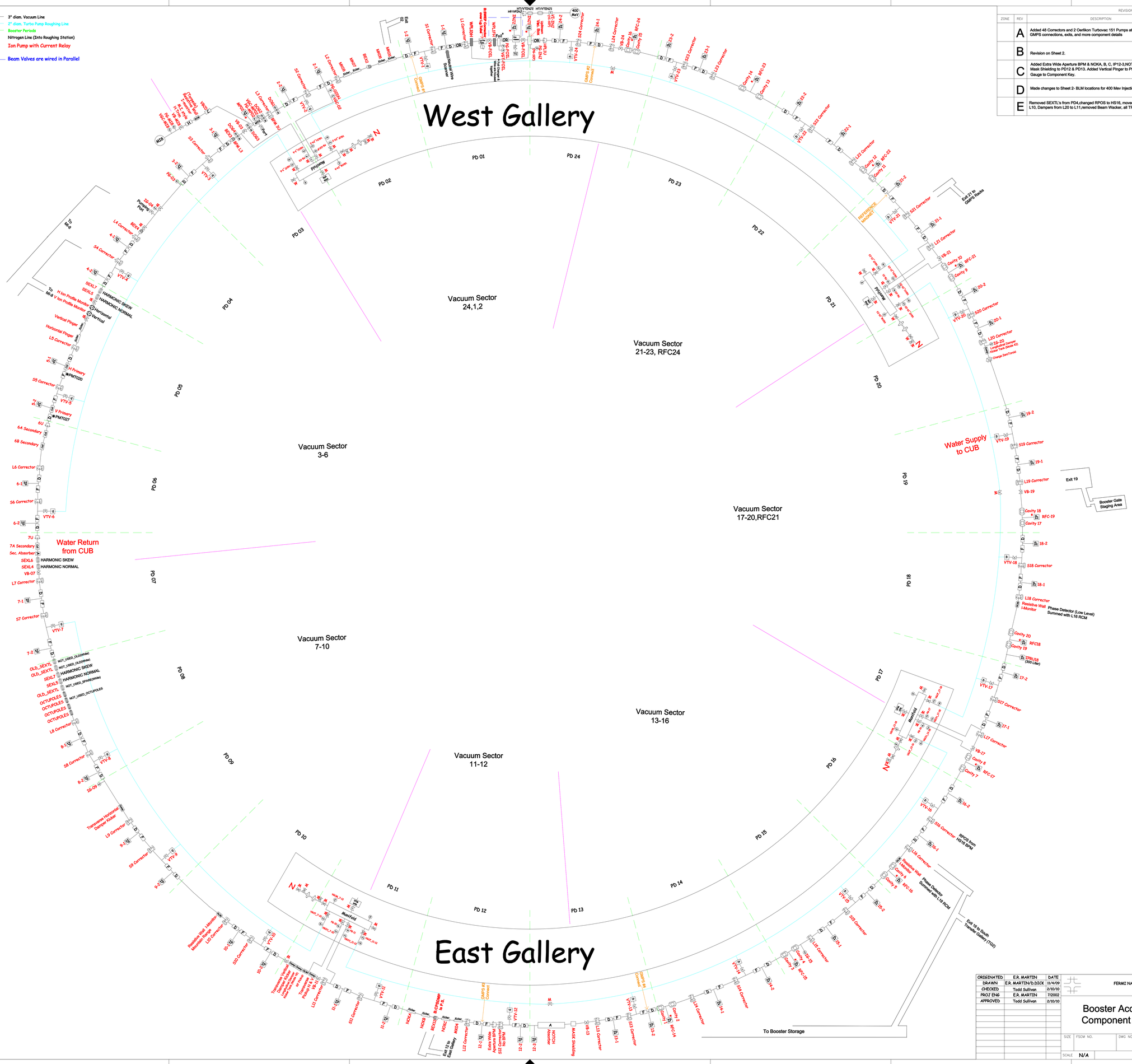
Ball Valve	Collimator
Penning Gauge	Correction Element
Trim	Multiwire
MPO3 Magnet	Octupole
MPO2 Septum Magnet	OR Bump
Convection Gauge	Phase Detector
Vacuum Gauge Bourdon	BEX Bump
Regulator	Dog Leg
Turbo Pump-Oerlikon 151	RF Cavity
Foil Box	Beam Position Monitor
Gate Valve	Sextupole
Ion Pump	Damper
Horizontal Trim	Toroid
Ion Profile Monitor	Focussing Magnet
Extraction Kicker	Defocussing Magnet
Current Monitor	Gamma-T (Obsolete)
300L Ion Pump	Wire Scanner
Corrector with Internal BPM	Griffin Detector
Oerlikon Turbovac Pump 151	Beam Wacker
Damper Pick-Up	Resistive Wall Current Monitor
Ion Gauge	Dipole Magnet
	Absorber
	Photo Multiplier Tube

