

GENERAL NOTES

- THE DESIGN CODE: CANADIAN HIGHWAY BRIDGE DESIGN (CHBDC) CAN/CSA S6-19 AND MTO STRUCTURAL MANUAL (2021)
- LIVE LOAD: CHBDC, CL-625-ONT
- UNIT WEIGHT OF BACKFILL=22.8kN/M³
- CLASS OF CONCRETE:35 MPa
- UNLESS OTHERWISE NOTED.
- REINFORCING STEEL:
 - ALL REINFORCING STEEL SHALL BE GRADE 400 (OPSS 905), UNLESS NOTED OTHERWISE.
- NO CONCRETE SHALL BE PLACED FOR ANY FOOTING UNTIL THE DEPTH OF THE EXCAVATION AND THE CHARACTER OF THE FOUNDATION HAVE BEEN INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER APPOINTED BY THE QUALITY VERIFICATION ENGINEER (QVE)
- BEARING CAPACITY FOR UNDISTURBED SOIL UNDER FOOTINGS:
 - a. SLS=250 kPa (MIN.)
 - b. ULS=300 kPa (MIN.)
- SOIL BEARING RESISTANCE UNDER FOOTINGS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. IF THE BEARING RESISTANCES ABOVE ARE NOT CONFIRMED, FOUNDATION DETAILS SHALL BE ADJUSTED ACCORDING TO SITE CONDITIONS.
- NO CONCRETE SHALL BE PLACED IN FOOTINGS UNTIL THE GEOTECHNICAL ENGINEER HAS INSPECTED AND APPROVED THE FOUNDING ELEVATION
- ANY POSSIBLE ANOMALIES OF THE SOIL THAT MAY EXIST AT THE FOUNDING ELEVATION SHALL BE REMOVED AND BACKFILLED WITH UNSHRINKABLE FILL TO THE UNDERSIDE OF THE FOOTING.
- BACKFILL MATERIAL SHALL BE GRANULAR "A" OR "B" TYPE II (OPSS 1010), SELECTED AND PLACED IN ACCORDANCE WITH THE SPECIFICATIONS, AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
- ALL FOOTINGS SHALL BE PROTECTED FROM FROST ACTION DURING CONSTRUCTION.
- PRECAST CONCRETE CULVERT DESIGN BY SUPPLIER FOR THE SPECIFIED LOADS AND OVERHEAD FILL.
- THE CONTRACTOR SHALL DESIGN AND CONSTRUCT THE PRECAST CONCRETE CULVERT SEGMENTS AND NORTH HEAD WALL BASED ON THE CONDITIONS SPECIFIED ON THE CONTRACT DOCUMENTS. THE DESIGN WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

