVEY BASED ON LOCAL VERTICAL DATUM
15.

THE CONTRACTOR SHALL PROVIDE TEMPORARY HOT MIX ASPHALT PATCHING TO CITY REQUIREMENTS AT ALL NECESSARY LOCATIONS. USE OF COLD MIX IS NOT ACCEPTABLE. TEMPORARY PATCHING OF SIDEWALKS AND CURBS AND GUTTERS IS ALSO TO BE MADE WITH HOT MIX AND MEET THE EXISTING SURFACE.
16.

FIGURED DIMENSIONS WILL GOVERN OVER SCALED DIMENSIONS.
17.

ALL TESTING OF MATERIAL AND COMPACTION SHALL BE PERFORMED BY A CERTIFIED TESTING AGENCY UNDER THE DIRECTION OF THE CONTRACT ADMINISTRATOR OR APPROVED REPRESENTATIVE. COPIES OF THE TESTING REPORT SHALL BE SUBMITTED TO THE CITY AND THE CONTRACT ADMINISTRATOR AS SOON AS IN RECEIPT.
18.

ALL SHOP DRAWINGS SHALL BE REVIEWED BY ISL ENGINEERING AND LAND SERVICES LTD. PRIOR TO FABRICATION.

TRAFFIC MANAGEMENT, NOTIFICATION AND APPROVALS NOTES:

1.

THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SIGNAGE, BARRIERS, FLASHING INDICATORS, ETC. AT ALL TIMES TO ENSURE THE SAFETY OF THE PUBLIC. TRAFFIC CONTROL WILL BE REQUIRED FOR ALL CONSTRUCTION WORKS WITHIN THE TRAVELED PORTION OF THE ROAD. NO ROAD SHALL BE CLOSED WITHOUT THE WRITTEN CONSENT OF THE CITY.
2.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL EXCAVATED MATERIAL UNSUITABLE FOR REUSE AT A SUITABLE OFF-SITE DISPOSAL AREA, IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
3.

THE CONTRACTOR SHALL ENSURE THAT ALL APPROVALS REQUIRED FOR THE PROPOSED WORKS HAVE BEEN OBTAINED FROM ALL AUTHORITIES AND AGENCIES PRIOR TO COMMENCING THE WORK.
4.

THE CONTRACTOR SHALL ARRANGE FOR, AND COORDINATE THE WORKS DONE BY:

CITY OF COQUITLAM; AND

FRANCHISE UTILITIES (BC HYDRO, FORTIS GAS, BC TRANSMISSION CORP., SHAW CABLE, TELUS AND METRO VANCOUVER).
5.

THE CONTRACTOR SHALL CONTACT THE APPROPRIATE PERSONNEL AT LEAST 72 HOURS PRIOR TO THE WORK. SCHEDULING AND OTHER CONSTRUCTION CONSTRAINTS IMPOSED BY THESE WORKS SHALL BE TAKEN INTO ACCOUNT.
6.

A TRAFFIC AND PEDESTRIAN SAFETY CONTROL PLAN SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO THE PRE-CONSTRUCTION MEETING.
7.

APPROVALS FOR REQUIRED TREE CUTTING OR TRIMMING NOT INDICATED IN CONTRACT DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR FROM THE CITY PRIOR TO WORK BEING PERFORMED.
8.

CONTRACTOR TO OBTAIN APPROVED LANE CLOSURE REQUEST FORM FOR ALL WORKS. APPROVED REQUESTS ARE CIRCULATED TO ALL EMERGENCY SERVICES.
9.

CONTRACTOR TO SUBMIT A TRAFFIC MANAGEMENT PLAN WITH LANE CLOSURE REQUEST FOR ALL MAJOR ROADS AND ANY LOCAL ROADS WHICH REQUIRE ANY DETOURS.
10.

APPROVAL OF NOISE VARIANCE FOR ALL WORK OUTSIDE OF NORMAL APPROVED WORK HOURS IS REQUIRED BY THE CITY.
11.

NOTICE OF CONSTRUCTION SIGNS TO BE INSTALLED AT ALL PROJECT LIMITS AND PREFERRED DETOUR ROUTE. NOTIFY CONTRACT ADMINISTRATOR WITH CONSTRUCTION SCHEDULE AND LOCATIONS.

