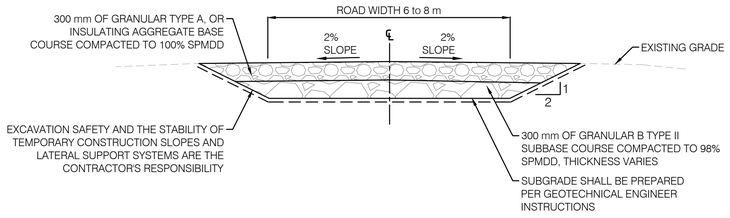
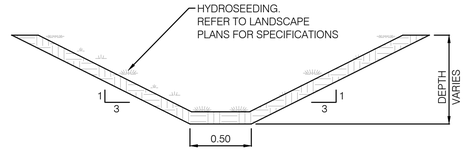


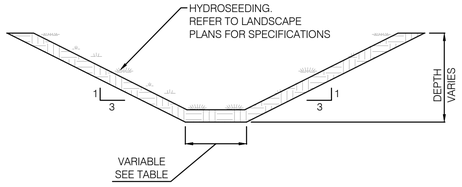
TYPICAL ROAD SECTION IN FILL - FOR MAIN ACCESS TO THE SITE
SCALE: N.T.S.



TYPICAL ROAD SECTION IN CUT - FOR MAIN ACCESS ROAD TO THE SITE
SCALE: N.T.S.



TYPICAL SECTION - POND OUTLET DITCH
SCALE: N.T.S.

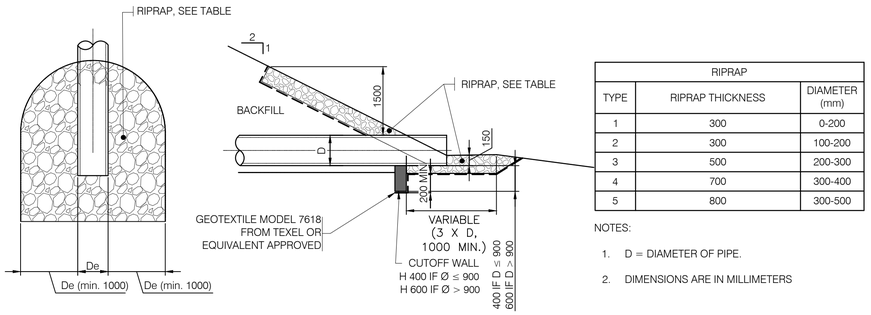


TYPICAL SECTION - REALIGNED WATERCOURSE
SCALE: N.T.S.

STATIONS	WIDTH
0+000 @ 0+539	2 m
0+539 @ 0+600	3 m

NOTES:

