

1.03 Construction Accelerator Systems										11/07/2013	08:16	Rollup	1179			
DESCRIPTION: This summary WBS covers the construction of the cryomodules, power systems, cryogenic systems, beam transport systems, extraction systems, and instrumentation, controls, & safety systems of the 12 GeV Upgrade accelerator.																
INHOUSE LABOR (MANWEEKS)																
	Weekly Rate	ETC	ETC Total		Weekly Rate	ETC	ETC Total		Weekly Rate	ETC	ETC Total					
Plant Eng	2.992	0.003	0.009		Mech Dsgn	2.052	4.711	9.666	Office	1.216	-1.154	-1.404				
Skilled Trades	1.425	1.741	2.481		Mech Tech	1.893	78.528	148.646	Directorate	8.135						
Elect Engr	3.005	90.877	273.113		Senior Staff	4.813	10.182	49.003	Contrib Univ Labor							
Elect Dsgn	2.151	35.108	75.529		Scientists	3.007	3.874	11.650	Visiting Users	0.823						
Elect Tech	1.880	203.255	382.061		Comp Scientist	2.795	80.372	224.624	Paid Univ Staff	2.393						
Mech Eng	2.987	14.815	44.249		Admin	2.502			Paid Univ Student	0.454	-1.957	-0.889				
	FY04-11 Actuals + Committed	FY12 Actuals + Committed	FY13 Actuals + Committed	FY14 Actuals + Committed	Cost + Committed To Date Total	ETC in FY14 \$	Estimate at Completion	Lehman May-2013	Variance							
Labor Manweeks	7,003.650 \$K	3,619.565 \$K	3,748.875 \$K		14,372.090 \$K	520.355 \$K	14,892.445 \$K	14,302.872 \$K	590							44
FTE Years	159.174 \$K	82.263 \$K	85.202 \$K		326.638 \$K	11.826 \$K	338.465 \$K	325.065 \$K	13.4							
TOTAL LABOR \$	14,424.066 \$K	7,278.607 \$K	7,829.701 \$K		29,532.374 \$K	1,218.739 \$K	30,751.113 \$K	29,458.364 \$K	1,293 \$K							1.026
\$ per Jlab FTE YEAR	90.618 \$K	88.480 \$K	91.896 \$K		90.413 \$K	102.742 \$K	90.733 \$K	90.811 \$K	\$0 K							
Supplies & Materials	6,164.141 \$K	2,669.625 \$K	1,346.545 \$K		10,180.312 \$K	33.235 \$K	10,213.547 \$K	9,917.578 \$K	\$296 K							
Travel	150.941 \$K	26.611 \$K	26.768 \$K		204.320 \$K	9.642 \$K	213.962 \$K	202.669 \$K	\$11 K							
Consult & Prch Labor	1,598.926 \$K	834.029 \$K	506.221 \$K		2,939.176 \$K	0.066 \$K	2,939.242 \$K	2,921.750 \$K	\$17 K							
Machine Shop Labor	211.867 \$K	446.190 \$K	452.325 \$K		1,110.382 \$K	0.858 \$K	1,111.240 \$K	880.751 \$K	\$230 K							
TOTAL EXPENSES	8,125.876 \$K	3,976.454 \$K	2,331.859 \$K		14,434.189 \$K	43.801 \$K	14,477.990 \$K	13,922.748 \$K	\$555 K							
Major Components/A&E < \$50K	4,705.087 \$K	990.179 \$K	616.473 \$K		6,311.739 \$K	434.477 \$K	6,746.216 \$K	7,013.971 \$K	-\$268 K							
Major Components/A&E > \$50K	43,322.492 \$K	2,787.955 \$K	-10.622 \$K		46,099.826 \$K	-120.000 \$K	45,979.826 \$K	46,130.697 \$K	-\$151 K							
TOTAL PROCUREMENTS	48,027.579 \$K	3,778.134 \$K	605.851 \$K		52,411.565 \$K	314.477 \$K	52,726.041 \$K	53,144.669 \$K	-\$419 K							
