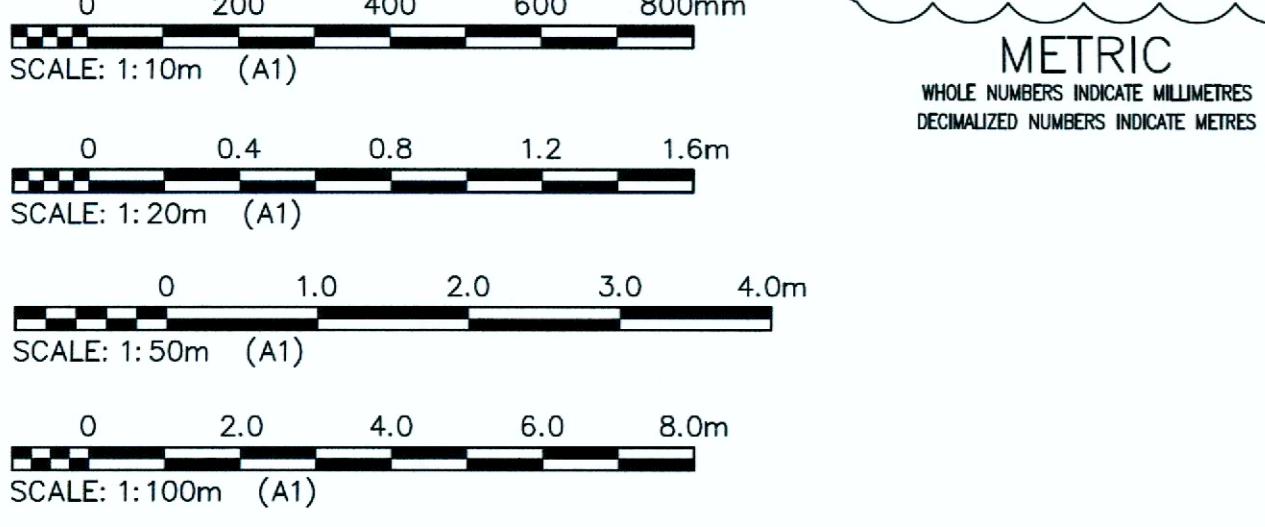
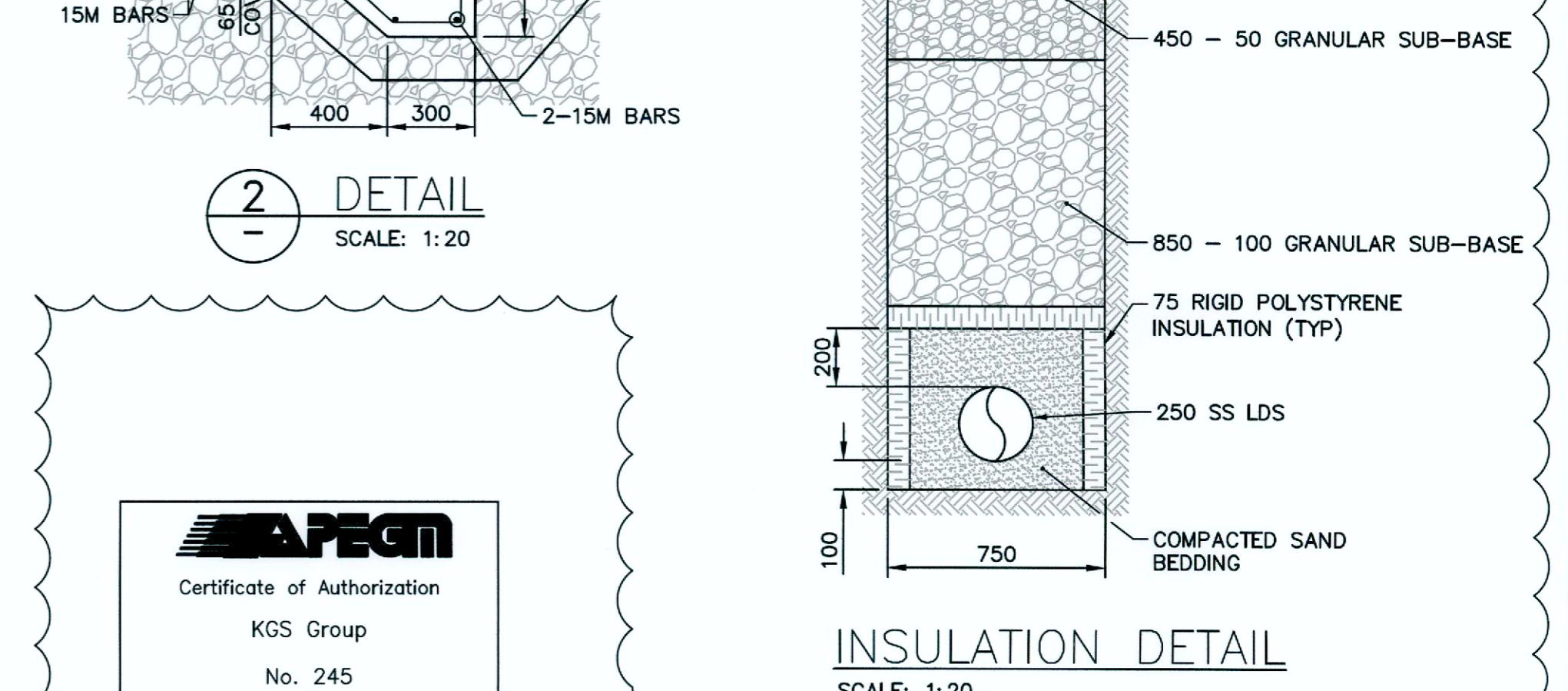
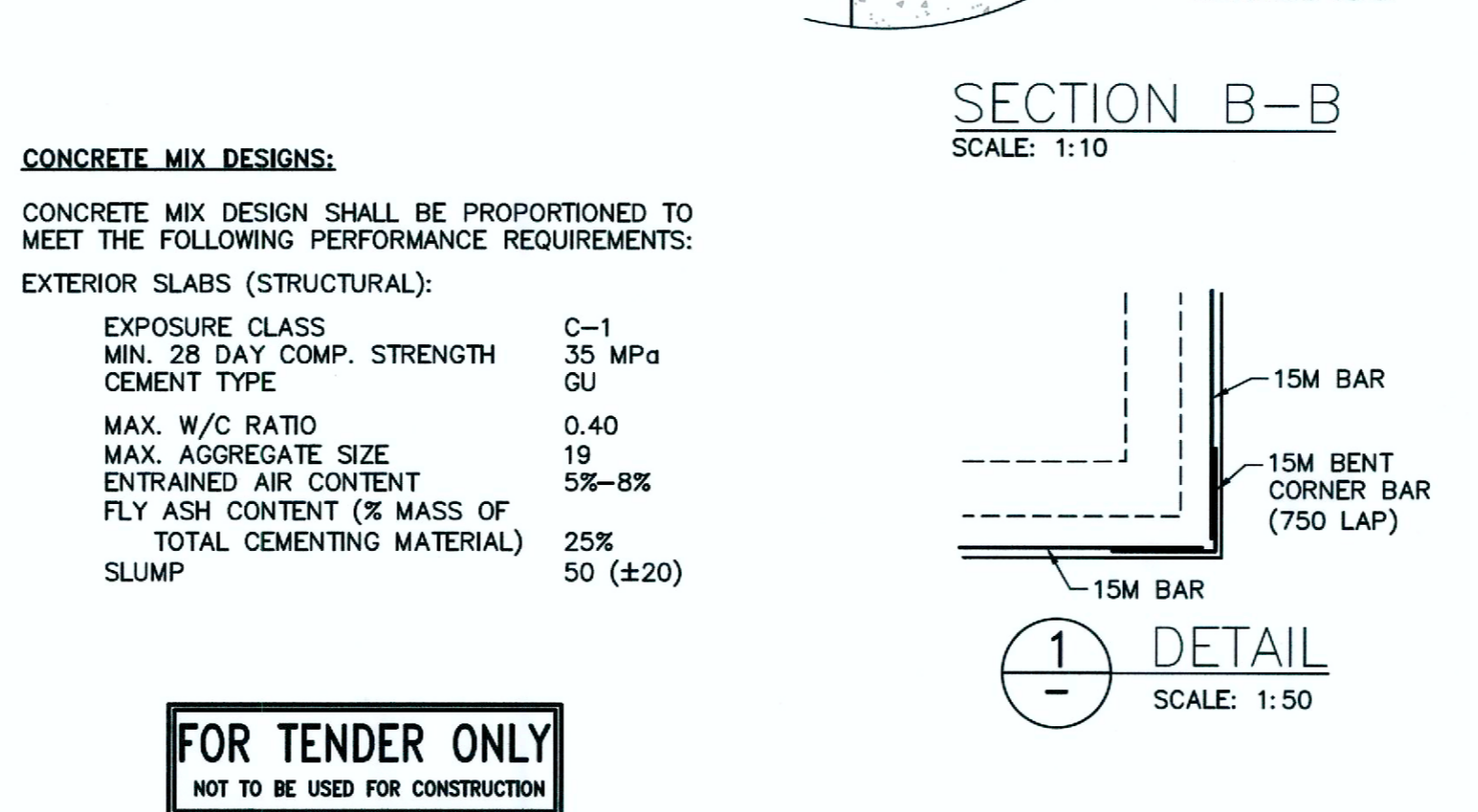


