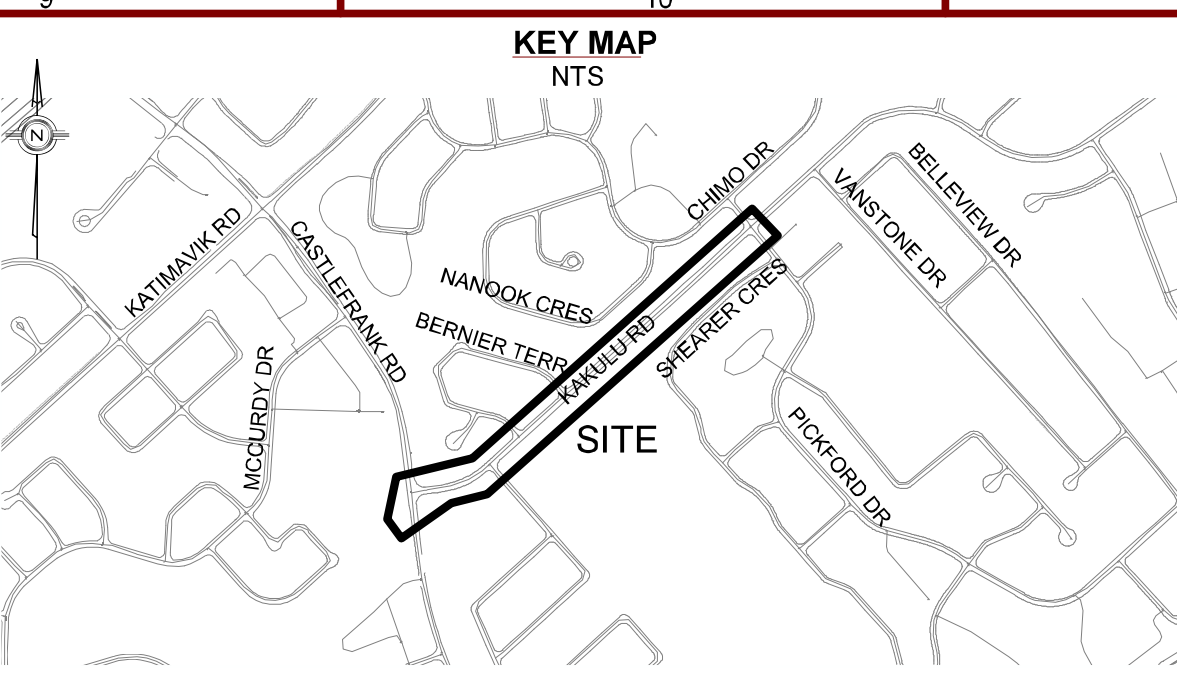


NOTE: RETAG CABLES BACK TO NEXT DEVICE.

STANDARD DISTRIBUTION PROPOSAL LEGEND

HYDRO OTTAWA POLE	2-WAY MANHOLE	PRIMARY PEDESTAL PAD	1-PHASE POLE MOUNT TRANSFORMER OR 3-PHASE TRANSFORMER
FOREIGN OWNED POLE	SWITCHING MANHOLE	DIRECT BURIED DUCT	2-PHASE POLE MOUNT TRANSFORMER (BANKED)
JOINT USE POLE	4-WAY MANHOLE	DIRECT BURIED CABLE	STEP TRANSFORMER (RABBIT)
POLE ANCHOR	TRANSFORMER / SWITCHGEAR PAD	CONCRETE BURIED DUCTBANK	Kiosk
SPAN GUY	TRANSFORMER / SWITCHGEAR PAD	CONCRETE BURIED DUCTBANK	CAPACITOR
HANDWIRE	TRANSFORMER / SWITCHGEAR PAD	CONCRETE BURIED DUCTBANK	VOLTAGE REGULATOR
1-PHASE PRIMARY CONDUCTOR	POTHEAD	CONCRETE BURIED DUCTBANK	POLE MOUNTED RECLOSER
2-PHASE PRIMARY CONDUCTOR	PRIMARY METER ENCLOSURE	CONCRETE BURIED DUCTBANK	REMOTELY OPERATED SWITCH (MOTORISED) COMPLETE GANG (LOAD BREAK)
3-PHASE PRIMARY CONDUCTOR	SECONDARY METER BANK (IF PREMISED)	CONCRETE BURIED DUCTBANK	LOCALLY OPERATED SWITCH (MOTORISED) COMPLETE GANG (LOAD BREAK)
UNDERGROUND CABLE	FAULT CIRCUIT INDICATOR	CONCRETE BURIED DUCTBANK	DOUBLE SOLID BLADE SWITCH (RANS) DOUBLE (LOAD BREAK)
4-PHASE OR 3-PHASE SECONDARY CONDUCTOR	SECONDARY PEDESTAL ENCLOSURE	CONCRETE BURIED DUCTBANK	MID-SPAN OPERATOR
CONNECTION POINT CABLE BREAK	SECONDARY DISCONNECT ENCLOSURE	CONCRETE BURIED DUCTBANK	LINE CLAMP
GROUND	STREETLIGHT	CONCRETE BURIED DUCTBANK	
FULL SWITCHING ELBOW (90°)	AC GENERATOR	CONCRETE BURIED DUCTBANK	
NON-OPERABLE ELBOW (90°)	DC GENERATOR	CONCRETE BURIED DUCTBANK	
STRESS CONE	CABLE SPLICE	CONCRETE BURIED DUCTBANK	



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 - Obtain utility locates prior to commencement of any excavation.
 - Where excavation within 1.5 metres of Hydro Ottawa underground plant, contact the designated Hydro Ottawa project manager or Hydro Ottawa Service Desk at 613-738-6400, Option 4.

