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Unitec Parts, Otis Glide® A Electrical Setup Manual

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1 Description

This document covers the installation of the Otis Glide A door operator on Open Order applications when replacing Otis door operators that use either multidrop or discrete wire communication with the Otis car controller. Instructions include wiring the Otis Glide A operator and associated electronics to successfully commission the operator.

NOTE: Non-Otis door operators and non-Otis control systems **are not** covered in this document.

NOTE: For upgrading the door operator on LRS/LRV systems, refer to UT-ID 22.17.1-8, *Otis Glide® A for Mod Open Order Upgrade—Electrical Installation on LRV/LRS Controllers*.

2 Parts Ordering and Specification

For parts ordering and specification information, see UT-ID 22.17.1-1, *Otis Glide A Specification and Ordering Guide for Mod & Open Order*.

NOTE: For part ordering and installation instructions when installing the Glide A on LRS/LRV systems, see UT-ID 22.17.1-8, *Otis Glide® A for Mod Open Order Upgrade—Electrical Installation on LRV/LRS Controllers*.

3 Mechanical Installation

3.1 Door Operator Installation

For the mechanical installation of the door operator, see UT-ID 22.17.1-2, *Otis Glide A for Mod: Mechanical Installation Guide*.

3.2 Power Supply Mounting

The AAA24430AE Otis Glide A power supply mounts inside the car controller cabinet. Identify or create holes to mount the power supply transformer base (a grounded surface is ideal). If enough space is not available to mount the power supply, it may be mounted in an adjacent enclosed space in the machine room using appropriate hardware (see Appendix A: Part Numbers for typical enclosure AAA308UD2).

Power Supply Dimensions: 5.5 x 10 x 7.5 in. (140 x 254 x 190,5 mm)

3.3 Discrete Interface Assembly Mounting

The discrete interface assembly (AAA24430AD), if used, mounts close to the Otis Glide A controller to allow connections using the kit harness (AAA24431H). It may be mounted next to the door operator controller using machine screws or adjacent to the controller on top of the car. The enclosure must be fully secured and allow access to the AAA26800AWG PC board for setup and troubleshooting.

Discrete Interface Assembly Dimensions (for mounting purposes):
3.5 x 13 x 11 in. (89 x 330 x 280 mm)

4 Electrical Installation

Prior to initiating electrical installation, ensure that all components are securely mounted in their designated locations. Electrical wiring and connections should be performed after all bulk mounting and physical adjustments have been made and all equipment related to the previous door operator has been removed.

4.1. Common Installation Components

Regardless of the car controller and door operator communication type (multidrop or discrete) take the following steps:

1. Otis Glide A Door Operator wiring (section 4.1.1).
2. Otis Glide A power supply electrical installation (section 4.1.2).

4.1.1 Otis Glide A Door Operator Wiring

The Otis Glide A door operator wiring consists of:

- Verifying the factory pre-wiring
- Securing proper PE (earth ground) connections to the operator

1. Verify that the Otis Glide A door operator is wired as shown in Figure 1. Ensure that all wires are properly connected and all the shield wires are properly terminated to the PE points (shown in Figure 2) on the controller enclosure.

Improper grounding of the motor resolver wire shields may result in inconsistent operation.

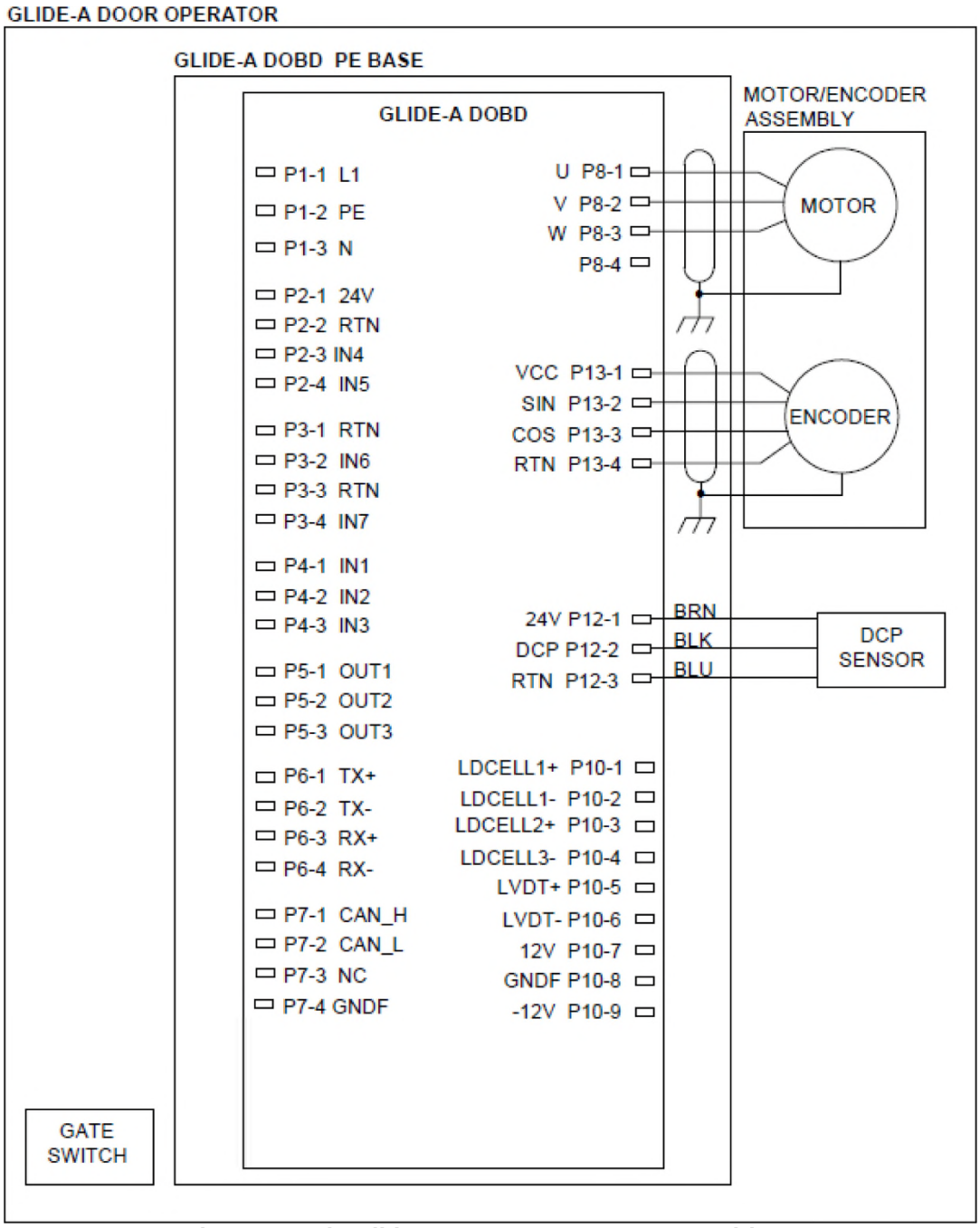


Figure 1: Otis Glide A Door Operator Factory Wiring

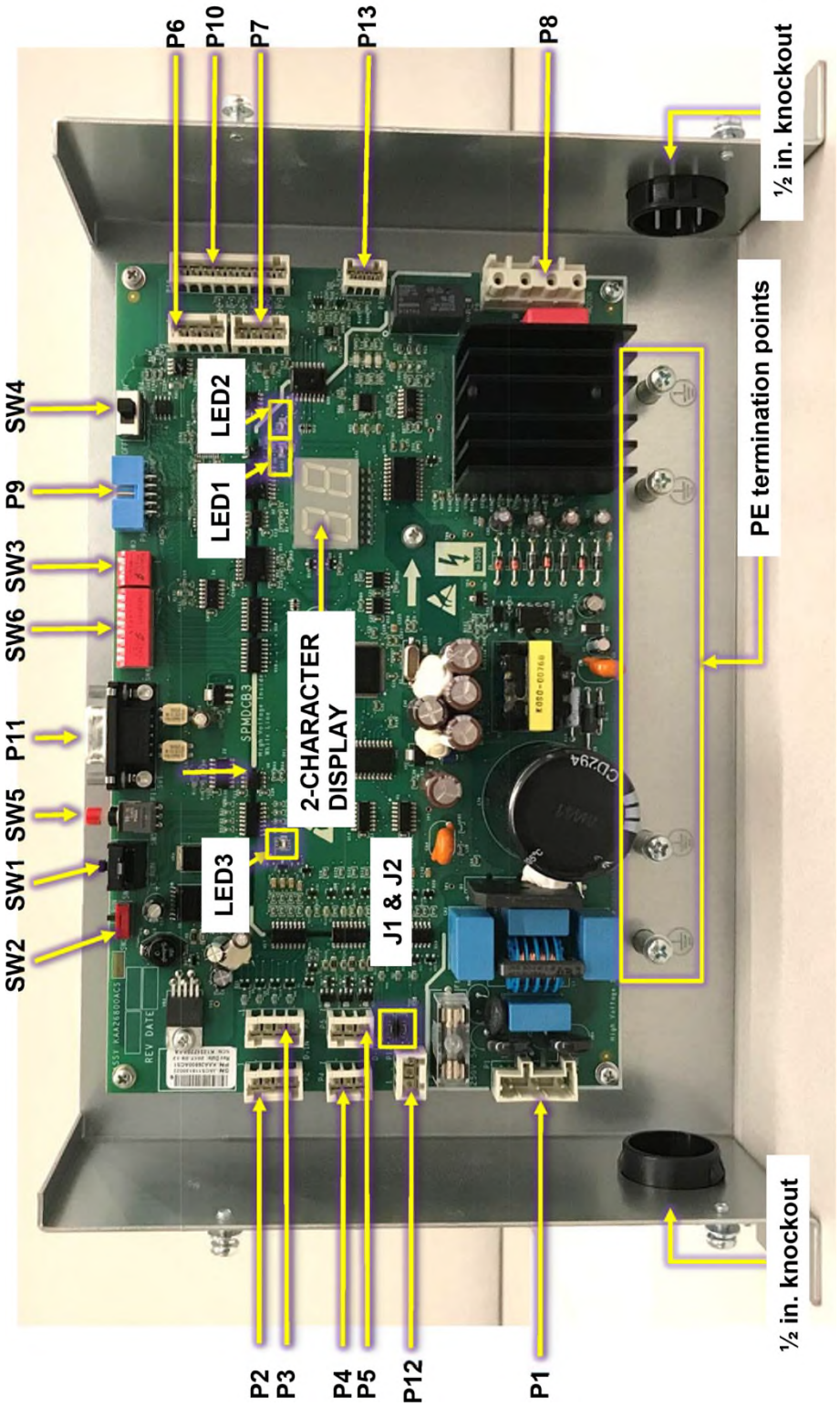


Figure 2: Otis Glide KAA24360ABX Controller PC Board (assembly cover, plugs and wires not shown for clarity)

2. Terminate the Glide A gate switch PE wire (factory installed) to the Glide A controller PE points (see Figure 2).

3. Using a self-tapping machine screw (provided with the kit) secure one end of a 14AWG green/yellow PE wire with ring terminal (provided with the kit) onto the Glide A door operator sheet metal. The recommended location is adjacent to the opening for the wires directly beneath the Glide A controller. Ensure that the length of the wire is long enough for the other end to terminate at a known PE point on top of the car through all the conduits and wire troughs.

Proper PE connection to the operator is required to ensure safety and consistent operation.

4.1.2 Otis Glide A Power Supply Installation

The single-phase power supply (AAA24430AE) consists of:

- Transformer AAA225JR
- Input fuses F1, F2 (AAA375BK26 3.5 A, 600 V)
- Output fuses F3, F4, and F5 (AAA375BK28 3 A, 600 V)
- Terminal blocks, mounting plate, and other miscellaneous hardware.

The power supply accepts single-phase input from 208–600 VAC (depending on arrangement, see Table 1) and provides outputs of 240 VAC @ 2.1 A and 120 VAC @ 2.1 A. The 120 VAC is used to power the electrical interface pc board AAA26800AWG located inside the enclosure assembly AAA24430AD. The 240 VAC is used to power the Otis Glide A door operator.

The power supply **must** be:

- Mounted in an enclosed space, usually inside the car controller cabinet.
- Properly connected to PE. Typical installation of the power supply will include a physical PE wire attached to the enclosure PE at one end and the base of the power supply transformer on the other end.

The power supply diagram is shown in Figure 3.

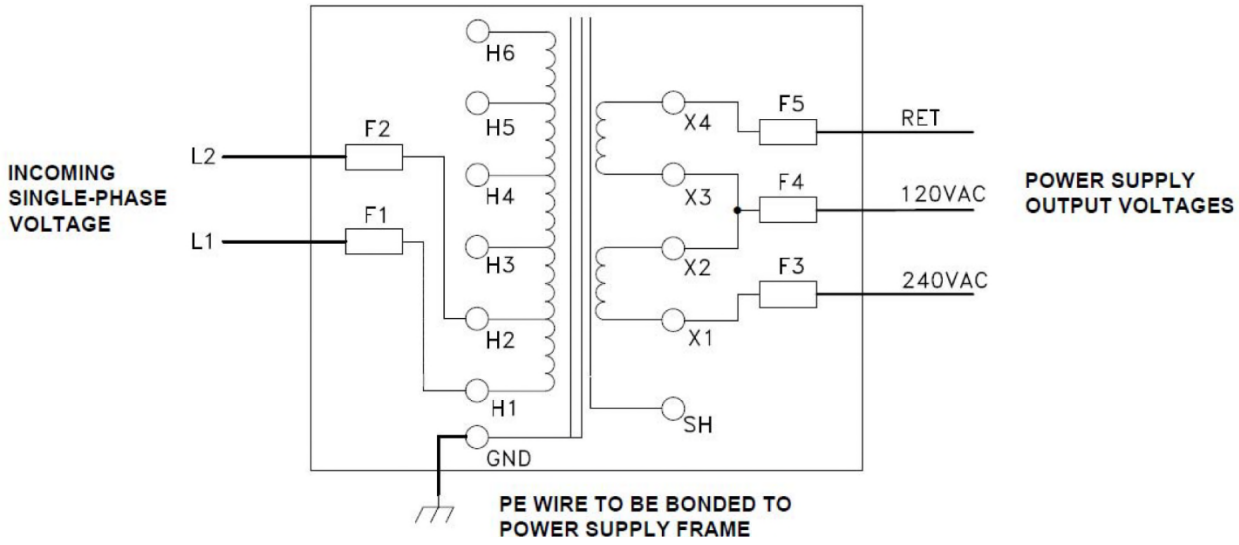


Figure 3: AAA24430AE Wiring

1. Mount the power supply in an enclosed space.

2. Terminate and secure a known PE wire to the base of the transformer. Note that the GND and SH terminal blocks are connected to the power supply chassis.

3. **Verify that the primary winding on the transformer is connected to the proper taps on the terminal block using Table 1. Adjust the factory wiring as needed.**

Table 1: Power Supply Primary Winding Connections

Power Supply	Primary Connection	For Input Voltage (VAC)
AAA24430AE1 (208–240 VAC Input)	H1-H2	208
	H1-H3	220
	H1-H4	230
	H1-H5	240
	H1-H6	H6 not available on this arrangement
AAA24430AE2 (346–416 VAC Input)	H1-H2	346
	H1-H3	380
	H1-H4	400
	H1-H5	416
	H1-H6	H6 not available on this arrangement
AAA24430AE3 (440–600 VAC Input)	H1-H2	440
	H1-H3	460
	H1-H4	480
	H1-H5	575
	H1-H6	600

4. Wire the incoming primary voltage into fuses F1 and F2 respectively. 14 AWG, 105C stranded wires (or better) should be used. Note that since the Glide A power supply is a single-phase power supply, only two out of the three phases will be used. Disconnect and remove the unused phase wire.

5. Wire the secondary voltage outputs:

   Voltage across F3 and F5 is 240 VAC. 14 AWG, 105C stranded wires and travelers (or better) should be used.

   Voltage across F4 and F5 is 120 VAC. 14 AWG, 105C stranded wires and travelers (or better) are recommended. 120VAC connection is needed only if the discrete electrical interface assembly, AAA24430AD is used.

4.2 Electrical Installation for Multidrop Systems without Load Weighing

The typical multidrop system wiring without load weighing is shown in Figure 4. Note that Figure 4 shows a system level view typical of most systems; not all controllers will need all of the signals/connections shown. Refer to the job specific wiring diagrams (examples covered in Appendix C) to identify the necessary connections.

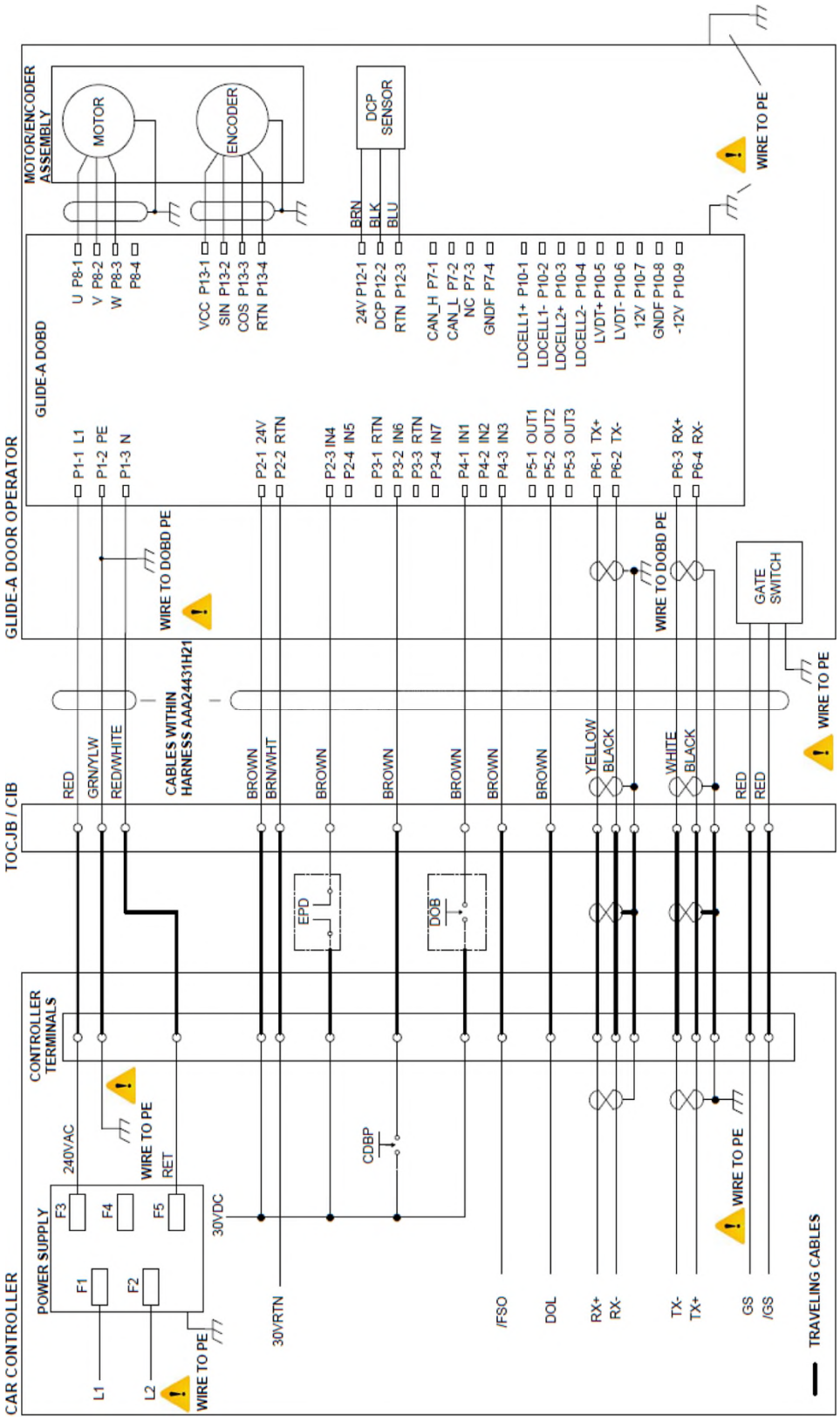


Figure 4: Typical System Wiring for Multidrop Communications w/o Load Weighing

1. On the Glide A controller, two conduit knockouts will be used for routing wires. One conduit will be used for power, gate switch and main PE connections, and the other will be used for 30VDC I/O and multidrop communications.

   These knockouts are located on either side of the controller.

   Refer to Figure 5 when following the procedure below.

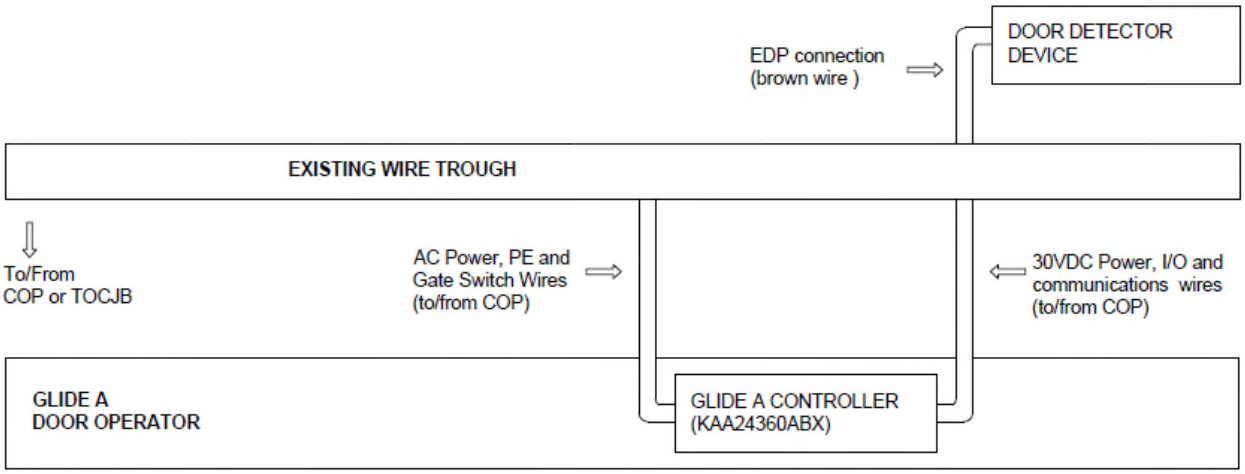


Figure 5: Conduit Routing for Glide A Door Operator w/o Load Weighing

2. Remove both knockout plugs from the Glide A controller and install a 1/2 in. conduit fitting (1/2 in. 90 degree fitting 440G1, provided in the kit) into each of the two holes.

3. Loosely install needed conduit lengths to these knockouts (6 ft. sections of 1/2 in. flexible conduit provided in the kit) along with appropriate insulation bushings (1/2 in. 334AY2 bushings provided in the kit).
   NOTE: These conduits should be terminated to the wire trough or TOCJB (Top Of Car Junction Box).

4. Connections between the system travelling cables and the Glide A are made using the AAA24431H21 harness provided in the electrical kit.

5. On the AAA24431H21 harness, remove and isolate the wires connected to the main power connector P1.

6. Insert the AAA24431H21 power plug to header P1 on the Glide A controller.

7. Secure the PE wire ring terminal on the power plug to one of the PE connection points adjacent to the Glide A controller PC board.

8. Pull the power wires, gate switch wires, and the door operator PE wire through the conduit closest to header P1 to route into the wire trough.

9. Insert the remaining plugs on the AAA24431H21 harness to the matching headers on the Glide A controller.

10. Pull the loose end of these wires through the conduit closest to header P8 to route into the wire trough.

11. Connect the open end of the brown wire going to P2-3 directly to the normally open contact of the door reversal device (shown as EPD, Electrical Protective Device, in Figure 4).
    NOTE: This wire may have to be isolated from the harness for optimal routing.

    If your door detector provides the EDP signal via a Normally Closed set of contacts, use relay AAA303EP199 and its cover, GAA613HK2, to alter that circuit so you are feeding EDP with an N.O. set of contacts.

12. Route the remaining wires to the travelling cable (via the COP or TOCJB) using connections specific to the jobsite wiring diagrams (examples covered in Appendix C). Secure all conduits after making all necessary connections.

    a. Connect harness P1 wires to the Glide A power supply (via travelling cables) as shown in Table 2.

Table 2: Wiring for Power Cable

From Otis Glide A Door Controller					To Glide A power supply (via traveling cables)	
Connector	**Pin**	**Wire Color**	**Wire Number**	**Wire Gauge**	**Connector**	**Pin**
P1	1	Red	3	18 AWG	--	Fuse F3 (L)
P1	2	Green/ Yellow	2	14 AWG	System PE	
Controller PE Hole						
P1	3	Red	1	18 AWG	--	Fuse F5 (N)

    b. Connect the remaining harness wires to system signals (via travelling cables) as shown in Table 3.

Table 3: Wiring for Multidrop Harness AAA24431H21

From TOC Junction Box or COP IBD			To Otis Glide A Controller		Comments
Signal	**Wire Color**	**Wire Gauge**	**Connector**	**Pin**	
DOB	Brown	18 AWG	P4	1	
/FSO				3	
EDP			P2	3	
CDBP			P3	2	Only for (L)MCSS based controllers.
DOL			P5	2	
TX+	Yellow	22 AWG	P6	1	Connect to travelling cable shield and terminate to door operator board PE.
TX-	Black			2	
RX+	White			3	Connect to travelling cable shield and terminate to car controller PE.
RX-	Black			4	
30VDC	Brown	18 AWG	P2	1	See Appendix A: Part Numbers if 30VDC is not available in the system.
30VRTN	Brown/ White			2	

- **Ensure that the shield wire on the multidrop TX+/TX- twisted pair is secured to a PE connection point (threaded hole) on the Otis Glide A controller board close to connector P6. The travelling cable twisted pair shield is to be connected to this shield and terminated at the door operator board PE.**
- **Ensure that the shield wire on the multidrop RX+/RX- twisted pair is connected to the TOCJB or COP interface board. This shield is to be connected to the shield on the travelling cables and terminated at the car controller PE.**

13. Connect the Glide A gate switch wires to the gate switch terminals on the COP or TOCJB. If the gate switch wires need to be extended, either the wires in the electrical interface kit or the unused wires from the previous door operator may be used **(18AWG minimum required).**

14. Using a multimeter, verify continuity of the PE points at the gate switch, the Otis Glide A controller board, Otis Glide A door operator sheet metal and system PE.

4.3 Electrical Installation for Multidrop Systems with Load Weighing

The typical multidrop system wiring with load weighing is shown in Figure 6. Note that Figure 6 shows a system level view typical of most systems; not all controllers will need all of the signals/connections shown. Refer to the job specific wiring diagrams (examples covered in Appendix C) to identify the necessary connections.

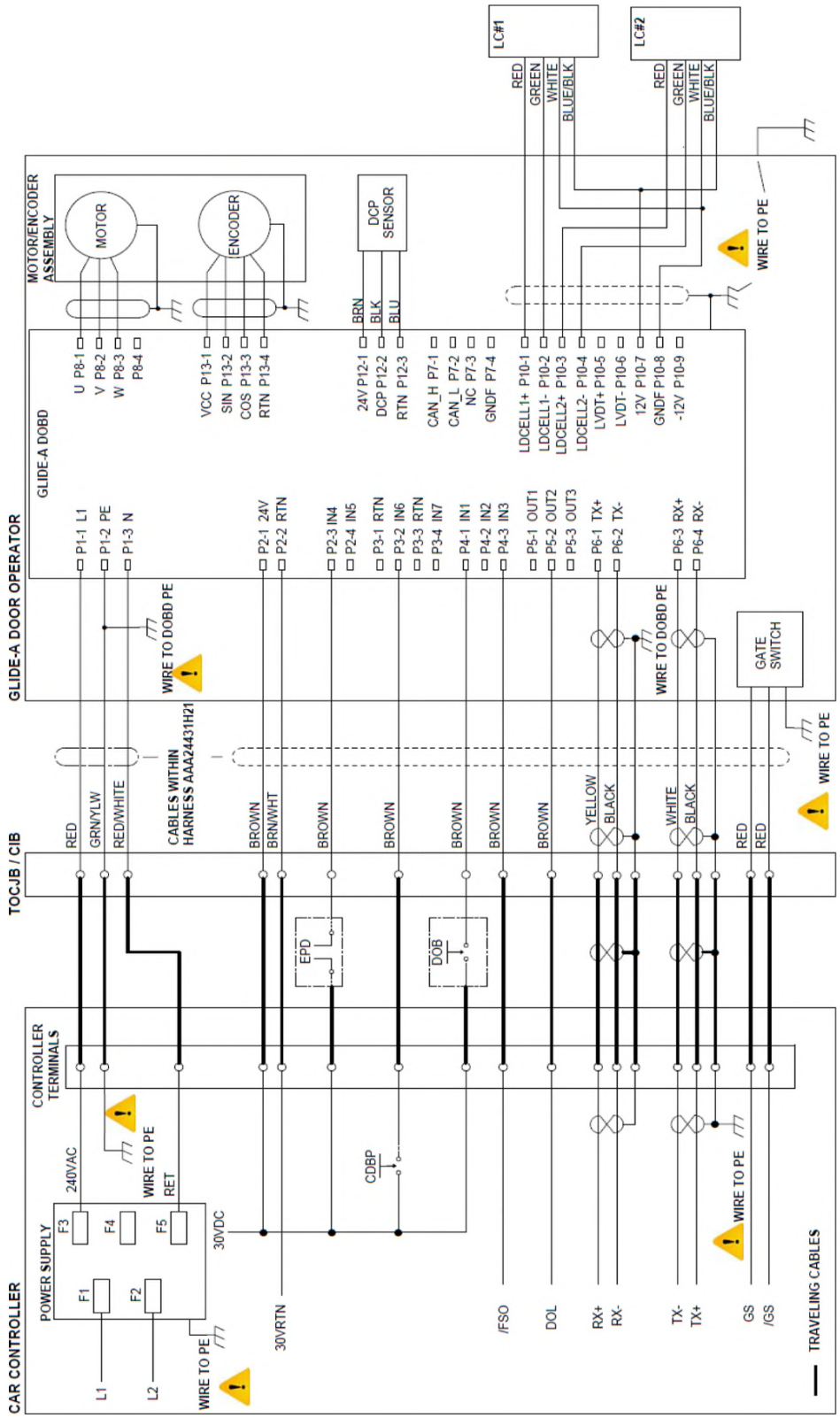


Figure 6: Typical Electrical Interface Kit Wiring for Multidrop Communications with Load Weighing (two load cell sensors shown)

1. On the Glide A controller two conduit knockouts will be used for routing wires. One knockout will be used for power, gate switch and main PE connections, and the other knockout will be used for 30VDC I/O, load sensor connections, and multidrop communications.

   These knockouts are located on either side of the controller.

   Refer to Figure 7 when following the procedure below.

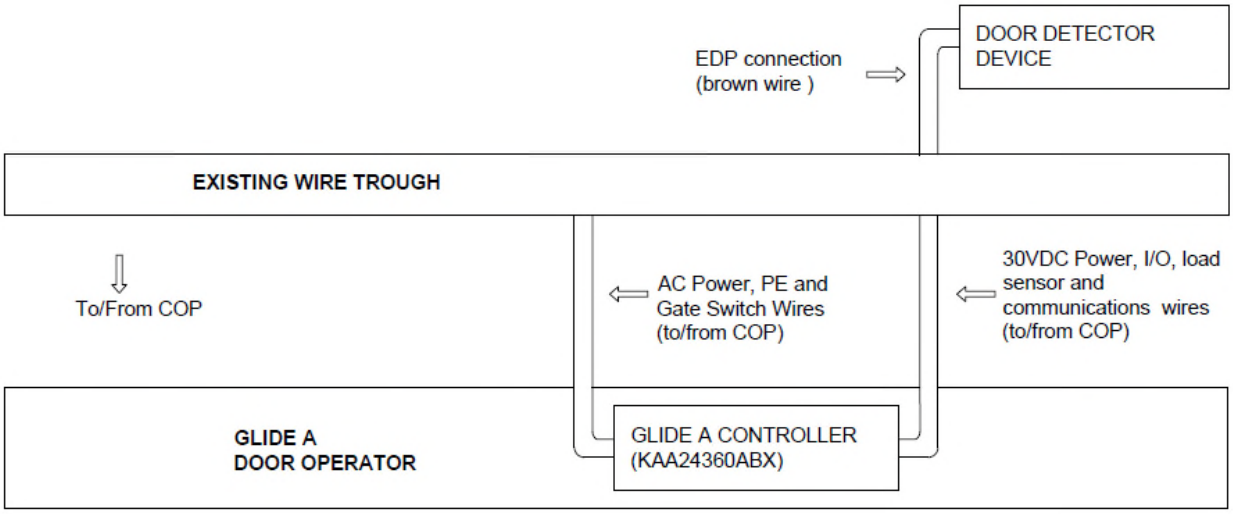


Figure 7: Glide A w/ Load Weighing Conduit Routing

2. Remove both knockout plugs from the Glide A controller and install a 1/2 in. conduit fitting (1/2 in. 90 degree fitting 440G1, provided in the kit) into each of the two holes.

3. Loosely install needed conduit lengths to these knockouts (6 ft. sections of 1/2 in. flexible conduit provided in the kit) along with appropriate insulation bushings (1/2 in. 334AY2 bushings provided in the kit).
   NOTE: These conduits should be terminated to the wire trough or TOCJB.

4. Connections between the system travelling cables and the Glide A are made using the AAA24431H21 harness provided in the electrical kit.

5. On the AAA24431H21 harness, remove and isolate the wires connected to the main power connector P1.

6. Insert the AAA24431H21 power plug to header P1 on the Glide A controller.

7. Secure the PE wire ring terminal on the power plug to one of the PE connection points adjacent to the Glide A controller pc board.

8. Pull the power wires, gate switch wires and the door operator PE wire through the conduit closest to header P1 to route into the wire trough.

9. Insert the remaining plugs on the AAA24431H21 harness to the matching headers on the Glide A controller.

10. Pull the loose end of these wires through the conduit closest to header P8 to route into the wire trough.

11. Also route the load sensor wires into the Glide A controller through this conduit.

12. Connect the load sensor wires into the Glide A controller using Table 4.

Table 4: Load Sensor Wiring to Load Weighing Assembly

From Load Weight Device			To Load Weighing Glide A Controller		
Device	**Signal**	**Wire Color**	**Signal**	**Connector**	**Pin**
Load Cell 1	RETURN	Blue/Black	12V	P10	7
	POWER	White	RTN		8
	OUT -	Green	LDCEL1-		1
	OUT +	Red	LDCEL1+		2
Load Cell 2	RETURN	Blue/Black	12V		7
	POWER	White	RTN		8
	OUT -	Green	LDCEL2-		3
	OUT +	Red	LDCEL2+		4
LVDT	VDC	Red	+12V		7
	VRTN	Black	-12V		9
	OUT +	Green	LVDT+		5
	OUT -	Blue	LVDT-		6

13. Connect the open end of the brown wire going to P2-3 directly to the normally open contact of the door reversal device (shown as EPD, Electrical Protective Device, in Figure 6).
NOTE: This wire may have to be isolated from the harness for optimal routing.

14. Route the remaining wires to the travelling cables (via the COP or top-of-car junction box) using connections specific to the jobsite wiring diagrams (see Appendix C for wiring diagrams). Secure all conduits after making all necessary connections:

    a. Connect harness P1 wires to the Glide A power supply (via travelling cables) as shown in Table 2.

    b. Connect the remaining harness wires to system signals (via travelling cables) as shown in Table 3.

    c. Connect the Glide A gate switch wires to the gate switch terminals on the COP or TOCJB. If the gate switch wires need to be extended, either the wires in the

electrical interface kit or the unused wires from the previous door operator can be used **(18AWG minimum required).**

15. Using a multimeter verify continuity of the PE points at the gate switch, Glide A controller board, the Glide A door operator sheet metal and system PE.

16. If the multidrop buffer board is not needed, proceed to section 5.

Multidrop Buffer Board Wiring:

17. The AAA26800MJ1 multidrop buffer board is shown in Figure 8 with a simplified connection wiring diagram shown in Figure 9. Mount and secure the multidrop buffer board assembly adjacent to the motion control board inside the machine room controller cabinet. The connector for the AAA26800MJ1 (AAA447X41) is provided in the electrical interface kit.

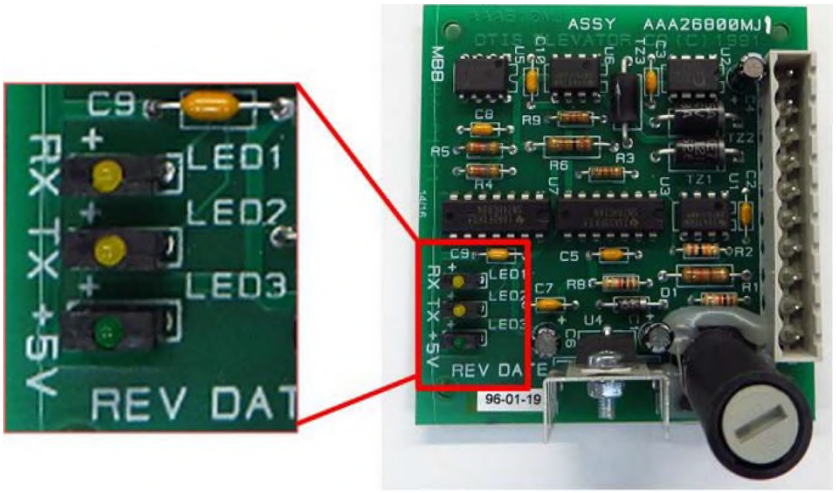


Figure 8: Multidrop Buffer Board (AAA26800MJ1)

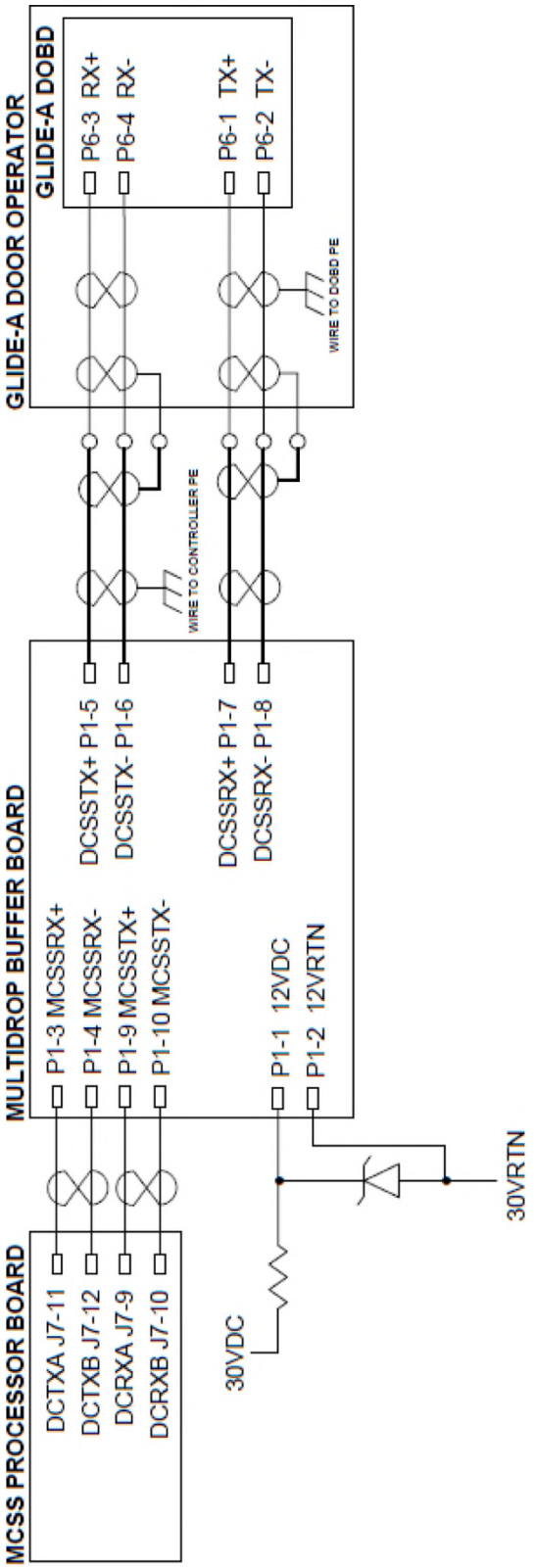


Figure 9: Simplified Wiring Diagram for Multidrop Buffer Board (MCSS processor board shown)

Table 5: AAA26800MJ1 Connections to MCSS Motion Logic Processor Board

From Car Controller Item					To AAA26800MJ1 Buffer Board		
Item	**Signal**	**Connector**	**Pin**	**Wire Gauge**	**Signal**	**Connector**	**Pin**
Motion Board	TXA	J7	11	Twisted Pair 22 AWG	MCSSRX+	P1	3
	TXB		12		MCSSRX-		4
	RXA		9		MCSSTX+		9
	RXB		10		MCSSTX-		10
Terminal Block	+12VDC		1	22 AWG	+12VDC		1
	12VRTN		2		12VRTN		2

18. Connect the Zener diode and resistor provided in the kit as shown in Figure 9 to derive 12VDC for the multidrop buffer board from the 30VDC source.

19. Wire the multidrop buffer board to the Otis Glide A controller (via traveling cable) as shown in Table 6 and Figure 6.

Table 6: Multidrop Buffer Board Connections to Otis Glide A Door Operator

From Multidrop Buffer Board				To Otis Glide A Controller (via Travelling Cables)		
Signal	**Connector**	**Pin**	**Wire Gauge**	**Signal**	**Connector**	**Pin**
DCSSRX+	P1	7	Twisted Pair 22 AWG	TX+	P6	1
DCSSRX-		8		TX-		2
DCSSTX+		5		RX+		3
DCSSTX-		6		RX-		4

20. Proceed to section 5.

4.4 Electrical Installation for NSAA Discrete Systems w/120VAC I/O

The typical discrete system wiring for systems that have 120VAC I/O and therefore use the electrical interface assembly is shown in Figure 10. Note that Figure 10 shows a system level view typical of most systems. Refer to the job specific wiring diagrams (examples covered in Appendix C) to identify the necessary connections.

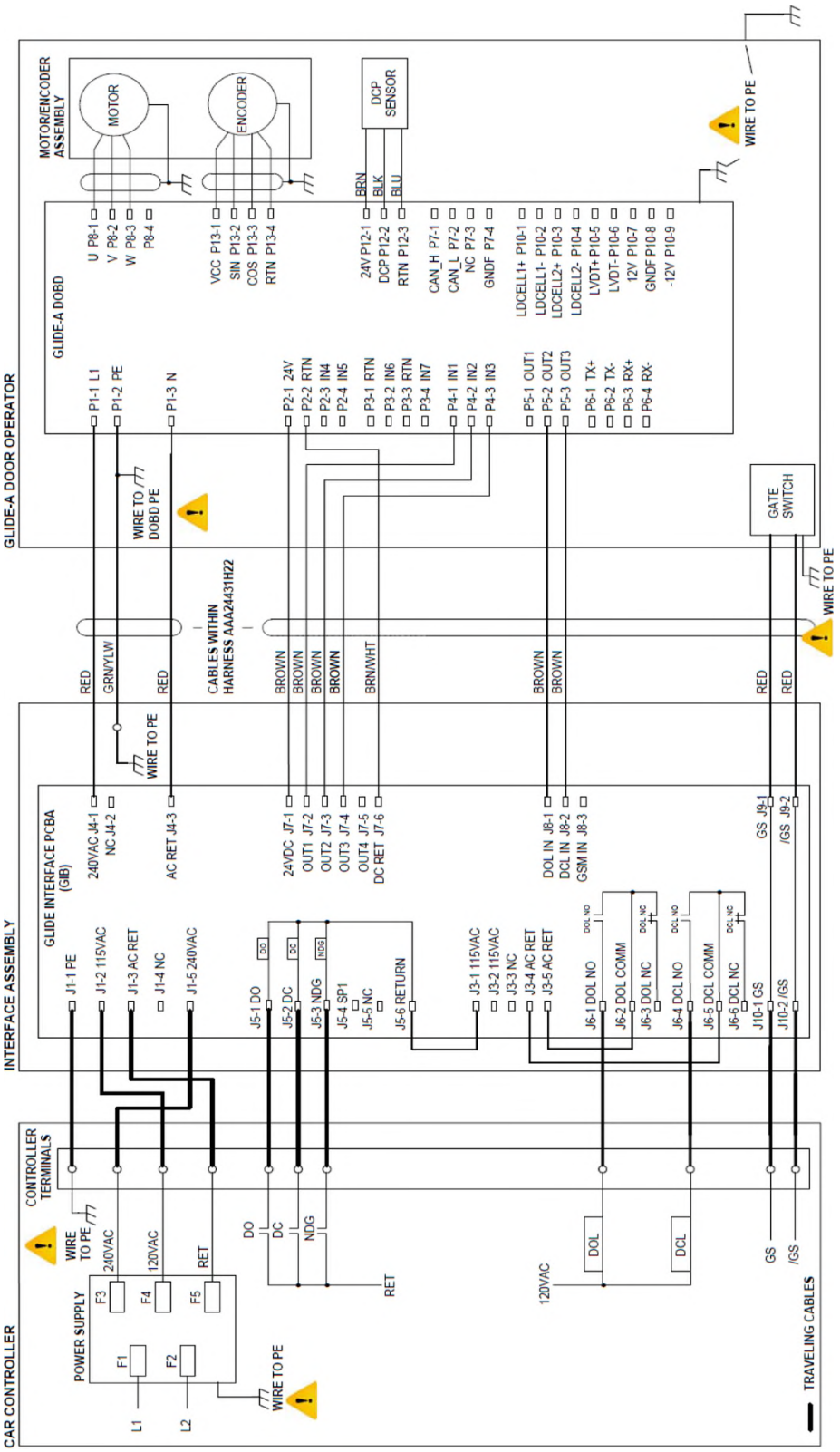


Figure 10: Typical system wiring for NSAA Discrete communications w/ 120VAC I/O.
This figure shows internal jumpers on the interface board to reduce the number of travelling wires required.

For discrete systems with 120VAC I/O, the electrical interface assembly is used. This assembly translates the 120VAC system I/O to 24VDC I/O needed/provided by the Glide A door operator. The connections that need to be made include:

- Connections between the electrical interface board and the Otis Glide A door operator.
- Connections between the electrical interface board and the machine room.

4.4.1 Connecting the Electrical Interface Board to the Door Operator

1. On the Glide A controller, two conduit knockouts will be used for routing wires. One knockout will be used for power, gate switch and main PE connections and the other knockout will be used for 30VDC power and I/O connections.

   These knockouts are located on either side of the controller as shown in Figure 2.

   Refer to Figure 11 when following the procedure below.

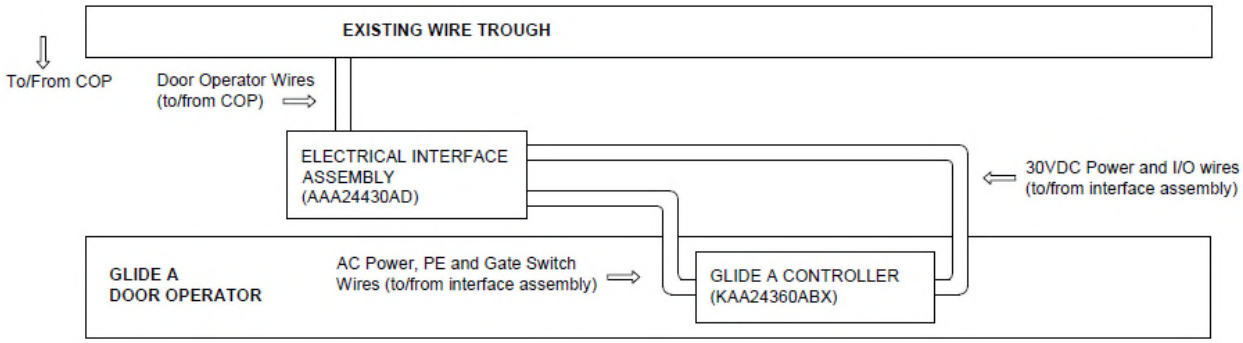


Figure 11: Conduit Routing for Glide A with the Electrical Interface Assembly (AAA24430AD)

2. Remove both knockout plugs from the Glide A controller and install a 1/2 in. conduit fitting (1/2 in. 90 degree fitting 440G1, provided in the kit) into each of the two holes.

3. Loosely install needed conduit lengths to these knockouts (6 ft. sections of 1/2 in. flexible conduit provided in the kit) along with appropriate insulation bushings (1/2 in. 334AY2 bushings provided in the kit).
   NOTE: These conduits are to be terminated to the wire trough or TOCJB (Top Of Car Junction Box).

4. On the electrical interface assembly, two 1/2 in. knockouts will be used to interface to the Glide A. One additional 1/2 in. knockout will be used to interface to the COP or TOCJB through the wire trough.

   Remove two knockouts from the side of the electrical interface assembly that allows for optimal routing of the conduits to the Glide A controller.

5. Install 1/2 in. conduit fitting into the knockouts (1/2 in. 90 degree fitting 440G1, provided in the kit).

6. Connections between the electrical interface assembly and the Otis Glide A are made using the AAA24431H22 harness provided in the electrical kit.

7. On the AAA24431H22 harness for the Glide A, remove and isolate the wires connected to the main power connector P1.

8. Insert the AAA24431H22 power plug to header P1 on the Glide A controller.

9. Secure the PE wire ring terminal on the power plug to one of the PE connection points adjacent to the Glide A controller pc board (see Figure 2).

10. Pull the power wires, gate switch wires and the door operator PE wire through the 1/2 in. conduit closest to header P1 to route into the electrical interface assembly.

11. Route this conduit to one of the two knockouts of the electrical interface board removed in step 4 above.

12. Insert the remaining plugs on the AAA24431H22 harness to the matching headers on the Glide A controller.

13. Pull the remaining wires on the open end of this harness through the conduit closest to Glide A header P8 to route into the electrical interface assembly.

14. Route this conduit to the remaining knockout of the electrical interface board. Note that this routing separates the high voltage and low voltage wires going from the door operator to the electrical interface board.

15. Inside the electrical interface assembly, connect the AAA24431H22 power wires to the electrical interface board (AAA26800AWG) using Table 7.

Table 7: Wiring for Power Cable (part of AAA24431H22).

From Otis Glide A Door Controller					To Electrical Interface Board	
Connector	**Pin**	**Wire Color**	**Wire Number**	**Wire Gauge**	**Connector**	**Pin**
P1	1	Red	3	18 AWG	J4	3
	2	Green/Yellow	2	14 AWG	Enclosure Stud	
Controller PE Hole						
P1	3	Red	1	18 AWG	J4	1

Ensure that the PE wire in the AAA24431H22 is terminated to the PE stud within the electrical interface board enclosure.

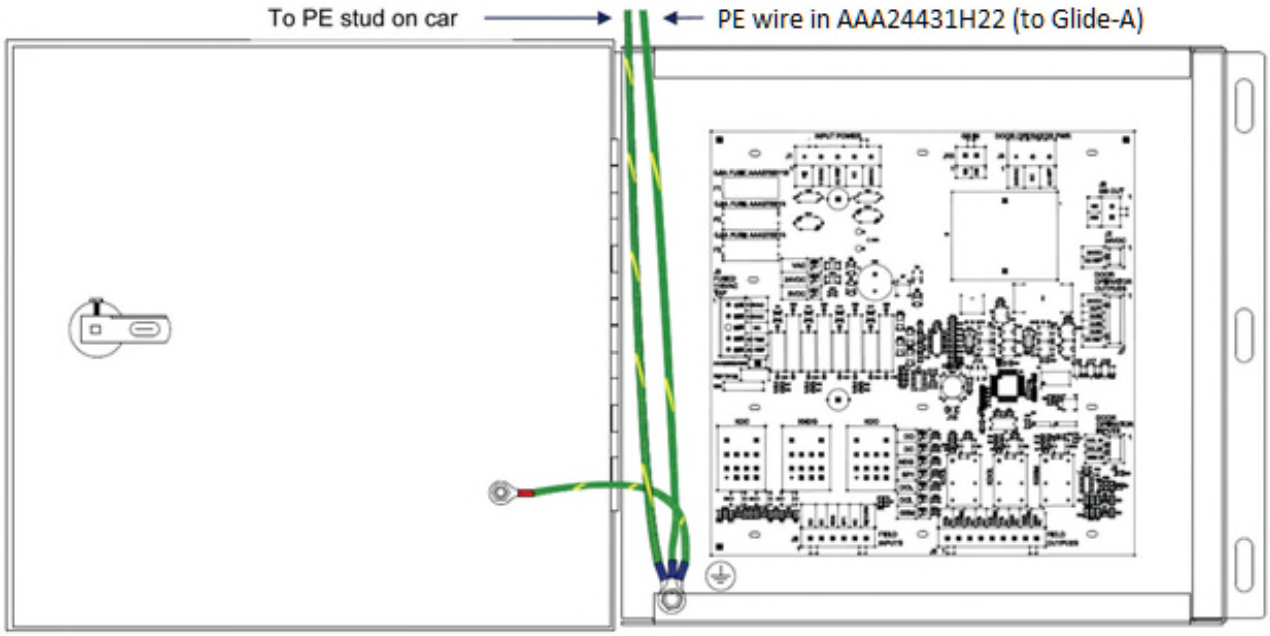


Figure 12: Field PE Connection to the Otis Glide A Electrical Interface Assembly AAA24430AD

14. Connect the remaining AAA24431H22 harness wires to the electrical interface board using Table 8.

Table 8: Wiring for Low Voltage Signal Cable (part of AAA24431H22)

From Otis Glide A Door Controller					To Electrical Interface Board		
Connector	Pin	Signal	Wire Information		Connector	Pin	Signal
			Color	Gauge			
P4	1	IN1 (/DO)	Brown	18 AWG	J7	2	OUT1 (/DO)
	2	IN2 (/DC)				3	OUT2 (/DC)
	3	IN3 (/NDG)				4	OUT3 (/NDG)
P2	1	V_CAN(30VDC)				1	24VDC(30VDC)
	2	RTN_CAN(30VRTN)	Brown/White			6	DC_RET(30VRTN)
P5	2	OUT2 (/DOL)	Brown		J8	1	DOL IN
	3	OUT3 (/DCL)				2	DCL IN

NOTE: Glide A input signals /DO, /DC, and /NDG are active low connecting to 30VRTN when active. The electrical interface board will connect these signals to 30VRTN when the corresponding relay is on/engaged.

Glide A output signals /DOL and /DCL are active low connecting to 30VDC when inactive (more precisely, these signals are inactive high).

- /DOL is 24VDC when the doors are not fully open and floating when doors are fully open.
- /DCL is 24VDC when the doors are not fully closed and floating when doors are fully closed.
- The corresponding relays on the electrical interface board engage when these limits are inactive.

15. Connect the Glide A door gate switch wires to the electrical interface board as shown in Table 9.

Table 9: Gate Switch Wiring

From Otis Glide A Gate Switch					To Electrical Interface Board	
Connector	**Pin**	**Wire Color**	**Wire No.**	**Wire Gauge**	**Connector**	**Pin**
---		Black (shown as Red in Fig 10)	N/A	18 AWG or better	J9	1
						2

16. Use the PE wire provided with the electrical interface kit to connect the car PE to the electrical interface board enclosure. The ring terminal end of the wire should be secured to the stud with the hardware provided. The other end of the cable is to be terminated on a known PE point on the car through the wire trough.

4.4.2 Connections between Electrical Interface Board and Machine Room

1. One knockout will be used to route power and door operator signals from the car controller (via travelling cables) to the electrical interface board.

   Remove one of the knockouts from the electrical interface assembly that best allows for optimal wire routing.

2. Install a 1/2 in. conduit fitting into the knockout (1/2 in. 90 degree fitting 440G1, provided in the kit).

3. Loosely install needed 1/2 in. conduit length to the knockout (6 ft. sections of 1/2 in. conduit provided in the kit) along with appropriate 1/2 in. insulation bushings (1/2 in. bushings provided in the kit). This conduit is to be terminated either to the car top wire trough or to the TOCJB.

4. Pull the power and door operator signal wires from the wire trough/TOCJB into the electrical interface assembly.

5. Connect power to the electrical interface board by connecting to connector J1 as shown in Table 10.

Table 10: Power Connections to Electrical Interface PC Board

Connector	Pin	Signal	Description	Connection To Be Made
J1	1	PE	PE	To PE stud on top of car
	2	115 VAC	115 VAC	To fused F4 120 VAC tap on machine room power supply
	3	AC RET	AC Return	To fused F5 AC return tap on machine room power supply
	4	NC	No Connect	N/A
	5	240 VAC	240 VAC	To fused F3 240 VAC tap on machine room power supply

6. Connect the door open (/DO), door close (/DC), and nudge (/NDG) commands from the machine room controller to the DO, DC, and NDG inputs on the electrical interface pc board connector J5 using Table 11.

Table 11: Door Command Signal Connections to the Electrical Interface Board

Connector	Pin	Signal	Description	Connection To Be Made
J5	1	DO	Door Open	Door Open signal from elevator controller.
	2	DC	Door Close	Door Close signal from elevator controller.
	3	NDG	Nudge	Nudge signal from elevator controller.
	4	SP1	Spare 1 (not used)	N/A
	5	NC	No Connect	N/A
	6	RETURN	Return	The RETURN signal is the reference for DO, DC and NDG. IF DO, DC and NDG are 120 VAC active high signals (i.e. connected to 120 VAC when active), RETURN **must** be connected to AC RETURN. If DO, DC and NDG are active low signals (i.e. connected to AC_RETURN when active), RETURN **must** be connected to 120 VAC. The fused taps on connector J3 may be used to provide the signal at RETURN.

NOTE: You MUST provide both the signal and reference voltage to these signals to the electrical interface board.

The door commands DO, DC, and NDG **must**:

- Activate the corrsponding “ice-cube” relay on the board to activate the signal at the Glide A door operator
- Have the same reference voltage connected to RETURN (J5-6)
- Be referenced to either 120 VAC or 120V RETURN bot not both.

The door commands DO, DC, and NDG **may**:

- Be active high and thus provide 120 VAC to J5 when active. In this case, RETURN J5-6 **must** be connected to AC return. The fused AC return tap on J3-4 of J3-5 may be used to provide this reference to J5-6.
- Be active low and thus provide an AC return path to J5 when active. In this case RETURN J5-6 **must** be connected to 120 VAC. The fused 115 VAC tap on J3-1 or J3-2 may be used to provide this reference to J5-6 (as shown in Figure 10).

Either all DO, DC, and NDG signals can be active high or all of them can be active low. A mixture of active high and active low signals will **damage** the electrical interface board.

7. Connect the door open limit (DOL) and door close limit (DCL) signals from the electrical interface board connector J6 to the machine room circuits using Table 12.

