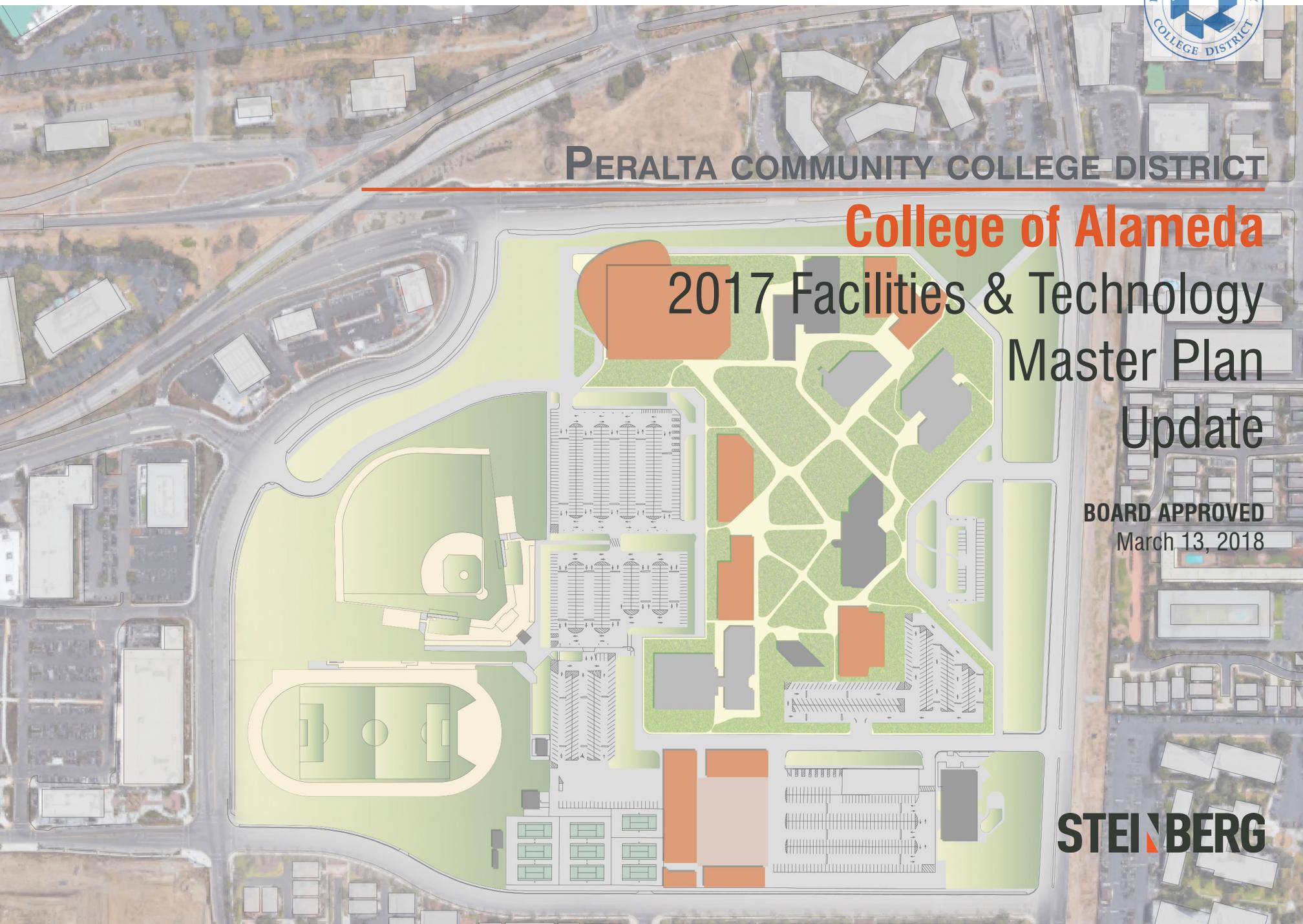**PERALTA COMMUNITY COLLEGE DISTRICT**

College of Alameda
2017 Facilities & Technology Master Plan Update

BOARD APPROVED
March 13, 2018

STEINBERG

MASTER PLAN TEAM

STEINBERG
Facilities Master Plan Architect

TEECOM
Technology Master Planner

CSW ST2
Infrastructure Master Planner

INTERFACE ENGINEERING
Mechanical, Electrical, Plumbing

CUMMING
Building Value Through Expertise
Preliminary Costing

Table of Contents

A NOTE FROM THE PRESIDENT

As College of Alameda we commit ourselves to our mission "to serve the educational needs of its diverse community by providing comprehensive and flexible programs and resources that empower students to achieve their goals." We continually strive to maintain our relevance to provide the best service possible to our students and community in a changing landscape. An important aspect of planning for our future is ensuring that our facilities align with our students' needs and best support their success.

To that end, we embarked on a facilities master plan. Our facilities are a physical expression of the college vision that we are a diverse, supportive, empowering learning community for seekers of knowledge. We are committed to providing a creative, ethical and inclusive environment in which students develop their abilities as thinkers, workers and citizens of the world. As a framework, the campus master plan creates additional opportunities for the campus community to plan for the future. Strategic planning will guide that work and will suggest additional areas of attention in academic program planning, strategic enrollment planning and an overall focus on student success.

Our facilities must be innovative, flexible and functional. This plan provides a blueprint for the future, for making wise decisions about building and renovation projects with one goal in mind: ensuring that we keep our students' needs front and center as we invest for the future. Thank you to our entire campus community for helping to create a shared vision from which to move forward.

Sincerely,
Timothy Karas, Ed.D
President, College of Alameda

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Executive Summary

OVERVIEW

College of Alameda (CoA) is one of four colleges in the Peralta Community College District, located on the island of Alameda, California. It has a main campus located at 555 Ralph Appezzato Memorial Parkway, an off-site shared facility at 860 Atlantic that houses the College's Science departments, and a satellite campus: the CoA Aviation Maintenance Training Facility located near Oakland Airport.

As an update to the 2009 Facilities Master Plan, the purpose of this Facilities Technology Master Plan Update (FTMP) is to analyze existing facilities and technology, and outline development goals that align with the current and future needs of College of Alameda, as identified in the College's 2016 Educational Master Plan.

To fully understand College of Alameda's needs and issues, a large and diverse set of stakeholders - students, faculty, staff and facilities personnel - participated in the Facilities & Technology Master Plan process through Online surveys, workshop discussions, meetings, campus forums, and presentations. The results of this extensive, investigative, and collaborative planning process are documented here, as follows:

Chapter One documents the FTMP purpose, process, vision, mission, and CoA's Educational Master Plan Goals. **Chapter Two** documents the existing conditions analysis, stakeholder feedback, and summarizes the facilities needs. **Chapter Three** documents the opportunities and constraints, the Facilities Master Plan, the complete Master Plan projects, and Priority projects.

The 2017 District-Wide Facilities and Technology Master Plan *(available under separate cover)* documents the Technology needs and projects (Technology Master Plan), the preliminary cost estimates (Cost Information), and the proposed Implementation Plan.

An **Appendix** *(available under separate cover)* documents back up materials from the College of Alameda process.

KEY DRIVERS FOR THE FTMP

The key drivers for the FTMP Update are:

- The needs arising out of the 2016 Educational Master Plan (EMP);
- In particular the need to increase student success, retention, transfer and completion;
- Also from the EMP, the needs arising out of 21st Century changing teaching and learning pedagogies;
- And the need to increase recruitment, and retention, of faculty since 50% of PCCD faculty and staff are within retirement age;
- The needs arising out of the existing condition of facilities, and infrastructure at College of Alameda (including Aviation Maintenance Training Facility);
- The needs arising out of the existing condition of technology; and
- Lack of Library space capacity for *current* demand.

KEY FINDINGS FROM 2016 EMPS

The 2016 Educational Master Plans' main focus/goal is to increase student success, retention, transfer, and completion in alignment with State Student Success Act (SB 1456). This is also the top strategic goal for the District, as identified in the 2015 PCCD Strategic Plan, and reflects the concern that by 2030, California will be short by 1.1 million college graduates if current trends persist (according to the Public Policy Institute of California (PPIC) Higher Education Center).
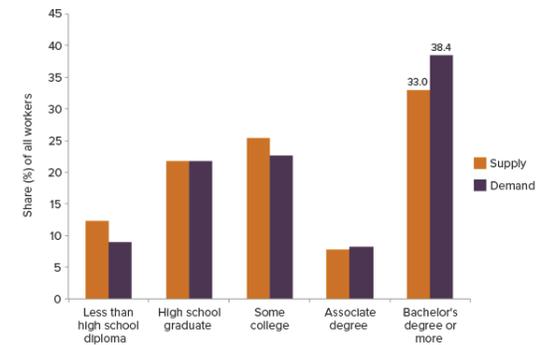
Source: Johnson, Cueller Mejia, and Bohn, *Will California Run Out of College Graduates?* (PPIC 2015)

The 2016 EMPs identify a 1.1% per year college area population growth rate, and a decline in students less than 25 years old, which means that for the next five years the College is growth neutral.

However, growth in the 24 - 34 age group offer opportunities for the PCCD colleges to enhance and re-design existing career technical education (CTE) programs and complementary CTE programming to cater to this population segment's needs for professional growth and career changes.

Other program enhancements/re-designs are needed to address the PCCD 2016 EMP Labor Market Gap Analysis Report, which identifies gaps between district's educational programs and high-wage/high-skill jobs available in the region.

There is also a need to develop non-credit to credit pathways for 16% of the adult population that is in need of career development and college preparation.

KEY FINDINGS FROM EXISTING CONDITIONS

The existing conditions analysis process identified that the existing facilities, technology and infrastructure are unable to support the 2016 Educational Master Plan goals due to:

- There is no need to increase capacity in the classrooms, and class labs space categories, BUT classrooms and class labs are outdated and cannot support the 21st century instruction and learning necessary for student success, retention, transfer and completion;
- There is a need to increase library space capacity;
- Aging facilities with failing systems requiring repair or replacement, like electrical and air-conditioning;
- Significant number of instructional and student spaces located in buildings past their useful life;
- Student services impaired by dispersed locations and inadequate space to accommodate functions;
- Science programs located off-campus creating obstacles to student success and retention; and
- Underground infrastructure in poor condition.

Per the Chancellor's FUSION Facilities Condition Index (FCI) ratings,

91%

of buildings at COA require renovation or replacement.