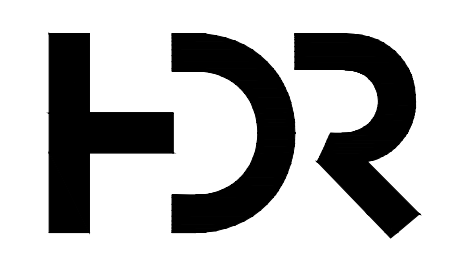
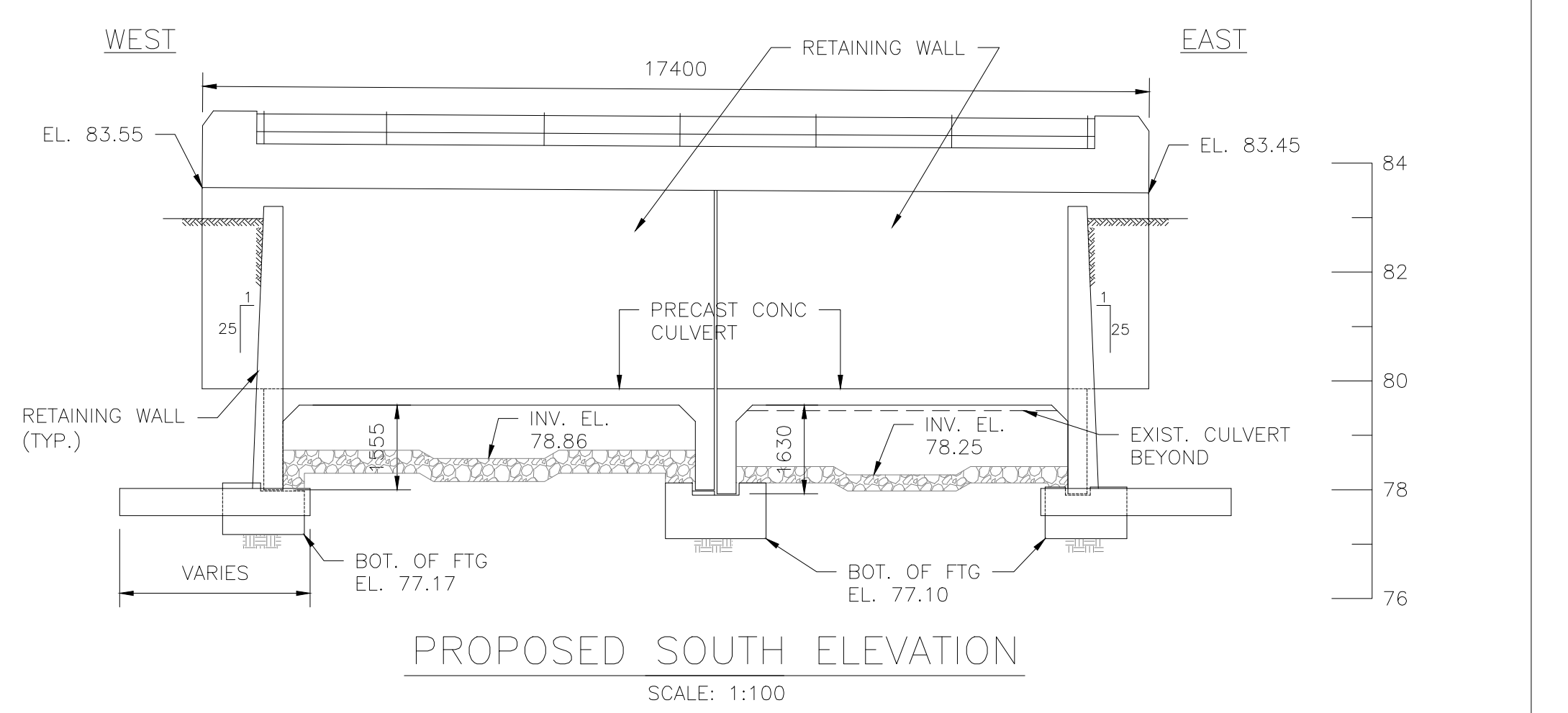
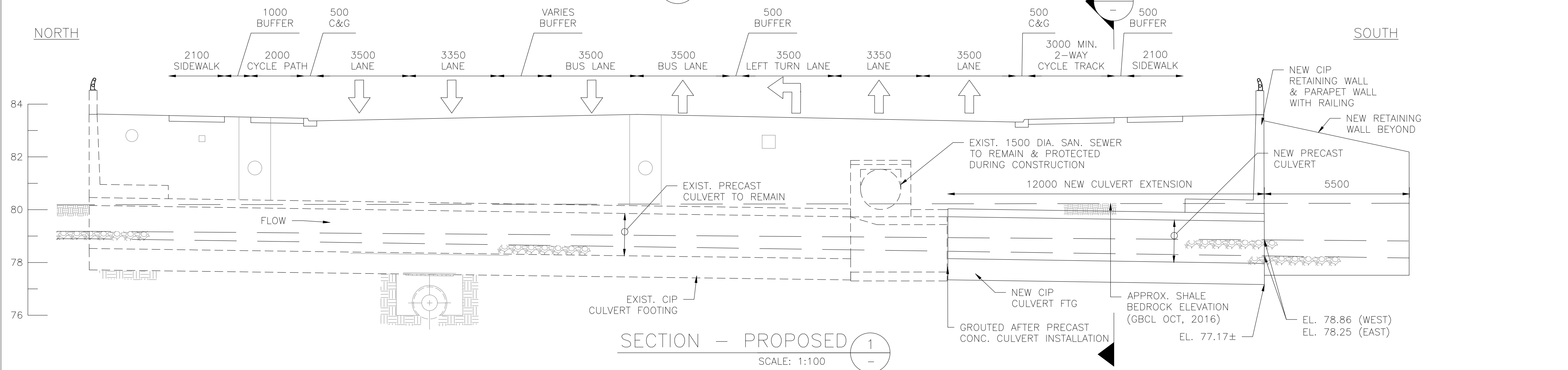