Total Costs (no overhead)	70,577.521 \$K	15,033.195 \$K	10,767.411 \$K		96,378.127 \$K	1,577.017 \$K	97,955.144 \$K	96,525.781 \$K	\$1,429 K							
Labor w/overhead	15,975.543 \$K	8,086.566 \$K	8,750.517 \$K		32,812.626 \$K	1,364.987 \$K	34,177.613 \$K	32,731.712 \$K	\$1,446 K							
Expenses w/overhead	9,000.219 \$K	4,419.165 \$K	2,608.224 \$K		16,027.608 \$K	49.057 \$K	16,076.665 \$K	15,453.835 \$K	\$623 K							
Procurement w/overhead	48,535.676 \$K	3,889.981 \$K	679.315 \$K		53,104.972 \$K	366.614 \$K	53,471.586 \$K	53,921.811 \$K	-\$450 K							
GRAND TOTAL	73,511.438 \$K	16,395.712 \$K	12,038.056 \$K		101,945.206 \$K	1,780.658 \$K	103,725.865 \$K	102,107.357 \$K	\$1,619 K							
YEAR	FY 2004/09	FY 2010	FY 2011	FY 2012	FY 2013	Actuals	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total	Original	Delta
LABOR - Obligation	\$902.208 K	\$5,650.798 K	\$9,422.538 K	\$8,086.566 K	\$8,750.517 K		\$1,355.591 K	\$9,397 K						\$34,177.613 K	\$34,144.291 K	\$33.323 K
EXPENSES - Obligation	\$501.913 K	\$4,216.120 K	\$4,282.185 K	\$4,419.165 K	\$2,608.224 K		\$48.691 K	\$0.366 K						\$16,076.665 K	\$16,068.405 K	\$8.259 K
PROCUREMENTS - Obligation	\$23,326.302 K	\$21,374.128 K	\$3,835.246 K	\$3,889.981 K	\$679.315 K		\$366.614 K							\$53,471.586 K	\$53,455.997 K	\$15.589 K
TOTAL	\$24,730.423 K	\$31,241.046 K	\$17,539.969 K	\$16,395.712 K	\$12,038.056 K		\$1,770.896 K	\$9.762 K						\$103,725.865 K	\$103,668.693 K	\$57.171 K
ESCL TOTAL	\$24,730.423 K	\$31,241.046 K	\$17,539.969 K	\$16,395.712 K	\$12,038.056 K		\$1,770.896 K	\$10.074 K						\$103,726.176 K	\$103,729.327 K	-\$3.151 K
MANWEEKS	FY 2004/09	FY 2010	FY 2011	FY 2012	FY 2013	Actuals	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total	Total	
Plant Eng			3.878 MW	1.565 MW	1.648 MW		0.003 MW							7.093 MW	7.090 MW	0.003 MW
Skilled Trades, Electrician		17.950 MW	66.363 MW	40.000 MW	72.000 MW		1.741 MW							198.054 MW	199.653 MW	-1.599 MW
Elect Engr	23.098 MW	344.943 MW	493.595 MW	488.008 MW	494.163 MW		90.508 MW	0.369 MW						1,934.682 MW	1,934.843 MW	-0.161 MW
Elect Dsgn	0.575 MW	24.863 MW	38.388 MW	35.213 MW	75.975 MW		34.609 MW	0.499 MW						210.121 MW	210.792 MW	-0.672 MW
Elect Tech	5.663 MW	234.265 MW	705.535 MW	652.168 MW	804.870 MW		199.953 MW	3.302 MW						2,605.755 MW	2,607.577 MW	-1.822 MW
Mech Eng	166.645 MW	661.500 MW	743.545 MW	541.575 MW	483.925 MW		14.815 MW							2,612.005 MW	2,611.023 MW	0.983 MW
Mech Dsgn	56.225 MW	438.373 MW	421.933 MW	279.100 MW	183.108 MW		4.711 MW							1,383.449 MW	1,383.408 MW	0.041 MW
Mech Tech	26.475 MW	436.220 MW	1,600.360 MW	1,384.178 MW	1,398.868 MW		78.528 MW							4,924.628 MW	4,916.233 MW	8.395 MW
Senior Staff	38.363 MW	101.323 MW	91.688 MW	68.433 MW	55.238 MW		10.182 MW							365.224 MW	364.315 MW	0.909 MW
Scientists	4.163 MW	32.688 MW	25.243 MW	38.635 MW	21.338 MW		3.874 MW							125.939 MW	126.135 MW	-0.196 MW