3" diam. Vacuum Line
2" diam. Turbo Pump Roughing Line
Booster Periods
N — Nitrogen Line (Into Roughing Station)
TP* — Ion Pump with Current Relay
Beam Valves are wired in Parallel



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	Added 48 Correctors and 2 Oerlikon Turbovac 151 Pumps at PD17 & PD18, GMPS connections, exits, and more component details	02/10/2010	Todd Sullivan
	B	Revision on Sheet 2.	08/17/2011	Todd Sullivan
	C	Added Extra Wide Aperture BPM & NOKA, B, C, IP12-3,NOTCH Absorber, & Mask Shielding to PD12 & PD13. Added Vertical Pinger to PD 5, Added Ion Gauge to Component Key.	10/3/2013	Todd Sullivan
	D	Made changes to Sheet 2- BLM locations for 400 Mev Injection Line.	11/07/2013	Todd Sullivan
	E	Removed SEXTL's from PD4,changed RPOS to HS16, moved Mountain Range to L10, Dampers from L20 to L11,removed Beam Wacker, all TP's are Oerlikon Style.	10/20/2016	Bill Pellico

ORIGINATED	E.R. MARTIN	DATE
DRAWN	E.R. MARTIN/D.DICK	11/4/09
CHECKED	Todd Sullivan	2/10/10
PROJ ENG	E.R. MARTIN	7/2002
APPROVED	Todd Sullivan	2/10/10

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UNITED STATES DEPARTMENT OF ENERGY

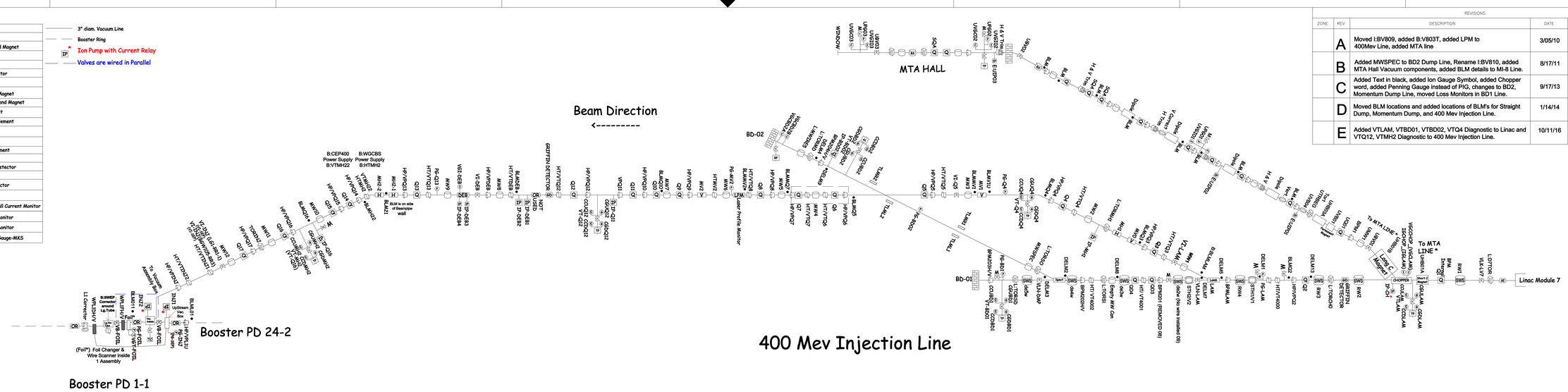
Booster Accelerator Vacuum & Component General Schematic

