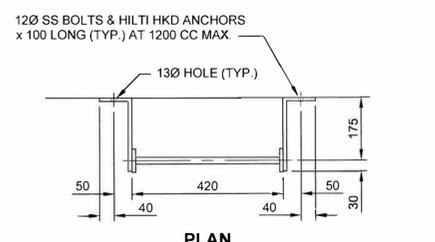


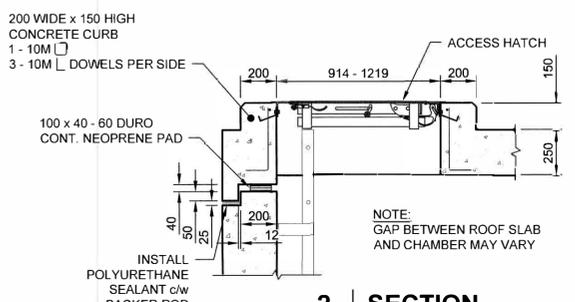
D SIZE 22" x 34" (559mm x 864mm)

PLOT: 4/24/2018 11:45:37 AM

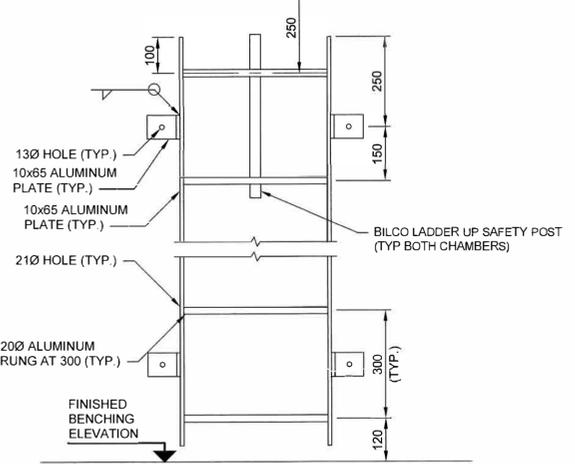
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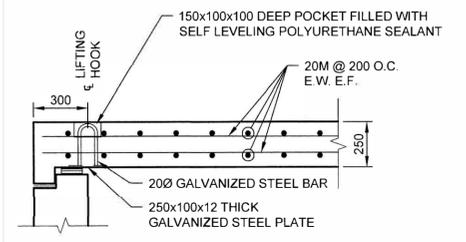
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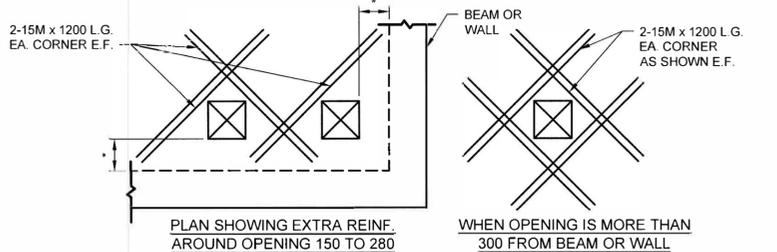
2 SECTION
ACCESS HATCH 1:20



1 ELEVATION
LADDER DETAIL 1:10



3 DETAIL
REMOVABLE ROOF SLAB LIFTING LUGS 1:20



4 STD DETAIL ADDITIONAL REINFORCING AROUND OPENINGS, WALLS AND SLABS 1:75

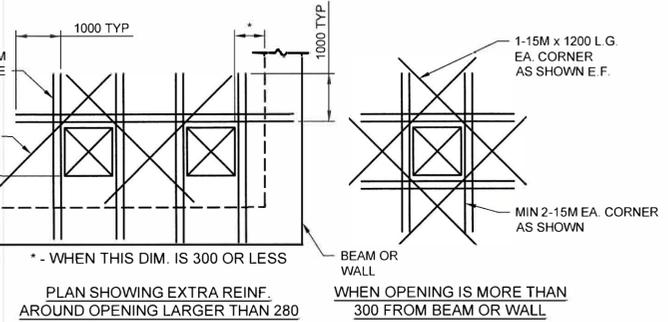
- GENERAL NOTES**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE IN METERS AND ARE TO GEODETIC DATUM. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS BEFORE BEGINNING CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE THE DRAWINGS.
 - THIS STRUCTURE TO BE DESIGNED IN ACCORDANCE WITH AND CONSTRUCTED IN COMPLIANCE WITH THE FOLLOWING BUILDING CODES AND APPLICABLE LOCAL BYLAWS:
 - ACI 350-06 ENVIRONMENTAL STRUCTURES
 - WHERE CONTRADICTION REQUIREMENTS OCCUR, THE MOST STRINGENT APPLY.
 - DISCREPANCIES OR AMBIGUITIES ON THE DRAWINGS AND/OR SITE, WHICH AFFECT THE STRUCTURAL FRAMING, TO BE REPORTED TO THE CONTRACT ADMINISTRATOR.
 - THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND SERVICES PRIOR TO START OF CONSTRUCTION.
 - LOCATION OF CONSTRUCTION JOINTS IS THE RESPONSIBILITY OF THE CONTRACTOR, BUT APPROVALS MUST BE GRANTED BY THE CONTRACT ADMINISTRATOR BEFORE PROCEEDING.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL NECESSARY SHORING, BRACING AND FORMWORK. FORMWORK FOR NEW CONSTRUCTION TO BE BRIDGED OVER EXISTING SERVICES. PROCEDURE TO BE APPROVED BY THE CONTRACT ADMINISTRATOR.
 - CONTRACT ADMINISTRATOR TO BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ALL CONCRETE POURS AND/OR INSTALLATION OF INTERIOR SHEATHING/FORMING, TO ALLOW FOR SITE REVIEWS.

