



# Muon Campus AIP

## Change Request Form

CR#:BT011

1) DATE: 2/4/15

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 documents the changes to escalation calculations caused by entering new resource rates into Cobra that incorporated past experience on resource costs. It was not initially understood that Cobra does not automatically recalculate based on these new rates and therefore the old escalation values were not revised. The total change to the Beam Transport budget is \$3,408.

6) **Assessment of Cost Impact (Use attachments if needed):** See attached.

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

8) **Secondary Impact & Other Comments:** N/A

9) **Approvals:**

AIP Project Manager:

*M. Kurbau*

Date: 02/04/15

AIP Project Coordinator:

*Mary E*

Date: 2/5/15

AD Div Director:

Date: \_\_\_\_\_

Directorate:

Date: \_\_\_\_\_

Beam Transport Pre CR011 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 Lamberson (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 (RKB 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	426,269.95	177,816.02	195,210.80	799,296.77	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	58,902.55	0.00	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+1)	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
A1303.04.01.02 Beamline Existing Magnets to be Repurposed	Scheduled	0.00	0.00	5,094.81	15,337.52	0.00	20,432.33
A1303.04.01.03 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 M13 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	81,699.13	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

Beam Transport Post CR011 CAP

Control Account	Results	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	32,909.15	35,283.86
A1303.02.01 Beam Transport Lamberson (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 (RKB 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	78,410.16	458,641.41
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	197,119.49	801,205.46
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 ROA (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+1)	Scheduled	0.00	0.00	8,653.56	0.00	0.00	8,653.56
A1303.03.02.01 RR to P1 Lamberson 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
A1303.04.01.01.01 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	199,273.97	8,119.63	218,098.12
A1303.04.01.03 Beam Line Installation & Mechanical	Scheduled	0.00	0.00	79,833.55	373,296.51	0.00	453,130.06
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	81,699.13	478,081.35	0.00	559,780.48
Grand Total	Scheduled	0.00	68,853.67	2,094,870.67	2,768,379.23	316,558.43	5,248,661.99