- REINFORCING STEEL:**
- REINFORCING STEEL TO BE NEW DEFORMED BILLET STEEL BARS CONFORMING TO CSA G30.18-09 (R2014). GRADE TO BE 400 MPa.
 - REINFORCING STEEL SHALL BE CLEAN, FREE OF RUST, DIRT, LOOSE SCALE, OIL, GREASE OR ANY OTHER MATERIAL WHICH WOULD REDUCE BOND WITH THE CONCRETE.
 - SUBMIT SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, SPACINGS, LOCATIONS & QUANTITIES OF REINFORCING STEEL, BENDING & CUTTING SCHEDULES, SUPPORTING & SPACING DEVICES, ETC. FOR REVIEW PRIOR TO FABRICATION. DETAIL, FABRICATE AND PLACE REINFORCING IN ACCORDANCE WITH CSA A23.1-09 (R2014), CSA A23.3-14 AND ACI SP-66 (2004) UNLESS NOTED. LAP STEEL 36 BAR DIAMETERS (MINIMUM) UNLESS NOTED.
 - TIE, SUPPORT AND SPACE ALL REINFORCING STEEL WITH PROPER APPROVED DEVICES DESIGNED FOR USE IN REINFORCED CONCRETE, TO PREVENT DISPLACEMENT OF REINFORCING AND ENSURE SPECIFIED CONCRETE COVER.
 - PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:
STRUCTURAL SLAB (TOP) 50
STRUCTURAL SLAB (BOTTOM & SIDES) 65