Table 12: Door Limit Signal Connections from Electrical Interface Board

Connector	Pin	Signal	Description	Connection To Be Made
J6	1	DOL NO	Door Open Limit Normally Open Connection	Normally open DOL contact to be provided to elevator controller logic.
	2	DOL COMM	Door Open Limit Common Feed	The feed side of BOTH the normally closed and normally open end contacts on the DOL relay on the electrical interface board. The taps available at connector J3 may be used to power the common feed (not exceeding 0.5 A).
	3	DOL NC	Door Open Limit Normally Closed Connection	Normally closed DOL contact to be provided to elevator controller logic.
	4	DCL NO	Door Close Limit Normally Open Connection	Normally open DCL contact to be provided to elevator controller logic.
	5	DCL COMM	Door Close Limit Common Feed	The feed side of BOTH the normally closed and normally open end contacts on the DOL relay on the electrical interface board. The taps available at connector J3 may be used to power the common feed (not exceeding 0.5 A).
	6	DCL NC	Door Close Limit Normally Closed Connection	Normally open closed DCL contact to be provided to elevator controller logic.
	7	GSM NO	Gate Switch Monitor Normally Open Connection	GSM not yet available.
	8	GSM COMM	Gate Switch Monitor Common Feed	
	9	GSM NC	Gate Switch Monitor Normally Closed Connection	

- The DOL relay on the electrical interface board is OFF/DROPPED/OPEN when the door is fully open. The DOL relay on the electrical interface board is ON/ENGAGED/PICKED when the door is any position but fully open.

- The DCL relay on the electrical interface board is OFF/DROPPED/OPEN when the door is fully closed. The DCL relay on the electrical interface board is ON/ENGAGED/PICKED when the door is in any position but fully closed.

- **Field must provide the voltage for the common side of the relays on connector J6** (in Figure 10, the common side of the relays is connected to the AC return tap on J3). The DOL and DCL relays on the electrical interface board are rated for 1 A @ 120 VAC and 1.5 A @ 30 VDC.

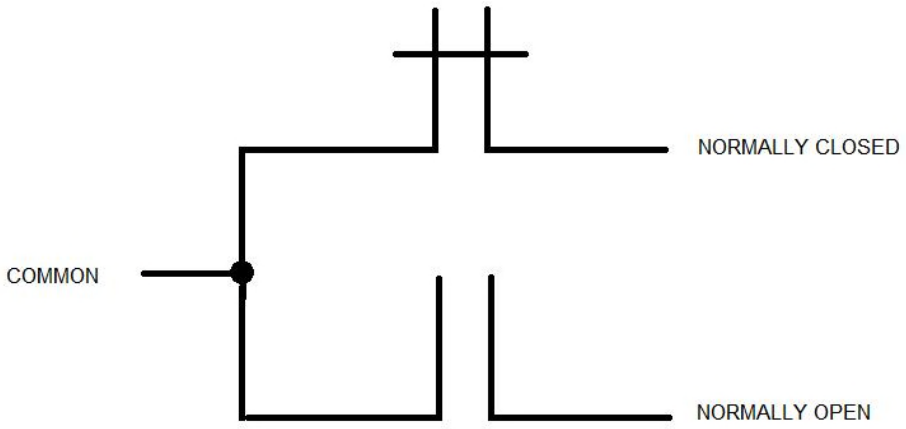


Figure 13: Output Relay Contact Configuration for DOL/DCL Relays on the Electrical Interface Board

8. Connect the gate switch travelling cables (from the controller safety chain circuit) to connector J10 on the electrical interface board as shown in Table 13. Note that the gate switch signals are simply passed through to connector J9 for wiring to the gate switch on the Otis Glide A door operator.

Table 13: Gate Switch Connections to Car Controller

Connector	Pin	Signal	Description	Connection To Be Made
J10	1	GS	Gate Switch	Gate switch feed signal to the machine room safety chain logic
	2	/GS	Gate Switch Return	Gate switch return/reference signal to the machine room safety chain logic

9. Using a multimeter, verify continuity of the PE points at the gate switch, electrical interface board enclosure, interface board J1-1, the Glide A controller board, the Glide A door operator sheet metal, and the system PE.

10. Tighten and finalize all conduit connections.

4.5 Electrical Installation for NSAA Discrete Systems w/24VDC I/O

The typical discrete system wiring for systems that have 24VDC I/O is shown in Figure 14. Since the Glide A control board accepts 24VDC I/O, the electrical interface pc board is **not** needed in these applications. Note that Figure 14 shows a system level view typical of most systems; not all controllers will need all of the signals/connections shown. Refer to the job specific wiring diagrams (examples covered in Appendix C) to identify the necessary connections.

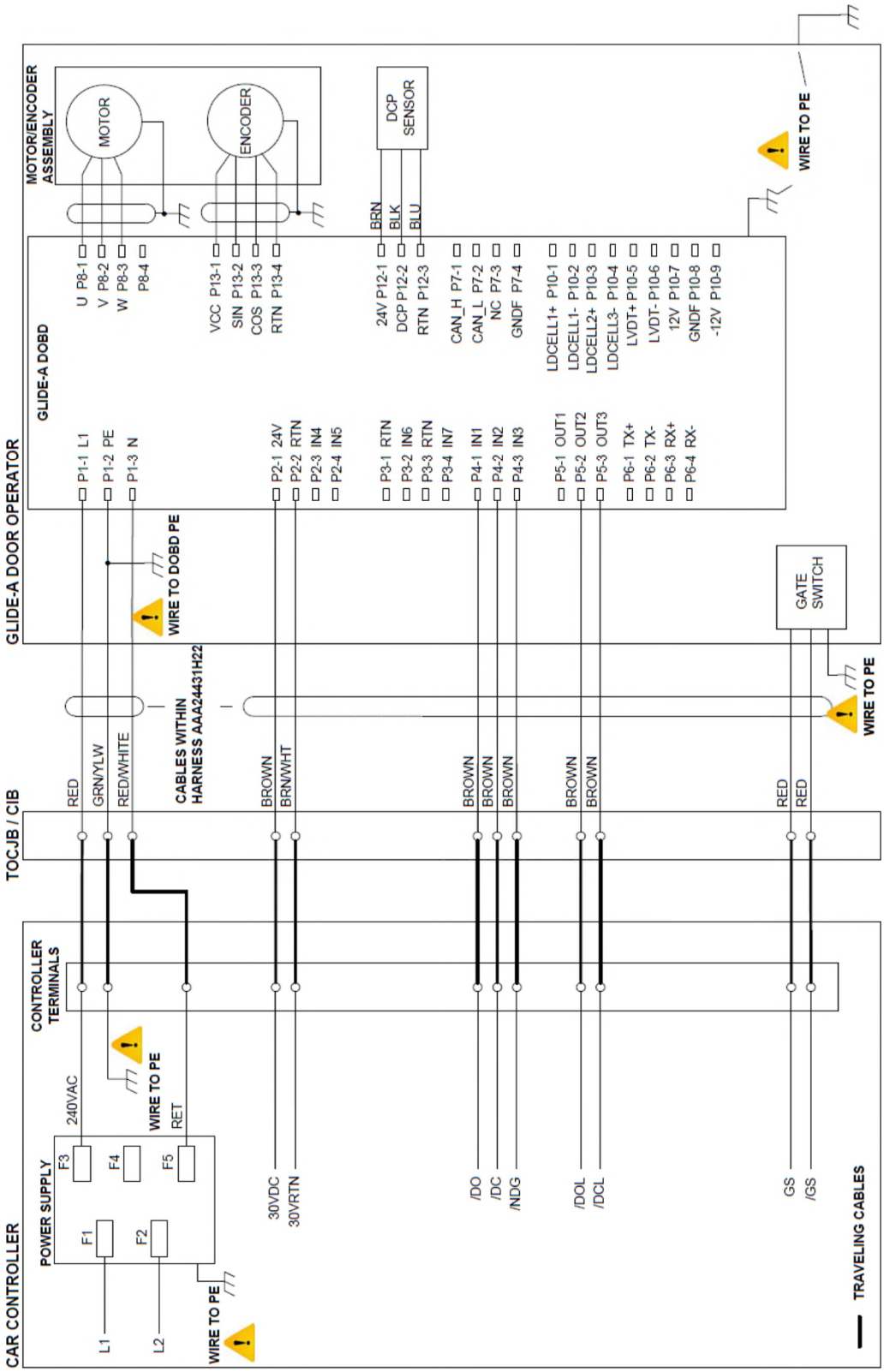


Figure 14: Typical System Wiring for NSAA Discrete Communications w/ 24VDC I/O

1. On the Glide A controller, two conduit knockouts will used for routing wires. One conduit will be used for power, gate switch and main PE connections and the other will be used for 30VDC I/O.

   These knockouts are located on either side of the controller as shown in Figure 2.

   Refer to Figure 15 when following the procedure below.

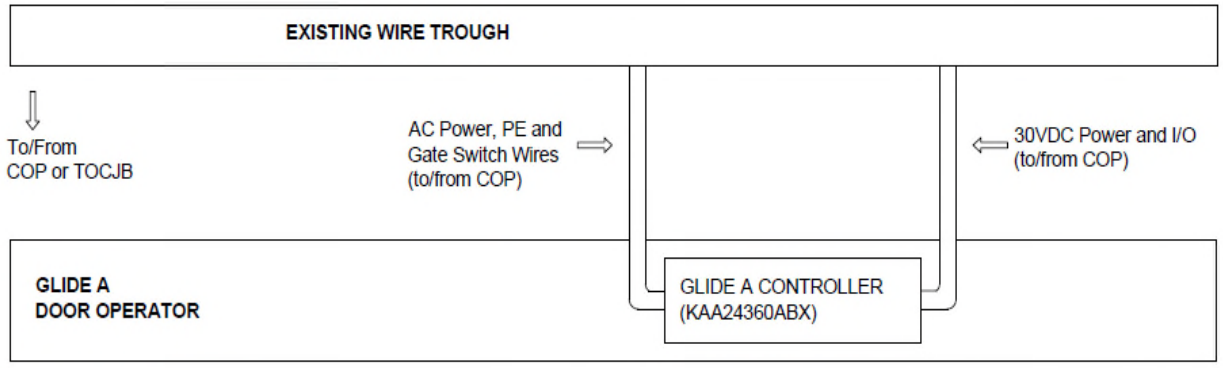


Figure 15: Conduit Routing for Glide A Door Operator w/o Load Weighing

2. Remove both knockout plugs from the Glide A controller and install a 1/2 in. conduit fitting (1/2 in. 90 degree fitting 440G1, provided in the kit) into each of the two holes.

3. Loosely install needed conduit lengths to these knockouts (6 ft. sections of 1/2 in. flexible conduit provided in the kit) along with appropriate insulation bushings (1/2 in. 334AY2 bushings provided in the kit).
   NOTE: These conduits should be terminated to the wire trough or TOCJB.

4. Connections between the system travelling cables and the Glide A are made using the AAA24431H21 harness provided in the electrical kit.

5. On the AAA24431H21 harness, remove and isolate the wires connected to the main power connector P1.

6. Insert the AAA24431H21 power plug to header P1 on the Glide A controller.

7. Secure the PE wire ring terminal on the power plug to one of the PE connection points adjacent to the Glide A controller pc board (see Figure 2).

8. Pull the power wires, gate switch wires, and the door operator PE wire through the conduit closest to header P1 to route into the wire trough.

9. Insert the remaining plugs on the AAA24431H21 harness to the matching headers on the Glide A controller.

10. Pull the loose end of these wires through the conduit closest to header P8 to route into the wire trough.

11. Connect the power cables at the open end of the harness between the Glide A door operator and the Glide A power supply (via travelling cables) as shown in Table 14 and Figure 14.

Table 14: Wiring for Power Cable

To Glide A power supply (via traveling cables)		From Otis Glide A Door Controller				
Connector	**Pin**	**Connector**	**Pin**	**Wire Color**	**Wire Number**	**Wire Gauge**
--	Fuse F3 (L)	P1	1	Red	3	18 AWG
System PE		P1	2	Green/Yellow	2	14 AWG
		Controller PE Hole				
--	Fuse F5 (N)	P1	3	Red	1	18 AWG

12. Route the remaining cable wire as shown in Table 15 and Figure 14.

Table 15: Wiring for Low Voltage Signal Cable

From Otis Glide A Door Controller						To Car Controller (via traveling cables)		
Connector	**Pin**	**Signal**	**Wire Color**	**Wire No.**	**Wire Gauge**	**Connector**	**Pin**	**Signal**
P2	1	IN1 (/DO)	Brown	13	18 AWG	--		/DO
	2	IN2 (/DC)		12				/DC
	3	IN3 (/NDG)		11				/NDG
P3	1	V_CAN(30VDC)		10				30VDC
	2	RTN_CAN(30VRTN)	Brown /White	9				30VRTN
P4	2	IN6 (HHD)	Brown	15				HHD
P5	1	OUT1 (GSM)	Brown	14				GSM
	2	OUT2 (/DOL)		8				/DOL
	3	OUT3 (/DCL)		7				/DCL

NOTE: Glide A input signals /DO, /DC, and /NDG are active low connecting to 30VRTN when active. The car controller must connect these signals to 30VRTN to activate the signal.

- **Glide A output signals /DOL and /DCL are active low connecting to 30VDC when inactive (more precisely, these signals are inactive high).**
- /DOL is 24VDC when the doors are not fully open and floating when doors are fully open.
- /DCL is 24VDC when the doors are not fully closed and floating when doors are fully closed.

13. Ensure that the PE wire in the AAA24431H22 is also connected to a known PE point on the top of the car.

14. Connect the Otis Glide A door gate switch to the system safety chain (via traveling cables).

15. Ensure that the PE wire from the gate switch assembly is securely tied to a known PE point on the top of the car.

16. Using a multimeter, verify continuity of the PE points at the gate switch, Otis Glide A controller PE holes and the Otis Glide A door operator sheet metal.

5 Start Up

For startup of the Otis Glide A door operator, see TIP 22.17.1-3, *Otis Glide® A for Modernization and Open Order – Setup and Startup Manual.*

6 Appendix A: Part Numbers

The following table lists all part numbers this document mentions.

Table 16: Related Part Numbers

Description	Part Number
Connector, Wago, 12-Pin, 5 mm for Multidrop Buffer Board P1	AAA447X41
Contactor, 120 VAC Coil, 3 NO + 1 NC, 250 VAC 10 A Contacts	AAA613DL30
Din Rail, 35 mm, 13.5 in.	401B14
Enclosure, for AAA24430AE Power Supply	AAA308UD2
Fuse, Slo-Blo, 3 A, 600 V	AAA375BK26
Fuse, Slo-Blo, 3.5 A, 600 V	AAA375BK28
Multidrop Buffer Board	AAA26800MJ1
Multidrop Buffer Board Assembly with Plastic Holder	AAA21380AE1
Otis Glide A Multidrop Harness	AAA24431H21
Otis Glide A Discrete Harness	AAA24431H22
Otis Glide A Electrical Interface Assembly	AAA24430AD3
Otis Glide A Electrical Interface Board	AAA26800AWG2
Otis Glide A Electrical Multidrop Interface Kit, w/(L)MCSS	AAA24430AP16
Otis Glide A Electrical Multidrop Interface Kit, w/o (L)MCSS	AAA24430AP12
Otis Glide A Electrical Discrete Interface Kit w/24VDC IO	AAA24430AP8
Otis Glide A Electrical Discrete Interface Kit w/110VAC IO	AAA24430AP4
Otis Glide A Power Supply For 208–240 VAC Primary	AAA24430AE1
Otis Glide A Power Supply For 340–416 VAC Primary	AAA24430AE2
Otis Glide A Power Supply For 440–600 VAC Primary	AAA24430AE3
Power Supply, 12 VDC, 2.5 A, 585–265 VAC or 120–370 VDC Input	AAA621AN28
Power Supply, 24/30 VDC 1.3 A, 85–265 VAC or 120–370 VDC Input	AAA621AN29
RC Relay Coil Suppressor	AAA613DL61
Top-Of-Car Junction Box	AAA25580AM1
Travelling Cable, 14 AWG, 4 Conductors	REP-J 4-14

7 Appendix B: Related Documents

The following table lists all documents this document mentions, as well as documents that contain further information on the topics in this TIP.

Table 17: Related Documents

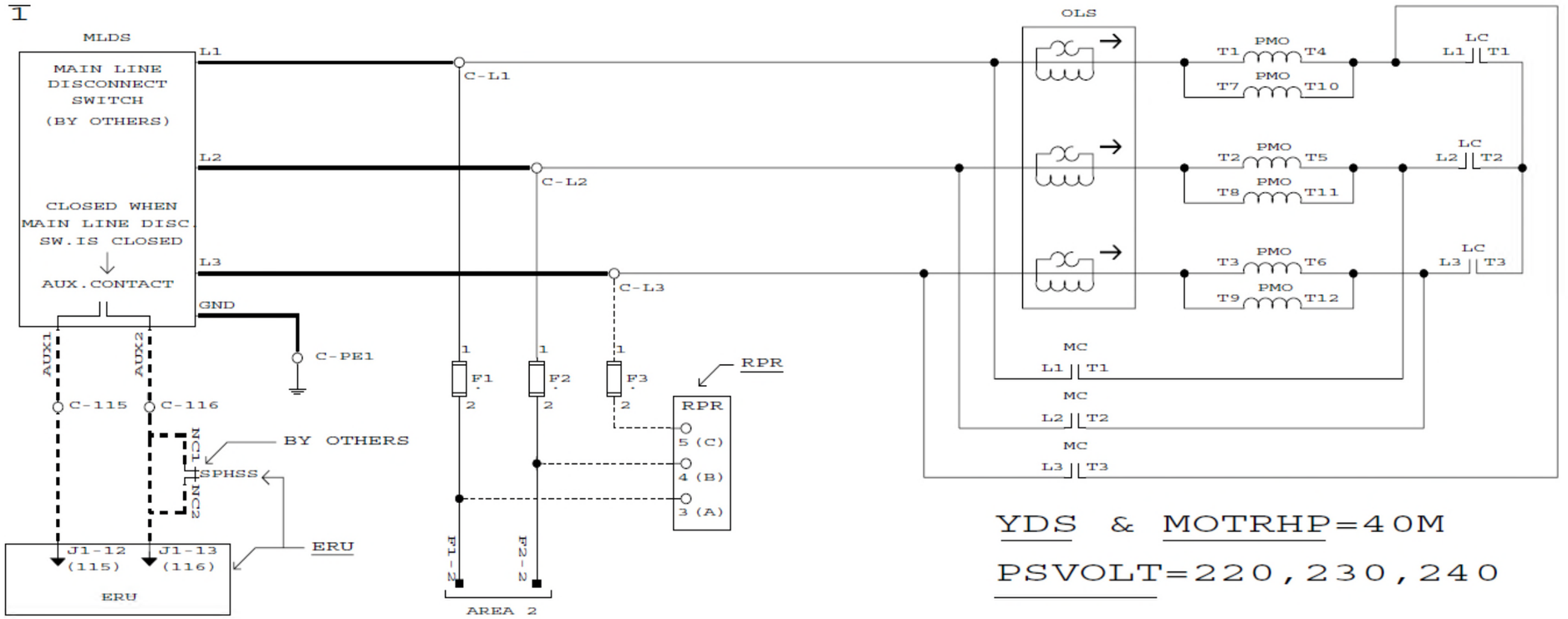
Document ID	Title
UT-ID 22.17.1-1	Otis Glide A-Specification and Ordering Guide for Unitec Parts Co
UT-ID 22.17.1-2	Otis Glide A-Mechanical Installation Guide for Unitec Parts
UT-ID 22.17.1-3	Otis Glide A-Electrical Setup and Startup Manual
UT-ID 22.17.1-8	Otis Glide A Electrical Installation on LRV-LRS Controllers

8 Appendix C: Elevator Wiring Diagram Markups

8.1 NSAA Discrete Installation on LVM1 with QL (W/D AEA21241L)

The following wiring diagram depicts installation of the Otis Glide A door operator on a LVM1 controller with existing QL door operator. The following areas are affected:

- **Area 1:** Removal of previous supply and addition of AAA24430AE power supply.
- **Area 2:** Reconfiguration of the power distribution connections.
- **Area 3:** Replacement of existing gate switch with the Glide A gate switch.
- **Area 6:** Replacement of existing door limit connections with Glide A door limit connections.
- **Area 7:** Removal of QL door operator and associated components within QL control box and reconnection to Glide A.



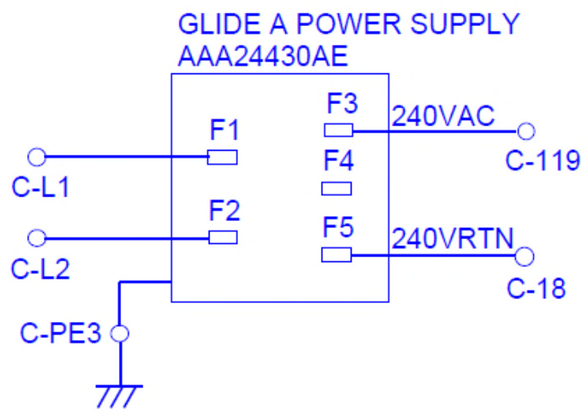


Figure 16: Area 1 of W/D AEA21241L - Addition of Glide A power supply, AAA24430AE

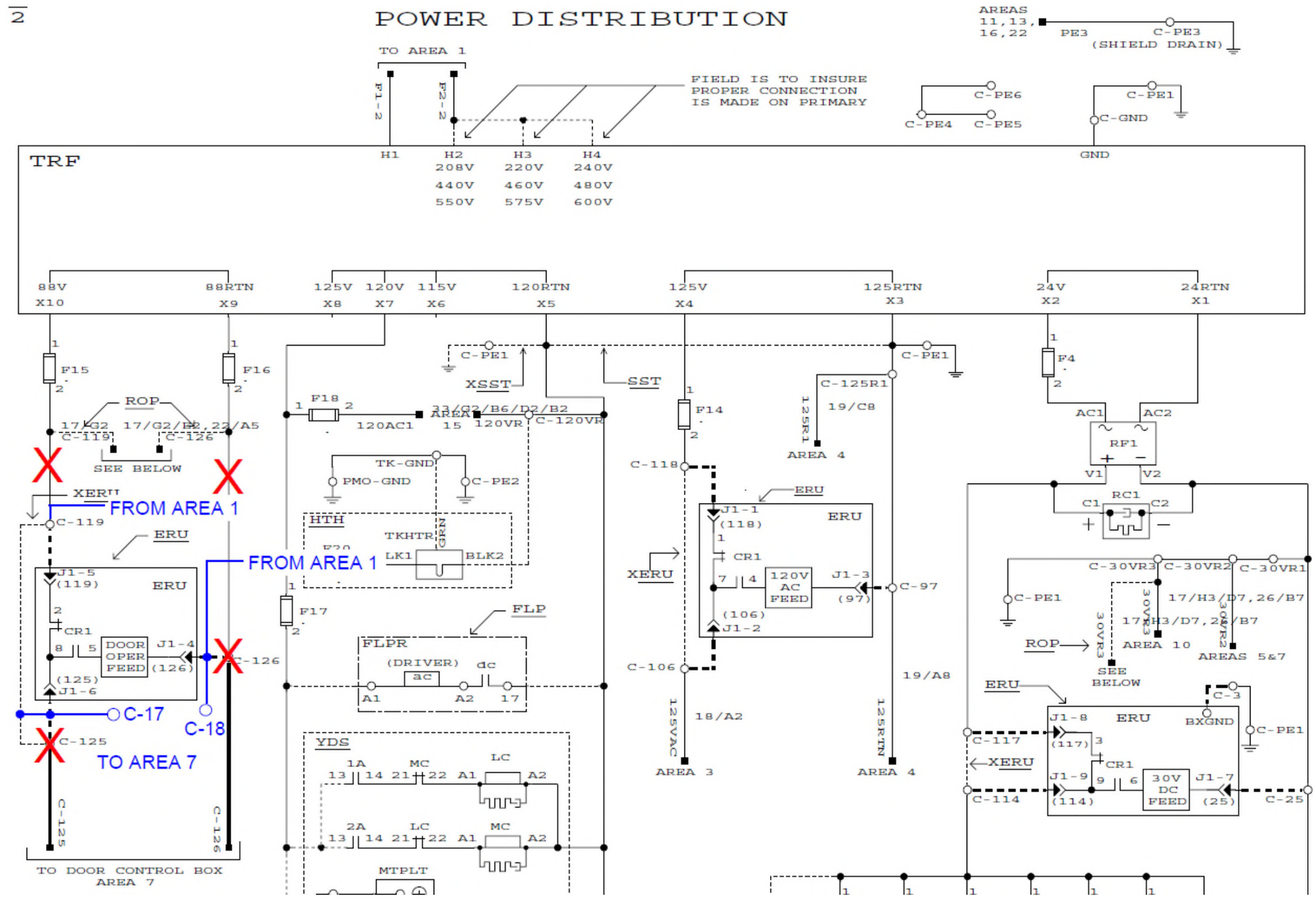


Figure 17: Area 2 of W/D AEA21241L - Reconfiguration of the Power Distribution Connections

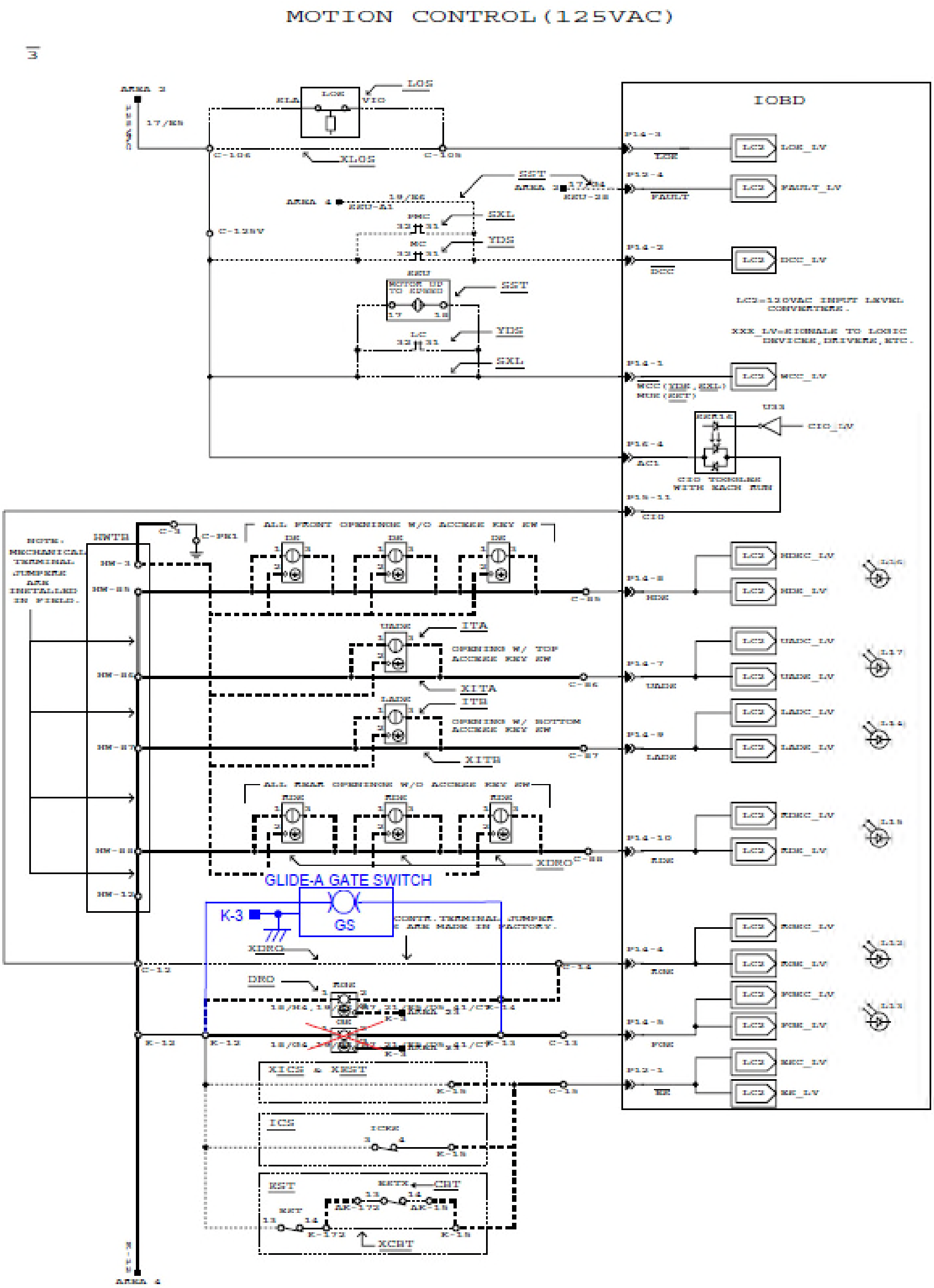


Figure 18: Area 3 of W/D AEA21241L - Existing Gate Switch Removed and Replaced with Glide A Gate Switch

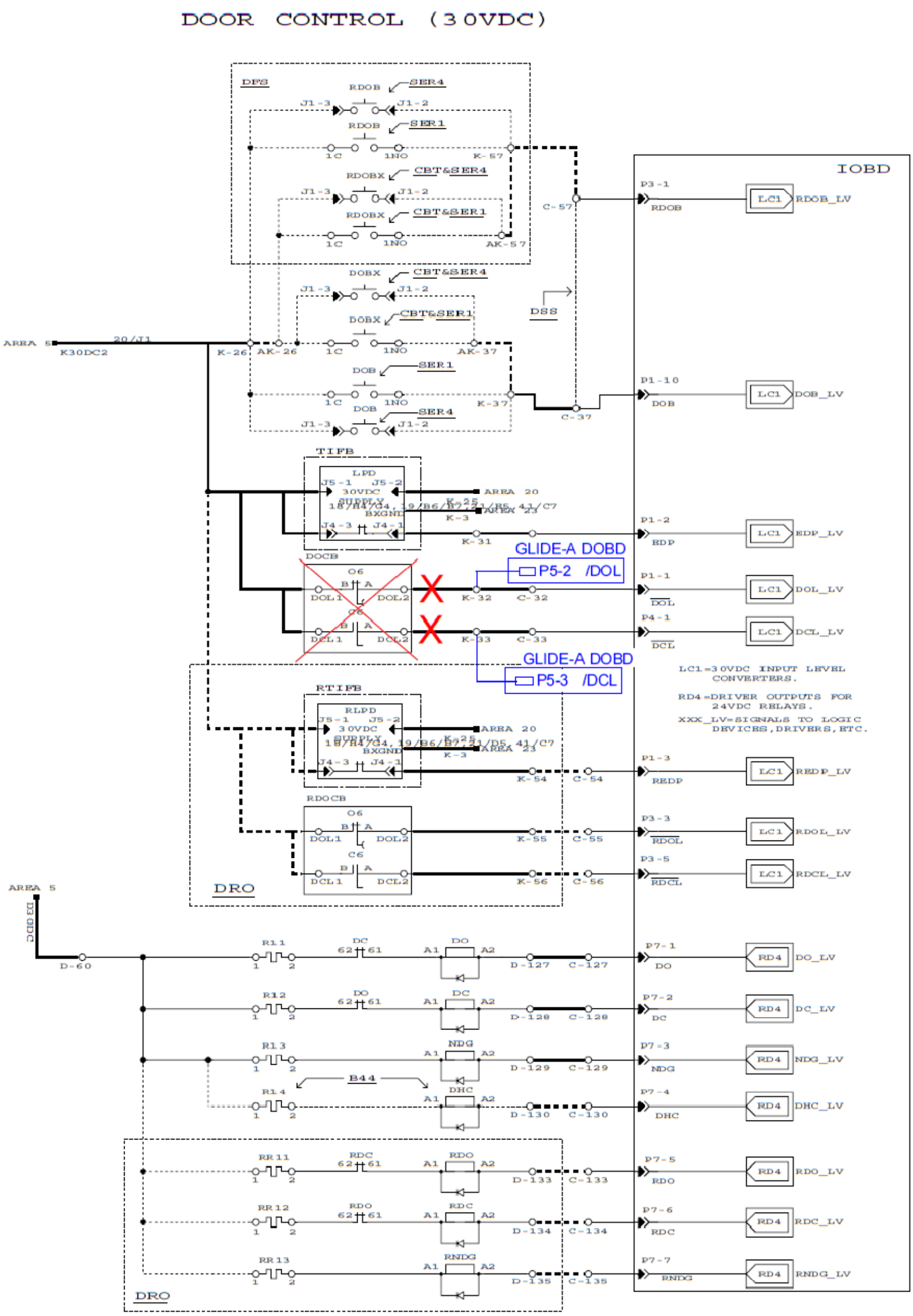


Figure 19: Area 6 of W/D AEA21241L - Existing Door Limit Connections Removed and Replaced with Glide A Door Limits

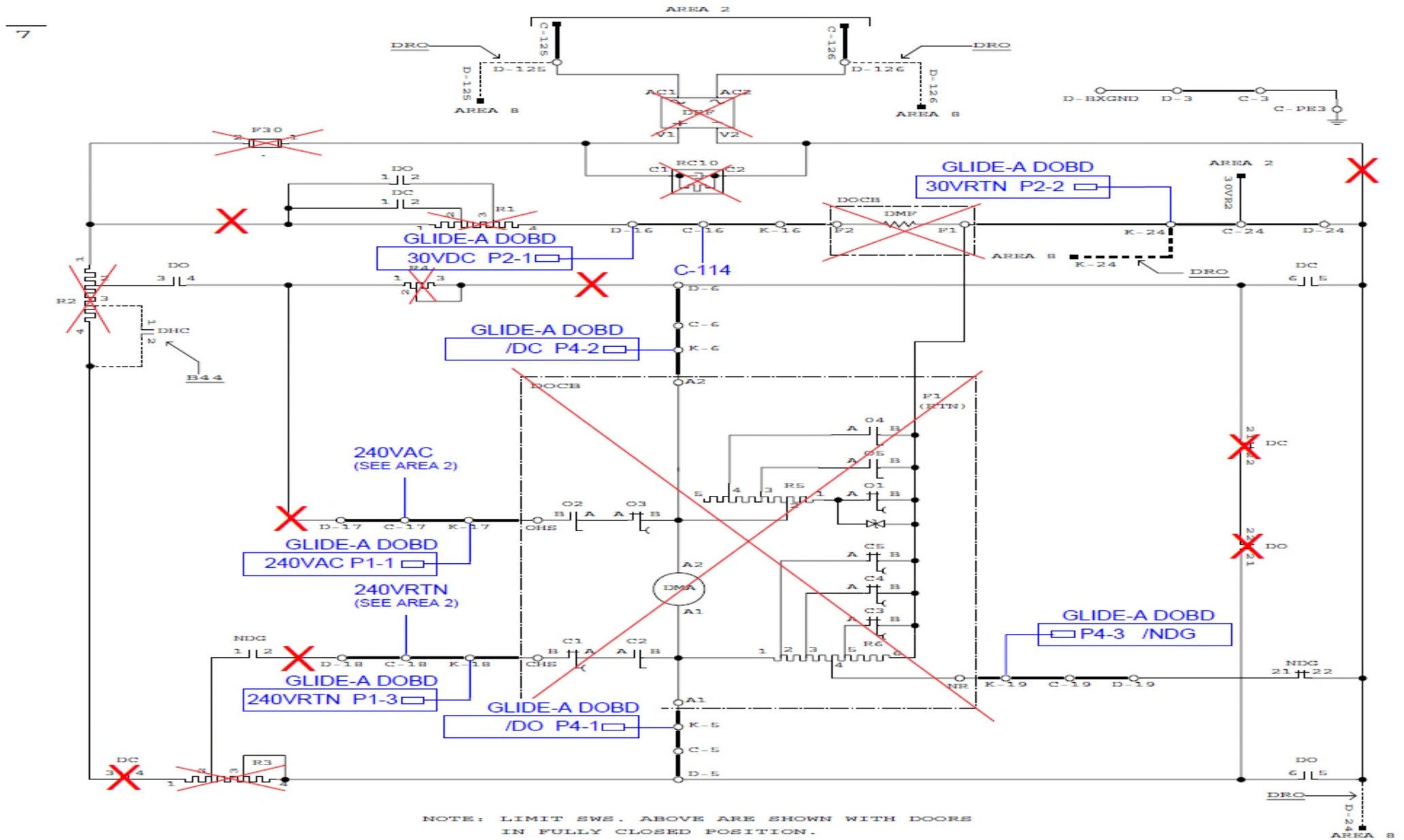


Figure 20: Area 7 of W/D AEA21241L - Existing Door Operator Removed and Connections Reused for Glide A

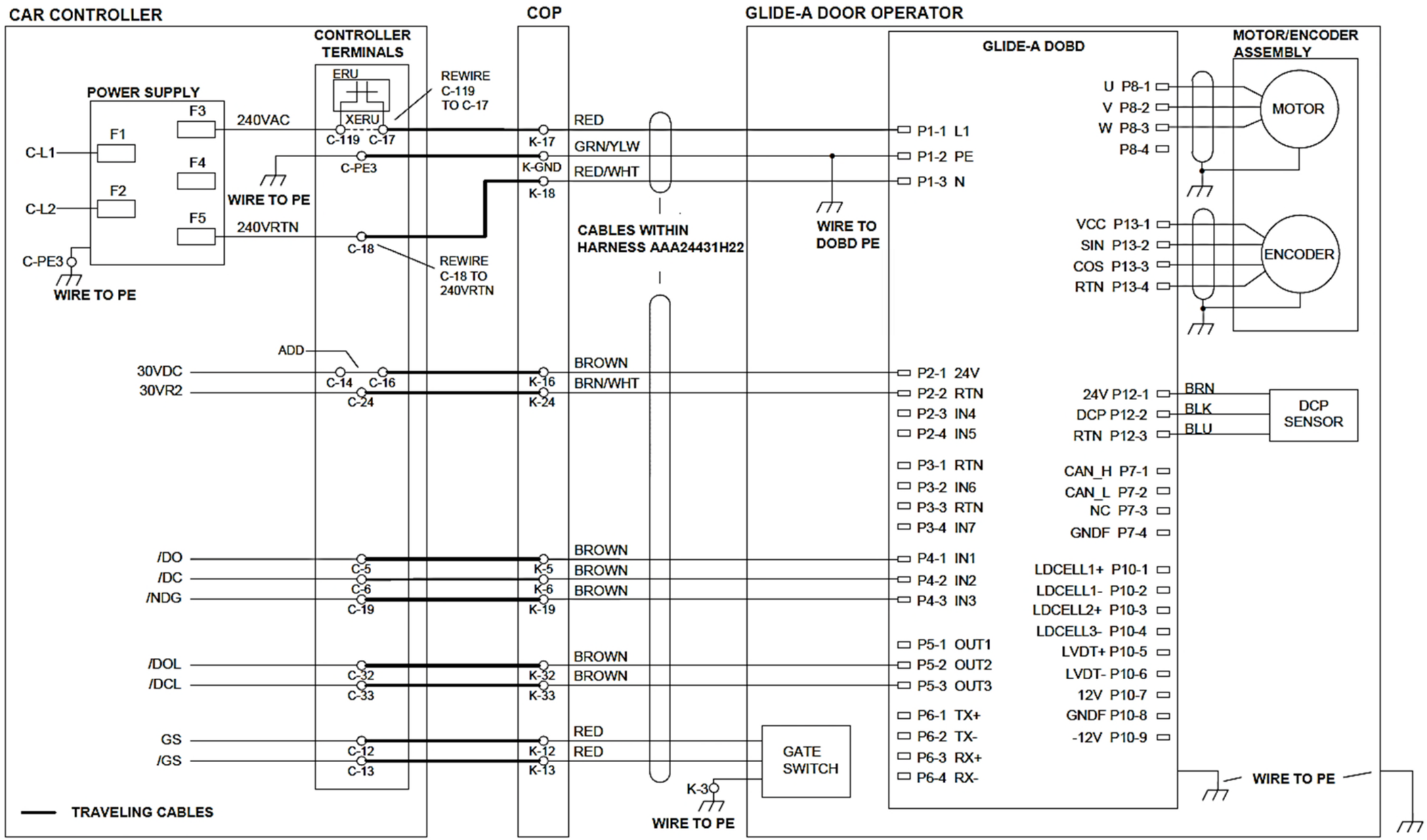


Figure 21: AEA21241L Connection Summary

8.2 NSAA Discrete Installation on LVM1 with i-Motion I (W/D AEA21241L)

The following wiring diagram depicts installation of the Otis Glide A door operator on a LVM1 controller with existing i-motion I door operator. The following areas are affected:

- **Area 1:** Removal of previous supply and addition of AAA24430AE power supply.
- **Area 2:** Reconfiguration of the power distribution connections.
- **Area 3:** Replacement of existing gate switch with the Glide A gate switch.
- **Area 6:** Replacement of existing door limit connections with Glide A door limit connections.
- **Area 7:** Removal of existing door operator and associated components reconnection to Glide A.

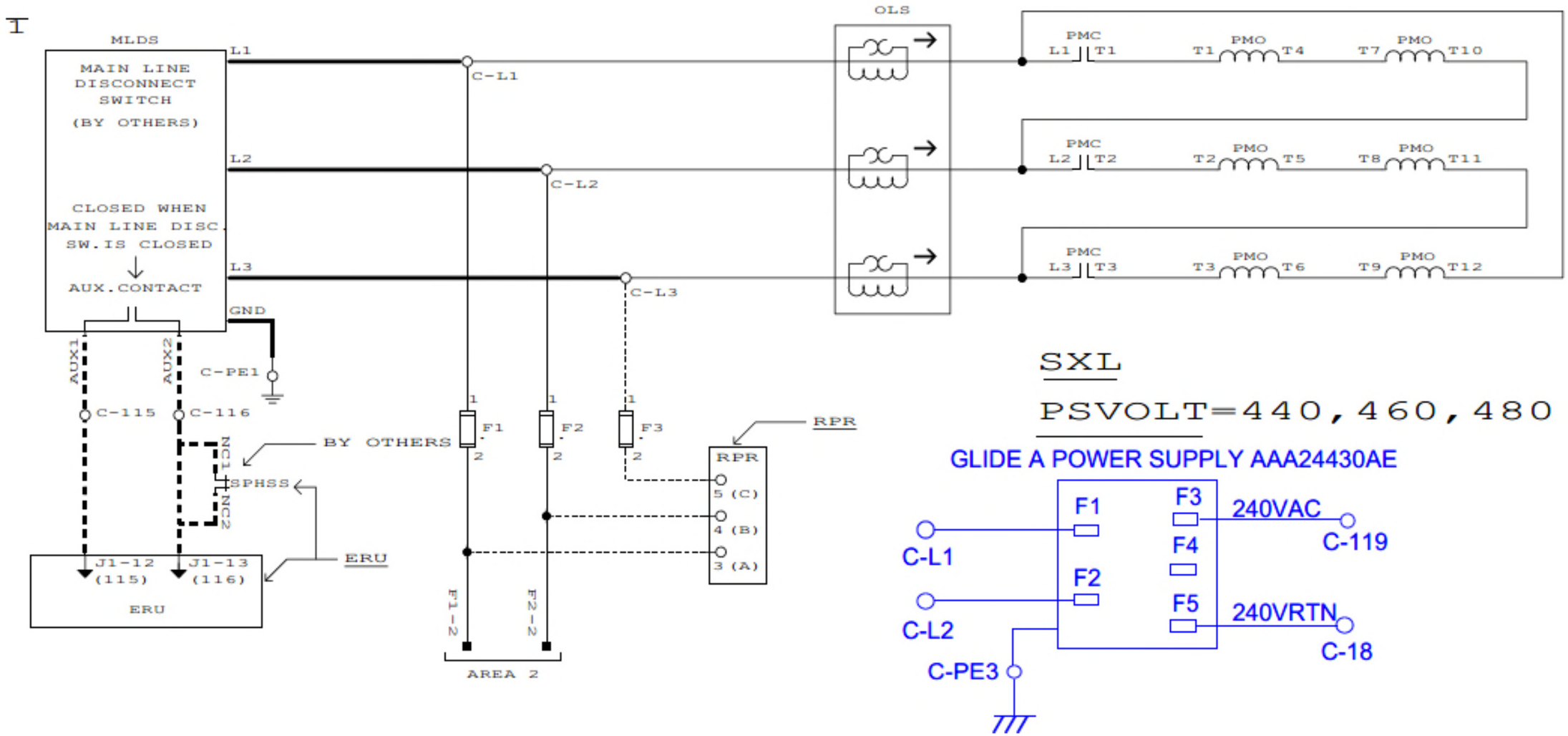


Figure 22: Area 1 of W/D AEA21241L - Addition of Glide A Power Supply, AAA24430AE

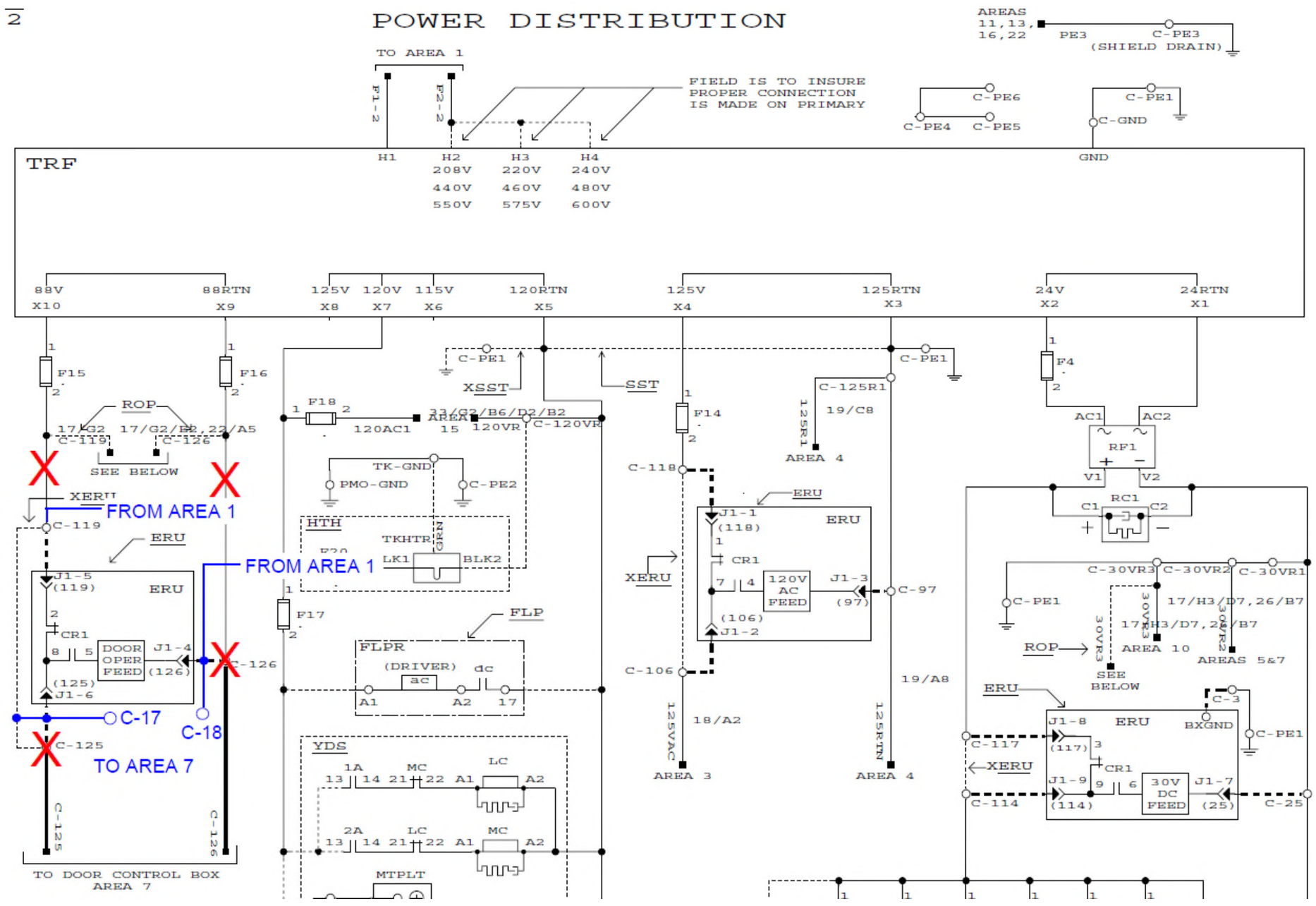


Figure 23: Area 2 of W/D AEA21241L - Reconfiguration of the Power Distribution Connections

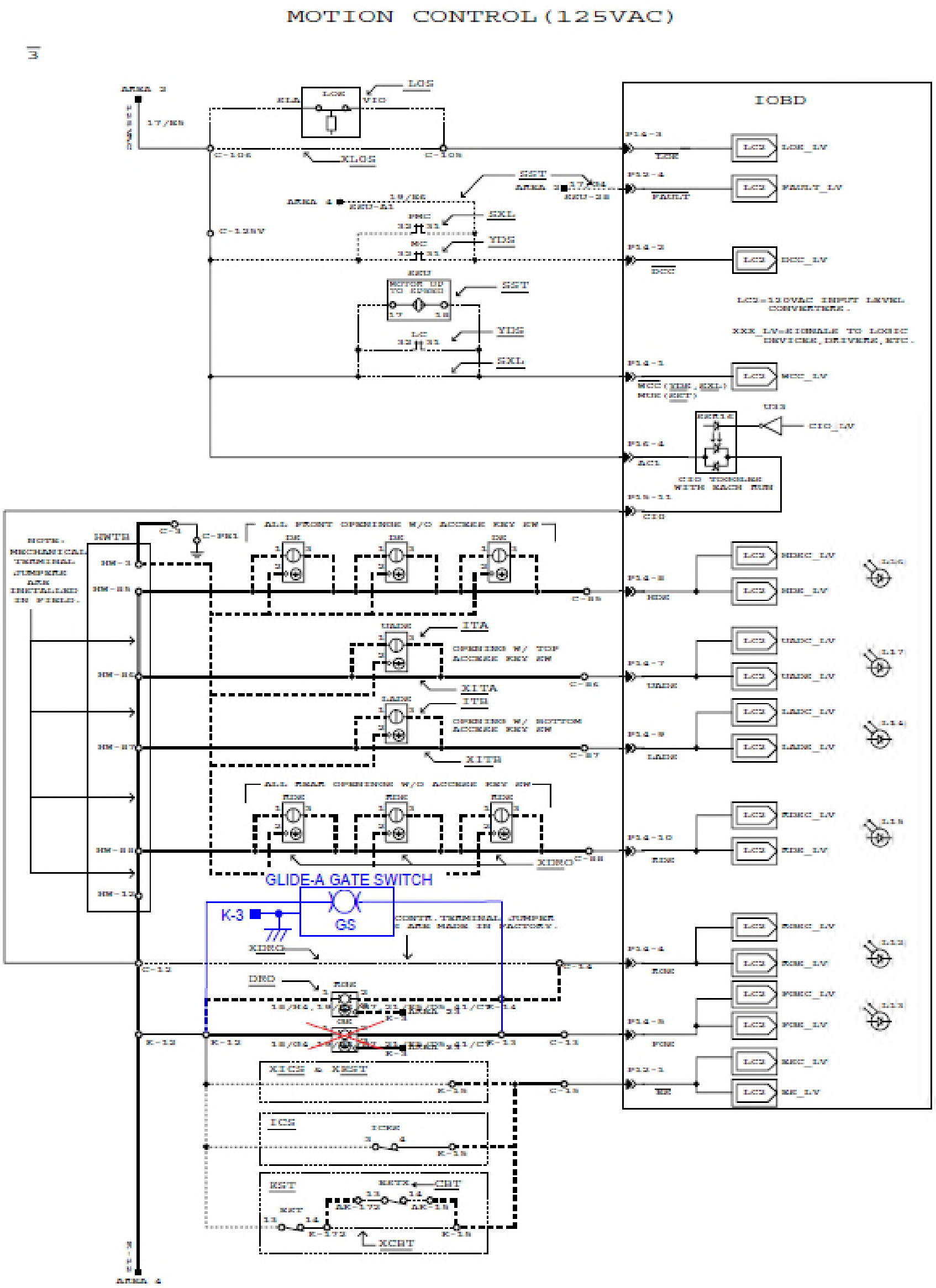


Figure 24: Area 3 of W/D AEA21241L - Existing Gate Switch Removed and Replaced with Glide A Gate Switch

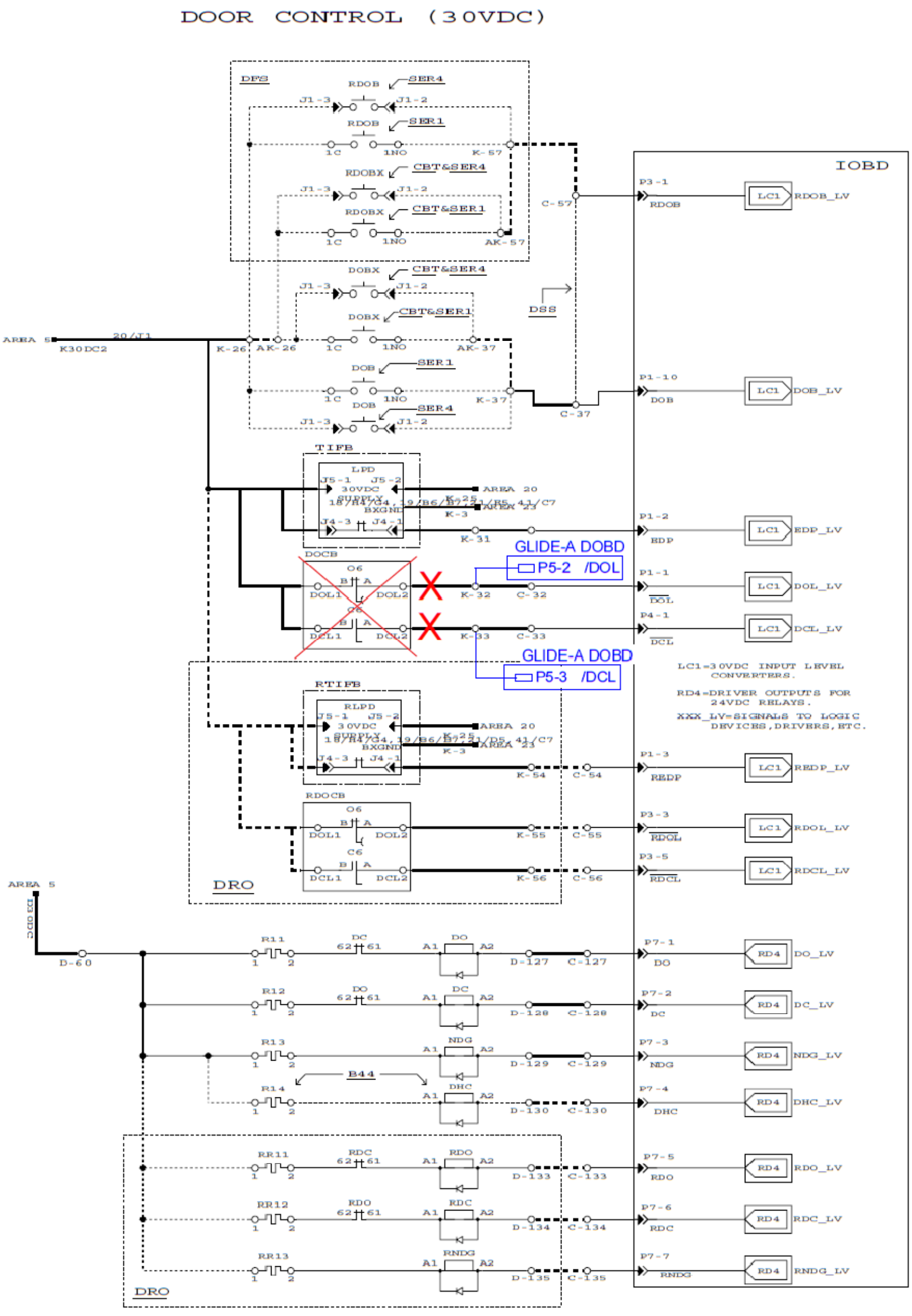


Figure 25: Area 6 of W/D AEA21241L - Existing Door Limit Connections Removed and Replaced with Glide A Door Limits

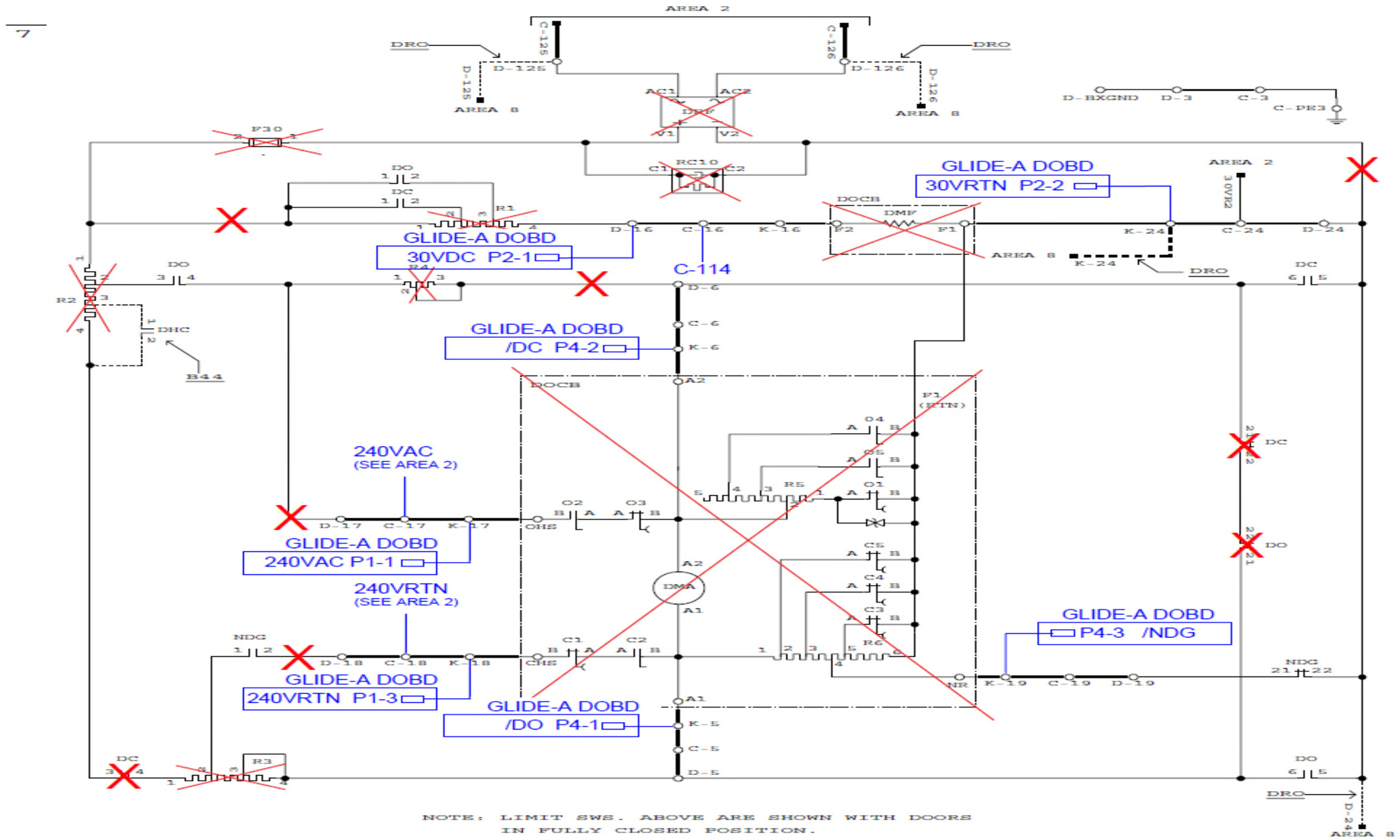


Figure 26: Area 7 of W/D AEA21241L - Existing Door Operator Removed and Connections Reused for Glide A

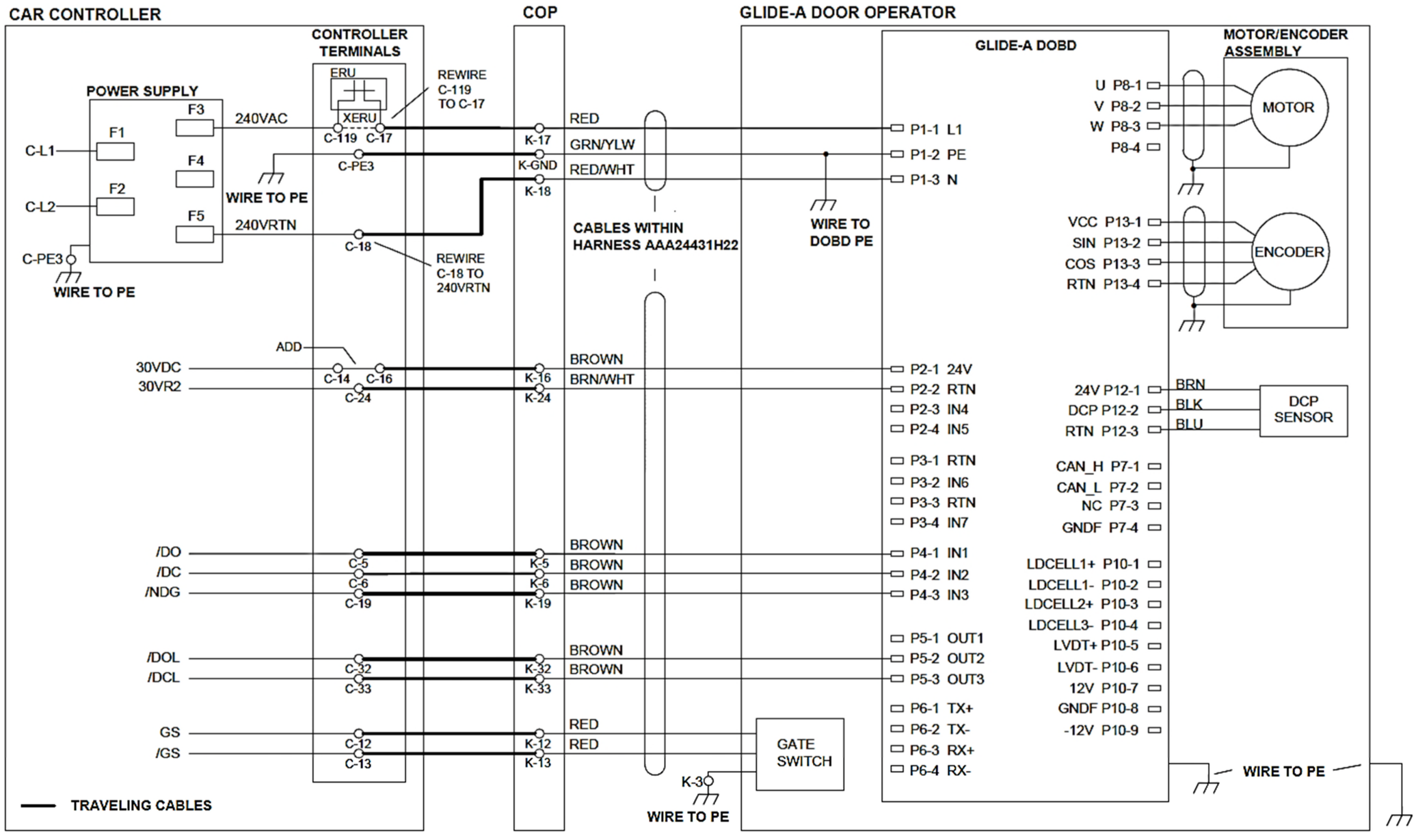


Figure 27: AEA21241L Connection Summary

8.3 NSAA Discrete Installation on GEM Controller with QL w/DISS Retained (WD ALA21290T)

The following wiring diagram depicts installation of the Otis Glide A door operator and its power supply on a GEM controller with existing QL door operator w/DISS (includes load weighing).