1. PROJECT COORDINATES ARE SET IN NAD83 (CSRS) MTM ZONE 9 PROJECTION.
2. COORDINATES ARE IN METERS AND ELEVATIONS ARE GEODETIC AND IN METERS.
3. THE DEVELOPER SHALL EMPLOY A PROFESSIONAL GEOTECHNICAL ENGINEER WITH EXPERIENCE IN IN-SITU COMPACTION AND DENSITY TESTING DURING THE PREPARATION OF THE SUB-GRADE AND CONSTRUCTION OF THE ROAD STRUCTURE TO VERIFY THE ADEQUACY OF THE PROPOSED AND EXISTING ROAD STRUCTURE AND SUB-GRADE.
4. PREPARATION AND CONSTRUCTION OF THE PROPOSED ACCESS ROAD INCLUDING MATERIAL TYPE, THICKNESSES AND COMPACTION EFFORTS SHALL BE COMPLETED IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS PROVIDED BY HATCH IN THE REPORT "SOUTH MARCH ROAD BATTERY ENERGY STORAGE SYSTEM (BESS) PRELIMINARY GEOTECHNICAL INVESTIGATION", PROJECT #H375142-0000-2A0-230-0001, REV.A, DATED FEBRUARY 28, 2025.
5. PROPOSED MANHOLES WITHIN THE ROAD ALLOWANCE MUST BE ADJUSTED TO SUIT THE PROPOSED FINISHED GRADE.
6. ALL LOOSE, ORGANIC, DELETERIOUS MATERIALS, OR SOFT SPOTS MUST BE EXCAVATED AND REMOVED FROM THE ROADWAY AND UTILITY TRENCHES WITHIN THE ROADWAY. THESE AREAS SHALL BE REPLACED WITH ADEQUATE ENGINEERED FILL IN ACCORDANCE WITH THE GEOTECHNICAL CONSULTANT'S REPORT OR AS DIRECTED BY THE CITY.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXPOSE AND CONFIRM THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES, AND ADVISE THE ENGINEER OF ANY POTENTIAL CONFLICTS. EXISTING UTILITIES SHOWN ARE BASED ON SURVEY PROVIDED BY TULLOCH GEOMATICS INC., "241451-FITZROY_BESS-MTM9-REV0.DWG BY TULLOCH GEOMATICS INC, DATED MARCH 11, 2025.
8. ROAD DIMENSIONS AND TURNING RADIUS HAVE BEEN DESIGNED TO ACCOMMODATE A TRIDEM DRIVE TRACTOR SEMITRAILER TRUCK AND THE LR 1300.1 SX CRAWLER CRANE. IN ADDITION, ROAD GEOMOTRY HAS BEEN DESIGNED TO ACCOMMODATE A LOWBOY SEMI-TRAILER DURING THE CONSTRUCTION PHASE. REVIEW OF ACCESS FOR DELIVERY AND INSTALLATION OF EQUIPMENT/STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL REQUIRED PERMITS MUST BE IN PLACE BEFORE START OF CONSTRUCTION.
10. SITE FROST DEPTH IS 1.8 m PER GEOTECHNICAL INVESTIGATION REPORT.
11. BASED ON THE GEOTECHNICAL INFORMATION PROVIDED BY HATCH, AVERAGE TOPSOIL THICKNESS RANGED ON SITE BETWEEN 100 AND 600 mm.
12. THE MATERIAL FROM ELATOCHEM (SWIFTPROOF M200 AND TE-8) MEETS THE REQUIRED FONCTION NEEDED. SWIFTPROOF M200 IS A GEOMEMBRANE THAT IS IMPERMIABLE AND THE TE-8 IS A GEOTEXTILE USED TO SEPERATE THE GRANULAR MATERIAL LAYERS. THIS PREVENT THE SAND TO MIGRATE INTO THE COARSE MATERIAL BELOW. APPROVED EQUILVALENT MEANS ANY OTHER SUPPLIER WITH A GEOMEMBRANE OR GEOTEXTILE THAT MEETS THE SAME CRITERIA COULD BE USED ONCE APPROVED BY THE CLIENT OR THE ENGENEER IN CHARGE.



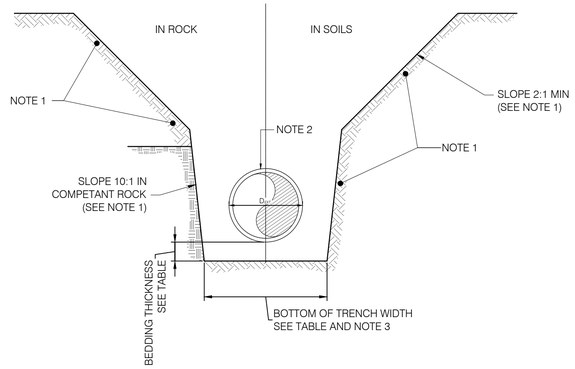
RIPRAP		
TYPE	RIPRAP THICKNESS	DIAMETER (mm)
1	300	0-200
2	300	100-200
3	500	200-300
4	700	300-400
5	800	300-500

NOTES:

1. D = DIAMETER OF PIPE.
2. DIMENSIONS ARE IN MILLIMETERS

DETAIL 1: INLET/OUTLET EROSION PROTECTION FOR CULVERTS
SCALE: N.T.S.

TYPICAL SECTION - BERM
SCALE: N.T.S.

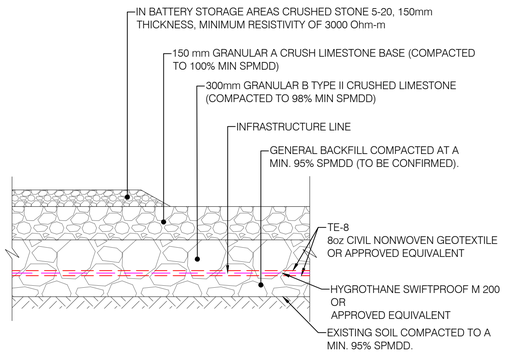


NOTES:

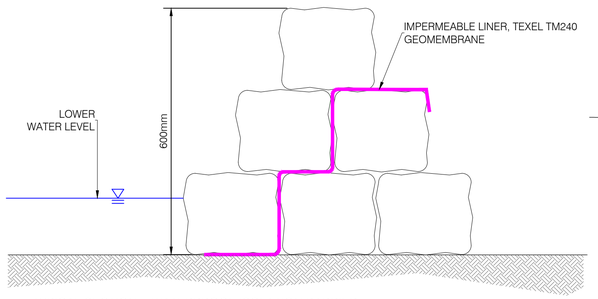
1. EXCAVATION SLOPES ARE NOT RESTRICTED TO SLOPES SHOWN ON DRAWING. THE EXCAVATION MUST MEET THE REQUIREMENTS OF THE "OCCUPATIONAL HEALTH AND SAFETY ACT", NAMELY THE REQUIREMENTS FOR MATERIAL STORAGE, CIRCULATION OF VEHICLES NEAR THE EXCAVATION AND STABILITY OF THE SLOPES.
2. THE PIPE MUST BE CENTERED AT THE BOTTOM OF THE TRENCH. Dext. IS THE OUTSIDE DIAMETER OF THE PIPE, MESURED IN MILLIMETERS.
3. BOTTOM OF TRENCH WIDTH CORRESPONDS TO THE DISTANCE BETWEEN SHORING WALLS, IF EXCAVATION IS SUPPORTED.

NOMINAL DIAMETER OF THE PIPE mm	MIN. BEDDING THICKNESS (mm)	BOTTOM OF TRENCH WIDTH mm
300 AND LESS	150	$D_{EXT.}$ + 900
350 to 600	150	$D_{EXT.}$ + 900
750 to 1200	200	$D_{EXT.}$ + 1200
1350 to 1500	250	$D_{EXT.}$ + 1200
1800 AND MORE	300	A) $D_{EXT.}$ + 1200 TRENCH IS SHORED B) $D_{EXT.}$ + 900 TRENCH IS NOT SHORED

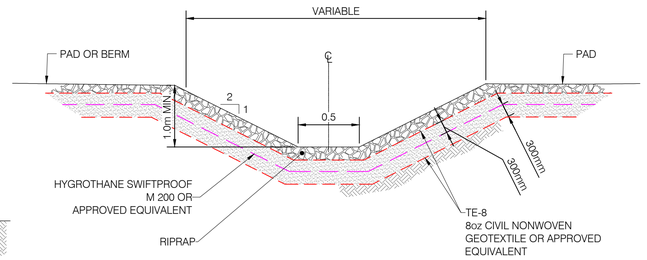
TRENCH SECTION
N.T.S.



BATTERY AREA AND PAD STRUCTURE
SCALE: N.T.S.



TYPICAL SECTION - WATERPROOF ISOLATION BARRIER



TYPICAL SECTION - PAD DITCH
SCALE: N.T.S.

FOR PERMITTING

ADAM BROWN
MANAGER , DEVELOPMENT REVIEW RURAL
PLANNING, DEVELOPMENT & BUILDING SERVICES
DEPARTMENT, CITY OF OTTAWA

APPROVED
By Adam Brown at 1:59 pm, Nov 23, 2026

REV	DESCRIPTION	PREPARED BY	CHECKED BY	DATE
AF	FOR PERMITTING	B. THOMAS	V. BRUNELLE P.E.O NO. 100617887	2026-11-18
AE	FOR PERMITTING	B. THOMAS	V. BRUNELLE P.E.O NO. 100617887	2026-04-21
AD	FOR PERMITTING	B. THOMAS	V. BRUNELLE P.E.O NO. 100617887	2026-01-23
AC	FOR PERMITTING	B. THOMAS	V. BRUNELLE P.E.O NO. 100617887	2025-11-05
AB	FOR PERMITTING	E. AMELI	M. SHAHRAKI	2025-06-19
AA	FOR COMMENTS	E. AMELI	M. SHAHRAKI	2025-03-03

DRAWING No. | DESCRIPTION | REFERENCE DRAWINGS | REVISIONS

SEAL: LICENSED PROFESSIONAL ENGINEER — V. BRUNELLE 100617887 — PROVINCE OF ONTARIO — 2026-11-18

CLIENT: Evolugen by Brookfield Renewable

PROJECT: SOUTH MARCH BESS
2555 AND 2625 MARCHURST ROAD, OTTAWA

TITLE: CIVIL
ROAD AND DRAINAGE DETAILS

DESIGNED BY:	DRAFTED BY:
B. THOMAS	G. NORMAND
PREPARED BY:	CHECKED BY:
V. BRUNELLE	V. BRUNELLE
SCALE: NTS	DATE: 2025-03-03

DRAWING No.: 7154023-100000-41-D50-0002 | SHEET: 01 | SIZE: A1 | REV. AF

0 1 2 3 4 5 6 7 8 9 10 cm

BY:BOURGUIGNON, EMILY
PRINTED:2026-11-18 12:05:48

CITY FILE no.: D07-12-25-0096 PLAN no.: 19401