**CONSTRUCTION NOTE:**  
UTILITY SERVICES TO INDIVIDUAL LOTS, CATCH BASIN LEADS, STREET LIGHT CONDUIT AND TRAFFIC SIGNAL CONDUIT ARE NOT ALWAYS SHOWN ON THE DRAWINGS FOR THE PURPOSE OF CLARITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION. ANY COSTS ASSOCIATED WITH UTILITY CONFLICTS OR DAMAGE CAUSED TO UTILITIES THAT WERE NOT PRELOCATED PRIOR TO CONSTRUCTION WILL BE THE CONTRACTORS RESPONSIBILITY.

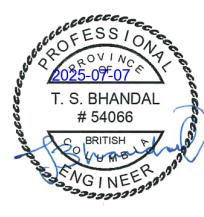
PLOT DATE: July 7, 2025

REV NO	REVISIONS	DATE	DRAWN	APPRD
A	PRELIMINARY DESIGN	2025/03/07	VM	TSB
B	ISSUED FOR TENDER	2025/07/07	VM	TSB



STORM  
CULVERT

LECLAIR DRIVE CULVERT  
GENERAL NOTES



#503, 4190 Loughheed Hwy, Burnaby, B.C. V5C 6A8  
T: (604)620-2098 F: (604)620-2098

