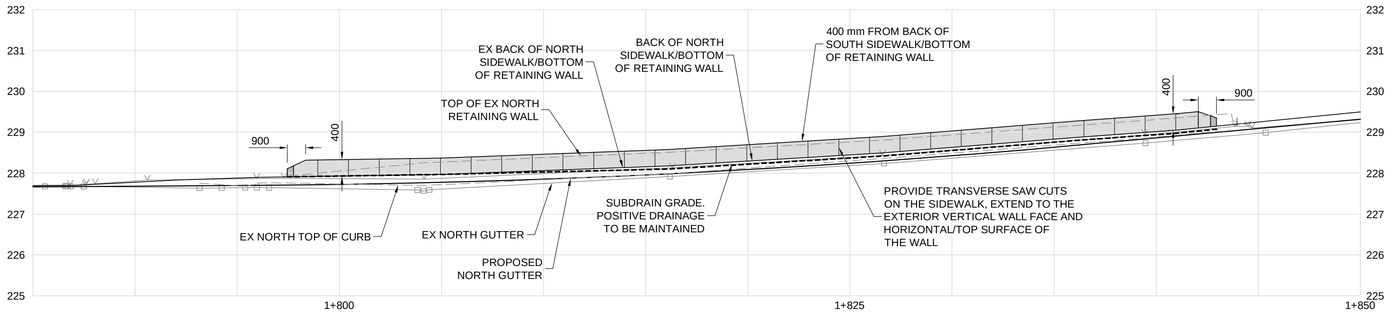
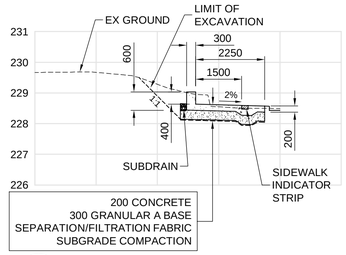