- **Area 1A:** Removal of previous supply and addition of AAA24430AE power supply
- **Area 4:** Replacement of QL gate switch with Otis Glide A gate switch.
- **Area 8:** Showing no change to DISS power connections.
- **Area 18:** DISS I/O Connection Changes.
- **Added Relays:** Connection Summary with changed door signal connections (for discrete operators and retained DISS board).

1A

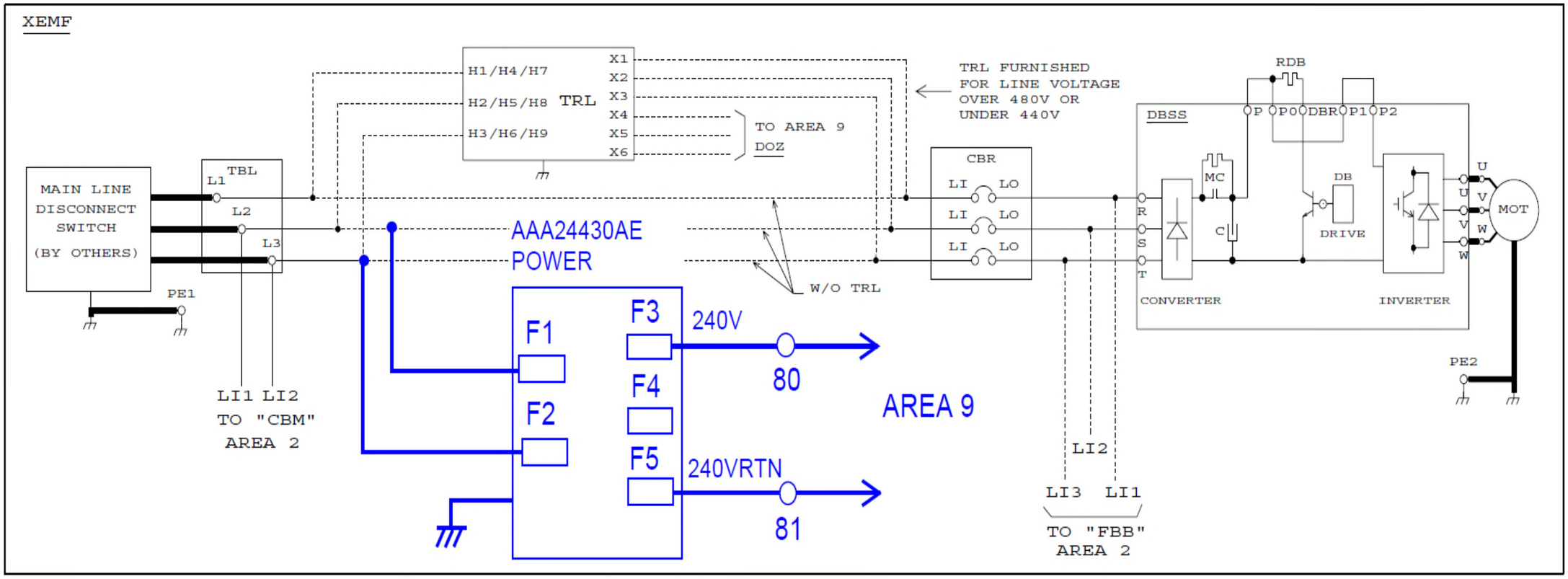


Figure 28: Area 1A of W/D ALA21290T Glide A Power Supply Added. Note that Terminal 80 and 81 Have Been Rewired from Area 9

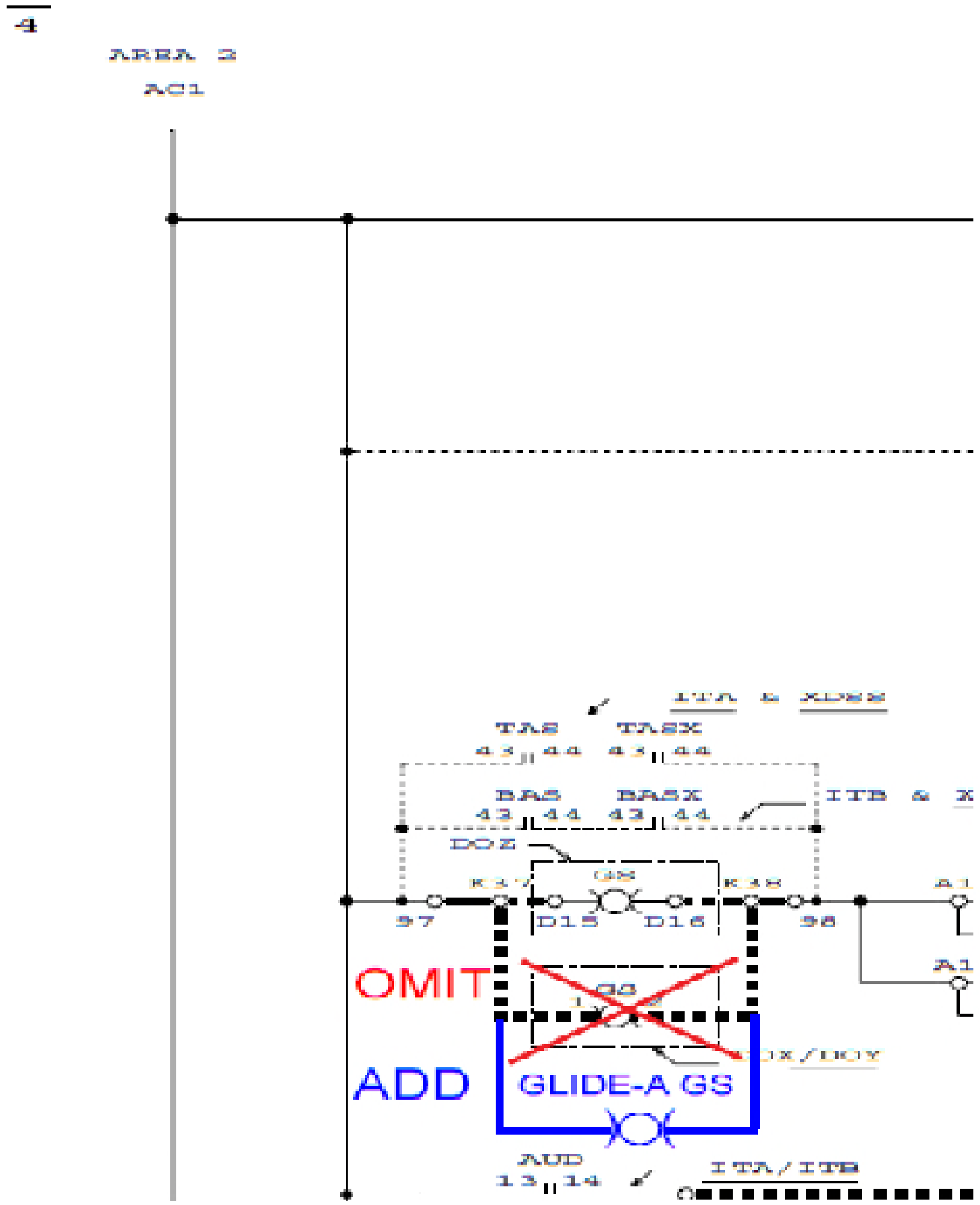


Figure 29: Area 4 of W/D ALA21290T. Existing Gate Switch Removed and Replaced with Glide A Gate Switch

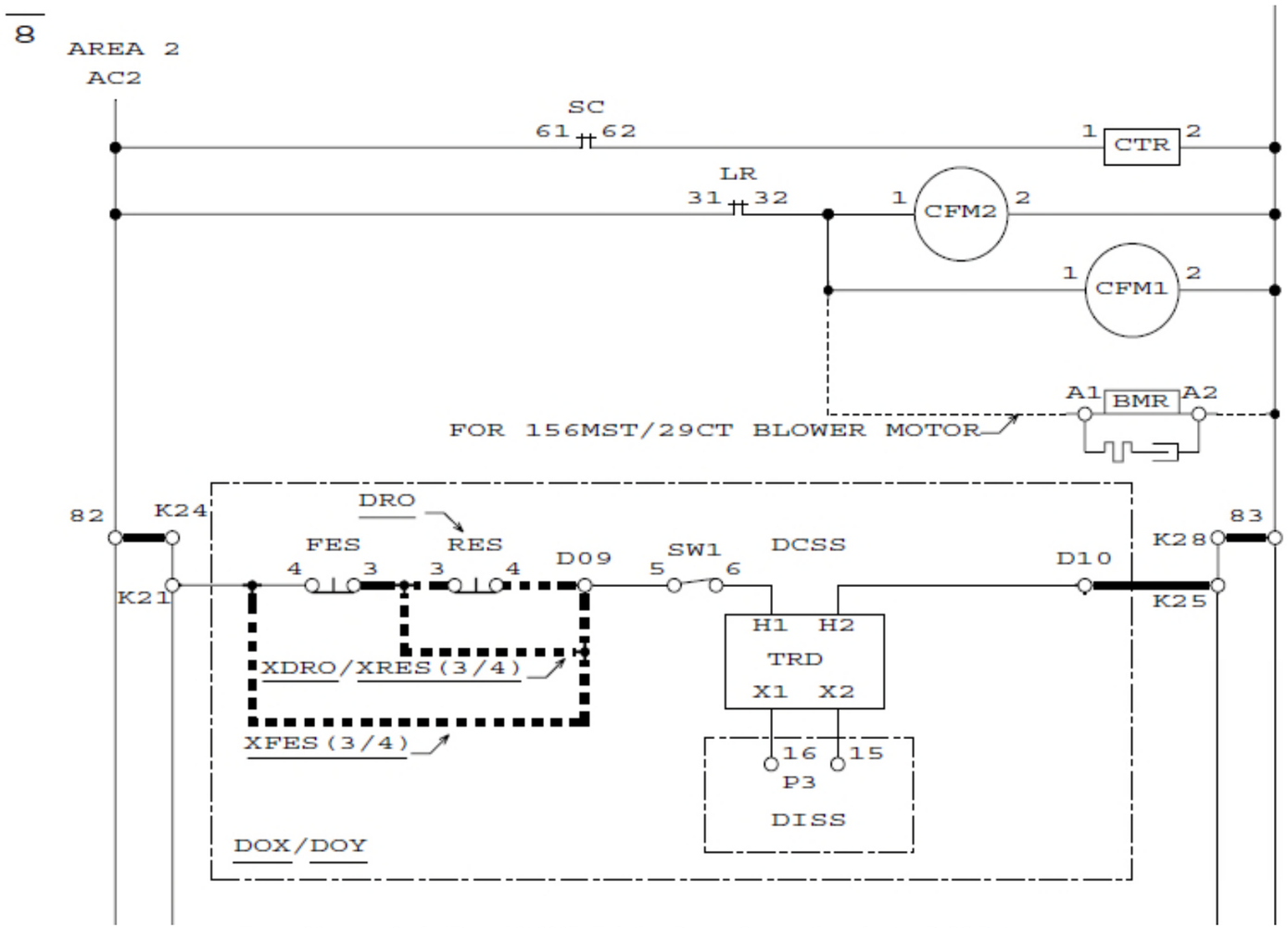


Figure 30: Area 8 of W/D ALA21290T: Existing Power Connections for the DISS Retained.

18

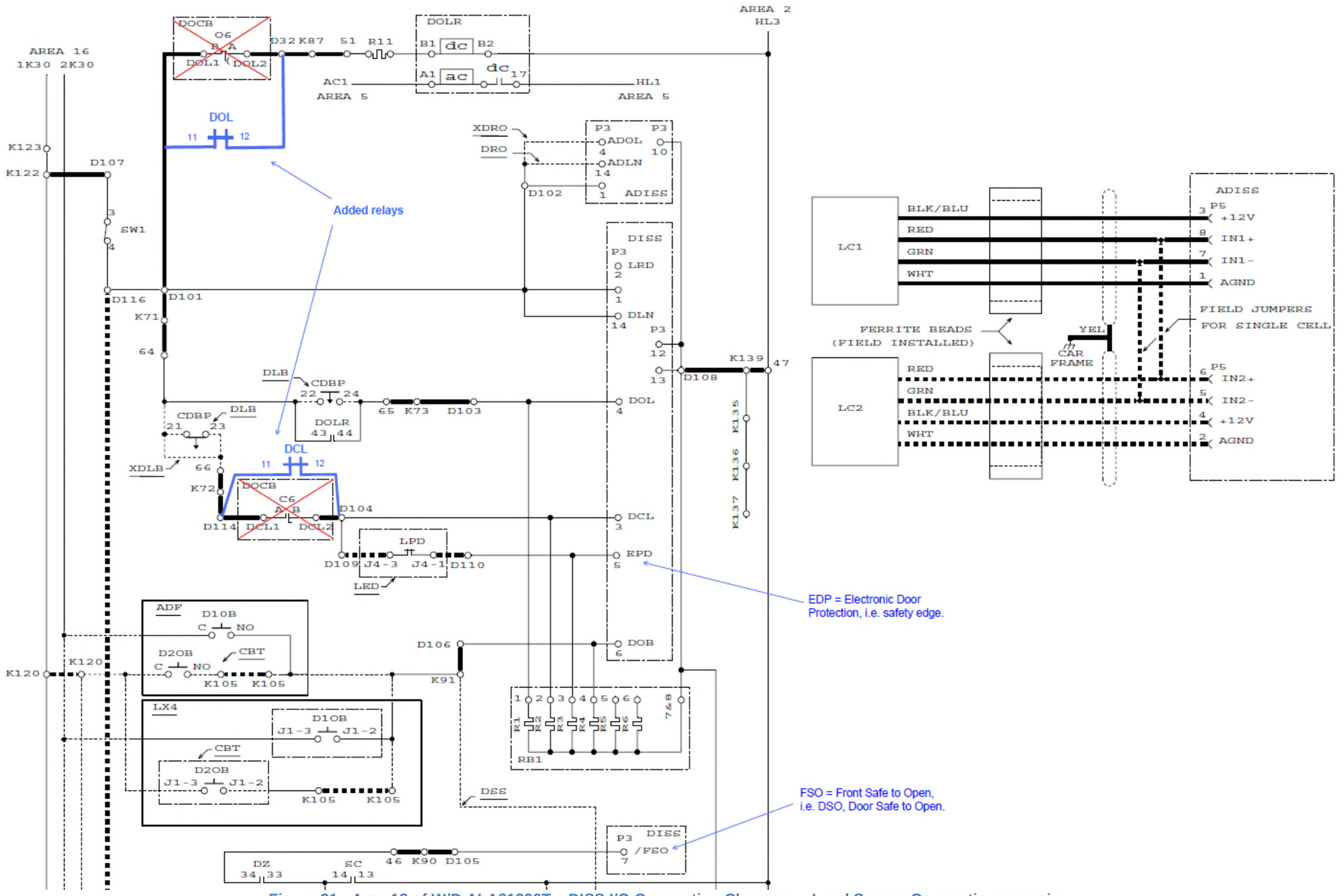


Figure 31: Area 18 of W/D ALA21290T – DISS I/O Connection Changes. Load Sensor Connections remain.

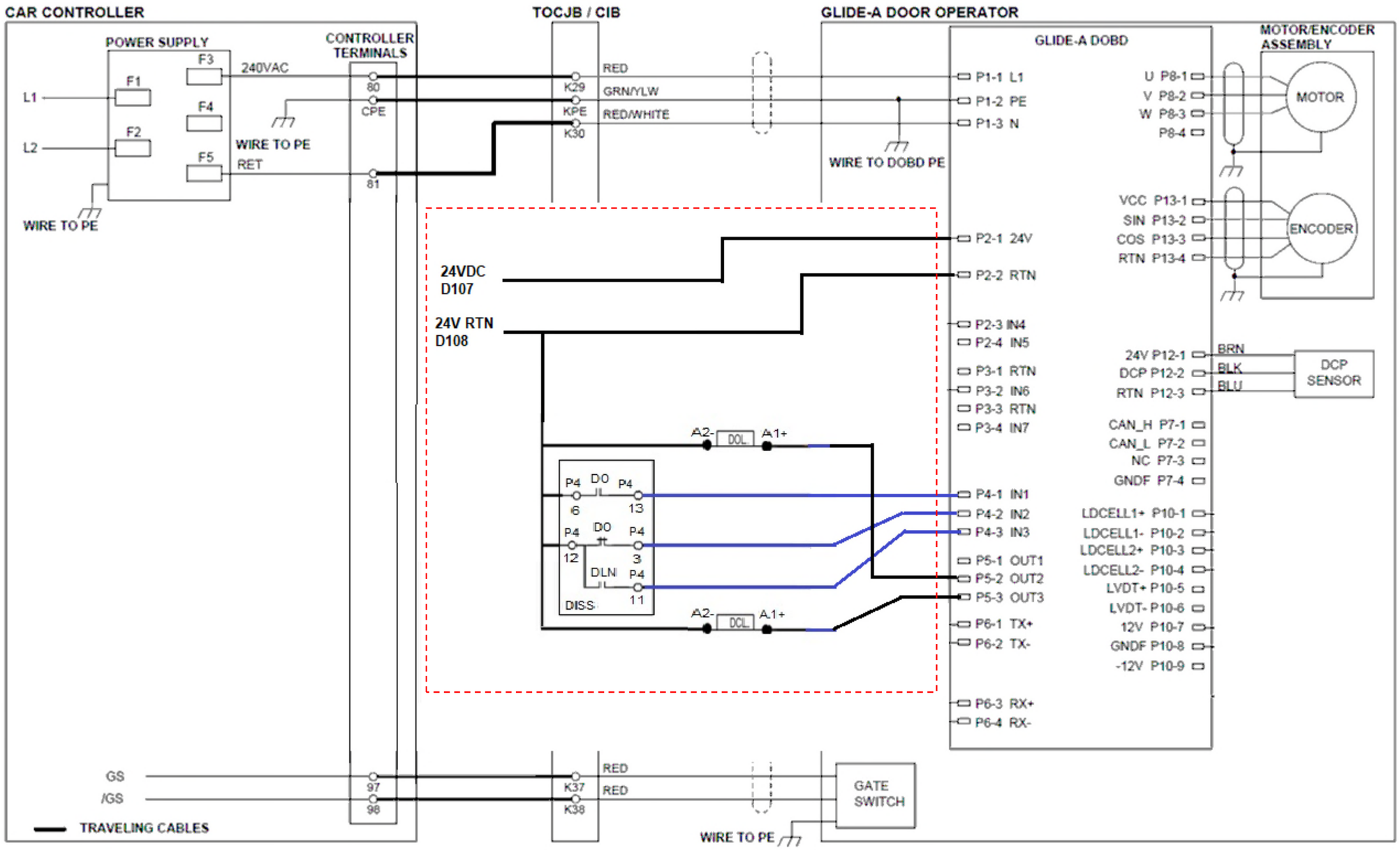


Figure 32: ALA21290T - Connection Summary with changed door signal connections (for discrete operators and retained DISS board).

8.4 NSAA Serial Multidrop Installation on GEM Controller with QL w/DISS (WD ALA21290T)

The following wiring diagram depicts installation of the Otis Glide A door operator and its power supply on a GEM controller with existing QL door operator w/DISS (includes load weighing). The following areas are affected:

- **Area 1A:** Removal of previous supply and addition of AAA24430AE power supply
- **Area 4:** Replacement of QL gate switch with Otis Glide A gate switch.
- **Area 8:** Removal of DISS power connections.
- **Area 10:** Removal of QL door operator, DISS and associated interconnections.
- **Area15:** Removal of DISS communication wires and replacement with multidrop buffer board and associated connections for multidrop communication.
- **Area 19:** Removal of DISS system I/O connections and reuse with Glide A.

1A

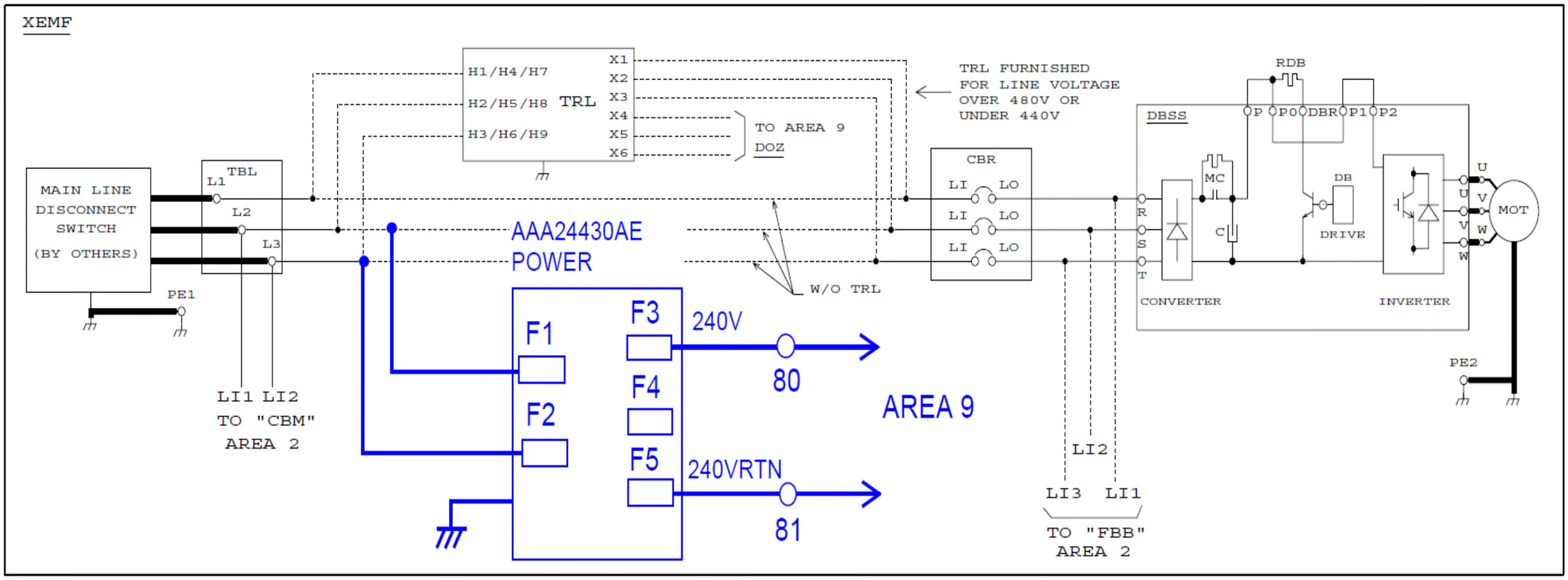


Figure 33: Area 1A of W/D ALA21290T Glide A Power Supply Added. Note that Terminal 80 and 81 Have Been Rewired from Area 9

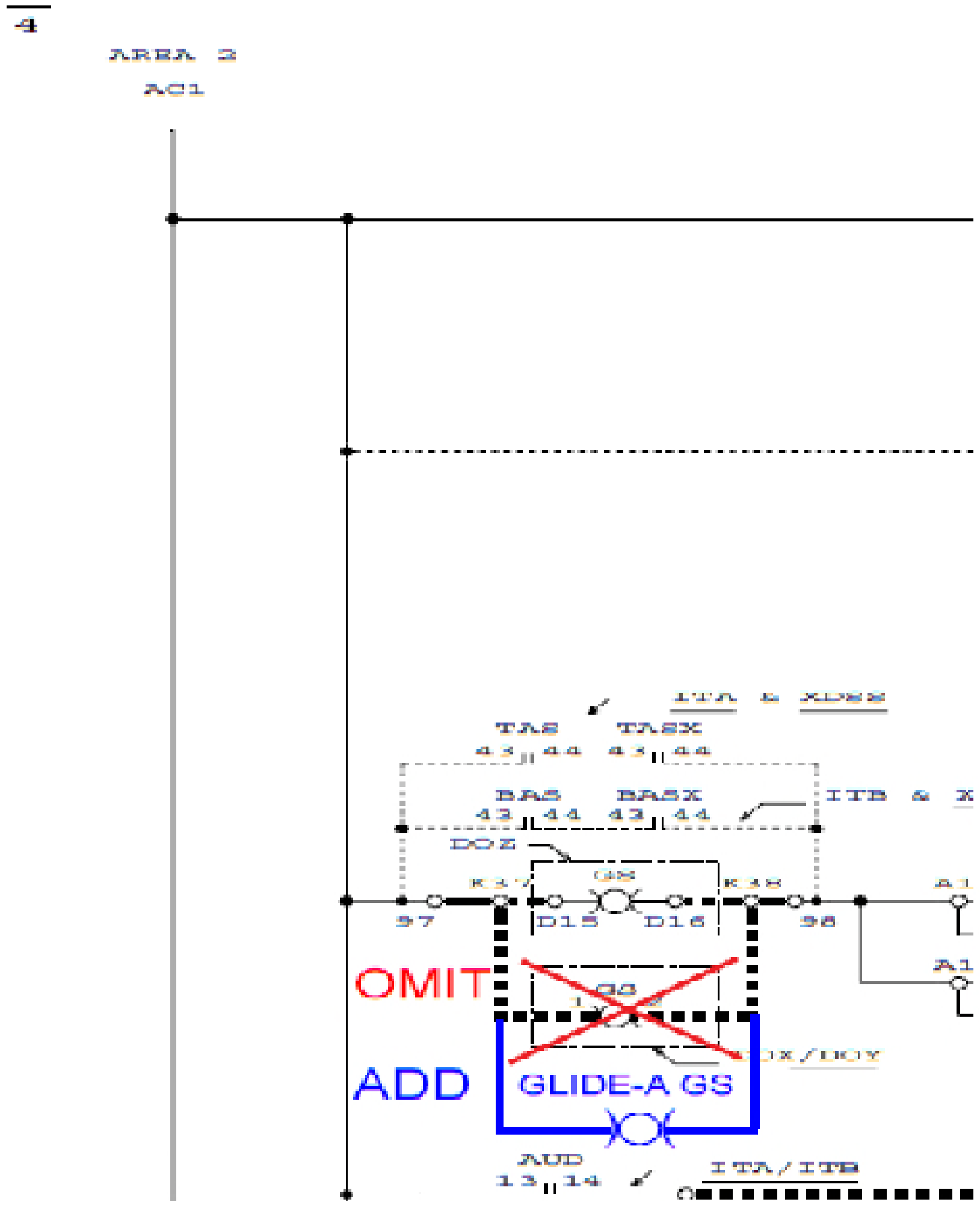


Figure 34: Area 4 of W/D ALA21290T. Existing Gate Switch Removed and Replaced with Glide A Gate Switch

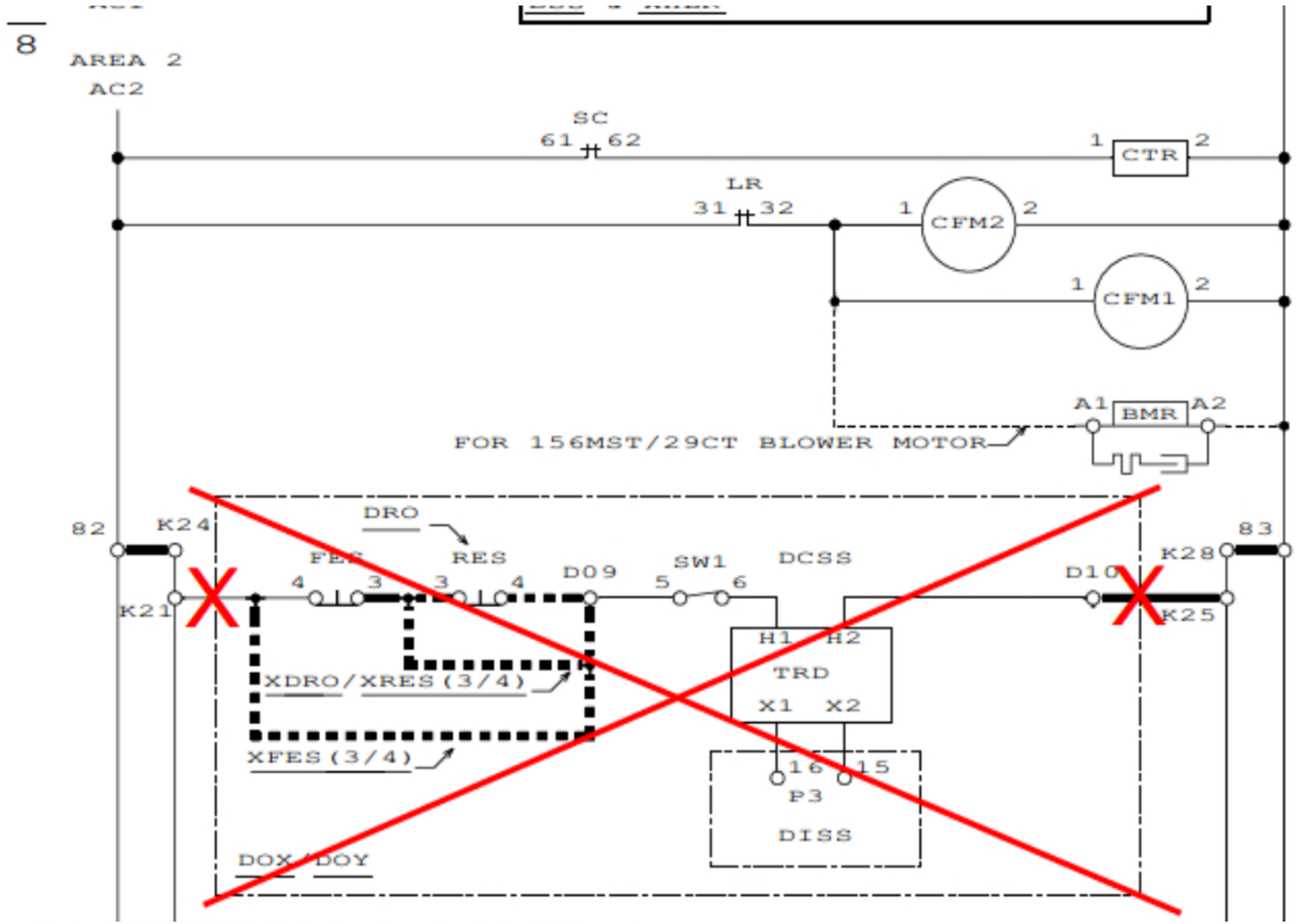


Figure 35: Area 8 of W/D ALA21290T: Existing Power Connections for the DISS Removed

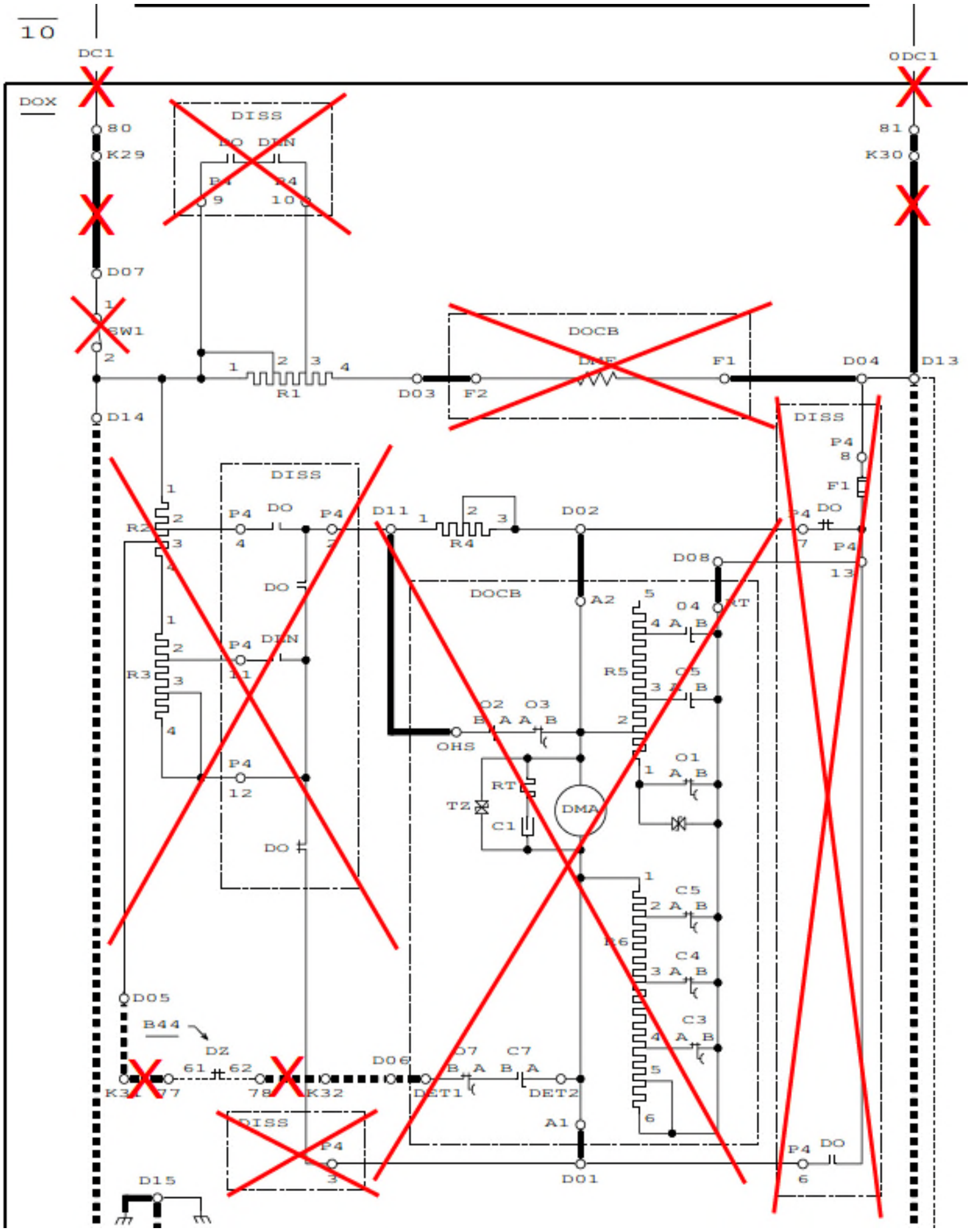


Figure 36: Area 10 of W/D ALA21290T - DISS I/O Connections Removed

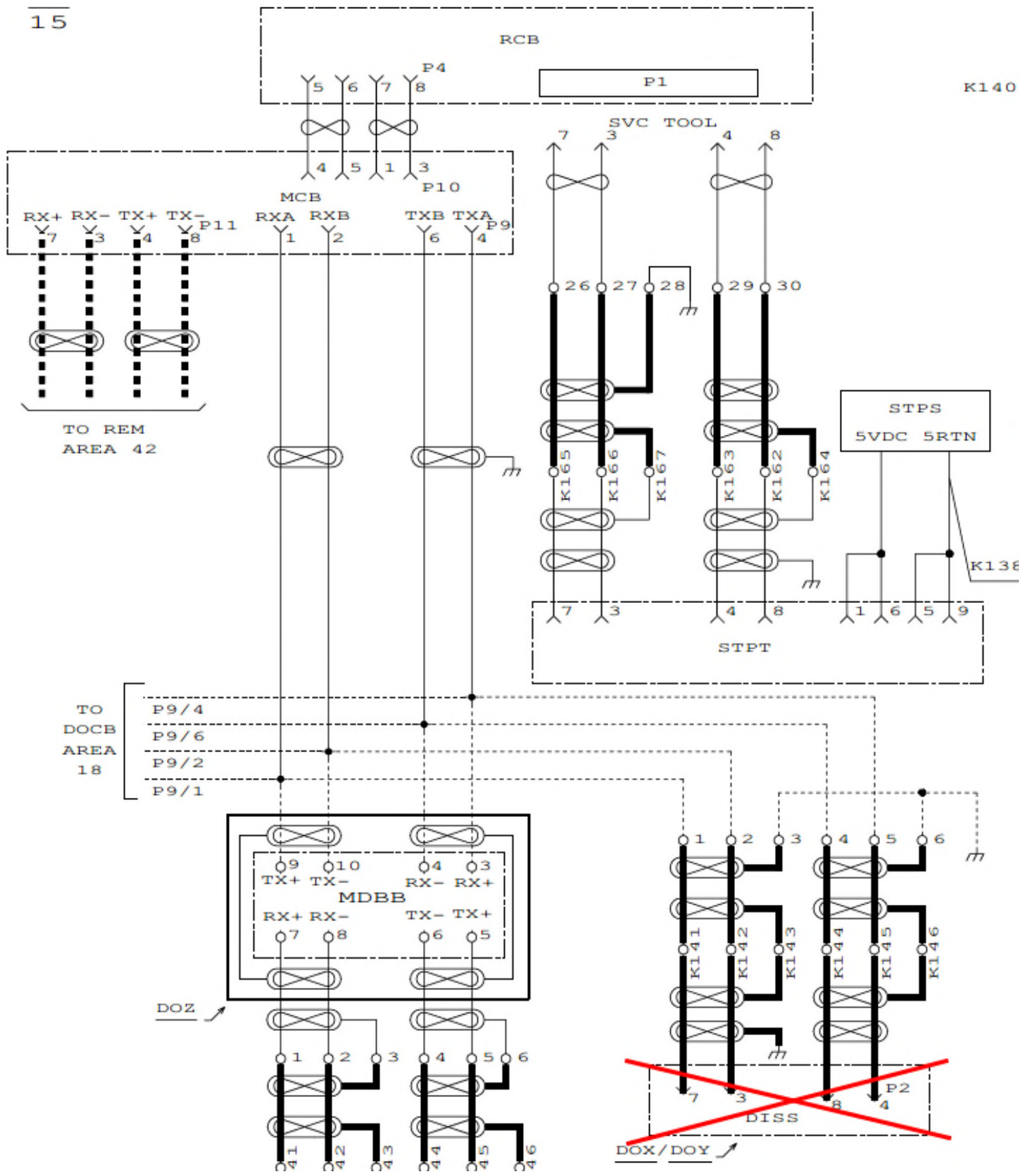


Figure 37: Area 15 of W/D ALA21290T – DISS Multidrop Connections Removed.
Multidrop Buffer Board and Wiring Reconnections Shown in Figure 33

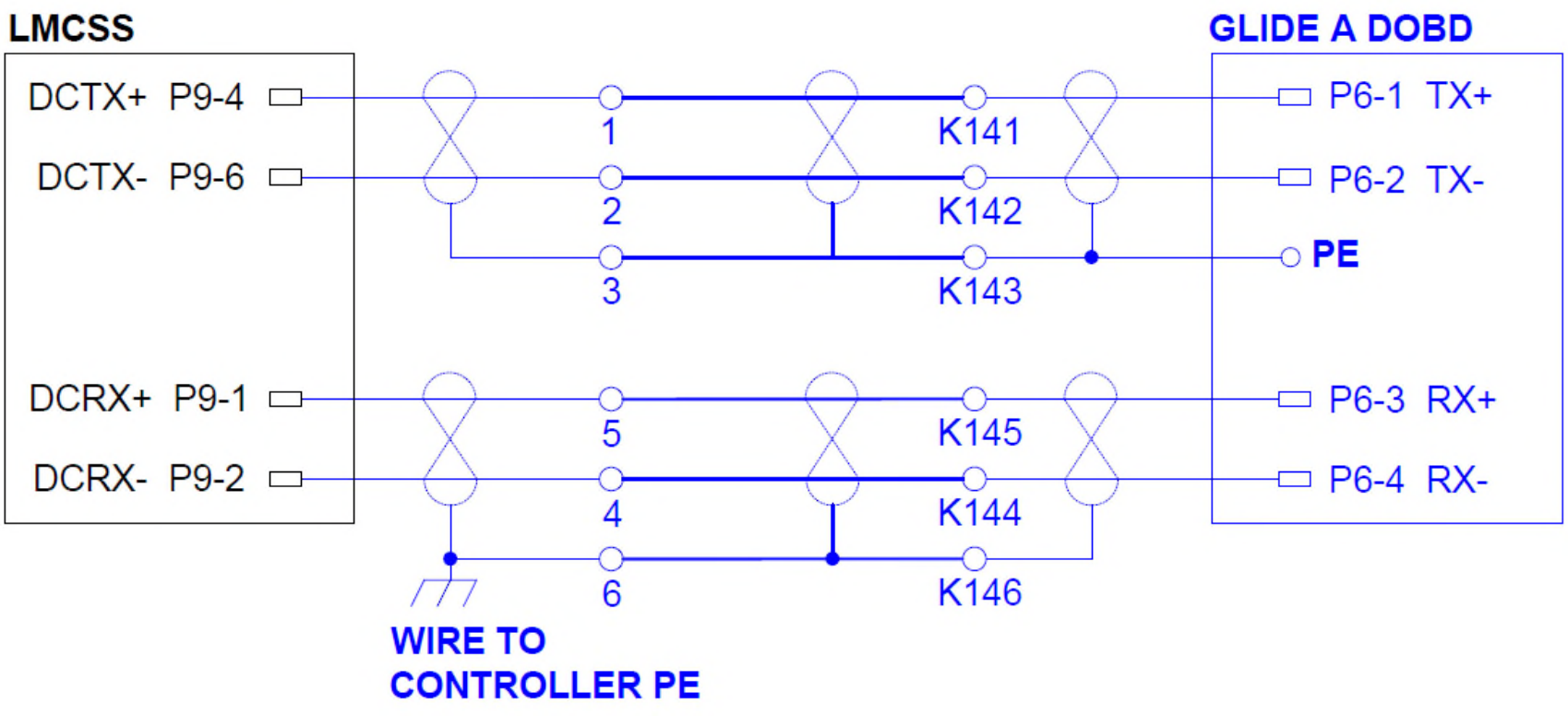


Figure 38: Area 15 of W/D ALA21290T - Multidrop Connections Removed from DISS and Installed onto Glide A. Note the Grounding Scheme of the Shield Wires

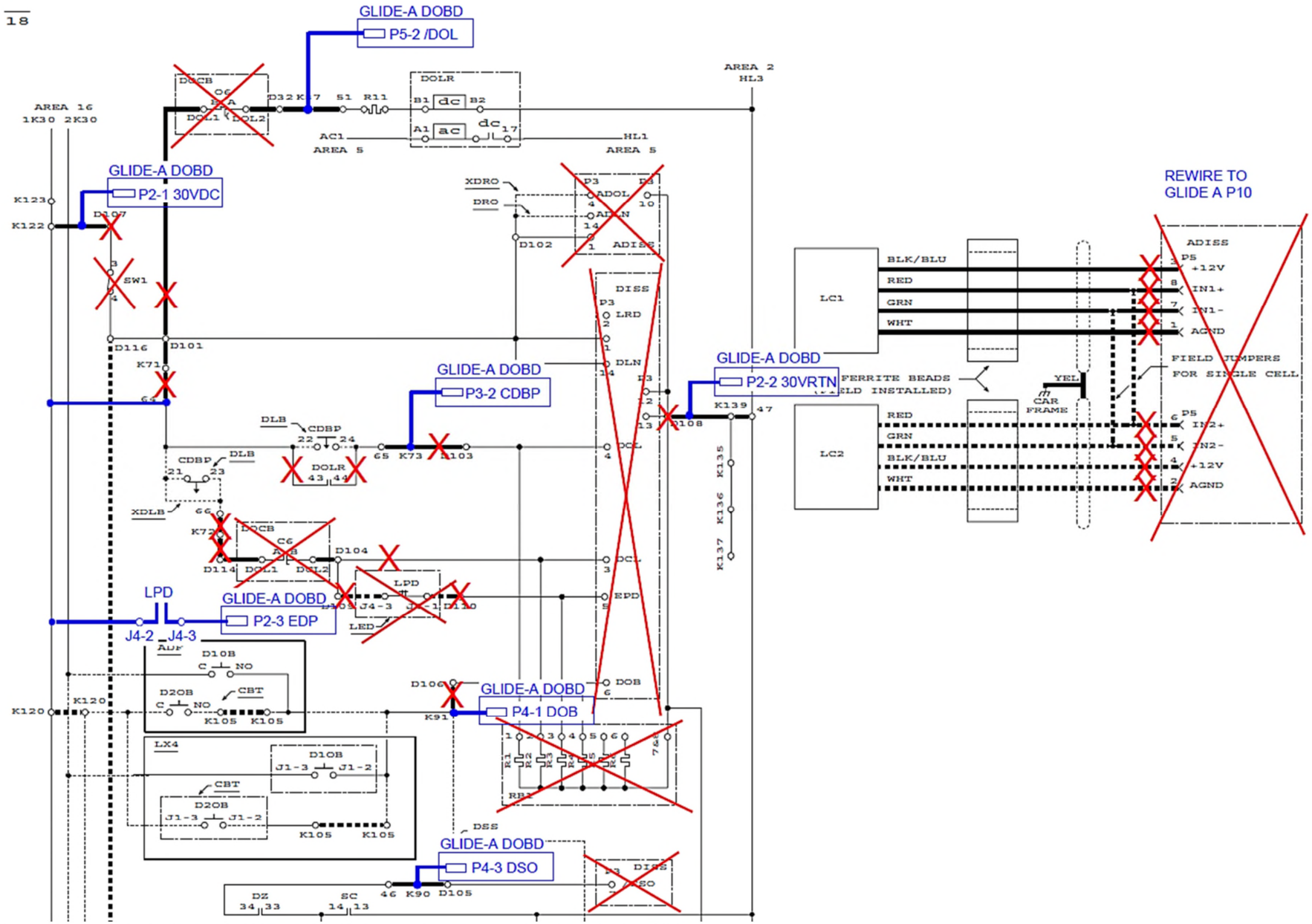


Figure 39: Area 18 of W/D ALA21290T – DISS I/O Connections Removed and Rewired to Glide A. Load Sensor Connections are Shown in Figure 35.

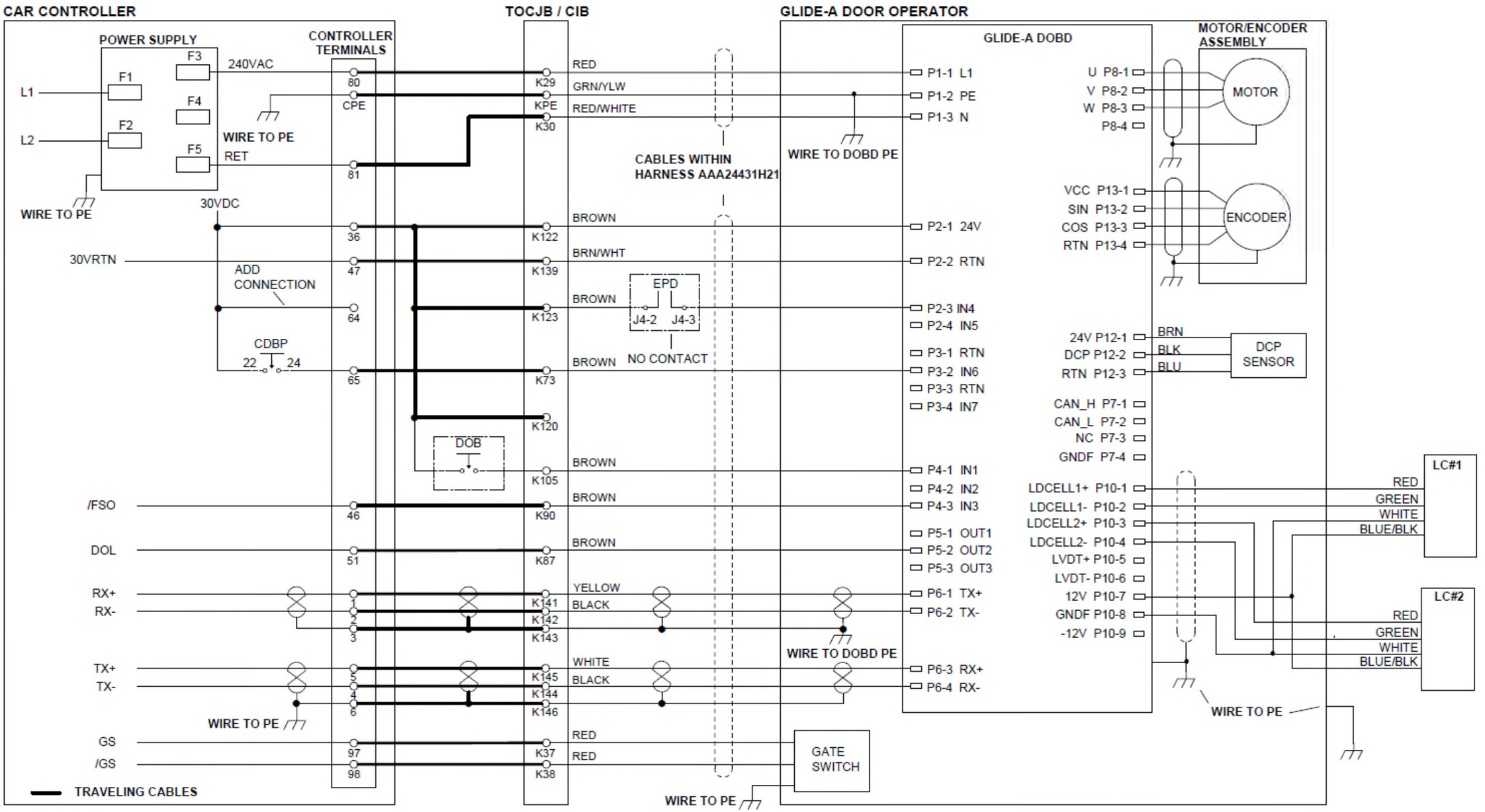


Figure 40: ALA21290T - Connection Summary

8.5 NSAA Discrete Installation on 211M Controller with i-Motion II (WD ABA21241VM)

The following wiring diagram depicts installation of the Otis Glide A door operator on a 211M controller with existing discrete i-motion door operator. The following areas are affected:

- **Area 1A:** Addition of AAA24430AE power supply.
- **Area 4C:** Removal of previous door operator power supply connections.
- **Area 6B:** Replacement of existing gate switch with Glide A gate switch and elimination of i-Motion e-stop switch.
- **Area 11M:** Replacement of i-Motion 24 VDC and discrete I/O signals with Glide A.
- **Area 12M:** Removal of i-Motion door operator power connections and rewiring to Glide A power supply, AAA24430AE.

