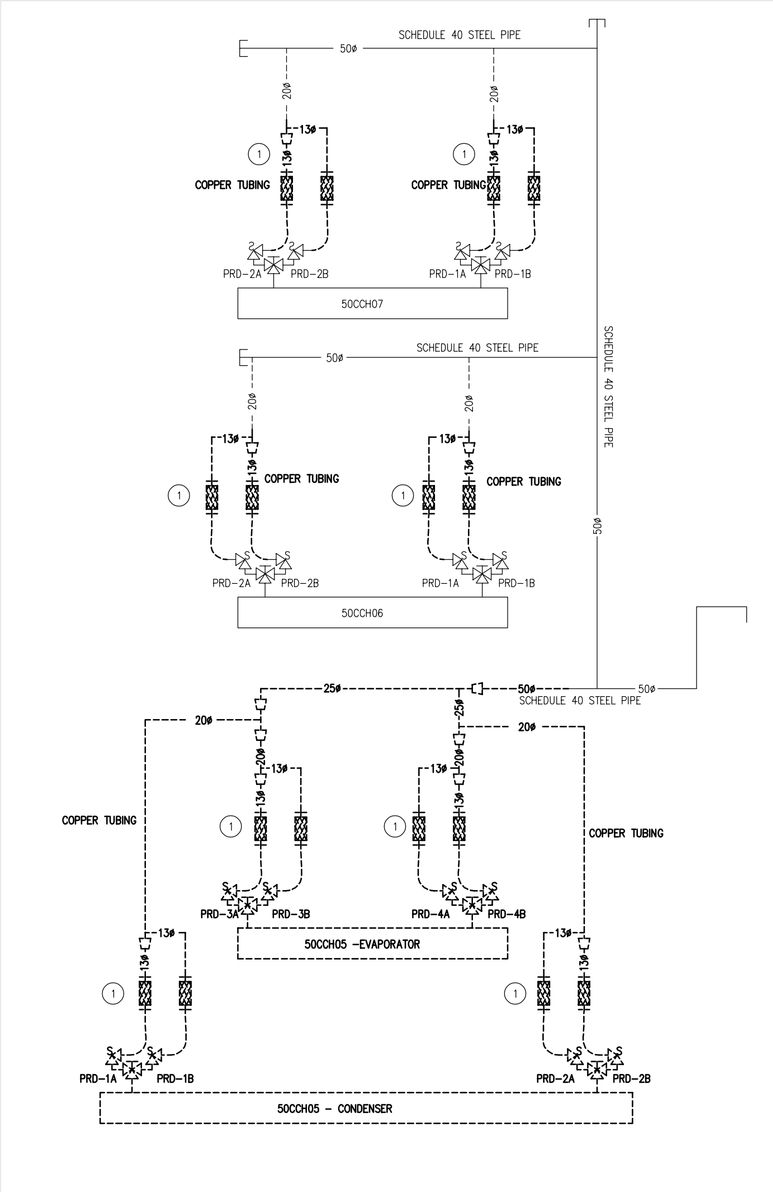
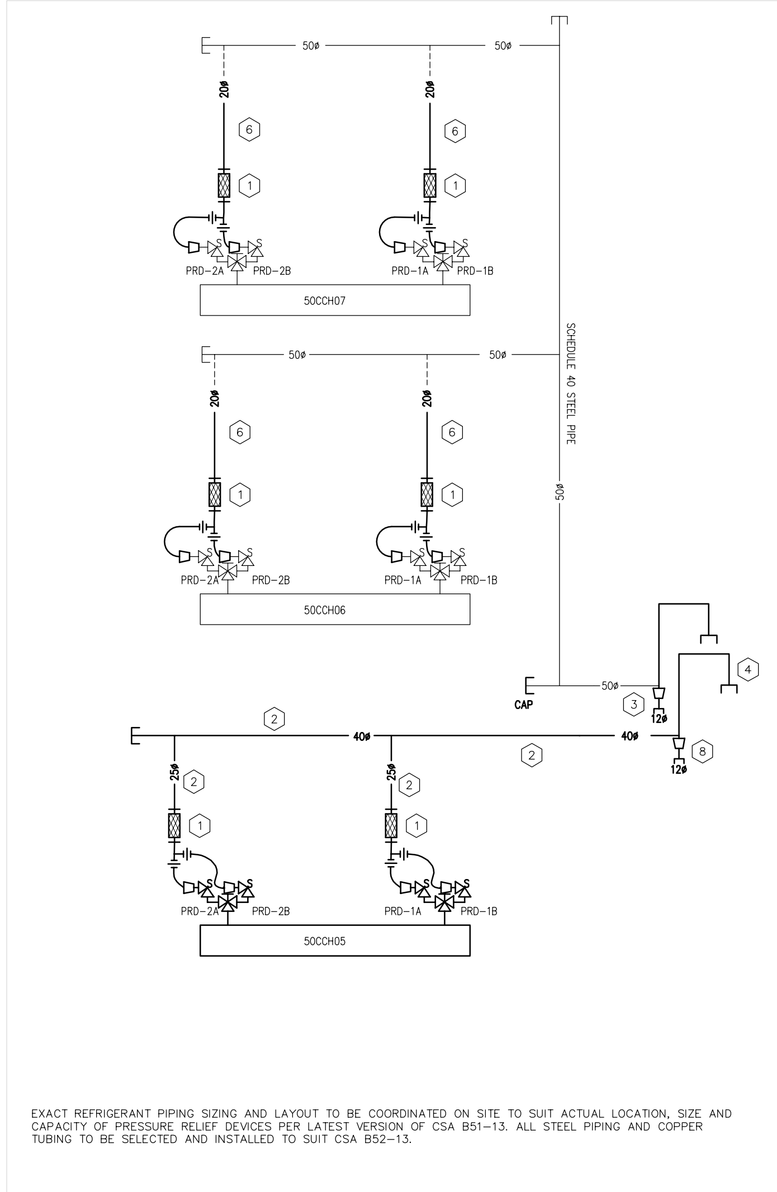


1 G02 REFRIGERANT RELIEF VENT PIPING SCHEMATIC– DEMOLITION

SCALE: NTS



EXACT REFRIGERANT PIPING SIZING AND LAYOUT TO BE COORDINATED ON SITE TO SUIT ACTUAL LOCATION, SIZE AND CAPACITY OF PRESSURE RELIEF DEVICES PER LATEST VERSION OF CSA B51–13. ALL STEEL PIPING AND COPPER TUBING TO BE SELECTED AND INSTALLED TO SUIT CSA B52–13.

2 G02 REFRIGERANT RELIEF VENT PIPING SCHEMATIC – NEW LAYOUT

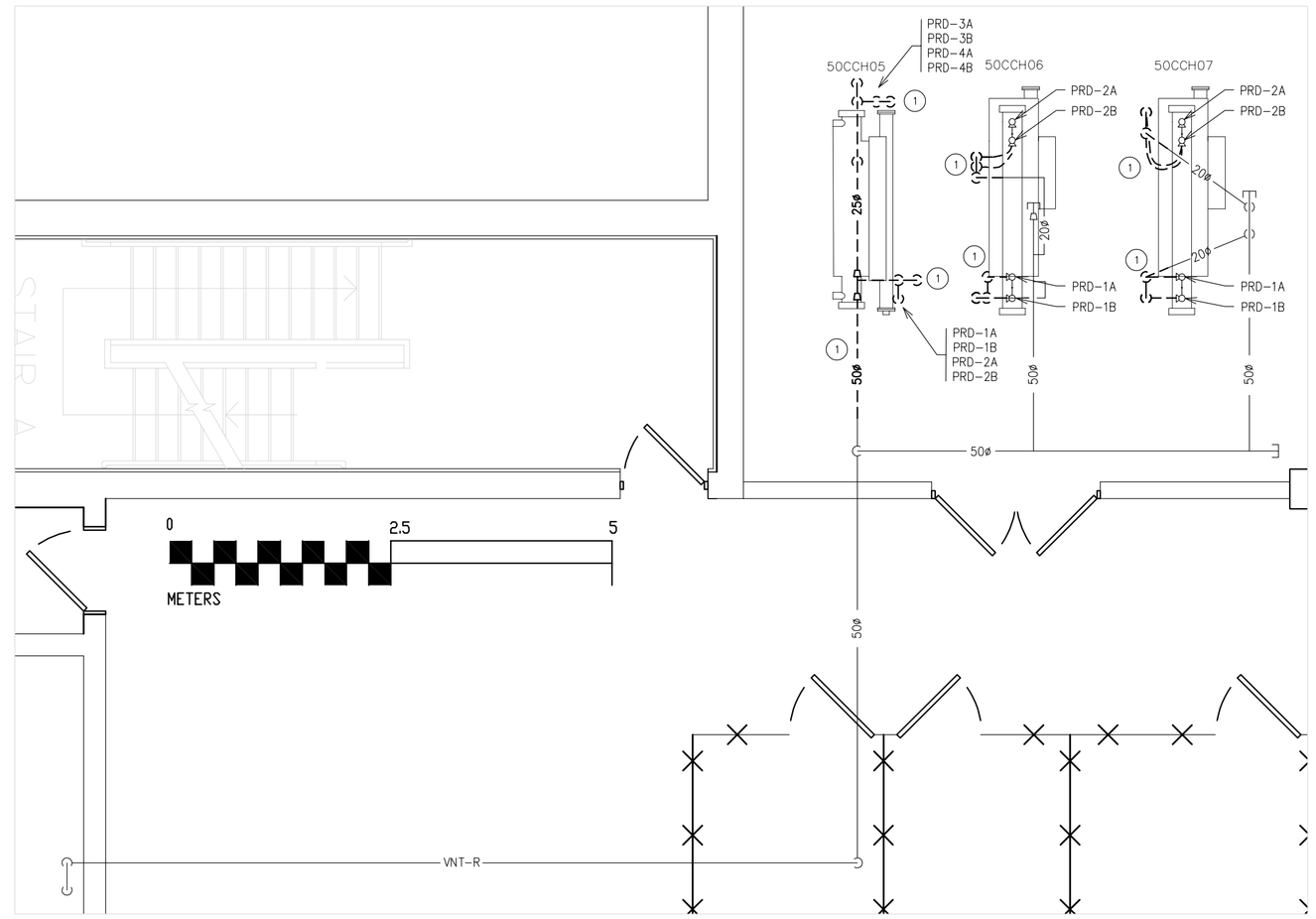
SCALE: NTS

DEMOLITION NOTES: (X)