PROFILE - NORTH RETAINING WALL

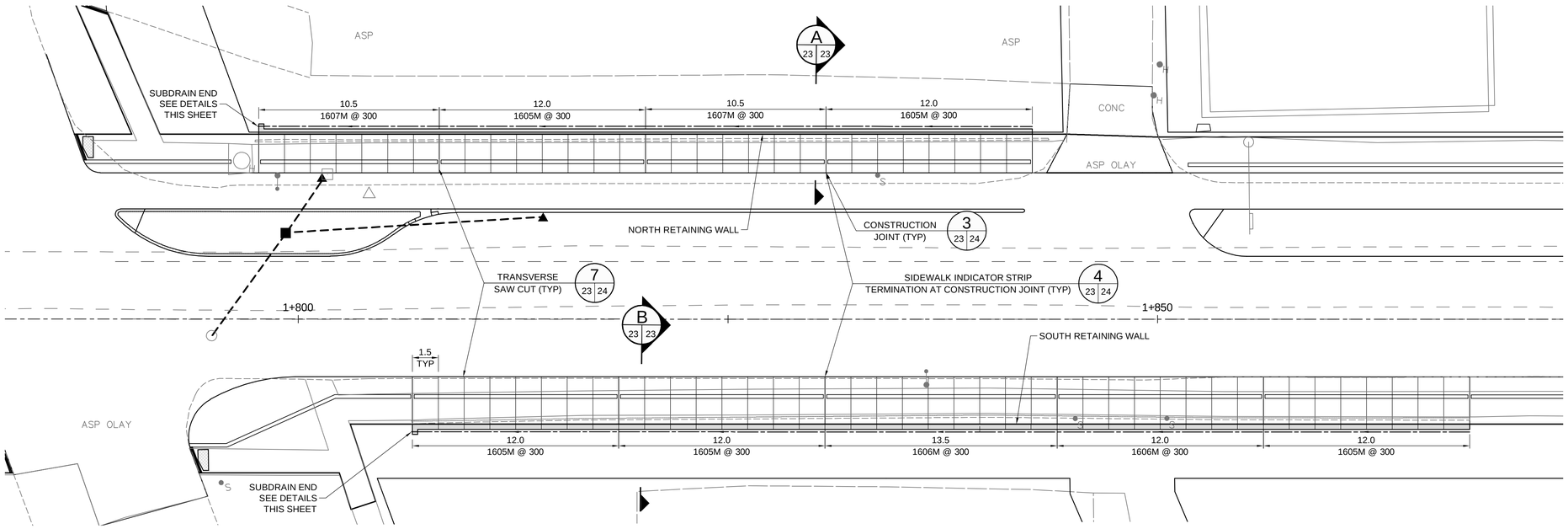
SCALE: H=1:150, V=1:75

SEE DETAIL 1 ON SHEET 24 FOR REINFORCING DETAILS



A 23 23 NORTH SECTION - STA. 1+830

SCALE: 1:100



PLAN - RETAINING WALLS

SCALE: 1:150

GENERAL NOTES

1. SIDEWALK SLAB SURFACE WILL BE GIVEN A TEXTURED BROOM FINISH, NO EDGER MARKS WILL BE LEFT.
2. TRANSVERSE SAW CUT JOINTS AT 1.5m O/C MAXIMUM.

DESIGN PHILOSOPHY

1. THE ANALYSIS WAS UNDERTAKEN USING THE DATA PROVIDED BELOW.
2. DESIGNED IN ACCORDANCE WITH CSA A23.2 2019 DESIGN OF CONCRETE STRUCTURES AND THE CANADIAN FOUNDATION ENGINEERING MANUAL.

DESIGN DATA

1. GEOTECHNICAL
   - ACTIVE EARTH PRESSURE COEFFICIENT, Ka = 0.75
   - UNIT WEIGHT OF CLAY FILL = 18 kN/m3
   - UNIT WEIGHT OF CONCRETE = 24 kN/m3
   - CLAY FILL COHESION = 5 kPa
   - CLAY FILL FRICTION ANGLE = 20 degrees
   - ANGLE OF FRICTION BETWEEN CONCRETE AND COMPACTED BASE = 29 degrees
   - ACTIVE EARTH PRESSURE LOAD FACTOR (MIN/MAX) = 0.8/1.25
   - SLIDING RESISTANCE FACTOR = 0.8
   - DEAD LOAD FACTOR (MIN/MAX) = 0.9/1.2
   - NOTE: ACTIVE EARTH PRESSURE COEFFICIENT CALCULATED USING RANKINE EARTH PRESSURE THEORY AND CLAY FILL STRENGTH PARAMETERS ARE ASSUMED.

MATERIAL NOTES

CONCRETE

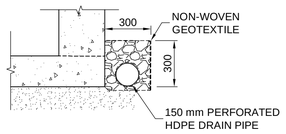
1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF CAN/CSA A23.1/A23.2 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION/TEST METHODS AND STANDARD PRACTICES FOR CONCRETE U/N.
2. CONCRETE SHALL BE:
   - EXPOSURE CLASS C-1;
   - 35 MPa @ 56 DAYS;
   - MAXIMUM AGREGATE SIZE OF 20 mm; AND,
   - AIR CONTENT CATEGORY 1.
3. PERMEABLE FORM WORK LINER SHALL BE USED ON ALL EXPOSED FORMED SURFACES U/N.
4. CONCRETE PERMANENTLY EXPOSED TO EARTH SHALL BE DAMP PROOFED
5. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 20 mm U/N.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE LOW-CARBON, CHROMIUM REINFORCEMENT CONFORMING TO THE REQUIREMENTS OF ASTM A1035 CM GRADE 100. MMFX CHROMX SERIES IS AN APPROVED PRODUCT.
2. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF THE REINFORCING STEEL INSTITUTE OF CANADA (RISC) MANUAL OF STANDARD PRACTICE OR MANUFACTURER'S REQUIREMENTS.
3. LAP SLICES SHALL BE CLASS B U/N.