- PROJECT NOTES**
- Where existing grades are greater or less than 150mm of final grade, grade stakes indicating final grade shall be provided at, or along each installation as required by Hydro Ottawa.
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 - Note existing Hydro Ottawa easements and proposed requirements for easements in favour of Hydro Ottawa on project drawing(s).
 - Primary cable shall be installed in accordance with Hydro Ottawa specification GCS0004 unless otherwise noted.
 - Connection to existing concrete duct banks shall be completed by an approved Hydro Ottawa contractor. All work on existing Hydro Ottawa plant shall be completed in the presence of a Hydro Ottawa Inspector and in accordance with the Occupational Health and Safety Act.
 - Civil work shall be installed in accordance with Hydro Ottawa specification GCS0005 unless otherwise noted.
 - Completed ducts shall be rodded by the site contractor in the presence of a Hydro Ottawa Inspector and shall be clear of all extraneous material. A mandrel to nominal diameter of the duct and approved by Hydro Ottawa will be passed through each duct. One (1) 9mm polypropylene rope shall be left in each duct.

PROJECT DETAILS

SYSTEM INFORMATION (TO BE CONFIRMED WITH SYSTEM OFFICE)	
AFFECTED CIRCUIT(S)	BRDF4
PRIMARY VOLTAGE(S)	27.6kV
SECONDARY VOLTAGE(S)	N/A

INFORMATION		EXISTING CABLE / CONDUCTOR	
EXISTING POLE OWNER	N/A	PRIMARY	500MCM XLPE
PROPOSED POLE OWNER	N/A	NEUTRAL	N/A
RULING SPAN OF PROP. POLES	N/A	SECONDARY	N/A
ASSESSED CLASS OF SOIL	N/A		
SWITCH GEAR	VISTA TYPE 006	PROPOSED CABLE / CONDUCTOR	
TRANSFORMER	N/A	PRIMARY	1000MCM & 1/0 28kV
POWER FUSE	N/A	NEUTRAL	CONCENTRIC
CURRENT LIMITING FUSE	N/A	SECONDARY	N/A
ACCESS ROUTE			

DRAWING INDEX / REFERENCE

NO.	SHEET	DESIGN, LEGEND, CONSTRUCTION DATA TABLE & TAGGING TABLE
1.	Sheet 1 of 2	DESIGN, LEGEND, CONSTRUCTION DATA TABLE & TAGGING TABLE
2.	Sheet 2 of 2	MANHOLE DETAILS & SINGLE LINE DIAGRAMS
3.		
4.		

HYDRO OTTAWA LIMITED - FINAL RECORD OF INSPECTION & CVP CERTIFICATE
 THIS IS TO CERTIFY THAT THE CONSTRUCTION WORK COMPLETED AND SPECIFIED ON THE ABOVE-MENTIONED PLAN IS CONSISTENT WITH THE APPROVED PLAN, STANDARD DESIGNS OR WORK INSTRUCTION AND THAT APPROVED EQUIPMENT HAS BEEN USED.

P.M. TO INITIAL WHEN APPLICABLE	TYPE OF INSPECTION REQ'D	DATE COMPLETED	VERIFIED BY	POSITION	SIGNATURE
1)	CIVIL PLANT				
2)	DISTRIBUTION/STATIONS PLANT				
3)					

REV.	DATE	CHANGE	PREP	CHKD	APPD
REV.	DATE	CHANGE			
REV.	DATE	CHANGE			
REV.	DATE	CHANGE			
REV.	DATE	CHANGE			
REV.	DATE	CHANGE			