FACILITIES TECHNOLOGY MASTER PLAN DEVELOPMENT

Based on the 2016 Education Master Plan, Institutional Goals, and Facilities Assessments, campus stakeholders identified the following as their key priorities for the 2017 Facilities and Technology Master Plan:

- Replace/repair and address all infrastructure issues for the Main Campus, Aviation Facility and within Buildings
- Reconfigure, renovate and relocate instructional spaces as necessary to meet 21st Century Teaching Pedagogies
- Relocate Science programs back on the Main Campus
- Address Student Services needs for Veterans Center and DSPS (students with disabilities)
- Enhance resources/connections with the Community

These priorities helped guide the development of the master plan, as did all data gathered and analyzed. The 2017 Facilities and Technology Master Plan Update recommends demolitions, new construction, modernizations, technology projects, as well as infrastructure and site improvement projects. The majority of these projects were identified in the previous master plan, although some of the details for them may be different in this FTMP update. A graphic depiction of the 2017 Facilities Master Plan (showing all projects) may be found on page 31. On the right you will find the Priority Projects list, and its corresponding graphic Master Plan on the following page.

SUSTAINABILITY AND RESILIENCY

Both Peralta CCD and College of Alameda are deeply committed to sustainability and total cost of ownership. To that effect, Peralta CCD has created a 2017 Sustainability and Resiliency Master Plan (SRMP) that will guide the execution of all future facilities and infrastructure projects, to achieve District Sustainability and Resiliency Goals. All FTMP projects, from infrastructure replacement, site improvements, demolitions, renovations and new construction will need to be developed utilizing the guidelines and recommendations within the SRMP.

MASTER PLAN PRIORITY PROJECTS

The campus stakeholders prioritized Facilities Projects as listed below and shown on the opposite page:

	INFRASTRUCTURE
A1	Replace All Campus Major Electrical Equipment
A2	Upgrade / Replace Central Heating Hot Water Plant
A3	Civil Infrastructure Replacements

	FACILITIES*
A4	**C/D Replacement: Science & Administration**
A5	**Aviation Complex (Replacement)****
A6	**Automotive/Diesel Complex (Replacement)**
A7	**Performing Arts**
A9	**Modernize Student Center Building F**

	TECHNOLOGY
A14	Main Campus Complete Wi-Fi Deployment
A15	Main Campus Complete Network Upgrade Project
A16	Aviation Site Complete Wi-Fi Deployment
A17	Aviation Site Complete Network Upgrade Project

* Bolded Projects are depicted on the Master Plan
** Courtesy of JRDV Urban International

FTMP PROJECT COSTS AND IMPLEMENTATION

Please see District-Wide FTMP for complete details.

Priority Projects Facilities Master Plan (Inset: Aviation Campus)

Webster Street

A7

performing arts drop-off

A4

A9

campus green

A2

Willie Stargell Avenue

Ralph Appezzato Memorial Parkway

A6

A5

LEGEND
New Facility/Addition
Renovation Project
Existing to Remain

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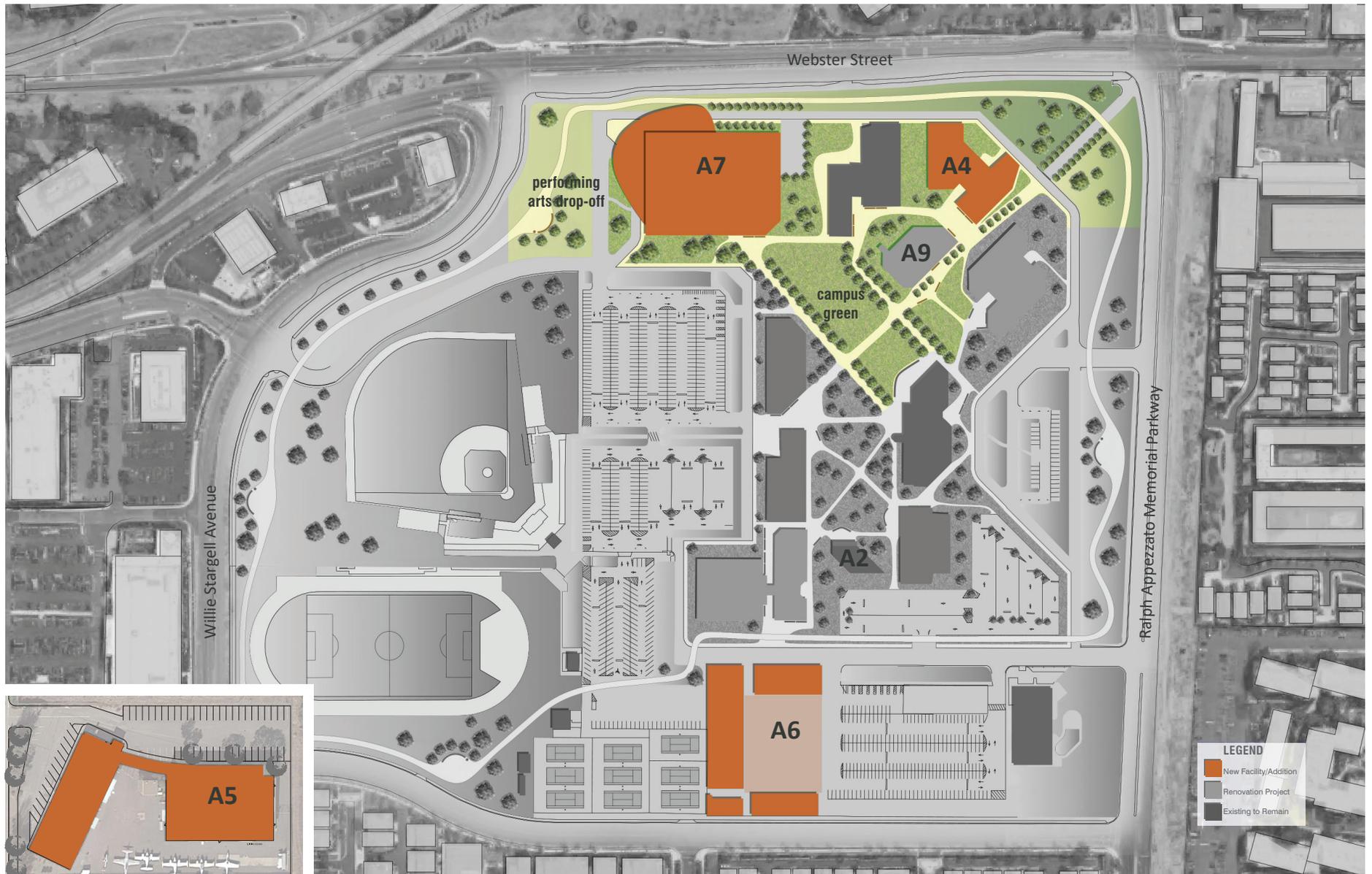
1.0 Introduction

PURPOSE

The purpose of the College of Alameda 2017 Facilities and Technology Master Plan Update (FTMP) is to update the previous Campus Facilities Master Plan (FMP) for:

- Alignment with the 2016 Educational Master Plan
- Alignment with the District Strategic Goals
- Changes experienced by the College since the last facilities master plan was developed
- Identify and integrate Infrastructure needs
- Identify and integrate Technology needs
- Prioritize projects for a first phase of implementation

THIS 2017 FTMP AND PREVIOUS FMPS

The 2017 Facilities and Technology Master Plan Update works in conjunction with the College of Alameda 2009 Facilities Master Plan in that aspects not covered in this update are still applicable.

The 2017 FTMP Update does supersede the previous FMP in the following aspects:

- Master plan projects defined here supersede previous master plan projects
- The infrastructure and building assessments from 2009 and the State provided FUSION 2016 assessments were re-analyzed, so the assessments ranking provided here supersedes previous rankings
- Space Capacity analysis is based on 2016 data, and therefore supersedes previous space capacity data

PROCESS

The 2017 FTMP process was a shared governance process led by Steinberg from March 2017 through December 2017. The process included Online surveys to reach a diversity of stakeholders, meetings with Facilities Planning Committees and Technology Committees, and multiple campus forums open to students, staff, faculty and administration.

MISSION

The Mission of College of Alameda is to serve the educational needs of its diverse community by providing comprehensive and flexible programs and resources that empower students to achieve their goals.

VISION

The Vision of College of Alameda is that we are a diverse, supportive, empowering learning community for seekers of knowledge. We are committed to providing a creative, ethical and inclusive environment in which students develop their abilities as thinkers, worked and citizens of the world.

2016 EDUCATIONAL MASTER PLAN GOALS

- **Goal One:** increase access to college programs / coursework through collaboration with other PCCD colleges in redesigning college schedules and offerings.
- **Goal Two:** reduce loss of students prior to start of classes.
- **Goal Three:** increase retention and persistence rates.
- **Goal Four:** increase community and educational partnerships.
- **Goal Five:** strengthen business and industry partnerships.
- **Goal Six:** advance CoA teaching and learning.
- **Goal Seven:** strengthen Data-driven/ informed decision making.
- **Goal Eight:** establish integrated planning and evaluation system.
- **Goal Nine:** design organizational, committee, and governance structures to support student success.
- **Goal Ten:** engage in redesign of PCCD policies and procedures, including the Budget Allocation Model (BAM).

2.0 Data Analysis & Needs

PROCESS

There are three types of information required to make informed decisions on master planning and future facilities improvements: reliable data, first hand feedback from the users of the facilities, and industry established trends in the delivery of education. To that effect, this first phase involved three concurrent efforts which informed one another: space capacity analysis, campus condition analysis, and a multi-faceted approach for gathering stakeholder feedback. The process and outcomes of these three efforts are document-ed in the following pages.

Figure 2.1: Existing Main Campus Site Plan (Inset: Aviation Campus)
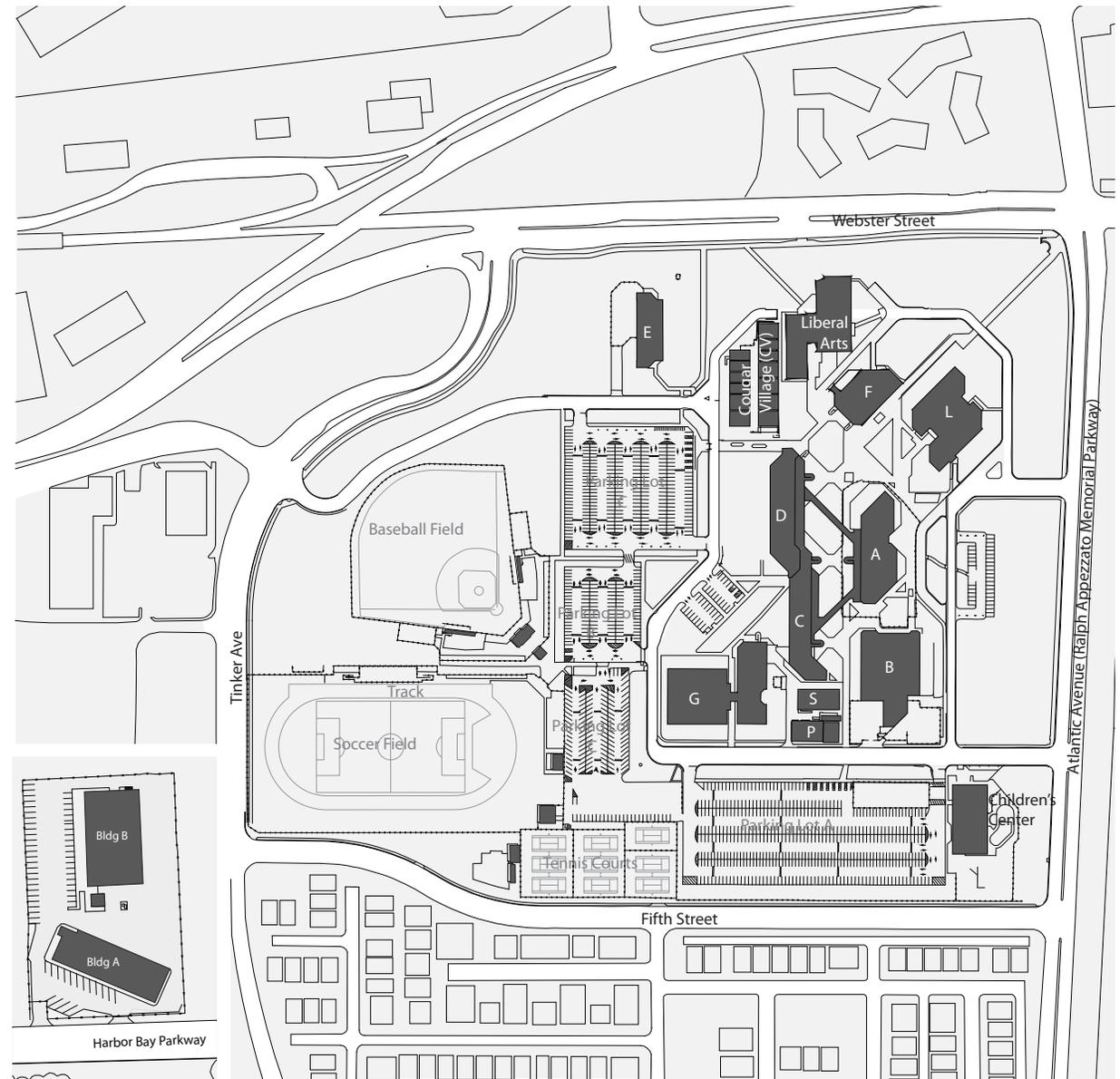
CAPACITY LOAD ANALYSIS
What Does the State Monitor?

Although there are a variety of spaces on a college campus, the State has established sizing[1] criteria and capacity[2] calculations for only six categories of spaces. These criteria are described in the Title 5 California Code of Regulations[3] (often abbreviated to just Title 5).

The Title 5 six categories are:

- Classrooms (the State gives these spaces Room Use codes in the 100s)
- Class Laboratories (Room Use codes in the 200s)
- Office (Room Use codes in the 300s)
- Library (Room Use codes in the 400s)
- Audiovisual/Television, known as AV/TV (Room Use code 530 and 535 only)
- Child Development Centers

Five of the categories have criteria that is tied to student enrollment and quantity of faculty and staff, and is monitored annually by the State. The sixth category, Child Development Centers requires program approval by the State, and the approval stipulates the criteria for the size and capacity of the Child Development Center.

CAPACITY LOAD ANALYSIS
How Does the College Fare?

Based on the State Title 5 Criteria, the State's projected student enrollments for College of Alameda, and the College's faculty and staff forecasting, College of Alameda is overbuilt by a total of 22,102 ASF[1] in 2023. Given the length of time facilities projects take, a District always needs to be looking at the required campus capacities five - six years from now.

Per the projected enrollment and forecasting, the 2023 space needs shows:

- Overbuilt in Lecture Classrooms (abbr. Classrooms)
- Overbuilt in Class Laboratories (abbr. Class Lab)
- On target with Offices
- Under-built in Library spaces
- Significantly under in Audiovisual/TV (abbr. AV/TV)

Note, the State is concerned with District totals, not the individual campus totals, which leaves some discretion for the District to offset overages and/or allocate missing capacity according to the campus location where it is most needed.

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1   Sizing refers to the total amount of ASF that the College can have of that type of space category. ASF stands for Assignable Square Feet, and it is the square footage of a space (or room) for assignment to occupants for a specific functional purpose. It includes the circulation space within the room but not the walls, in other words the clear inside dimensions of the room/space.
2   Capacity refers to the how many students the room can accommodate for Classrooms, Class Laboratories, Library and AV/TV, and how many Faculty/Staff/Administrators and Counselors for Offices. The State uses different mechanisms to calculate these, some of which are discussed later in this Chapter.
3   The California Community College's Board of Governors is responsible for approving Title 5 regulations, and the California Community Colleges Chancellor's Office (CCCCO) is responsible for implementation and compliance.

Figure 2.2: Capacity Load Analysis

ALAMEDA	Lecture ASF	Lab ASF	Office ASF	Library ASF	AV/TV ASF
EXISTING ASF	27,134	84,976	25,309	21,740	3,539
Fall 2017 NEEDED ASF	13,719	52,533	22,540	22,588	5,671
ASF Difference	13,415	32,443	2,769	-848	-2,132
Percentage Difference	198%	162%	112%	96%	62%
Fall 2023 NEEDED ASF	17,210	68,493	24,920	24,183	5,790
2023 ASF Difference	**9,924**	**16,483**	**389**	**-2,443**	**-2,251**
2023 Percentage Difference	**158%**	**124%**	**102%**	**90%**	**61%**

CAPACITY LOAD ANALYSIS
Considerations Regarding the State Data

It is important to understand that the State has not revised its Title 5 criteria regarding sizing and capacity for these five categories in over 40 years. In that time frame very significant changes have happened:

LECTURE CLASSROOMS

Lecture Classroom[1] sizing criteria provides a range of 11.5 to 25 ASF per student, however the State capacity computation is based on an average of 15 ASF/student. As such, the range results in fewer classrooms if a campus chooses to use anything above 15 ASF/student, which impacts the number of concurrent classes that can be held.

Realities the State Computation does not address:
- Current California Building Code requires a minimum of 20 ASF per student per classroom, anything below this is not complying with the Code.
- Standard tablet arm lecture spaces and tiered lecture spaces (that result in 15 ASF or less per student) are no longer the norm. Most programs require group work; many require flexibility to have students sit individually and grouped; others require some computers, or other equipment, within the room. The ability to accommodate these needs requires all classrooms to be in the 20 - 25 ASF per student range.
- ADA regulations apply, requiring larger aisles between rows of seating, in addition to seating areas large enough to accommodate wheelchairs.
- Regarding capacity, the State computations do not align with community college student enrollment patterns – they expect to see rooms occupied from 8 am till 10 pm Monday through Friday, yet majority of Community College students are part-time coming either in the mornings or evenings, and not in the afternoon.

Per State calculations College of Alameda is over in lecture classrooms. The expectation is that while there will be some reduction in total number of classrooms, new classrooms and many existing classrooms need to be reconfigured to address the multiple issues outlined above, and as such they will be sized larger.

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1 Classroom is a space used for classes that do not require special purpose equipment for student use.

CLASS LABORATORIES

Class Laboratories[1] sizing criteria is based on the program, so as an example Mathematics (computer) labs get 35 ASF per student, Physics gets 60 ASF and Automotive Technology gets 200 ASF. Furthermore, the areas for the support spaces such as Physics prep and stock rooms, and Automotive tool rooms and painting booths, are calculated within the 60 ASF for Physics, and the 200 ASF for Automotive.

Changes in the last 40 years since criteria was developed:
- Most disciplines have more, and often larger, equipment both within the lab, and the support spaces.
- ADA regulations apply to class laboratories as well.
- Some programs need to conduct the lecture portion of their course within the lab itself, or in a dedicated room adjacent to the lab, due to equipment and materials required for the instructor's demonstration. This means that the class lab needs to not only accommodate one student per equipment item, but also an area within the room where all students can sit together around a whiteboard/projection screen and listen to the instructor's lecture. The State' sizing does not account such space.
- Many disciplines now have computer based instruction in addition to the traditional methods of teaching that program. Examples include Art, Photography, Music.
- Other disciplines were previously taught in lecture classrooms only, but now use computers periodically as well. Examples include Journalism, Mathematics, Foreign Languages etc.
- Regarding capacity, the State computations do not align with community college student enrollment patterns see last bullet under classrooms.

Per State calculations College of Alameda is over in class labs and, the expectation is that while there will be some consolidation there will be some net increases due to changes in teaching pedagogy, and waiting lists for Science related programs and certain Career Technical Education (CTE) programs.

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1 Class Laboratory is a space designed for and/or furnished with special purpose equipment (including computers for student use) to serve the needs of a particular discipline for group instruction in regularly scheduled classes.

OFFICE

Office category sizing criteria was based on a time when there were no computers, a significant amount of occupants were in cubicles, which in turn were not sized with disabled access requirements in mind (now a code requirement).

Changes in the last 40 years since criteria was developed:
- We have computers and more equipment to house (printers, copiers etc.) in offices.
- Most faculty and staff require private offices to maintain student confidentiality, due to State privacy regulations.
- Both cubicles and offices have to be larger to accommodate wheelchairs, per California Building Code ADA (American Disabilities Act) regulations.
- Faculty hiring has changed, with a movement away from predominantly full-time faculty to less full-time and more adjunct part-time faculty. While it is feasible for part-time faculty to share offices while they work on campus, the issue is when their office hours for students overlap. Aside from the noise issues with having two different sets of faculty and students talking in the same office, the more significant issue is that with the existing State criteria there is not enough space to accommodate the two different sets of faculty and students in the same space.
- There are far more counselors needed today (related to both student success and support programs and mental health specialists).