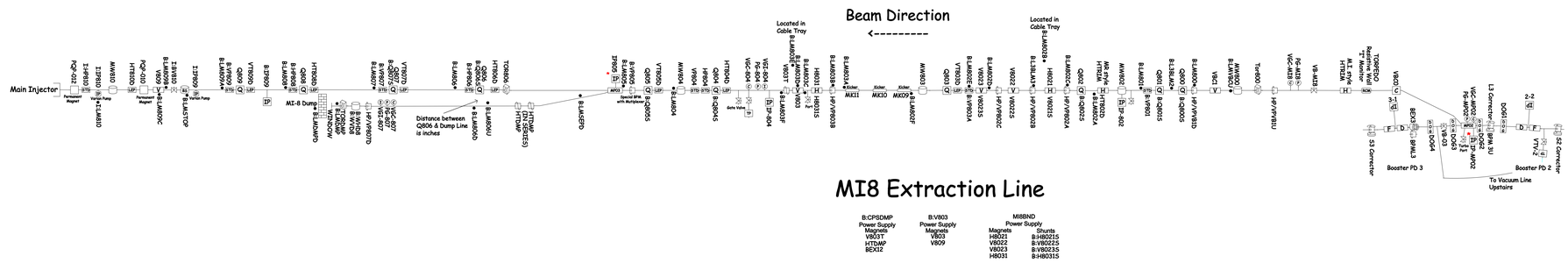
SIZE | FSCM NO. | DWG NO. 0340-LE-282247 | REV. E
SCALE N/A | SHEET 1 of 2

Ball Valve	Lamb. Lamberston
Penning Gauge	Chopper Chopper
Trim Large Trim	V. Vertical Bend Magnet
MP03 Septum Magnet	Multiwire
MP02 Septum Magnet	OR OR Bump
Convection Gauge-TC Control	CM Current Monitor
Vacuum Gauge Bourdon	BEX Bump
Beam Position Monitor	Super Trim Magnet
Turbo Pump	H Horizontal Bend Magnet
DEB Debuncher	Dipole Magnet
Gate Valve	Correction Element
IP Ion Pump	Q Quadrupole
IP 25L Ion Pump	Toroid
Dump	SK Steering Element
	LEP LEP DIPOLE
	STD Split Tube Detector
Spect Spectrometer	Trim Trim Magnet
SWS Single Wire Scanner	GD Griffin Detector
V Vertical Trim Magnet	Bs Beam Stop
LPM Laser Profile Monitor	RCM Resistive Wall Current Monitor
Corrector with Internal BPM	Beam Loss Monitor
Ion Gauge	Total Loss Monitor
Cold Cathode Gauge-MKS	Convection Gauge-MKS

3" diam. Vacuum Line
Booster Ring
IP * Ion Pump with Current Relay
Valves are wired in Parallel

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	Moved I:BV809, added B:V803T, added LPM to 400Mev Line, added MTA line	3/05/10	Todd Sullivan
	B	Added MWSPEC to BD2 Dump Line, Rename I:BV810, added MTA Hall Vacuum components, added BLM details to MI-8 Line.	8/17/11	Todd Sullivan
	C	Added Text in black, added Ion Gauge Symbol, added Chopper word, added Penning Gauge instead of PIG, changes to BD2, Momentum Dump Line, moved Loss Monitors in BD1 Line.	9/17/13	Todd Sullivan
	D	Moved BLM locations and added locations of BLM's for Straight Dump, Momentum Dump, and 400 Mev Injection Line.	1/14/14	Todd Sullivan
	E	Added VTLAM, VTBD01, VTBD02, VTQ4 Diagnostic to Linac and VTQ12, VTMH2 Diagnostic to 400 Mev Injection Line.	10/11/16	Todd Sullivan





ORIGINATED	E.R. MARTIN	DATE
DRAWN	E.R. MARTIN/D.DICK	9/24/09
CHECKED	Todd Sullivan	3/5/10
PROJ ENG	E.R. MARTIN	7/2002
APPROVED	Todd Sullivan	3/5/10

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Booster Accelerator Vacuum & Component General Schematic

SIZE | FSCM NO. | DWG NO. 0340-LE-282247 | REV E
SCALE N/A | SHEET 2 of 2