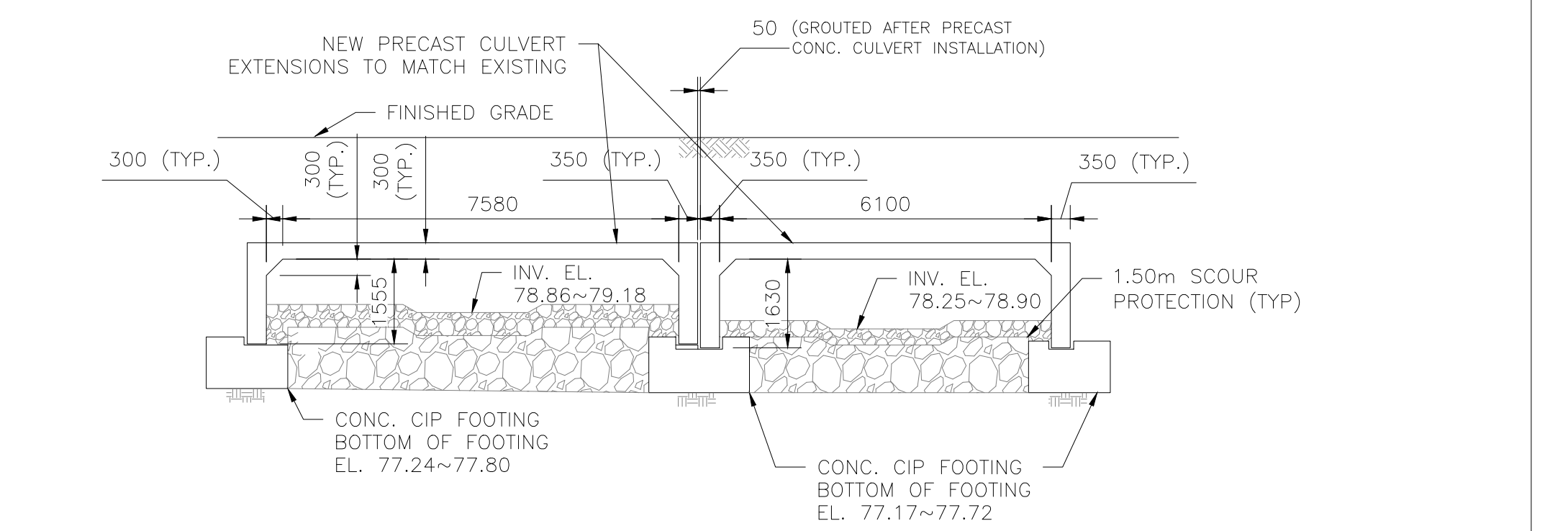
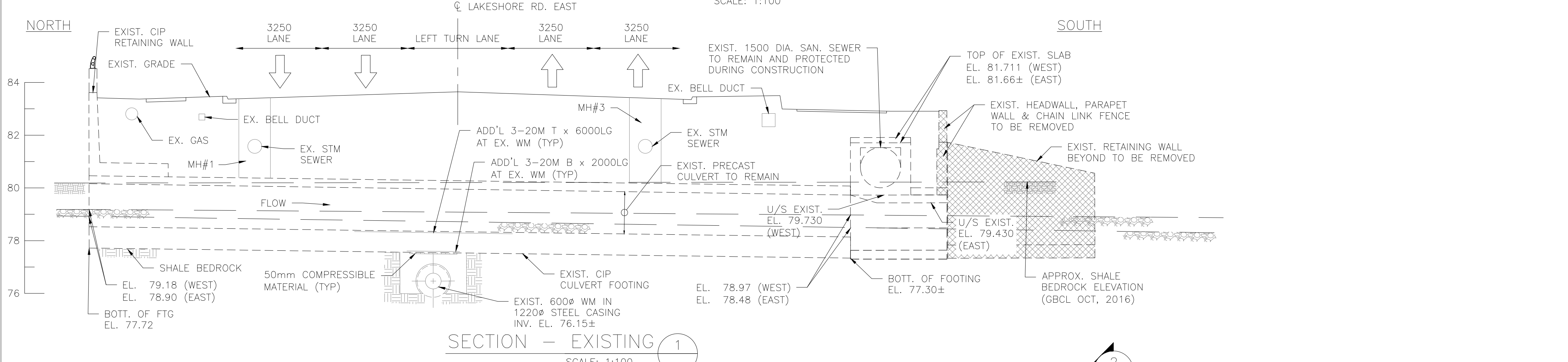
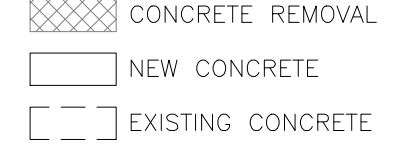
CONSTRUCTION NOTES