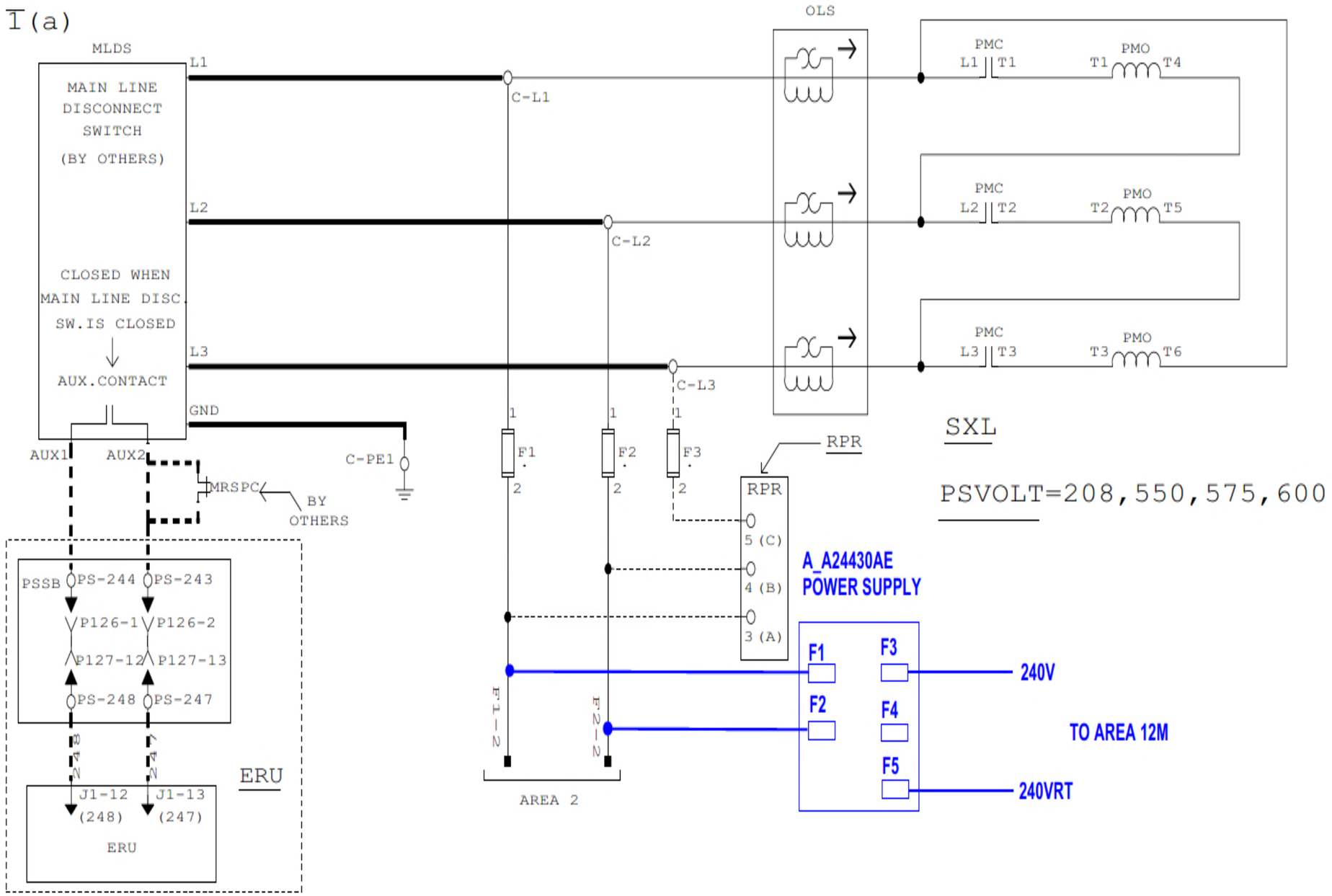


Figure 41: Area 1a of WD ABA21241VM—Otis Glide A Power Supply A_A24430AE Added

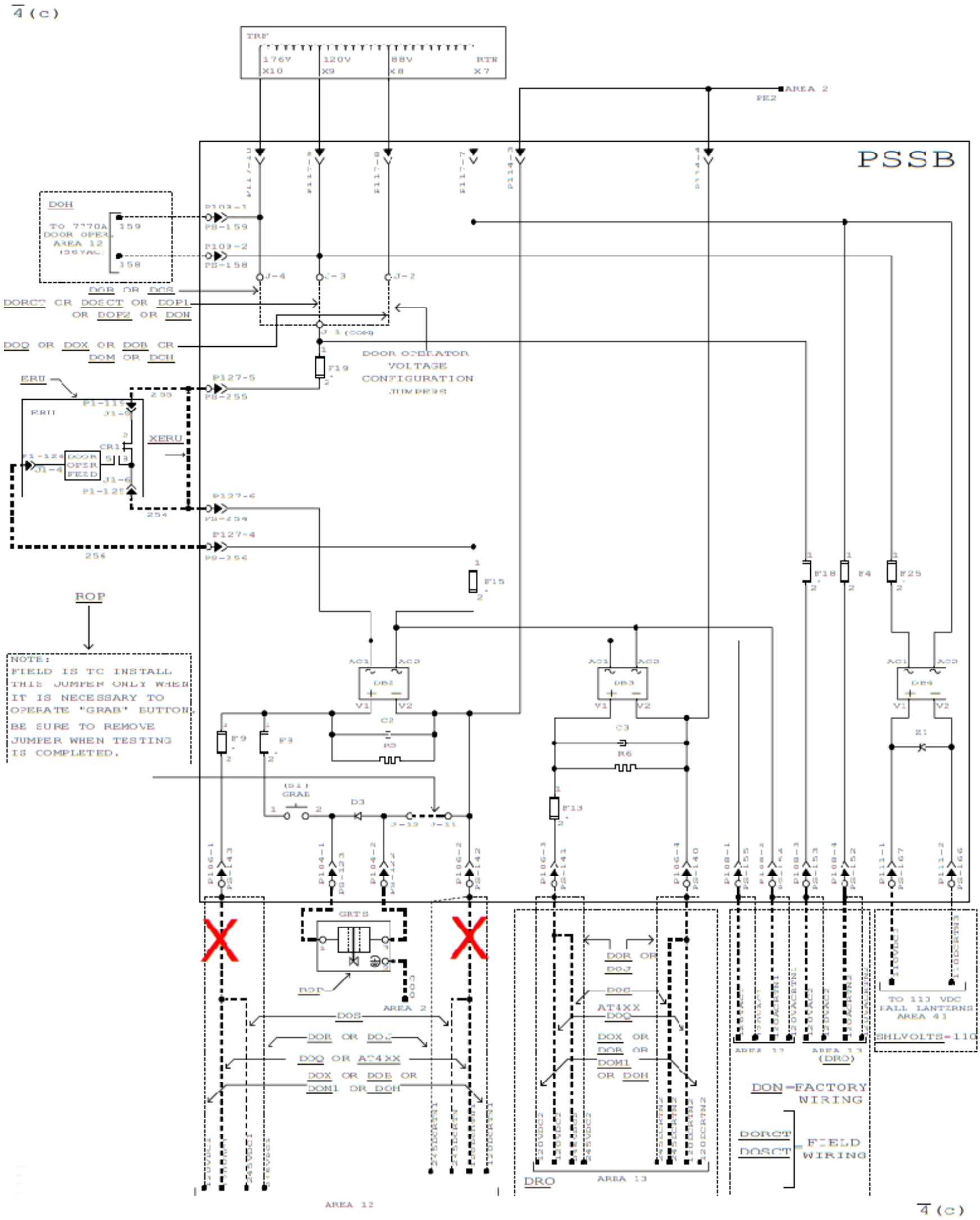
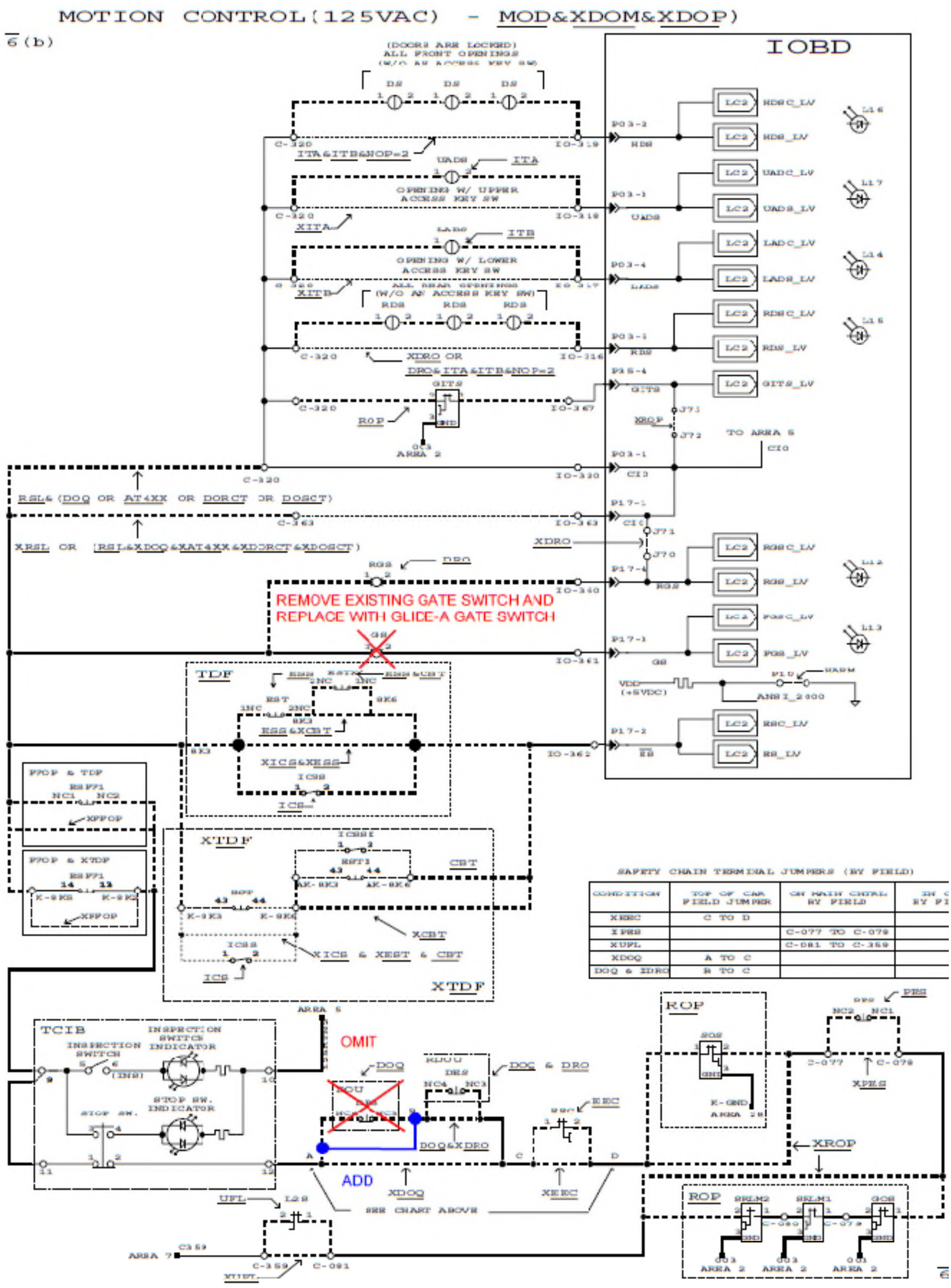


Figure 42: Area 4c of WD ABA21241VM—PSSB Connections for i-Motion Door Operator (120 VDC) Removed



CONDITION	TOP OF CAR FIELD JUMPER	GM MAIN CNTRL BY FIELD	IN C BY FI
XEEC	C TO D		
XPES		C-077 TO C-078	
XUFL		C-081 TO C-359	
XDOQ	A TO C		
DOQ & XDRO	B TO C		

Figure 43: Area 6b of WD ABA21241VM—Existing Gate Switch Removed and Replaced with Glide A Gate Switch; Emergency Stop (DES) Removed and Bypass Connection Added

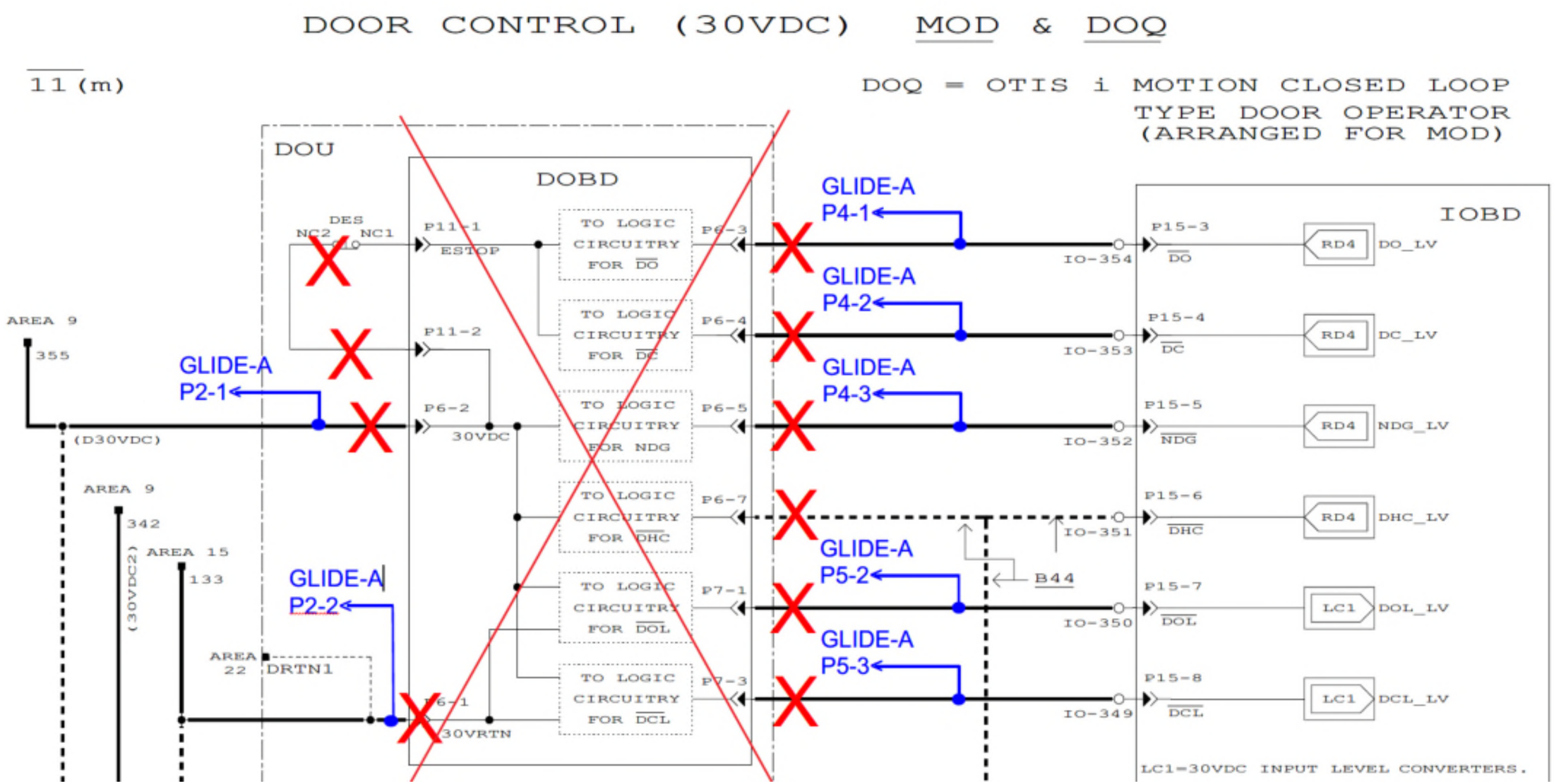


Figure 44: Area 11m of WD ABA21241VM—i-Motion Discrete Signals Removed and Rewired for Use with Glide A (see Figure 41-40)

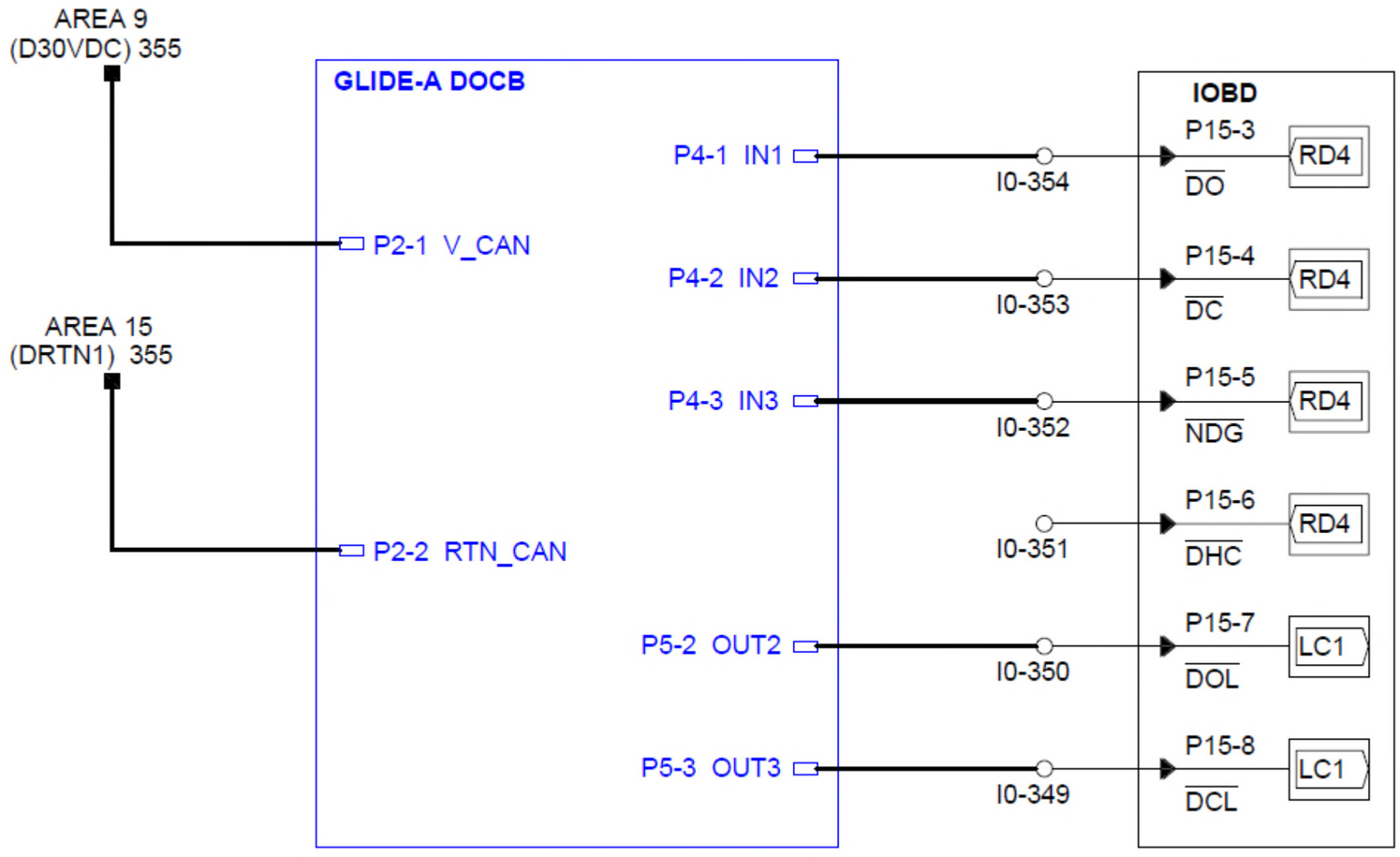


Figure 45: Area 11m of WD ABA21241VM I/O Connection Summary for Glide-A

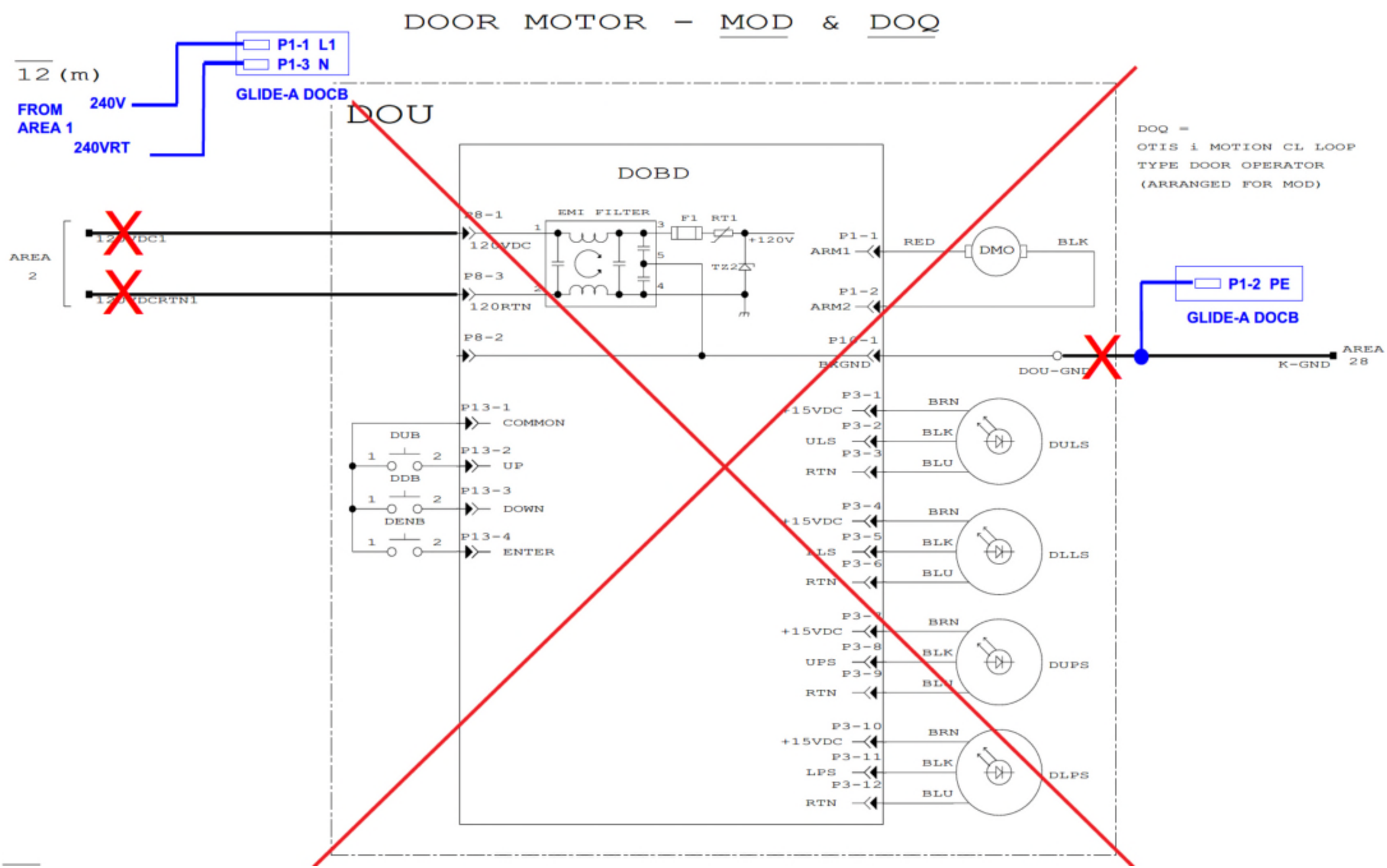


Figure 46: Area 12m of WD ABA21241VM—i-Motion Door Operator Removed and Power Connections Repurposed for Glide A

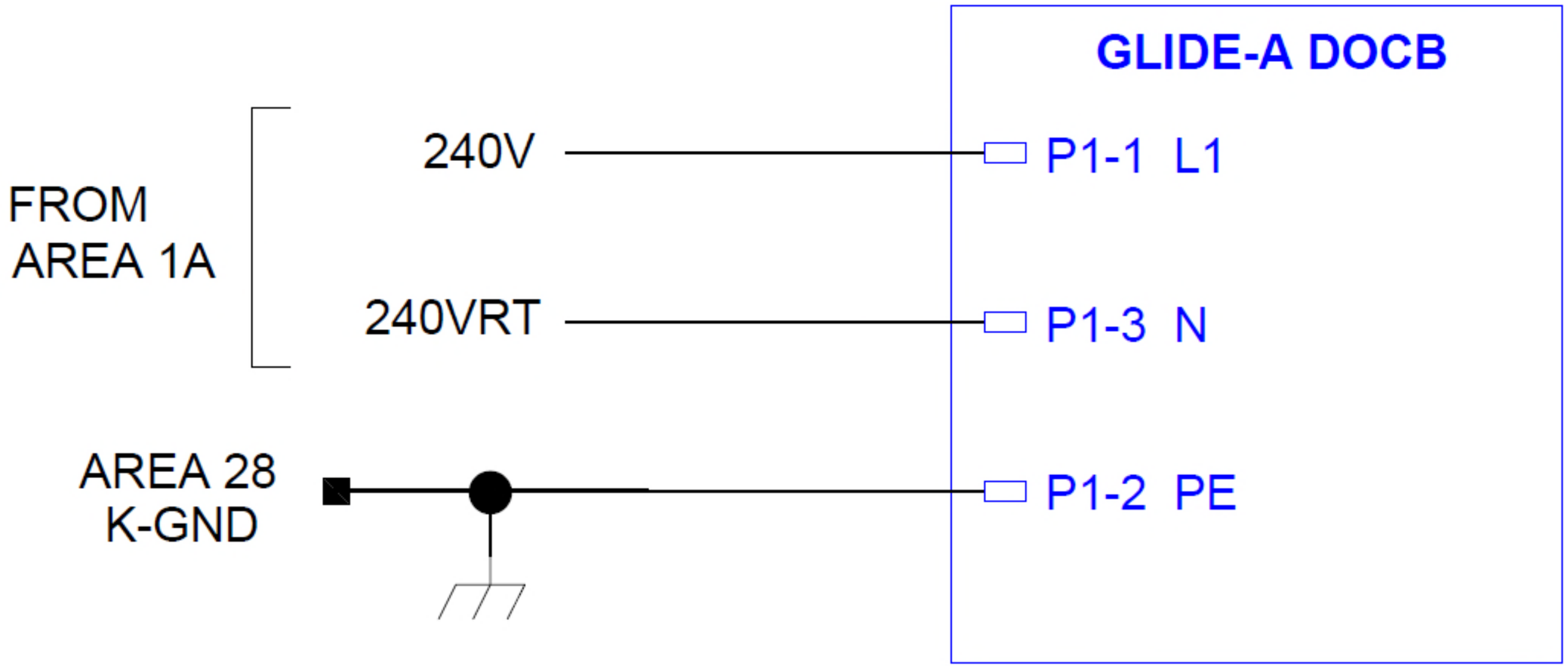


Figure 47: Area 12m of WD ABA21241VM Power Connection Summary for Glide A

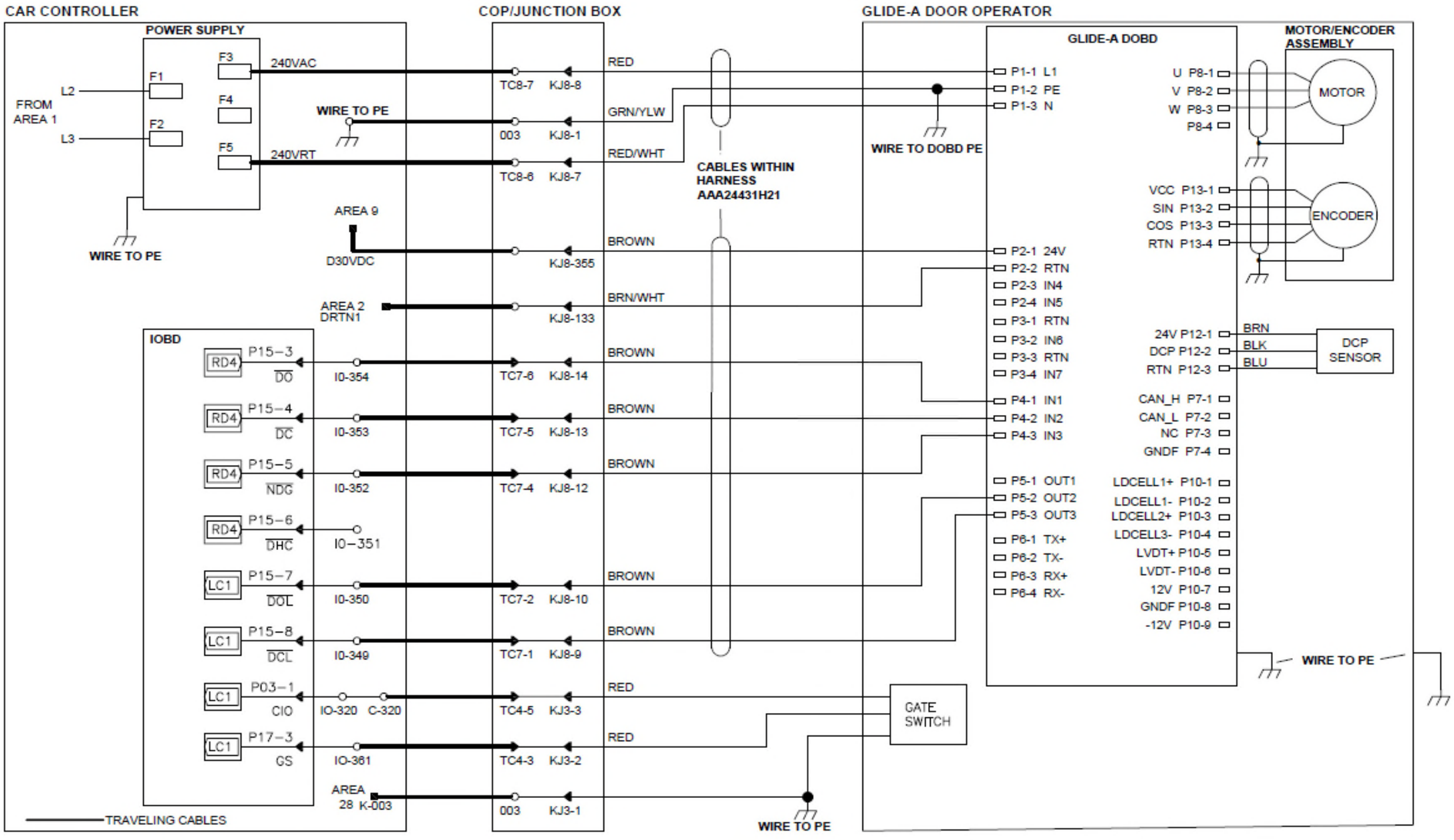


Figure 48: WD ABA21241VM—Connection Summary with Glide A Door Operator

8.6 NSAA Discrete Installation on LVM2 with Black Belt (W/D AFA21241V)

The following wiring diagram depicts installation of the Otis Glide A door operator on a LVM2 controller with existing discrete Otis Black Belt door operator. The following areas are affected:

- **Area 1A:** Addition of AAA24430AE power supply.
- **Area 2A & 3A:** Existing 120VDC ERU replaced with 220VDC ERU. Note that the connections remain identical.
- **Area 4A:** Existing 120VDC ERU replaced with 220VDC ERU and interface with 240VAC input voltage for the Glide A door operator.
- **Area 6A:** Replacement of existing gate switch with Glide A gate switch.
- **Area 11A:** Replacement of 24 VDC and discrete I/O signals with Glide A.
- **Area 12:** Removal of Black Belt door operator power connections and rewiring to Glide A power supply, AAA24430AE.

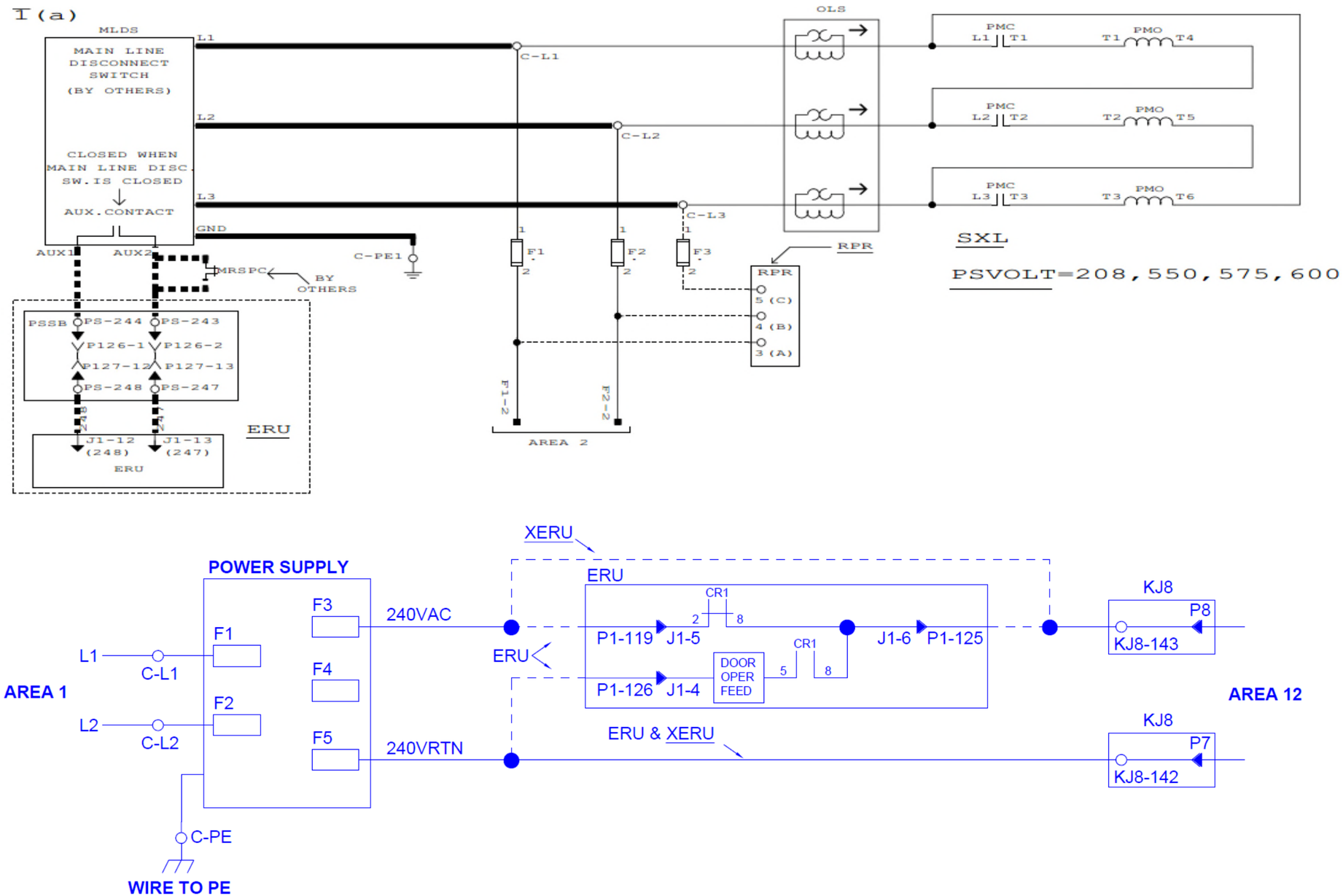


Figure 49: Area 1A of W/D AFA21241V - Connections for Glide A power supply AAA24430AE.

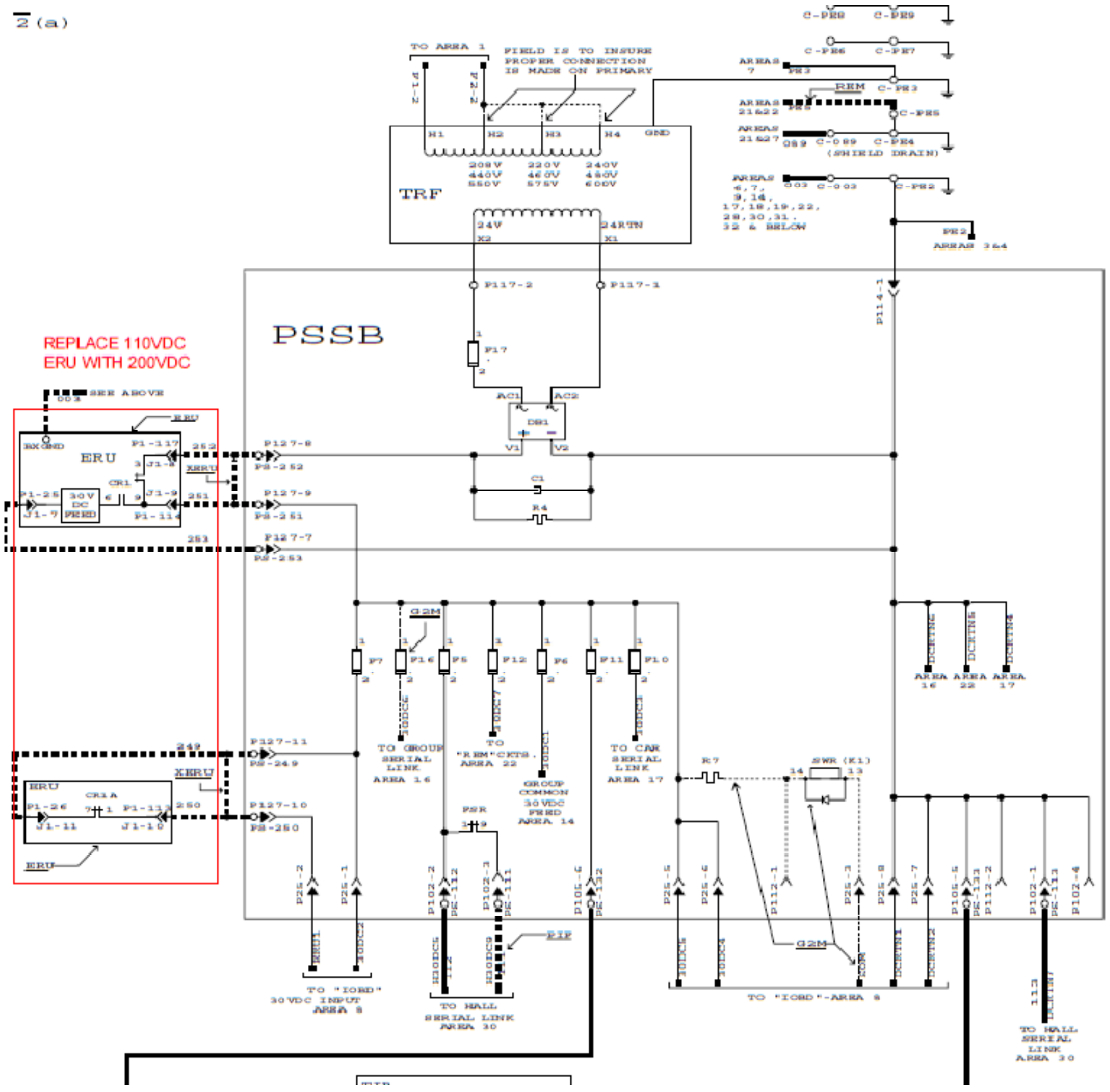


Figure 50: Area 2A of W/D AFA21241V - 110VDC ERU Replaced with 220VDC ERU

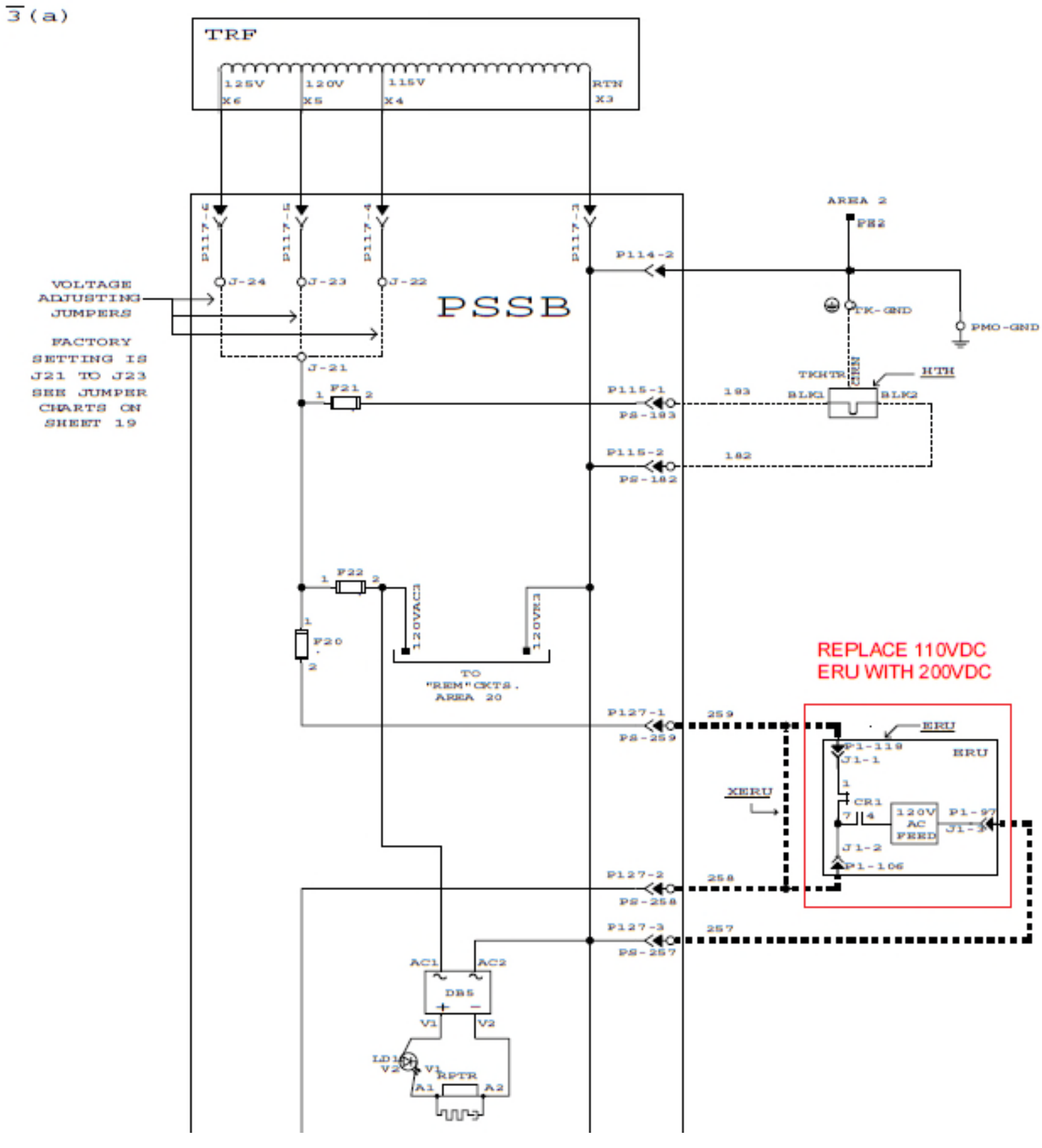


Figure 51: Area 3A of W/D AFA21241V - 110VDC ERU replaced with 220VDC ERU

4 (a)

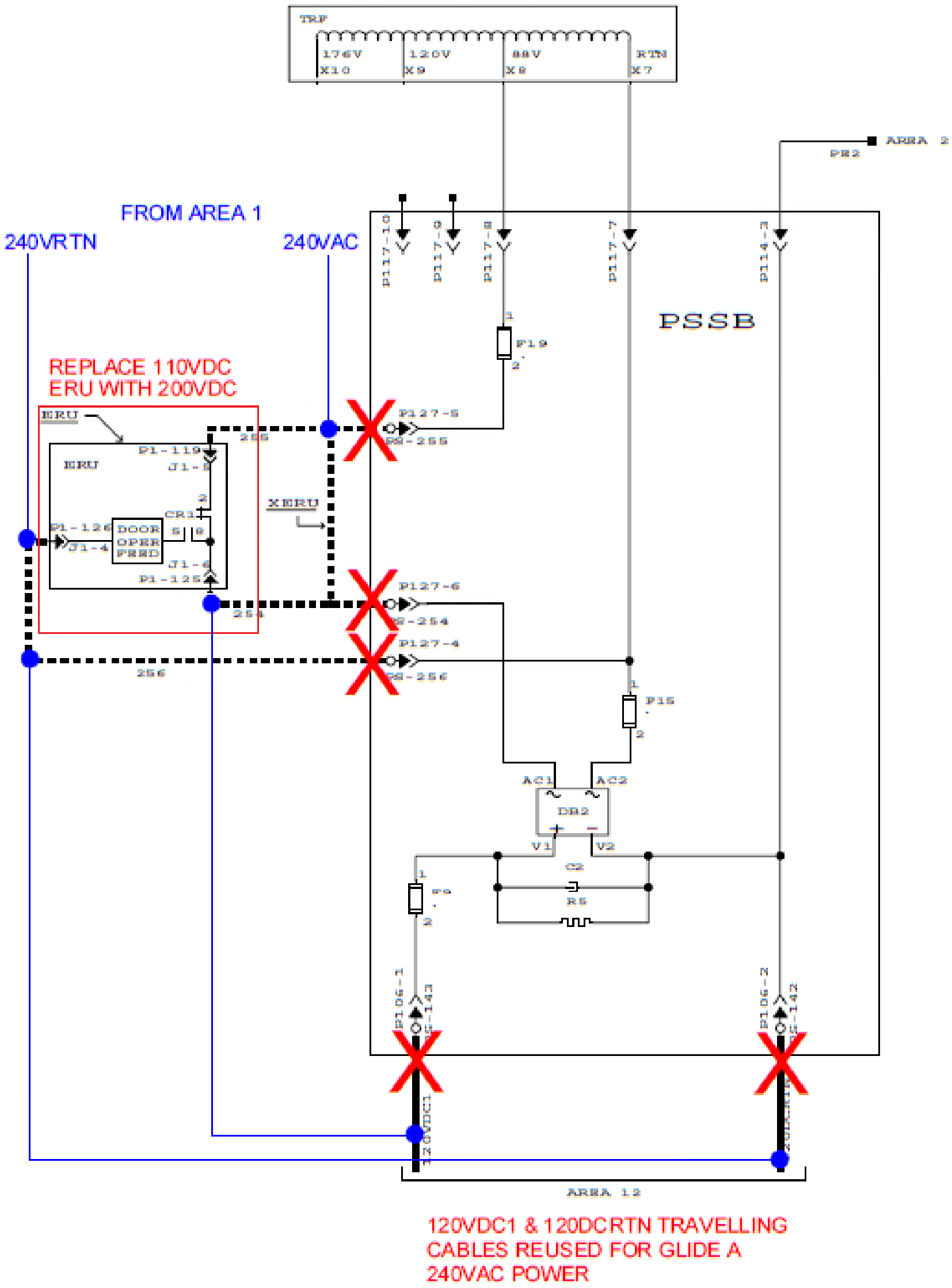


Figure 52: Area 4A of W/D AFA21241V - 110VDC ERU Replaced with 220VDC ERU and Connections Made for Use with Glide A 240VAC Input Voltage. Note that the Travelling Cables Used for 120VDC to Power the Black Belt Door Operator are to be Reused for 240VAC

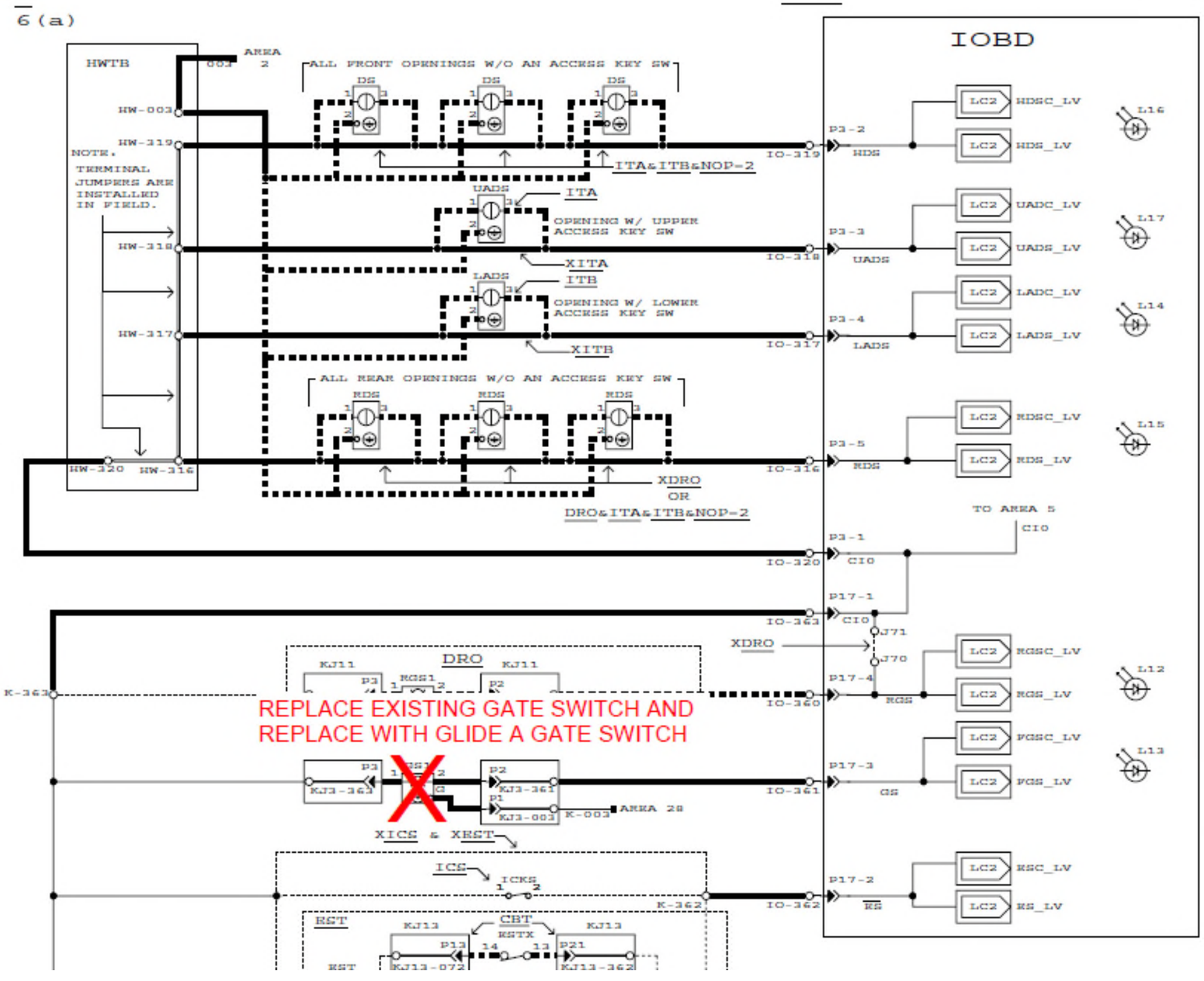


Figure 53: Area 6A of W/D AFA21241V – Existing Gate Switch Replaced with Glide A Gate Switch

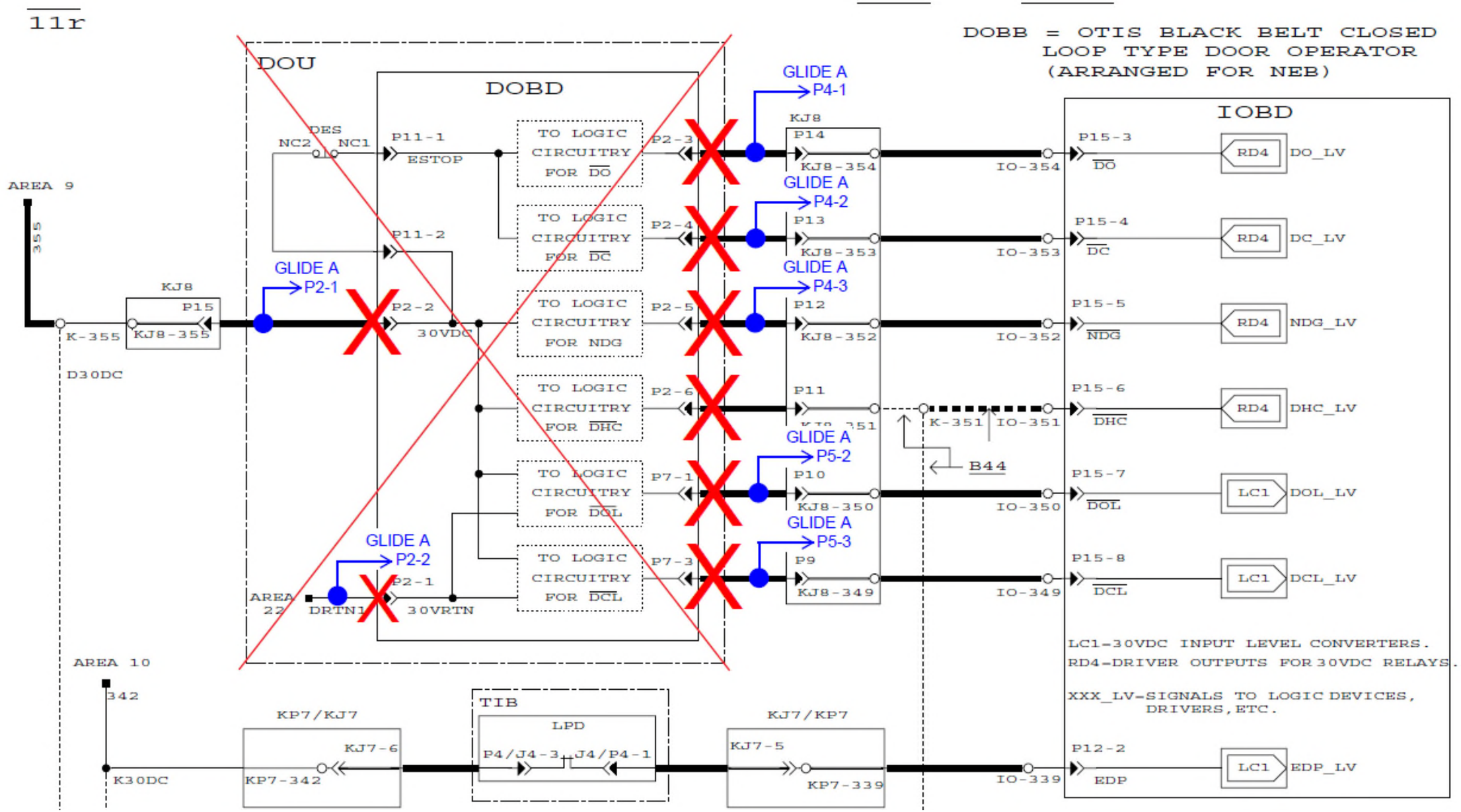


Figure 54: Area 11r of W/D AFA21241V – Black Belt Door Operator 30VDC & I/O Connections Removed and Reused with Glide A

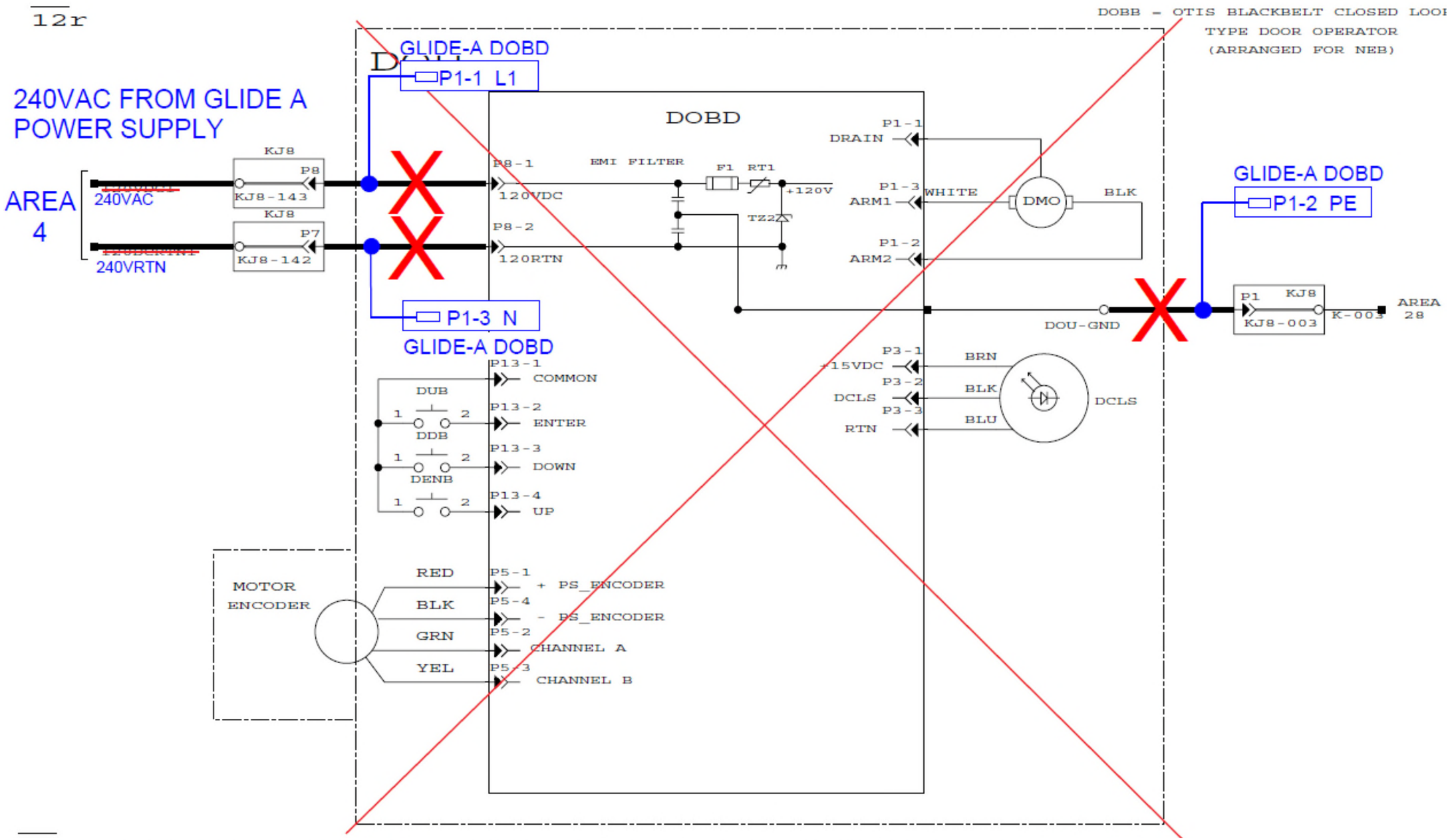


Figure 55: Area 12r of W/D AFA21241V – Black Belt Door Operator and 120VDC Input Connections Removed and Reused for Glide A 240VAC Input Voltage

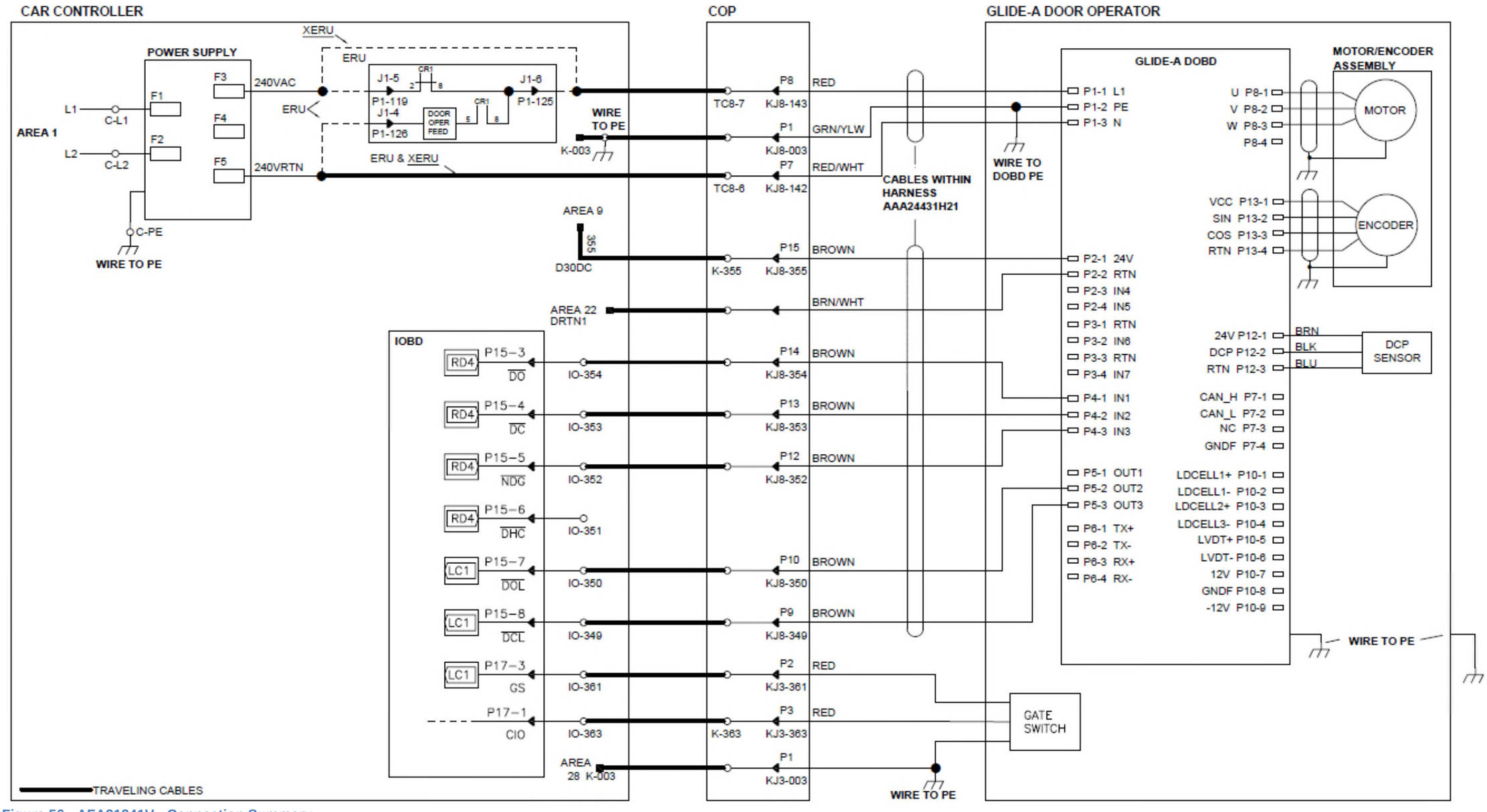


Figure 56: AFA21241V - Connection Summary

8.7 NSAA Discrete Installation on 10, 20, 30 HOCLS, H1CLS AC Resistance Controller with 7300AC (W/D 7-1S7561DC)

The following wiring diagram depicts installation of the Otis Glide A door operator on a 10, 20, 30 HOCLS, H1CLS AC resistance controller with existing discrete 7300AC door operator. The following areas are affected:

- **Area 1:** Removal of existing door operator circuits and addition of Glide A power supply.
- **Area 4:** Replacement of existing door operator limit circuits with Glide A limit circuits.
- **Area 7:** Replacement of existing gate switch with Glide A gate switch.