HydroOttawa

PREP: B. BAIN / EBG
 CHKD: E. COFFIE
 ASSETS: T. COHEN
 APPD: KEITH McROBERTS

TITLE: **KAKULU TRUNK REPLACEMENT SC4789**

NO: 92012028-TUG

DATE: 2018-06-18
 SCALE: 1:500 @ ANSI D

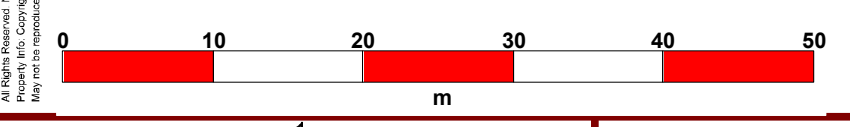
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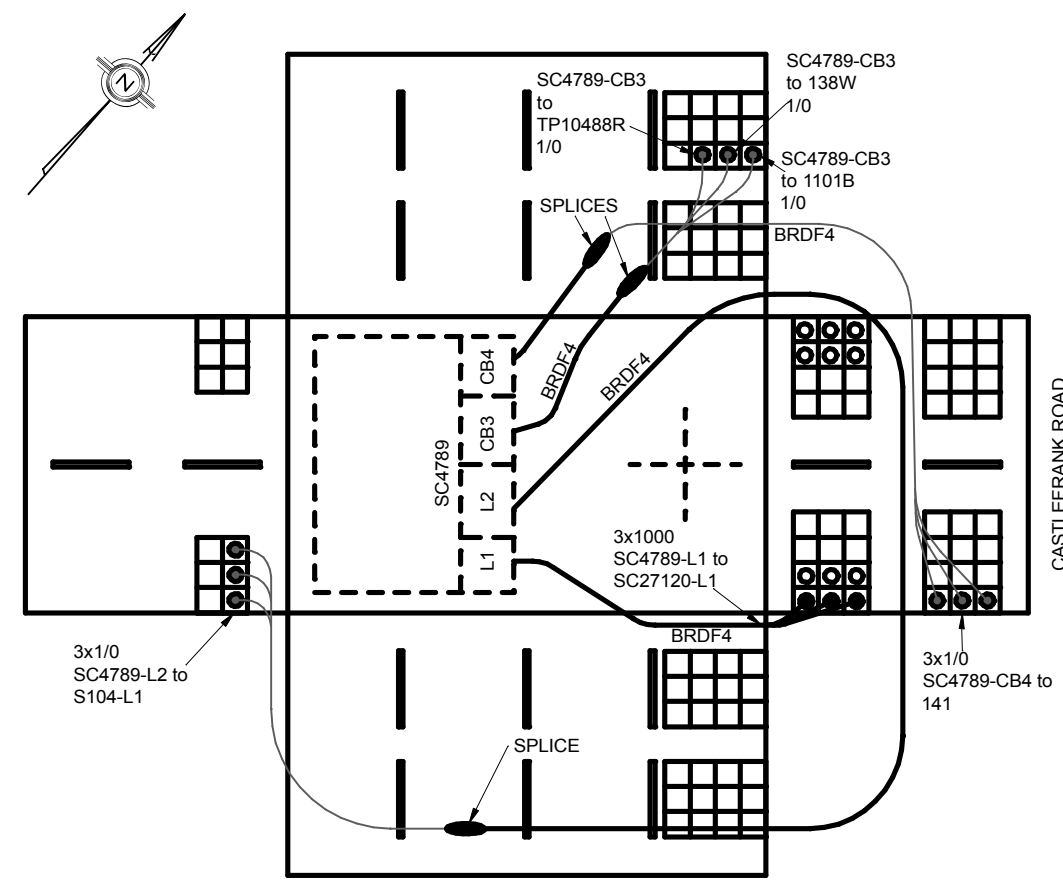
CONSTRUCTION DATA TABLE

Work Location #	Nomenclature ID#	Type of UG or OH Structure or Device	Civil Standards	Electrical Standards	Instructions
L1	SC4789 MH4845	Vista Switch Gear 6x12 Precast SWMH	UCS8025 UCS8033 UDS0001 UFS0001 UCS0005	UCG0001 UCG0003 UJS0300 UJS0400 UJS0401	CIVIL Install new 6x12 SWMH adjacent to existing switch base, with 4 bollards and grounding, stub out ducts as shown ELECTRICAL Install new Vista, create 9 new tails for existing cables and splice in MH4845. Install 3x1000mm cables from SC27120 - existing cables will enter MH at best location - splicing inside MH.
L2	SS1	PMH Switch Gear			CIVIL - Remove existing base ELECTRICAL - De-energize Switch and remove
L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14		Concrete encased Duct 3H x 4W	UCS0001 Detail 1		CIVIL - install 12 x 100mm concrete encased ducts 3Hx4W - Check MH details for proper duct entrance at each MH 4 road crossings (Police req'd on Castlefrank) ELECTRICAL Pull in 3 x 1000mm XLPE cables from SC27120 to SC4789 - splice where required
L4 L6 L8 L9 L10 L12	MH4846 MH4850 MH4849 MH4848 MH4847	6x12 Precast MH	UCS0014		CIVIL - install 5 precast MH's ELECTRICAL NA
L15		Concrete Encased Ductbank	UDS0001 Detail 1		CIVIL Connect proposed duct bank to existing duct structure ELECTRICAL
L16	SC27120	Existing Auto Vista		UCG0001 UCS0003 UJS0300 UJS0400 UJS0401	CIVIL NA ELECTRICAL Install T-Bodies on the 1000mm and use L1 Remove existing cables from L1 NIU cables to OH switches 147 + 603 - remove both OH switches
L17	X06706				CIVIL Remove OH switch 147
L18	X06707				CIVIL Remove OH switch 603