- CONCRETE**
- ALL CONCRETE WORK TO CSA A23.1 (LATEST). CONCRETE TESTED TO CSA A23.2 (LATEST).
 - CONCRETE MEETS THE FOLLOWING REQUIREMENTS:

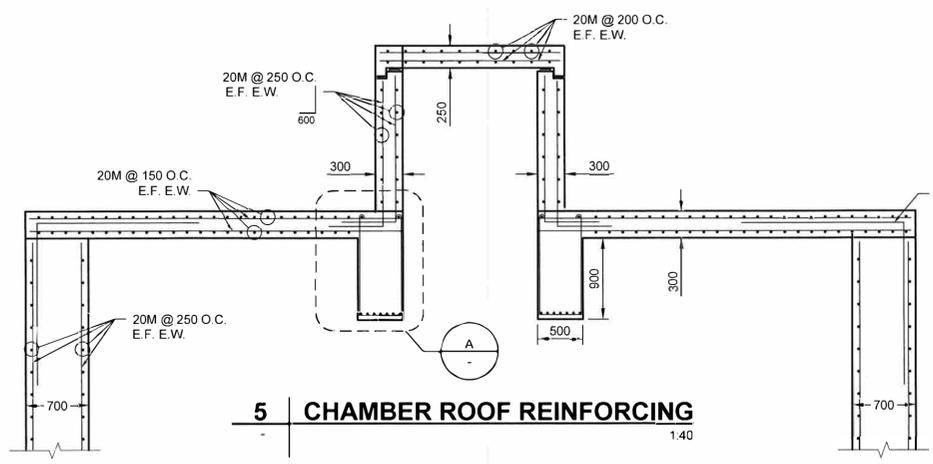
MIX TYPE	INTENDED APPLICATION	MINIMUM COMPRESSIVE STRENGTH (MPa)	CSA EXPOSURE CLASS	CONCRETE COVER TO REINFORCING STEEL (mm)
1	STRUCTURAL CONCRETE FOR ROOFS & WALLS	35	S-1	50
2	STRUCTURAL CONCRETE FOR BASE SLAB	35	S-1	50 TOP 75 BOTTOM

- FORMWORK AND FALSEWORK TO BE COMPLETED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA AND SUBMITTED TO CONTRACT ADMINISTRATOR FOR REVIEW.

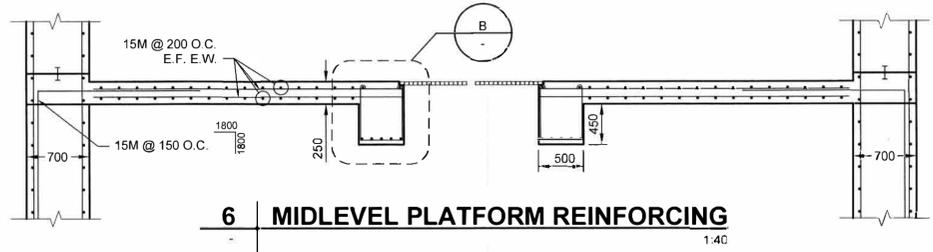
- REINFORCING STEEL**
- REINFORCING STEEL: NEW DEFORMED BARS TO CSA G30.18 "BILLET STEEL BARS FOR CONCRETE REINFORCEMENT", WITH MIN 400 MPa YIELD STRENGTH.
 - DEFORMED BARS CONFORMING TO CSA G30.18, GRADE 400. LAP SPLICES AS PER CSA A23.3.
 - REINFORCING WORK IS IN ACCORDANCE WITH CSA A23.1 AND CSA A23.3.



