

Revision	By	Appd.	YY.MM.DD
2	CB	AA	24.01.11
1	CB	AA	23.12.21
0	CB	AA	23.09.18
Issued			
File Name:	115423001e_e-201m	CB	AA
		Dwn.	Chkd.
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		Dwn.	Chkd.
		CB	AA
		Dwn.	Chkd.

Permit-Seal

ORIGINAL
 DRAWING
 SEALED BY
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 MEMBER
 31095
 Stantec Consulting Ltd.
 2023-09-20



Client/Project
 WINNIPEG TRANSIT DIRECT CURRENT FAST
 CHARGING BUS STATIONS BRANDON GARAGE

600 Brandon Ave. Winnipeg, Manitoba

Title
 ELECTRICAL SERVICE EQUIPMENT -
 NEW CONSTRUCTION

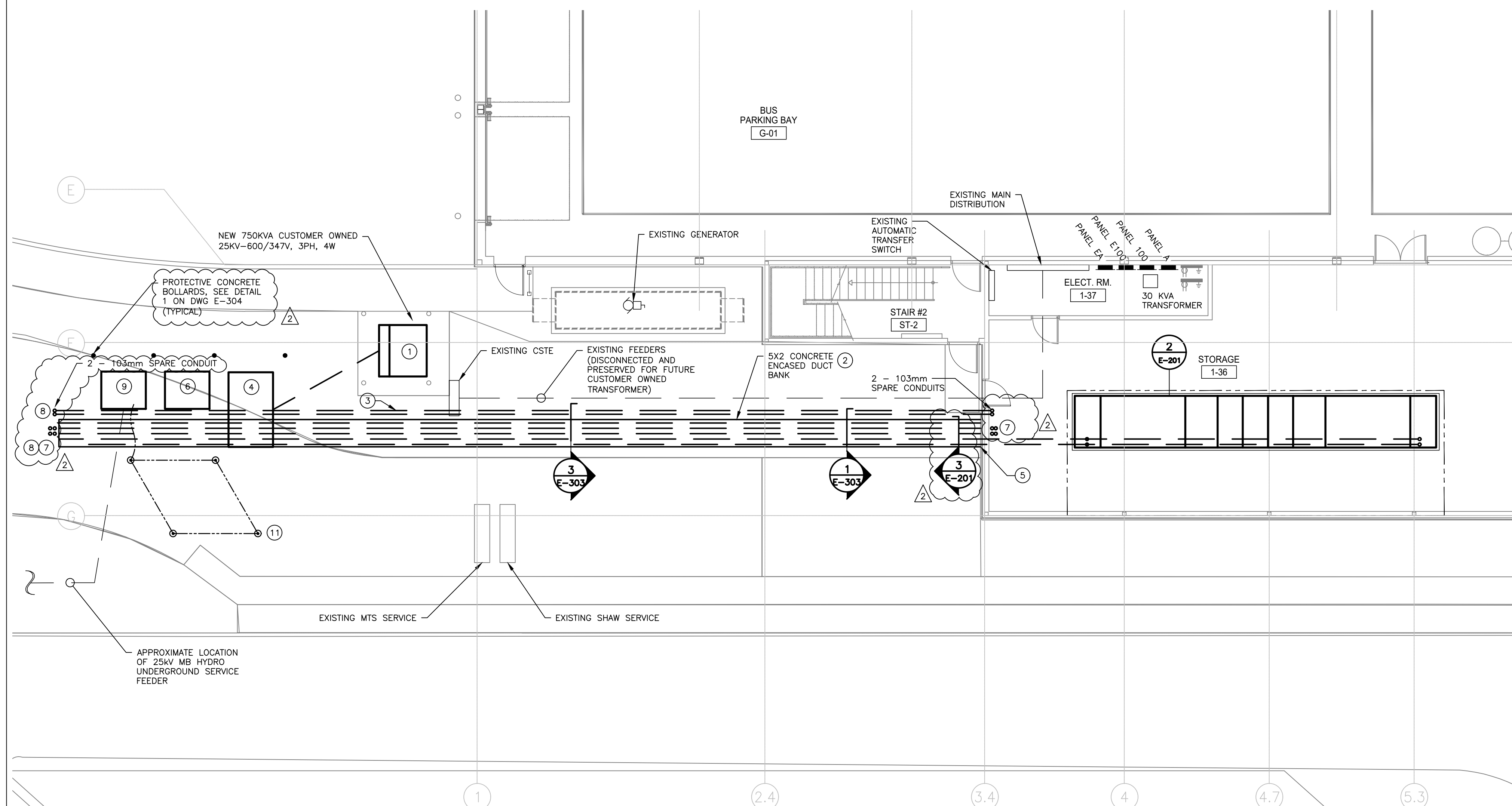
Project No. 144523001	Scale As Indicated
Drawing No. E-201	Sheet 4 of 12
Revision	Revision 2

GENERAL NOTES:

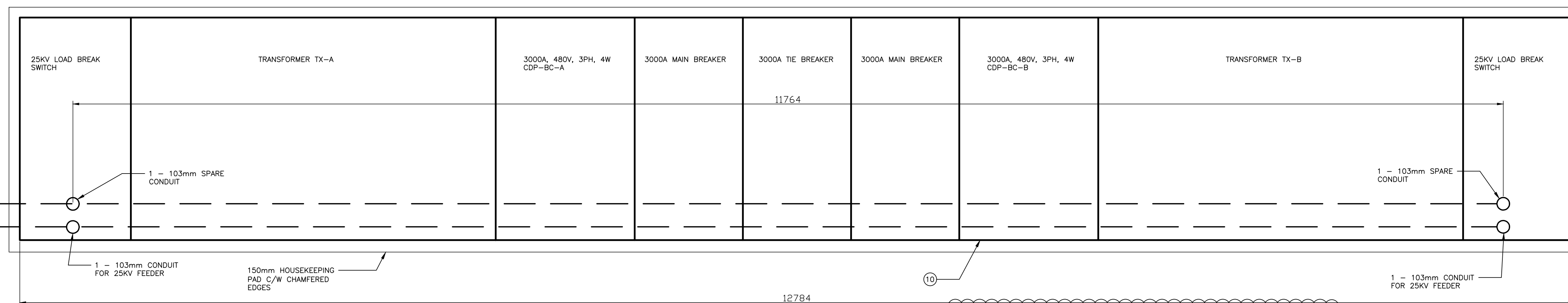
- CONTRACTOR TO SCAN AND DETERMINE ROUTING AND DEPTH OF EXISTING MTS AND SHAW SERVICES PRIOR TO COMMENCING WORK ON ANY UNDERGROUND SERVICES. WHERE EXISTING SERVICES ARE ANTICIPATED TO BE WITHIN 1M OF NEW SERVICES, EXPOSE EXISTING SERVICES USING SOFT DIG / HYDRO VAC EXCAVATION METHODS TO CONFIRM THE EXACT LOCATION OF THE SERVICES PRIOR TO COMMENCING TRENCHING. SUPPORT AND PROTECT EXISTING SERVICES DURING INSTALLATION OF NEW SERVICES TO ENSURE AGAINST DAMAGE AND EXCESS CABLE TENSION.
- CONTRACTOR TO ENSURE ALL CABLE LOCATES ARE DONE PRIOR TO ANY UNDERGROUND WORK BEING UNDERGONE. THE CONTRACTOR IS TO ALLOW FOR ALL HYDRO EXCAVATION AND DAY LIGHTING ACTIVITIES REQUIRED FOR PLANNING AND UNDERGROUND EXCAVATION WORK.

KEY NOTES:

