REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14

DRAWING INDEX

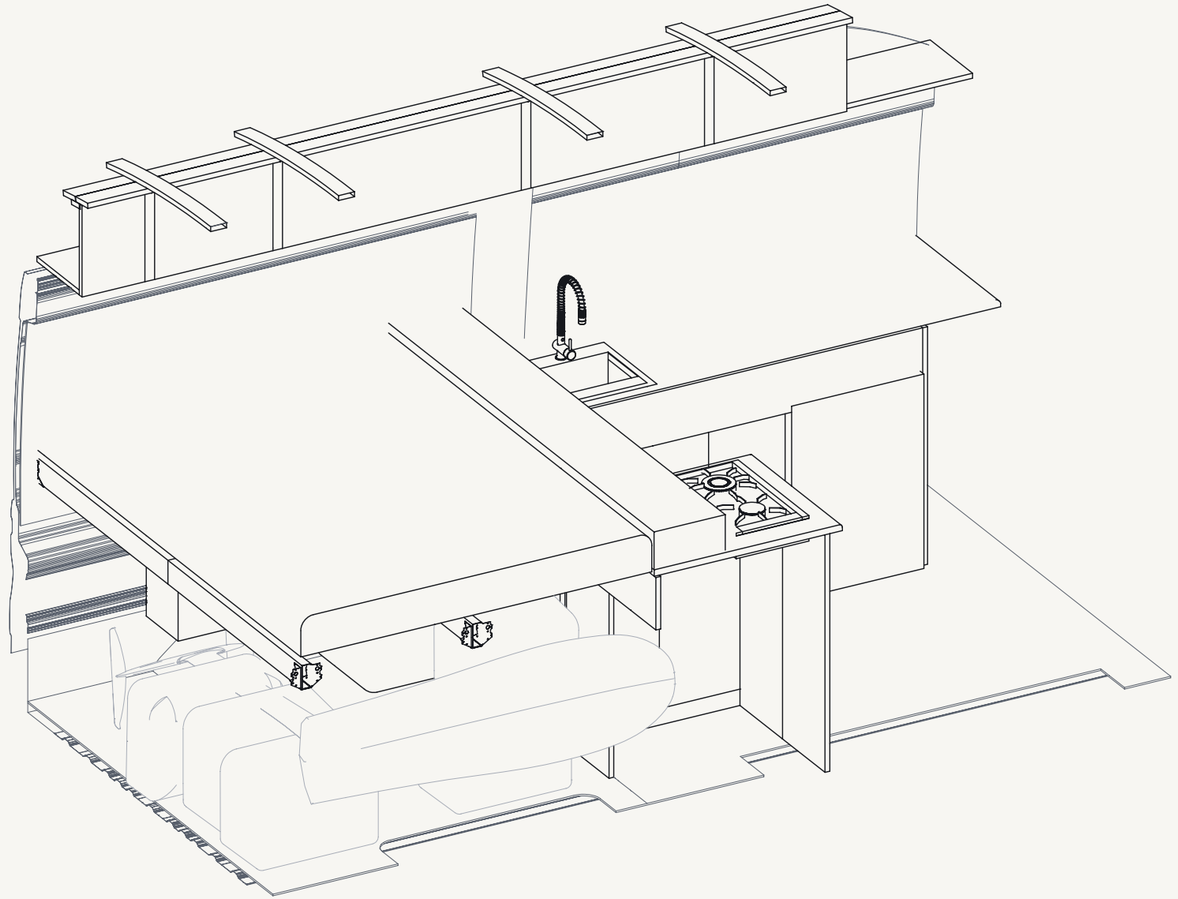
DWG NO.	TITLE	SCALE	SHEETS
VAN-001	COVER SHEET, DRAWING INDEX, GENERAL NOTES	NONE	1
VAN-002	FLOOR PLAN, WITH THE SCHEDULE	1:15	1
VAN-003	INTERIOR ELEVATION, DRIVER SIDE	1:15	1
VAN-004	INTERIOR ELEVATION, PASSENGER SIDE	1:15	1
VAN-005	CROSS-SECTIONS: A-A GALLEY AND BATTERY BAY, B-B BED	1:15	1
VAN-006	BATTERY BAY AND ELECTRICAL CABINET	1:10	1
VAN-007	WIRING DIAGRAM, 12 V HOUSE SYSTEM; WIRE AND FUSE LISTS	NONE	2
MFB-002	MAXXFAN WIRING DIAGRAM (ITS OWN SET, REFERENCED)	NONE	1

THE VAN

ITEM	
VEHICLE	2019 FORD TRANSIT T-250, 148 IN WHEELBASE, HIGH ROOF
CARGO FLOOR	3578 × 1758, CAB END TO REAR DOORS (MODEL)
HEADROOM	1996 FLOOR TO CEILING ON THE CENTERLINE (MODEL)
WHEEL WELLS	1400 APART (MODEL); FORD: 54.8 IN (1392)
LAYOUT	DRIVER-SIDE GALLEY, STOVE BY THE SLIDING DOOR, BED OVER A GARAGE
POWER	520 W SOLAR, 200 AH LIFEPO4, 12 V (VAN-007)
WATER	25 US GAL TANK ON THE DRIVER WHEEL WELL

TERMS ON THESE DRAWINGS

TERM	MEANING
TBD	NOT DECIDED OR NOT KNOWN YET: AN ANSWER IS NEEDED
VERIFY	TAKEN FROM A SOURCE OR INFERRED: CHECK IN THE VAN
PROPOSED	A STUDY, NOT BUILT (RED)
2019	FROM THE JULY 2019 WIRING PLAN
AFF	ABOVE THE FINISHED FLOOR (MODEL Z 109)
CL	CENTERLINE OF THE VAN (MODEL Y 0)



THE INTERIOR FROM THE REAR PASSENGER SIDE, PASSENGER WALL AND ROOF REMOVED

AXONOMETRIC VIEW FROM THE RHINO MODEL (LAYOUT F), NOT TO SCALE · STORED GEAR IN LIGHT LINE

GENERAL NOTES

1. THE CONSTRUCTION DRAWINGS (VAN-002 TO VAN-006) ARE PROJECTED FROM CODY'S RHINO LAYOUT MODEL, LAYOUT F (AUGUST 2022), WITH RHINO'S HIDDEN-LINE (MAKE2D) ENGINE. WHETHER THE VAN WAS BUILT EXACTLY TO LAYOUT F IS NOT CONFIRMED: VERIFY EVERY DIMENSION IN THE VAN BEFORE CUTTING ANYTHING.
2. DIMENSIONS IN MILLIMETERS, ROUNDED FROM THE MODEL. HEIGHTS FROM THE FINISHED FLOOR. MODEL FRAME: X 0 AT THE REAR DOORS, CAB TOWARD −X; Y 0 ON THE CENTERLINE, DRIVER SIDE −Y.
3. THE MODEL'S CAB IS A STAND-IN, NOT A TRANSIT CAB, SO NO SHEET DRAWS IT.
4. THE WIRING DIAGRAM (VAN-007) COMBINES WHAT IS INSTALLED NOW (THE POWER PAGE, THE VAN HUB README) WITH THE RATINGS AND GAUGES OF THE JULY 2019 WIRING PLAN. ITS SHEET 2 LISTS EVERY OPEN ITEM.
5. THE SECOND BATTERY (VAN-006 E8, VAN-007 BT1B) IS THE NOVEMBER 2026 STUDY: PROPOSED, NOT BUILT.
6. THE MAXXFAN'S BRUSHLESS RETROFIT HAS ITS OWN DRAWINGS (MFB-002, MFB-004).