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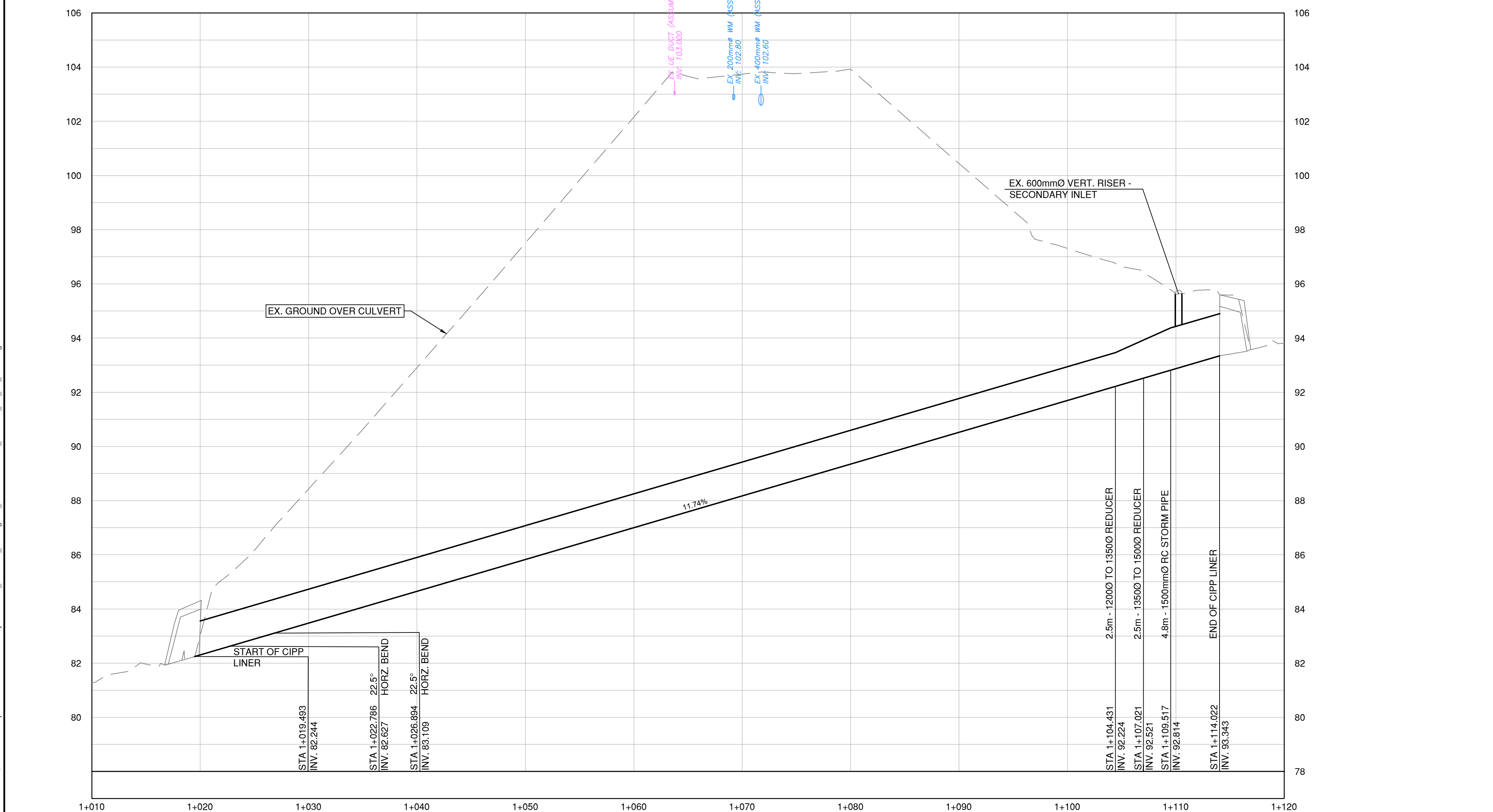
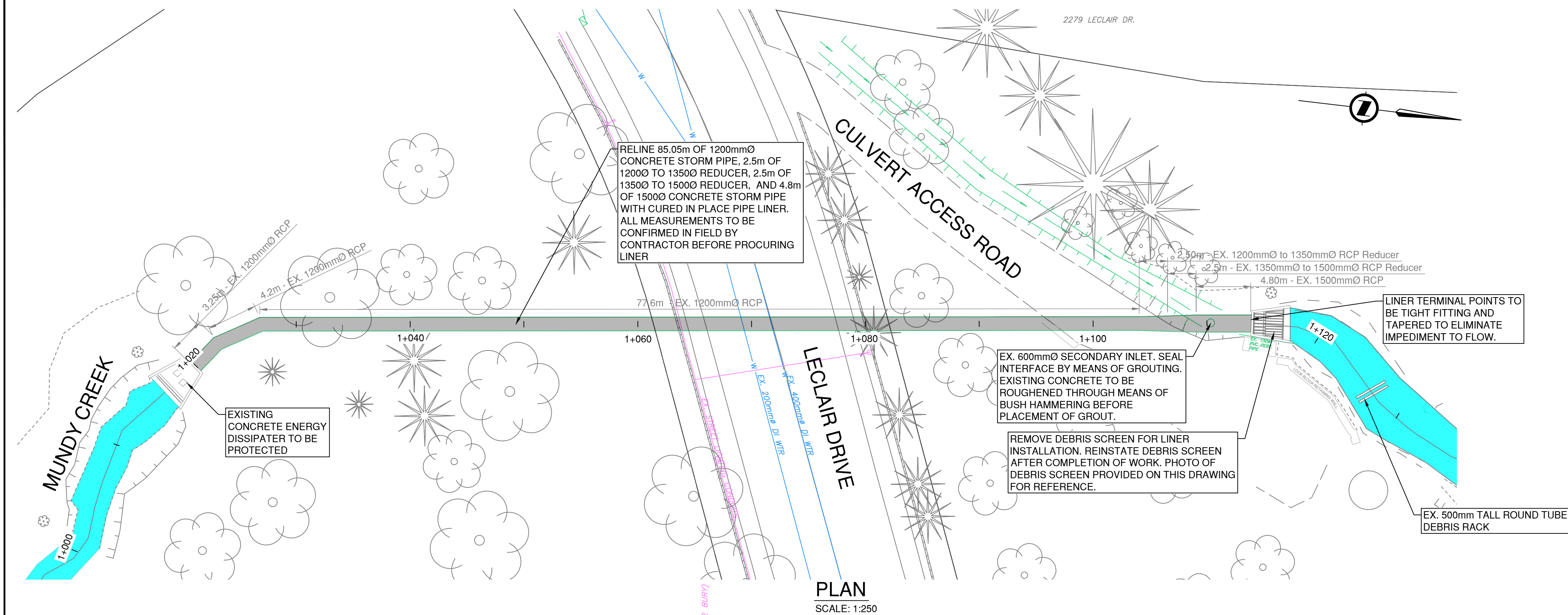
DESIGN NO.