PROPOSED CABLE WORKS TABLE

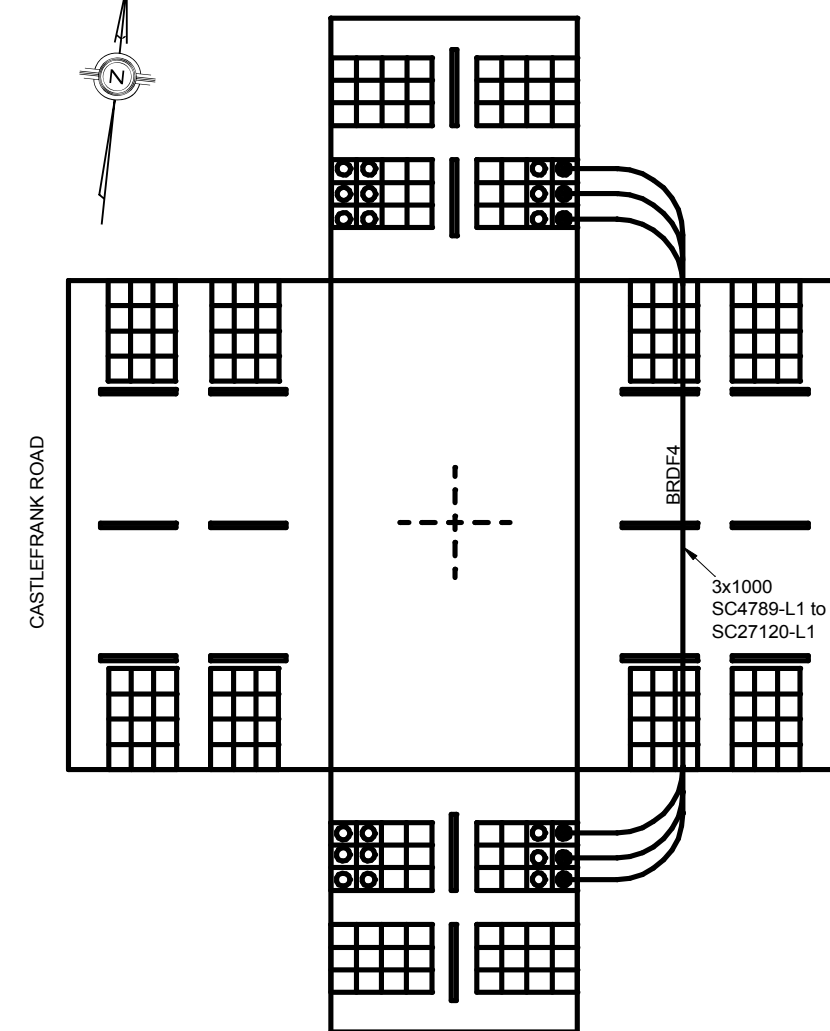
DUCT LABEL	CIRCUIT	CABLE TAG
SC4789 SC27120	BRDF4	Primary between SC4789-L1 And SC27120-L1
SC4789 S104	BRDF4	Primary between SC4789-L2 And S104-L1
SC4789 TP10488 138 1101	BRDF4	Primary between SC4789-CB3 And TP10488-R 138-W 1101-B
SC4879 141	BRDF4	Primary between SC4789-CB4 And 141-2





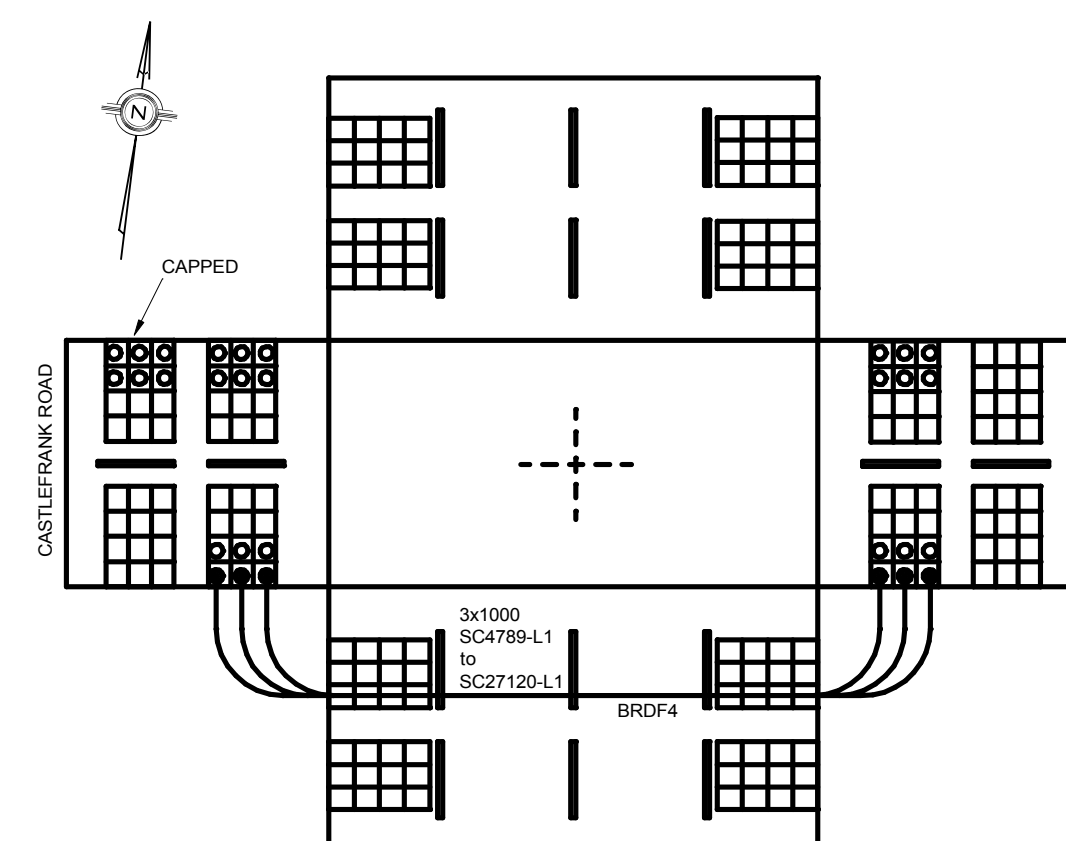
PROPOSED MH4845 (SC4789)