DIMENSIONS IN MILLIMETERS

VAN BUILD · 2019 FORD TRANSIT 148 HR

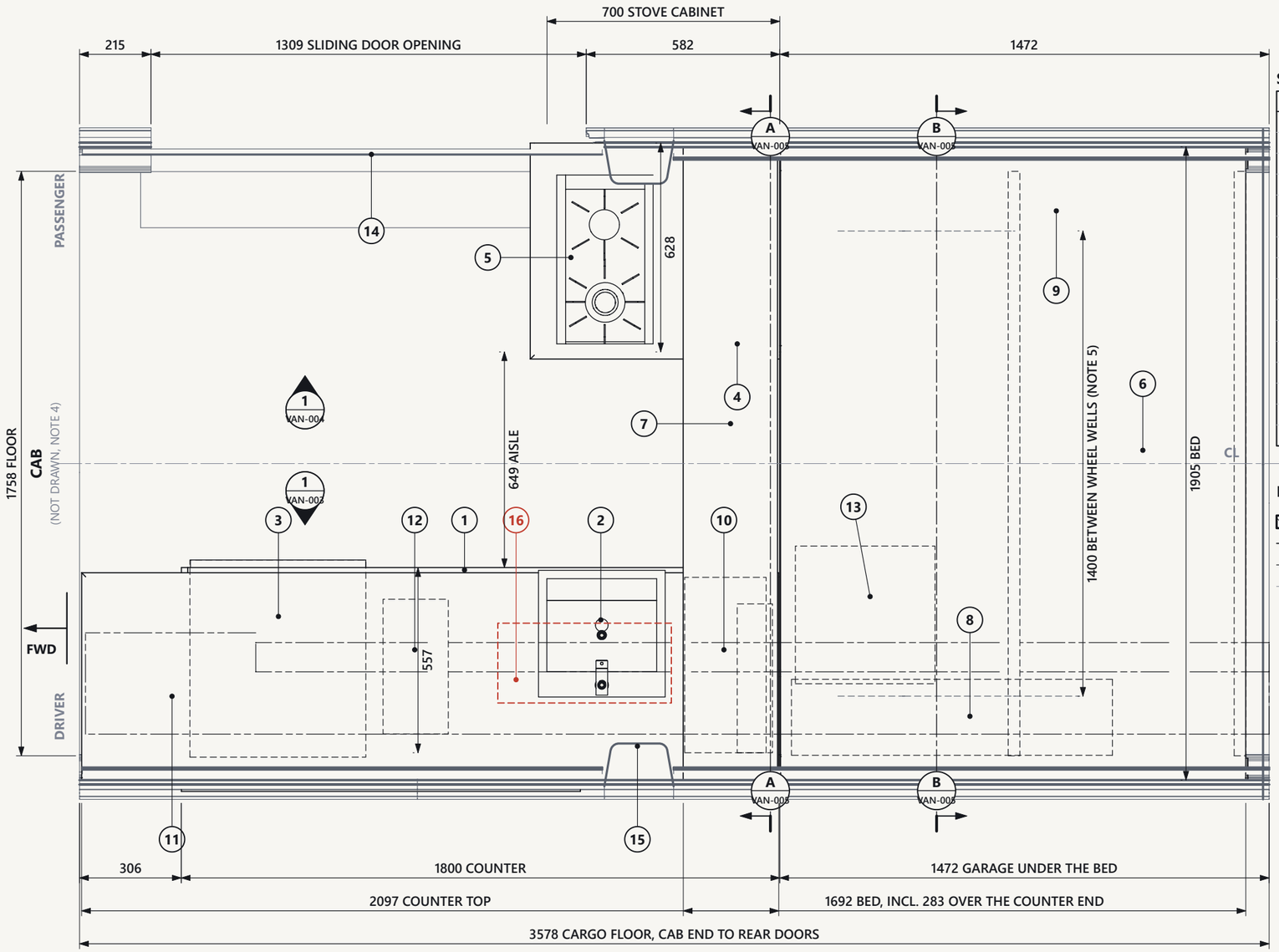
CODY STANSKY · FROM THE RHINO LAYOUT MODEL, LAYOUT F (AUG 2022)

TITLE

COVER SHEET
DRAWING INDEX, GENERAL NOTES

SIZE	DWG NO.	REV
B	**VAN-001**	**A**
SCALE NONE	**DATE 2026-11-14**	**SHEET 1 OF 1**

REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14



FLOOR PLAN SCALE 1:15

CUT 1191 ABOVE THE FLOOR, LOOKING DOWN · UNDER THE COUNTER AND BED DASHED · OVERHEAD SHELF PHANTOM · PROPOSED SECOND BATTERY IN RED

SCHEDULE: JOINERY, APPLIANCES, EQUIPMENT

TAG	ITEM	L × D × H, MM (MODEL)	NOTE
1	COUNTER, DRIVER SIDE: 4 DOORS, TOE KICK	1800 × 557 × 920	TOP 945 AFF
2	SINK, IN THE COUNTER TOP	381 × 381 × 229	FAUCET ABOVE
3	FRIDGE, FRONT-OPENING (MAKE TBD)	529 × 593 × 753	UNDER THE TOP
4	STOVE CABINET, PASSENGER SIDE	700 × 628 × 920	TOP 945 AFF
5	COOKTOP, 2 BURNER	290 × 508	IN THE TOP
6	BED PLATFORM, WALL TO WALL	1400 × 1905 × 153	TOP 1085 AFF
7	BED OVER THE COUNTER END	283 × 1905	VERIFY
8	WATER TANK, ON THE WHEEL WELL	966 × 228 × 508	25 US GAL
9	WHEEL WELL (BODY), BOTH SIDES	869 × 179 × 219	OEM
10	BATTERY BAY AND ELECTRICAL CABINET	SEE VAN-006	
11	OVERHEAD SHELF, DRIVER SIDE	3560 × 324 × 354	1731 AFF
12	OPEN BIN BESIDE THE FRIDGE	196 × 405 × 569	VERIFY USE
13	LOOSE BOX AT THE GARAGE FRONT	420 × 414 × 365	VERIFY
14	SLIDING DOOR (OEM)	1309 OPENING	OEM
15	BODY PILLAR, BOTH SIDES	209 WIDE	OEM
16	SECOND BATTERY, PROPOSED	522 × 240 × 219	STUDY ONLY

LEGEND

- CUT JOINERY (PLYWOOD)
- VISIBLE: BUILD
- HIDDEN
- CENTERLINE
- CUT VAN BODY / LINING
- VISIBLE: VAN BODY (OEM)
- ABOVE THE CUT (PHANTOM)
- PROPOSED, NOT BUILT

NOTES

1. DRAWN FROM THE RHINO LAYOUT MODEL (LAYOUT F, AUG 2022). WHETHER THE VAN WAS BUILT EXACTLY TO IT IS NOT CONFIRMED: VERIFY EVERY DIMENSION IN THE VAN BEFORE CUTTING ANYTHING.
2. DIMENSIONS IN MM, ROUNDED FROM THE MODEL. SIZES IN THE SCHEDULE ARE MODEL ENVELOPES (L FORE-AFT, D ACROSS THE VAN). HEIGHTS (AFF) FROM THE FINISHED FLOOR, MODEL Z 109.
3. MODEL FRAME: X 0 AT THE REAR DOORS, Y 0 ON THE CENTERLINE (CL), DRIVER SIDE NEGATIVE.
4. CAB NOT DRAWN: THE MODEL'S CAB IS A STAND-IN, NOT A TRANSIT CAB.
5. FORD PUBLISHES 54.8 IN (1392) BETWEEN THE WHEEL WELLS FOR THE 148 HR; THE MODEL HAS 1400.
6. WATER TANK SIZE IS THE MODEL ENVELOPE (112 L); THE VAN HUB IS SET UP FOR 25 US GAL (95 L). VERIFY.
7. TAG 16 IS THE SECOND-BATTERY STUDY (2026-11), NOT BUILT. SEE VAN-006.