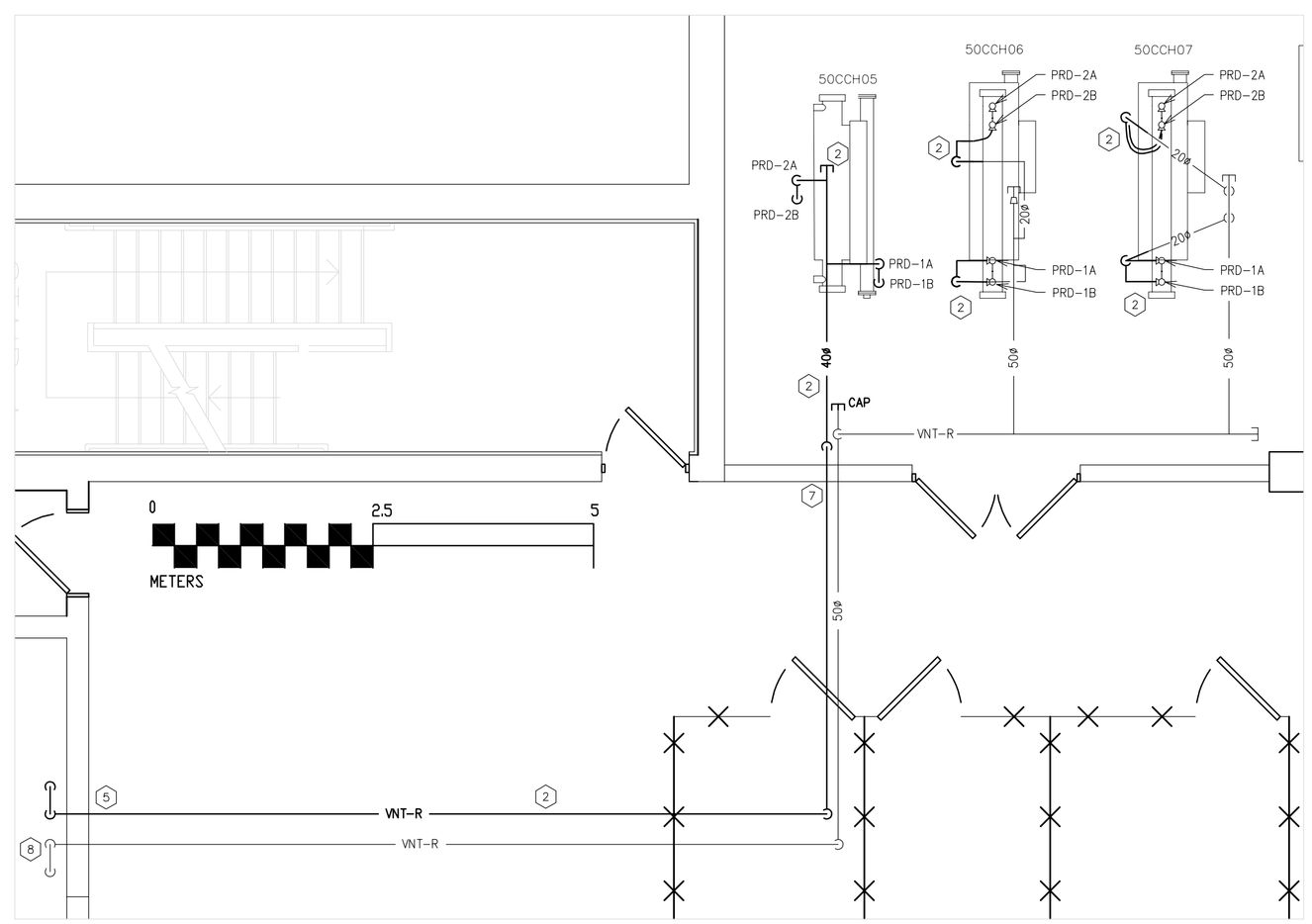
1. EXISTING REFRIGERANT VENT PIPING/TUBING TO BE REMOVED ALONG WITH FLEXIBLE, SUPPORTS, ETC., AS INDICATED ON DRAWING.

NEW WORK NOTES: (X)

1. NEW FLEX 304 STAINLESS STEEL DOUBLE BREADED FLEXIBLE HOSE, REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.
2. NEW REFRIGERANT VENT STEEL PIPING (40ø)/ COPPER TUBING (25ø) LAYOUT FROM NEW CHILLER TO OUTSIDE.
3. NEW REDUCE C/W DRAIN ON EXISTING PIPING. REINSTATE AND PAINT EXISTING VENT PIPING.
4. NEW EXTERIOR VENT PIPING TO BE VENTED TO THE OUTSIDE TO MATCH EXISTING LAYOUT.
5. CORE NEW 60mmø HOLE THROUGH EXISTING 200mm THICK CONCRETE WALL TO SUIT NEW PIPING. CONTINUOUSLY FILL VOID BETWEEN PIPE AND WALL WITH GRAY SILICONE CAULKING.
6. NEW COPPER TUBING VENTING FROM EXISTING CHILLER SAFETY RELIEF VALVES.
7. CORE NEW 60mmø HOLE THROUGH EXISTING 150mm THICK CONCRETE WALL TO SUIT NEW PIPING. CONTINUOUSLY FILL VOID BETWEEN PIPE AND WALL WITH FIRE PROOF CAULKING.
8. PROVIDE NEW DRAIN AT BASE OF EXISTING 50ø VENT PIPING.