College of Alameda is on target with office space, and the expectation is that it will need to add some additional meeting/support space to address the issues outlined above.

CAPACITY LOAD ANALYSIS
Considerations Regarding the State Data

LIBRARY

Library category sizing criteria is based on traditional book libraries with no computers (one of the library sub categories was called "Carrels" and the State only revised the terminology to "Electronic Carrels"), and before tutoring and cohort groups came into existence.

Changes in the last 40 years since criteria was developed:
- Libraries are heavily computer based.
- There has been a dramatic increase in the need for tutoring services driven by State mandates focused on student success[1], basic skills and student equity.
- There has been a decline in student preparedness for College resulting in increased demand for basic skills and associated tutoring.
- There has also been an increased need to have decentralized study areas dedicated to particular cohort groups, located adjacent to the support services provided to that group (e.g. STEM Center, Veterans Center etc.). Studies have shown that doing so significantly increases the chances for student success.
- Changes in teaching pedagogy has also resulted in a sharp rise in group project assignments requiring more group study rooms for students to meet and complete these assignments while on campus (having no residential halls as an alternative place to meet).

College of Alameda is under-built in library space and the expectation is that it will add some library space.

AV/TV - AUDIOVISUAL TELEVISION

AV/TV category sizing criteria is based on both Radio/TV teaching programs, and AV rooms that housed overhead projectors and TVs and VCRs on rolling carts.

Changes in the last 40 years since criteria was developed:
- Radio/TV programs are in decline and typically require smaller footprints due to digitalization and smaller equipment.
- Overhead projectors, TVs and VCRs have been replaced with ceiling mounted projectors within teaching spaces.

Given the above, it is not a surprise that College of Alameda is significantly under in this category, and the expectation is that it will not need to build any significant amount of space in this category.

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1   Student Success is defined by how many students complete their college courses, persist to the next academic term, and achieve their educational objectives. The goal of the Student Success and Support Program & Student Equity Plan is to ensure that all students are able to achieve this through the assistance of student support programs offered by the College.

SPACE ANALYSIS
Teaching Pedagogies affecting Classrooms

There have been many changes in teaching pedagogies over the last several decades. Some of it is driven by technology (which continues to evolve at an ever-changing rapid pace) but, it is also driven by research into the ways students learn best. That research shows that students learn when they not only read, hear and see, but when they also experience and teach. The combination of these is often called "active learning" which is defined as "those instructional activities involving students in doing and thinking about what they are doing."[1] The FTMP update Online survey respondents echo this research, with 68% of respondents saying they learn and teach best with a combination of lecture, small group and hands on activities.

The 2016 Educational Master Plan indicated the need for College of Alameda's facilities to accommodate both current and future teaching pedagogies. Although future teaching pedagogies and future technology can be hard to predict, one method of preparing for the future is to build flexible spaces. Luckily, active learning spaces that are needed now are all about flexibility: the ability to reconfigure the room for multiple different activities. To do this they require more space per student (20 - 26 ASF per student), more writable surfaces (that can double up as projectable surfaces), and furniture that can be versatile. Very few existing classrooms at College of Alameda meet these requirements.

The majority of the classrooms and class labs at College of Alameda are in need of reconfiguration and modernization for:

- Technology
- Sizing – area / per student, disabled access and appropriate code clearances at lab equipment
- Sizing – # of student chairs
- New lab equipment & more writing Surfaces
- Furniture - comfortable and flexible
- Flexibility / Adaptability to accommodate Hands On, Lecture and Group work.

On the next pages we outline some examples of how modern teaching pedagogies have impacted campus spaces.

1   Active Learning definition by Bowell, C., & Eison, J. (1991) Active learning: Creating excitement in the classroom AEHE-ERIC higher education report No. 1.

SETTING THE STAGE FOR INNOVATION Today's Learners

10%	20%	30%	50%	70%	90%
Read	Hear	See	Read Hear See	Read Hear See Experience	KNOWLEDGE RETAINED / Read Hear See Experience Teach

Studies support the idea that learning is facilitated through hands-on, inter-disciplinary, and experiential projects.
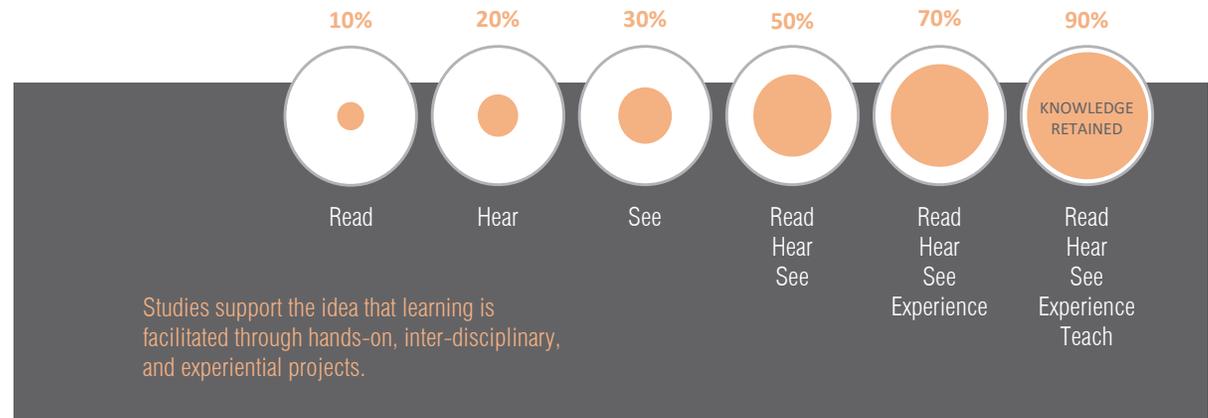
Hands On Lecture Small Group

68%

of respondents think that these three methods are the most effective way of teaching and learning

SPACE ANALYSIS
Tiered Lecture Classrooms

Semi-circle layout facilitates class discussion, but to accommodate group work, the lecture classroom needs tables (versus tablet chairs and there needs to be two tables per tier (students in front row of tier turn around and collaborate with students in row behind them).

Layout requires 20 to 25 square feet per student.

Modern audiovisual systems means that these rooms can have daylighting, which research indicates improves student learning.

Typical for Today's Teaching Pedagogies (below)
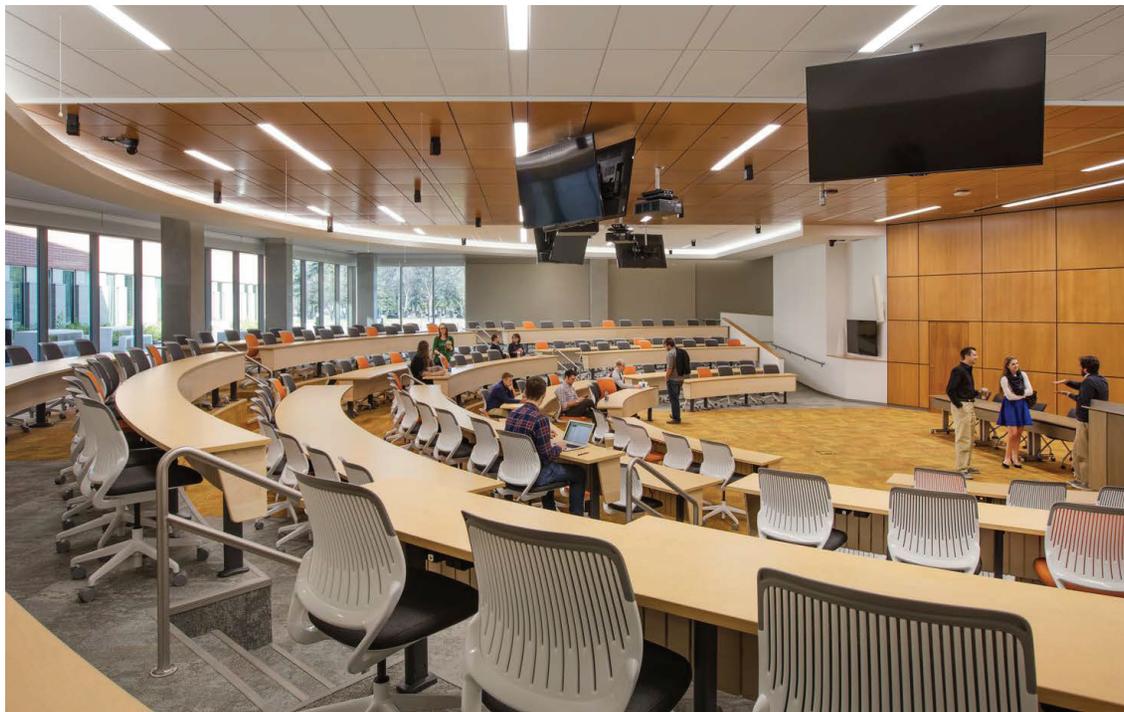
SPACE ANALYSIS
Tablet Arm Classrooms

Again reflecting the need for interactive classrooms, tablet chair classrooms have changed in that the tablet arm chairs are now mobile, permitting collaboration as well as lectures. Modern tablet arm chairs are also sized bigger in both the chair (reflecting the change in people's sizes) and tablet (to accommodate digital devices in addition to notebook).

Rooms typically have writable walls all around for both projection and collaboration in different classroom formations.

Layout requires 20 to 24 square feet per student.
Typically used for small class sizes (20 - 25 students)

Typical for Today's Teaching Pedagogies
(below)

Writable Wall

Smart Short-Throw Projector
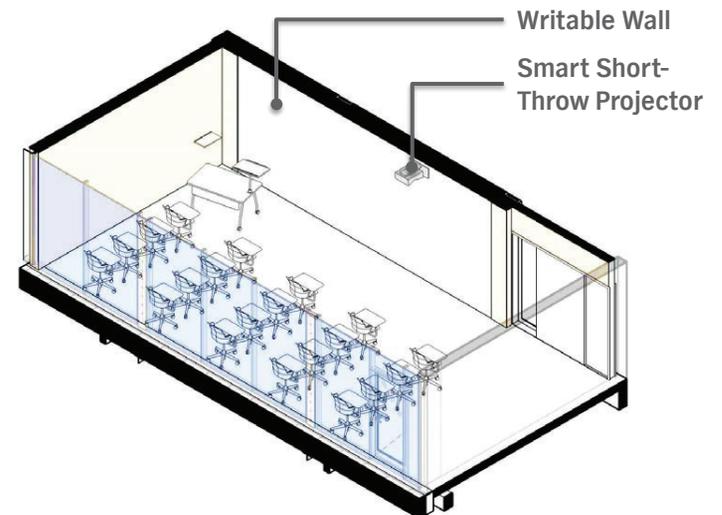
SPACE ANALYSIS
Table Chair Classrooms

Quickly move between class discussion & group work. Mobile tables and chairs accommodate different teaching style set ups with relative ease. Interactive projectors & writable walls for group work.