DIMENSIONS IN MILLIMETERS

VAN BUILD · 2019 FORD TRANSIT 148 HR

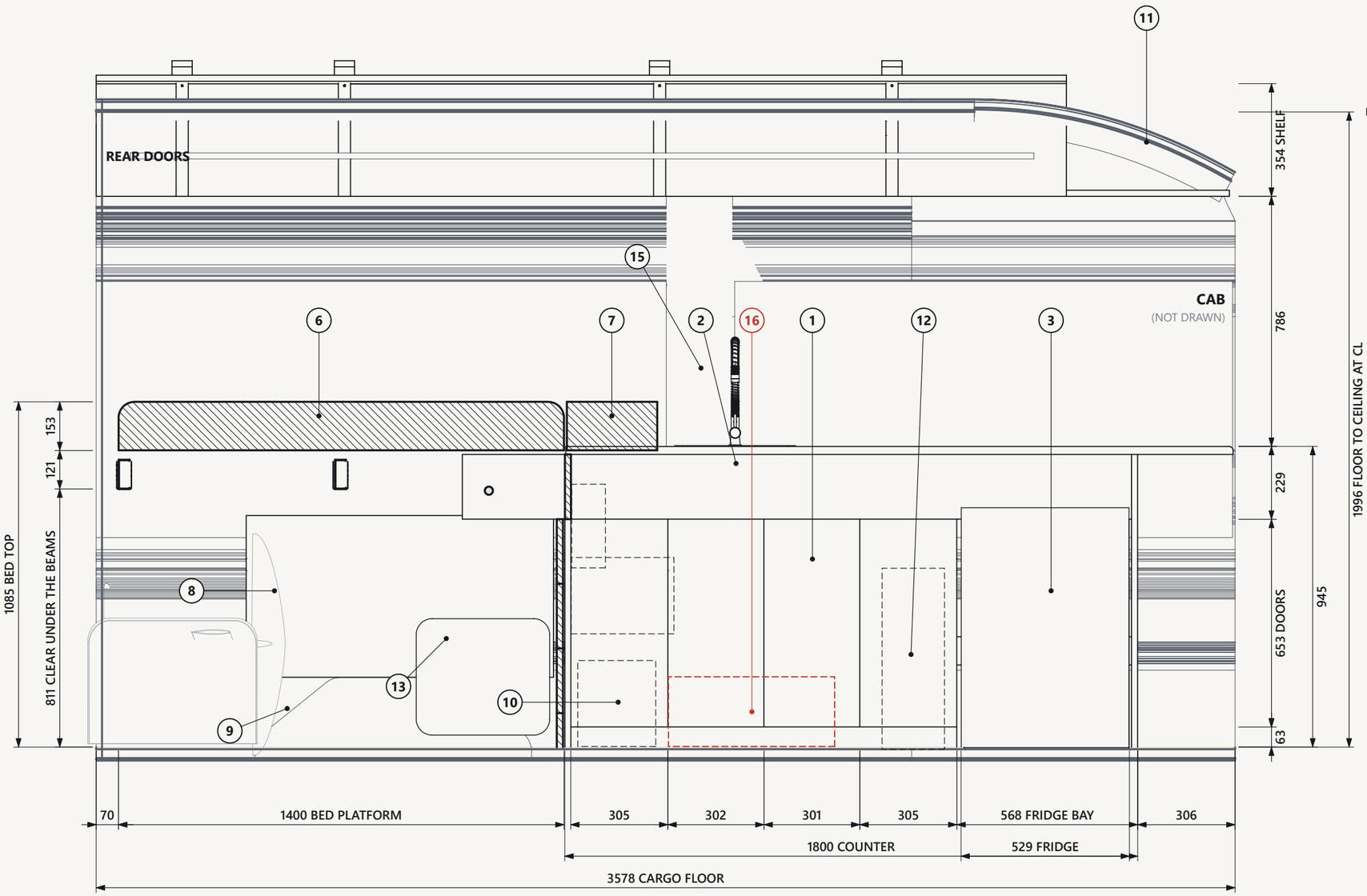
CODY STANSKY · FROM THE RHINO LAYOUT MODEL, LAYOUT F (AUG 2022)

TITLE

FLOOR PLAN

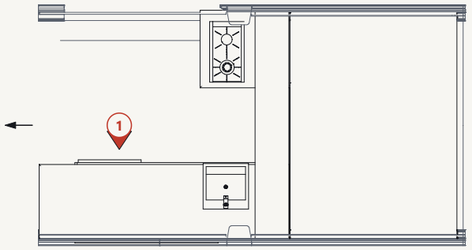
SIZE	DWG NO.	REV
B	VAN-002	A
SCALE 1:15	DATE 2026-11-14	SHEET 1 OF 1

REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14



INTERIOR ELEVATION, DRIVER SIDE SCALE 1:15

SECTION ON THE CENTERLINE LOOKING AT THE DRIVER SIDE · CAB TO THE RIGHT · BED, FLOOR AND ROOF CUT



KEY PLAN 1:50

TAGS

TAG	ITEM (SCHEDULE ON VAN-002)
1	COUNTER, DRIVER SIDE
2	SINK
3	FRIDGE (MAKE TBD)
6	BED PLATFORM
7	BED OVER THE COUNTER END
8	WATER TANK
9	WHEEL WELL
10	BATTERY BAY, ELECTRICAL CABINET: VAN-006
11	OVERHEAD SHELF
12	OPEN BIN
13	LOOSE BOX
15	BODY PILLAR
16	SECOND BATTERY, PROPOSED

LEGEND

- CUT JOINERY (PLYWOOD)
- CUT VAN BODY / LINING
- VISIBLE: BUILD
- VISIBLE: VAN BODY (OEM)
- HIDDEN
- PROPOSED, NOT BUILT

NOTES

1. SECTION ON THE CENTERLINE (MODEL Y +20) LOOKING AT THE DRIVER SIDE; THE PASSENGER SIDE IS REMOVED.
2. HEIGHTS FROM THE FINISHED FLOOR (MODEL Z 109). ALL SIZES FROM THE MODEL: VERIFY IN THE VAN (VAN-002 NOTE 1).
3. BEHIND THE DOORS, DASHED: BIN (12), BATTERY AND INVERTER (10), PROPOSED SECOND BATTERY (16, RED).
4. THE OVERHEAD SHELF HANGS FROM FOUR ROOF BRACKETS. THE FOIL IN THE GARAGE IS STORED GEAR, IN LIGHT LINE.