Comp Scientist		34.170 MW	73.840 MW	58.380 MW	123.783 MW		80.372 MW							370.545 MW	374.298 MW	-3.753 MW
Admin		11.488 MW	22.788 MW	14.250 MW	0.325 MW									48.850 MW	48.850 MW	
Office	0.250 MW	2.713 MW	9.000 MW	18.063 MW	22.838 MW		-1.154 MW							51.708 MW	51.863 MW	-0.154 MW
Directorate																
Contributed University Labor																
Visiting Users																
Paid University Staff																
Paid University Students	3.700 MW	21.638 MW	20.213 MW		10.800 MW		-1.957 MW							54.393 MW	54.675 MW	-0.282 MW
TOTAL MANWEEKS	325.155 MW	2,362.130 MW	4,316.365 MW	3,619.565 MW	3,748.875 MW		516 MW	4 MW						14,892 MW	14,890.753 MW	1.693 MW
TOTAL FTES	7.390 FTES	53.685 FTES	98.099 FTES	82.263 FTES	204.484 FTES		11.7 FTES	0.1 FTES						338.5 FTES	338.426 FTES	0.038 FTES
Supplies & Materials	\$415.060 K	\$3,207.646 K	\$2,541.435 K	\$2,669.625 K	\$1,346.545 K		\$32.909 K	\$0.327 K						\$10,213.547 K	\$10,214.500 K	-\$0.954 K
Travel	\$27.336 K	\$67.780 K	\$55.825 K	\$26.611 K	\$26.768 K		\$9.642 K							\$213.962 K	\$213.714 K	\$0.248 K
Purch Labor	\$7.077 K	\$441.316 K	\$1,150.532 K	\$834.029 K	\$506.221 K		\$0.066 K							\$2,939.242 K	\$2,928.612 K	\$10.629 K
Machine Shop Labor	\$1.522 K	\$80.560 K	\$129.785 K	\$446.190 K	\$452.325 K		\$0.858 K							\$1,111.240 K	\$1,112.707 K	-\$1.468 K
PROCUREMENTS <50K	\$793.321 K	\$2,465.268 K	\$1,446.498 K	\$990.179 K	\$616.473 K		\$434.477 K							\$6,746.216 K	\$6,731.982 K	\$14.234 K
PROCUREMENTS >50K	\$22,443.413 K	\$18,638.388 K	\$2,240.692 K	\$2,787.955 K	-\$10.622 K		-\$120.000 K							\$45,979.826 K	\$45,979.826 K	
Total	\$23,687.729 K	\$24,900.959 K	\$7,564.767 K	\$7,754.588 K	\$2,937.710 K		\$357.951 K	\$0.327 K						\$67,204.031 K	\$67,181.342 K	\$22.689 K
\$\$\$\$\$\$\$\$	FY 2004/09	FY 2010	FY 2011	FY 2012	FY 2013	Actuals	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total	Total	
Skilled Trades, Electrician		\$27.707 K	\$106.909 K	\$65.295 K	\$122.975 K		\$2.481 K							\$325.368 K	\$325.145 K	\$0.222 K
Elect Engr	\$67 K	\$873.643 K	\$1,292.285 K	\$1,314.473 K	\$1,392.738 K		\$272.005 K	\$1.108 K						\$5,213.720 K	\$5,207.529 K	\$6.191 K
Elect Dsgn	\$1 K	\$47.872 K	\$79.047 K	\$74.491 K	\$74.491 K		\$74.454 K	\$1.074 K						\$444.081 K	\$442.628 K	\$1.453 K
Elect Tech	\$11 K	\$410.990 K	\$1,198.437 K	\$1,121.639 K	\$1,424.319 K		\$375.853 K	\$6.207 K						\$4,548.885 K	\$4,540.278 K	\$8.607 K
Mech Eng	\$412 K	\$1,638.294 K	\$1,859.415 K	\$1,403.436 K	\$1,302.579 K		\$44.249 K							\$6,659.923 K	\$6,658.117 K	\$1.805 K
Mech Dsgn	\$105 K	\$787.424 K	\$772.183 K	\$505.945 K	\$353.801 K		\$9.666 K							\$2,533.993 K	\$2,533.553 K	\$0.441 K
Mech Tech	\$44 K	\$655.375 K	\$2,503.215 K	\$2,188.524 K	\$2,362.018 K		\$148.646 K					</				