BAR SIZE (MMFX)	LAP (mm)
16M	600
19M	800
25M	1200
32M	1500

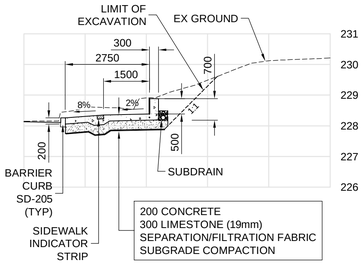
4. CLEAR COVER SHALL BE 60 mm UNLESS NOTED OTHERWISE.
5. BEFORE PLACING REBAR, ENSURE IT IS CLEAN, FREE OF LOOSE SCALE, DIRT OR OTHER DELETERIOUS SUBSTANCE.



DRAIN PIPE DETAIL

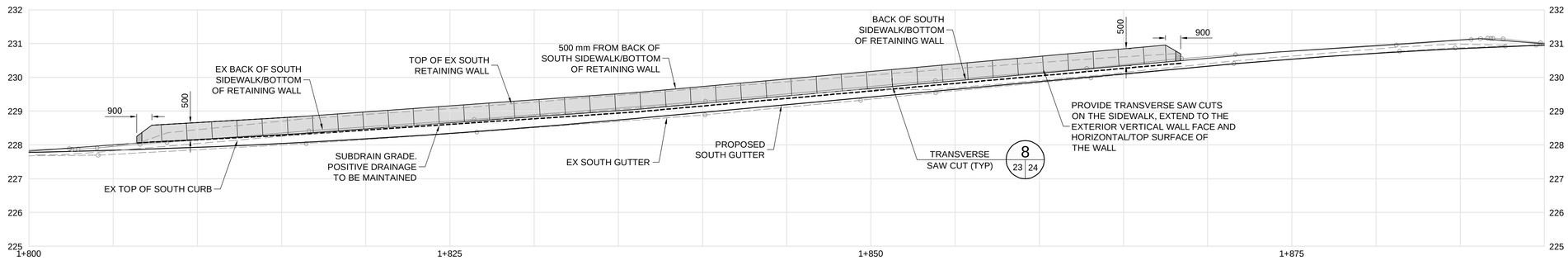
SCALE: 1:20

SEE DETAIL 2 ON SHEET 24 FOR REINFORCING DETAILS



B 23 23 SOUTH SECTION - STA. 1+820

SCALE: 1:100



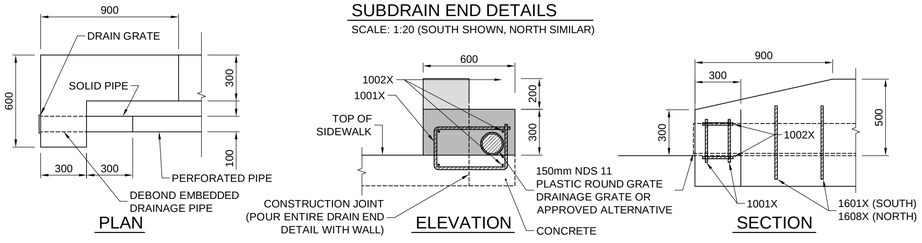
PROFILE - SOUTH RETAINING WALL

SCALE: H=1:150, V=1:75

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SUBDRAIN END DETAILS

SCALE: 1:20 (SOUTH SHOWN, NORTH SIMILAR)



UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES DATE

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.

B.M. ELEV.

NO.	REVISIONS	DATE	BY
A	ISSUED FOR TENDER	23/03/15	DBW

DESIGNED BY	MR
DRAWN BY	TJH
CHECKED BY	TE
APPROVED BY	DBW
HOR. SCALE	AS NOTED
VERTICAL	AS NOTED

DILLON CONSULTING

RELEASED FOR CONSTRUCTION

DATE

ENGINEER'S SEAL

PROVINCE OF MANITOBA — ORIGINAL STAMPED BY T.A. EPP 2023/03/28 Member 35395 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NUMBER 22-4677

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT

REGIONAL STREET RENEWAL PROGRAM
2023 GOULET STREET REHABILITATION AND DES MEURONS RECONSTRUCTION

RETAINING WALLS

CITY DRAWING NUMBER P-3561-23

SHEET 23 OF 30

CONSULTANT DRAWING NUMBER

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