DIMENSIONS IN MILLIMETERS

VAN BUILD · 2019 FORD TRANSIT 148 HR

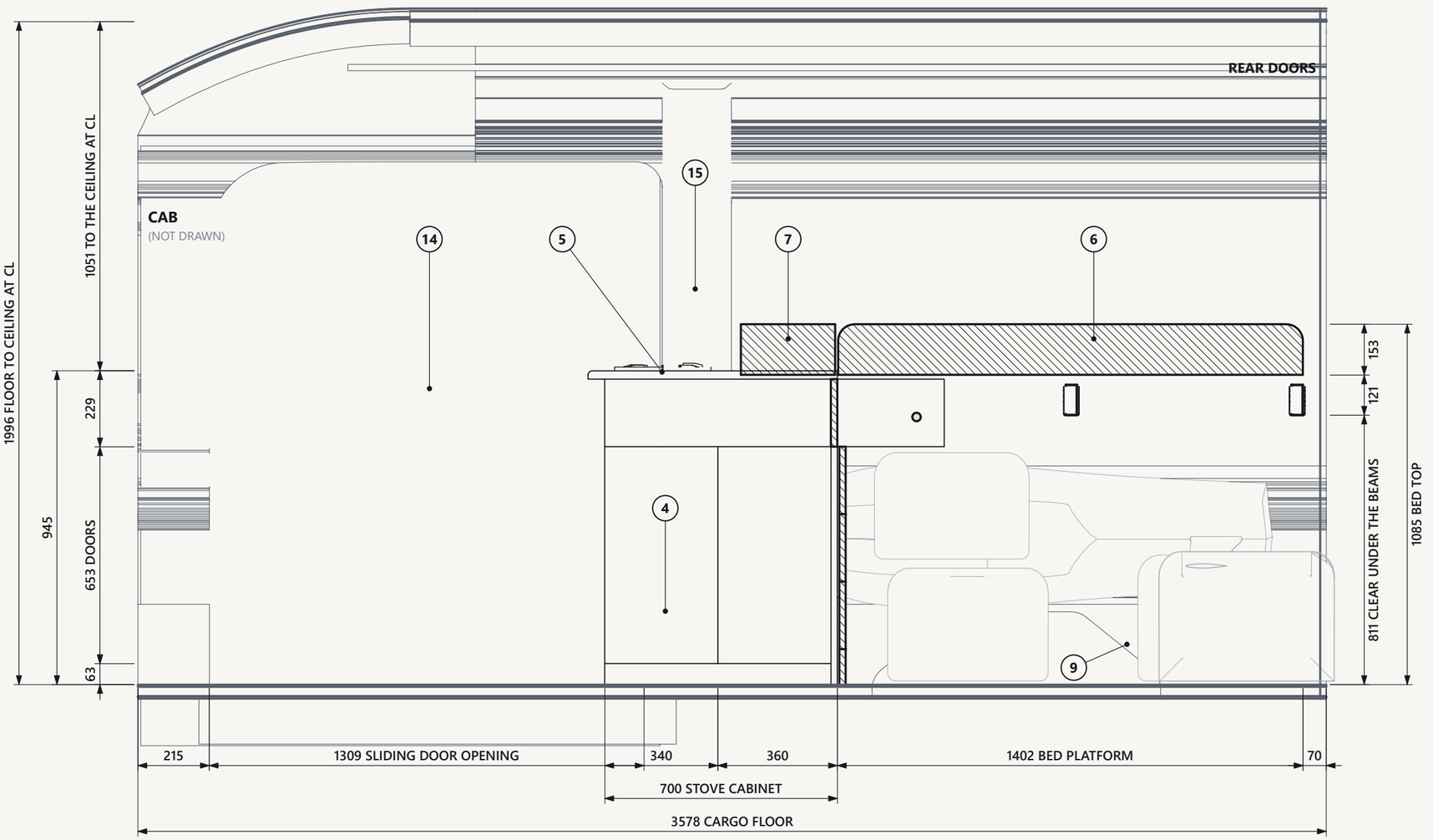
CODY STANSKY · FROM THE RHINO LAYOUT MODEL, LAYOUT F (AUG 2022)

TITLE

INTERIOR ELEVATION
DRIVER SIDE

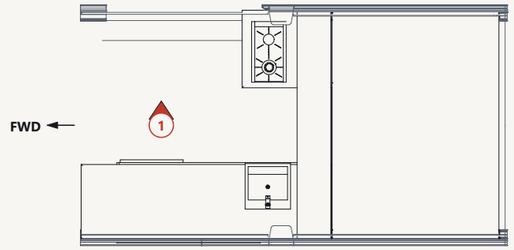
SIZE	DWG NO.	REV
B	VAN-003	A
SCALE 1:15	DATE 2026-11-14	SHEET 1 OF 1

REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14



INTERIOR ELEVATION, PASSENGER SIDE SCALE 1:15

SECTION ON THE CENTERLINE LOOKING AT THE PASSENGER SIDE · CAB TO THE LEFT · BED, FLOOR AND ROOF CUT



KEY PLAN 1:50

TAGS

TAG	ITEM (SCHEDULE ON VAN-002)
4	STOVE CABINET, 2 DOORS
5	COOKTOP, 2 BURNER
6	BED PLATFORM
7	BED OVER THE COUNTER END
9	WHEEL WELL
14	SLIDING DOOR (OEM)
15	BODY PILLAR

LEGEND

- CUT JOINERY (PLYWOOD)
- CUT VAN BODY / LINING
- VISIBLE: BUILD
- VISIBLE: VAN BODY (OEM)
- HIDDEN

NOTES

1. SECTION ON THE CENTERLINE (MODEL Y -20) LOOKING AT THE PASSENGER SIDE; THE DRIVER SIDE IS REMOVED.
2. HEIGHTS FROM THE FINISHED FLOOR (MODEL Z 109). ALL SIZES FROM THE MODEL: VERIFY IN THE VAN (VAN-002 NOTE 1).
3. STORED GEAR UNDER THE BED (KITES, FOILBOARD) IN LIGHT LINE, FOR REFERENCE.
4. THE SLIDING DOOR IS SHOWN CLOSED.

DIMENSIONS IN MILLIMETERS

VAN BUILD · 2019 FORD TRANSIT 148 HR

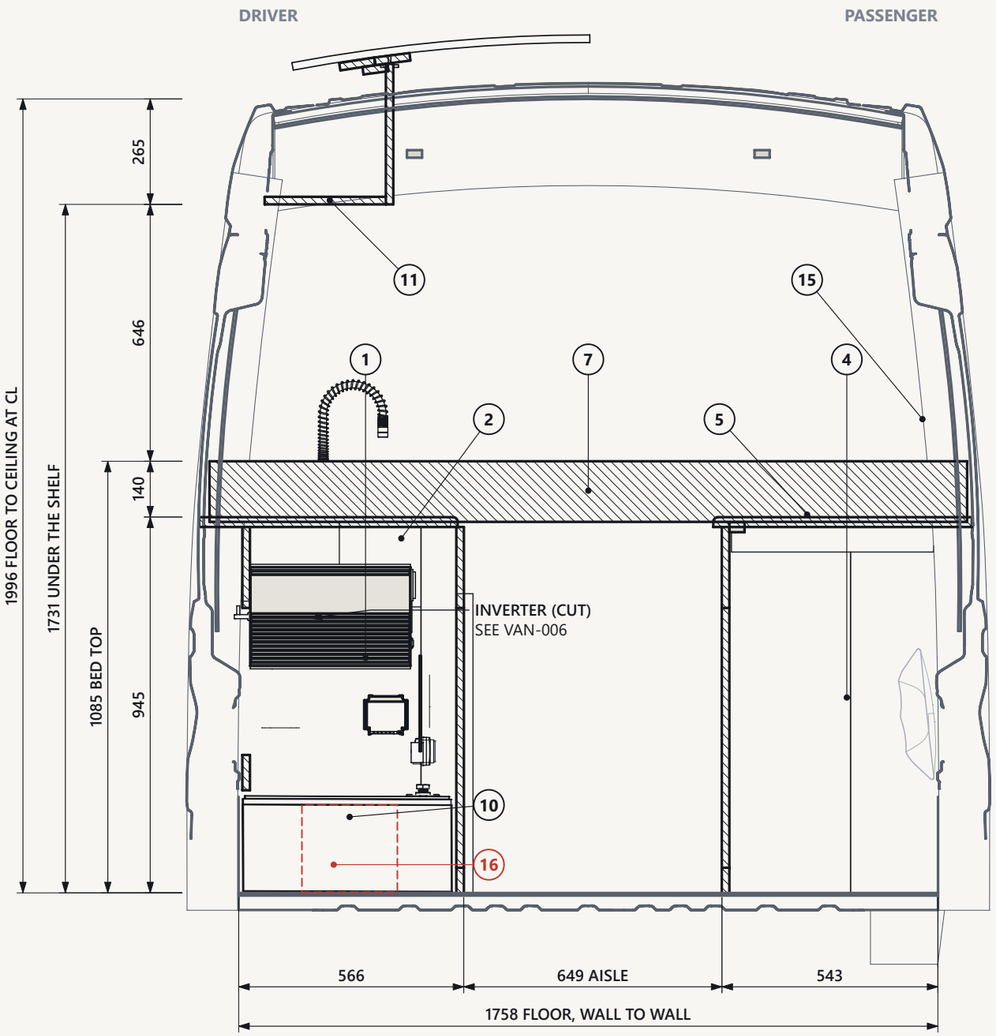
CODY STANSKY · FROM THE RHINO LAYOUT MODEL, LAYOUT F (AUG 2022)