- ALL EXPOSED CONCRETE EDGES SHALL HAVE 25mm CHAMFER, UNLESS NOTED
- REINFORCING STEEL SUPPORTS SHALL BE AS PER OPSD 3329.100 AND OPSD 3329.101 ON FORMED SURFACES. ON NON-FORMED SURFACES, CONCRETE BLOCKS (MIN. 20MPa) SHALL BE USED.
- REFER TO OPSD - 3950.100 FOR JOINTS, CONCRETE EXPANSION AND CONSTRUCTION, OR STRUCTURE
- THE LOCATION OF ANY EXISTING SERVICES SHALL BE EXPOSED AND VERIFIED. THE ENGINEER SHALL BE NOTIFIED OF ANY CONFLICTS BETWEEN EXISTING OR PROPOSED SERVICES AND THE PROPOSED STRUCTURES. EXISTING UTILITIES SHALL BE SUPPORTED AND PROTECTED DURING CONSTRUCTION
- SEDIMENT AND EROSION CONTROL MEASURES WILL BE IMPLEMENTED PRIOR TO AND DURING CONSTRUCTION PHASES, TO PREVENT THE ENTRY OF SEDIMENT OR DEBRIS INTO THE CHANNEL.
- BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND THE CULVERT LEGS KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BE GREATER THAN 500mm
- THE CONTRACTOR TO PROVIDE TEMPORARY WORKS DURING THE STAGING CONSTRUCTION AT WHERE REQUIRED
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURES ON SITE AGAINST THE PROPOSED WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE THE START OF CONSTRUCTION.
- ANY CROSSING THROUGH THE WATERCOURSE IS PROHIBITED.
- ALL CAST IN PLACE CONCRETE SHOULD BE TOTALLY ISOLATED FROM FLOWING WATER FOR A MINIMUM 48 HOURS PERIOD TO ALLOW THE pH TO REACH NEUTRAL LEVELS BEFORE CONTINUING INSTREAM WORK. WATER FROM THE CONTAINMENT AREA MUST BE PRE-TREATED PRIOR TO DISCHARGE INTO ANY WATERCOURSE.
- ALL CONCRETE FORMS USED IN AND AROUND WATERCOURSES SHALL BE TIGHT FITTING TO PREVENT CONCRETE FROM CONTAMINATING THE WATERCOURSE OR SOILS.
- WATER REMOVED FROM THE WORK AREA DURING CONSTRUCTION WORK SHALL BE DISCHARGED A MINIMUM OF 15 METERS FROM THE NEAREST WATER FEATURE OR INTO A SUITABLE APPROVED FILTERING MECHANISM OR SEDIMENT CONTROL DEVICE, AS PER CONTRACT SPECIFICATIONS FOR WATERCOURSE PROTECTION

CONCRETE REPAIR NOTES

- BEFORE PLACEMENT OF NEW CULVERT, THE EXISTING CULVERT TO BE INSPECTED AND ANY POSSIBLE CRACKS TO BE REPAIRED WITH FORMED CONCRETE PATCHES
- ALL EXISTING REINFORCING TO REMAIN.
- WHERE REINFORCING STEEL IS EXPOSED, CONCRETE IS TO BE REMOVED TO A MINIMUM DEPTH OF 25mm BEHIND FIRST LAYER OF REINFORCING STEEL.
- AFTER REMOVAL OF UNSOUND CONCRETE, REMAINING CRACKS TO BE CHIPPED TO FORM A CHASE OF MINIMUM 75mm DEPTH AND 100mm WIDTH.
- DURING REPAIRS/RECONSTRUCTION TO THE EXISTING CULVERT, DEBRIS SHALL BE PROHIBITED FROM ENTERING THE WATERCOURSE.

LEGEND



LAKESHORE ROAD (PART A)
 (EAST AVE W TO ETOBICOKE CREEK)
 CULVERT EXTENSION
 GENERAL ARRANGEMENT
 APPLEWOOD CREEK CULVERT

PLAN NO.	S-01
SCALE	1:100
DATE	APR 2022