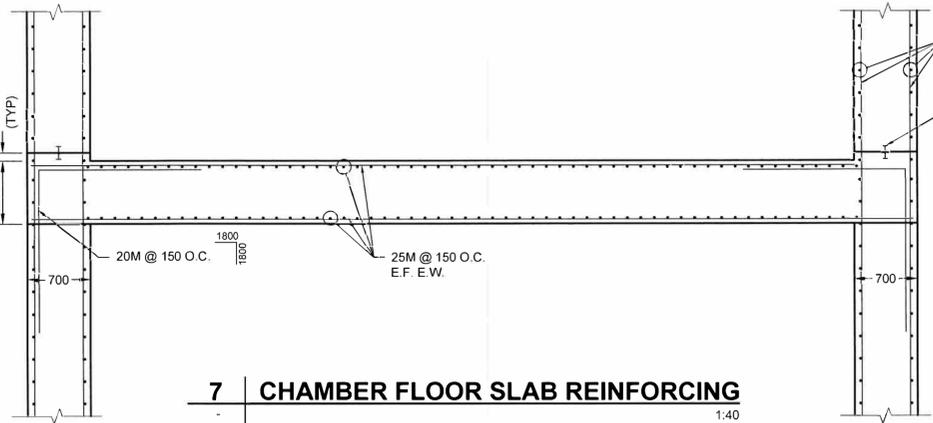
- DEFLECT MINIMUM BARS EACH SIDE OF OPENING AS SHOWN
- WHERE OPENING IS LARGE ENOUGH THAT MORE THAN 4 CUT BARS WOULD BE DEFLECTED, PLACE MINIMUM 4-15M BARS ALONG THAT OPENING LENGTH SIDE
- NUMBER OF REINFORCING BARS TO BE CUT AT OPENING TO BE KEPT AT A MINIMUM
- REINFORCING BARS TO BE KEPT MINIMUM 50 CLEAR OF OPENING
- CIRCULAR OPENINGS TO BE TREATED IN SAME MANNER AS RECTANGULAR UNLESS OTHERWISE DETAILED



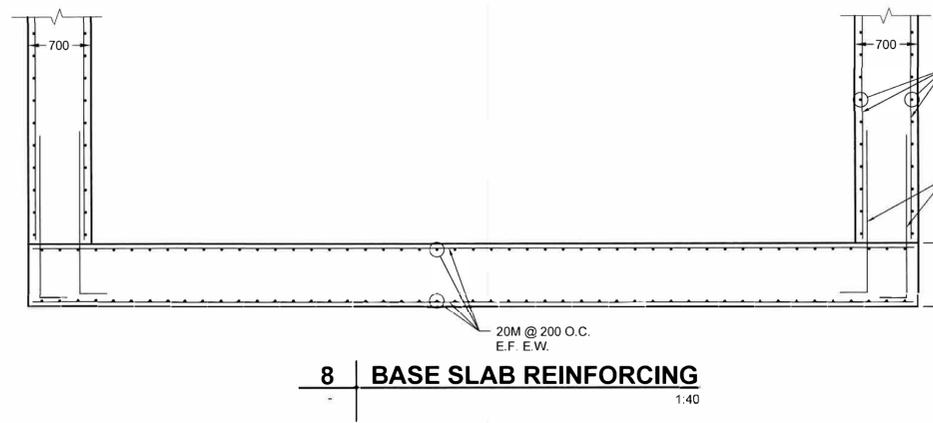
5 CHAMBER ROOF REINFORCING 1:40



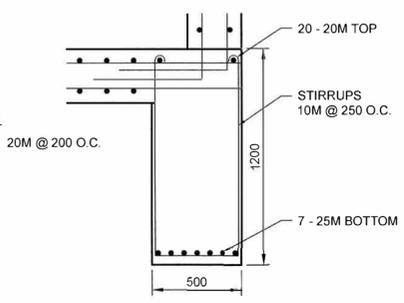
6 MIDLVL PLATFORM REINFORCING 1:40



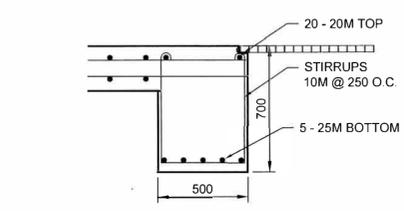
7 CHAMBER FLOOR SLAB REINFORCING 1:40



8 BASE SLAB REINFORCING 1:40



A DETAIL Scale 1:20



B DETAIL Scale 1:20

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR. LIG STRUCTURES DATE COMMITTEE

AECOM
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: April 24/18

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.

NO.	ISSUED FOR CONSTRUCTION	18/04/24	KLC
0	ISSUED FOR CONSTRUCTION	18/04/24	KLC
NO.	REVISIONS	YYMMDD	BY

AECOM

DESIGNED BY JAT
CHECKED BY ADB
DRAWN BY ADL/KLC
APPROVED BY [Signature]
HOR. SCALE AS NOTED
VERT. SCALE AS NOTED
DATE [Signature]

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA
J.A. THOMPSON
Member
30632
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NO.
60509089-SHT-30-0000-S-4001_S-4002

THE CITY OF WINNIPEG
Winnipeg
NORTHEAST INTERCEPTOR SEWER RIVER CROSSING

SIPHON CHAMBER
REINFORCING DETAILS & MISCELLANEOUS DETAILS

BID OPPORTUNITY NO. 1136-2017B

SHEET 11 OF 11
CITY DRAWING NUMBER
11676 REV 0

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES