Pathway Facilities Sheet: Sciences (Cedar Hall/Building K) **Dr. Miguel Moreno**

Day of Dialogue based on Criteria Developed & Approved by Work Environment Committee 9/26/2016

I. **Flagship Program Elements (40%) –** Outline what makes your program unique; include any regional/state/federal program recognition(s); accreditation/external certification(s); external funding. We thank the President, Leticia, the Work Environment Committee and everyone for this opportunity to present our request for a new Science building. I ask you to please consider the following: Science is the Flagship Discipline here at LATTC, and unique in the sense that it is the platform that supports all the other disciplines on this campus. All the disciplines here at LATTC are based on Science and the scientific methodologies. We, at the Science Department, have Trade Programs and also Academic Transfer Programs. Our Programs, such as Chemical Technology and Process Technology are recognized by Industry with awards and grant support and training equipment. Industry also recognizes our programs by providing jobs to essentially all of our Program graduates. Many of our students are hired even before they complete our programs. Also, federal agencies have recognized our programs and provided support, NASA for example, recognized our programs with an important grant where there were more than 750 competitors nationwide and we won. We also have recognition from Universities throughout the country who accept our students with scholarships and grants. We have developed and continue to develop a network of partnerships with Industry and with Universities. Our programs, such as Chemical Technology, Process Technology are unique, not only because of their quality, but also because they are the only programs in the Western US that have sustainably existed for a long time. Also, our LATTC Science Department students are also recognized as outstanding Medical Doctors, Doctors of Pharmacy, Doctors of Dentistry, Doctors of Optometry, and Doctors of Physical Therapy and as professionals in many other fields. In two and three years they completed the first part of their program and pathway here in our Science Department and they successfully transferred to professional schools. These professionals were our LATTC low income students, some of whom today make a very substantial yearly salary, much higher, far beyond all the other occupations. Applied Science Pathways represent our Flagship Program and is unique because all the trades and disciplines at LATTC are based on Science, Science is the platform on which everything is based and because we set one of the best examples of helping our low income students with a pathway to become very wealthy and successful professionals. To make these pathway programs sustainable to provide the training and education for our students we need the infrastructure, we need a new Science building. We put our students and our faculty and staff at risk with very old and unsafe facilities.

II. <u>Facility Condition Index (23%)</u> – <u>58.36%</u> Cedar Hall/Building K

III. **Health and Safety of Employee & Students (22%)** - Outline any health and safety issues including duration, impact to instruction, etc. Regarding Facility Conditions: Our Cedars Hall/ K- Building, is an old, a very inadequate building, and is in need of repairs and earthquake upgrade. Our chemistry labs and instrument rooms present a safety problem for our students and faculty. Our programs have grown and the space is very small, we only have two fume hoods when we need 15, due to this situation, we've had students who were exposed to chemical fumes and their allergic condition caused them to faint and go through a difficult episode that required medical attention and put them in danger. The overall repair of this old building will cost close to $20.0M, and it will still be a very old building, while its replacement is estimated to cost $33.0M. We need modern facilities, we need better infrastructure to support our Science programs. The majority of our lab courses require the use of many chemicals, of which many are very toxic and some are potential carcinogens. We lack the appropriate ventilation systems (i.e. fume hoods) to deal with these chemicals in the safest manner possible, to minimize the exposure of these chemicals to our students, staff and faculty. The long time exposer to these chemical are a serious health and safety concerns to staff and faculty. We lack appropriate lab space to handle the student demand for our classes. Our labs are designed for approximately 24 students and we have class sizes of 30 plus students. Working in these congested labs is a potential hazard—an accident waiting to happen. Up to this point we have been fortunate that we have not had a serious accident, however we are always concern about this possibility. These suboptimal conditions seriously impact our instruction. Students don't get the full lab experience they require because of our limited space and the inadequate conditions of the labs and the building.

IV. Data - Labor Market Demand/Student Success Metrics (14%) – See back side

V. Other Pathway Considerations for Future Building - (not scored but informational) The Science Pathways have grown and we now serve more than 6,000 students per year, and we put them at risk with a very old building and unsafe lab facilities. We have an earthquake assessment and we are told that the Geological stresses are very high and increasing every year and we are told to prepare for an 8.0 magnitude earthquake or higher. With an old, inadequate building in bad shape and old structural conditions, with outdated codes, we don't stand a chance to survive an 8.0 earthquake in that old building. Those who survive will be coming out of the rubble wondering and asking what happened? We will first help them and then we will have to explain to them that what happened was that we didn't get a new building for science, because our request was not placed in high priority. I ask you to please consider our request for a new building for our Science Pathways and we ask that you please consider and place this humble request with a high priority.

Student Success Metrics: Pathway Completions

Pathway	Program Title	11-12	12-13	13-14	14-15	15-16	5-Year Totals
Biotechnology	Science					1	1
Chemical Technology	Science	4	6	6	3	8	27
Chemistry	Science	0	0	0	1	3	4
Process Technology	Science	0	4	5	5	7	21
Liberal Arts & Sciences: Natural Sciences	Science	7	31	44	47	90	219
Biotechnology	Science					2	2
Chemical Technology	Science	5	13	4	11	14	47
Process Technology	Science	1	4	3	6	8	22
					Degrees		**272**
					Certificates		71

Student Success	Totals
Degrees	272
Certificates	71
Completions (2011-2016)	343

Data: Pathway Labor Market Demand

SOC	Description	2017 Jobs	2022 Jobs	2017 - 2022 Change	2017 - 2022 % Change	Avg. Hourly Earnings	Annual Openings	Typical Entry Level Education
17-2011	Aerospace Engineers	4,155	4,004	(151)	(4%)	$61.36	116	Bachelor's degree
17-2051	Civil Engineers	8,156	8,553	397	5%	$46.95	327	Bachelor's degree
17-2071	Electrical Engineers	4,751	4,709	(42)	(1%)	$50.31	110	Bachelor's degree
17-2112	Industrial Engineers	6,548	6,413	(135)	(2%)	$49.43	194	Bachelor's degree
17-2131	Materials Engineers	684	679	(5)	(1%)	$48.33	25	Bachelor's degree
17-2141	Mechanical Engineers	6,700	6,766	66	1%	$47.52	231	Bachelor's degree
17-2199	Engineers, All Other	4,233	4,263	30	1%	$48.40	94	Bachelor's degree
17-3029	Engineering Technicians, Except Drafters, All Other	2,074	2,072	(2)	0%	$32.93	53	Associate's degree
19-4021	Biological Technicians	1,823	1,892	69	4%	$24.16	66	Bachelor's degree
19-4031	Chemical Technicians	1,245	1,259	14	1%	$22.08	40	Associate's degree
19-4099	Life, Physical, and Social Science Technicians, All Oth	1,940	2,030	90	5%	$23.09	102	Associate's degree
29-1062	Family and General Practitioners	6,508	6,649	141	2%	$86.83	225	Doctoral or professional degree
29-1071	Physician Assistants	3,096	3,531	435	14%	$44.89	164	Master's degree
29-1131	Veterinarians	1,516	1,611	95	6%	$55.60	49	Doctoral or professional degree
31-9091	Dental Assistants	12,718	13,543	825	6%	$18.65	492	Postsecondary nondegree award
31-9096	Veterinary Assistants and Laboratory Animal Caretak	3,469	3,713	244	7%	$13.86	124	High school diploma or equivalent
		69,617	71,686	2,069	3%	$43.64	2,411	