TITLE

INTERIOR ELEVATION
PASSENGER SIDE

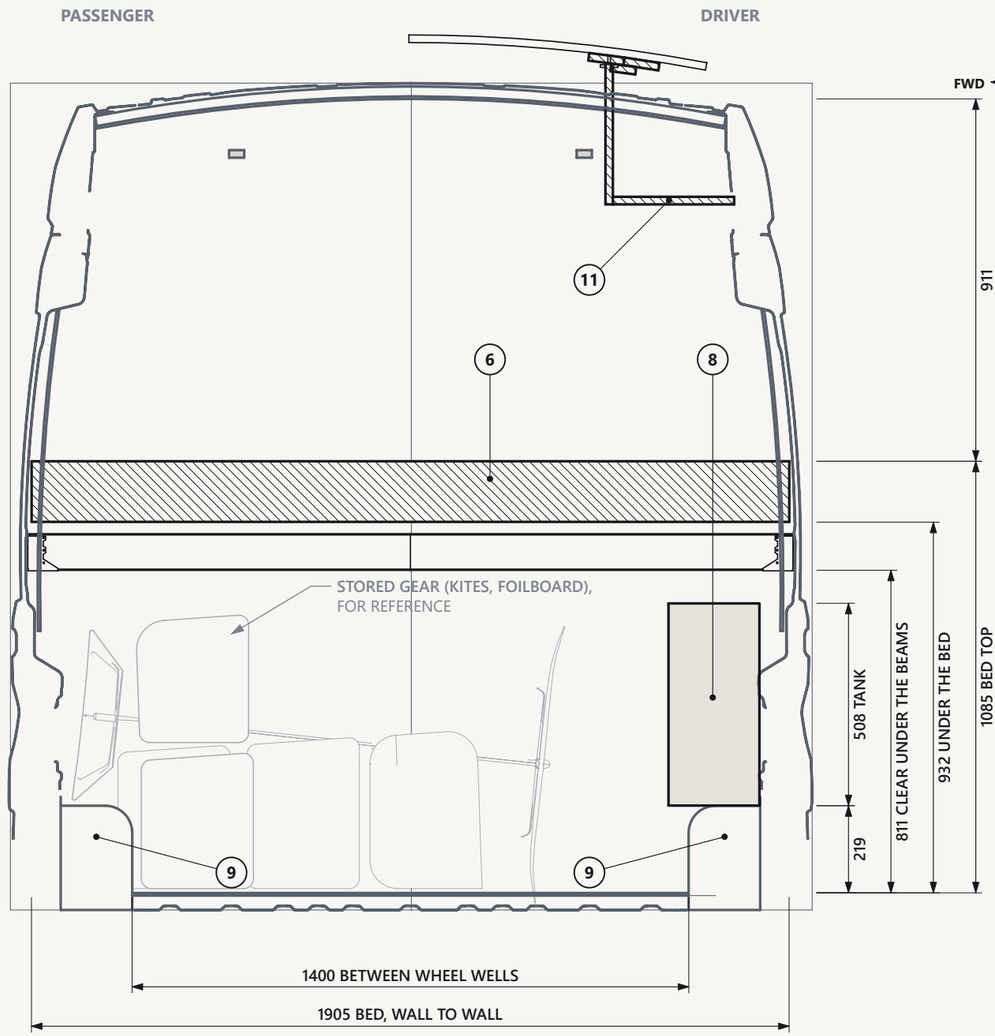
SIZE	DWG NO.	REV
B	VAN-004	A
SCALE 1:15	DATE 2026-11-14	SHEET 1 OF 1

REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14



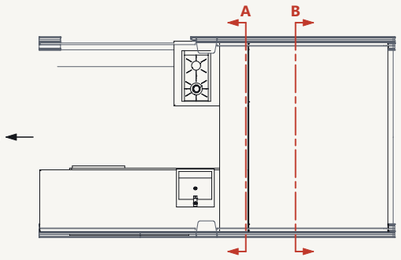
SECTION A-A SCALE 1:15

MODEL X -1500, LOOKING FORWARD · DRIVER LEFT, PASSENGER RIGHT



SECTION B-B SCALE 1:15

MODEL X -1000, LOOKING AFT · PASSENGER LEFT, DRIVER RIGHT



KEY PLAN 1:60

TAGS

TAG	ITEM (VAN-002)
1	COUNTER, DRIVER SIDE
2	SINK, BEYOND
4	STOVE CABINET
5	COOKTOP, BEYOND
6	BED PLATFORM
7	BED OVER THE COUNTER END
8	WATER TANK
9	WHEEL WELLS
10	BATTERY BAY: VAN-006
11	OVERHEAD SHELF
15	BODY PILLAR, BEYOND
16	SECOND BATTERY, PROPOSED

LEGEND

- CUT JOINERY (PLYWOOD)
- CUT VAN BODY / LINING
- VISIBLE: BUILD
- VISIBLE: VAN BODY (OEM)
- HIDDEN
- PROPOSED, NOT BUILT

NOTES

1. SIZES FROM THE MODEL; VERIFY IN THE VAN (VAN-002 NOTE 1). HEIGHTS FROM THE FINISHED FLOOR (MODEL Z 109).
2. A-A CUTS THE INVERTER ON THE COUNTER'S END PANEL AND LOOKS INTO THE BATTERY BAY.
3. THE BODY SECTION (WALLS, ROOF, LINING) IS THE MODEL'S, NOT FORD'S DATA.

DIMENSIONS IN MILLIMETERS

VAN BUILD · 2019 FORD TRANSIT 148 HR

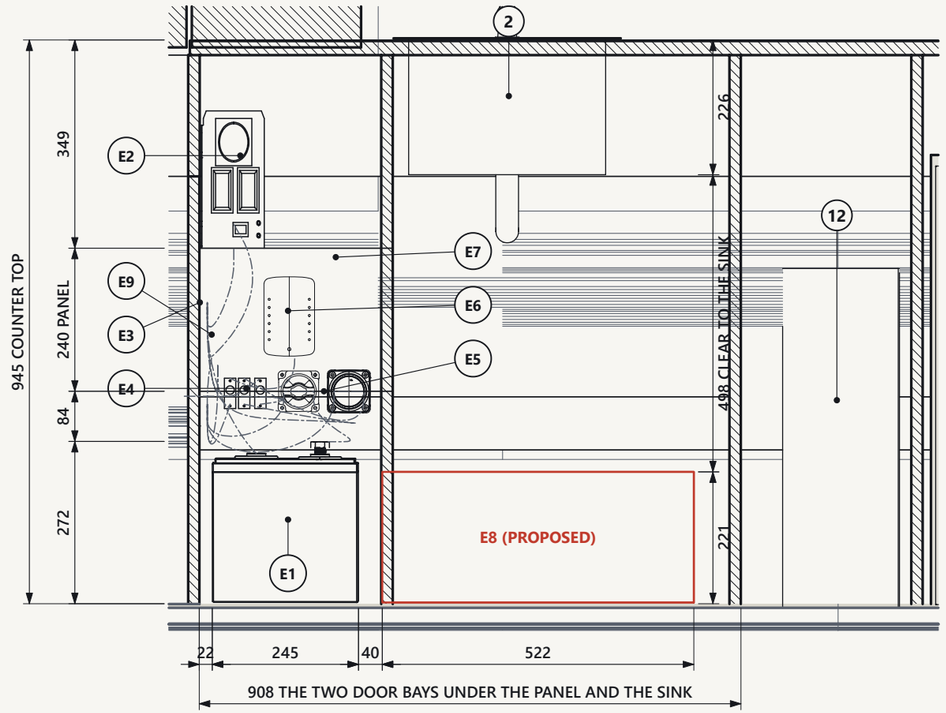
CODY STANSKY · FROM THE RHINO LAYOUT MODEL, LAYOUT F (AUG 2022)