Layout requires 26 square feet per student.
Typically used for small to medium class sizes.

Typical for Today's Teaching Pedagogies (below)

Writable Wall

Smart Short-Throw Projector

Writable Wall

Smart Short-Throw Projector
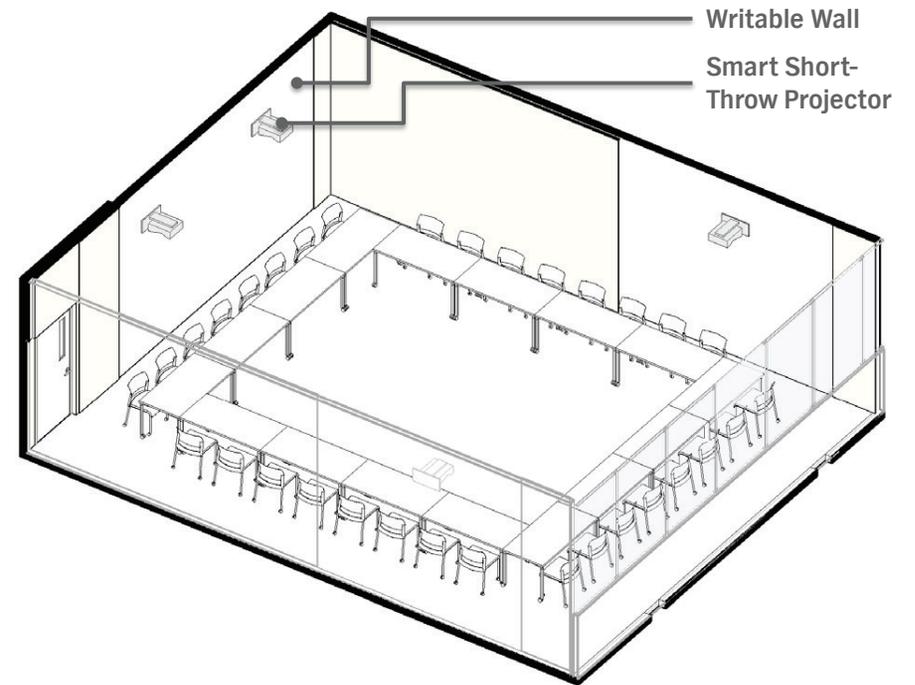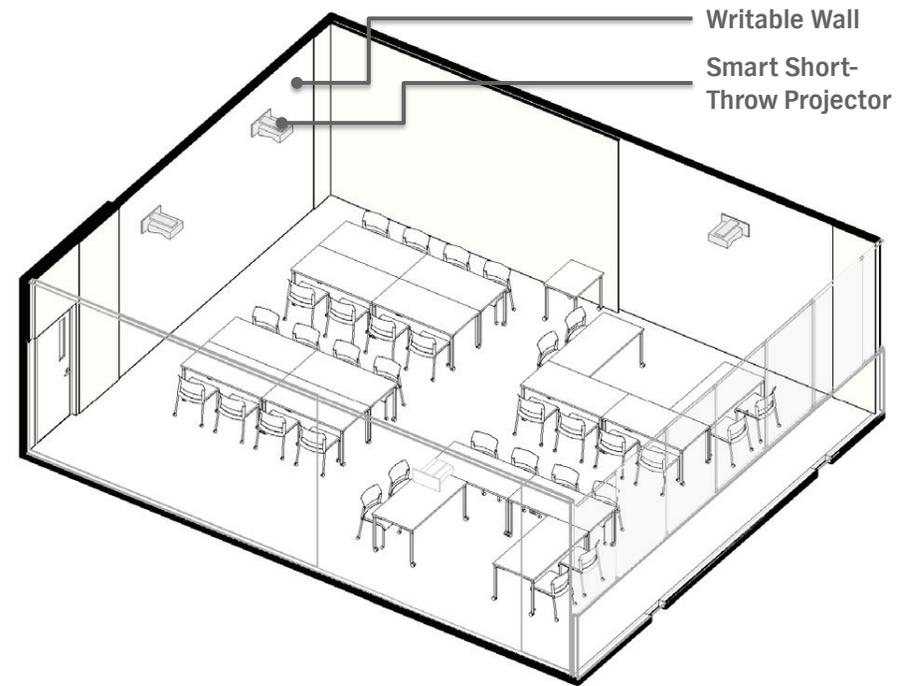
SPACE ANALYSIS
Collaboration Spaces near Classrooms & Offices

Longstanding research has shown that the majority of student learning happens outside of the classroom setting, with a fair amount arising from peer to peer learning. Fairly recent research has shown that locating collaboration spaces in close proximity to classrooms and faculty offices enhances this type of learning by providing immediate opportunities to continue classroom discussions and faculty assistance.

These spaces feature expansive writable walls and comfortable seating.

Typical for Today's Teaching Pedagogies
(below)
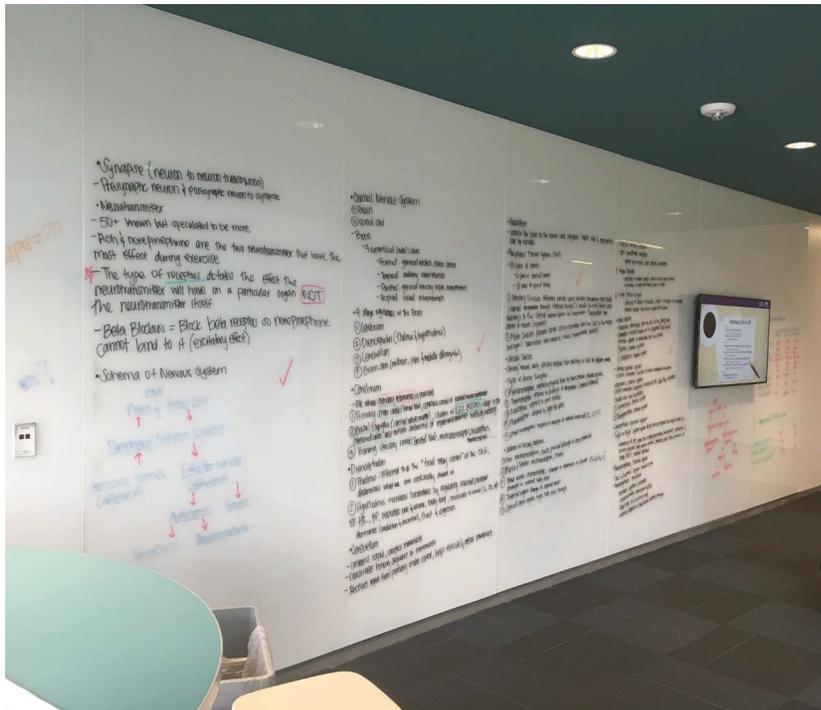
SPACE ANALYSIS
Other Space Considerations

CLASS LABORATORIES

As previously indicated there have been a number of changes affecting class lab layouts. Code requirements for the safe handling of equipment and materials, along with disabled access requirements have generally resulted in increased area requirements per student.

A number of disciplines also have breakout lecture sessions during laboratory class time, necessitating the need to either have dedicated classrooms adjacent to these laboratories or providing a space within the laboratory itself where students can gather around a projector/white board for traditional "mini" lecture sessions.

In other fields, like automotive and diesel technology, advances in technology (alternative fuels, air emissions etc,) have created changes in the methods of teaching and the tools and equipment used in the industry today, resulting in the need for space reconfiguration.

CAMPUS CONDITION ANALYSIS
Buildings

To understand the condition of the buildings the master planning team:

- Reviewed State provided data (via FUSION) on Facilities Conditions. This includes written assessments from 2016 and a Facilities Condition Index from 2017
- Reviewed the District provided 2009 Building Assessments (no new site or building observations were made by this team)
- Reviewed the September 2017 District provided Roof Replacement and Leaks documentation
- Reviewed the March 2017 District provided Accessibility Reports (where available) for big picture condition (i.e. not room by room as detailed in reports)
- Performed selective review of Structural Assessments based on the District provided 2009 Structural Assessments

Per the Chancellor's FUSION Facilities Condition Index (FCI) ratings,

91%

of buildings at COA require renovation or replacement.

STATE FACILITY CONDITION INDEX

The State Facilities Condition Index (FCI) is a measure of the condition of a building relative to the replacement cost of the building. FCI does not measure the suitability or functionality of spaces.

$$FCI\% = \frac{current\ repair\ cost}{replacement\ cost}$$

Image on the right, the colors represent:
Blue = Good (Repair Costs less than 10% of Replacement)
Green = Fair (Repair Costs between 10 - 50% of Replacement)
Yellow = Poor (Repair Costs between 50 - 90% of Replacement)
Red = Very Poor (Repair Costs over 90% of Replacement)

Figure 2.3: State Facility Condition Index

Fusion - Building FCI

0	(white)
<10	(blue)
<50	(green)
<90	(yellow)
>90	(red)

Figure 2.4: Building Assessments Analysis

	Electrical Distribution System	Emergency Distribution System	Lighting Systems	Fire Alarm System	HVAC Equipment	HVAC Ducts & Air Distribution	HVAC Piping	Plumbing Fixtures	Plumbing Piping	Architectural[1]	Roofing[2]
860 Atlantic Avenue[3]	8	8	8		3	3	3				
Aviation Facility	3		3	5	1	1	1	1	1	4	1
A Building	8	8	8		3	3	3			8	4
B Building	3	4	4	5	1	1	3	3	6	4	3
C Building	3	3	4	5	2	2	1	4	7	4	1
Child Care Center					4	4	4	3	5	6	1
Cougar Village	7		7	6							
D Building	3	3	4	5	1	1	2	4	4	4	1
E Building					1	1	2	4	6	4	3
F Building	3	3	4	5	2	1	3	7	6	6	1
G Building	3	3	4	5	1	1	1	5	5	5	4
L Building	3	3	3	5	3	3	1	6	7	5	2