NTS



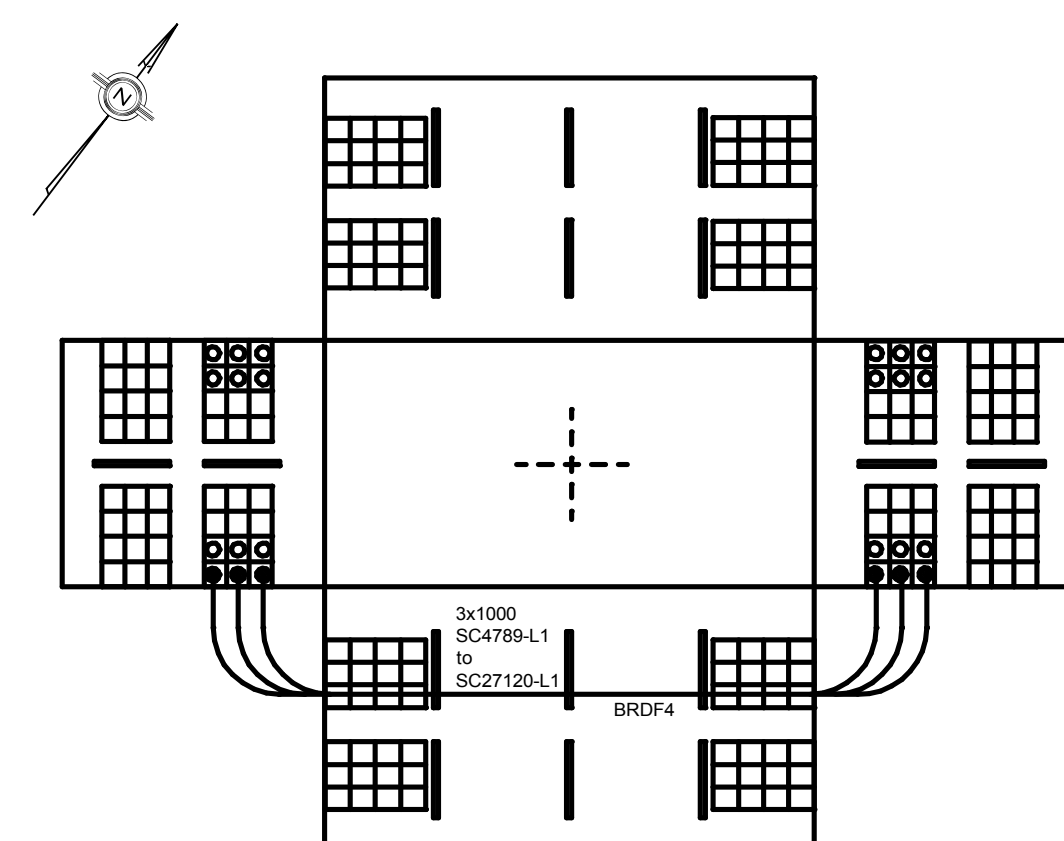
PROPOSED MH4846

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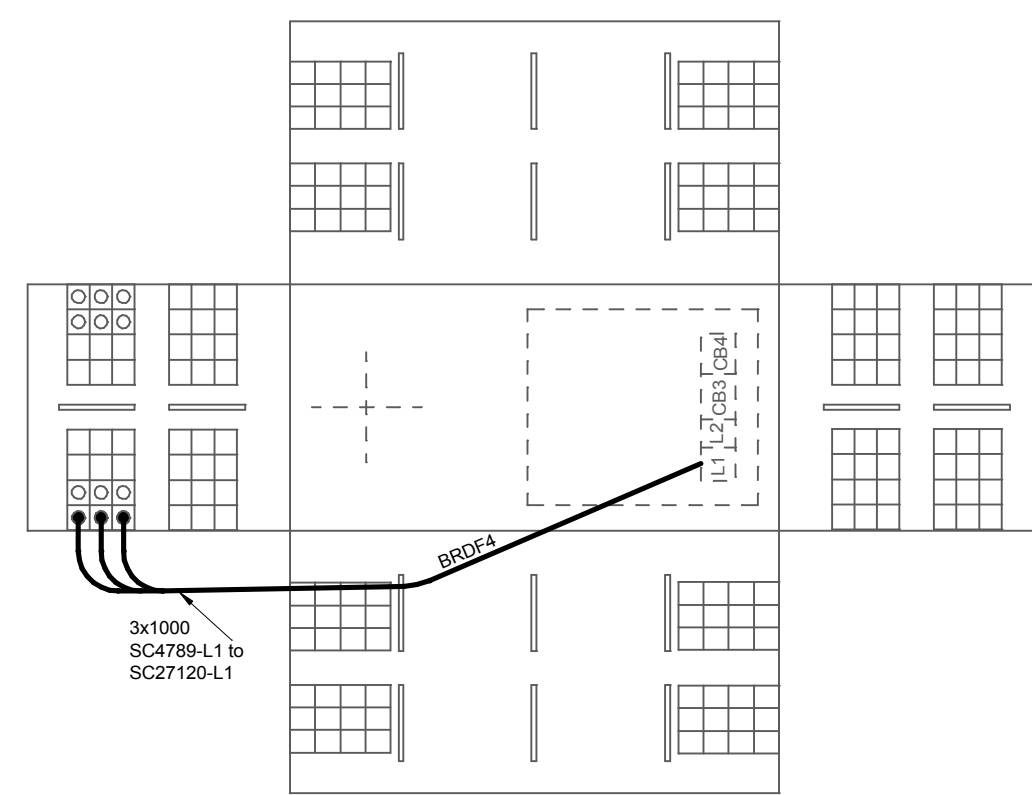
PROPOSED MH4850