TITLE

CROSS-SECTIONS
A-A GALLEY AND BATTERY BAY, B-B BED

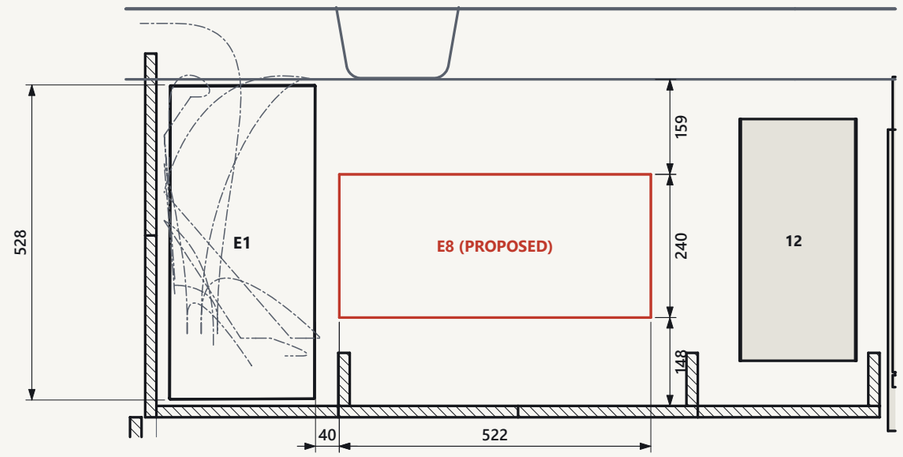
SIZE	DWG NO.	REV
B	VAN-005	A
SCALE 1:15	DATE 2026-11-14	SHEET 1 OF 1

REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14



ELEVATION C: FROM THE AISLE, COUNTER DOORS OFF SCALE 1:10

CUT BEHIND THE DOOR FACES (MODEL Y -335), LOOKING AT THE DRIVER WALL · CAB TO THE RIGHT



PLAN D: CUT 191 ABOVE THE FLOOR (MODEL Z 300) SCALE 1:10

LOOKING DOWN, TURNED TO LINE UP WITH ELEVATION C · DRIVER WALL AT THE TOP · DOOR FACES AT THE BOTTOM

BATTERY BAY EQUIPMENT (MODELLED 2022, NAMES 2026)

TAG	ITEM	SIZE, MM	STATUS
E1	HOUSE BATTERY: RENOGY RBT200LFP12-BT, 12 V 200 AH LIFEPO4	MODEL 245 × 528 × 270	VERIFY
E2	INVERTER: 2000 W IN THE MODEL, 1500 W IN THE 2019 PLAN	106 × 468 × 263	TBD
E3	BUS BARS, 2, ON THE END PANEL (POLARITY NOT IN THE MODEL)	202 × 38	VERIFY
E4	FUSE HOLDERS, 3, ON THE PANEL (RATINGS: VAN-007)	70 × 51	VERIFY
E5	DEVICE DRAWN 2D ON THE PANEL FACE, UNLABELLED	155 × 72	VERIFY
E6	DEVICE DRAWN 2D ABOVE E5, UNLABELLED	84 × 133	VERIFY
E7	ELECTRICAL PANEL, PLYWOOD, BEHIND THE LAST DOOR	323 × 240	VERIFY
E8	SECOND RBT200LFP12-BT, 27.3 KG, UPRIGHT	522 × 240 × 219	PROPOSED
E9	SMARTSOLAR MPPT 75/15 ON THE END PANEL (VAN-007 A2)	43 × 136 × 111	VERIFY

LEGEND

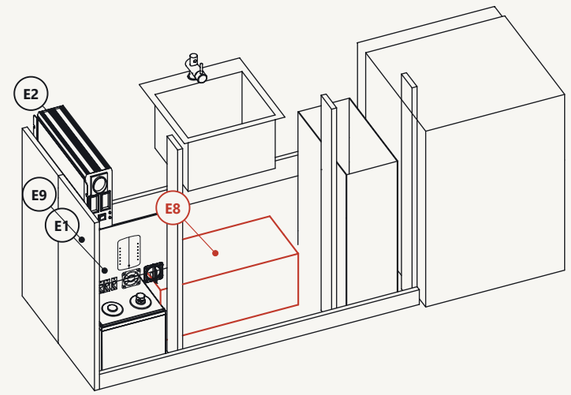
- CUT JOINERY (PLYWOOD)
- HIDDEN
- WIRE RUN AS MODELLED (2022)
- VISIBLE: BUILD
- PROPOSED, NOT BUILT
- CUT VAN BODY / LINING

NOTES

1. THE BAY IS THE REAR END OF THE DRIVER-SIDE COUNTER (VAN-002 TAG 10). EQUIPMENT POSITIONS ARE THE 2022 MODEL'S; THE 2026 NAMES (E1) ARE FROM THE VAN HUB FIRMWARE AND THE POWER PAGE. VERIFY IN THE VAN.
2. E1 IS MODELLED AS A 245 × 528 × 270 BOX WITH TWO POSTS. THE RBT200LFP12-BT IS 522 × 240 × 219 (RENOGY), SO IT STANDS WITH ITS LONG SIDE ACROSS THE VAN: VERIFY ORIENTATION AND TERMINAL HEIGHT.
3. E8, THE SECOND BATTERY, IS THE 2026-11 STUDY: UPRIGHT UNDER THE SINK, 40 FROM E1, 148 FROM THE DOOR FACES, 159 FROM THE WALL. THE STUDY QUOTED 680 CLEAR TO THE COUNTER TOP; THE SINK BASIN LEAVES 498. A PAIR OF EQUAL-LENGTH CABLES ABOUT 0.5 M LONG JOINS E1 AND E8 (VAN-007).
4. E2'S RATING IS OPEN: THE MODEL OBJECT IS NAMED 2000 W, THE 2019 WIRING PLAN SHOWS 1500 W.
5. E3 TO E6 ARE DRAWN BUT NOT NAMED IN THE MODEL. THE WIRING DIAGRAM (VAN-007) SAYS WHAT THE SYSTEM NEEDS; MATCH EACH DEVICE TO IT IN THE VAN.
6. WIRE RUNS ARE THE MODEL'S 2022 ROUTES: ONE UP TO THE ROOF (SOLAR), ONE FORWARD TO THE CAB (ALTERNATOR CHARGING), THE REST BETWEEN E1, E3, E4, E9 AND E2.

