



# Muon Campus AIP

## Change Request Form

CR#: BT009

1) DATE: 12/4/14      2) WBS: BT1      3) Originator: Ken Domann *KAD*

4) WBS Description of Primary Affected Tasks: Beam Transport AIP

5) Technical Description & Primary Motivation for Change: This change request reduces the Total Cost of the Beam Transport AIP from \$6,651,916 approved in the original Project Plan in August 2013 to the new total of \$6,511,684. This reduction of \$140,232 will be applied to contingency. This action was directed by the Fermi Directorate in order to free funds and budget for the Mu2e cavity work that has been added to the RRF AIP scope.

6) Assessment of Cost Impact (Use attachments if needed): See Attachments for changes.

7) Assessment of Schedule Impact (Use attachments if needed): N/A

8) Secondary Impact & Other Comments: N/A

9) Approvals:

AIP Project Manager:	<i>M. Kubos</i>	Date: <u>12/4/14</u>
AIP Project Coordinator:	<i>Man CC</i>	Date: <u>12/9/14</u>
AD Div Director:	<i>SW</i>	Date: <u>12/12/14</u>
Directorate:	<i>SW</i>	Date: <u>12/12/14</u>

Beam Transport Pre CR009 CAP

Control Account		FY12	FY13	FY14	FY15	FY16	Cumulative
A1303.01.02.01 Project Management Oversight FY13	Scheduled	0.00	56,415.81	0.00	0.00	0.00	56,415.81
A1303.01.02.02 Project Management Oversight FY14	Scheduled	0.00	0.00	139,404.50	0.00	0.00	139,404.50
A1303.01.02.03 Project Management Oversight FY15	Scheduled	0.00	0.00	3,062.52	118,198.79	0.00	121,261.31
A1303.01.02.04 Project Management Oversight FY16	Scheduled	0.00	0.00	0.00	2,374.71	32,250.72	34,625.44
A1303.02.01 Beam Transport Lamberton (MLAW) Magnet	Scheduled	0.00	0.00	295,983.41	0.00	0.00	295,983.41
A1303.02.02.01 Beam Transport Extraction Kicker Magnets (RK8 2)	Scheduled	0.00	6,218.93	163,023.76	0.00	0.00	169,242.68
A1303.02.02.02 Beam Transport Extraction Kicker Power Supplies	Scheduled	0.00	0.00	32,213.32	348,017.93	77,491.50	457,722.76
A1303.02.02.03 Beam Transport Kicker Loads & Cooling System	Scheduled	0.00	6,218.93	389,354.87	33,663.44	0.00	429,237.24
A1303.02.02.04 Beam Transport Recycler Ring Extraction Insert Installa	Scheduled	0.00	0.00	426,269.95	177,816.02	195,210.80	799,296.77
A1303.03.01.01 RR to P1 Vertical Bending Dipole ADCW (1)	Scheduled	0.00	0.00	24,275.42	0.00	0.00	24,275.42
A1303.03.01.02 RR to P1 Permanent Magnets RQA (4)	Scheduled	0.00	0.00	0.00	58,902.55	0.00	58,902.55
A1303.03.01.03 RR to P1 Trim Quad STQB (4+1)	Scheduled	0.00	0.00	159,220.31	0.00	0.00	159,220.31
A1303.03.01.05 RR to P1 Vertical Dipole Correctors (1+2)	Scheduled	0.00	0.00	8,653.56	0.00	0.00	8,653.56
A1303.03.02.01 RR to P1 Lamberton PS	Scheduled	0.00	0.00	50,020.25	10,489.67	0.00	60,509.92
A1303.03.02.02 RR to P1 Vertical Magnet PS	Scheduled	0.00	0.00	50,020.25	10,489.67	0.00	60,509.92
A1303.03.02.03 RR to P1 Trim Dipole PS(2)	Scheduled	0.00	0.00	26,087.02	0.00	0.00	26,087.02
A1303.03.02.04 RR to P1 Trim Quad PS(4)	Scheduled	0.00	0.00	30,932.88	0.00	0.00	30,932.88
A1303.03.03 Beam Transport RR to P1 Instrumentation	Scheduled	0.00	0.00	0.00	264,774.05	0.00	264,774.05
A1303.03.04 Beam Transport RR to P1 Installation	Scheduled	0.00	0.00	0.00	456,427.59	0.00	456,427.59
A1303.04.01.01 Beamline B2 Dipole Magnet (1) (V714 Replacement)	Scheduled	0.00	0.00	39,771.00	9,730.06	0.00	49,501.06
A1303.04.01.01.02 Beamline Existing Magnets to be Repurposed	Scheduled	0.00	0.00	5,094.81	15,337.52	0.00	20,432.33
A1303.04.01.01.03 Beamline CDA Magnet (F-17C Replacement)	Scheduled	0.00	0.00	1,170.09	41,543.02	0.00	42,713.11
A1303.04.01.02 Beamline PS	Scheduled	0.00	0.00	10,704.52	201,951.80	5,248.53	217,904.85
A1303.04.01.03 Beam Line Installation & Mechanical	Scheduled	0.00	0.00	83,830.87	369,570.09	0.00	453,400.96
A1303.04.01.04 RR to AP-0 Target Station and RR to M3 Line optics	Scheduled	0.00	0.00	67,641.57	0.00	0.00	67,641.57
A1303.04.02 Beam Transport Electrical Infrastructure	Scheduled	0.00	0.00	10,433.98	169,962.38	0.00	180,396.36
A1303.04.03 Beamline Instrumentation & Controls	Scheduled	0.00	0.00	81,689.13	478,081.35	0.00	559,780.48
Grand Total	Scheduled	0.00	88,833.67	2,098,868.00	2,767,330.64	310,201.55	5,245,253.85

Beam Transport Post CR009 CAP

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A1303.03.01.02 RR to P1 Permanent Magnets RQA (4)	Scheduled	0.00	0.00	0.00	58,902.55	0.00	58,902.55
A1303.03.01.03 RR to P1 Trim Quad PS(4)	Scheduled	0.00	0.00	159,220.31	0.00	0.00	159,220.31
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A1303.04.01.01.03 Beamline COA Magnet (F-17C Replacement)	Scheduled	0.00	0.00	1,170.09	41,543.02	0.00	42,713.11
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A1303.04.02 Beam Transport Electrical Infrastructure	Scheduled	0.00	0.00	10,433.98	169,962.38	0.00	180,396.36
A1303.04.03 Beamline Instrumentation & Controls	Scheduled	0.00	0.00	81,699.13	478,081.35	0.00	559,780.48
Grand Total	Scheduled	0.00	68,853.67	2,098,868.00	2,767,330.64	310,201.55	5,245,253.85