NTS



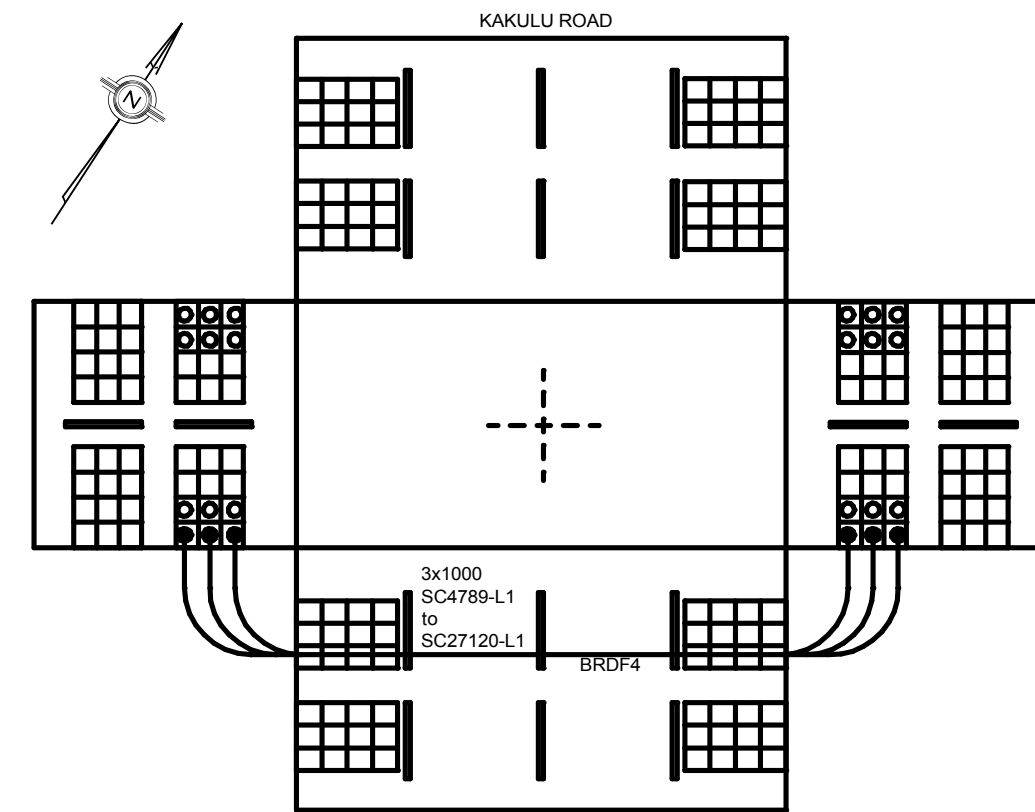
PROPOSED MH4849

NTS



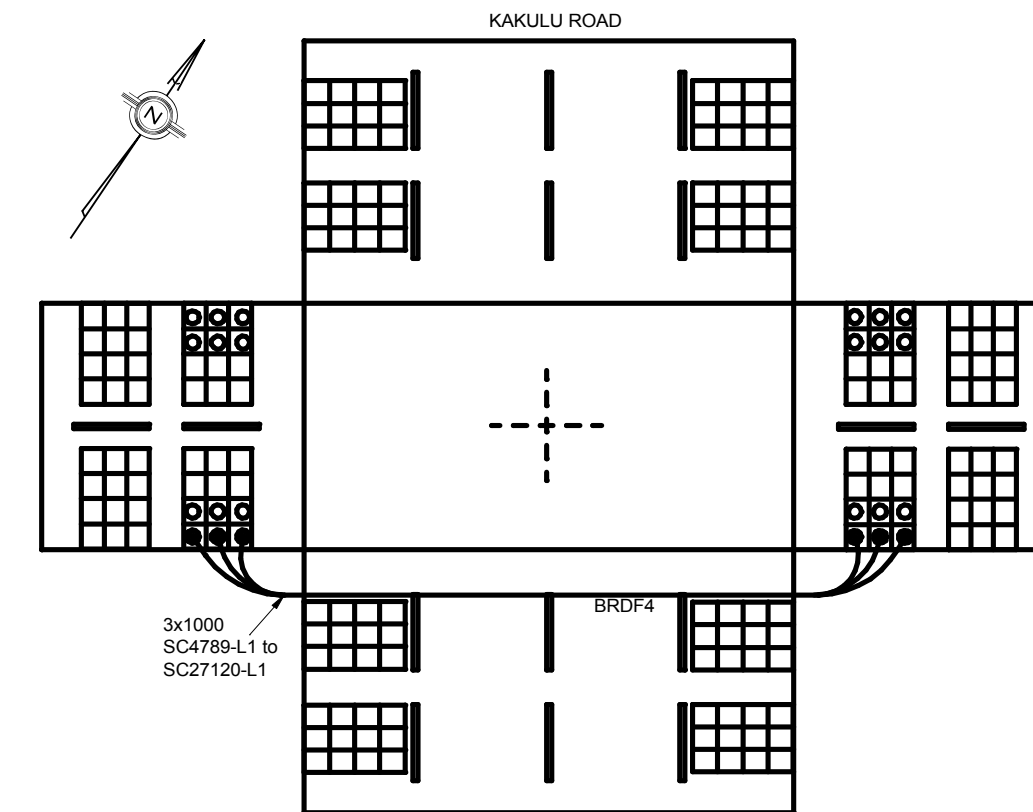
EXISTING MH4706 (SC27120)

