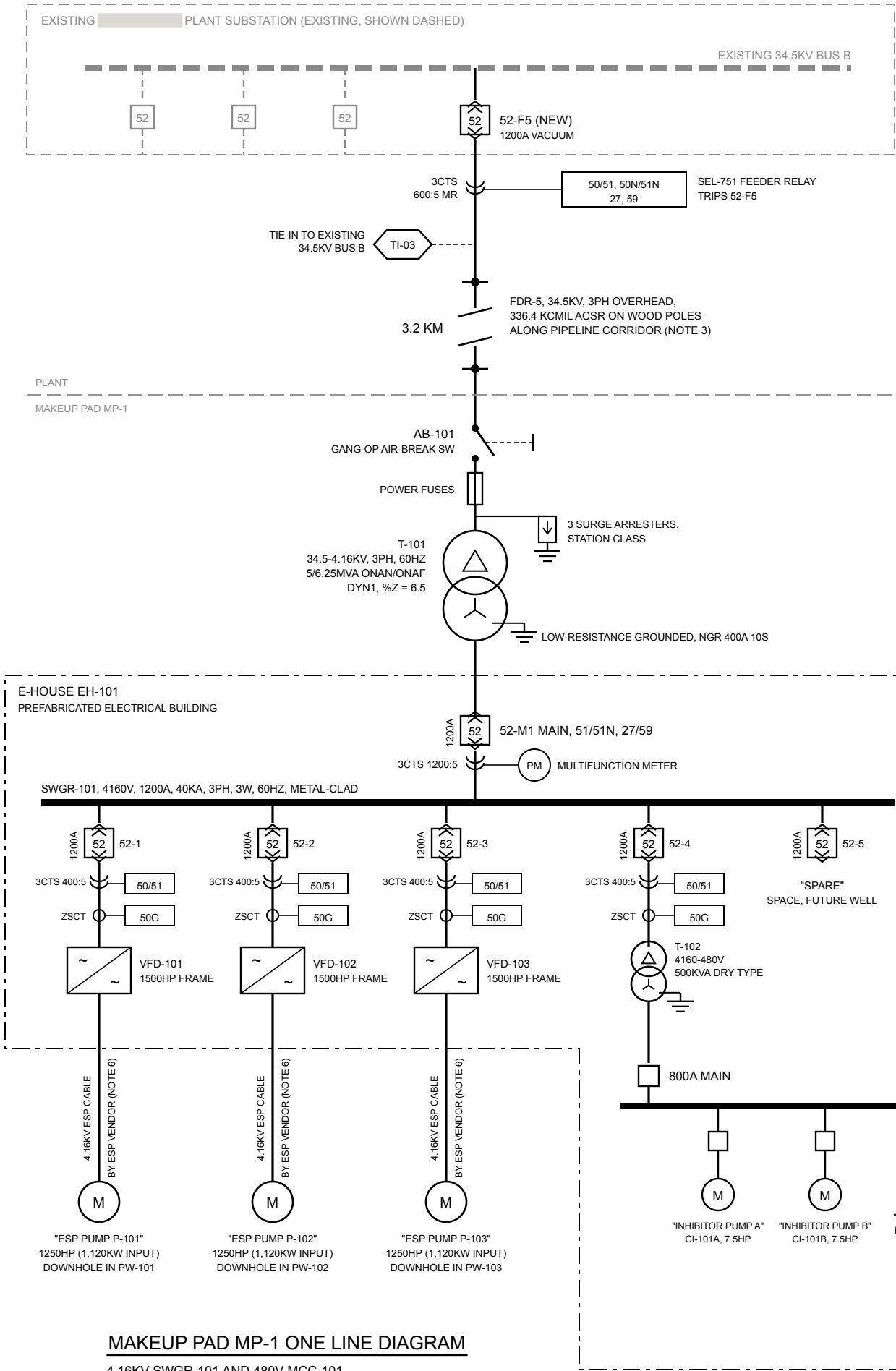




MAKEUP PAD MP-1 ONE LINE DIAGRAM

4.16KV SWGR-101 AND 480V MCC-101

LEGEND

	DRAWOUT CIRCUIT BREAKER (52)		RELAY FUNCTION (ANSI C37.2)
	MOLDED CASE BREAKER		POWER METER
	CURRENT TRANSFORMER (CT)		AIR-BREAK SWITCH
	TRANSFORMER, DELTA / WYE		FUSE / FUSED CUTOUT
	INDUCTION MOTOR		SURGE ARRESTER
	VARIABLE FREQUENCY DRIVE		TIE-IN POINT
	GROUND, 4/0 BARE CU GRID		EXISTING, BY OTHERS