[1] Architectural ranking does not include teaching/learning set up of rooms: See separate discussion regarding teaching/learning observations

[2] Roofing information per District Vendor Information

[3] No 2009 Assessments, only 2016 FUSION Assessments to go on

Legend

1	2	3	4	5	6	7	8	9	10

Bad Condition

Antiquated System - End of Useful Life

Needs to be Replaced

Good Condition

Like New

Not Applicable or

No prior Assessments
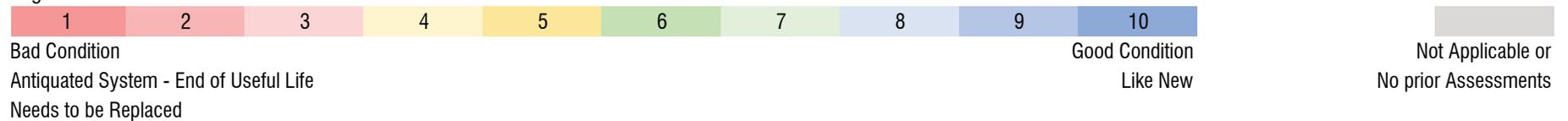
CAMPUS CONDITION ANALYSIS
Buildings Assessments

OVERALL BUILDINGS ANALYSIS OVERVIEW

Our team analyzed previous assessments provided by the District: facilities assessments from 2009, and State (FUSION) facilities assessment from 2016. Taking into consideration any information provided by the District with regards to any improvements that were done since 2009, the team factored in the additional age and wear in updating the assessments. The results are depicted in the table to the left. The scale goes from 1 (red) to 10 (blue), with "1" being bad condition, end of useful life, needing to be replaced; to "10" being in good condition, like new.

The assessments indicate that all buildings except the Child Care Center have mechanical systems at, or near, the end of their useful life. The electrical, lighting and plumbing systems are also in poor condition in the majority of these buildings. Keeping and repairing these antiquated systems (which often no longer have available parts) costs the District more money than necessary in capital operating costs. Replacing these systems with ones that are not only less taxing on maintenance resources, but are also more energy and water efficient will contribute to a more sustainable management of resources, which is both a District-wide and a College goal.

ELECTRICAL MAJOR FINDINGS

Assessments from 2009 still apply, summarized below.

Applies to both Aviation and Main Campus: electrical equipment is over 40 years old and exceeds the Manufacturer's recommended service life of 25 years. Most of the original electrical equipment, while in working condition, is antiquated and without the capacity to accommodate additional loads. Working clearances around most electrical distribution equipment do not comply with the current electrical codes, and the interior lighting utilizes fluorescent luminaries with T12 lamps that are not energy efficient. Lighting switches are installed at +54" AFF (non-ADA complaint). No GFCI receptacles installed at all sink locations or rooftops, and no receptacles installed within 25 feet of all HVAC equipment as required by the current electrical codes.

See Appendix for more detailed information.

ELECTRICAL MAJOR NEEDS

In light of the assessments we recommend:
- Replacement of all antiquated distribution equipment (including main 3000A switchboard) with new equipment. New distribution equipment to accommodate remodeled and new program spaces.
- Replacement of existing lighting with new energy-efficient luminaries and add occupancy sensors and lighting controls.
- Upgrade of egress lighting system as necessary to meet current codes.
- All new lighting switches and occupancy sensors to be located at 48" AFF (above finish floor) to meet ADA requirements.
- Installation of systems to accurately monitor energy use and system performance.

MECHANICAL & PLUMBING MAJOR FINDINGS

Assessments from 2009 still apply, summarized below.

Aviation Facility: the supply and exhaust fans, ductwork and hydronic piping systems are past their service life. These systems will leak as they age creating both maintenance problems and reductions in energy efficiency. Units that are way past their service life should be replaced in their entirety with units of same or larger capacity. Due to the age of the exhaust fans, we recommend complete replacement of all units. The plumbing fixtures should be replaced in their entirety. All existing domestic hot waters that are beyond their service life should be replaced and reconnected to the main domestic hot water system. All existing hot water circulating pumps should be replaced with new.

Main Campus Central Plant: the College of Alameda has campus-wide primary, secondary and tertiary heating hot water system (hydronic) that originates from the Boiler Room located in Building C. Three packaged boilers manufactured in 1976, with input rating of 10,400 MBH, service the heating hot water system. These systems are beyond their useful life and should be replaced with larger capacity.

Main Campus: Majority of the mechanical equipment is almost 40 years old and exceed the ASHRAE recommended service life. Air conditioning is very scarce throughout the campus. Not including the IT closets, there's a small number of spaces that are equipped with air conditioning. Most of the original mechanical equipment, while is antiquated and without the capacity to accommodate additional loads. Most of the buildings are not fully fire sprinklered. Some do not have any fire sprinklers. Existing water heaters are aged and need replacement.

See Appendix for more detailed information.

MECHANICAL MAJOR NEEDS

Based on the assessments we recommend:
- Major Upgrade for a new Central Heating Hot Water Plant for a larger capacity (30,000 MBH).

Within the existing old buildings, the needs are:
- Demolition of all existing HVAC systems in mechanical penthouses and replacement of air handlers; ductwork; hot and chilled water piping/connections; diffusers; and, controls.

PLUMBING MAJOR NEEDS

In light of the assessments we recommend:
- Demolition and replacement of all existing older plumbing fixtures within buildings with low water consumption fixtures.
- Replace domestic hot water heaters in Aviation Facility.

CAMPUS CONDITION ANALYSIS
Buildings Assessments

ARCHITECTURAL
Although numerous spaces within buildings are in need of floor, wall, and ceiling repairs/replacements, the driving force behind architectural needs are the current teaching pedagogies that require a number of teaching spaces to be overhauled (see previous section), and accessibility issues. Almost all restrooms have accessibility concerns.

ROOFING
Based on a roof installation/warranty report provided by the District, a number of buildings at College of Alameda are due to have their roofs replaced. The aged condition of these roofs may explain some of the leaks being encountered at some of these buildings on the campus. However, Buildings A, G and the S portables (Alameda Science Technology Institute and Career Center) have also encountered leaks. The former two are due for roof replacement in 6-8 years. The replacement of roofing should be coordinated with the structural roof work required, as indicated in the structural assessments that follow.

ACCESSIBILITY
The accessibility report identified access issues for all buildings and the site. The majority of the concerns pertain to doors and restrooms, with the biggest one pertaining to the elevator in Building L, which is too small by current Accessibility (ADA) codes.

CAMPUS CONDITION ANALYSIS
Technology Assessments & Needs

Please refer to the District-Wide FTMP for detail on technology assessments, needs, telecommunications standards, and audiovisual systems design guidelines as they apply to College of Alameda, and to the District as a whole. Inclusive of all the needs are the Audiovisual components for various spaces and most importantly classroom technologies for a variety of classroom types.

CAMPUS CONDITION ANALYSIS
Way-finding and Signage

Way-finding at College of Alameda is very challenging: a number of buildings are similar looking, buildings do not have clear entries, and the signage is lacking both in quantity, clarity and consistency. The District should develop and implement a district wide signage program that is consistent across the District for many Peralta CCD students attend more than one campus, and a consistent standard would help way-finding.

Figure 2.5: Proposed Audiovisual Capabilities per Room Type

Room Type	Single Display	Multiple Display	Projector and Screen	Laptop / BYOD Presentation	Local Dedicated Computer Presentation	Video Capture / Recording	Distance Education	Overflow to Adjacency or Huddle Space	Voice Amplification / Audience Participation	Assisted Listening	Control Touch Panel / Keypad	Room Scheduler / Roster	Local AV Furniture / Lectern / Teaching Station	Annotation Board	Wireless Microphones	Beamforming Microphone	Broadcasting Connectivity
Small Classrooms	x			x		x	x				x	x	x	x			
Medium Classrooms		x	x	x		x	x				x	x	x	x			
Large Classrooms		x	x	x		x	x	x	x	x	x	x	x	x	x		
Breakout/Huddle/Overflow	x			x		x					x	x					
Auditoriums/Lecture Halls		x	x			x	x		x	x	x	x	x	x	x		
All-Hands Spaces		x		x		x	x		x		x	x	x	x	x		
Conference / Meeting	x			x	x	x					x	x	x	x		x	
Athletic Facility		x	x	x	x	x	x	x	x	x	x		x	x	x	x	x

Summary of Capabilities per Room Type

CAMPUS CONDITION ANALYSIS
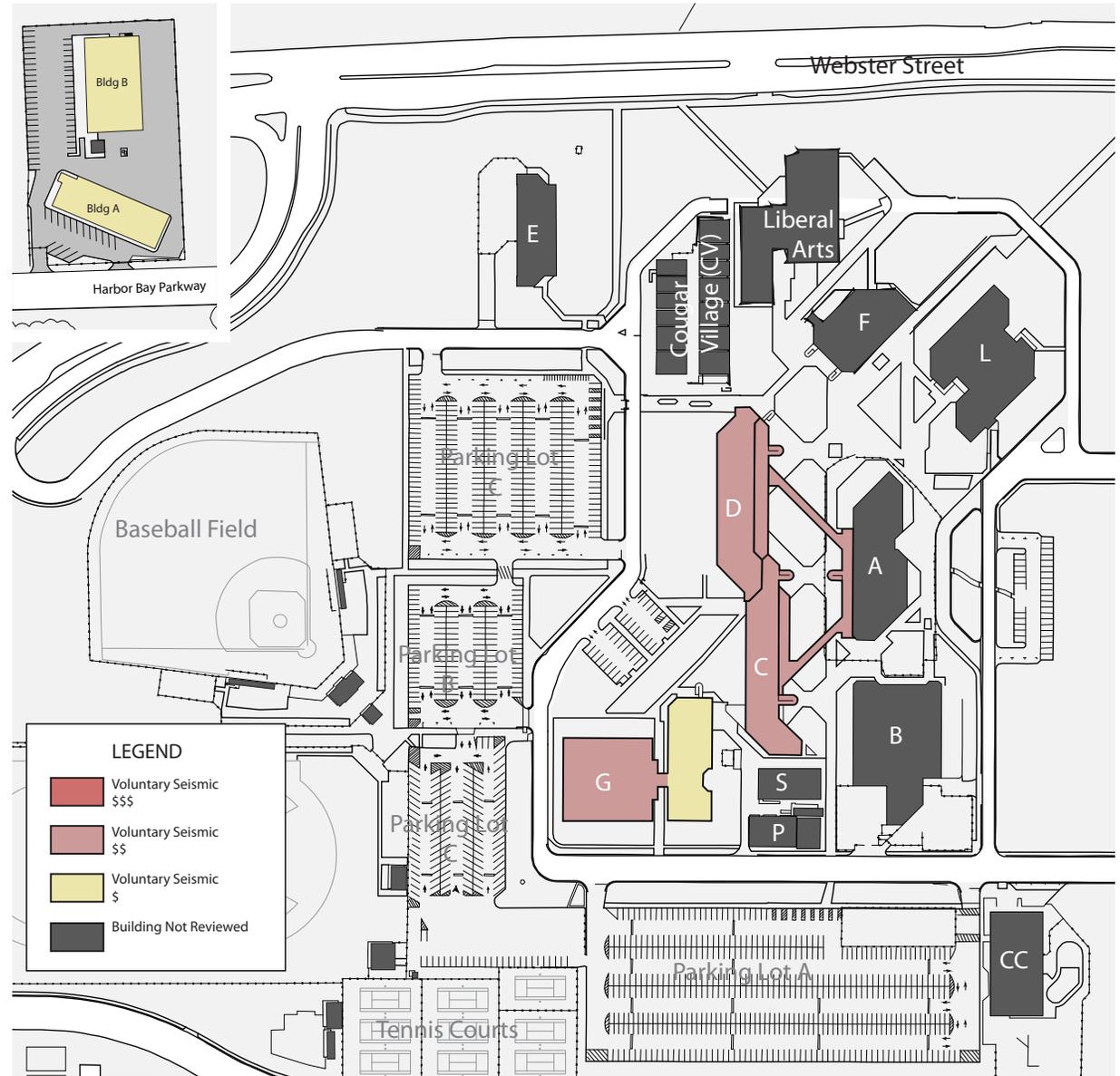
Structural Assessments