NOTE: For this particular connection 3 spare terminals and travelling cables are needed.

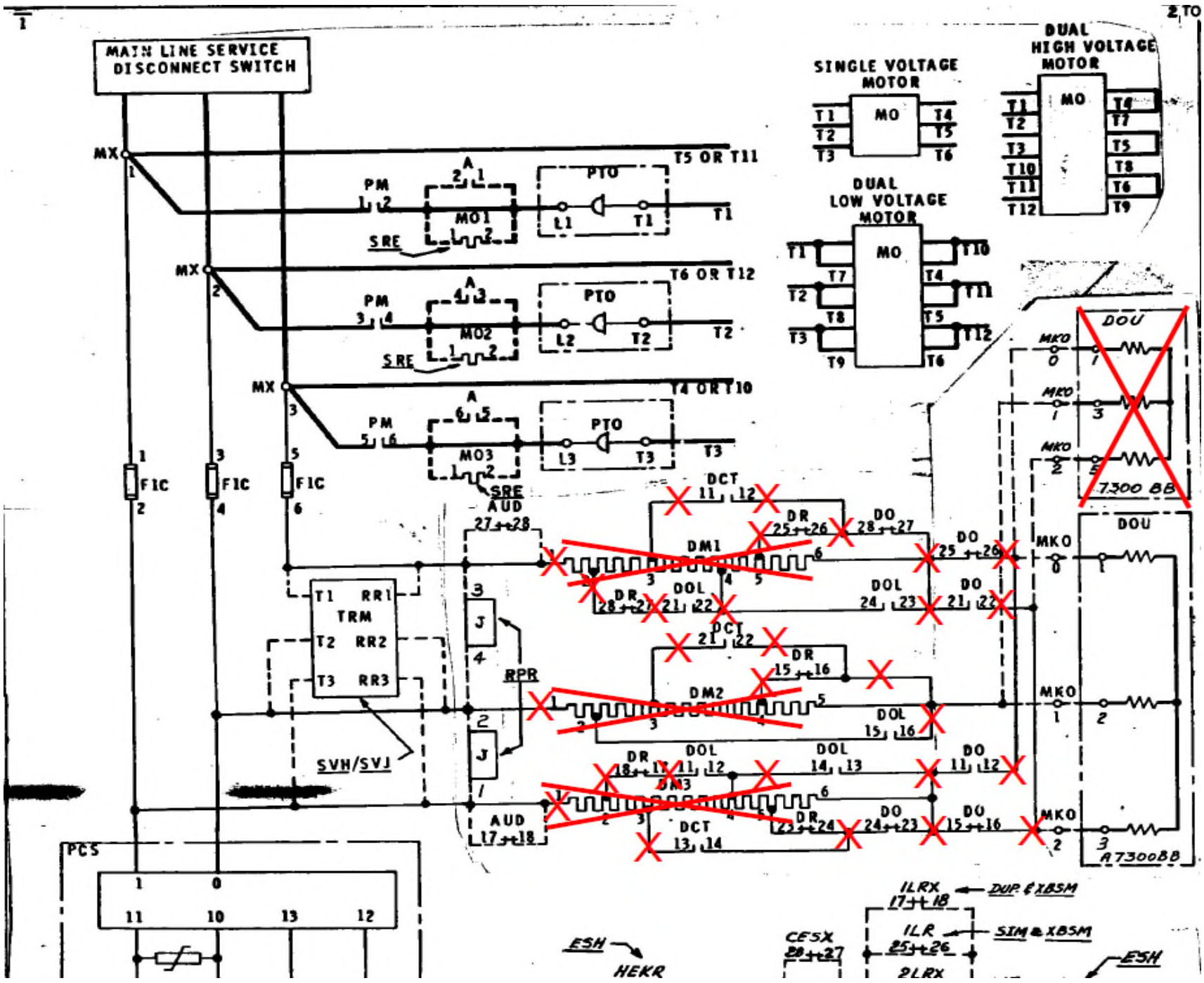


Figure 57: Area 1 of W/D 7-1S7561DC – Existing Door Operator Connections Removed.
Add Glide A Power Supply as Shown in Figure 55. Note that Terminals are to be Reused.

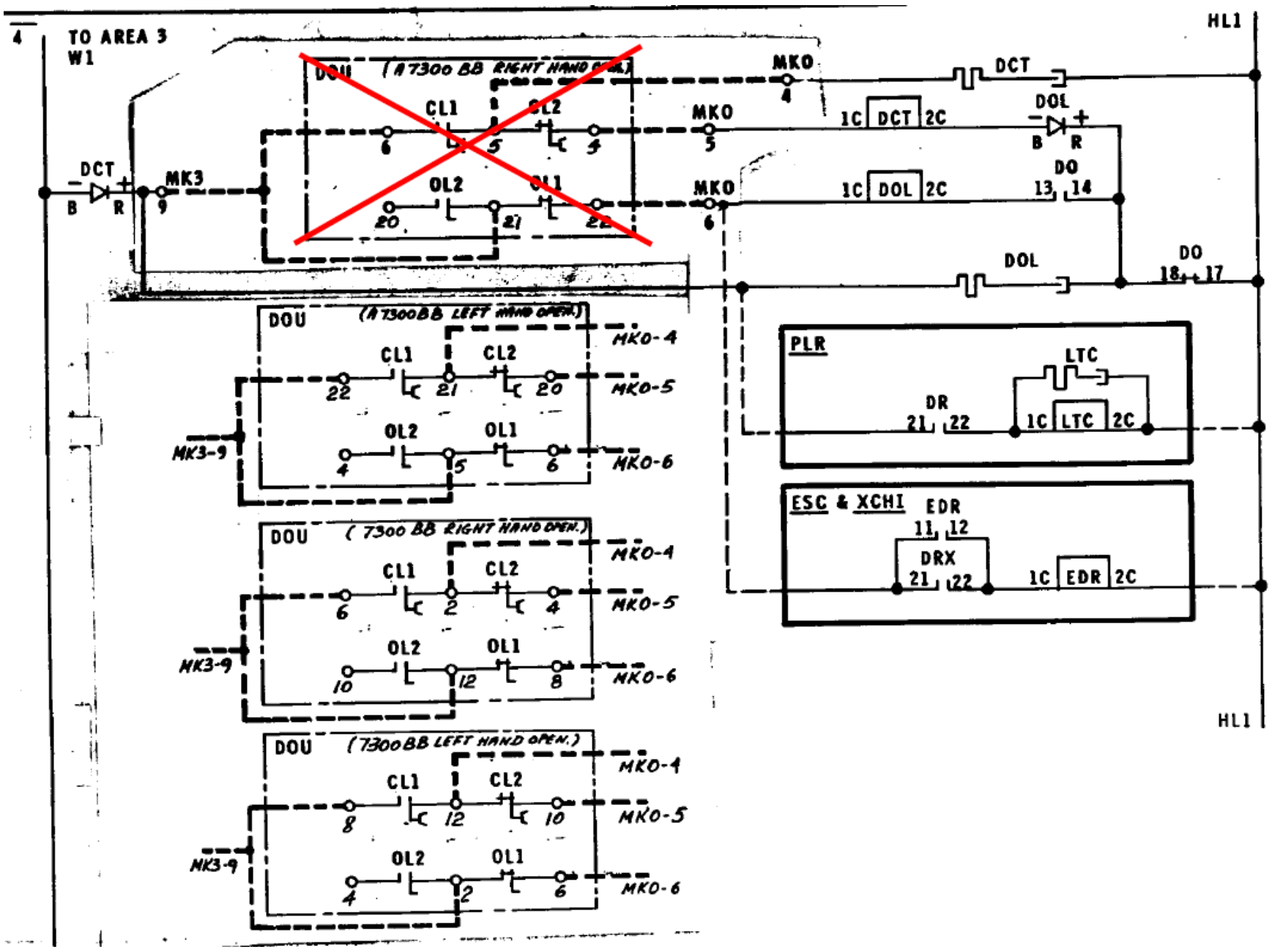


Figure 58: Area 4 of W/D 7-1S7561DC – Existing Door Operator Limit Circuits Removed. Add Glide A Limit Circuits as Shown in Figure 55

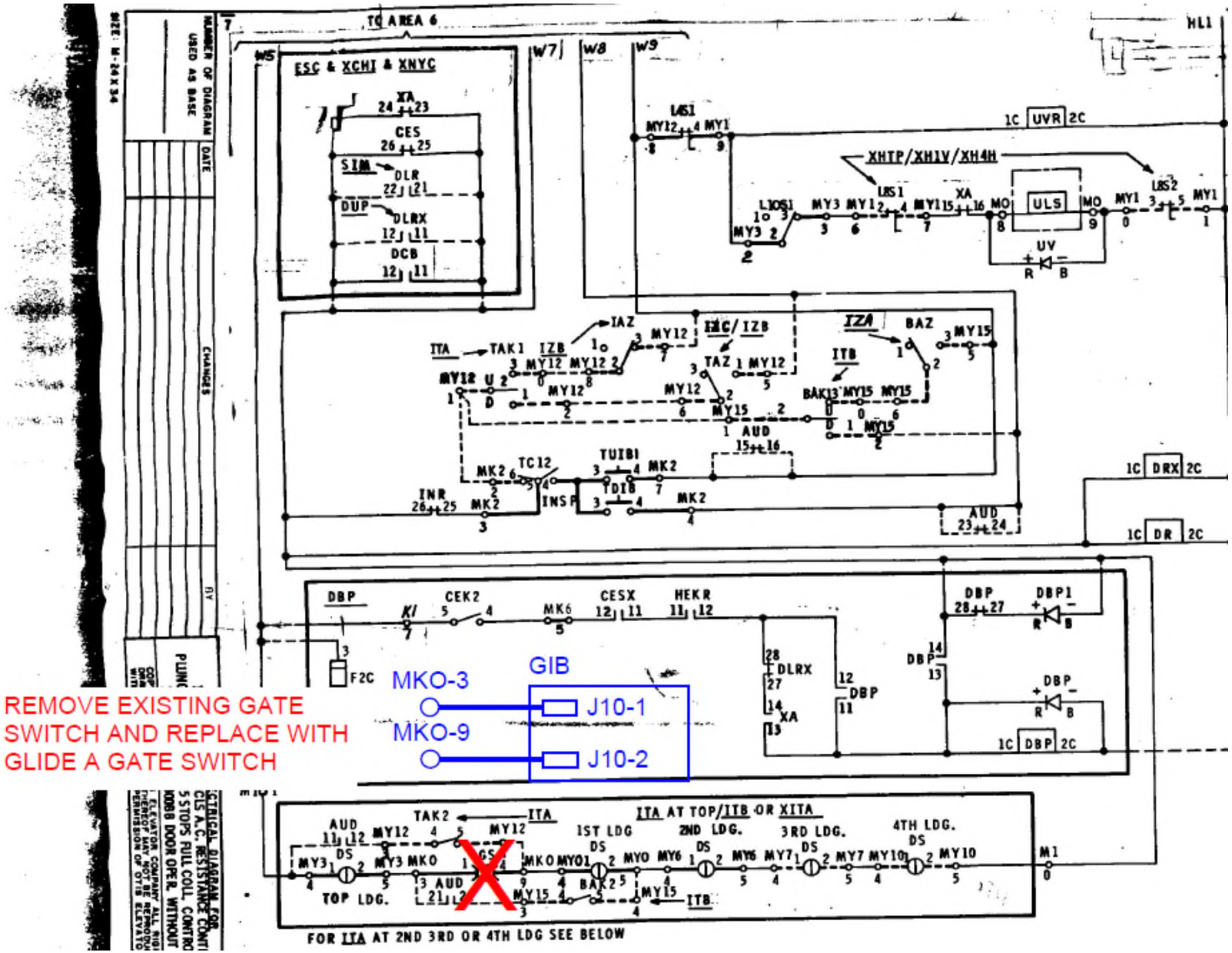


Figure 59: Area 7 of W/D 7-1S7561DC – Existing Door Operator Gate Switch Replaced with Glide A Gate Switch through Glide Interface Board (GIB)

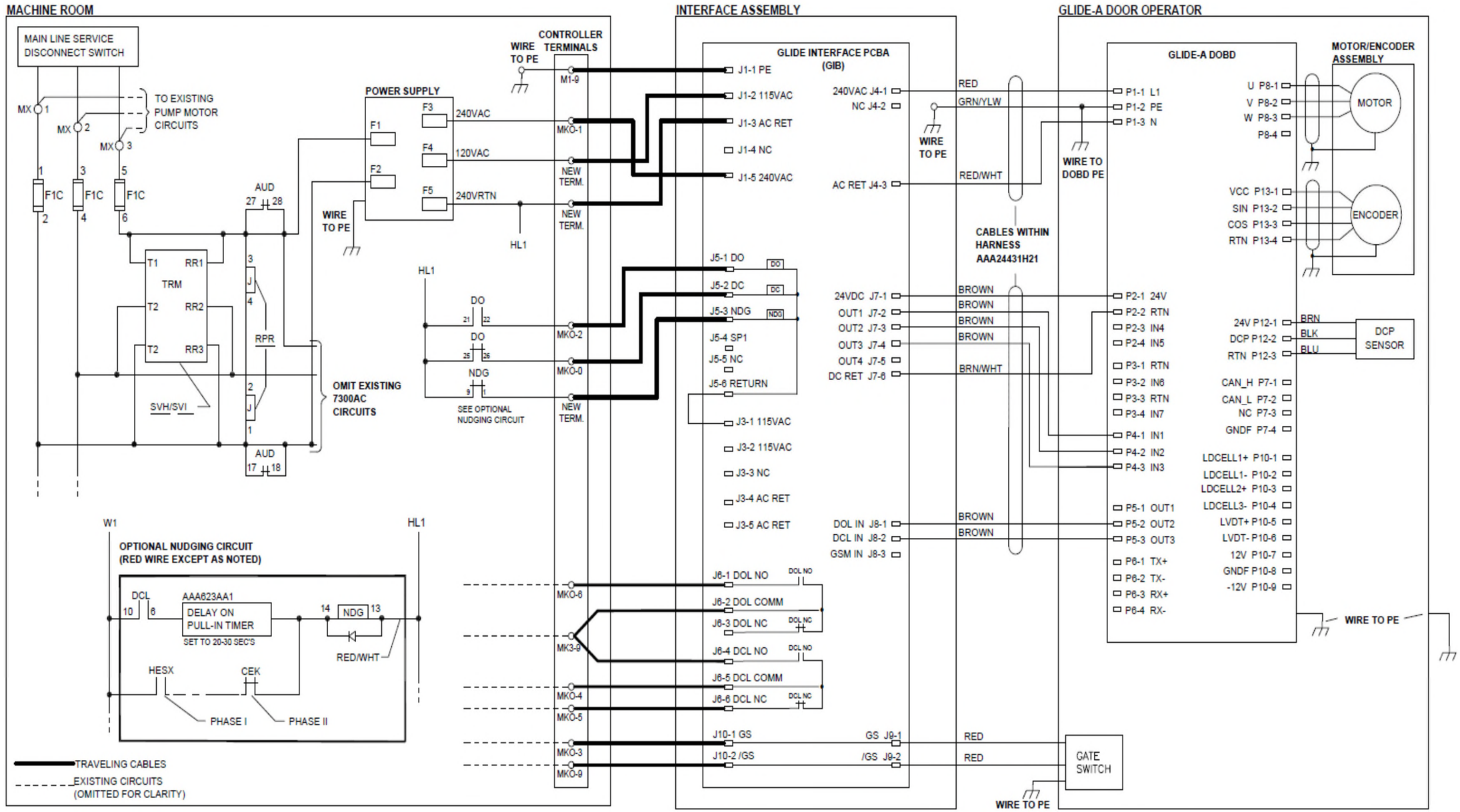


Figure 60: WD 7-1S7561DC—Connection Summary with Glide A Door Operator

8.8 NSAA Discrete Installation on MRVF with A7777 (W/D 4-2S7418C)

The following wiring diagram depicts installation of the Otis Glide A door operator on a MRVF controller with existing discrete A7777 door operator. The following areas are affected:

- **Area 1:** Rewiring of existing door operator power connections for use with the Glide power supply; addition of the Glide power supply.
- **Area 2:** Replacement of existing door operator and reuse of door operator signals with the Glide A. Replacement of existing gate switch with Glide A gate switch.
- **Area 6:** Replacement of existing door operator limits with Glide A door limit circuits.

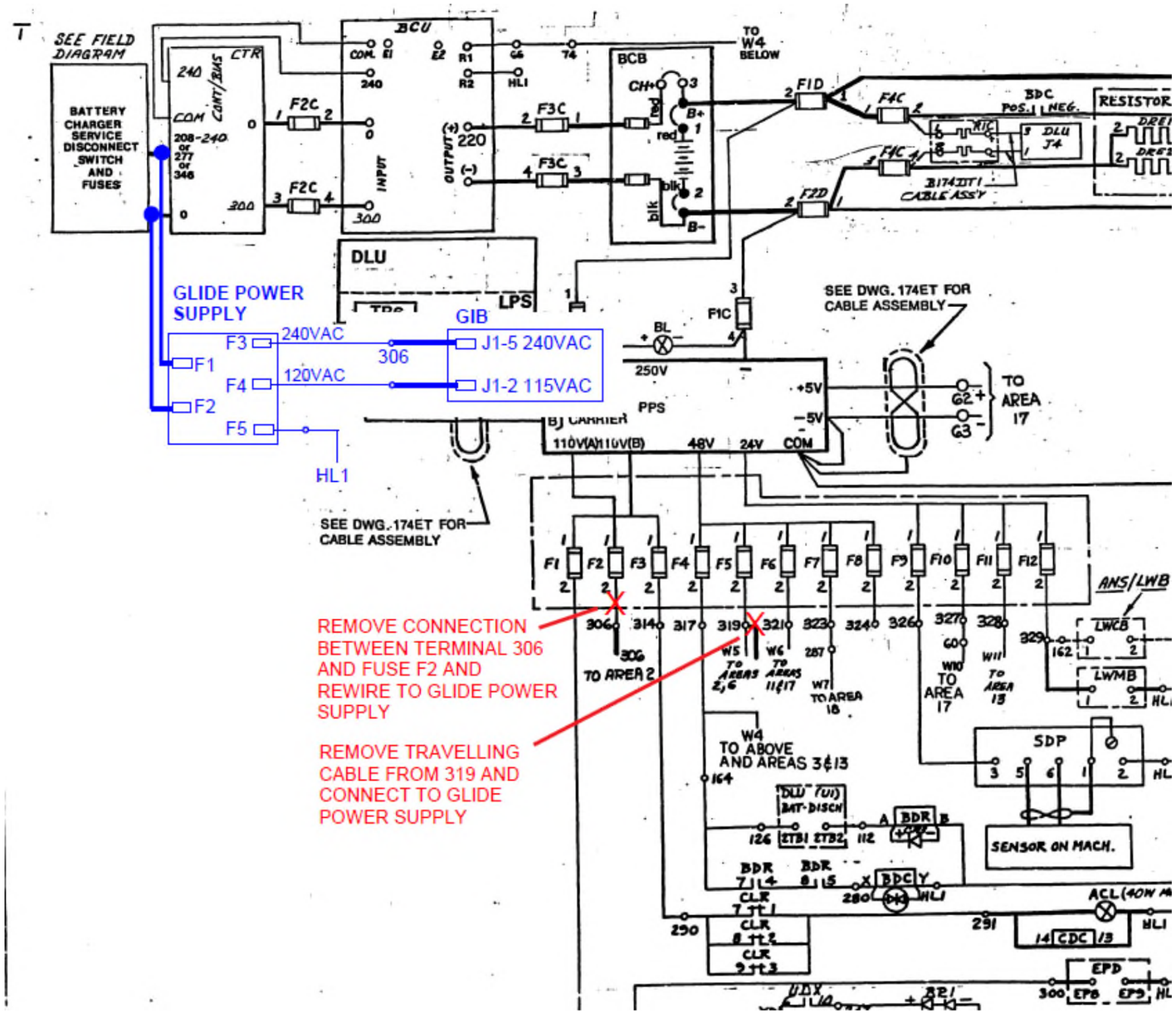


Figure 61: Area 1 of W/D 4-2S7418C – Existing Power Connections are Modified and Reused with the Glide Power Supply Installed into the Controller

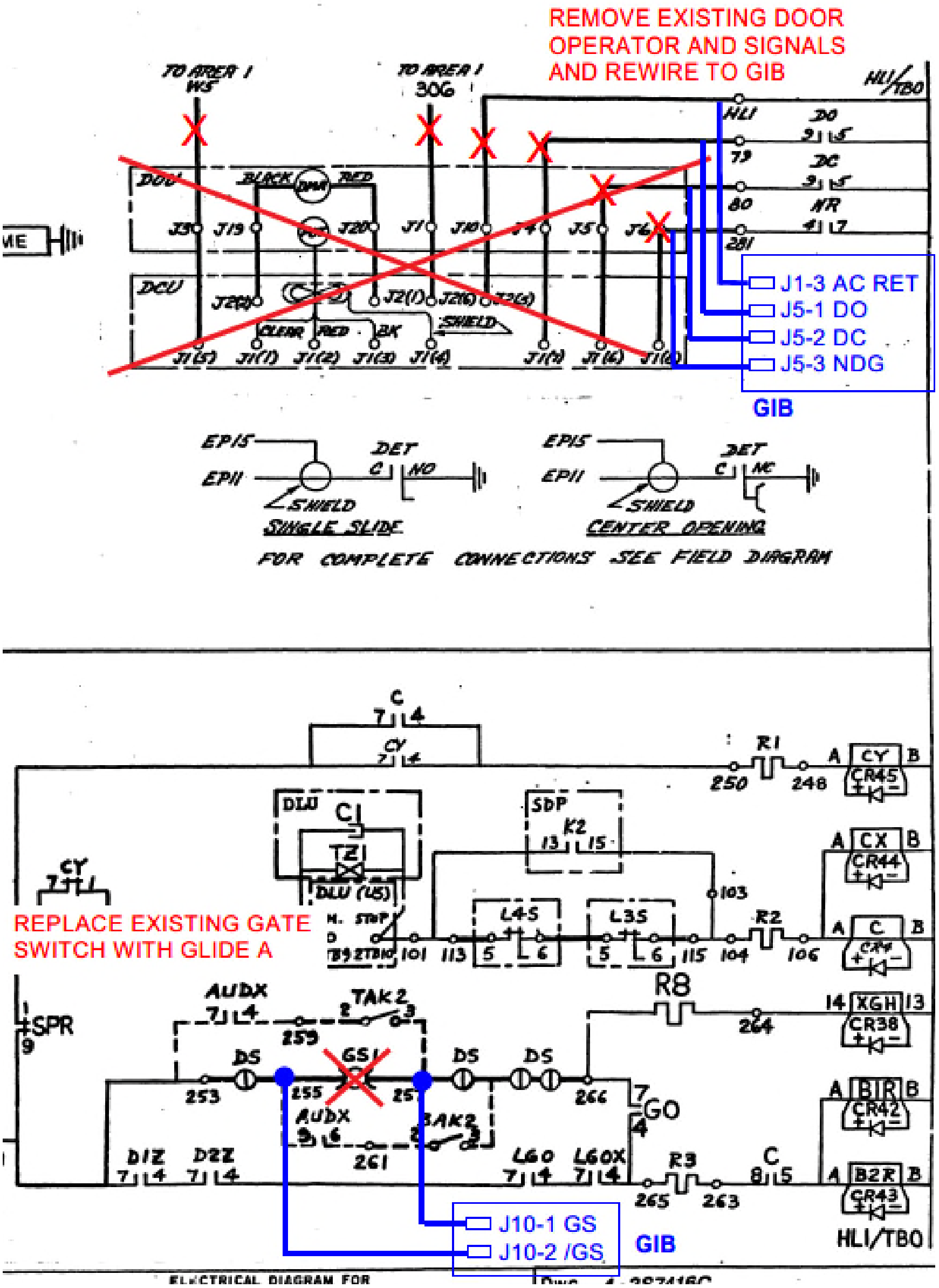


Figure 62: Area 2 of W/D 4-2S7418C – Existing Door Operator Removed and Signals Reused with Glide A. The Existing Gate Switch is Replaced with the Glide A Gate Switch

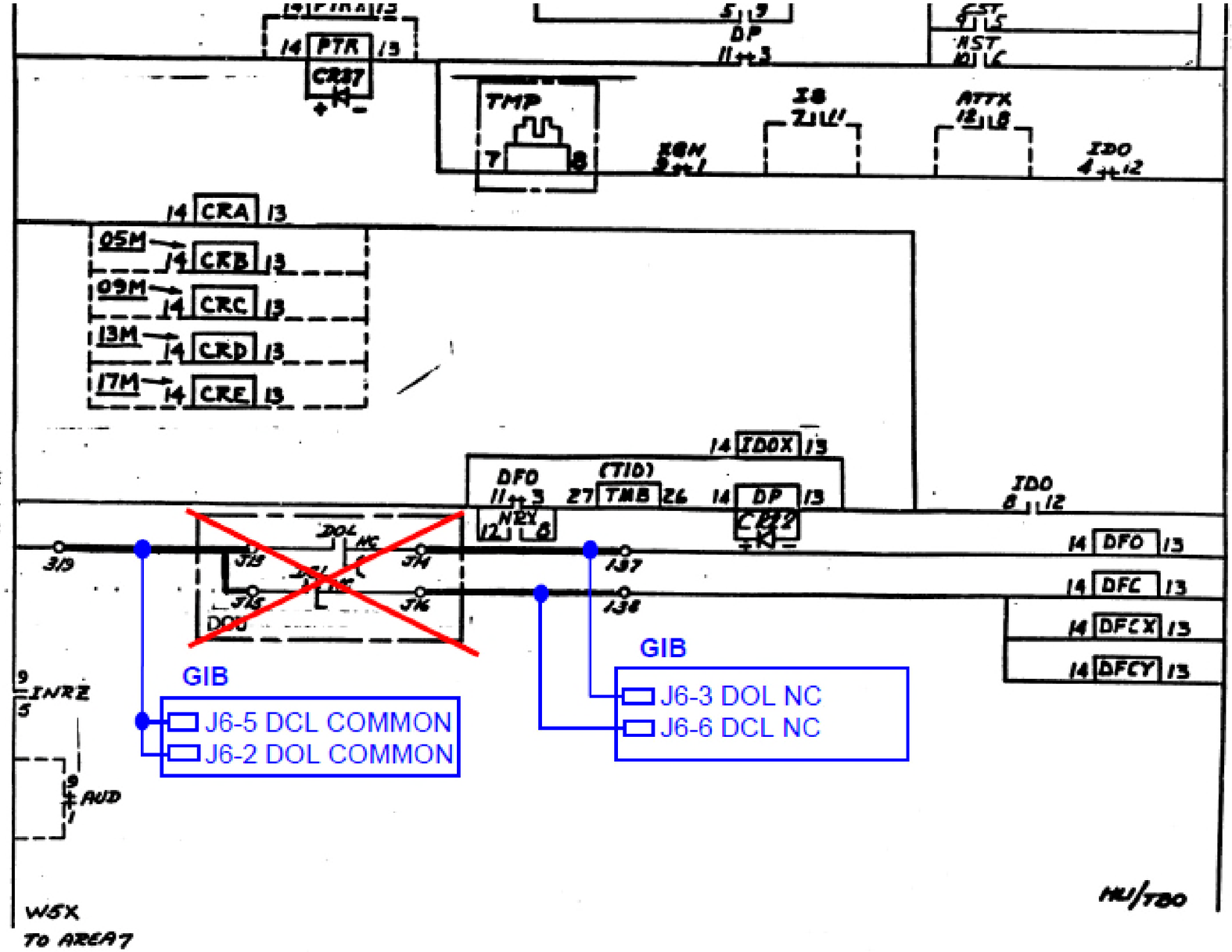


Figure 63: Area 6 of W/D 4-2S7418C – Existing Door Operator Limits Circuit Replaced with Glide A Door Limit Signals

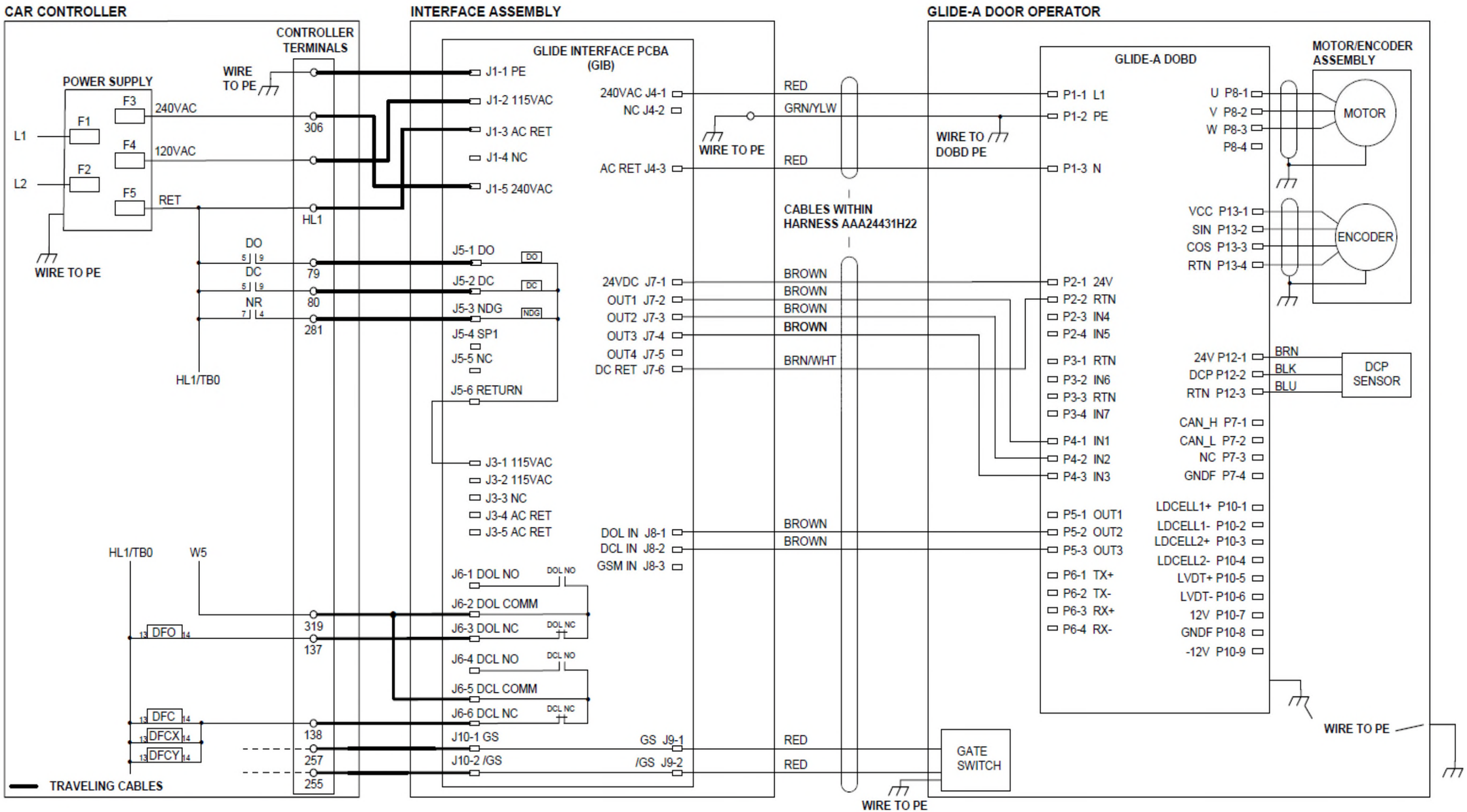


Figure 64: W/D 4-2S7418C Glide A Connection Summary

8.9 NSAA Multidrop Installation on GEM Controller with i-Motion II Door Operator (W/D AFC21290CC)

The following wiring diagram depicts installation of the Otis Glide A door operator on a 311 GEM controller with existing multidrop i-motion II door operator. The following areas are affected:

- **Area 1A:** Addition of Glide power supply.
- **Area 2A:** Removal of existing i-motion II power supply.
- **Area 3A:** Replacement of existing gate switch with Glide A gate switch.
- **Area 15A:** Connection of existing door operator discrete signals to Glide A.
- **Area 20A:** Multidrop connections for the Glide A.

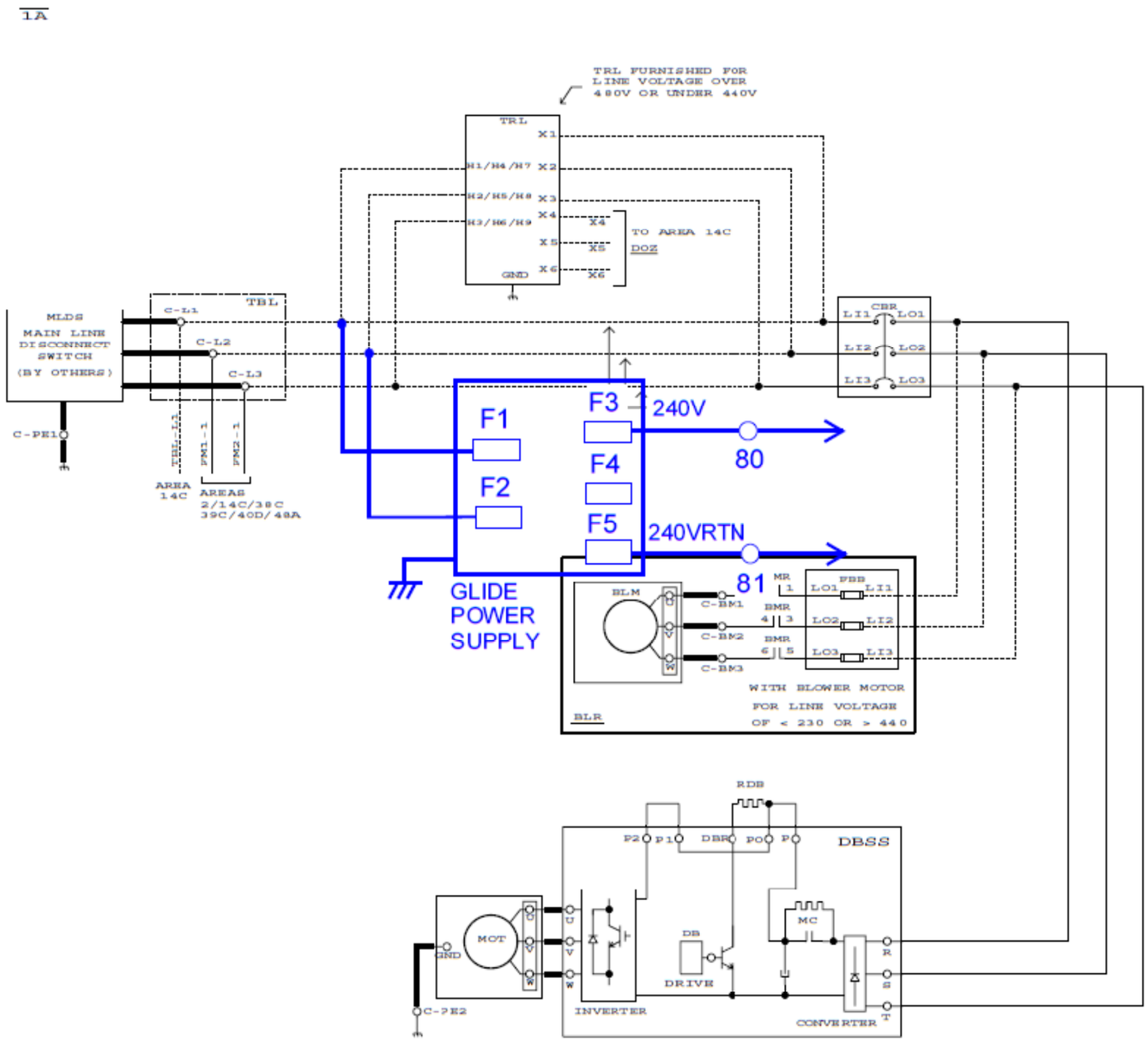


Figure 65: Area 1A of W/D AFC21990C – Glide Power Supply Added

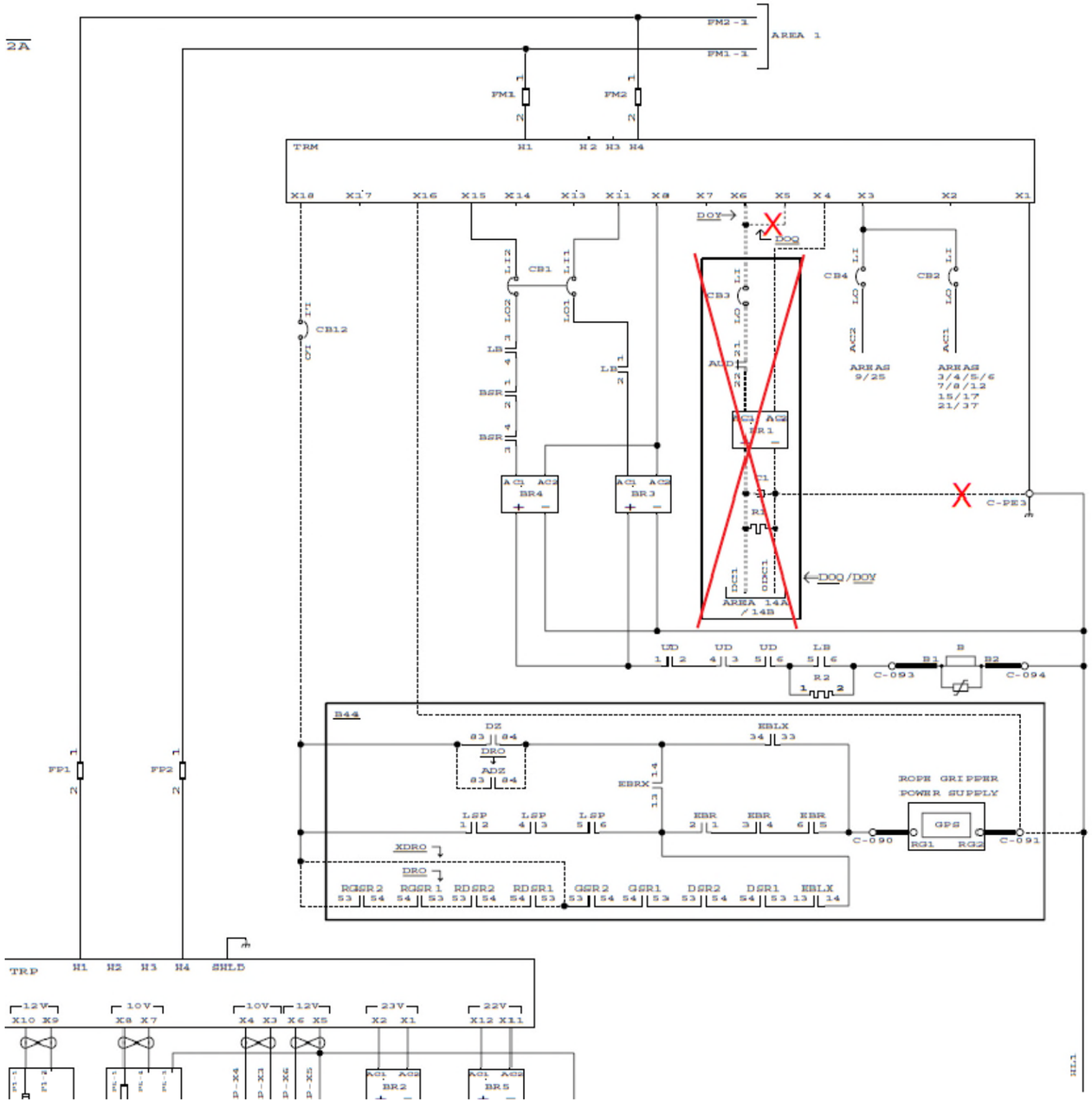


Figure 66: Area 2A of W/D AFC21990C – Existing Power Supply Connections Removed

3A

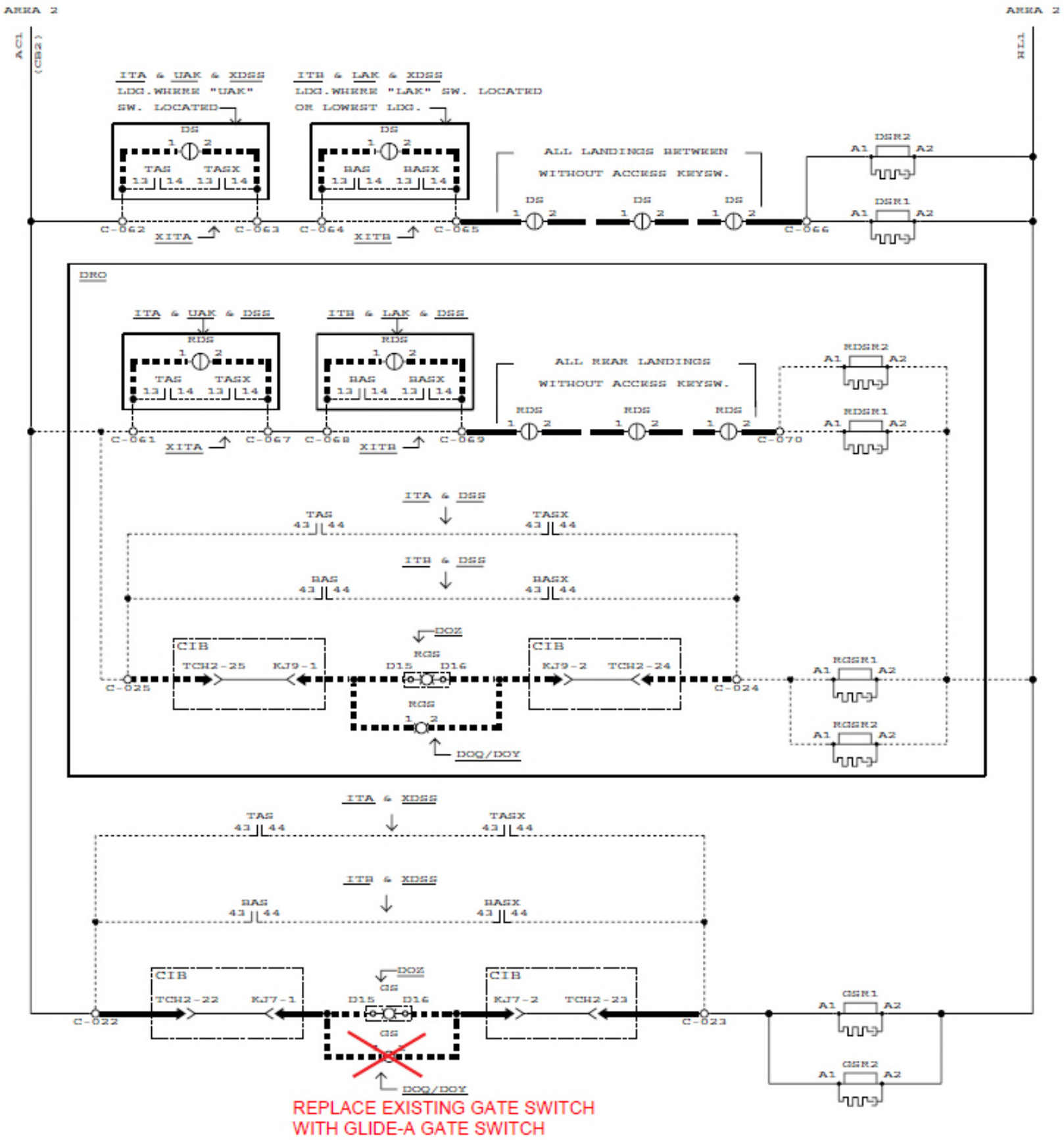


Figure 67: Area 3A of W/D AFC212990C - Replace Existing Gate Switch with Glide A Gate Switch

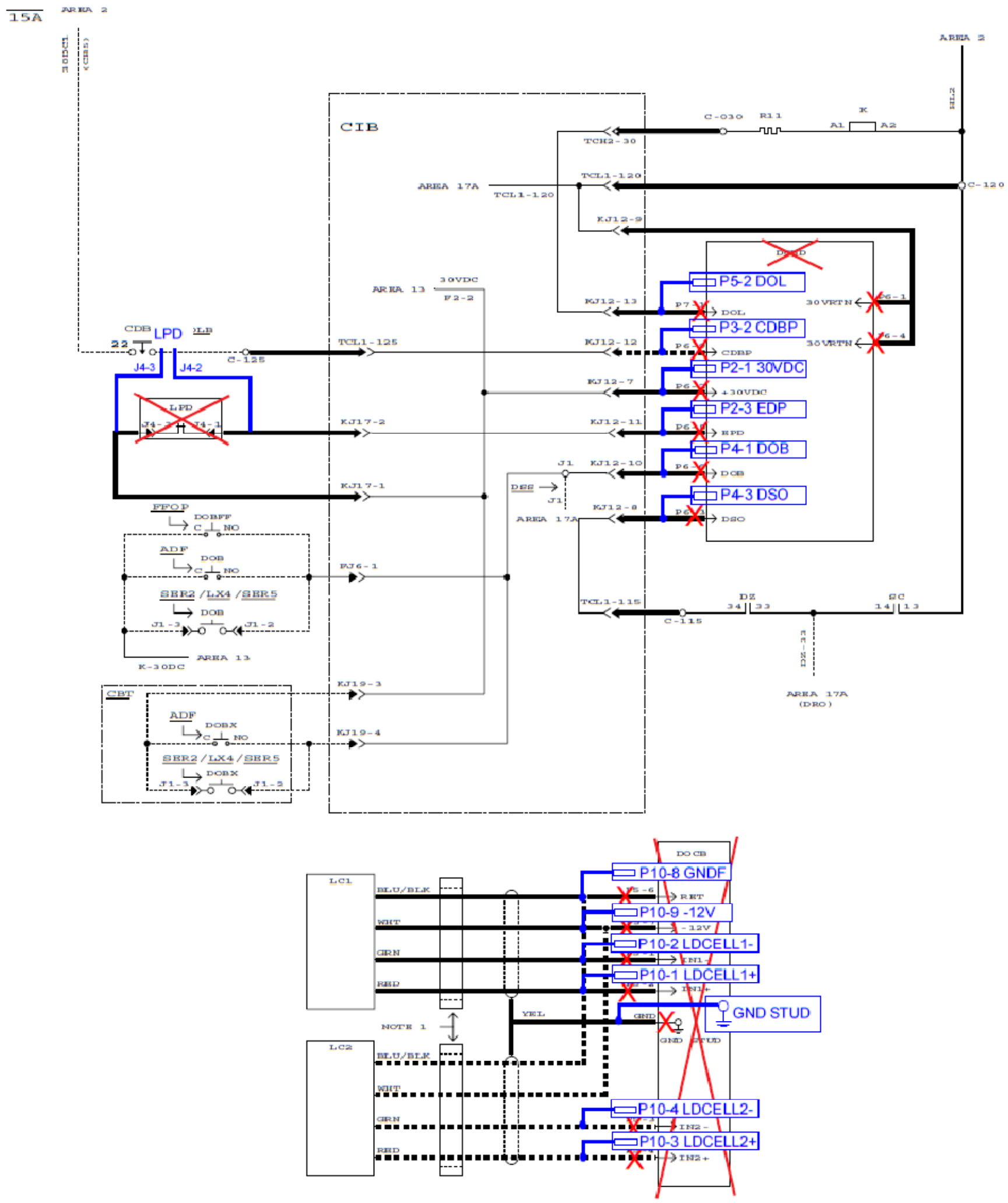


Figure 68: Area of 15A of W/D AFC212990C- Door Operator Discrete Signals and Load Weighing Re-routed to Glide-A

14A

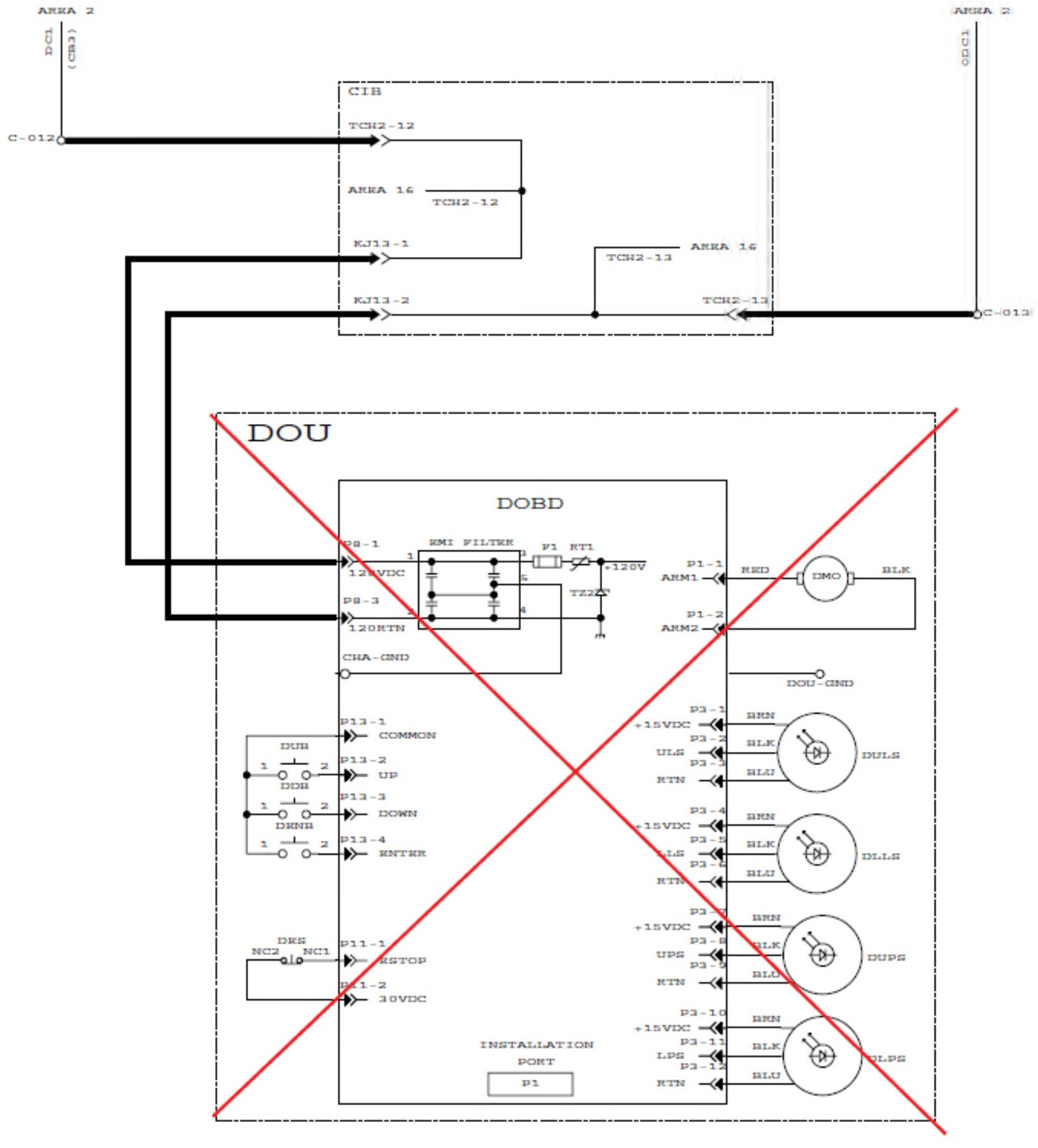


Figure 69: Area of 14A of W/D AFC212990C – Existing Door Operator Removed

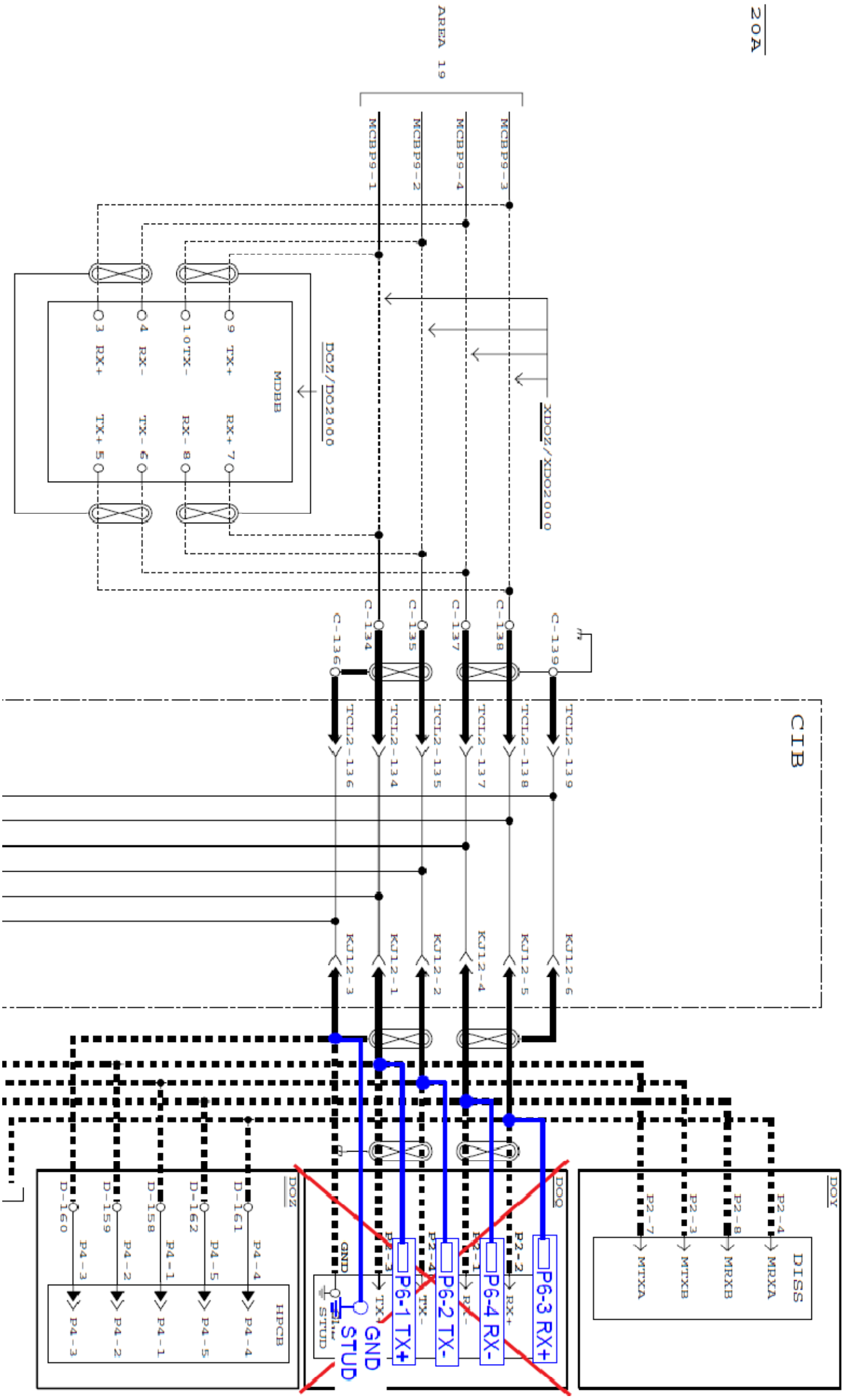


Figure 70: Area 20A of W/D AFC212990C – Multidrop Connections for Glide A

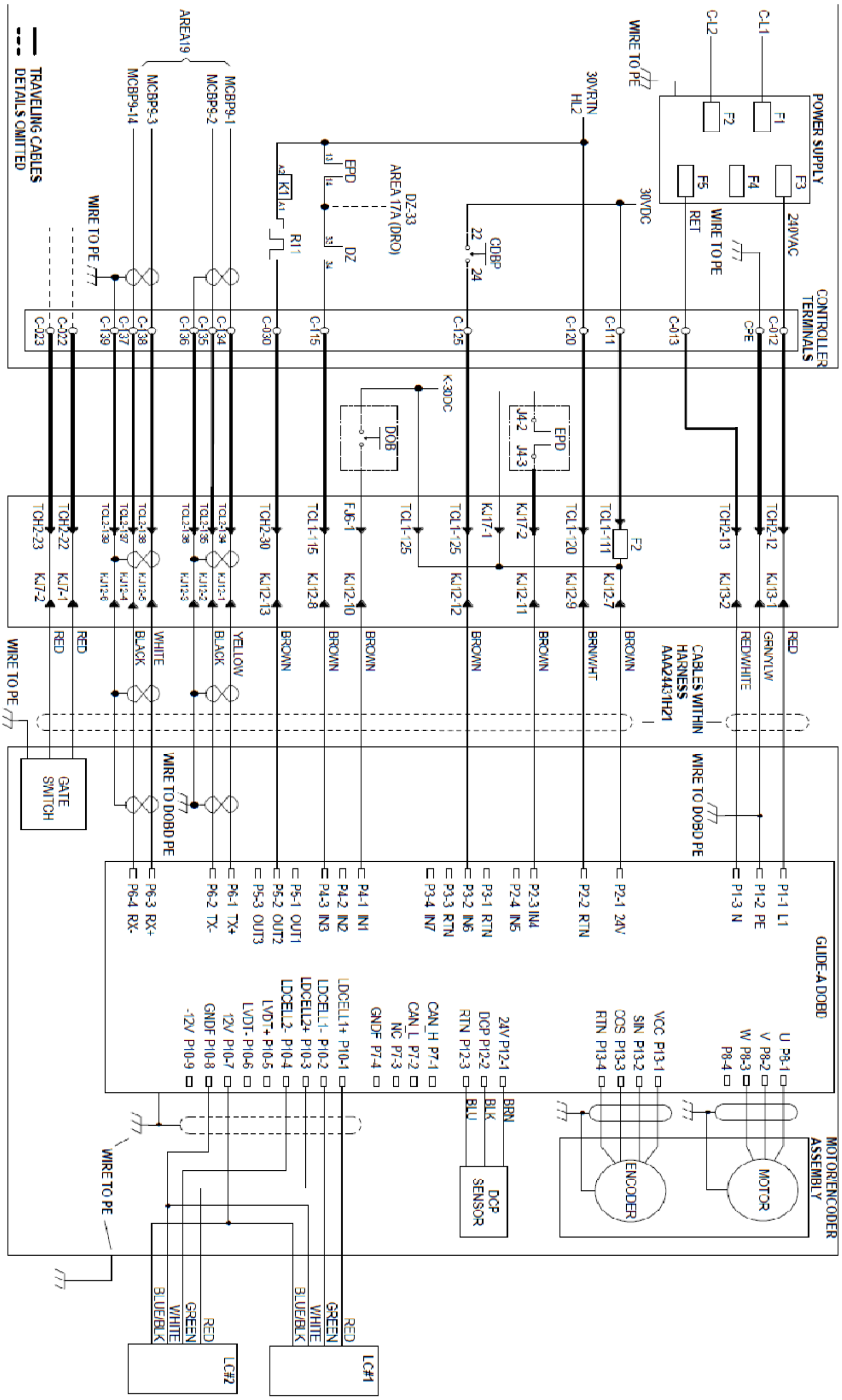


Figure 71: W/D AFC21290C Glide A Connection Summary

8.10 NSAA Discrete Installation on Relay Hydro 1, 2, 3, 4 HOCL AC Resistance Controller with 7770A Door Operator (W/D A2S7900H)

The following wiring diagram depicts installation of the Otis Glide A door operator on a relay hydro controller with existing discrete 7770A door operator. The following areas are affected:

- **Area 1:** Addition of Glide power supply.
- **Area 3:** Removal of existing door operator circuits and re-use with Glide Interface Board (GIB).
- **Area 6:** Replacement of existing gate switch with Glide A gate switch via Glide Interface Board (GIB).