3 G02 PLAN VIEW – EXISTING REFRIGERANT VENT LAYOUT



4 G02 PLAN VIEW – NEW REFRIGERANT VENT LAYOUT

CHILLER REFRIGERANT PRESSURE RELIEF DEVICES

PRD TAG	CIRCUIT CAPACITY LBS	SET PRESSURE PSIG	FLOW LBS AIR/MIN.	SIZE NPS	REF. TYPE NPS
50CCH07					
PRD–1A/1B	86	450	30.1	1/2	R–22
PRD–2A/2B	86	450	30.1	1/2	R–22
50CCH06					
PRD–1A/1B	86	450	30.1	1/2	R–22
PRD–2A/2B	86	450	30.1	1/2	R–22
50CCH05 – TO BE REPLACED					
PRD–1A/1B	–	450	30.1	1/2	R–22
PRD–2A/2B	–	450	30.1	1/2	R–22
PRD–3A/3B	–	300	20.3	1/2	R–22
PRD–4A/4B	–	300	20.3	1/2	R–22
50CCH05 – NEW					
PRD–1A/1B	31	600	49.7	5/8	R–410A
PRD–2A/2B	31	600	49.7	5/8	R–410A

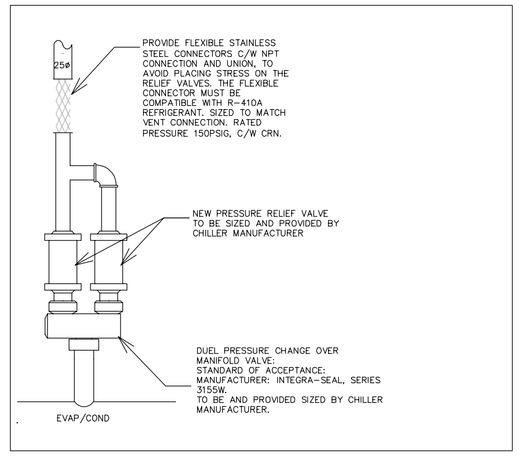
EXISTING CHILLER TO BE REMOVED.

MANUFACTURER	TRANE
NRC TAG	50CCH05
MODEL	CGWD0605CJOHBT101FFOUHG
CAPACITY (TONS)	65
NUMBER OF COMPRESSORS	4
COMPRESSOR TYPE	SCROLL
NOMINAL WEIGHT (KG)	1,600
MCA (A)	93
NOMINAL DIMENSIONS (mm)	3657x1016x1500
ELECTRICAL (V/PH/Hz)	575/3/60
REFRIGERANT TYPE:	R–22
NOTE:	EXISTING REFRIGERANT HAS BEEN REMOVED FROM CHILLER