VIEW F

AXONOMETRIC FROM THE AISLE, NOT TO SCALE: COUNTER TOP, DOORS AND BED OFF



DIMENSIONS IN MILLIMETERS

VAN BUILD · 2019 FORD TRANSIT 148 HR

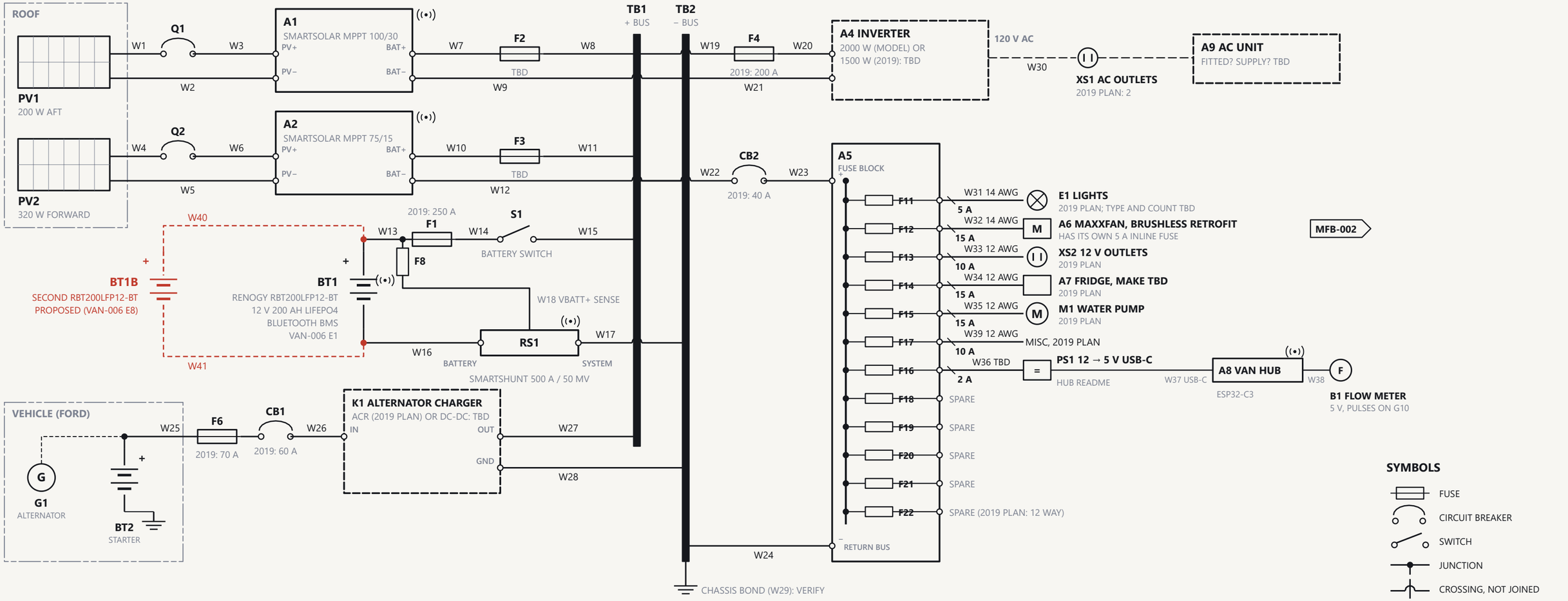
CODY STANSKY · FROM THE RHINO LAYOUT MODEL, LAYOUT F (AUG 2022)

TITLE

BATTERY BAY AND ELECTRICAL CABINET

SIZE	DWG NO.	REV
B	VAN-006	A
SCALE 1:10	DATE 2026-11-14	SHEET 1 OF 1

REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14



NOTES

1. THE VAN'S 12 V HOUSE SYSTEM AS AN INTERCONNECTION DIAGRAM, NOT TO SCALE. THE 2022 MODEL PUTS BT1, ONE MPPT, THE INVERTER, BUS BARS AND FUSES IN THE BATTERY BAY (VAN-006); OTHER LOCATIONS: VERIFY.
2. WHAT IS INSTALLED (PV1, PV2, A1, A2, BT1, RS1, A8, B1) IS FROM THE POWER PAGE AND THE VAN HUB README (2026). RATINGS AND GAUGES MARKED 2019 ARE FROM THE JULY 2019 WIRING PLAN, BUILT FOR AN EARLIER SYSTEM: VERIFY EACH ONE.
3. EVERY NEGATIVE LANDS ON TB2, ON THE LOAD SIDE OF RS1, SO THE SHUNT SEES ALL THE CURRENT. ONLY RS1'S BATTERY TERMINAL GOES TO BT1 (–).
4. BRANCH CIRCUITS FROM A5 ARE DRAWN AS ONE LINE (2 CONDUCTORS): + FROM THE FUSE, – BACK TO A5'S RETURN BUS, SAME GAUGE.
5. BLUETOOTH, NOT WIRED: A8 READS A1, A2 AND RS1 (VICTRON INSTANT READOUT), BT1'S BMS AND THE GOVEE THERMOMETERS. A8 TALKS TO A6 OVER THE VAN'S WI-FI. THE ROUTER'S SUPPLY IS NOT IN THE SOURCES, SO IT IS NOT SHOWN.
6. A6, THE MAXXFAN WITH ITS BRUSHLESS RETROFIT, HAS ITS OWN WIRING DIAGRAM, MFB-002: W32 HERE IS ITS W1/W3 SUPPLY PAIR, AND ITS 5 A FUSE F1 SITS AT THE SUPPLY END OF W32.
7. B1 IS THE WATER FLOW METER ON A8'S 3-PIN JST-SM PIGTAIL: RED 5 V, WHITE GND, GREEN SIGNAL TO G10 THROUGH A 10K / 20K DIVIDER IN THE HUB BOX (HUB README).
8. BT1B, THE SECOND BATTERY, IS THE 2026-11 STUDY (VAN-006 E8): IN PARALLEL WITH BT1 ON AN EQUAL-LENGTH PAIR (W40, W41) OF ABOUT 0.5 M. NOT BUILT; CABLE SIZE AND FUSING TBD.
9. OPEN ITEMS (TBD) AND EVERY VERIFY ARE LISTED ON SHEET 2.

SYMBOLS

FUSE
CIRCUIT BREAKER
SWITCH
JUNCTION
CROSSING, NOT JOINED
BUS BAR
BLUETOOTH / WI-FI
2-CONDUCTOR BRANCH
TBD (OPEN ITEM)
PROPOSED, NOT BUILT
VEHICLE / ROOF / AC

VAN BUILD · 2019 FORD TRANSIT 148 HR

CODY STANSKY · FROM THE POWER PAGE, THE VAN HUB README AND THE 2019 WIRING PLAN

TITLE

WIRING DIAGRAM
12 V HOUSE SYSTEM

SIZE	DWG NO.	REV
B	VAN-007	A
SCALE NONE	DATE 2026-11-14	SHEET 1 OF 2

REVISIONS		
REV	DESCRIPTION	DATE
A	FIRST ISSUE FOR REVIEW: NOT YET CHECKED IN THE VAN	2026-11-14

WIRE LIST

WIRE	FROM	TO	AWG	COLOR	LENGTH	REMARKS
W1	PV1 (+)	Q1	8	RD	10 FT	2019: PV RUN, 8 AWG; NOW TWO ARRAYS: VERIFY EACH
W2	PV1 (−)	A1 PV−	8	BK	10 FT	2019
W3	Q1	A1 PV+	8	RD		Q1 IF FITTED
W4	PV2 (+)	Q2	TBD	RD		ROOF ENTRY: VERIFY
W5	PV2 (−)	A2 PV−	TBD	BK		
W6	Q2	A2 PV+	TBD	RD		Q2 IF FITTED
W7	A1 BAT+	F2	8	RD	2 FT	2019: CHARGER TO BUS, 8 AWG
W8	F2	TB1	8	RD		
W9	A1 BAT−	TB2	8	BK		
W10	A2 BAT+	F3	TBD	RD		75/15 IS 15 A MAX
W11	F3	TB1	TBD	RD		
W12	A2 BAT−	TB2	TBD	BK		
W13	BT1 (+)	F1	2/0	RD	0.5 FT	2019: 2/0 AT THE BATTERY
W14	F1	S1	2/0	RD		
W15	S1	TB1	2/0	RD		
W16	BT1 (−)	RS1 BATTERY	2/0	BK	0.5 FT	THE ONLY CONDUCTOR ON BT1 (−) (NOTE 3)
W17	RS1 SYSTEM	TB2	2/0	BK		
W18	RS1 VBATT+	BT1 (+) VIA F8	LEAD	RD		SUPPLIED WITH THE SHUNT
W19	TB1	F4	0	RD	2 FT	2019: 0 AWG FOR A 1500 W INVERTER; RECHECK
W20	F4	A4 (+)	0	RD		
W21	TB2	A4 (−)	0	BK	2 FT	
W22	TB1	CB2	8	RD	2 FT	2019: FUSE BLOCK FEED
W23	CB2	A5 (+)	8	RD		
W24	A5 (−)	TB2	8	BK	2 FT	
W25	BT2 (+)	F6	4	RD		F6 AT THE STARTER BATTERY
W26	F6 / CB1	K1 IN	4	RD	10 FT	2019: 4 AWG FROM THE CAB
W27	K1 OUT	TB1	4	RD	2 FT	2019
W28	K1 GND	TB2	TBD	BK		IF K1 NEEDS ONE (DC-DC: YES)
W29	TB2	CHASSIS	TBD	BK		VERIFY BONDED
W30	A4 AC OUT	XS1, A9	TBD	—		120 V AC SIDE: TBD
W31	A5 F11	E1 LIGHTS	14	RD/BK		2019
W32	A5 F12	A6 MAXXFAN	14	RD/BK		= MFB-002 W1 + W3; F1 5 A AT THIS END
W33	A5 F13	XS2 12 V OUTLETS	12	RD/BK		2019
W34	A5 F14	A7 FRIDGE	12	RD/BK		2019
W35	A5 F15	M1 WATER PUMP	12	RD/BK		2019
W36	A5 F16	PS1 IN	TBD	RD/BK		HUB README: 2 A FUSE
W37	PS1 USB-C	A8 USB-C	LEAD	—		THE CONVERTER'S OWN LEAD
W38	A8 PIGTAIL	B1	3 × LEAD	RD WH GN		JST-SM 3-PIN: 5 V, GND, SIGNAL
W39	A5 F17	MISC	12	RD/BK		2019
W40	BT1 (+)	BT1B (+)	TBD	RD	≈0.5 M	PROPOSED: SAME LENGTH AS W41
W41	BT1 (−)	BT1B (−)	TBD	BK	≈0.5 M	PROPOSED