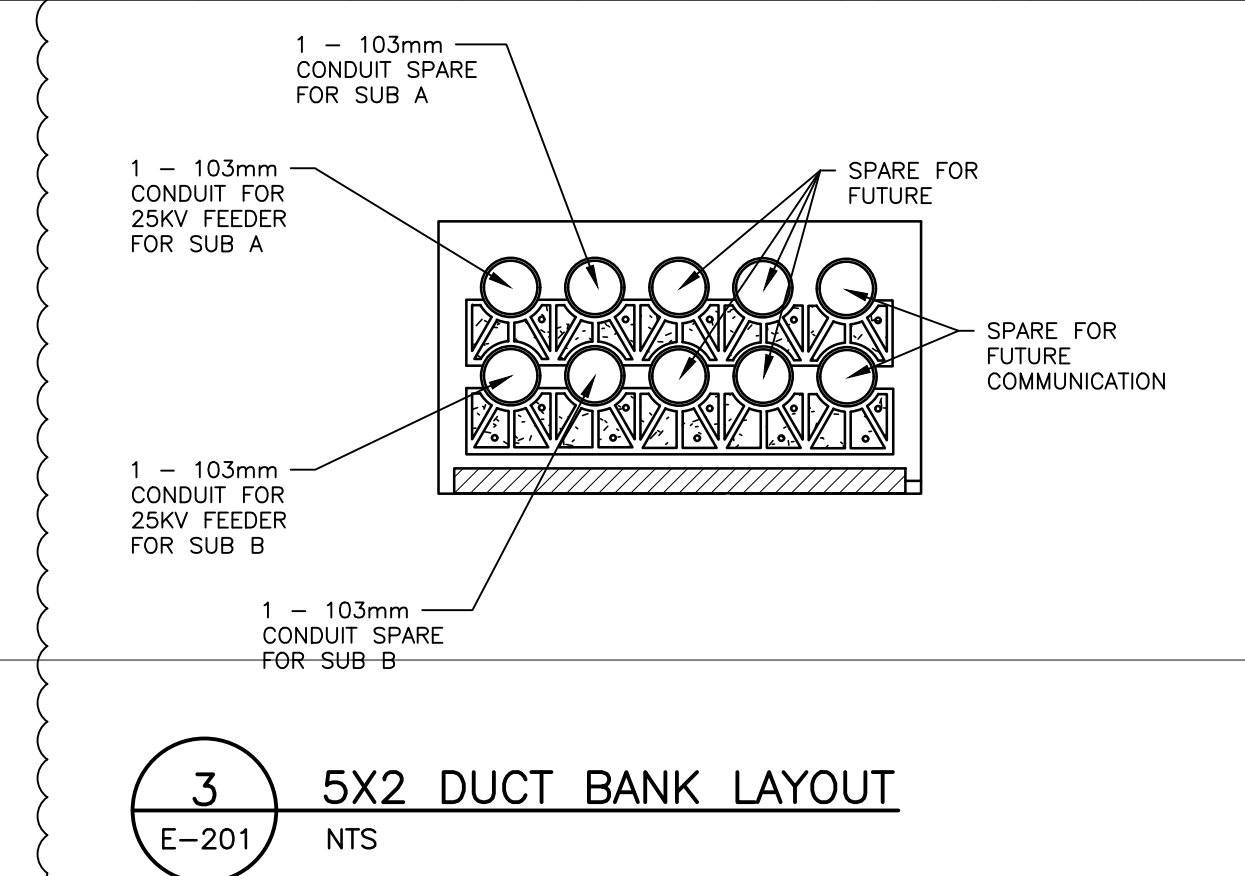
- EXISTING MB HYDRO 750KVA TRANSFORMER TO BE REPLACED WITH NEW 750KVA TRANSFORMER. COORDINATE TRANSFORMER REPLACEMENT WITH MANITOBA HYDRO TO MINIMIZE BUILDING POWER OUTAGE.
- PROVIDE CONCRETE ENCASED DUCT BANK FROM SWITCHGEAR TO NEW SUBSTATION UNIT.
- ROUTE CONDUITS FOR FUTURE USE 200mm BELOW THE INCOMING SERVICE DUCT BANK. PROVIDE CONCRETE ENCASEMENT FOR THE FUTURE CONDUITS WITHIN 1000mm OF THE INCOMING SERVICE DUCT BANK IN ACCORDANCE WITH E-303 DETAIL 1.
- NEW 25KV 6-WAY PAD MOUNTED LOW PROFILE SWITCHGEAR WITH INSULATING GAS.
- STEEL STUD SUPPLIER TO DESIGN AND PROVIDE SHOP DRAWINGS SEALED BY AN ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA TO FRAME THE OPENINGS THROUGH THE EXISTING WALL AND TO SUPPORT THE DUCT HOOD. REFER TO MECHANICAL FOR REQUIREMENTS INCLUDING OPENING SIZE AND EXACT LOCATION.
- NEW 25KV PAD MOUNTED METERING SECTION. COORDINATE EQUIPMENT REQUIREMENTS WITH MANITOBA HYDRO METERING STANDARDS SECTION 8 AND MANITOBA HYDRO REPRESENTATIVE.
- 4 - 103MM CONDUIT DUCT BANK IN 2X2 CONFIGURATION STUBBED UP FOR FUTURE PV INSTALLATION.
- CONTRACTOR TO RUN BURIED CONDUITS FOR FUTURE CONNECTION AS SHOWN. CONTRACTOR TO ENSURE 1500MM SPACING BETWEEN THE TERMINATION POINT OF THE CONCRETE ENCASED DUCT BANK AND ANY ADJACENT SERVICES. CONTRACTOR TO EXTEND CONCRETE ENCASED DUCT BANK CONDUITS DESIGNATED FOR FUTURE USE, CAP AND MARK END POINT OF THE DUCT BANK.
- NEW 25KV PAD MOUNTED LOW PROFILE SERVICE ENTRANCE SWITCH WITH INSULATING GAS. COORDINATE INCOMING SERVICE REQUIREMENTS WITH MANITOBA HYDRO REPRESENTATIVE.
- SWITCHGEAR CELL ARRANGEMENT MAY BE MODIFIED AS REQUIRED, PROVIDING THE ARRANGEMENT INCLUDES ALL THE REQUIRED ELEMENTS AND CAN BE POSITIONED WITHIN THE ALLOCATED FOOTPRINT.
- PROVIDE GROUND GRID AT THE LOCATION INDICATED. INTERFACE NEW GROUND GRID WITH EXISTING BUILDING GROUND AT EXISTING CSTE. GROUND GRID SHALL BE INTERCONNECTED USING #2/0 AWG BARE CU CONDUCTOR CADWELDED TO 3M X 19MMØ COPPER CLADDED STEEL RODS SPACED 3M APART, BURIED WITH THE TOPS OF RODS 600mm BELOW GRADE. BOND BOLLARDS AND 25KV EQUIPMENT TO THE GROUND GRID.



1 ELECTRICAL SERVICE EQUIPMENT - NEW CONSTRUCTION
 E-201 1:100



2 ENLARGED CONDUIT STUB UP DETAIL
 E-201 1:20



3 5X2 DUCT BANK LAYOUT
 E-201 NTS

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