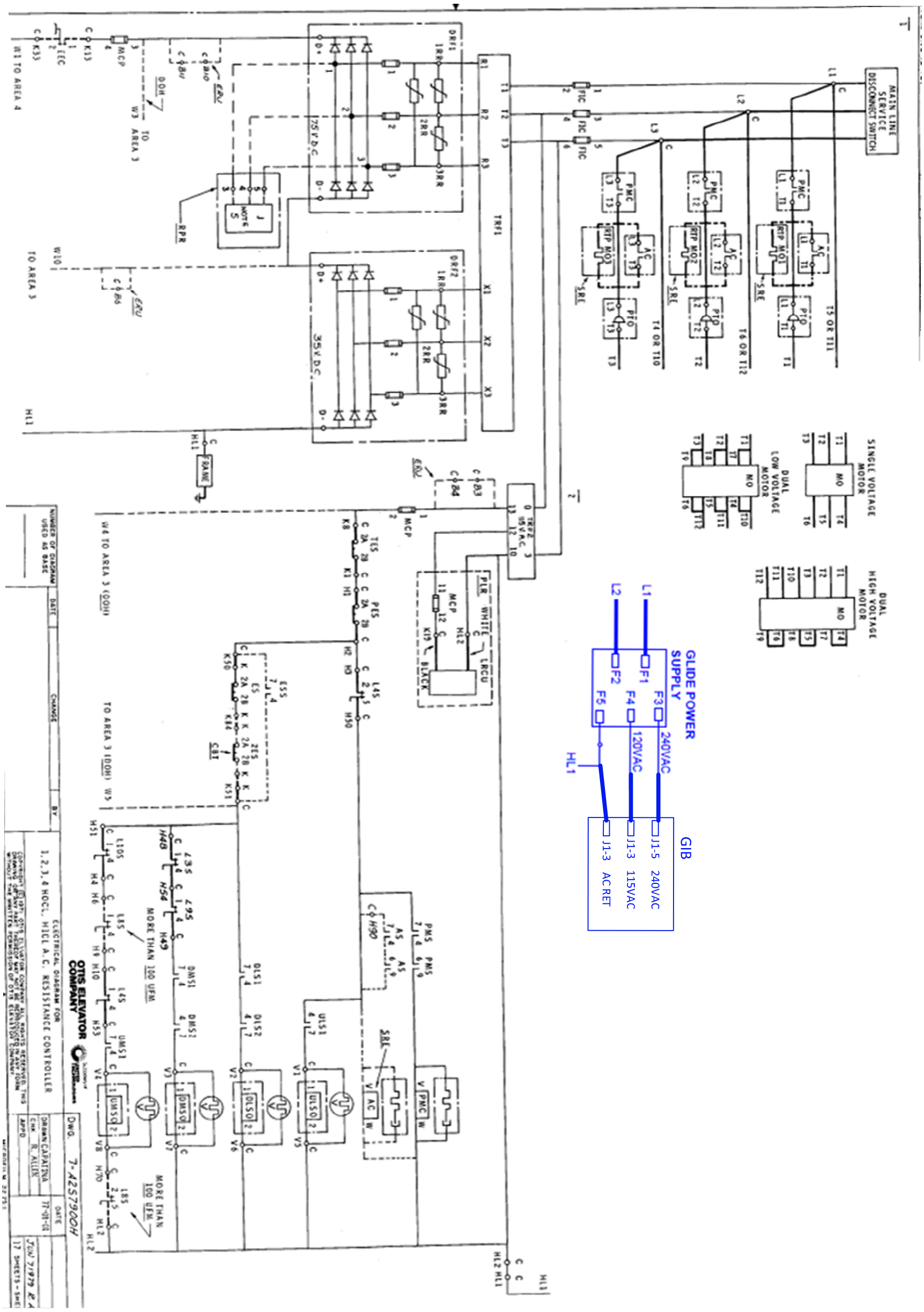


Figure 72: Area 1 of W/D 7-2AS7900H – Glide Power Supply Added

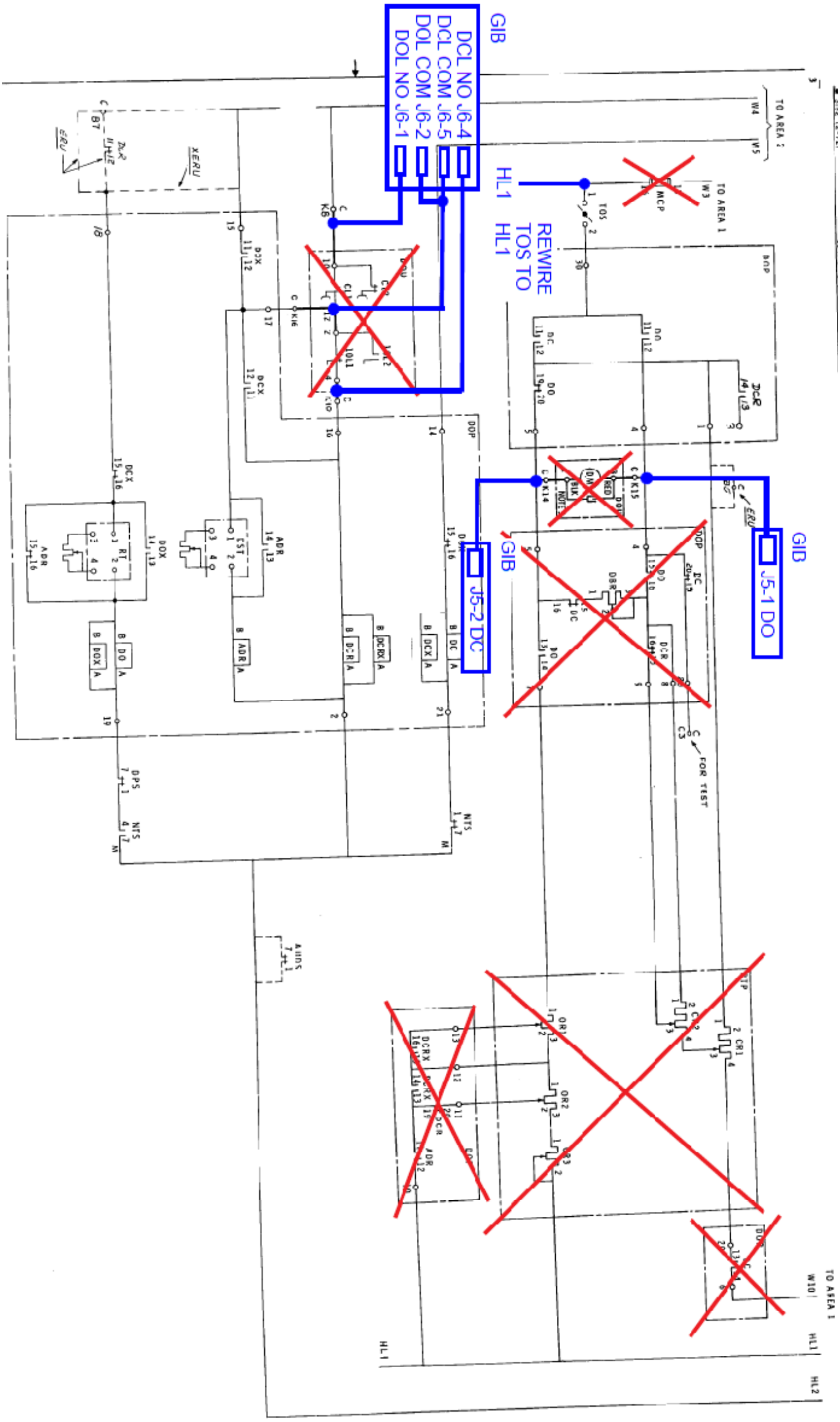


Figure 73: Area 3 of W/D 7-2AS7900H – Existing Door Operator Circuits Removed and Reused with Glide Interface Board (GIB)

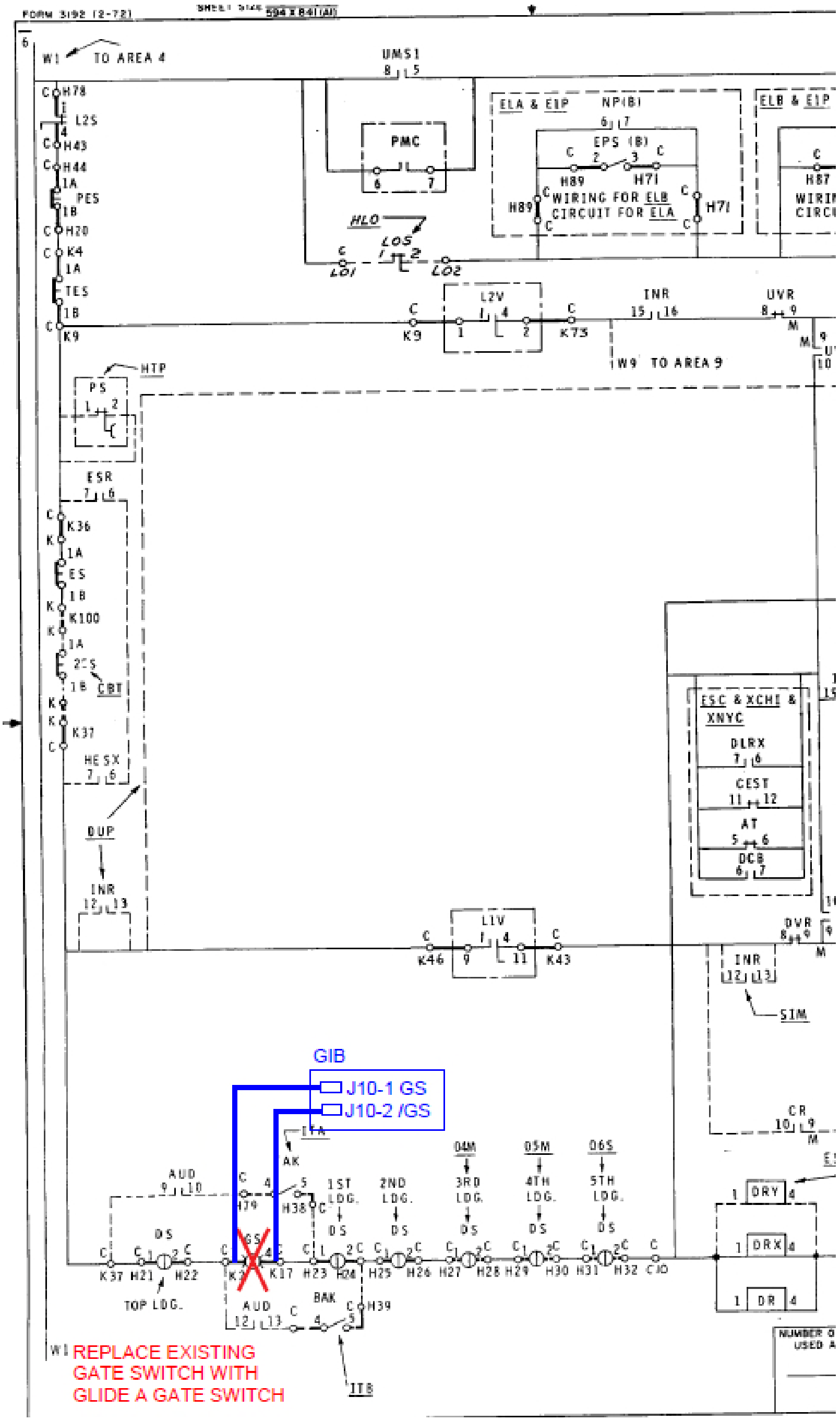


Figure 74: Area 6 of W/D 7-2AS7900H – Existing Gate Switch Replaced with Glide A Gate Switch via the Glide Interface Board (GIB)

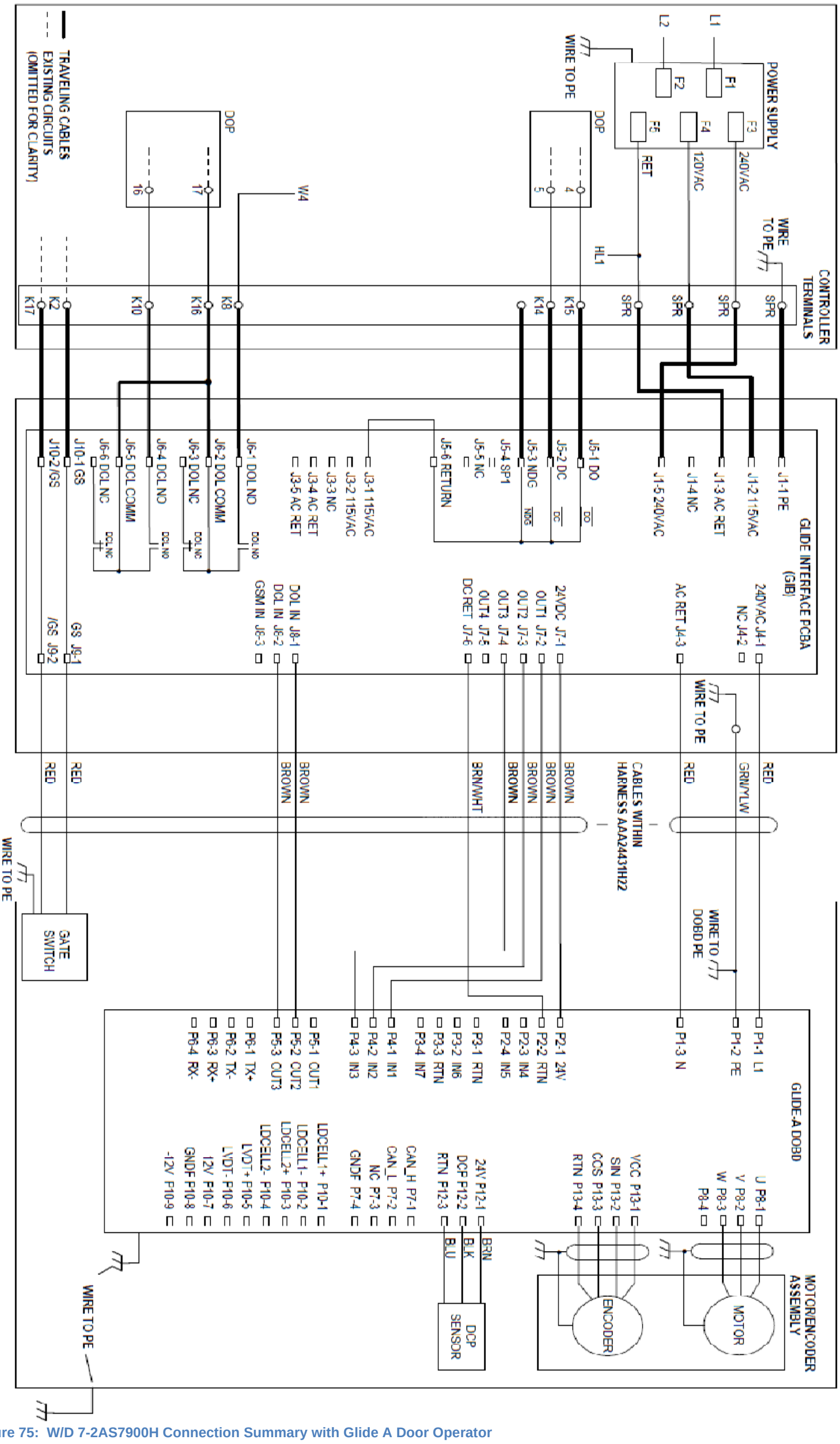


Figure 75: W/D 7-2AS7900H Connection Summary with Glide A Door Operator

8.11 NSAA Discrete Installation on MRQ Controller with 7782AA QL Door Operator (W/D 5-2S7417A)

The following wiring diagram depicts installation of the Otis Glide A door operator MRQ (Spec 60) controller with existing discrete 7782AA QL door operator. The following areas are affected:

- **Area 2:** Addition of Glide power supply.
- **Area 3:** Removal of existing door operator circuits and re-use with Glide Interface Board (GIB).
- **Area 7:** Replacement of existing door close limit (DCL) with Glide A limit signal. Note that an additional DCLX relay has been added to accommodate the additional limit circuit in area 19A.
- **Area 8:** Replacement of existing gate switch with Glide A gate switch via Glide Interface Board (GIB).
- **Area 19A:** Replacement of existing gate door open limit (DOL) and auxiliary gate switch contact (GS2) with Glide A circuits.

NOTE: This installation requires an extra relay to accommodate for the dual gate switch contacts used in the system wiring diagram (the Glide A gate switch only has a single set of contacts).

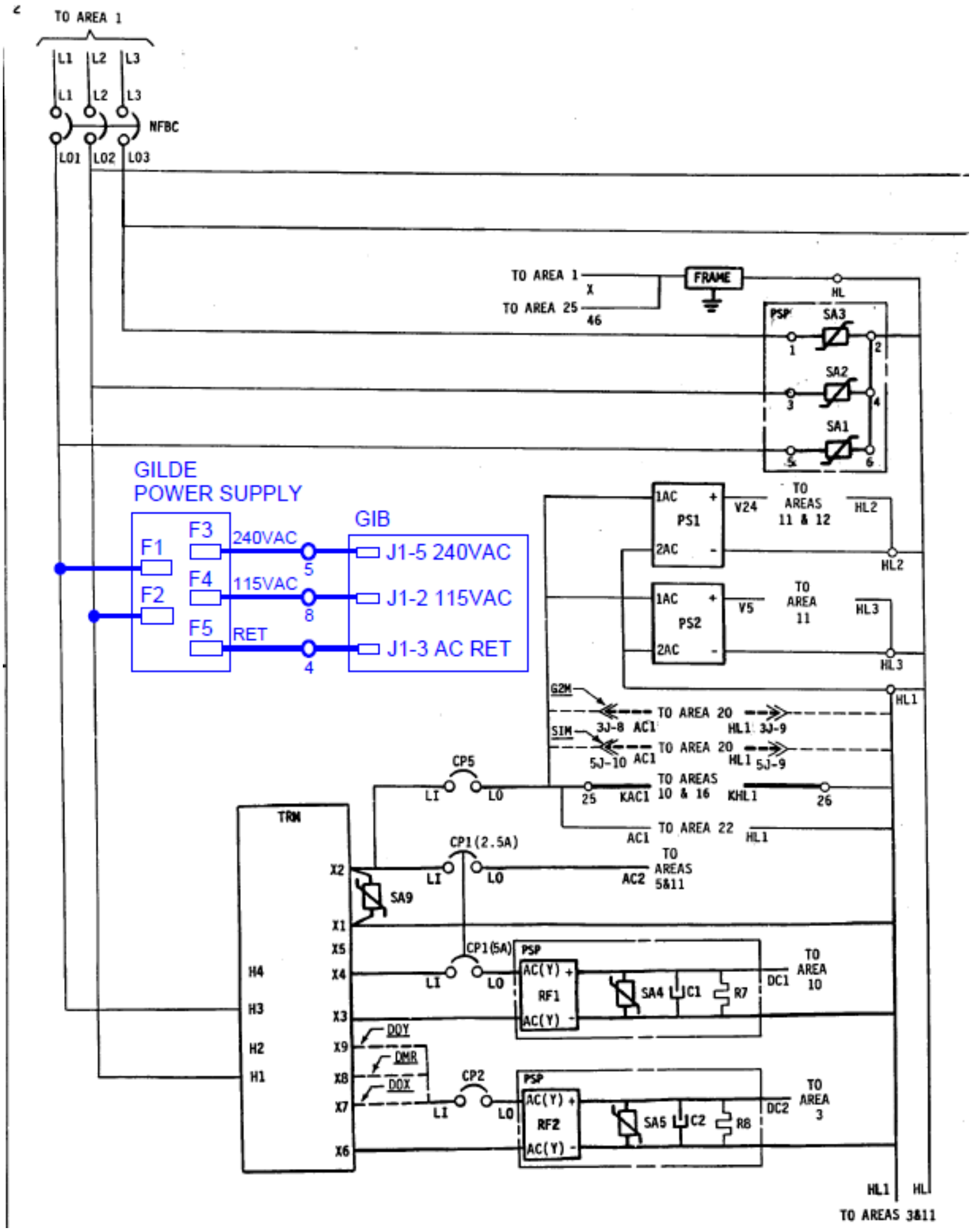


Figure 76: Area 2 of W/D 3-2S7417A – Glide Power Supply Added

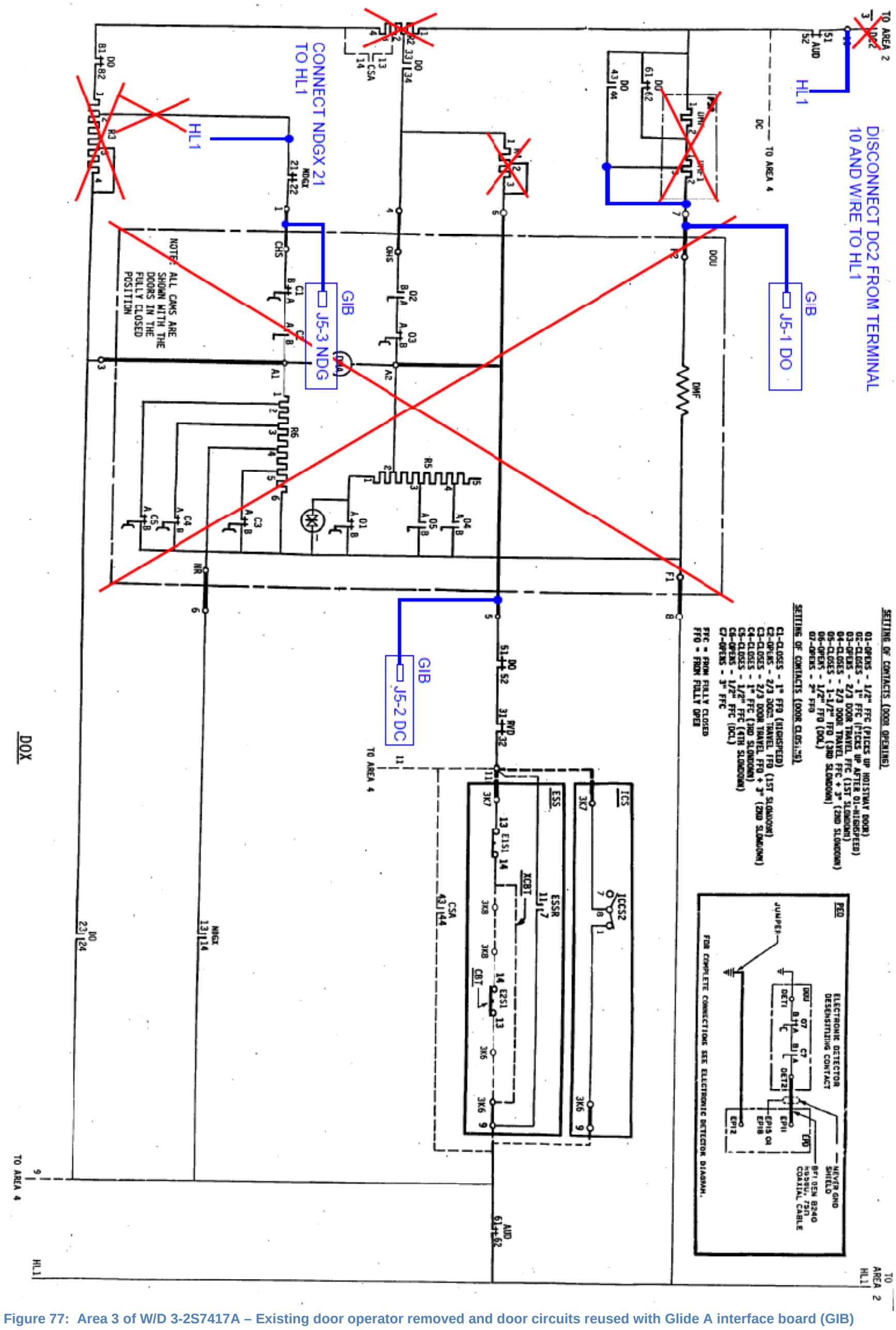


Figure 77: Area 3 of W/D 3-2S7417A – Existing door operator removed and door circuits reused with Glide A interface board (GIB)

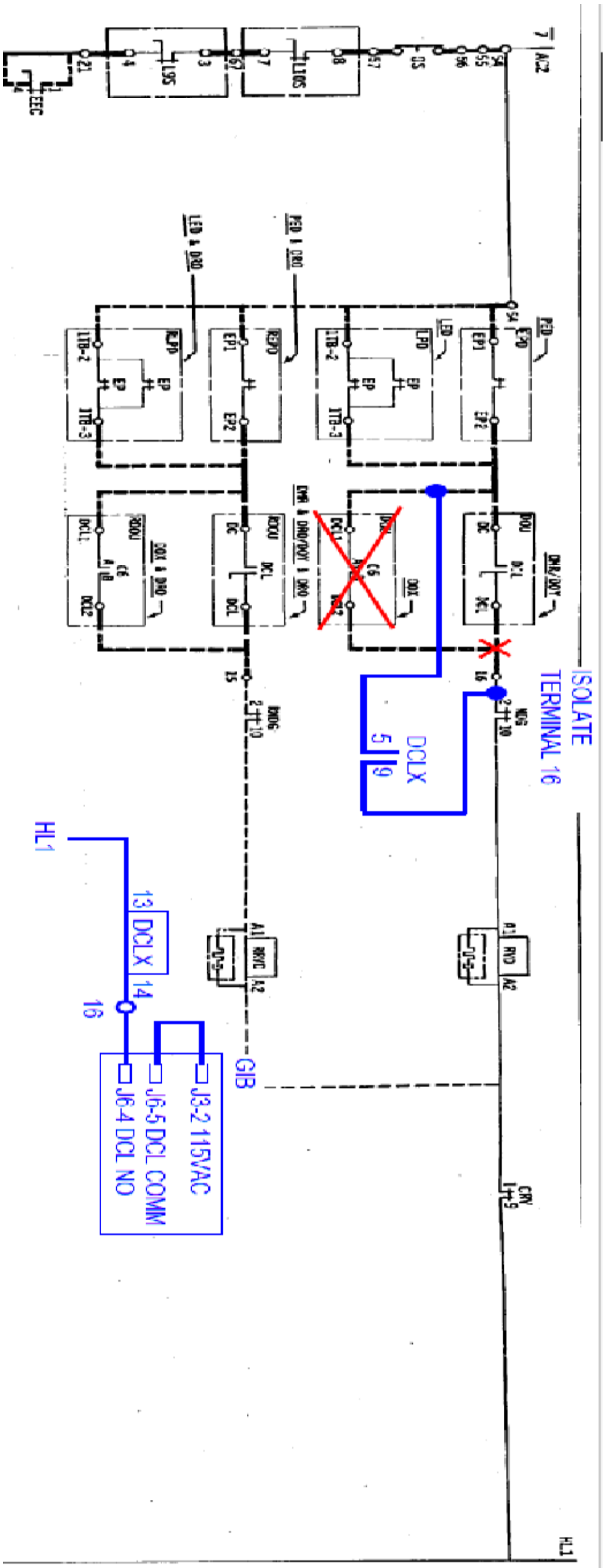


Figure 78: Area 7 of W/D 3-2S7417A – Existing door close limit signal removed and replaced with Glide door close contact. Note that due to needing two DCL contacts, an additional relay in the car controller has to be added (DCLX).

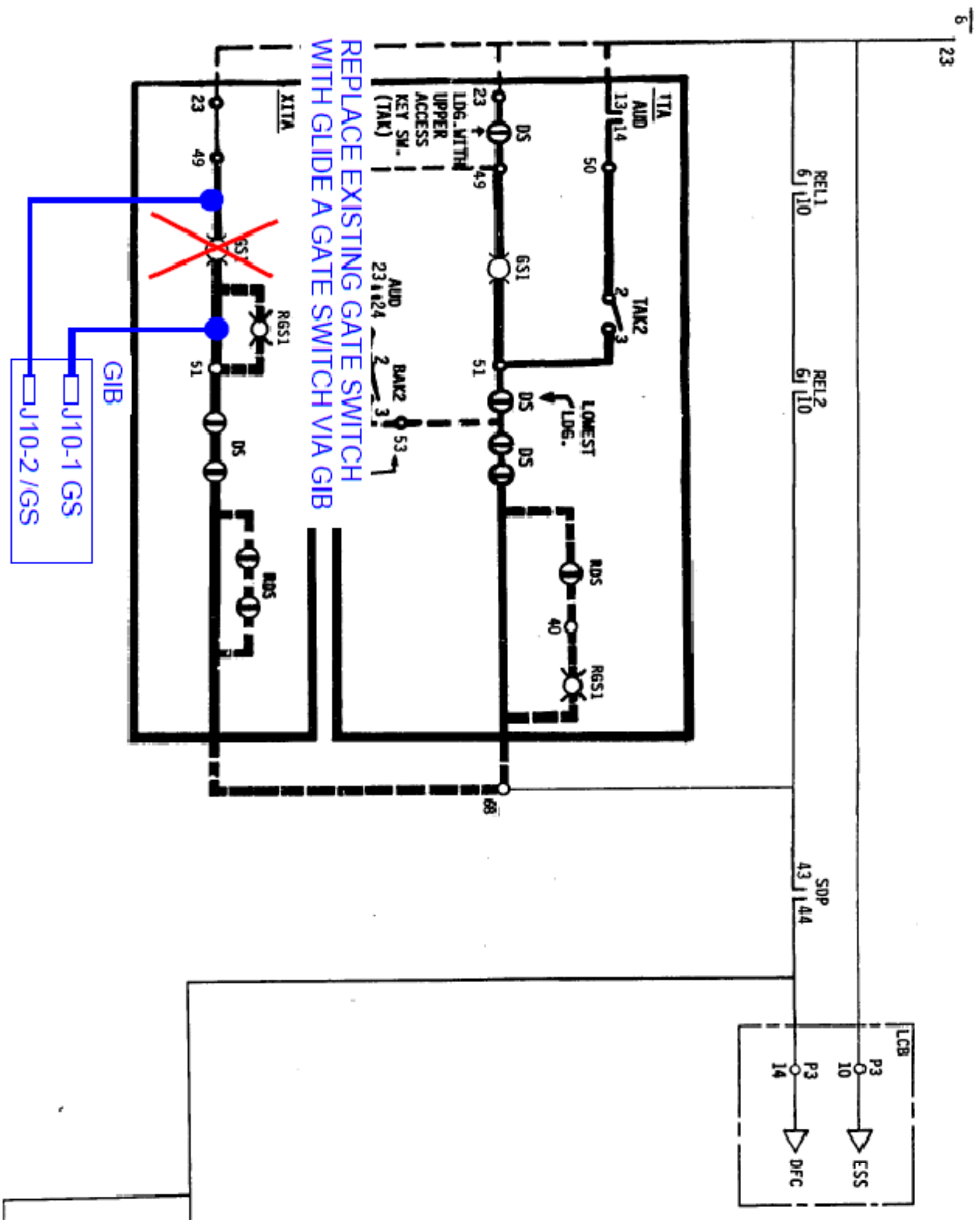


Figure 79: Area 8 of W/D 3-2S7417A – Existing gate switch replaced with Glide A gate switch via Glide Interface Board (GIB)

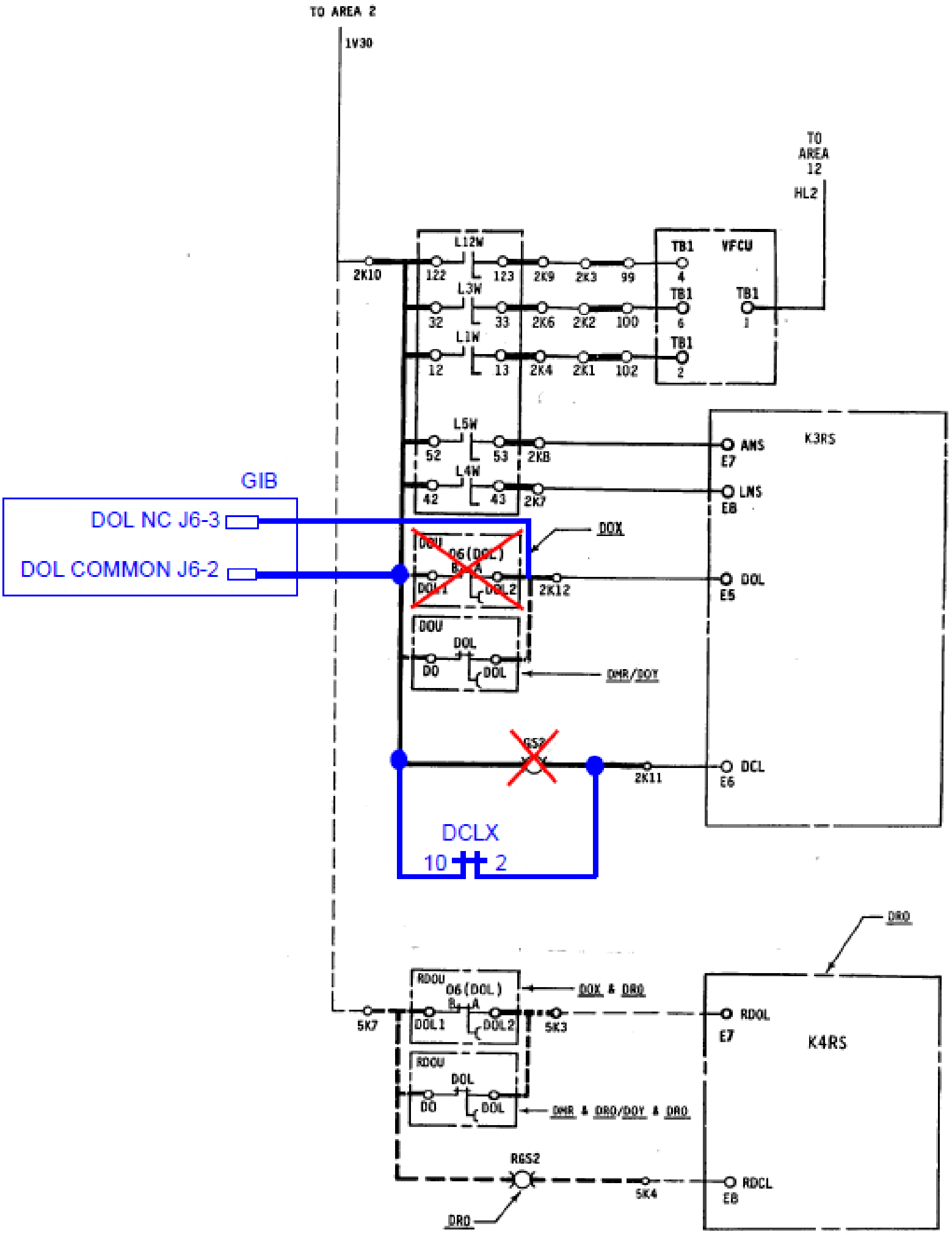


Figure 80: Area 19A of W/D 3-2S7417A – DOL and GS2 circuits removed and rewired using the Glide Interface Board (GIB) and the additional DCLX contact

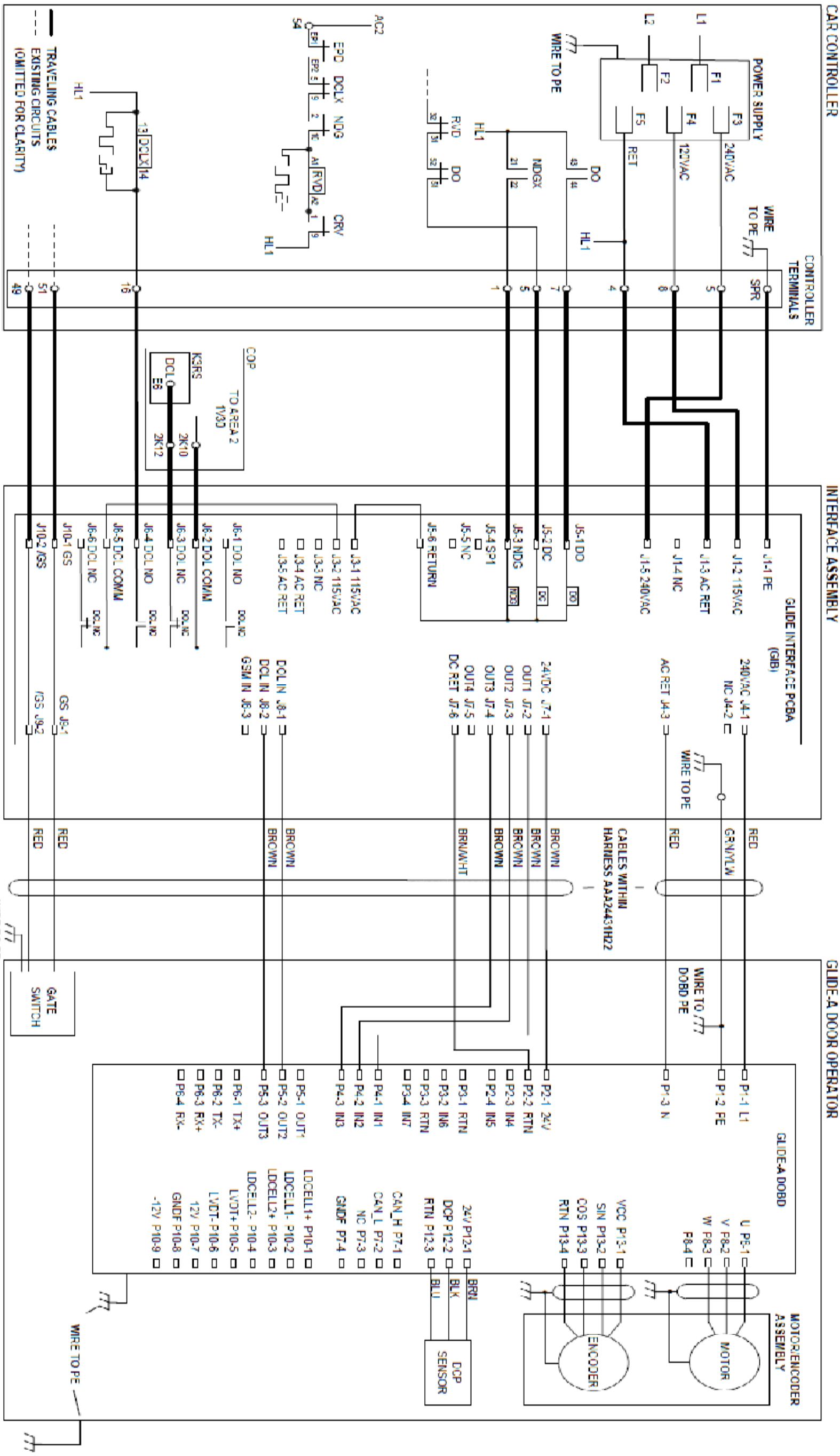


Figure 81: W/D 3-2S7417A Glide A Connection Summary

8.12 NSAA Multidrop Installation on 311 Controller with OVL Door Operator w/DISS (W/D ABA21380A)

The following wiring diagram depicts installation of the Otis Glide A door operator on a 311 controller with existing discrete OVL door operator with the serial DISS/ADISS boards. The following areas are affected:

- **Area 1:** Existing power supply disconnected and Glide power supply added.
- **Area 4B:** Existing gate switch replaced with Glide A gate switch.
- **Area 7:** Removal of DISS pc board and re-use of serial communication wires with Glide A controller.
- **Area 8A:** Existing door operator removed and door operator circuits reused with Glide A.
- **Area 9:** ADISS pc board removed and load weighing connections reused with Glide A.

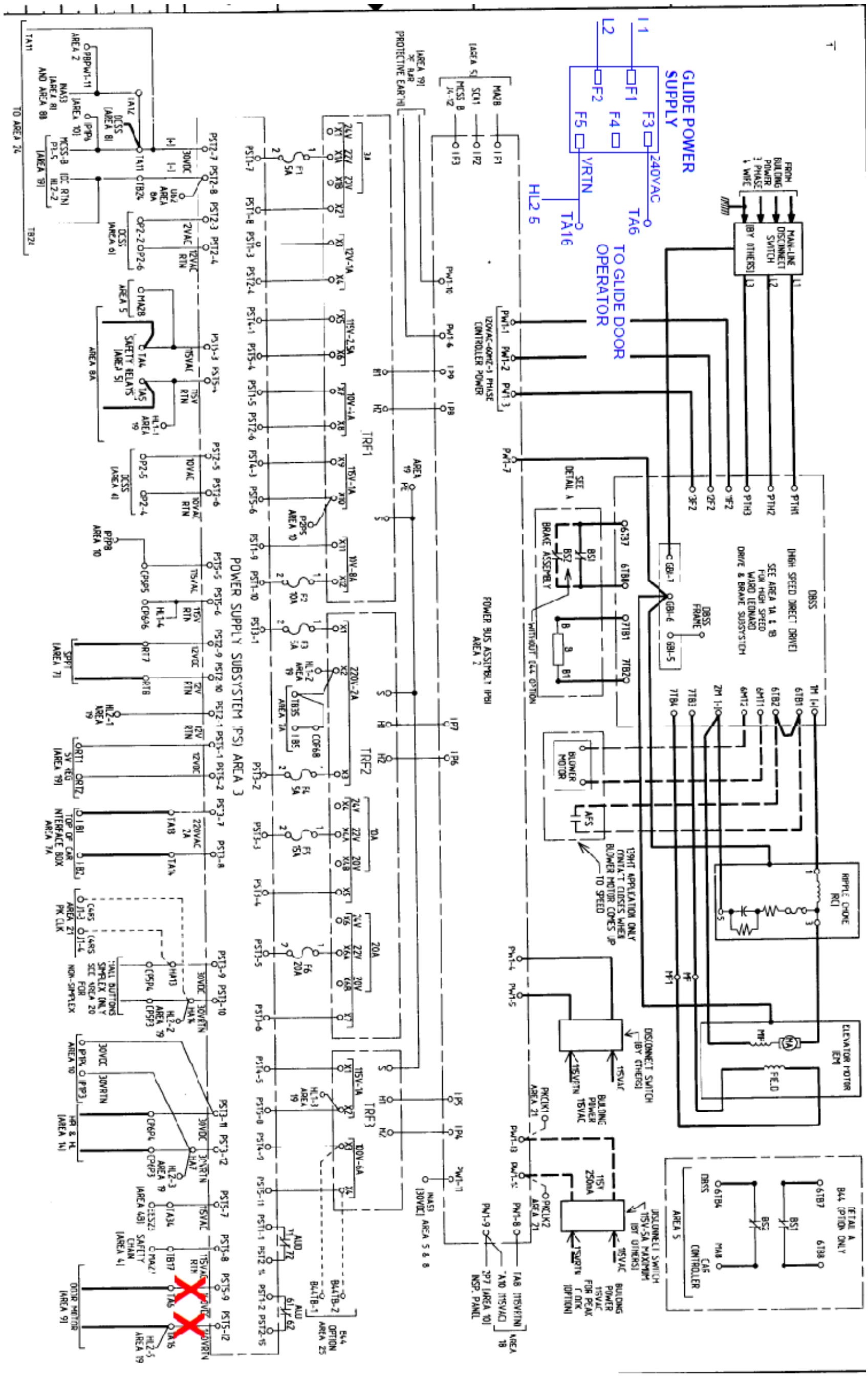


Figure 82: Area 1 of W/D ABA21380A – existing power connections removed and Glide power supply added.

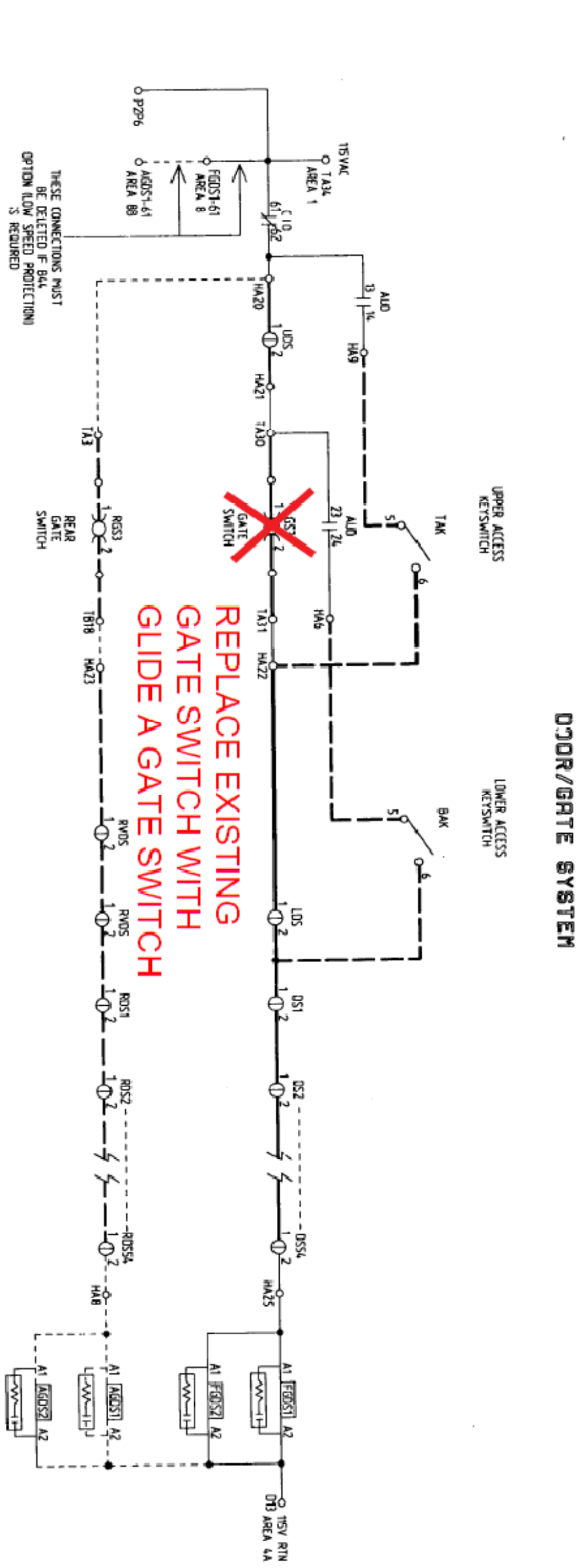


Figure 83: Area 4B of W/D ABA21380A – existing gate switch replaced with Glide A gate switch.

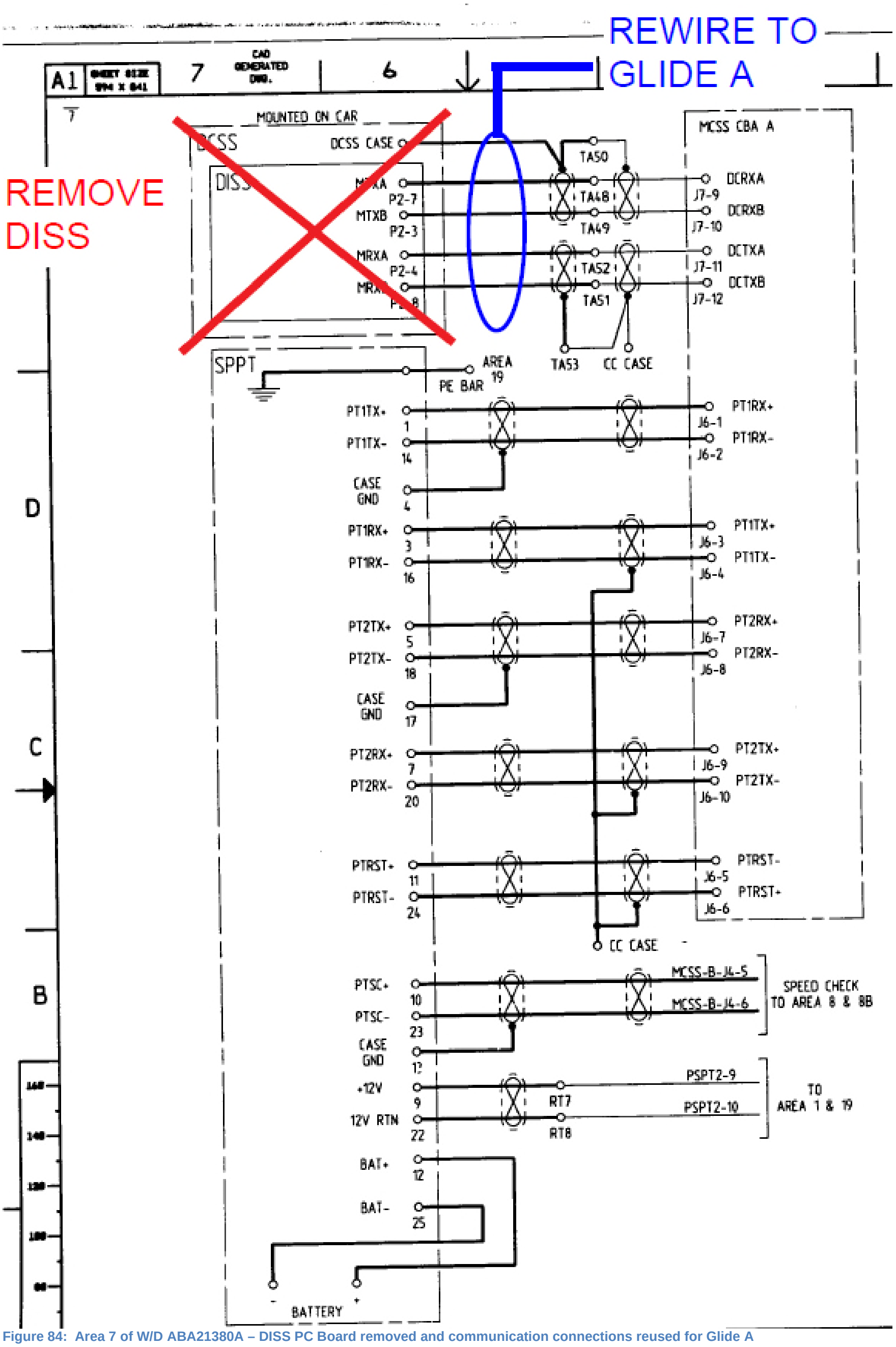


Figure 84: Area 7 of W/D ABA21380A – DISS PC Board removed and communication connections reused for Glide A

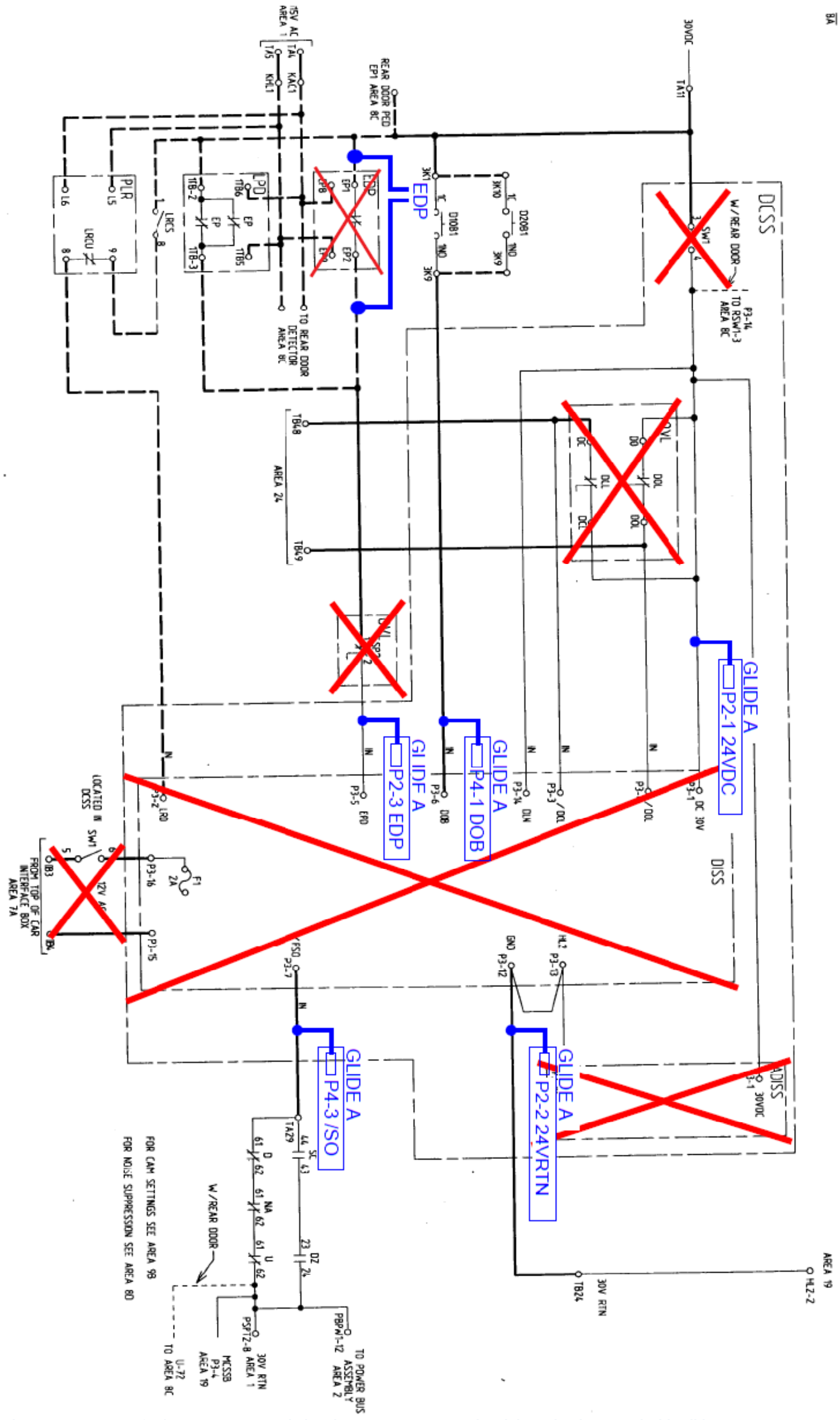


Figure 85: Area 8A of W/D ABA21380A – existing door operator removed and door circuits reused with Glide A

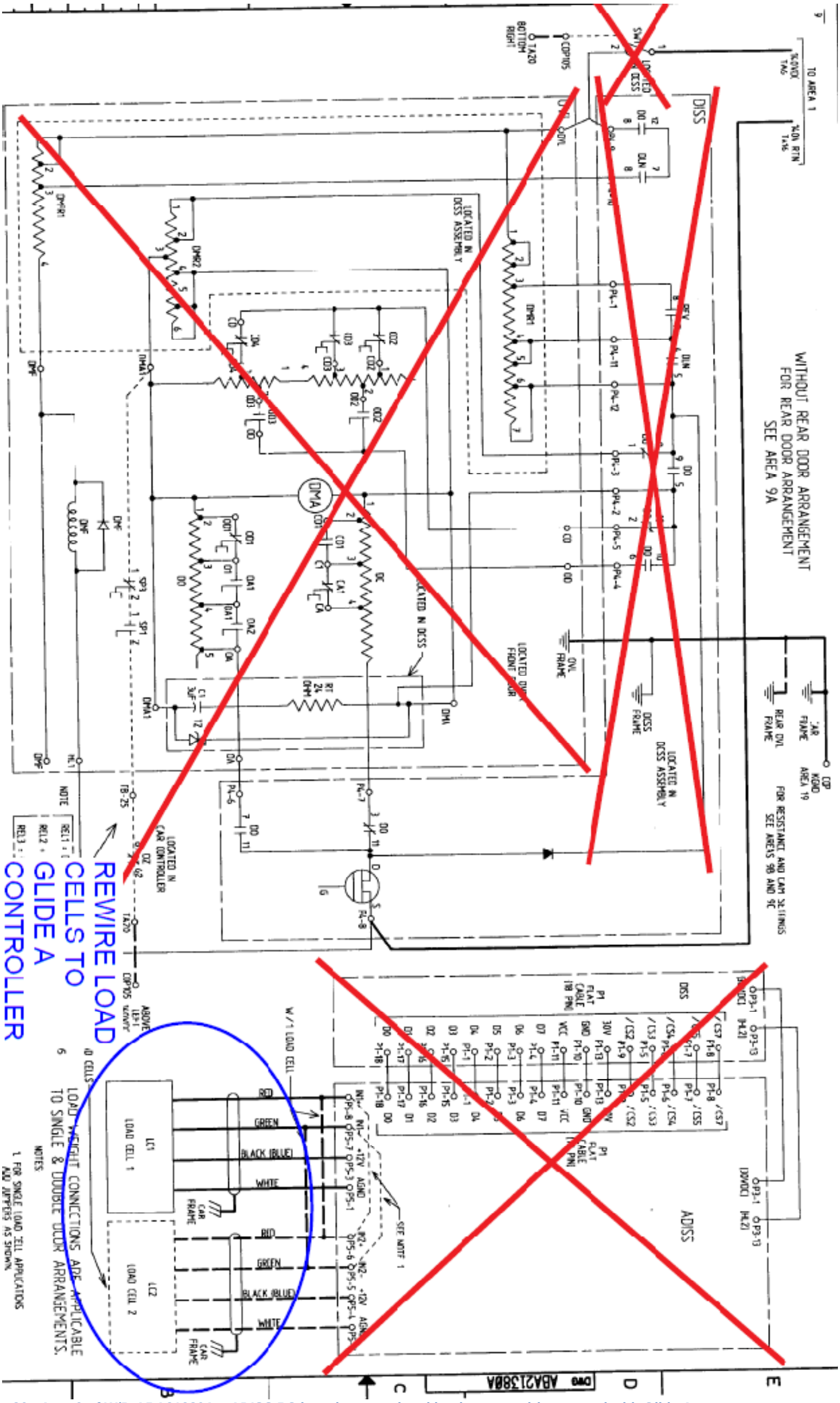


Figure 86: Area 9 of W/D ABA21380A – ADISS PC board removed and load sensor wiring reused with Glide A

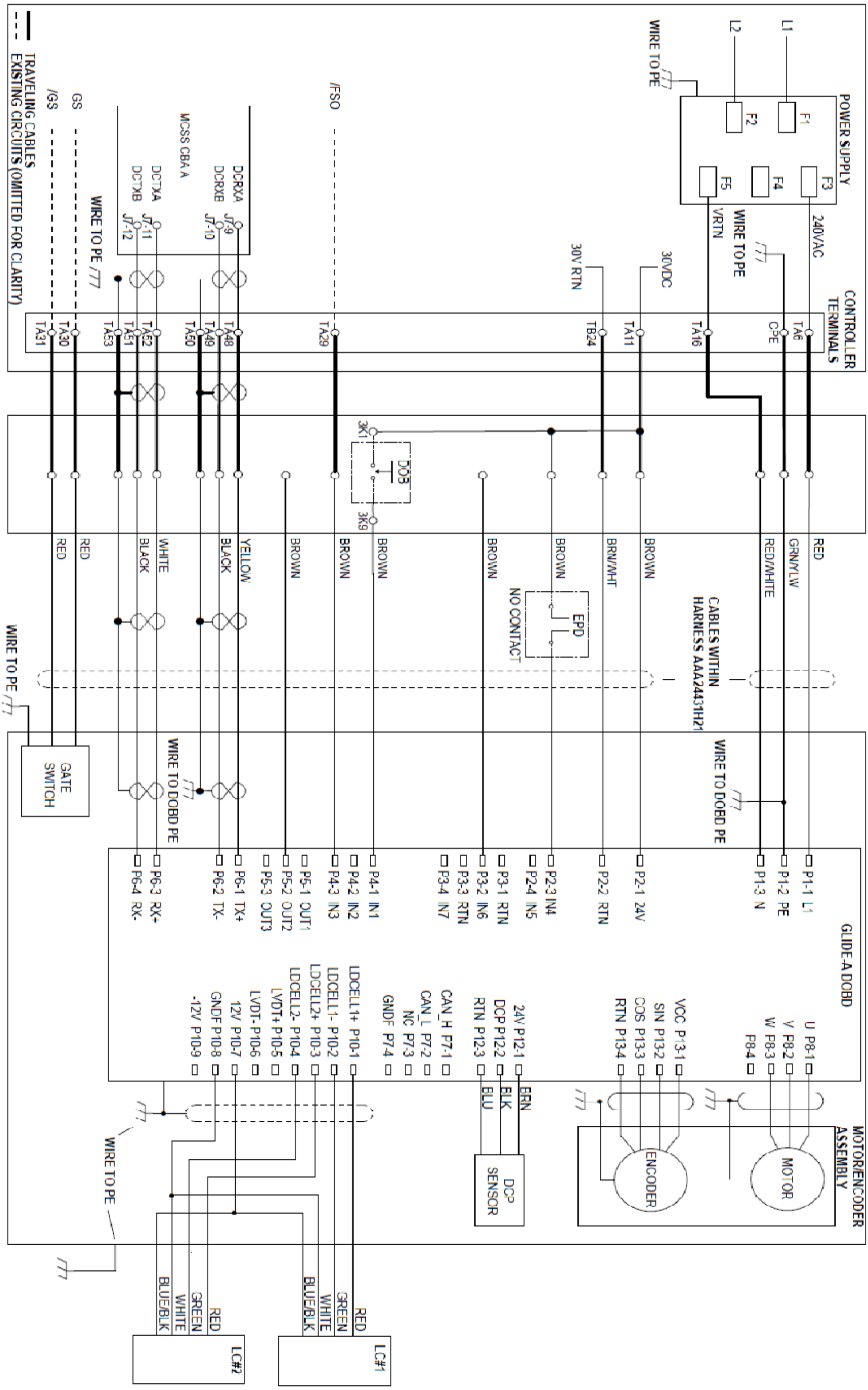


Figure 87: ABA21380A Connection summary W/D with Glide A

8.13 NSAA Discrete Installation on LRVF Controller with AT400 Door Operator (W/D ACA21290CG)

The following wiring diagram depicts installation of the Otis Glide A door operator on a LRVF controller with existing discrete AT400 door operator. The following areas are affected:

- **Area 1:** Glide power supply added.
- **Area 4:** AT400 power supply connection to PSSB removed. These travelling cables are to be reused to connect Glide A power supply to Glide A door operator.
- **Area 6:** Existing gate switch replaced with Glide A gate switch.
- **Area 12C:** Existing door operator removed and door operator circuits reused with Glide A.
- **Area 13:** AT400 power connections removed. Travelling cables to be reused with Glide A.