NTS



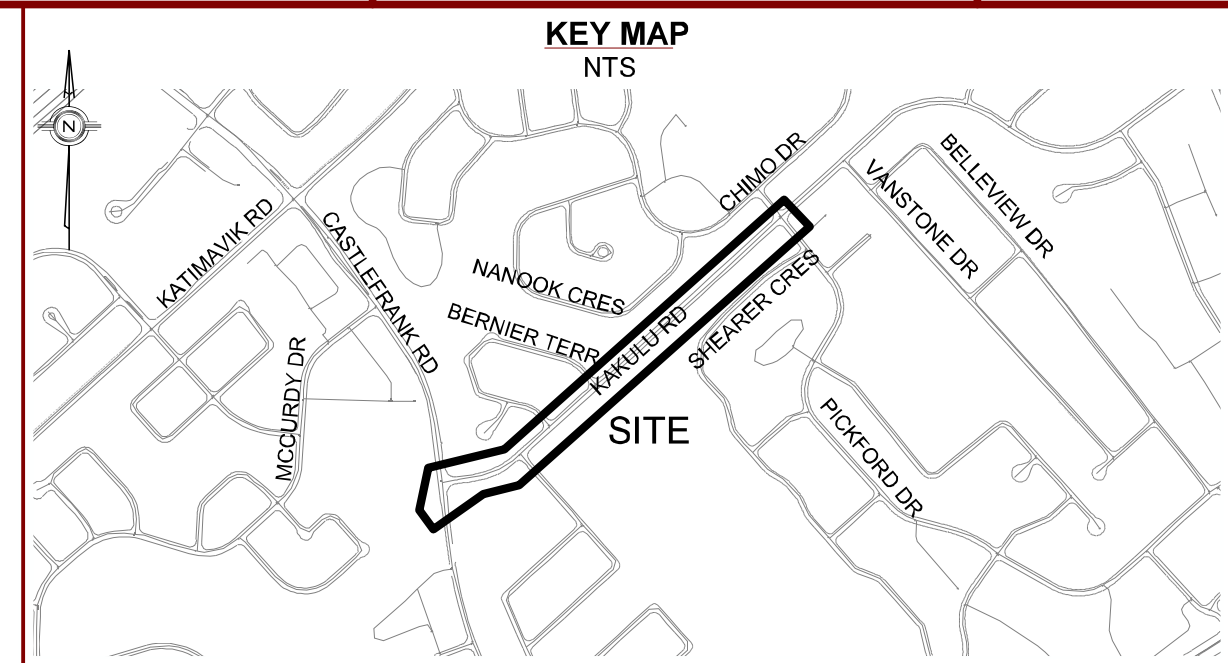
PROPOSED MH4848

NTS



PROPOSED MH4847

NTS



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ASSESSED CLASS OF SOIL	N/A		
SWITCH GEAR	VISTA TYPE 006		
TRANSFORMER	N/A	PROPOSED CABLE / CONDUCTOR	
POWER FUSE	N/A	PRIMARY	1000MCM & 1/0 28kV
CURRENT LIMITING FUSE	N/A	NEUTRAL	CONCENTRIC
ACCESS ROUTE		SECONDARY	N/A