AWG AND LENGTH FROM THE 2019 PLAN UNLESS MARKED; ALL TO VERIFY. COLORS ASSUMED: RD +, BK −.

OPEN ITEMS: TBD AND VERIFY

1. TBD: INVERTER A4, 2000 W (THE MODEL'S NAME FOR IT) OR 1500 W (2019 PLAN)? MAKE AND MODEL. F4 AND W19-W21 FOLLOW.
2. TBD: K1, ACR (2019 PLAN) OR A DC-DC CHARGER FROM THE ALTERNATOR? MAKE AND RATING; F6, CB1 AND W25-W28 FOLLOW.
3. TBD: FRIDGE A7, MAKE AND MODEL.
4. TBD: AC UNIT A9: IS ONE FITTED, WHICH, AND WHAT POWERS IT?
5. VERIFY: IS LAYOUT F (AUG 2022) THE VAN AS BUILT? VAN-002 TO VAN-006 ARE DRAWN FROM IT.
6. VERIFY: PV1 AND PV2, PANEL COUNT, SERIES OR PARALLEL, ROOF ENTRY AND GAUGE; ARE Q1, Q2 FITTED?
7. VERIFY: F2, F3 RATINGS. WHERE A1, A2 AND A5 ARE MOUNTED: THE 2022 MODEL HAS ONE MPPT, A 75/15, IN THE BATTERY BAY (VAN-006 E9).
8. VERIFY: F1 TYPE AND RATING, S1 FITTED, CB2, AND WHICH A5 POSITION EACH CIRCUIT USES (F16 FOR THE HUB).
9. VERIFY: TB2 BONDED TO THE CHASSIS (W29).
10. VERIFY: E3 TO E6 ON VAN-006 MATCHED TO DEVICES HERE; BT1 ORIENTATION AND TERMINAL HEIGHT.
11. VERIFY: F12 AT 15 A WITH MFB-002'S 5 A F1, OR ONE 5 A FUSE.
12. VERIFY: WIRE COLORS AND EVERY GAUGE TAKEN FROM THE 2019 PLAN.
13. TBD: CABLE SIZE AND FUSING FOR THE SECOND BATTERY BT1B (W40, W41), IF IT IS BUILT.
14. NOT SHOWN: THE VAN'S WI-FI ROUTER (SUPPLY NOT IN THE SOURCES); SHORE POWER (NONE IN THE SOURCES).

FUSE AND SWITCH LIST

REF	PROTECTS	RATING	SOURCE	REMARKS
F1	BT1 (+), MAIN	250 A	2019 PLAN	TYPE TBD (CLASS T, MRBF OR ANL)
F2	A1 OUTPUT	TBD	—	SIZE TO THE 100/30 MANUAL
F3	A2 OUTPUT	TBD	—	SIZE TO THE 75/15 MANUAL
F4	A4 INVERTER FEED	200 A	2019 PLAN	WAS FOR 1500 W; RECHECK
F6	K1, AT BT2	70 A	2019 PLAN	DEPENDS ON K1 (TBD)
CB1	K1, IN SERIES WITH F6	60 A	2019 PLAN	BREAKER
CB2	A5 FEED	40 A	2019 PLAN	BREAKER
F8	RS1 VBATT+ SENSE	KIT	SHUNT KIT	VERIFY FITTED
Q1	PV1 DISCONNECT	TBD	2019: 15 A	VERIFY FITTED
Q2	PV2 DISCONNECT	TBD	—	VERIFY FITTED
S1	BATTERY SWITCH	—	2019, MODEL	VERIFY
F11	E1 LIGHTS	5 A	2019 PLAN	
F12	A6 MAXXFAN	15 A	2019 PLAN	PLUS MFB-002 F1, 5 A
F13	XS2 12 V OUTLETS	10 A	2019 PLAN	
F14	A7 FRIDGE	15 A	2019 PLAN	CHECK ONCE THE MAKE IS KNOWN
F15	M1 WATER PUMP	15 A	2019 PLAN	
F16	PS1 / A8 VAN HUB	2 A	HUB README	BLOCK POSITION: VERIFY
F17	MISC	10 A	2019 PLAN	
F18–22	SPARE	—		2019 PLAN: 12-WAY BLOCK

WIRELESS LINKS TO A8, THE VAN HUB (NOT WIRED)

DEVICE	WHAT A8 READS	HOW	SETUP NEEDS
A1, A2	VICTRON INSTANT READOUT	BLE ADVERTS	EACH DEVICE'S KEY
RS1	VICTRON INSTANT READOUT	BLE ADVERTS	ITS KEY
BT1	RENOGY BMS (MODBUS)	BLE, EVERY 30 S	NOTHING
GOVEE H5075	TEMPERATURE, HUMIDITY	BLE ADVERTS	A NAME
A6	MAXXFAN HTTP API	VAN WI-FI	ITS ADDRESS

DEVICES

REF	DEVICE
PV1	SOLAR ARRAY, 200 W, AFT
PV2	SOLAR ARRAY, 320 W, FORWARD
A1	SMARTSOLAR MPPT 100/30
A2	SMARTSOLAR MPPT 75/15
A4	INVERTER (TBD)
A5	FUSE BLOCK
A6	MAXXFAN, RETROFIT (MFB-002)
A7	FRIDGE (TBD)
A8	VAN HUB, ESP32-C3
A9	AC UNIT (TBD)
B1	WATER FLOW METER
BT1	HOUSE BATTERY (VAN-006 E1)
BT1B	2ND BATTERY, PROPOSED (E8)

REF	DEVICE
BT2	STARTER BATTERY (FORD)
E1	LIGHTS
G1	ALTERNATOR (FORD)
K1	ALTERNATOR CHARGER (TBD)
M1	WATER PUMP
PS1	12 → 5 V USB-C CONVERTER
RS1	SMARTSHUNT 500 A / 50 MV
S1	BATTERY SWITCH
TB1	+ BUS BAR (VAN-006 E3?)
TB2	− BUS BAR (VAN-006 E3?)
XS1	120 V AC OUTLETS
XS2	12 V OUTLETS
F, CB, Q	SEE THE FUSE LIST

VAN BUILD · 2019 FORD TRANSIT 148 HR

CODY STANSKY · FROM THE POWER PAGE, THE VAN HUB README AND THE 2019 WIRING PLAN

TITLE

WIRING DIAGRAM
WIRE LIST, FUSE LIST, OPEN ITEMS

SIZE	DWG NO.	REV
B	VAN-007	A
SCALE NONE	DATE 2026-11-14	SHEET 2 OF 2