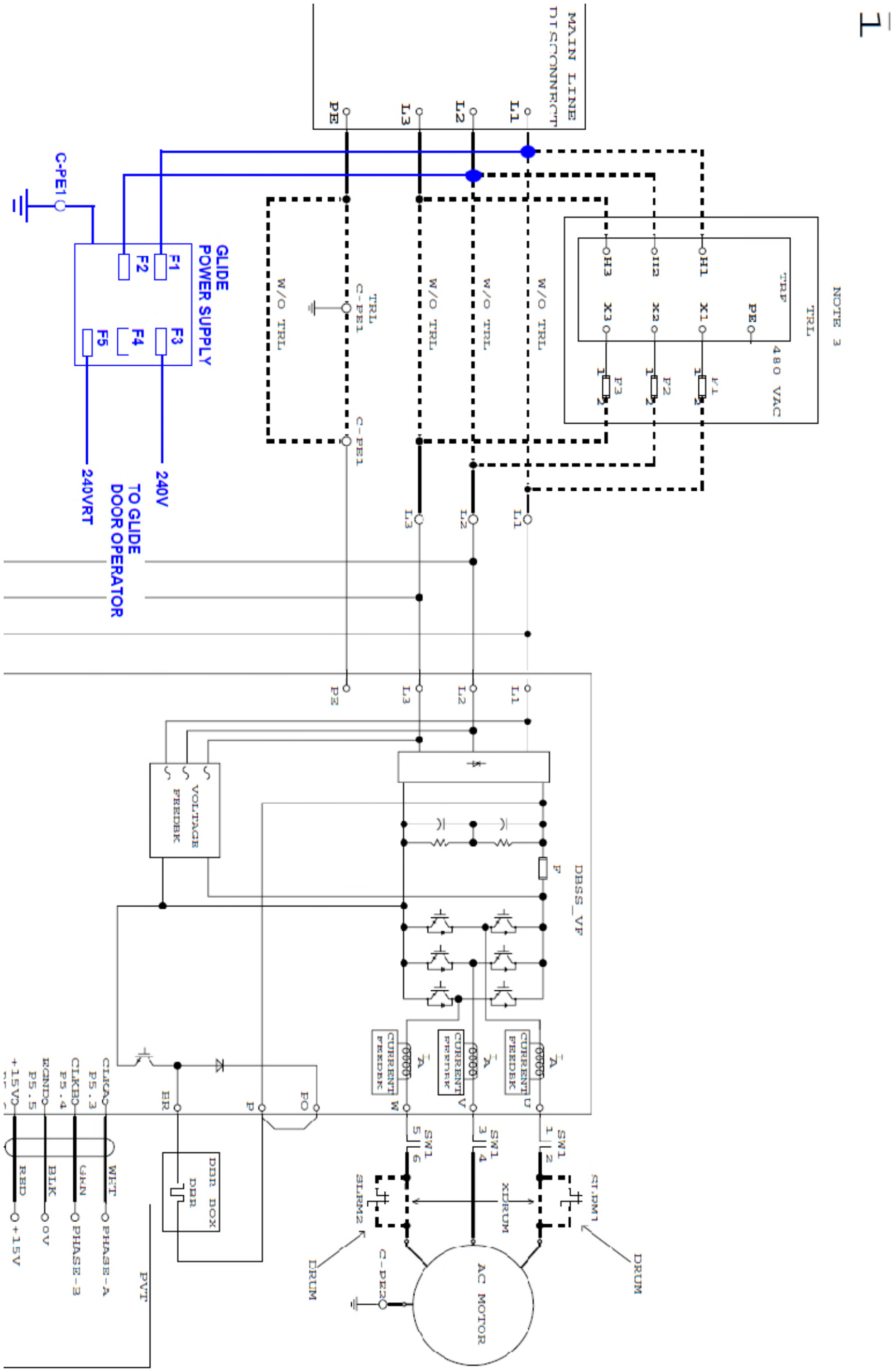
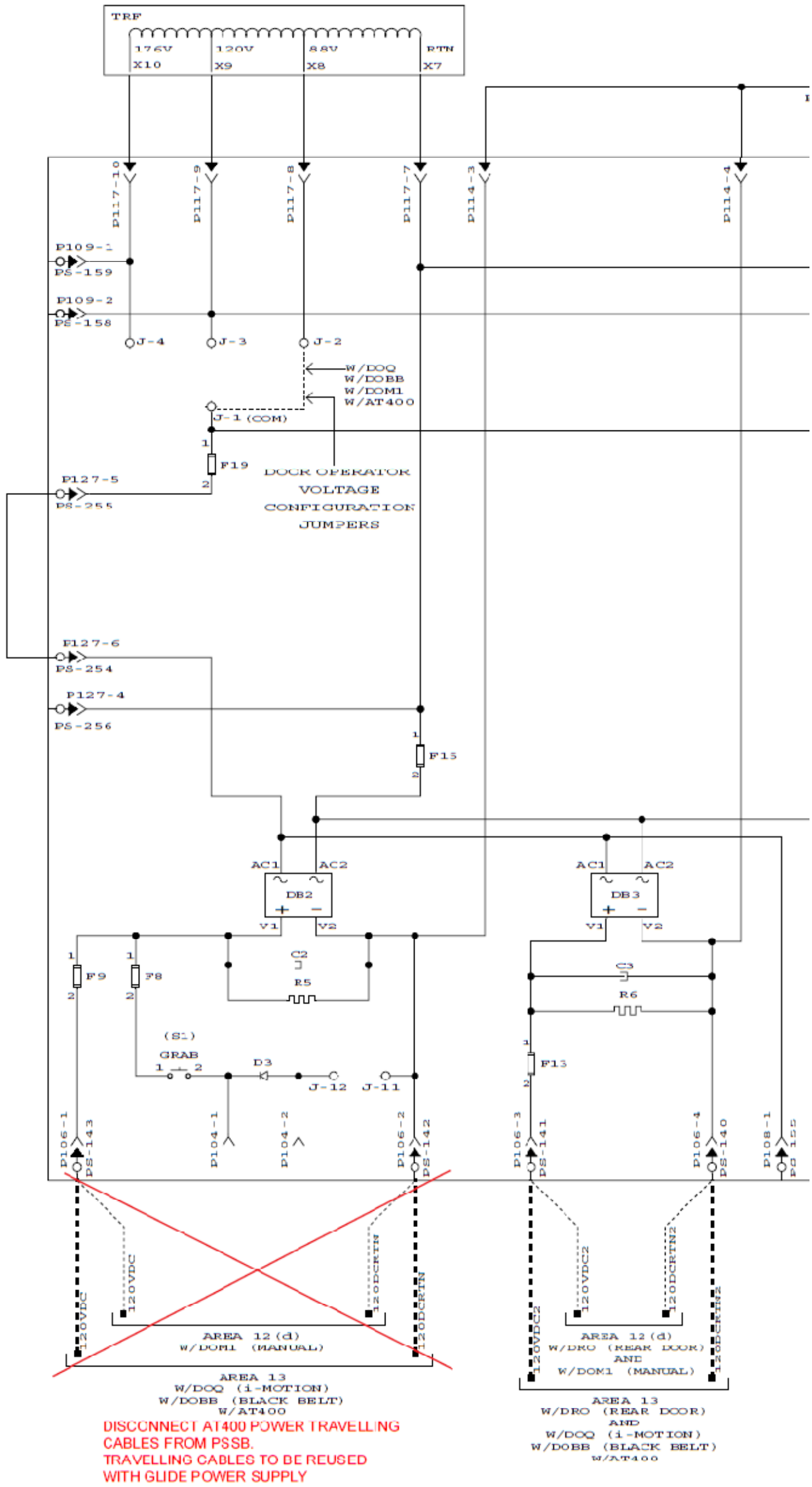


Figure 88: Area 1 of W/D ACA21290CG – Glide power supply added

4



POWER DISTRIBUTION (CONT'D) (DOOR OPERATORS

Figure 89: Area 4 of W/D ACA21290CG – AT400 power connection to PSSB removed. These travelling cables are to be reused for Glide A door operator power.

6 (a)

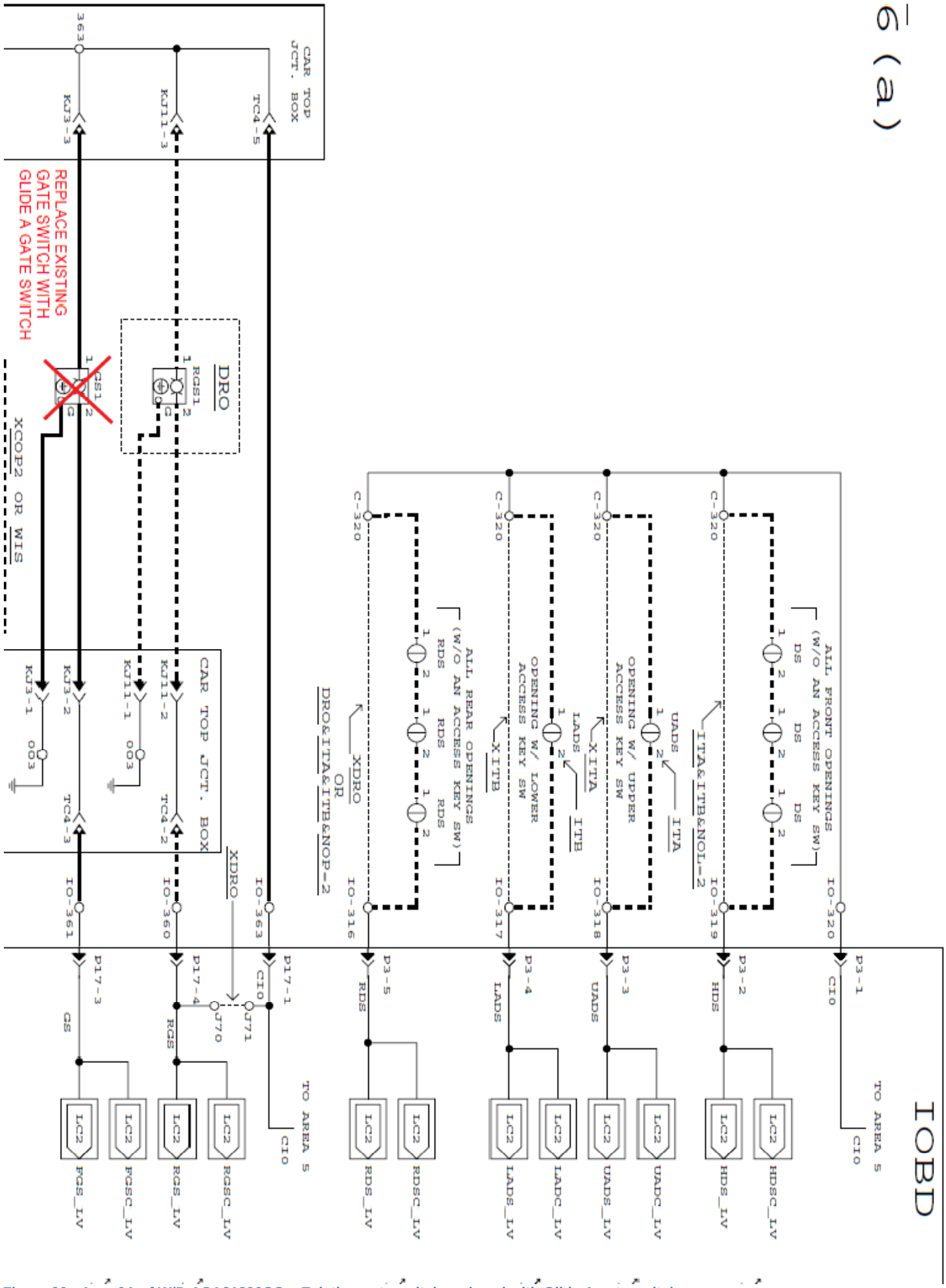


Figure 90: Area 6A of W/D ACA21290CG – Existing gate switch replaced with Glide A gate switch.

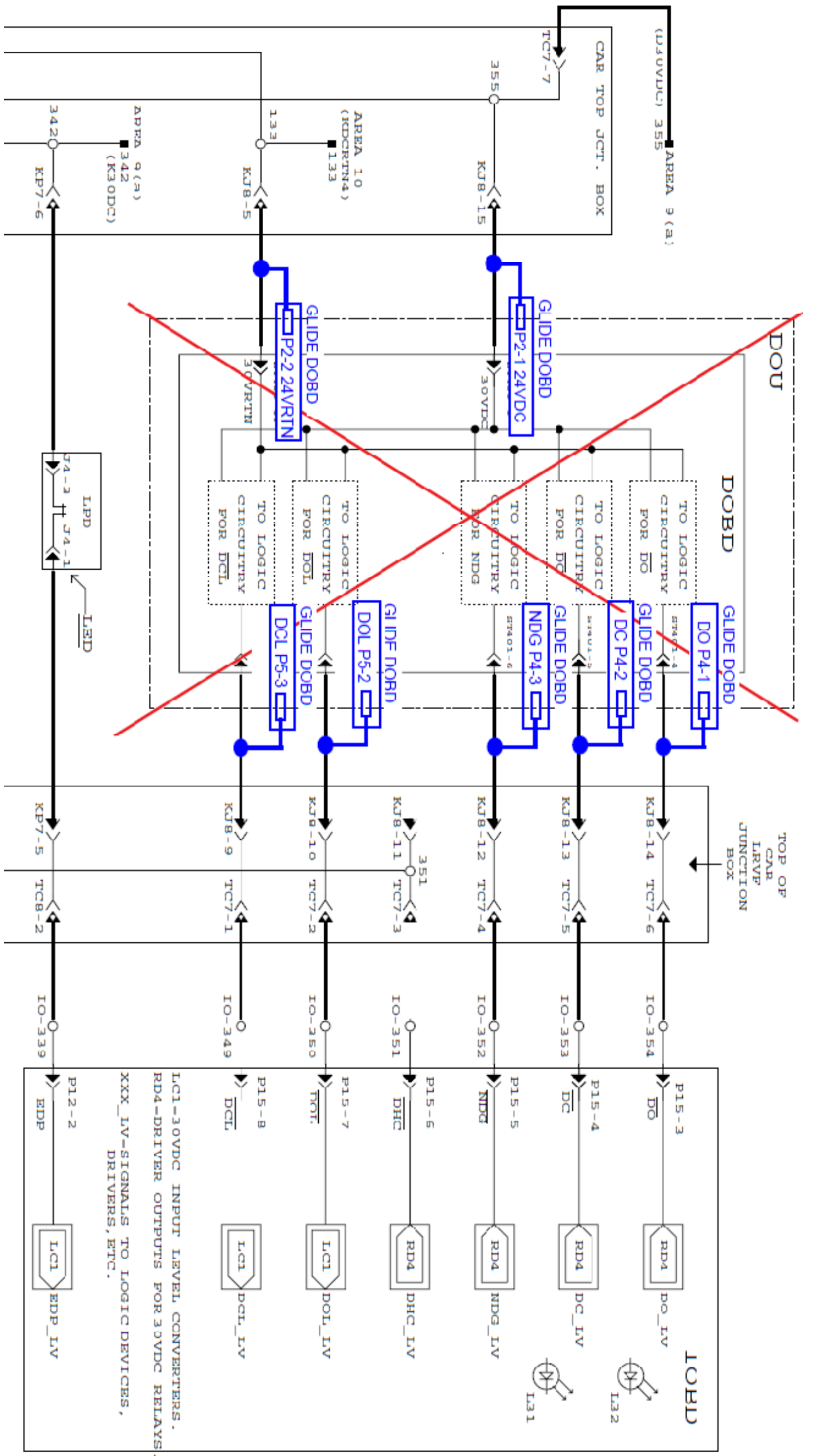


Figure 91: Area 12C of W/D ACA21290CG – Existing door operator connections removed and circuits reused with Glide A

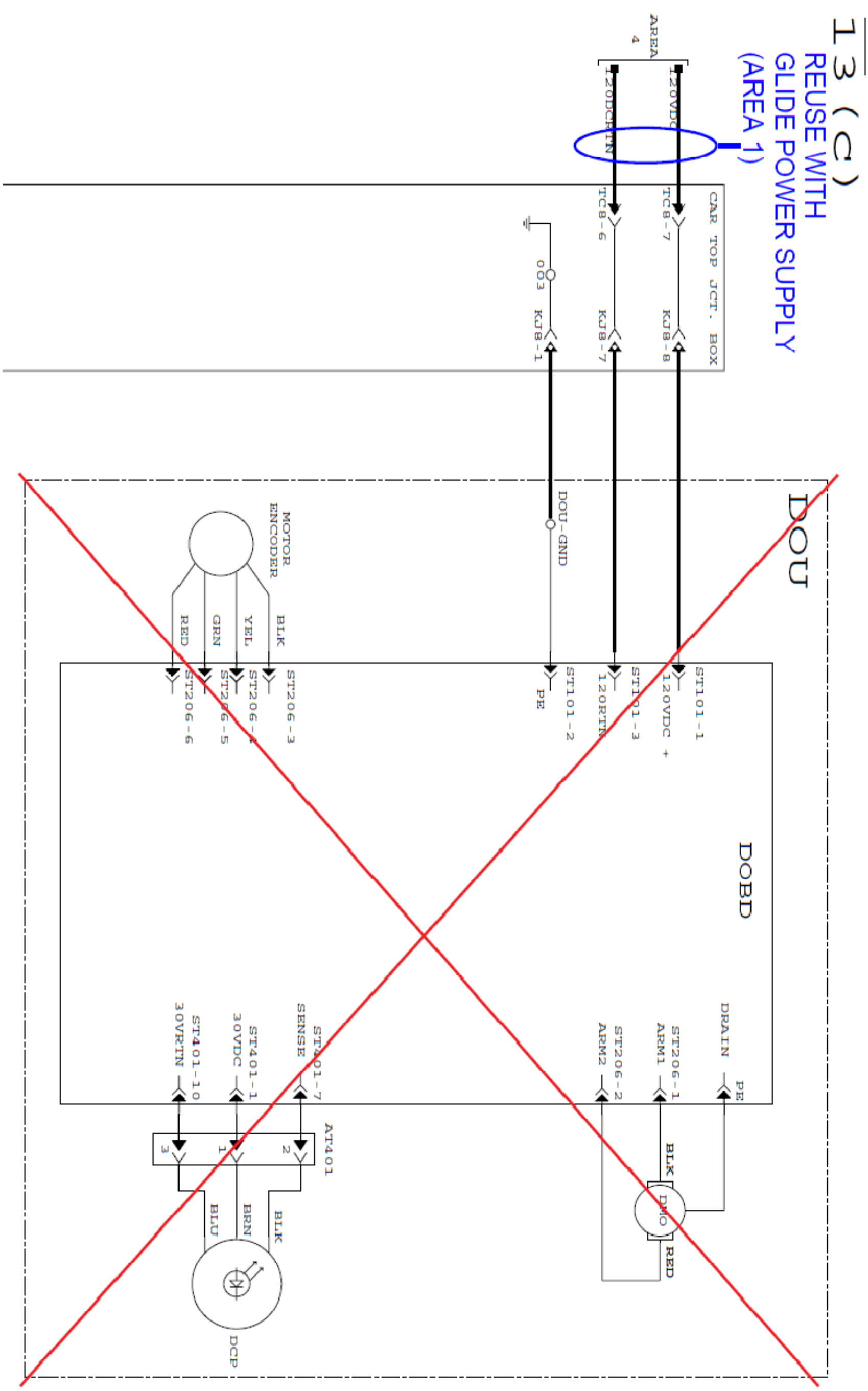


Figure 92. Area 13C of W/D ACA21290CG – AT400 door operator removed. Travelling cables reused for Glide A door operator power.

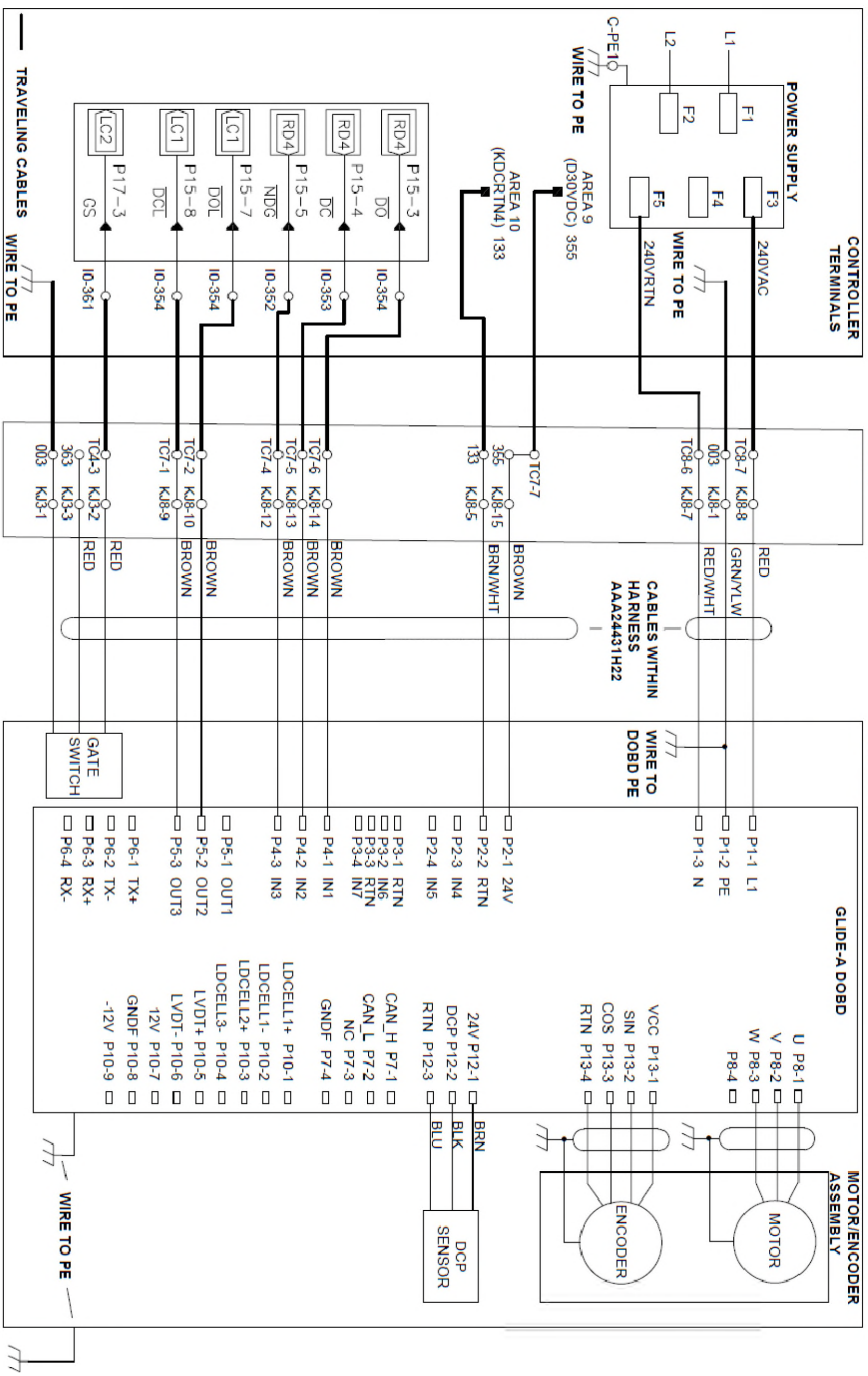


Figure 93: Area 1 of W/D ACA21290CG – Connection Summary with Glide A door operator

8.14 NSAA Multidrop Installation on E411M-HS Controller with i-Motion II Door Operator (W/D AEA21250A)

The following wiring diagram depicts installation of the Otis Glide A door operator on a E411M-HS controller with existing i-motion II door operator. The following areas are affected:

- **Area 1:** Power connections for i-motion II removed and Glide power supply added.
- **Area 2A:** Existing gate switch replaced with Glide A gate switch; i-motion II emergency stop connections removed.
- **Area 9:** Existing door operator removed and door operator circuits reused with Glide A.
- **Area 11A:** i-motion II power connections and distribution circuits reused with Glide A.

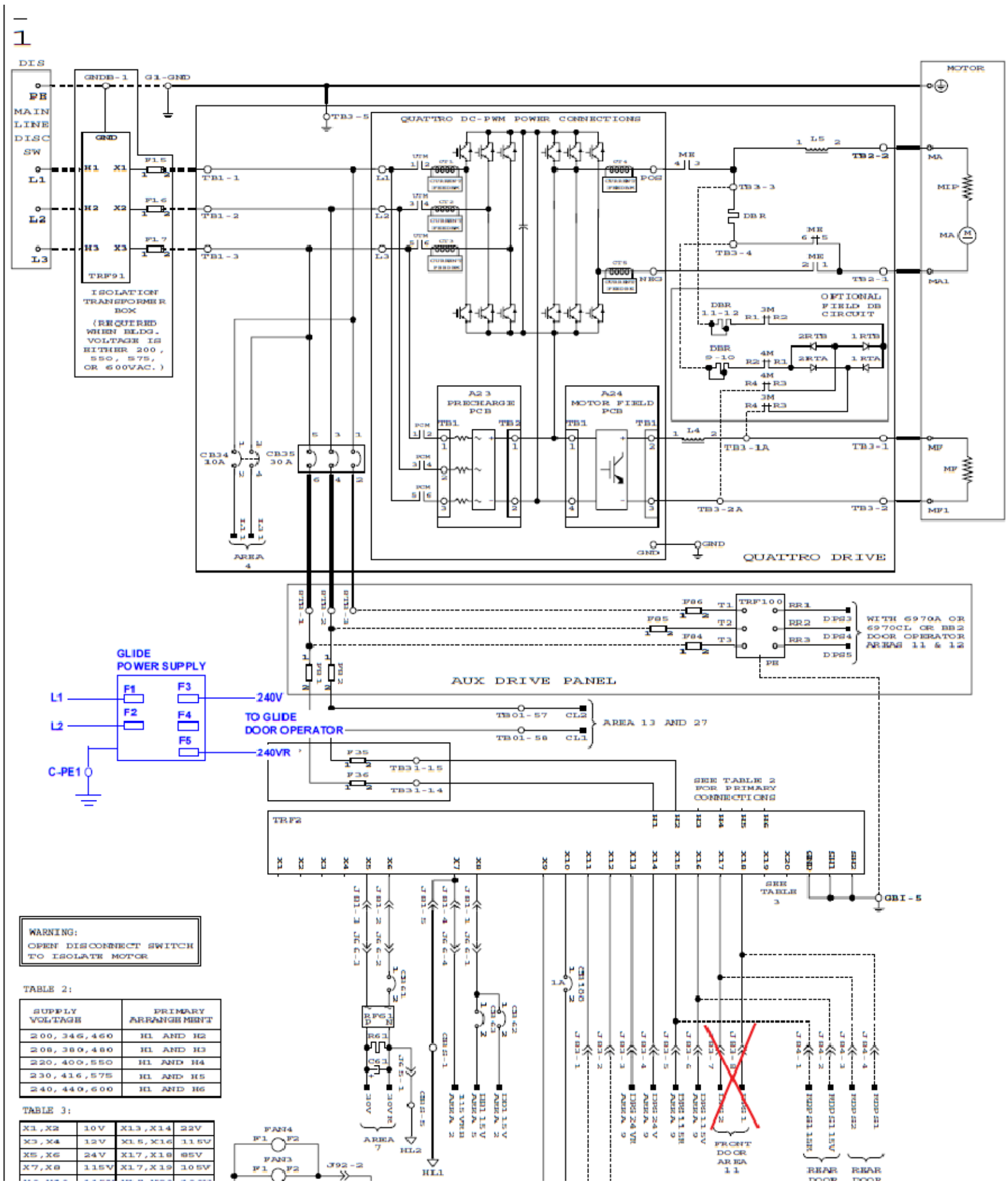


Figure 94: Area 1 of W/D AEA21250A – existing power connections disconnected and Glide power supply added

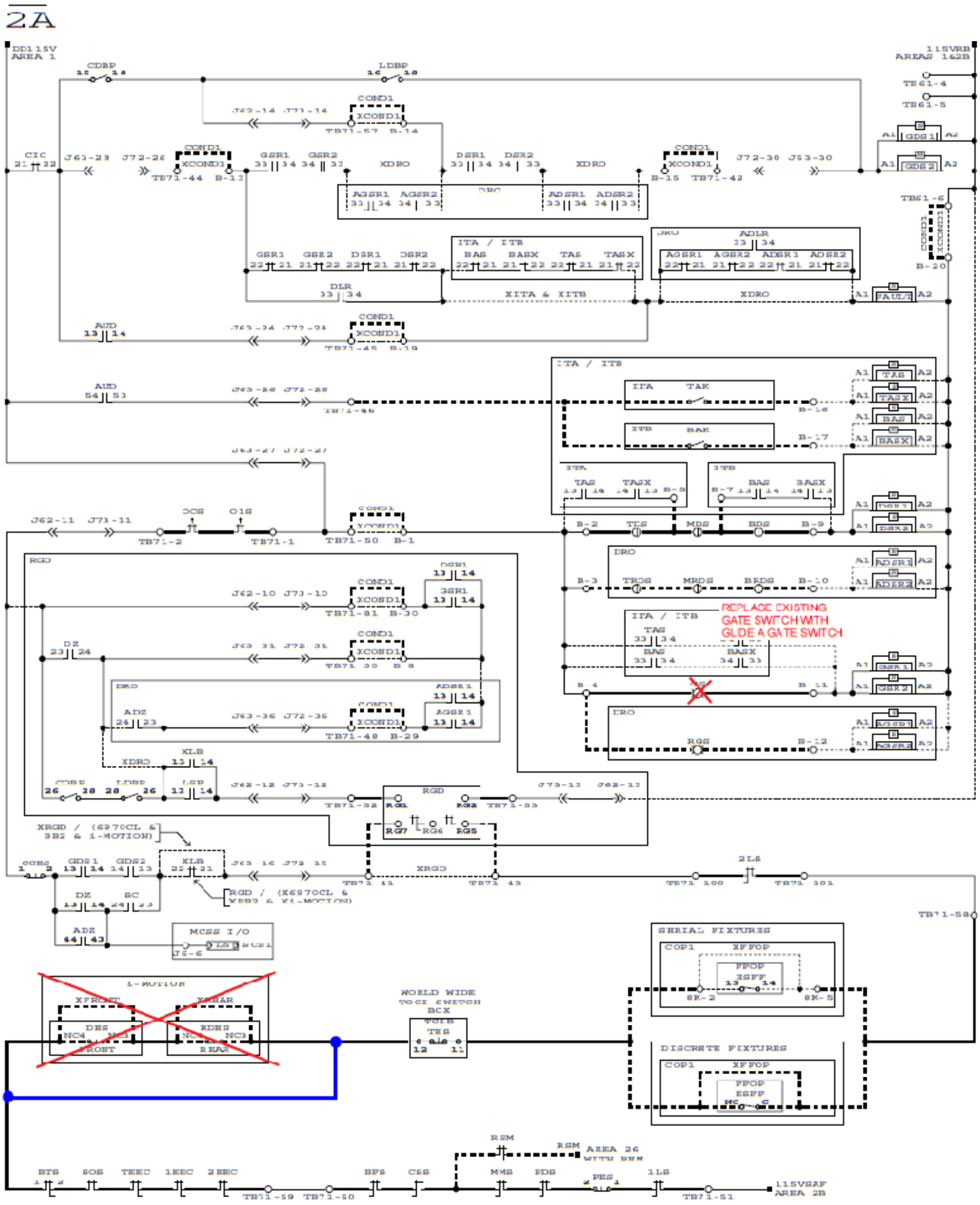


Figure 95: Area 2A of W/D AEA21250A – Existing gate switch replaced with Glide A gate switch and i-motion II emergency stop connections removed.

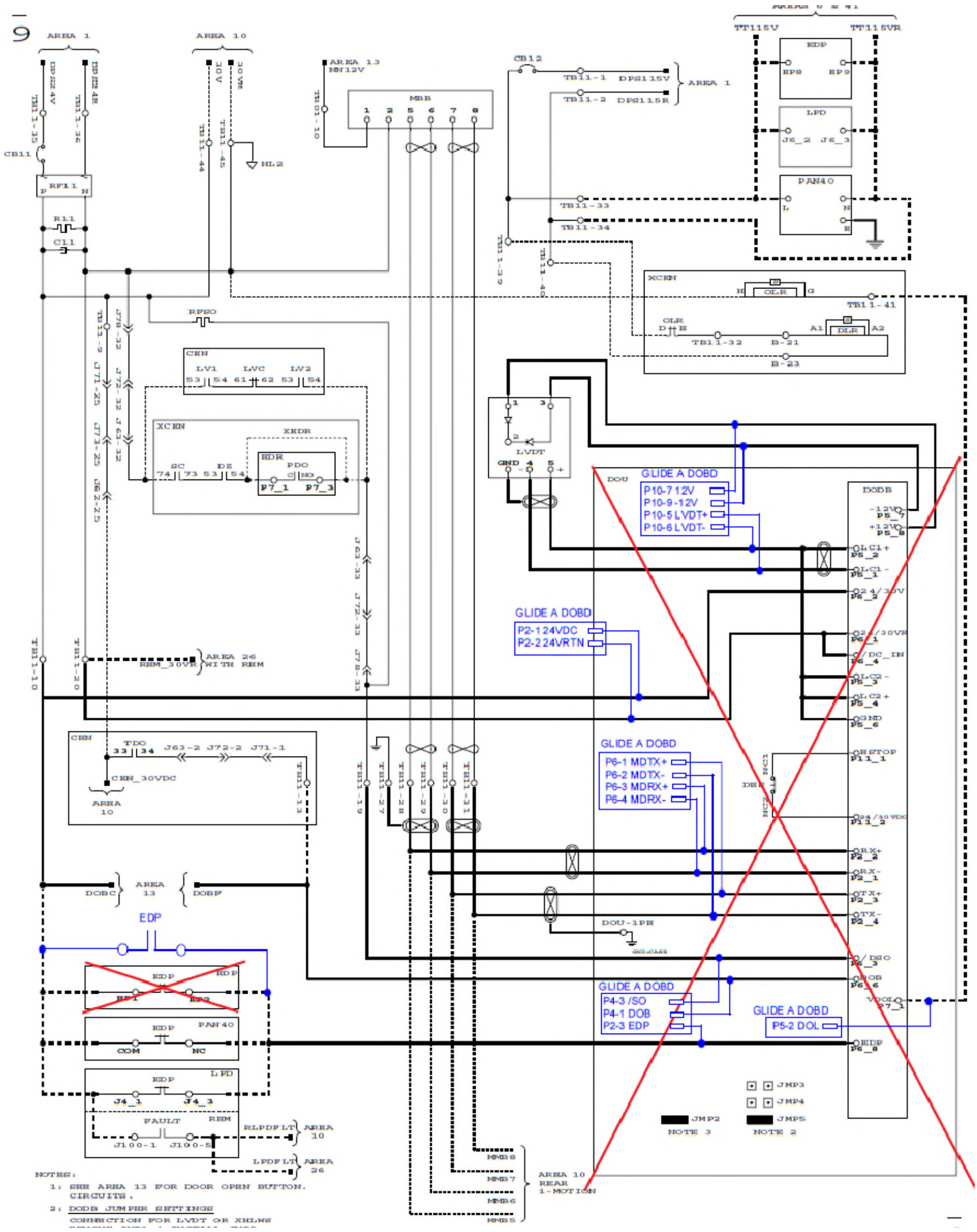


Figure 96: Area 9 of W/D AEA21250A – i-motion II door operator removed and door circuits reused with Glide-A. Note that the normally open contact of EDP is used

11

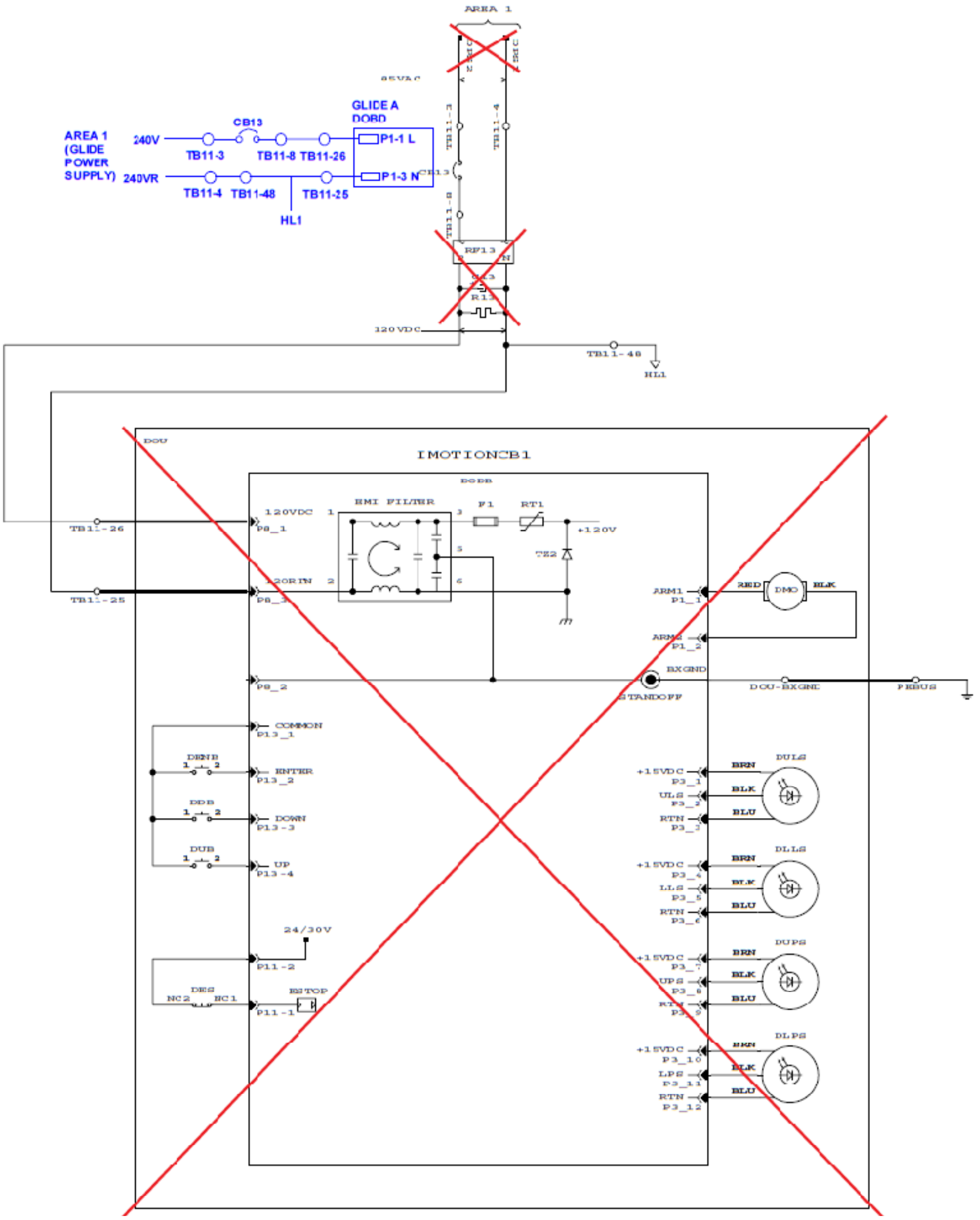


Figure 97: Area 11 of W/D AEA21250A – i-motion II door operator removed and power connections reused for Glide A

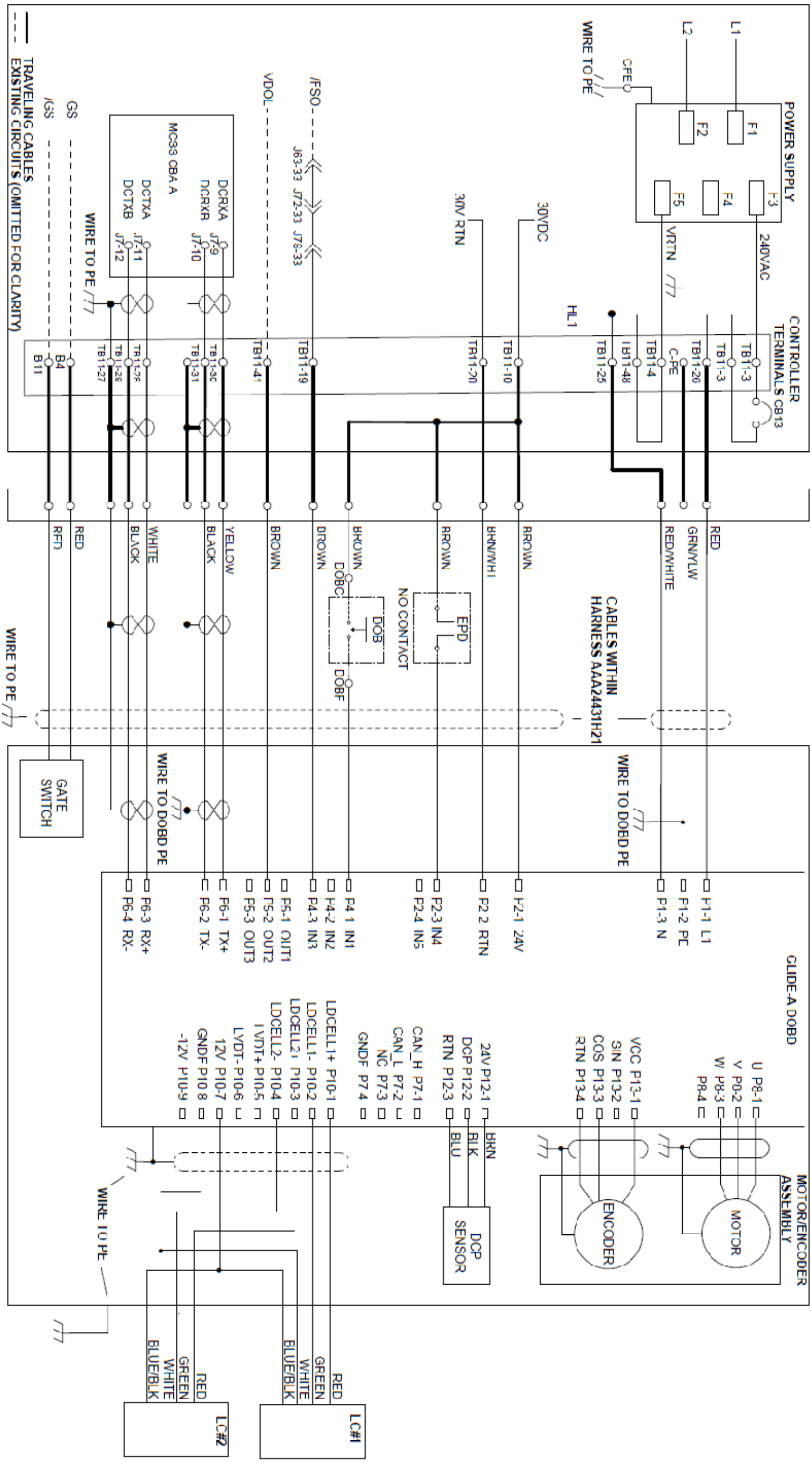


Figure 98: W/D AEA21250A Connection Summary with Glide-A

8.15 NSAA Serial Multidrop Installation on E411M-MS/VF Controller with i-Motion II Door Operator (W/D AEA21255X)

The following wiring diagram depicts installation of the Otis Glide A door operator on a E411M-MS/VF controller with existing i-motion II door operator using multi-drop communication to the car controller. The following areas are affected:

- **Area 1:** Power connections for i-motion II removed and Glide power supply added.
- **Area 2:** i-motion II power wiring removed.
- **Area 5:** Existing gate switch replaced with Glide A gate switch; i-motion II emergency stop connections removed.
- **Area 20:** i-motion II circuits re-used with Glide A.
- **Area 21:** Existing door operator removed.

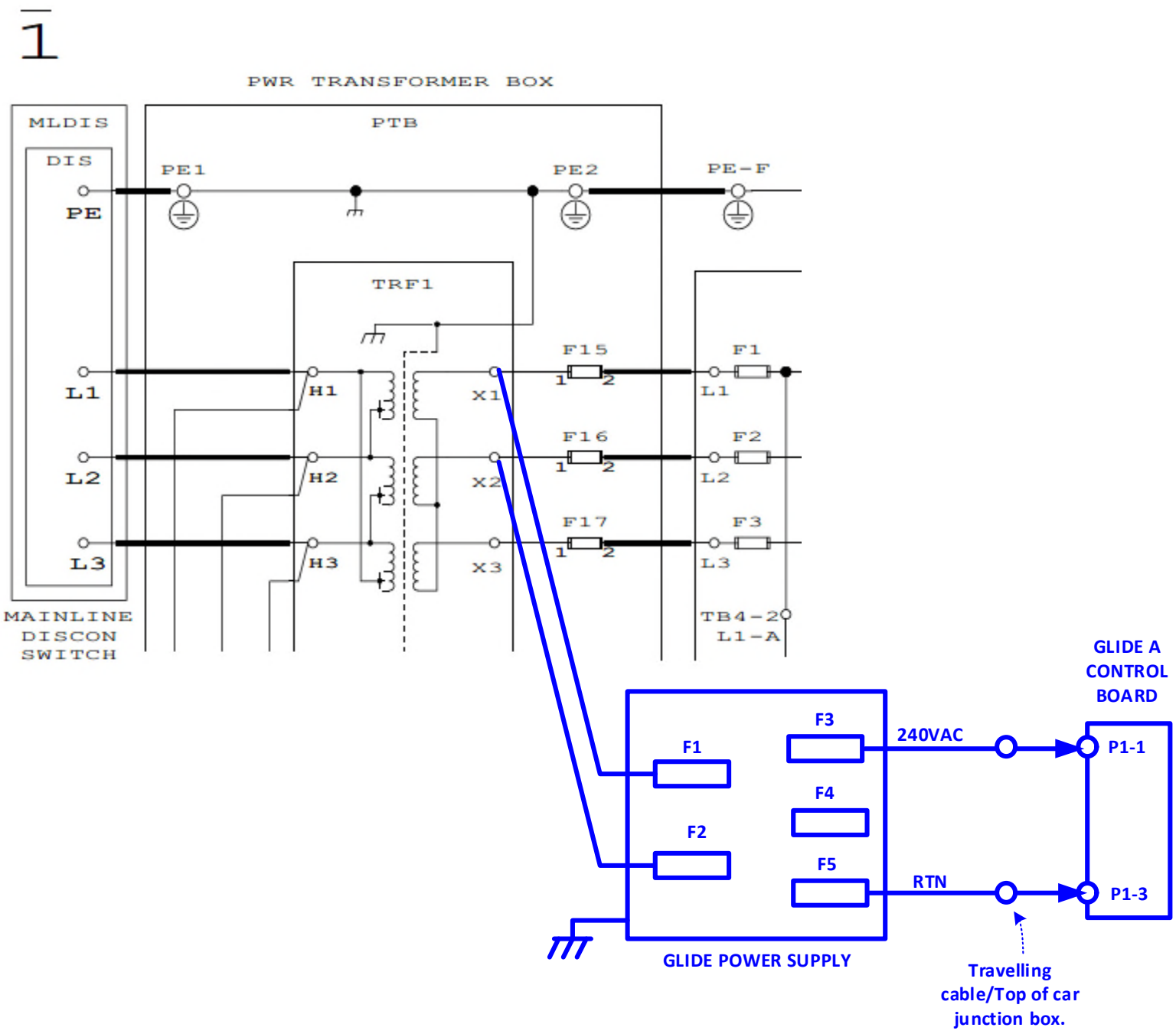


Figure 99: Area 1 of W/D AEA21255X – Power connections for i-motion II removed and Glide power supply added.

2

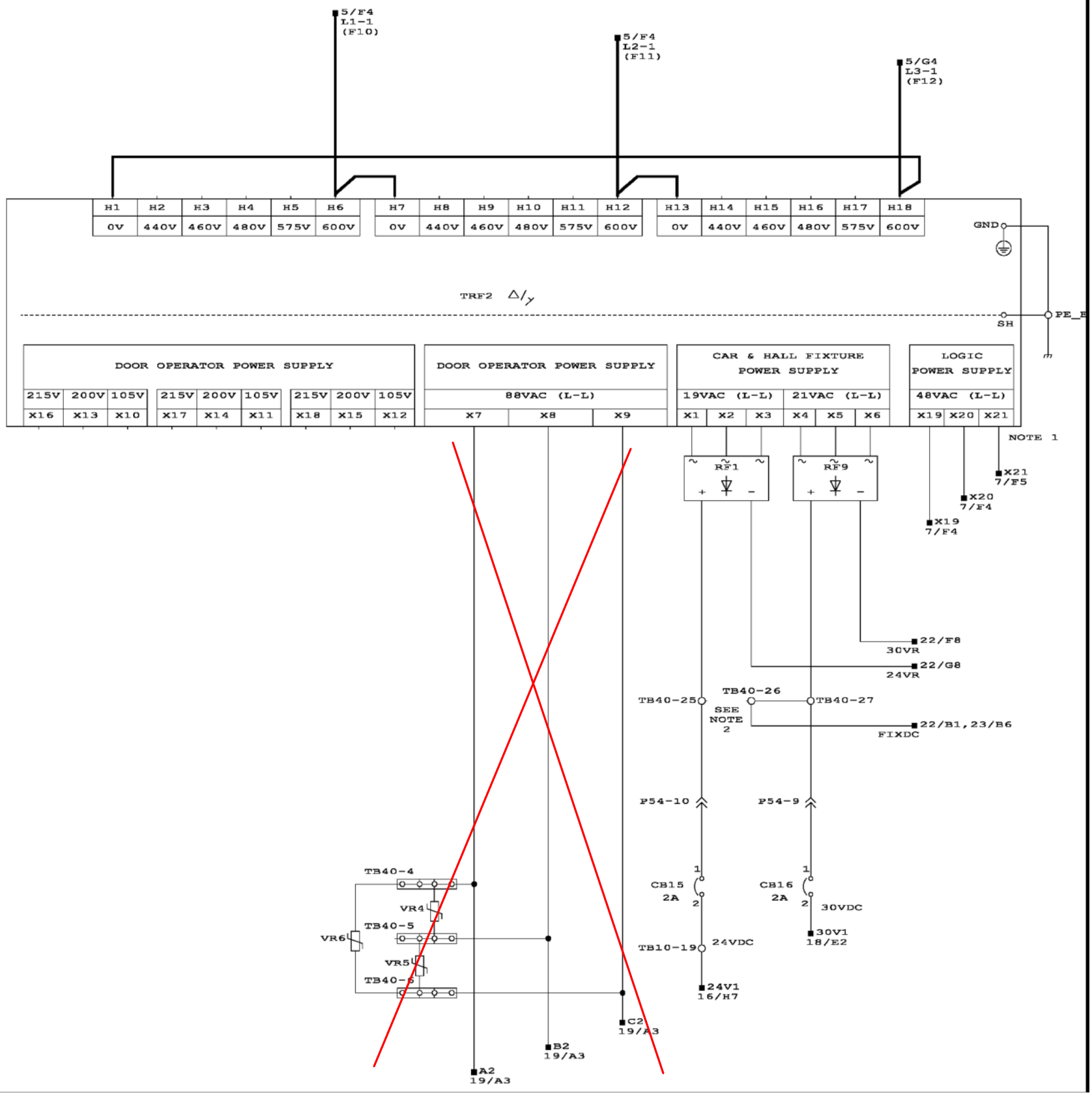


Figure 100: Area 2 of W/D AEA21255X – i-motion II power wiring removed.

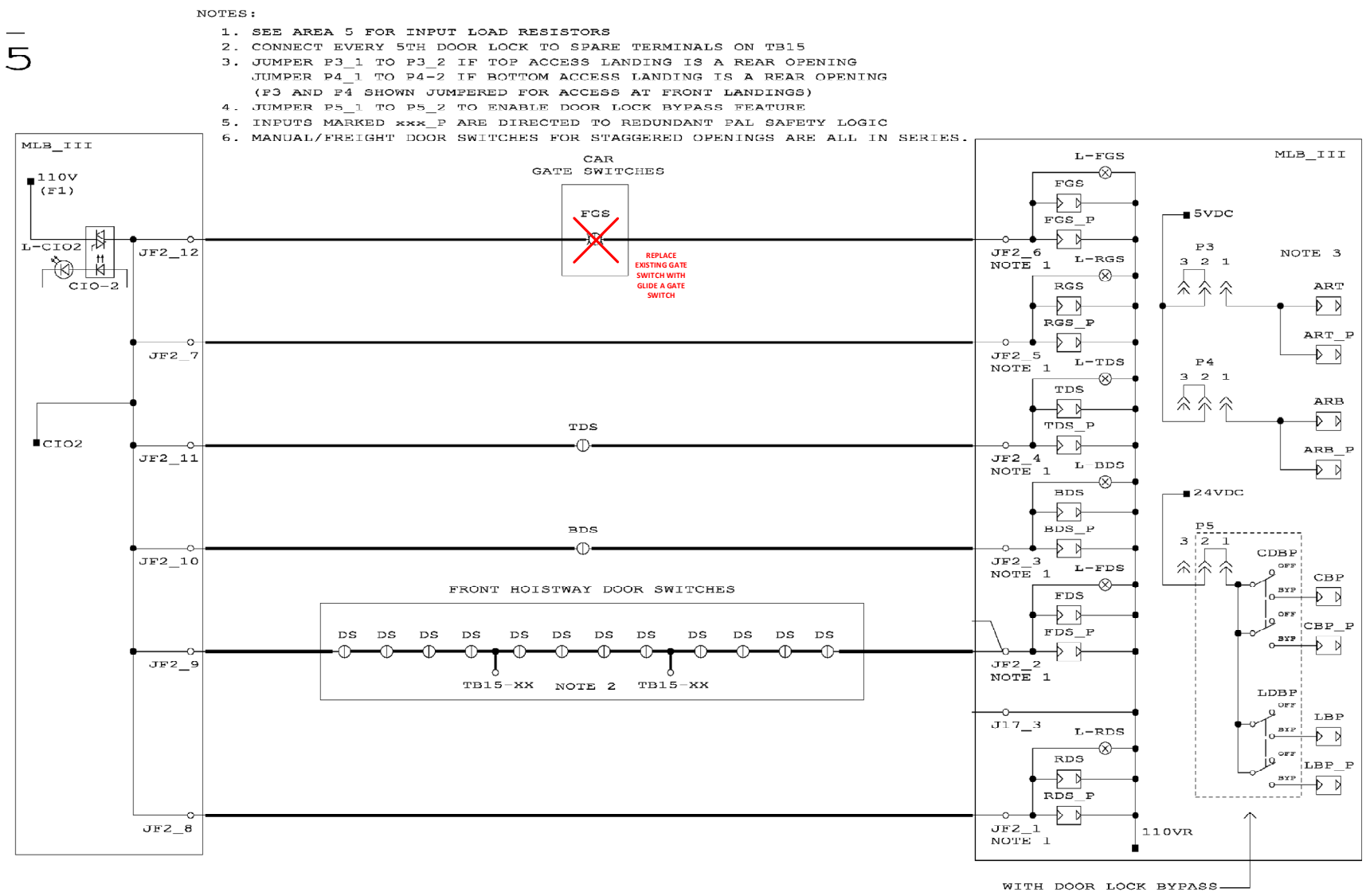


Figure 101: Area 5 of W/D AEA21255X – Existing gate switch replaced with Glide A gate switch; i-motion II emergency stop connections removed..