The Master Plan for the Alameda College campus includes both renovation and replacement of existing structures. The existing inventory of buildings includes a variety of structural systems, and the specific structures included within our scope of work for the District were reinforced concrete buildings designed between 1968 and 1974 with the exception of the buildings at the airport (CoA Aviation Facility). This structural assessment,[1] in collaboration with other disciplines' assessments, is intended to assist the District's team in preparing for the future of this campus.

Our approach to this structural assessment began with the review of the existing as-built structural plans, the review of the structural assessment report from 2008 by WLC architects and KPW structural engineers, and site visits to the Alameda campus. Once the existing conditions were assessed, collaboration with the District's team enabled us to provide structural recommendations for future planning. Structural analysis will be required for each future project to identify specific deficiencies and retrofit requirements.

The attached diagram indicates which buildings were investigated and the estimated effort required to upgrade the structure with voluntary retrofits (see discussion on next page for mandatory versus voluntary upgrades).

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[1] This report does not express or imply any warranty of the existing structure(s) and was developed based solely on visual observations made during site visits and a review of available construction documents and reports for the existing structures. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable engineers practicing in the structural field in this or similar localities at this time. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for the Peralta Community College District to be used solely for its evaluation of the subject properties, and may not contain sufficient information for the purposes of other parties or other uses.

Figure 2.6: Structural Voluntary Upgrade Analysis (Inset: Aviation Campus)

LEGEND

- Voluntary Seismic $$$
- Voluntary Seismic $$
- Voluntary Seismic $
- Building Not Reviewed

CAMPUS CONDITION ANALYSIS

Structural Assessments

MANDATORY AND VOLUNTARY STRUCTURAL UPGRADES

The California Administrative Code (CAC) Section 4-306 through Section 4-309 regulates the structural requirements for altering existing buildings in public schools, including when a full structural evaluation to the lateral force resisting system (LFRS) is required. For projects with a cost over $100,000 that include structural work, and all projects that exceed $250,000, there are four primary factors to be considered to determine if an upgrade is required. These triggers are summarized below, and in the flow chart to the right (larger version available in appendix).

Financial: If the cost of the reconstruction, alteration, or addition of the project exceeds 50 percent of the replacement value of the existing building, then a required rehabilitation is triggered.
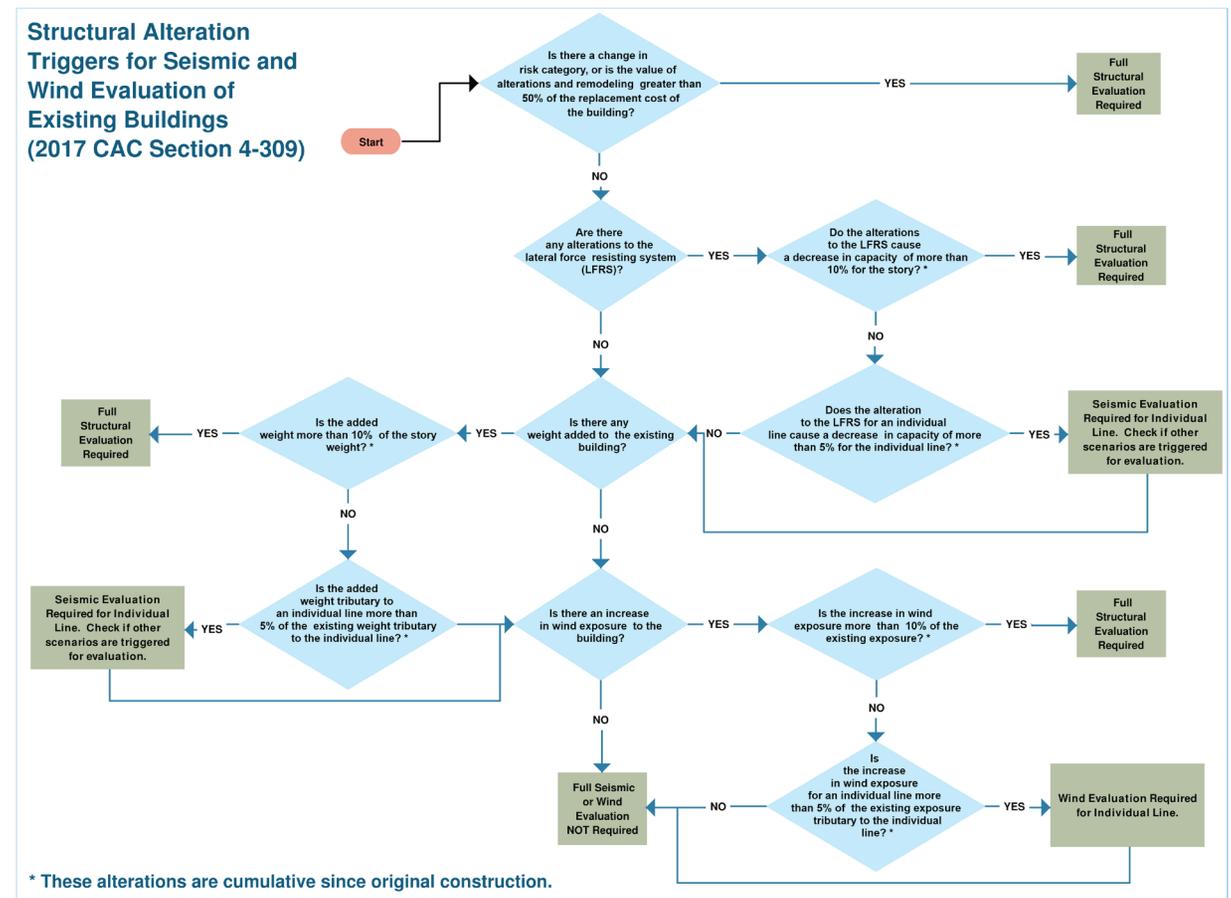
Occupancy: If there is a change of occupancy that results in a structure being reclassified to a higher risk category, then a required rehabilitation is triggered. Risk categories are defined in the California Building Code, Table 1604.5, and allows for a greater degree of resilience in certain structures.

Demand: If there is a 10% increase in lateral demand to the structure, usually incurred by increased mass or wind area, then a required rehabilitation is triggered. If there is a 5% demand increase to a lateral force resisting element or wall line, then that element is required to be analyzed, though it does not trigger a full building evaluation. These percent load increases are cumulative since the original construction.

Capacity: If there is a 10% decrease in lateral capacity of the original structure, usually incurred by removing part of the lateral system, then a required rehabilitation is triggered. If there is a 5% capacity decrease of a lateral force resisting element or wall line, then that element is required to be analyzed, though it does not trigger a full building evaluation. These capacity decreases are cumulative since the original construction.

If one of the above triggers is met, and a full mandatory evaluation is required, the existing building must be analyzed, and retrofitted if necessary, to meet current code. If the above triggers above are avoided, then a mandatory evaluation is not required. However, the District has the option of providing a voluntary seismic upgrade to address any deficiencies that are not otherwise triggered.

Figure 2.7: Mandatory Structural Triggers Flow-Chart

Structural Alteration Triggers for Seismic and Wind Evaluation of Existing Buildings (2017 CAC Section 4-309)

* These alterations are cumulative since original construction.

CAMPUS CONDITION ANALYSIS
Structural Assessments

Findings and Recommended Voluntary Upgrades

The following is a general summary of the buildings reviewed, and Figure 2.6 is a campus graphic illustrating the approximate effort required to rehabilitate the structure.

C & D BUILDINGS

Buildings C and D, built circa 1968, are two story and three story (respectively) classroom buildings. The roof and floor structures consist of reinforced concrete beams and slabs, and are supported by reinforced concrete walls and columns. For both buildings, there is an outdoor deck at the second floor that connects to a pedestrian bridge, and at Building C, the roof is also an accessible outdoor deck for occupants. At the west end of the Building C is a two-story open mechanical room. The two buildings are adjacent to each other, and there is an expansion joint between the two structures. The buildings are supported by piles and pile caps. The lateral system appears to be reinforced concrete shearwalls with more capacity in the north-south direction than in the east-west direction. Further analysis of the structure would determine the extent of retrofit required to meet current code.

G BUILDING: GYMNASIUM

The gymnasium Building G, built circa 1974, is a two-story reinforced concrete building. It has access to the Locker Rooms Building via pedestrian walkway at the second floor. The second floor of Building G is mostly open, and has an interior balcony around the perimeter of the structure. The roof is a steel truss system with a metal deck diaphragm. The second-floor slab is supported by reinforced concrete beams, walls, and columns. The building is supported by piles and pile caps. Lateral forces are resisted by reinforced concrete shearwall systems.