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ASSOCIATED PROJECTS COM TOH TUG RES SUB OTHER

REFERENCED PROJECTS

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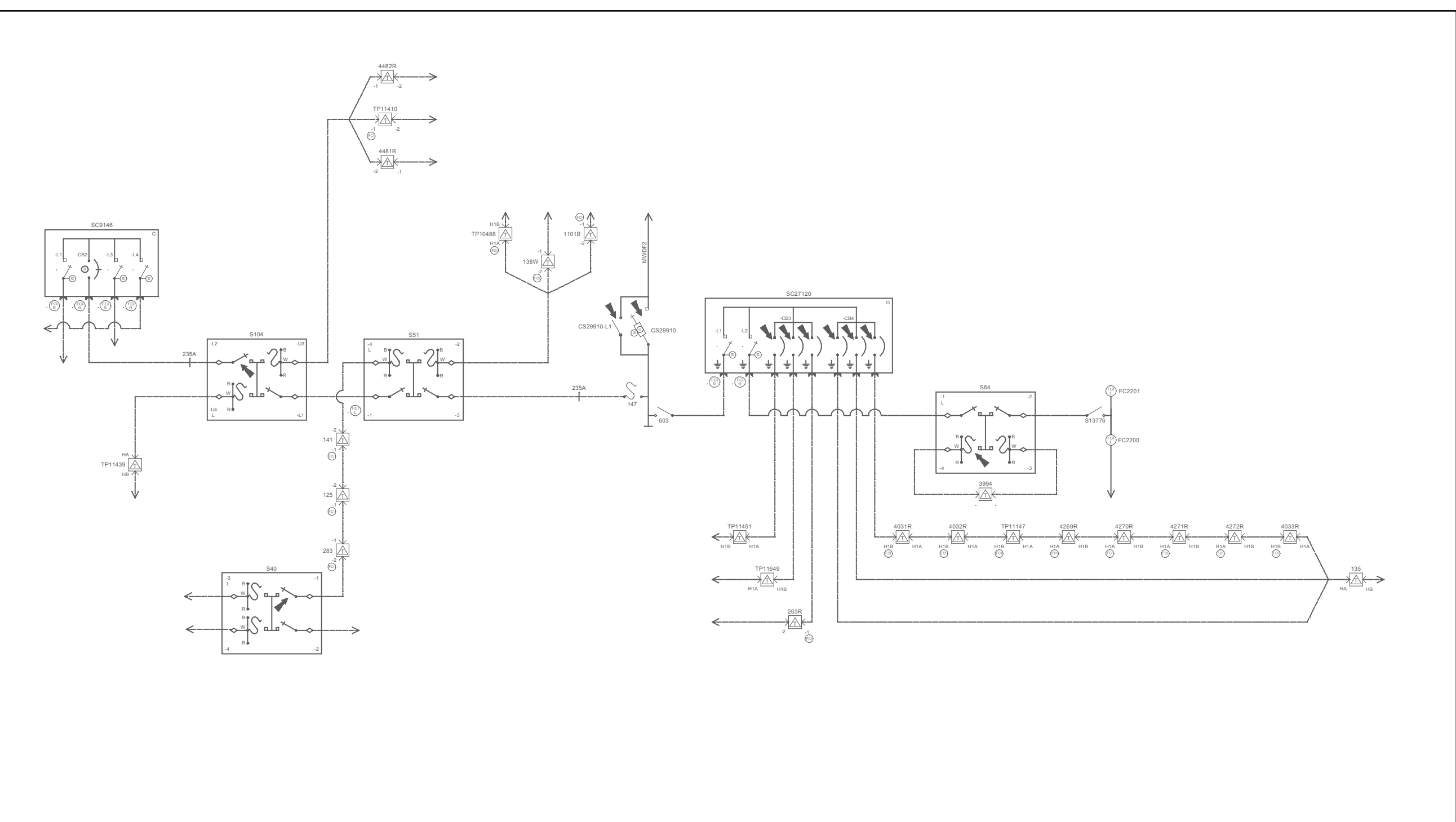
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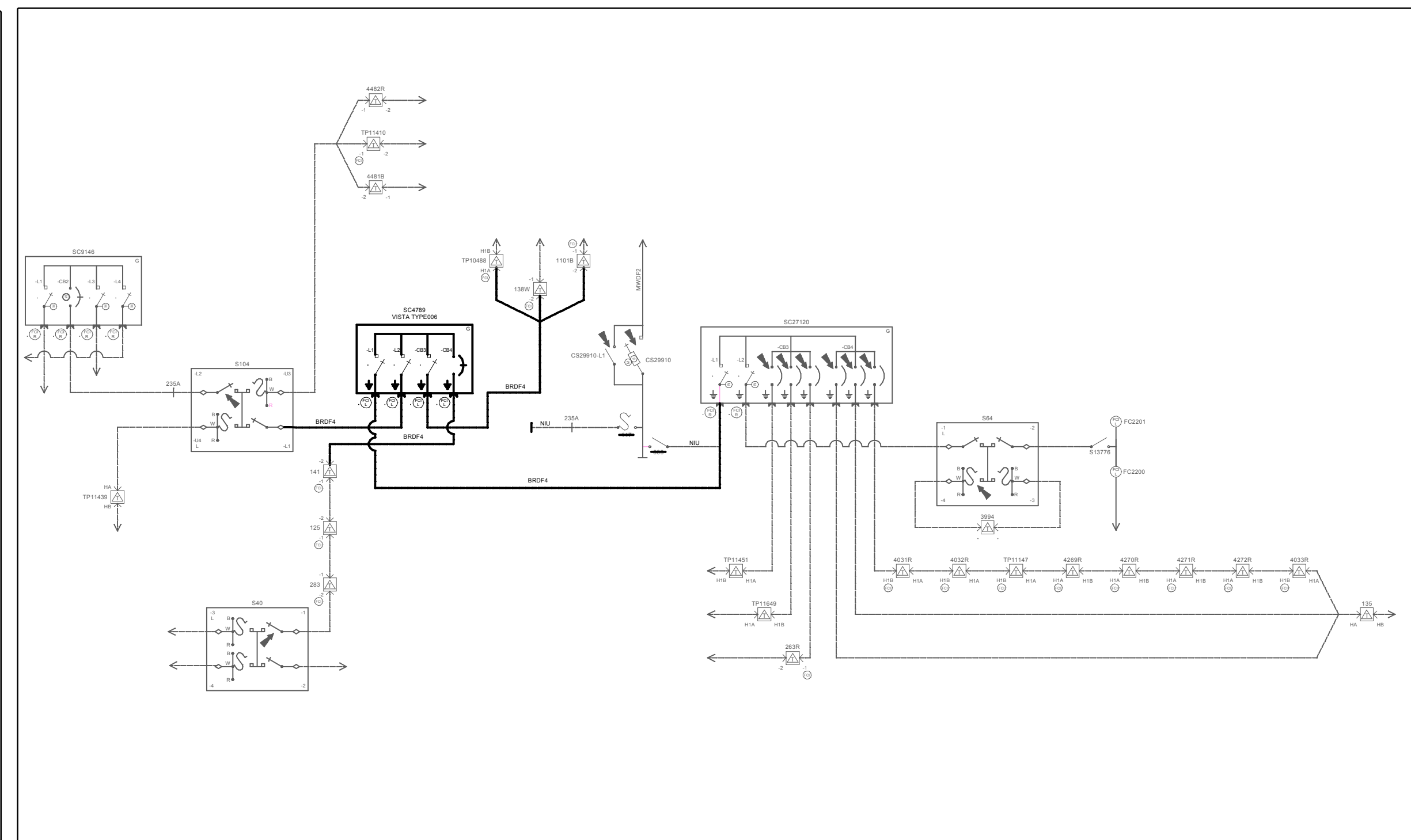
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EXISTING BRDF4 SINGLE LINE DIAGRAM

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PROPOSED BRDF4 SINGLE LINE DIAGRAM

N.T.S.

Hydro Ottawa, 100 King Street West, Toronto, Ontario M5X 1C4
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