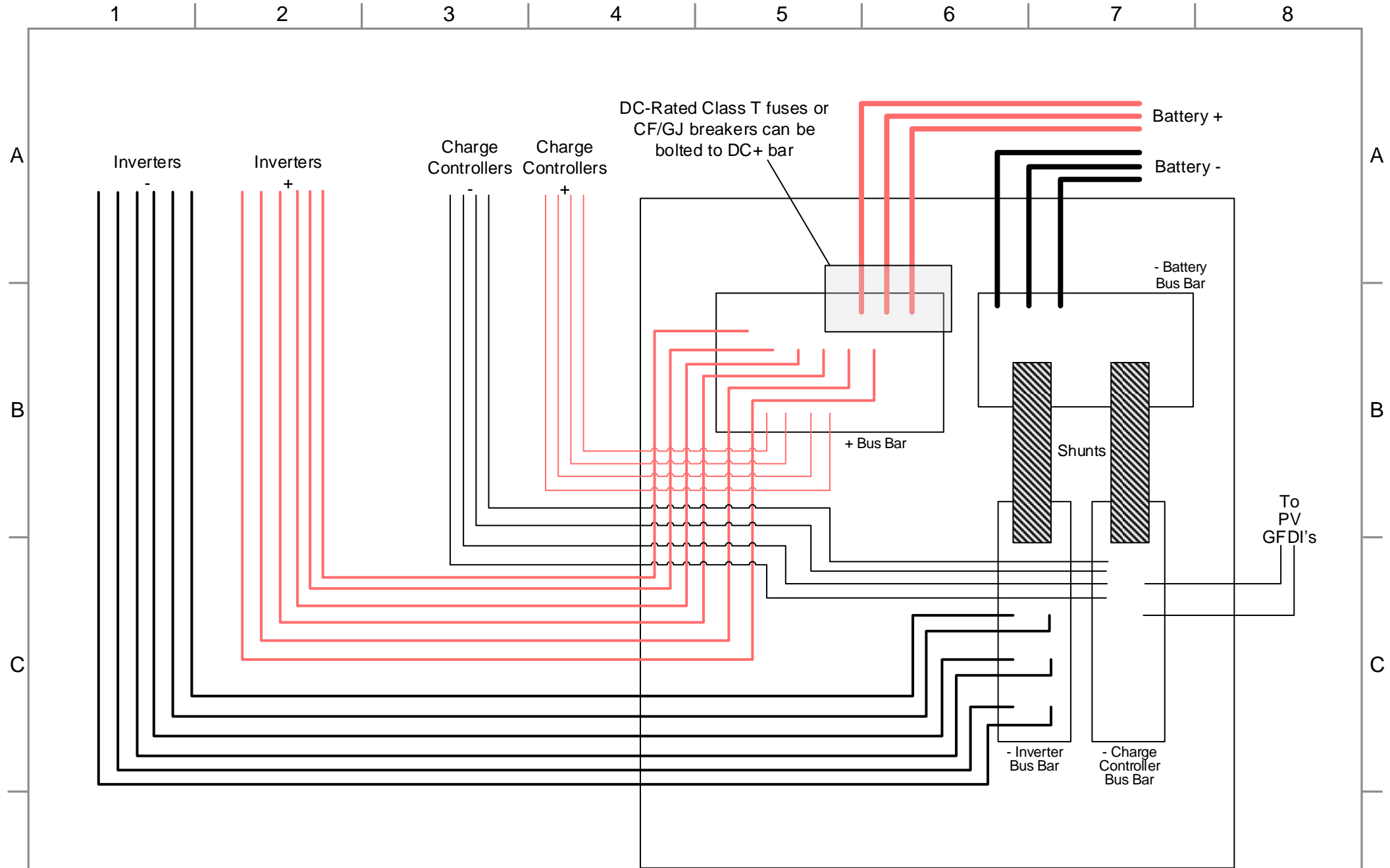


FM80 DC- and DC+ outputs are routed (①) to FP's for GFDI and OCPD breakers, then routed to DCBS (②). If a DC Panelboard is used (Page 3) only DC- needs to be routed to FP3's for the GFDI's.

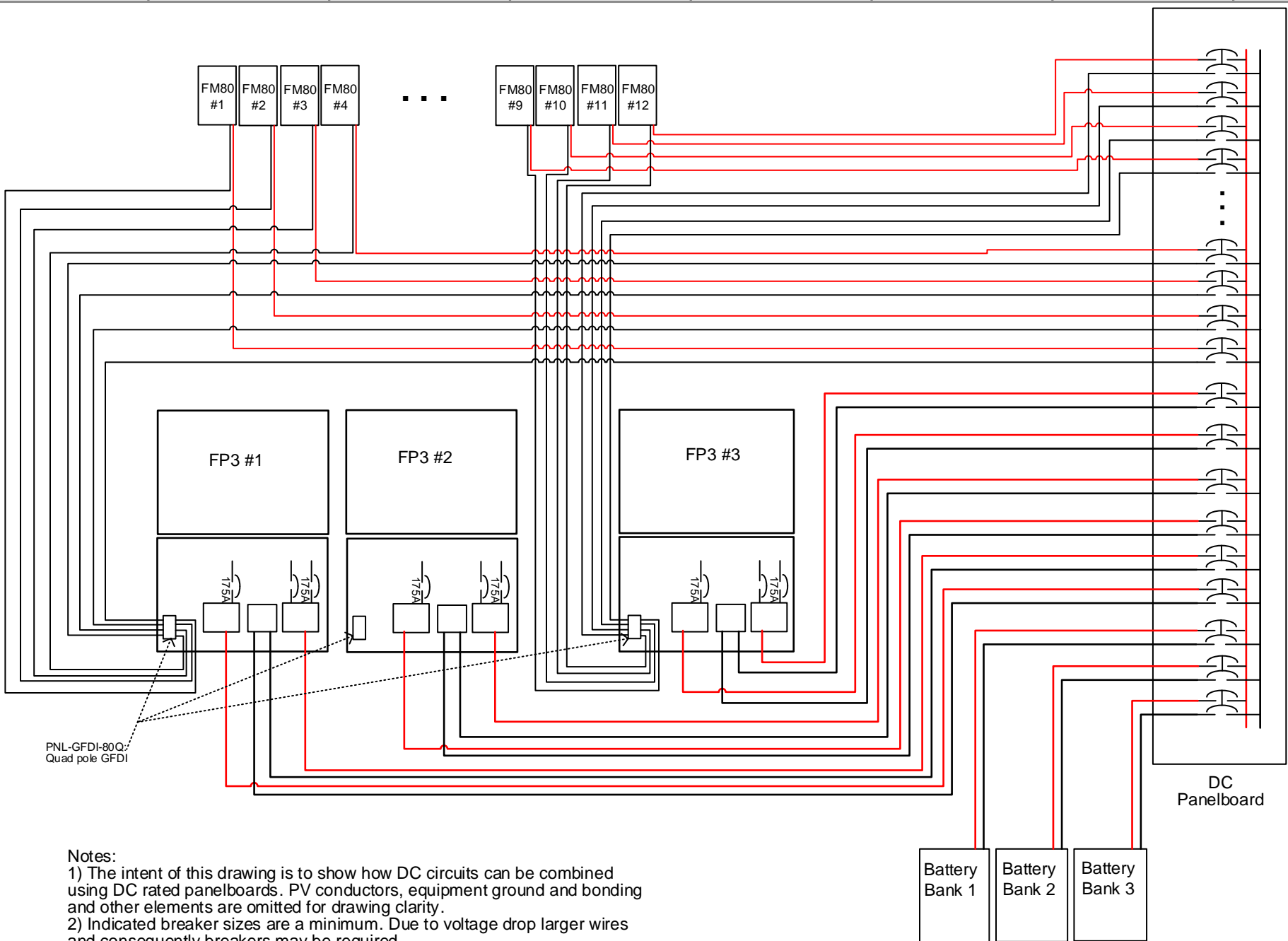
- Notes:
- A) A single FP3's DC cabinet has breaker space for 4 charge controllers. If more space is needed, the AC cabinet can also be used, where running a combination of AC and DC wiring is not a code violation.
 - B) Bypass switch
 - B1) Each pole rated for 30A x QTY of inverters connected to that phase.
 - B2) Requires two poles for 120/240V systems, one pole for 230V systems, and 3 poles for 230V/400V systems.
 - C) FNDC limited to measuring 1000A

Document description: This drawing set is a guide for wiring for up to nine FXR inverter/chargers configured for three phase (WYE) applications. PV charge controller wiring is also shown on its own sheet. Always check with AHJ for specific installation requirements.				Sheet list: 1) System single line & cover sheet 2) Three-line: DC bussing 3) Three-line: DC bussing using DC panelboard 4) Three-line: AC Combining Panel and Bypass Switch 5) Three-line: AC wiring in FW-1000's 6) Three-line: PV wiring 7) HUB wiring			
TITLE Multi-stack three-phase FXR (w/combining panels) system diagrams				SHEET TITLE System single line & cover sheet			
FILENAME MULTI-STACK FP3 FXR WITH LOADCENTERS.R3.RL.8-19-2015.VSDX		DRAWN BY REX L.	DATE 8/19/15	EDITED BY	EDITED ON	REV R3	SHEET 1



Notes:
 1) This is example system consists of, 3 battery banks, 3 Flexpower (FP) inverter systems, 4 charge controllers.
 2) OCPD must be utilized to protect all conductors.

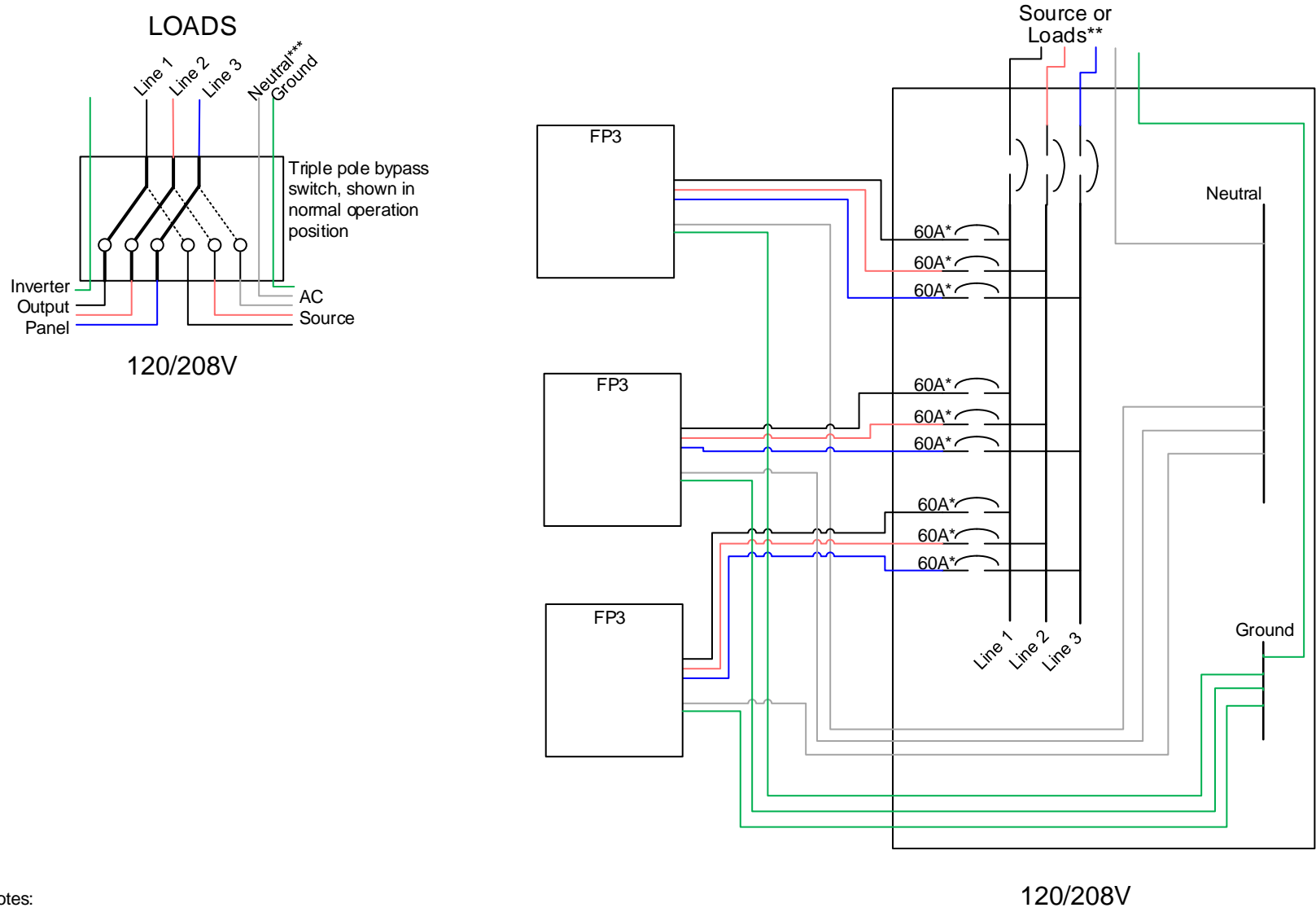
TITLE Multi-stack three-phase FXR (w/combining panels) system diagrams				SHEET TITLE Three-line: DC Bussing			
FILENAME MULTI-STACK FP3 FXR WITH LOADCENTERS.R3.RL.8-19-2015.VSDX	DRAWN BY REX L.	DATE 8/19/15	EDITED BY	EDITED ON	REV R3	SHEET 2	



PNL-GFDI-80Q
Quad pole GFDI

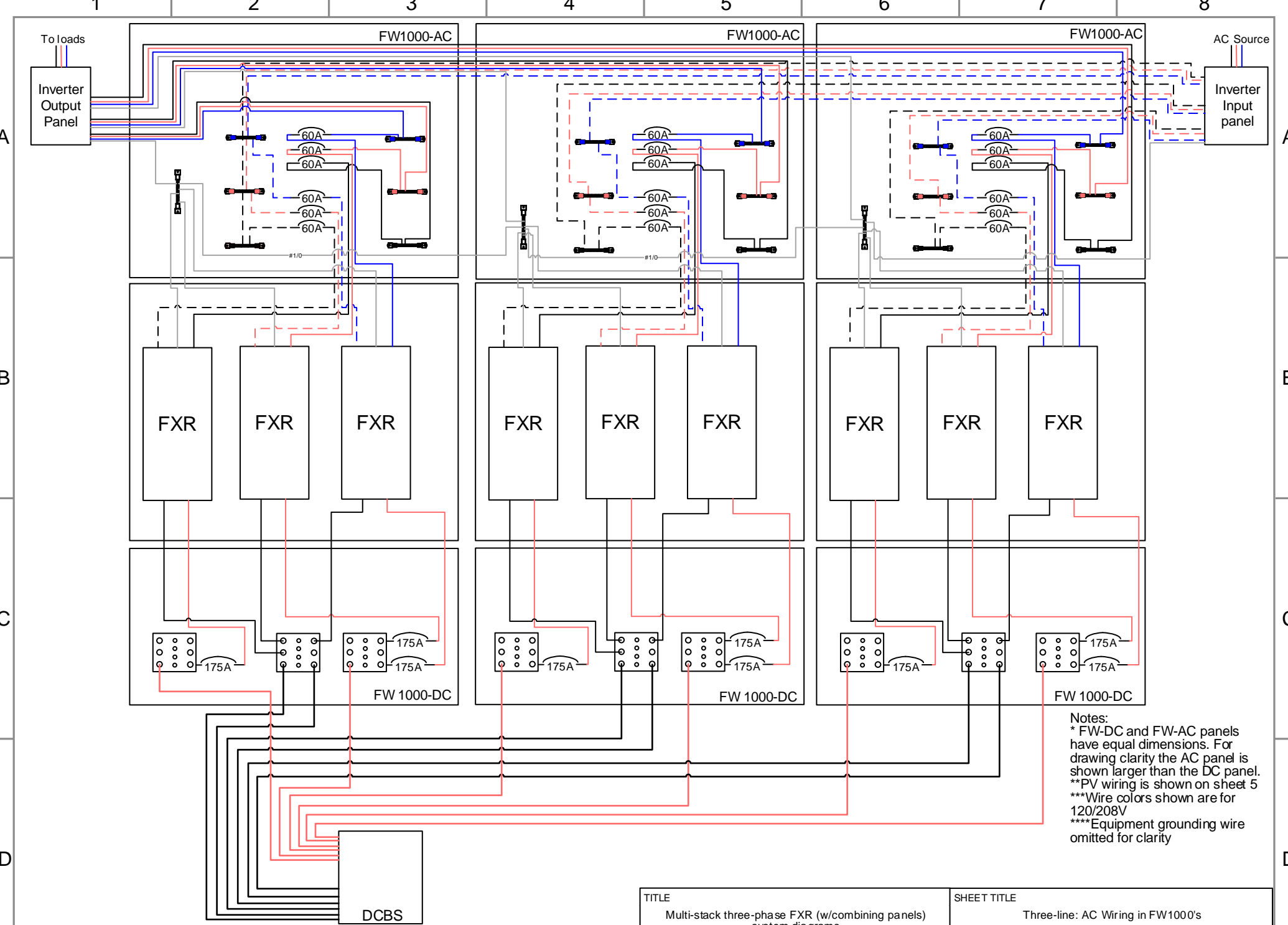
- Notes:
- 1) The intent of this drawing is to show how DC circuits can be combined using DC rated panelboards. PV conductors, equipment ground and bonding and other elements are omitted for drawing clarity.
 - 2) Indicated breaker sizes are a minimum. Due to voltage drop larger wires and consequently breakers may be required.
 - 3) GFDI's can be mounted in any available breaker spaces within GSLCs.
 - 4) For drawing clarity only some of the GFDI wiring is shown. The same principle applies for FP3 #2.

TITLE Multi-stack three-phase FXR (w/combining panels) system diagrams				SHEET TITLE Three-line: DC Bussing using DC Panelboard			
FILENAME MULTI-STACK FP3 FXR WITH LOADCENTERS.R3.RL.8-19-2015.VSDX	DRAWN BY REX L.	DATE 8/19/15	EDITED BY	EDITED ON	REV R3	SHEET 3	



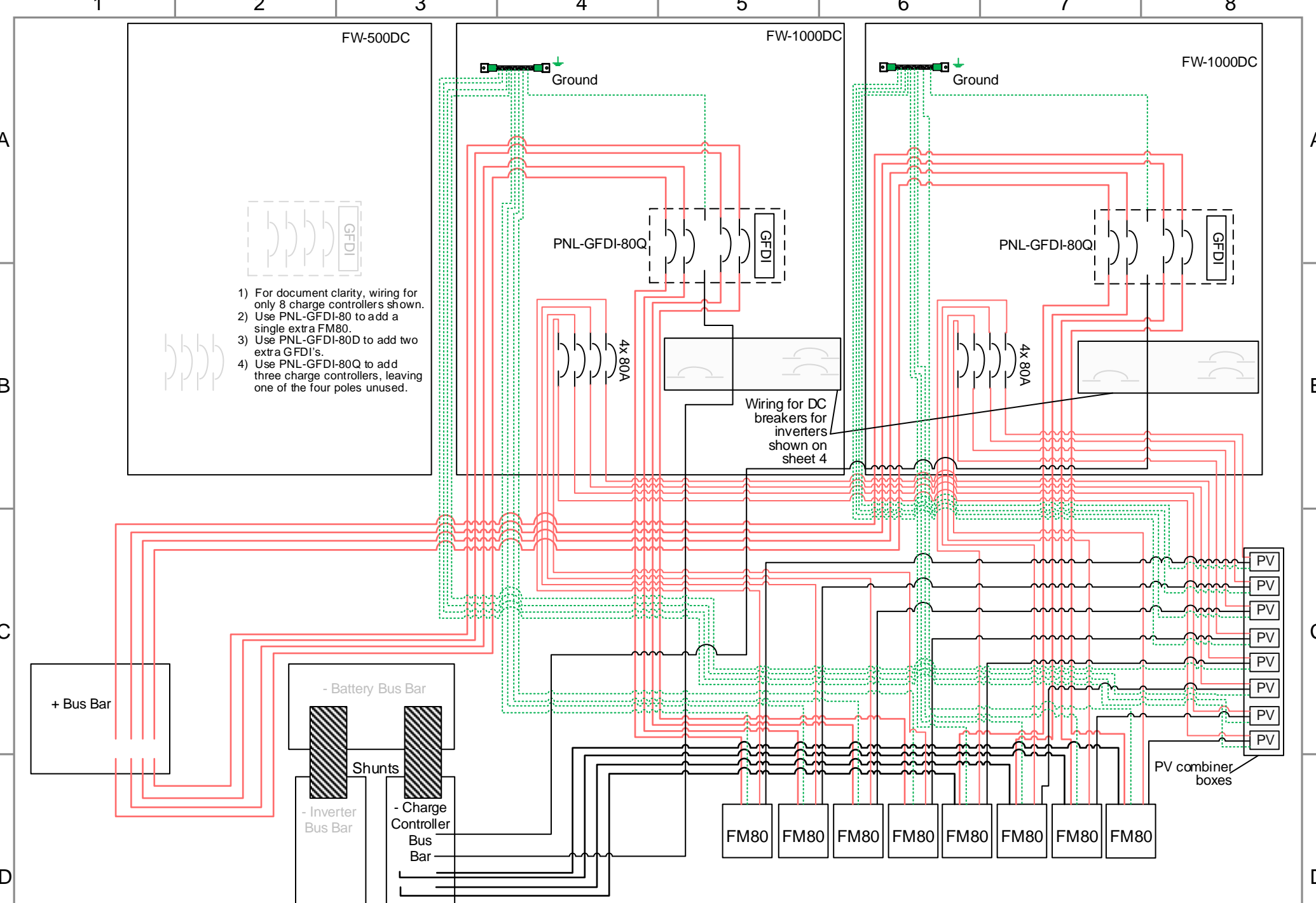
Notes:
 * If preferred, 3-pole breakers can be used for each FP3. Voltage drop could dictate larger conductors and OCPD.
 **For input panels, breakers distribute source power to inverters. For output panels, breakers consolidate inverter outputs into a single output.
 ***Since neutral is not switched, it passes through input to loads, regardless of bypass switch position.

TITLE Multi-stack three-phase FXR (w/combining panels) system diagrams				SHEET TITLE Three-line: AC Combining Panel and Bypass Switch			
FILENAME MULTI-STACK FP3 FXR WITH LOADCENTERS.R3.RL.8-19-2015.VSDX	DRAWN BY REX L.	DATE 8/19/15	EDITED BY	EDITED ON	REV R3	SHEET 4	



Notes:
 * FW-DC and FW-AC panels have equal dimensions. For drawing clarity the AC panel is shown larger than the DC panel.
 **PV wiring is shown on sheet 5
 ***Wire colors shown are for 120/208V
 **** Equipment grounding wire omitted for clarity

TITLE Multi-stack three-phase FXR (w/combining panels) system diagrams				SHEET TITLE Three-line: AC Wiring in FW1000's				
FILENAME MULTI-STACK FP3 FXR WITH LOADCENTERS.R3.RL.8-19-2015.VSDX	DRAWN BY REX L.	DATE 8/19/15	EDITED BY	EDITED ON	REV R3	SHEET 5		

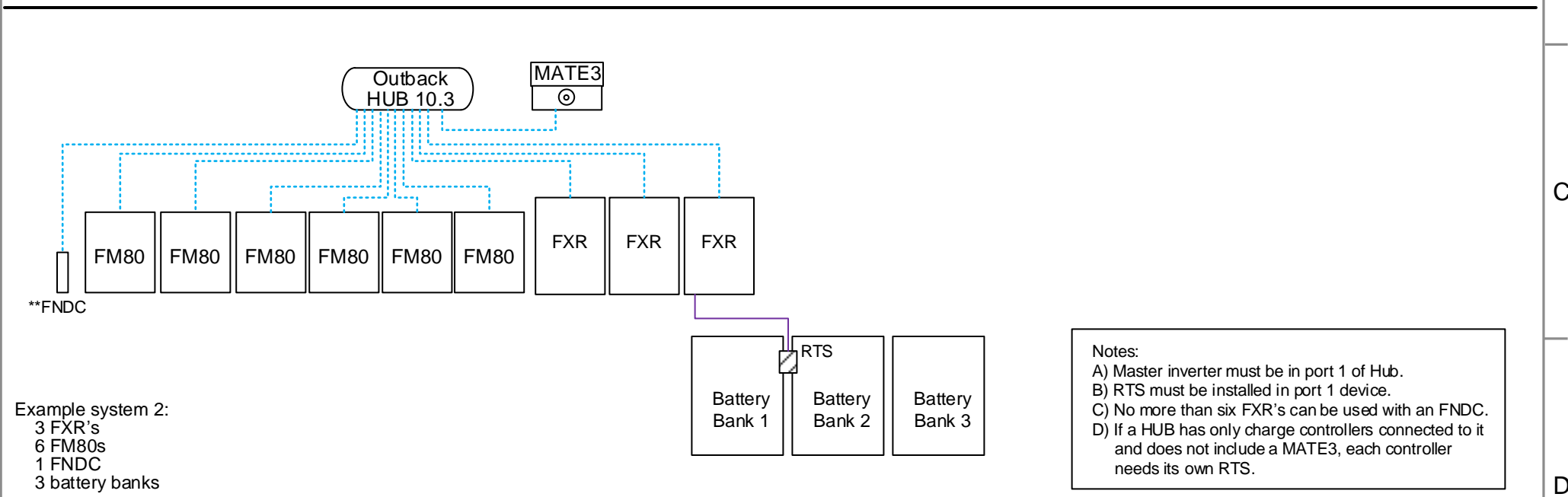
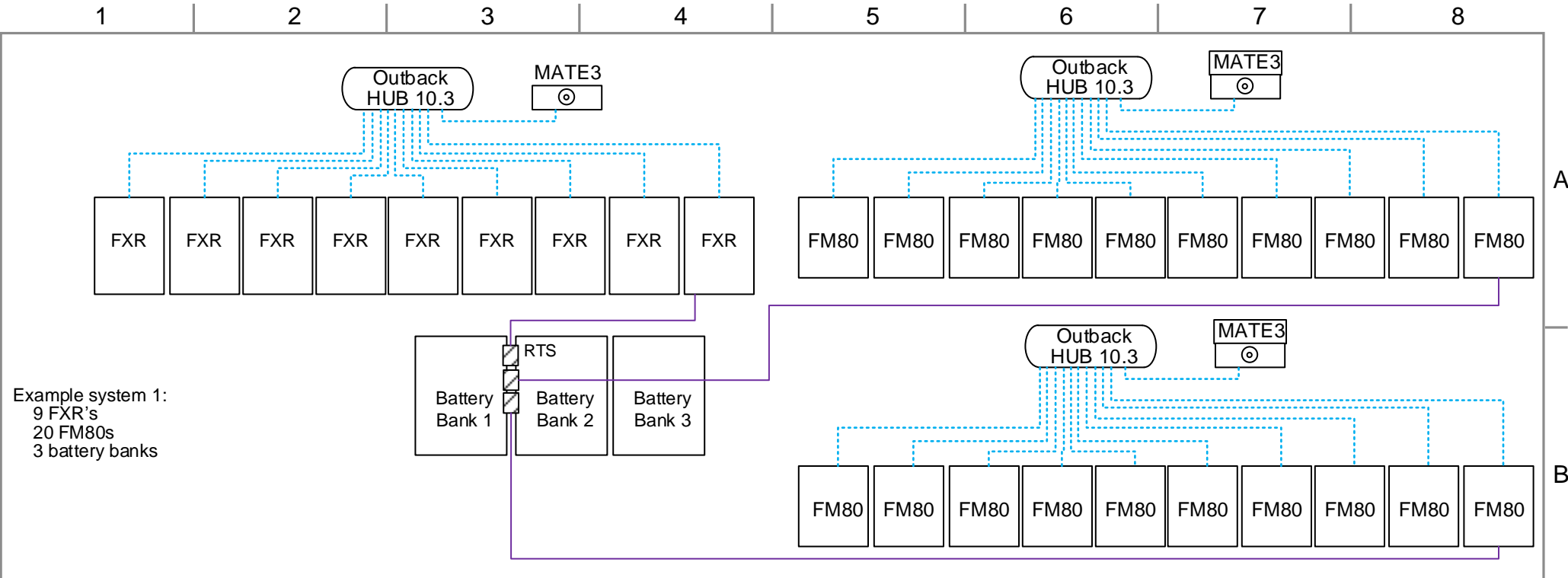