- CONCRETE:**
- CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CSA A23.1-09 (R2014). SEE BELOW FOR MIX REQUIREMENTS.
 - ADMIXTURES SHALL NOT BE USED UNLESS SPECIFIED HEREIN OR APPROVED BY THE DESIGN ENGINEER. CALCIUM CHLORIDE SHALL NOT BE USED.
 - MIX WATER SHALL BE POTABLE.
 - DESIGN, FABRICATE AND ERECT FORMWORK/SHORING IN ACCORDANCE WITH CAN/CSA-S269.3-M92 (R2013). ALLOW SUFFICIENT CONCRETE CURING TIME PRIOR TO REMOVAL.
 - CONCRETE FINISHING SHALL MEET THE REQUIREMENTS OF CSA A23.1-09 (R2014).
 - FORM RELEASE AGENT SHALL BE BIODEGRADABLE, NON-STAINING AND NON-VOLATILE.
 - PROVIDE ADEQUATE COLD/HOT WEATHER PROTECTION AS REQUIRED DURING CURING PERIOD.
 - THE CONCRETE SUPPLIER SHALL BE CERTIFIED TO MEET THE REQUIREMENTS OF CSA A23.1-09 (R2014).
 - THE CONCRETE SUPPLIER SHALL SUBMIT CONCRETE MIX DATA SUBMISSION FORMS FOR EACH TYPE OF CONCRETE SPECIFIED FOR REVIEW PRIOR TO BATCHING ANY CONCRETE.
 - CONCRETE TO BE TESTED BY CSA CERTIFIED TESTING AGENCY ENGAGED BY CONTRACTOR.



WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

- NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
- TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 210/72 FOR DETAILS

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION

B.M. KGS_BASE	ELEV= 249.213	NAD83	CSRS	CGVD28
NO.	REVISIONS	DATE	BY	
1	ISSUED WITH ADDENDUM #1	2017 07 10	EM	
0	ISSUED FOR TENDER	2017 06 15	MP	

KGS GROUP
CONSULTING ENGINEERS & PROJECT MANAGERS

WINNIPEG (204) 898-1209
THUNDER BAY (807) 345-2233

DESIGNED BY P. PAWLUK
CHECKED BY SH
DRAWN BY D. WEBBER
APPROVED BY MP

SCALE:
HORIZONTAL AS NOTED
VERTICAL -

DATE 2017 07 10
DATE

ENGINEER'S SEAL

PROVINCE OF MANITOBA
MARCOLETTI-SHATSKY
Member
32671

CONSULTANT DRAWING NUMBER
15-0107-014_C18

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF)
DISPOSAL CELL CONSTRUCTION AND
LEACHATE COLLECTION AND STORAGE (300,000 LITRE) TANK

CIVIL WORKS DETAILS - 2

SHEET 20 OF 44
CITY DRAWING NUMBER
1-0400A-C0032-002