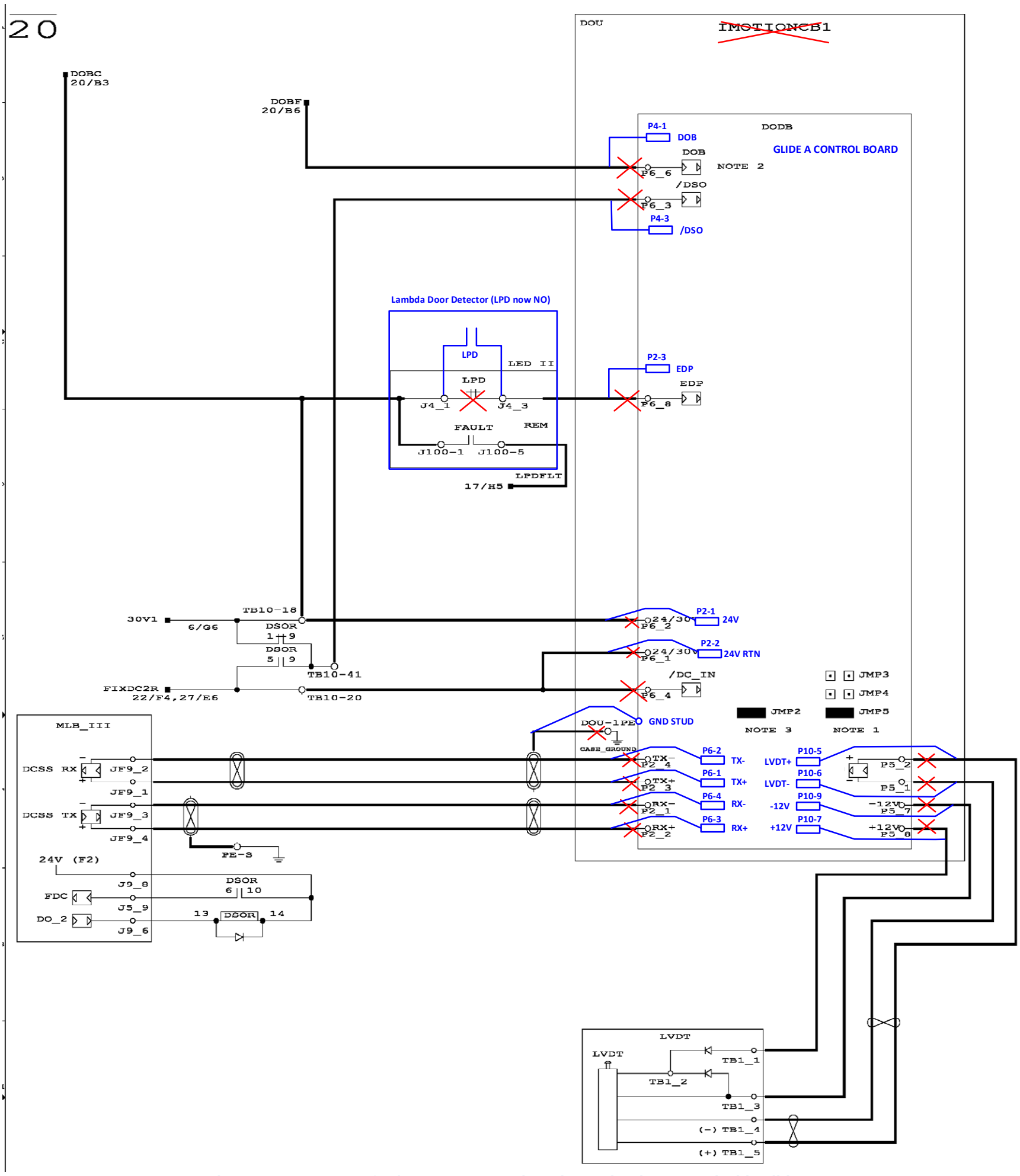


Figure 102: Area 20 of W/D AEA21255X – i-motion II circuits re-used with Glide A.

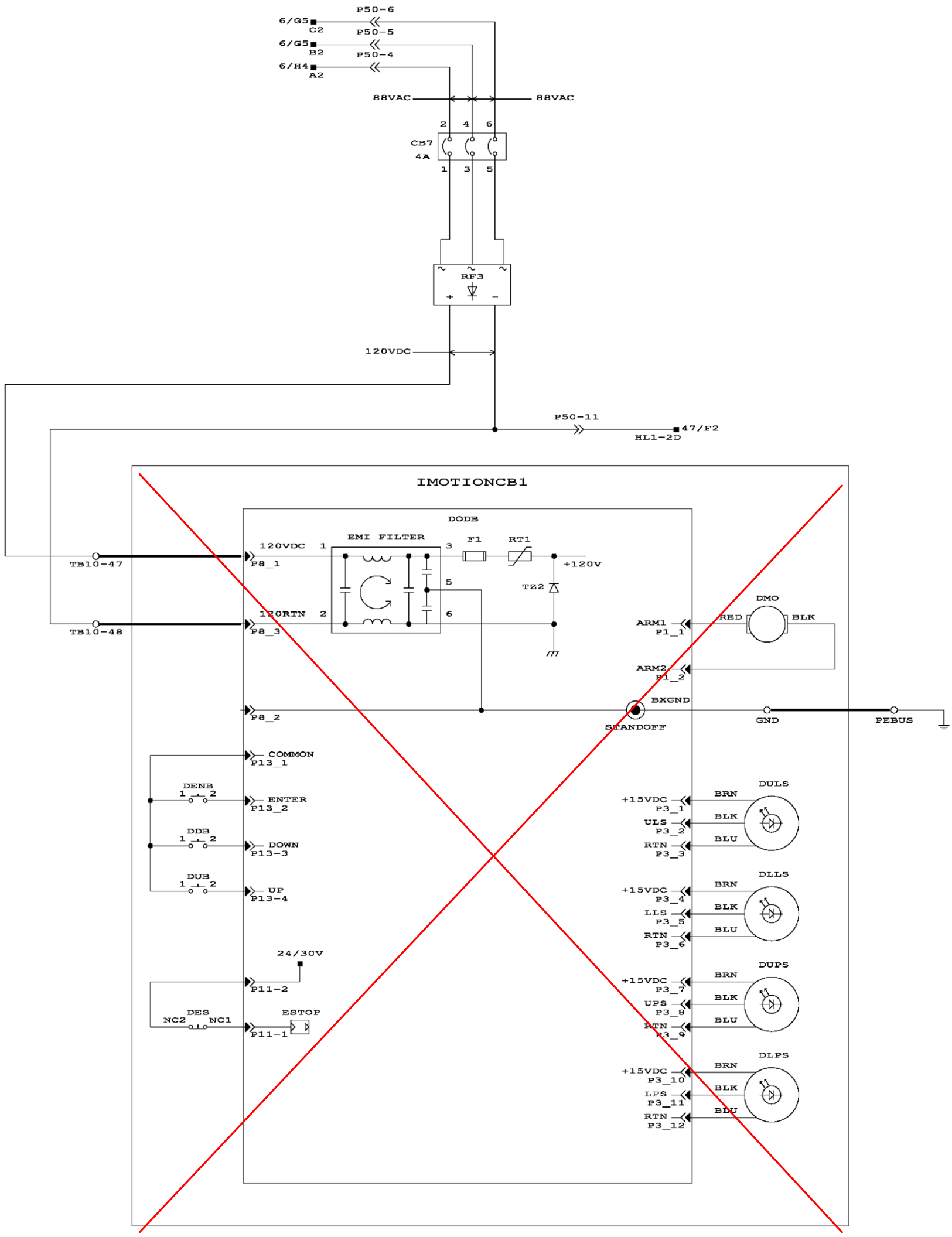


Figure 103: Area 21 of W/D AEA21255X – Existing door operator removed.

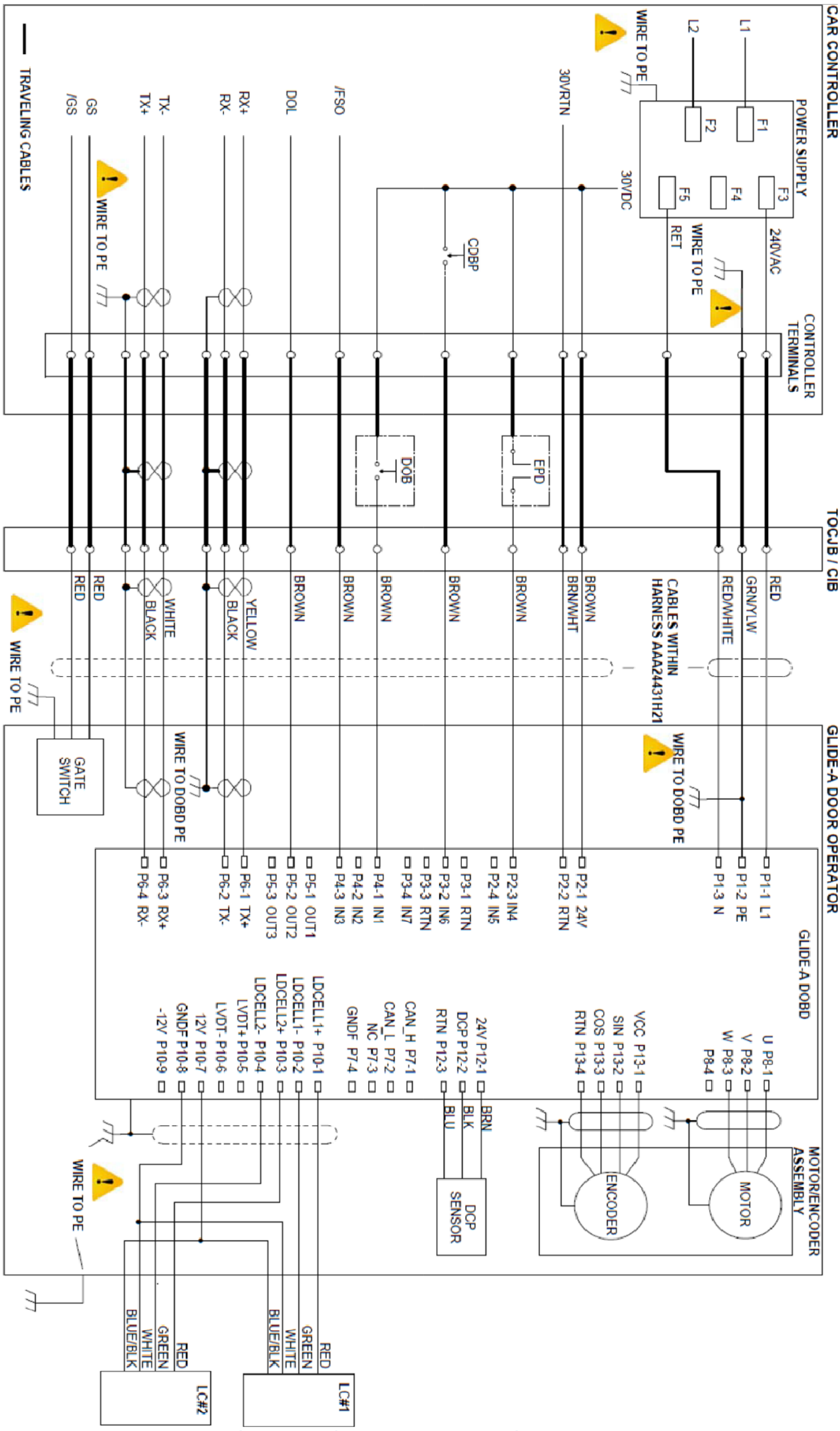


Figure 104: W/D AEA21255X – Connection Summary

8.16 NSAA Discrete Installation on E411M-MS/VF Controller with i-Motion II Door Operator (W/D AEA21255X)

The following wiring diagram depicts installation of the Otis Glide A door operator on a E411M-MS/VF controller with existing i-motion II door operator that uses discrete communication to the car controller. The following areas are affected:

- **Area 1:** Power connections for i-motion II removed and Glide power supply added.
- **Area 2:** i-motion II power wiring removed.
- **Area 5:** Existing gate switch replaced with Glide A gate switch; i-motion II emergency stop connections removed.
- **Area 20:** i-motion II circuits re-used with Glide A.
- **Area 21:** Existing door operator removed.

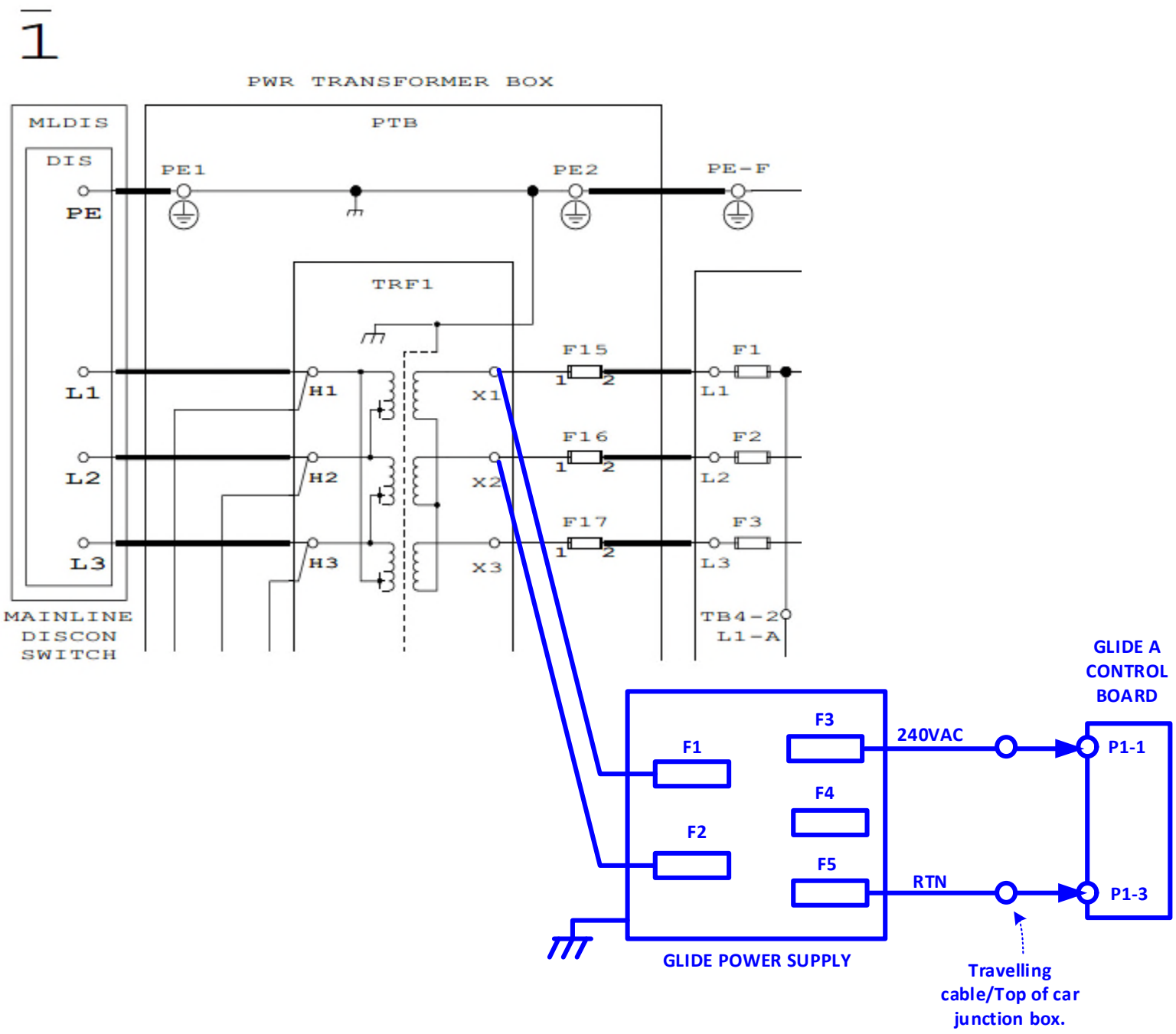


Figure 105: Area 1 of W/D AEA21255X – Power connections for i-motion II removed and Glide power supply added.

2

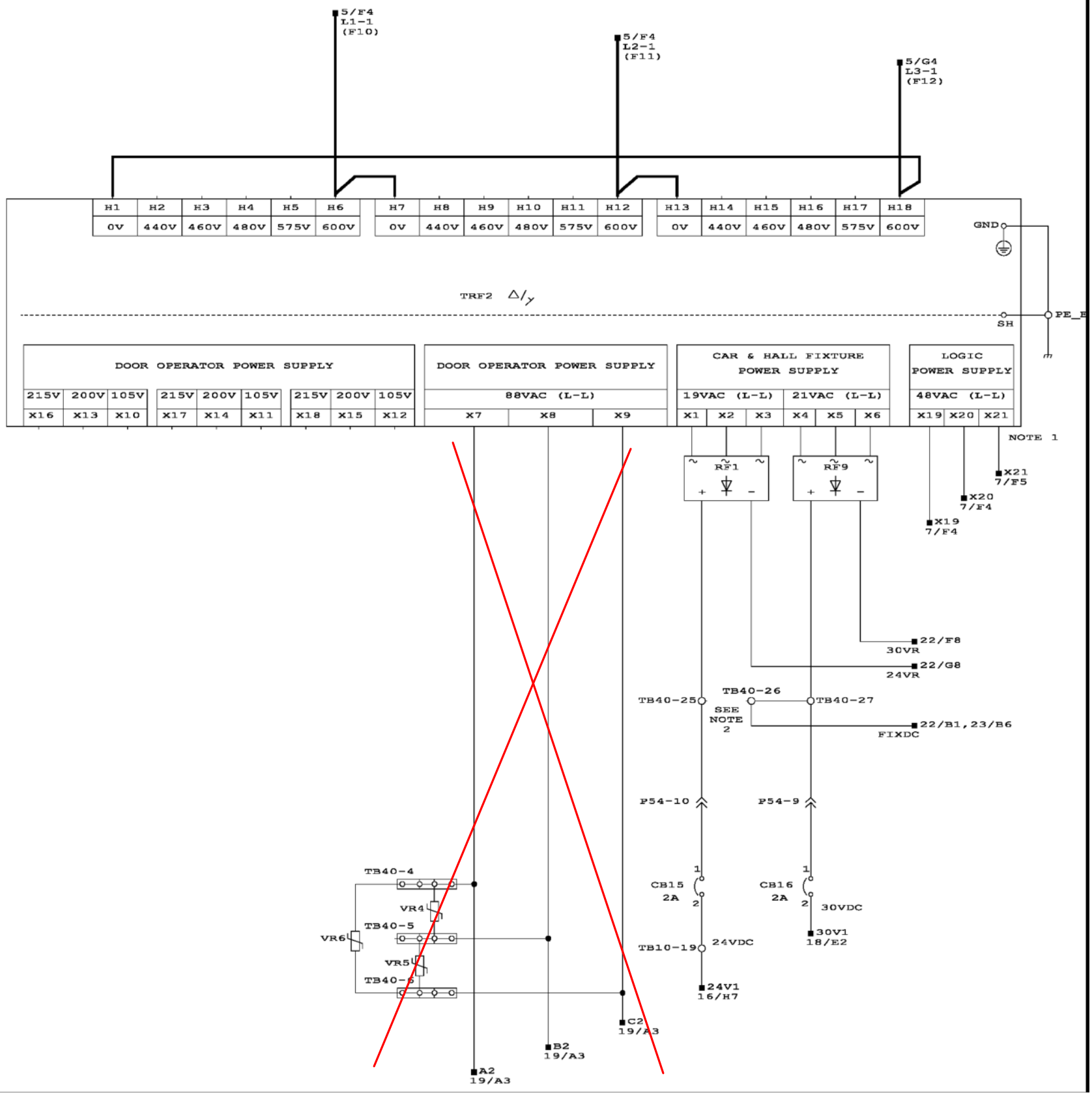


Figure 106: Area 2 of W/D AEA21255X – i-motion II power wiring removed.

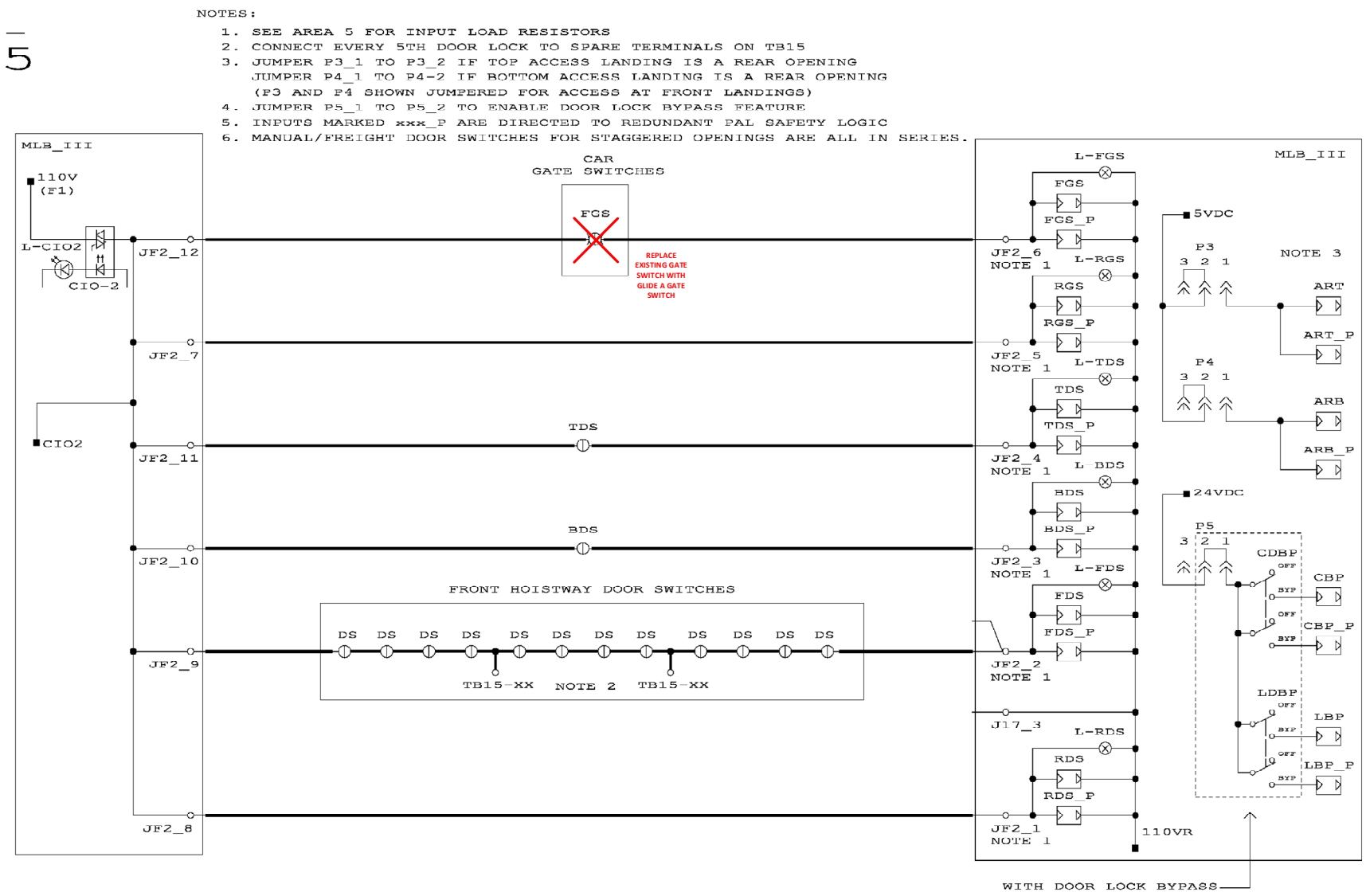


Figure 107: Area 5 of W/D AEA21255X – Existing gate switch replaced with Glide A gate switch; i-motion II emergency stop connections removed..

20

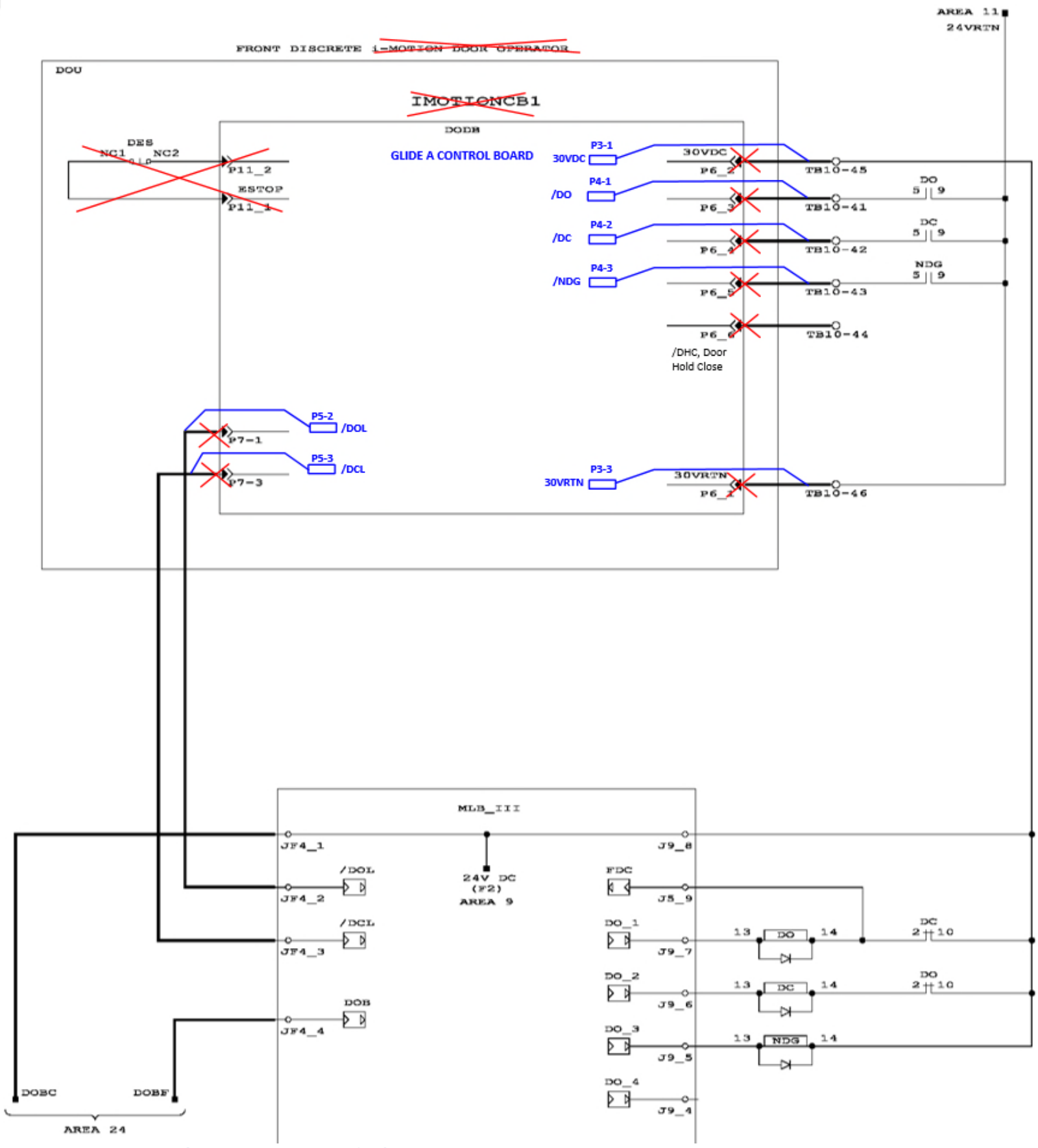


Figure 108: Area 20 of W/D AEA21255X – i-motion II circuits re-used with Glide A.

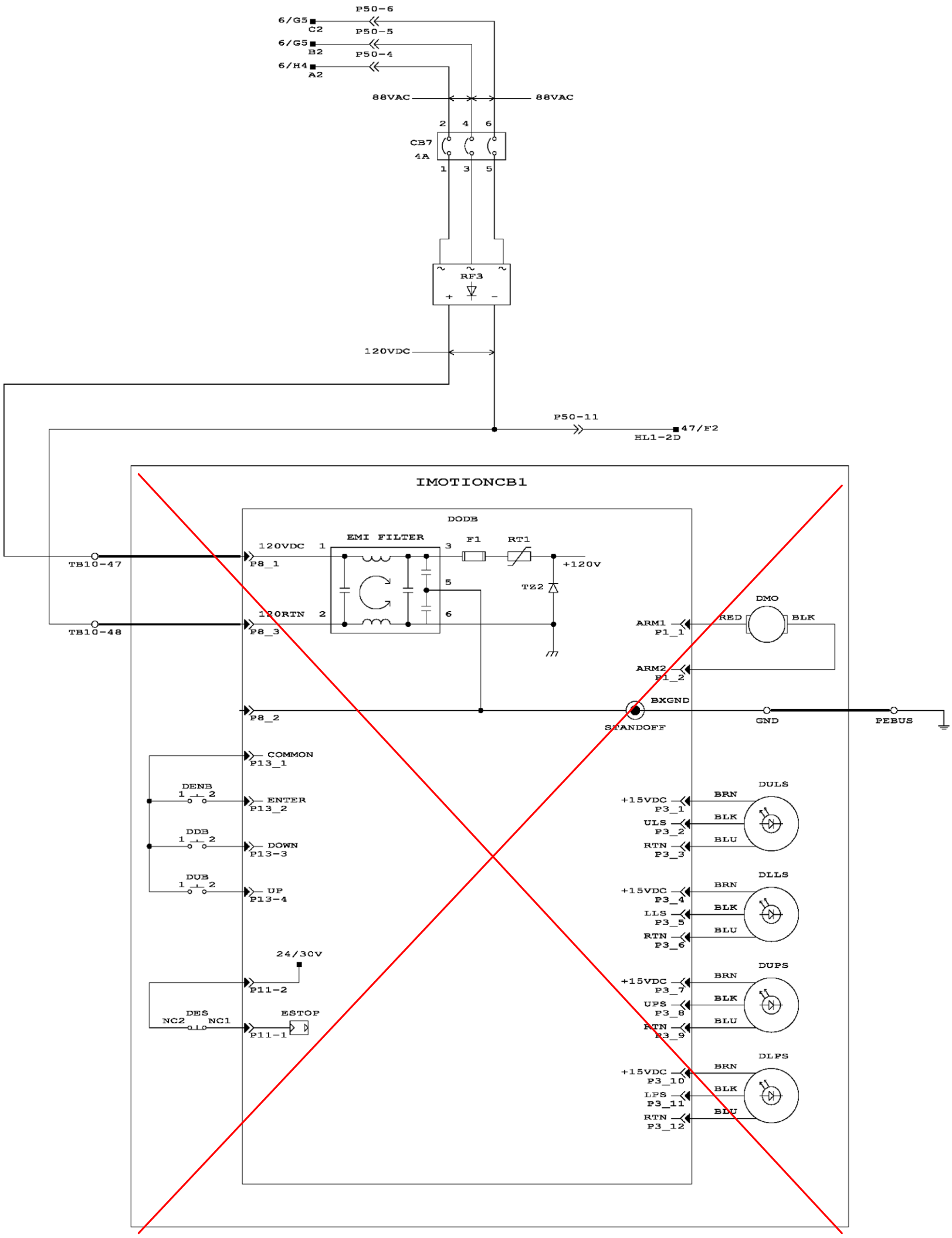


Figure 109: Area 21 of W/D AEA21255X – Existing door operator removed.

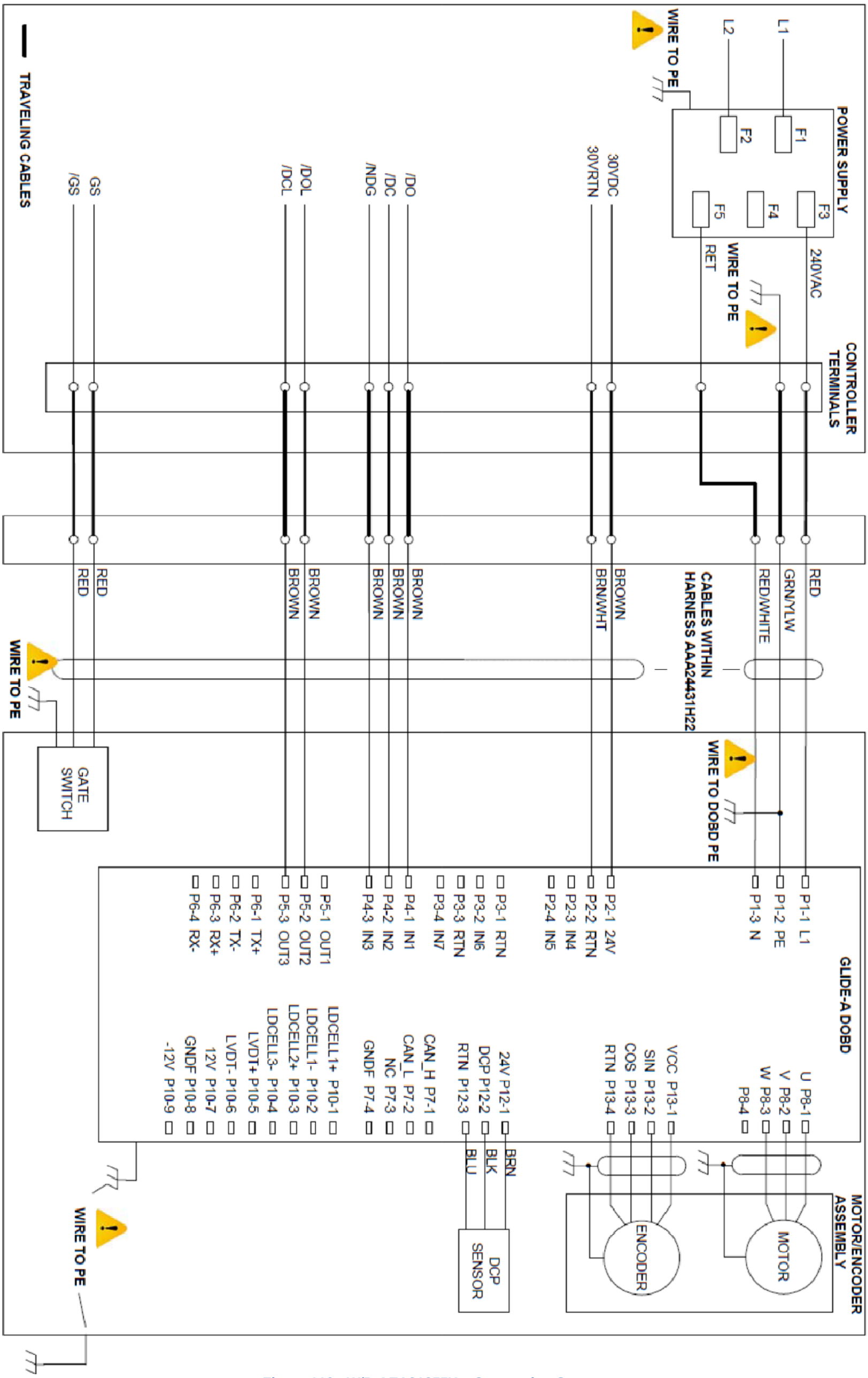


Figure 110: W/D AEA21255X – Connection Summary

8.17 NSAA Multidrop Installation on Gen2 NGGC Controller with AT400 Door Operator (W/D ADC21310AB)

The following wiring diagram depicts installation of the Otis Glide A door operator on an MLB3 based Gen2 controller with existing multidrop AT400 door operator. The following areas are affected:

- **Area 1:** Addition of Glide power supply.
- **Area 2:** Removal of existing AT400 power connection.
- **Area 6:** Replacement of existing gate switch with Glide A gate switch.
- **Area 13:** Remove AT400.
- **Area 14:** Door Operator Connections, Lambda and Load Weighing connections for the Glide A.

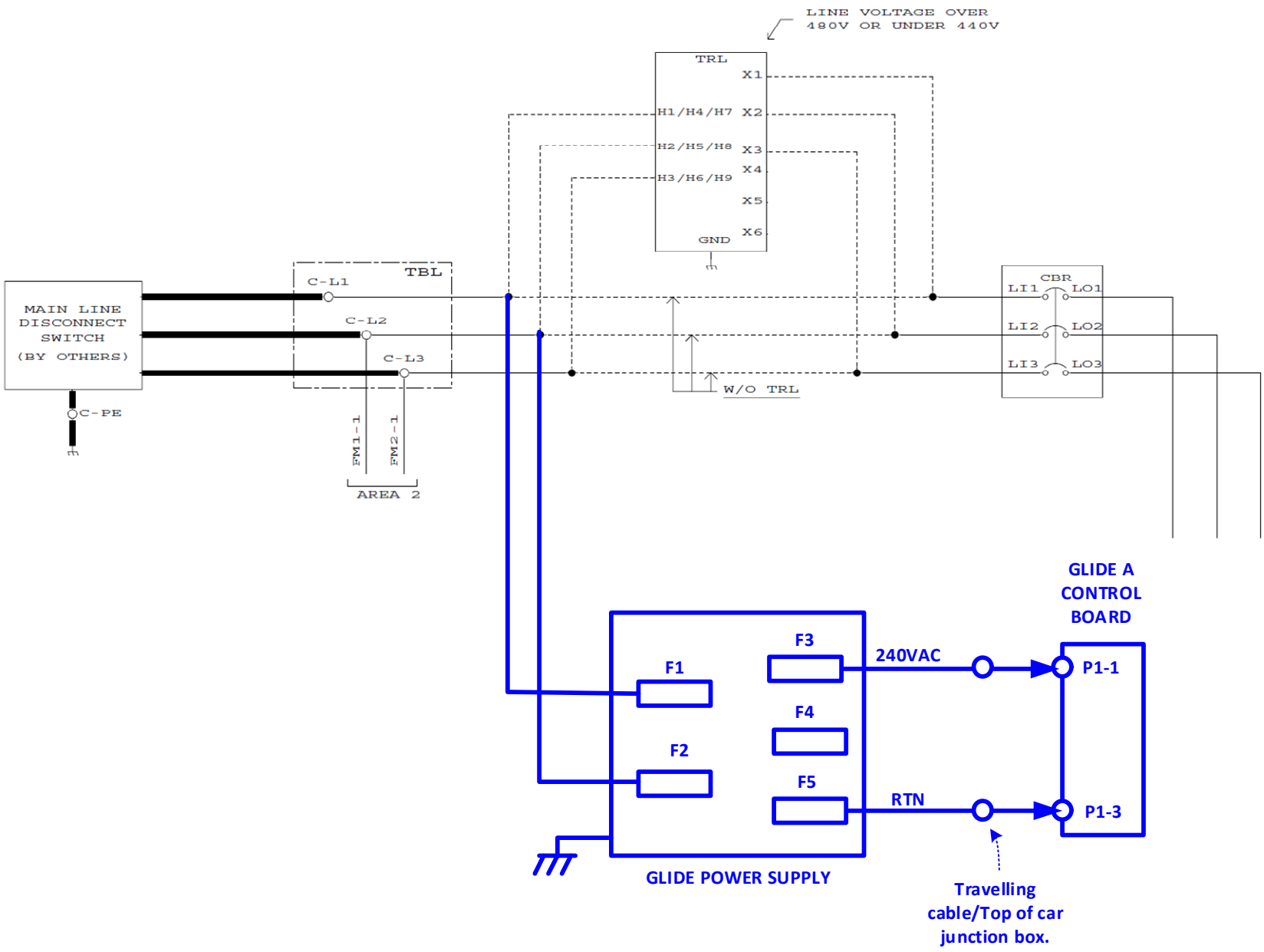


Figure 111: Area 1 of W/D ADC21310AB – Glide Power Supply Added

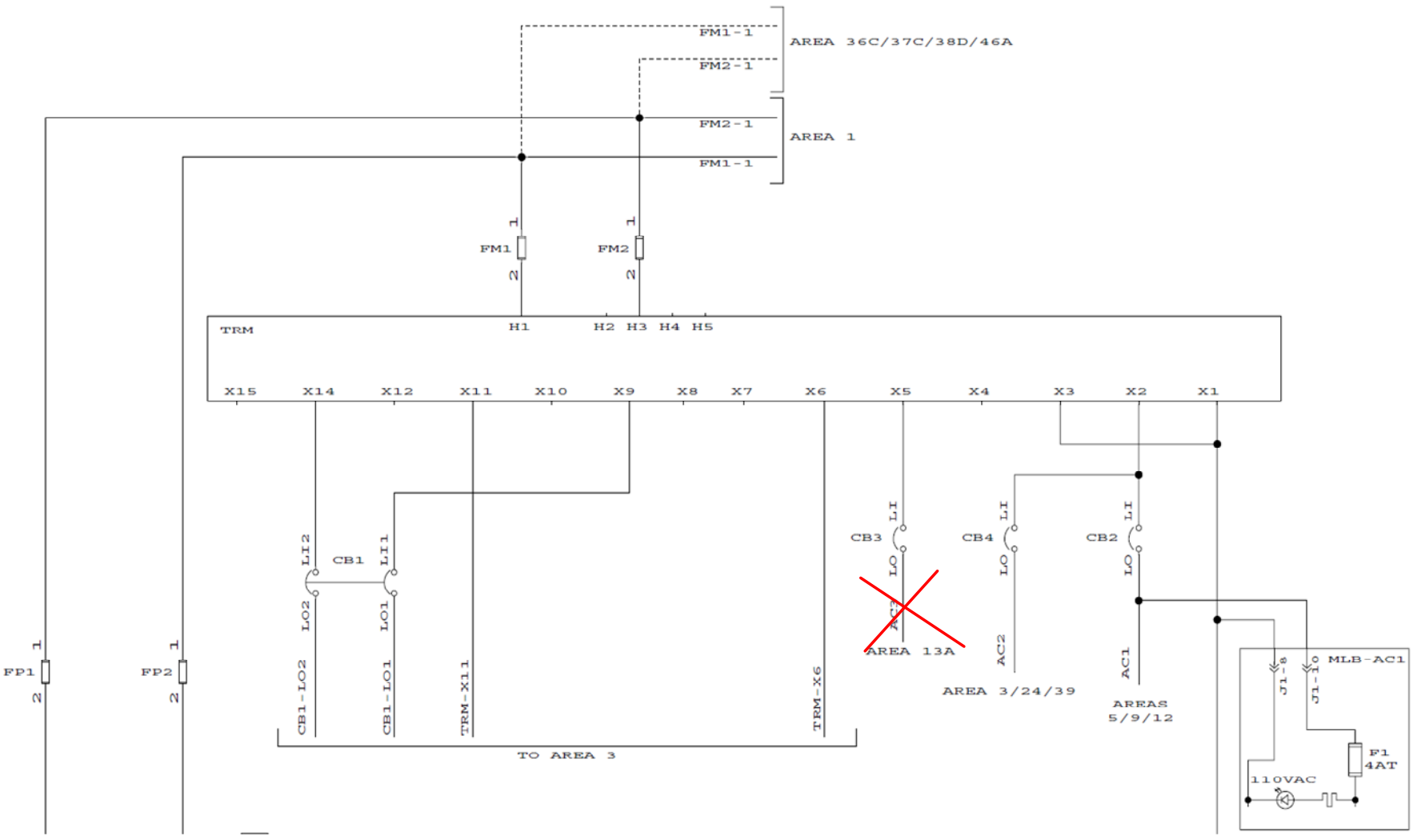


Figure 112: Area 2 of W/D ADC21310AB – Existing Door Power Supply Connection Removed

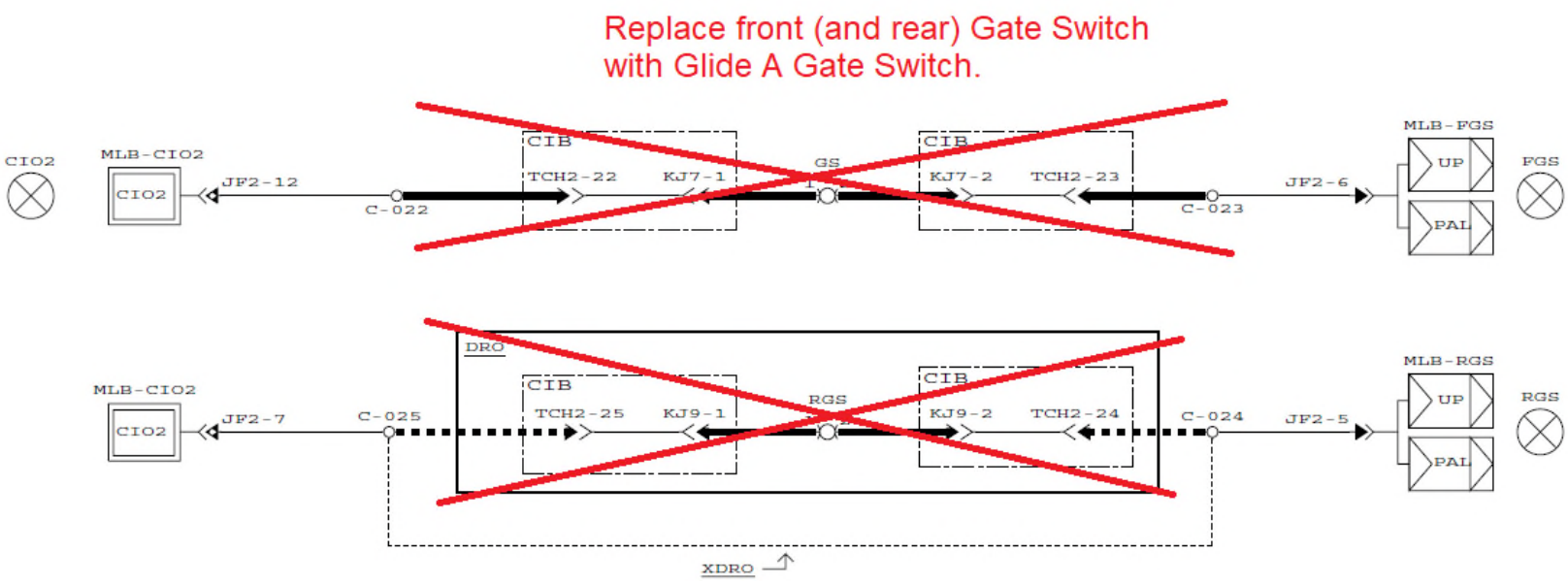
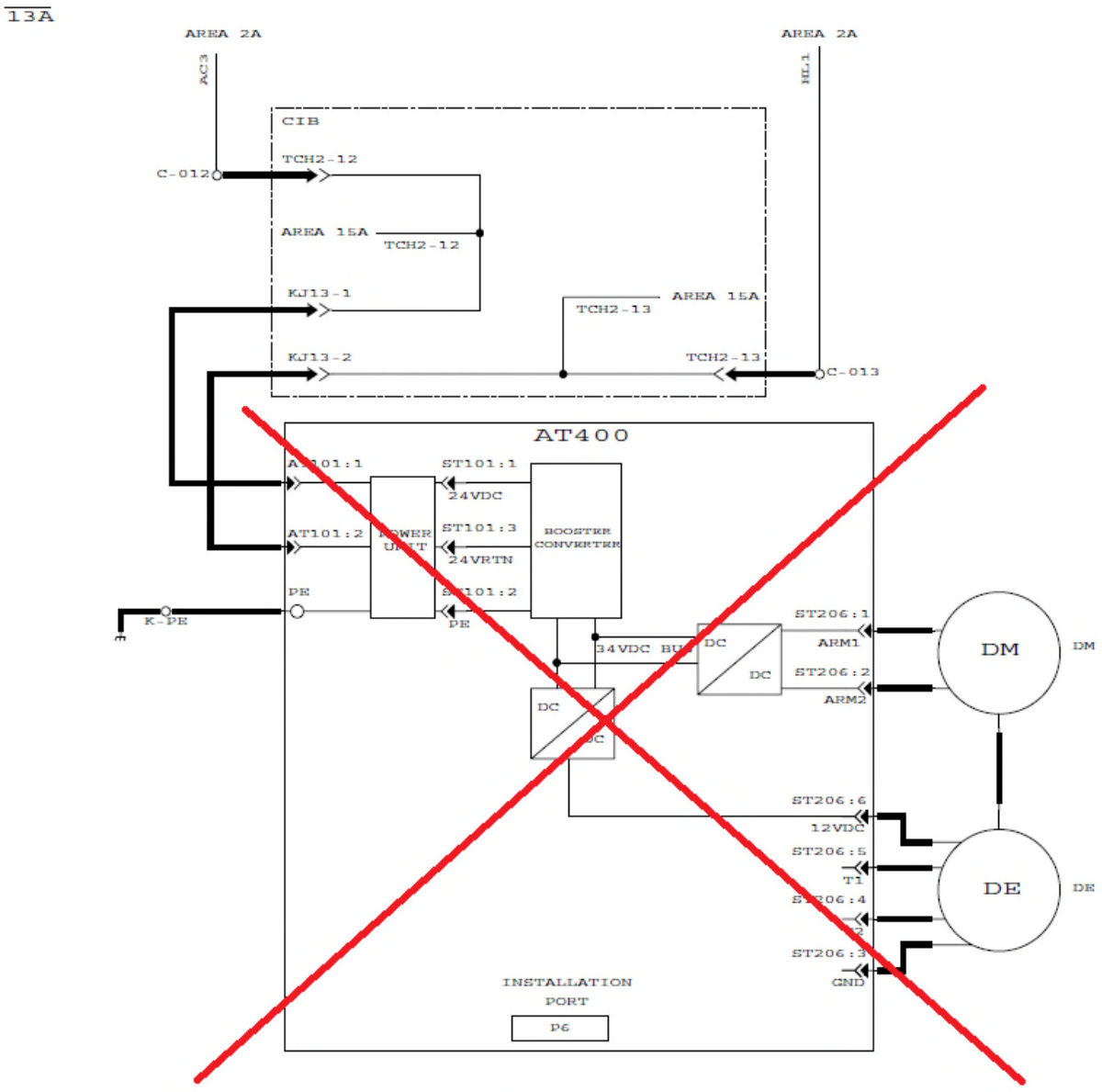


Figure 113: Area 6 of W/D ADC21310AB - Replace Existing Gate Switch with Glide A Gate Switch.



AT400 removed.

Figure 114: Area 13 of W/D ADC21310AB – AT400 removed.

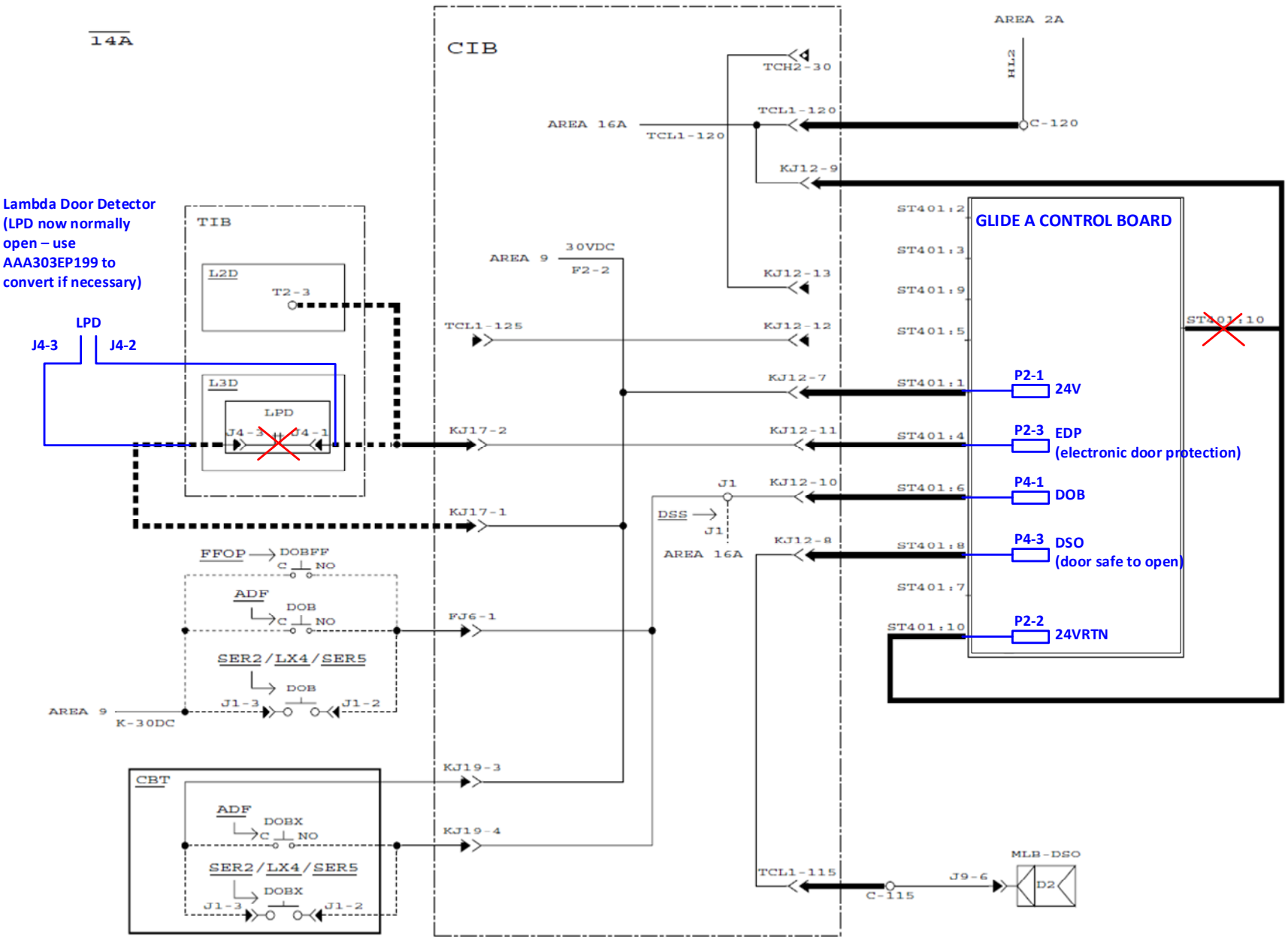


Figure 115: Top of Area 14 of W/D ADC21310AB - Door Operator Signals.

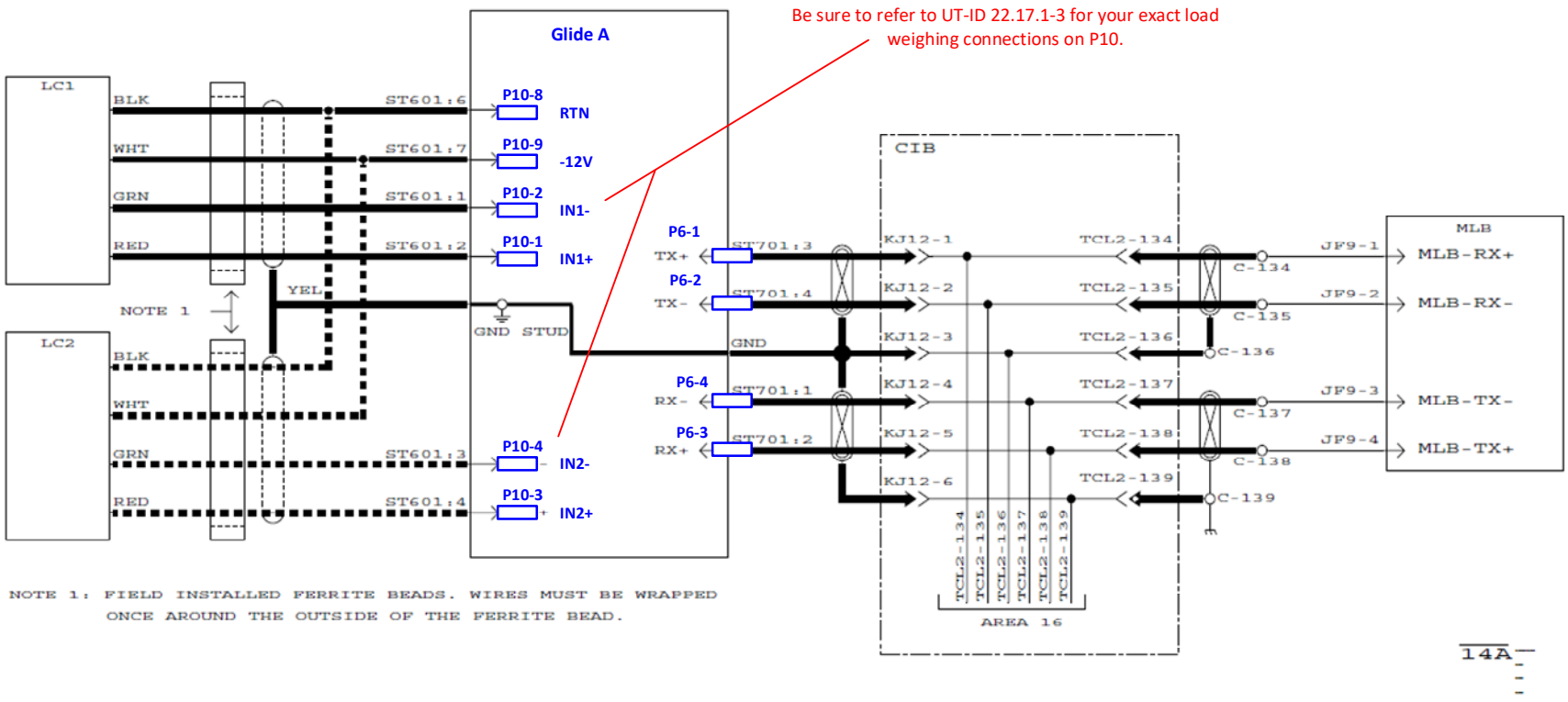


Figure 116: Bottom of Area 14 of W/D ADC21310AB – Serial, Multi-drop wiring.