LOAD SUMMARY

LOAD	BASIS	KW	REMARK
ESP MOTORS P-101/102/103	3 X 1,120KW INPUT	3,360	VIA VFDS
AUX, MCC-101 VIA T-102	CONNECTED	APPROX 150	32% OF T-102
TOTAL CONNECTED LOAD		APPROX 3,510	APPROX 3.5MW
T-101 DEMAND	0.95 PF	APPROX 3.7MVA	
T-101 LOADING		74% ONAN	59% ONAF

GENERAL NOTES

- ALL RATINGS ARE PRELIMINARY, SUBJECT TO SHORT-CIRCUIT, LOAD FLOW, ARC FLASH (IEEE 1584) AND PROTECTIVE DEVICE COORDINATION STUDIES.
- NEW BREAKER 52-F5 AND RELAY SEL-751 ADDED ON EXISTING PLANT 34.5KV BUS B AT TIE-IN TI-03. OUTAGE AND TIE-IN SEQUENCE TO BE AGREED WITH PLANT OPERATIONS.
- FDR-5 RUNS 3.2 KM OVERHEAD ON WOOD POLES ALONG THE PIPELINE CORRIDOR. SEE MUF-C-001 FOR ROUTE.
- PAD ESD TRIPS VFD-101/102/103 BY HARDWIRED INTERLOCK. PLANT TRIPS PAD VIA FAIL-SAFE FIBER TRANSFER TRIP (TI-04), TRIP ON CHANNEL LOSS.
- PAD GROUND GRID 4/0 BARE CU, BONDED TO T-101 NGR, SWGR-101 GROUND BUS, E-HOUSE STEEL AND WELLHEADS.
- ESP MOTORS ARE DOWNHOLE IN PW-101/102/103. VFD SINE-WAVE OUTPUT FILTER, STEP-UP TRANSFORMER, ESP CABLE AND MOTOR VOLTAGE BY ESP VENDOR. INPUT KW = 932 KW SHAFT / 0.90 MOTOR / 0.96 CABLE / 0.965 VFD.

SHEET KEYNOTES

FEEDER CT RATIOS AND RELAY SETTINGS BY COORDINATION STUDY.
52-5 IS A SPACE FOR A FUTURE FOURTH MAKEUP WELL.

REFERENCE DRAWINGS

- MUF-G-001 COVER SHEET AND DRAWING INDEX
- MUF-C-001 OVERALL SITE PLAN AND PIPELINE CORRIDOR
- MUF-PFD-001 PROCESS FLOW DIAGRAM AND HEAT AND MATERIAL BALANCE
- MUF-PID-101 P&ID MAKEUP PAD MP-1 WELLHEADS AND PRODUCTION HEADER
- MUF-PID-102 P&ID BRINE PIPELINES AND PLANT TIE-INS
- MUF-SCH-001 LINE LIST AND TIE-IN SCHEDULE
- MUF-SCH-002 EQUIPMENT LIST AND ELECTRICAL LOAD LIST

CLIENT



PROJECT

COUNTY,

PRELIMINARY - NOT
FOR CONSTRUCTION

REVISIONS

REV	DATE	DESCRIPTION
A	2026-10-02	ISSUED FOR REVIEW

DESIGNED

[ENGINEER NAME]

DRAWN

[ENGINEER NAME]

CHECKED

APPROVED

DATE

2026-10-02

SCALE: NTS

ELECTRICAL

ELECTRICAL ONE-LINE
DIAGRAM

MUF-E-001