- 1) For document clarity, wiring for only 8 charge controllers shown.
- 2) Use PNL-GFDI-80 to add a single extra FM80.
- 3) Use PNL-GFDI-80D to add two extra GFDI's.
- 4) Use PNL-GFDI-80Q to add three charge controllers, leaving one of the four poles unused.

Wiring for DC breakers for inverters shown on sheet 4

PV combiner boxes

TITLE Multi-stack three-phase FXR (w/combining panels) system diagrams				SHEET TITLE Three-line: PV Wiring			
FILENAME MULTI-STACK FP3 FXR WITH LOADCENTERS.R3.RL.8-19-2015.VSDX	DRAWN BY REX L.	DATE 8/19/15	EDITED BY	EDITED ON	REV R3	SHEET 6	



Notes:
 A) Master inverter must be in port 1 of Hub.
 B) RTS must be installed in port 1 device.
 C) No more than six FXR's can be used with an FNDC.
 D) If a HUB has only charge controllers connected to it and does not include a MATE3, each controller needs its own RTS.

TITLE Multi-stack three-phase FXR (w/combining panels) system diagrams				SHEET TITLE HUB Wiring			
FILENAME MULTI-STACK FP3 FXR WITH LOADCENTERS.R3.RL.8-19-2015.VSDX	DRAWN BY REX L.	DATE 8/19/15	EDITED BY	EDITED ON	REV R3	SHEET 7	