34136

SCALE	CREATION DATE	MAR 7, 2025	DWG. NO.
DRAWN BY VM	DESIGN BY VM		01 OF 02
CHECKED BY TSB	APPROVED BY TSB		REV. B



File: C:\Users\mamd\OneDrive\Documents\34136 COQ Leclair and Cape Hen Culvert Rehab\Project Files\02\_CADD\20\_Drafting\202\_CADD\20\_Drafting\202\_Production\34136\_LECLAIR\_SH\_PL\_UTIL.dwg



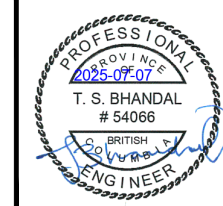
PROFILE  
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STORM  
CULVERT

LECLAIR DRIVE CULVERT  
CULVERT REHABILITATION



SCALE	AS SHOWN	CREATION DATE	MAR 7, 2025	DWG. NO.
DRAWN BY	VM	DESIGN BY	VM	02
CHECKED BY	TSB	APPROVED BY	TSB	02
PLOT DATE	July 7, 2025			REV. B

#### NOTES

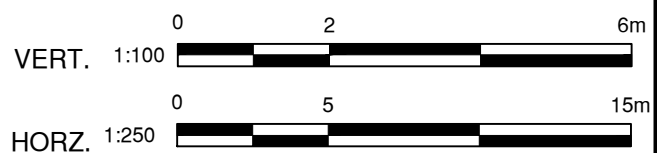
- REFER TO COVER SHEET FOR SURVEY CONTROL.
- REFER TO SHEET 01 FOR GENERAL NOTES.

ADJACENT ADDRESS	LECLAIR DRIVE, COQUITLAM
CCTV BY	CITY OF COQUITLAM
CCTV DATE	AUGUST 17, 2021
CCTV REPORTS	NA
CCTV FOOTAGE	STCV17926-28904 - LECLAIR DRIVE
FLOW CONTROL DURING CCTV INSPECTION	NOT CONTROLLED
RECORD DRAWINGS	D-784-A
UPSTREAM ASSET/ TYPE/ RIM TO INVERT DEPTH	HEADWALL WITH DEBRIS SCREEN
DOWNSTREAM ASSET/ TYPE/ RIM TO INVERT DEPTH	HEADWALL WITH ENERGY DISSIPATERS
PIPE DIAMETER AND MATERIAL	4.8m OF 1500mm RC PIPE, 2.5m OF 1500X1350mm REDUCER, 2.5m OF 1350X1200mm REDUCER, 85.05m OF 1200mm RC PIPE. TO BE CONFIRMED IN FIELD BY CONTRACTOR.
PIPE LENGTH BETWEEN HEADWALLS	±94.85m HEADWALL TO HEADWALL
PIPE CONDITION	FULLY DETERIORATED
GROUNDWATER TABLE	GROUNDWATER HEIGHT UP TO GROUND SURFACE ELEVATION ABOVE PIPE
SOIL DENSITY	2350kg/m <sup>3</sup>
MODULUS OF SOIL REACTION	6.90 MPa
LIVE LOAD REQUIREMENTS	AASHTO HS-20
FACTOR OF SAFETY	2
DESIGN LIFE	50 YEARS
LINER TYPE	FIBRE REINFORCED LINER
SERVICES	600mm INLET AT 12'o CLOCK - 3.5m FROM INLET
POINT REPAIR LOCATION	REBAR PROTRUDING FROM INVERT AT 48.2m FROM UPSTREAM REBAR PROTRUDING FROM INVERT AT 58m FROM UPSTREAM 4 - REBARS PROTRUDING FROM INVERT AT 65m FROM UPSTREAM REBAR PROTRUDING FROM INVERT AT 71.4m FROM UPSTREAM
PREPARATION (BEFORE REHABILITATION)	FLUSH EXISTING CULVERT - CLEAR ENCRUSTATION AND DEPOSITS
OVALITY OBSERVATIONS	REFER TO CCTV FOOTAGE

DESIGN METHOD SHALL BE IN ACCORDANCE WITH ASTM F1216 - APPENDIX X1. THIRD PARTY TESTING REQUIRED TO SUBSTANTIATE FLEXURAL MODULI USED IN DESIGN. WHERE LONG TERM VALUES ARE NOT AVAILABLE IN ACCORDANCE WITH ASTM D2990, REFER TO MMCD SECTION 33 05 24, PARAGRAPH 3.2.7.



PHOTO 1: EXISTING DEBRIS SCREEN



ISSUED FOR TENDER

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