NEW REPLACEMENT CHILLER SCHEDULE

MANUFACTURER	TRANE	
NRC TAG	50CCH05	
MODEL	CGWR065	
NOMINAL CAPACITY (TONS)	60	
NUMBER OF COMPRESSORS	3	
COMPRESSOR TYPE	SCROLL	
NOMINAL WEIGHT (KG)	1,156	
REFRIGERANT TYPE:	R–410A	
REFRIGERANT SAFETY RELIEF VALVES		
TAG	1	2
SET PRESSURE (PSIG)	600	600
FLOW RATE (LBS AIR/MIN)	49.7	49.7
NUMBER OF REF. CIRCUITS	2	
MINIMUM OPERATING CAPACITY	111,600 BTUH	
REF. CHARGE PER CIRCUIT (LBS)	31	
EVAPORATOR:		
ENT./LEV. WATER TEMP. (F)	44/54	
FLOW RATE (USGPM)	148	
EXCHANGER TYPE	SHELL AND TUBE	
CONNECTION TYPE	FLANGED–CLASS 150	
MAXIMUM PRESSURE DRIP (FT)	52 @ 235 USGPM	
NOMINAL FLOW RATE (USGPM)	148	
CONNECTION SIZE (DN)	100	
CONDENSER:		
ENT./LEV. WATER TEMP. (F)	85/95	
FLOW RATE (USGPM)	180	
EXCHANGER TYPE	SHELL AND TUBE	
CONNECTION TYPE	FLANGED–CLASS 150	
MAXIMUM PRESSURE DRIP (FT)	8.2 @ 342 USGPM	
NOMINAL FLOW RATE (USGPM)	180	
CONNECTION SIZE (DN)	100	
ELECTRICAL (V/PH/Hz)	575/3/60	
MCA (A)/ MOP (A)	93/125	

OPTIONS TO BE INCLUDED:
- BACNET MS/TP
- WARRANTY – COMPRESSOR 5 YEARS, FULL PARTS/LABOR 1 YEAR
- CHILLER START–UP TO BE PERFORMED BY A CERTIFIED MANUFACTURER SERVICE TECHNICIAN.
- FLOW SWITCH TO BE SUPPPLIED BY CHILLER MANUFACTURER AND FIELD–INSTALLED BY DIVISION 25.
- DUAL REFRIGERANT PRESSURE RELIEF VALVE TO BE PROVIDED.
- FOUR FIELD INSTALLED SUPER WIDE W ELASTOMERIC INSULATORS PADS. STANDARD OF ACCEPTANCE: MANUF.: KINETICS NOISE CONTROL, TYPE: NGD–6–45 SECURE CHILLER TO EXISTING PAD WITH HILTI KB–TZ ANCHORS.
- NON–FUSED DISCONNECT SWITCH
- COLOUR TOUCHSCREEN USER INTERFACE.



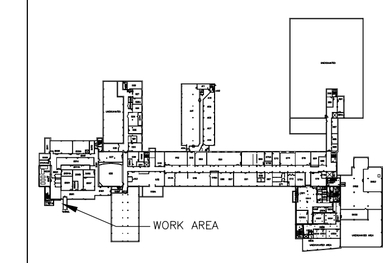
5 G02 NEW CHILLER VENT DETAIL

SCALE: NTS

National Research Council Canada / Conseil national de recherches Canada
Administrative Services and Property Management Branch / Division des services administratifs et gestion de l'immobilier

NRC · CNRC

KEY PLAN



No.	Date	Revision	By: Par:
0	04 02 2021	ISSUED FOR TENDER	R.G.C

Date Printed / Date imprimée

- Verify all dimensions and site conditions and be responsible for same
- Vérifier toutes les dimensions et l'etat des lieux et en assumer lo responsabilité

A Detail no. / No. du détail
B Location drawing no. / sur dessin no.
C Drawing no. / dessin no.

project / projet: CHILLER 50CCH05 REPLACEMENT

MONTREAL ROAD CAMPUS : M50

drawing / dessin: DETAIL AND SCHEDULES

designed / conçu	RPPM	date	JULY/2021
drawn / dessiné	RGC/ZF	scale / échelle	AS NOTED
checked / vérifié	IAF	sheet / feuille	2 of/de 2
approved / approuvé	ALS	W.O.no.	D.T.no.

dwg.no. / dessin no.: 5860-G02

ASPM B1 (1000x707)