Shearwalls are discontinuous from the first to second floor which creates vertical irregularities. Out-of-plane anchorage at the roof is likely insufficient to adequately restrain the concrete walls. Further analysis would determine the need for new columns supporting the existing misaligned concrete shearwalls and new anchorage in the roof-to-wall connections.

LOCKER ROOMS BUILDING

The Locker Rooms building attached to Building G was built circa 1974 and is a two-story reinforced concrete building. It is connected to Building G by a pedestrian walkway at the second floor. The roof and second floor structures consist of reinforced concrete beams and slabs, and are supported by reinforced concrete walls and columns. The building is supported by piles and pile caps. There are concrete shearwalls surrounding the structure, and the building is expected to have adequate seismic resistance.

AIRPORT BUILDING A

The Airport Building A, built circa 1969, is a one story prefabricated steel building with an interior mezzanine. The building is located off-campus at the north field of the Oakland Airport. The roof elevation is split, with a lowered roof around 3 sides of the structure. The roof consists of steel joists supported by steel columns on reinforced concrete pad footings. The lateral system consists of a steel rod diaphragm supported by steel moment frames and tension-rod bracing.

This prefabricated steel building is not a good candidate for retrofit to meet DSA standards because DSA has not been accepting of prefabricated metal buildings in the past due to their non-conventional lateral force resisting systems and indeterminate load paths. A mandatory retrofit of an existing metal building would likely require an independent structural system provided within the existing metal building.

CAMPUS CONDITION ANALYSIS
Infrastructure Assessments

To understand the condition of the infrastructure the master planning team:
- Reviewed and updated the 2009 Infrastructure Assessments (no new site utilities observations)
- Stakeholder feedback during the master planning process

INFRASTRUCTURE NEEDS[1]
In light of the 2009 assessments we recommend:
- Corrections and replacements at multiple sanitary sewer locations.
- Corrections and replacements at multiple storm drain locations.
- Replacement of all existing leaking and rusted fire hydrants on campus with EBMUD standard hydrants.
- Gas lines should be potholed at a few locations to determine material and condition: all metal lines should be replaced.
- Recommendation: new fire lines should be installed with new buildings (which we recommend be equipped with fire sprinklers).
- Due to age, suspected piping material, and corrosive soil conditions, the underground sanitary sewer system and the storm drainage system are a major concern. The extent of replacement can only be verified with further analysis (see below).

INFRASTRUCTURE FINDINGS CONCLUSION
The review of the 2009 Infrastructure Assessments, which the list above is based on, is located in the Appendix. The Infrastructure review process resulted in a recommendation that the District create a more reliable infrastructure database so that the Infrastructure needs could be more comprehensively understood, and defined. The District followed this recommendation and authorized this work in mid-December 2017. The results of that process will expand the items identified herein, and will be captured as an amendment to the District-Wide FTMP.

See Appendix for more detailed information.

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1   See Infrastructure Findings Conclusion & Follow-Up Infrastructure Assessments.

CAMPUS STAKEHOLDER DATA

Process

The starting point for gathering stakeholder feedback on facilities, infrastructure and technology needs was to conduct an Online survey based on facilities needs identified in the previous 2009 facilities master plan. The objective was to validate whether those needs and priorities were still valid, and to explore what other needs may have arisen since then.

College of Alameda launched a survey in April and the complete results are presented in the Appendix, with a snapshot of some of the results to the right.

In addition to the Online surveys, additional stakeholder feedback regarding campus needs was provided through a couple of campus forums, an additional Online survey conducted by the College, and College led stakeholder outreach across shared governance committees.

The major findings of the stakeholder feedback are:
- Demolish and replace C&D to bring Science back on campus (currently housed off campus at 860 Atlantic Avenue, Alameda)
- Update technology, make "Smart" classrooms smart and standardized
- Update classrooms for modern pedagogy and increased flexibility
- Add air conditioning and fix Infrastructure issues
- Create one state-of-the-art automotive facility
- Performing Arts absent
- Modernize Library - need more collaborative spaces
- Engage the community - campus is very inward focused, make it more friendly and open
- Bike/Trail tied into Alameda Beltline Park
- More sustainable landscaping
- Better transit connections to campus
- Get Solar on campus (increase sustainability)
- Aviation Facility: need to address all infrastructure and accessibility issues, renovate existing classrooms to be Smart and add classrooms and other support spaces.
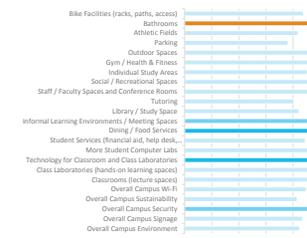
Figure 2.7: Sample Online Survey Answers

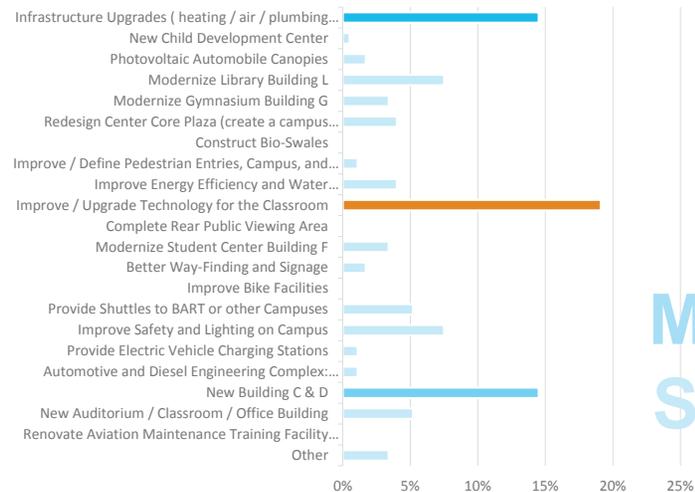**College of Alameda**
101 Responses

101
total responses

16 Students
26 Faculty
13 Staff
8 Administrators
4 Community
34 unanswered

Which facilities need the most improvement:

Bike Facilities (racks, paths, access)
Bathrooms
Athletic Fields
Parking
Outdoor Spaces
Gym / Health & Fitness
Individual Study Areas
Social / Recreational Spaces
Staff / Faculty Spaces and Conference Rooms
Library / Study Space
Tutoring
Informal Learning Environments / Meeting Spaces
Dining / Food Services
Student Services (financial aid, help desk,...
More Student Computer Labs
Technology for Classroom and Class Laboratories
Class Laboratories (hands-on learning spaces)
Classrooms (lecture spaces)
Overall Campus Wi-Fi
Overall Campus Sustainability
Overall Campus Security
Overall Campus Signage
Overall Campus Environment

Bathrooms
Technology
Dining/Food
Informal Mtg
Security

Top priorities for facilities improvements from previous FMP:

Infrastructure Upgrades (heating / air / plumbing...
New Child Development Center
Photovoltaic Automobile Canopies
Modernize Library Building L
Modernize Gymnasium Building G
Redesign Center Core Plaza (create a campus...
Construct Bio-Swales
Improve / Define Pedestrian Entries, Campus, and...
Improve Energy Efficiency and Water...
Improve / Upgrade Technology for the Classroom
Complete Rear Public Viewing Area
Modernize Student Center Building F
Better Way-Finding and Signage
Improve Bike Facilities
Provide Shuttles to BART or other Campuses
Improve Safety and Lighting on Campus
Provide Electric Vehicle Charging Stations
Automotive and Diesel Engineering Complex:...
New Building C & D
New Auditorium / Classroom / Office Building
Renovate Aviation Maintenance Training Facility...
Other

0%   5%   10%   15%   20%   25%

Technology
Infrastructure
New C & D
Modernize LRC
Safety/Lighting

CAMPUS STAKEHOLDER DATA
Facilities Projects

The stakeholder process validated that in addition to re-placing and upgrading campus-wide infrastructure, building infrastructure and technology infrastructure (as identified by the preceding assessments), the following are the facilities needs for the campus by prioritization order (see following section for prioritization process):

- C/D Replacement (Science and Administration)
- Aviation Complex
- Automotive (and Diesel) Complex
- Performing Arts Center
- S Portables Replacement (ASTI Early College/ Career Center)
- F Building (Student Center) Modernization
- L Building (Library) Modernization
- G Building Modernization

Five out of eight of these projects were identified in the previous 2009 FMP, the first three and the last two. The Performing Arts project is an evolution of the previous FMP's project proposal for an "auditorium building." The Alameda community has expressed interest in having a local Performing Arts Center and the College's Dance and Music programs are lacking a performance space. This space could be used for a number of college needs, inclusive of graduations and special events. The S Portables replacement is due to the aged condition of the portables and the fact it will cost more to repair them than to replace them. The ASTI and Career Center both deserve permanent space on campus. The F Building is equally aged as the Gymnasium and Library buildings and severely outdated in its ability to meet student support needs (Health Center, Student Center etc,).

DATA FINDINGS
Summary

The prioritization outcomes helped guide the development of the master plan, as did all data gathered and analyzed. The cumulative findings from this data are:

- The Central Plant equipment (central hot water heating system) needs to be replaced and upgraded in size.
- Other campus-wide infrastructure elements (including technology)also need to be replaced/upgraded.
- Mechanical, Electrical, Plumbing and Roofing elements within the majority of buildings needs to be replaced.
- The cumulative infrastructure issues make Buildings C and D good candidates for demolition.
- The Aviation Facility will most likely require replacement for its light weight structure is an issue with DSA (the regulatory agency) and providing an additional structural system within the existing structure would be just as costly and intrusive as rebuilding.
- If replacement projects are proposed, these should be balanced with removal of buildings to address overages in space by State criteria.
- However, the expectation is that the College will net an increase in area to address multiple deficiencies: all classrooms need to be sized 20-26 ASF per student; class labs need to be sized for lab equipment clearances and code related items; existing buildings lack student collaboration spaces in the vicinity of classrooms that are essential to improved learning outcomes; and impacts of designing dual use spaces.

3.0 The Facilities Master Plan

PROCESS

Based on the data collection and analysis, the master planning team developed a few options for the future development of the campus in response to the needs identified. The option chosen was revised per shared governance feedback received through a campus forum, a follow up Online survey and the collection of feedback from campus committees by the President of the College. This was an iterative process of refinement, and the results of that process are shared within this chapter.

GOALS

The facilities master plan goals are rooted in the ten 2016 Educational Master Plan Goals (repeated here for convenience), and Goal 6 identified five strategic planning priorities related to facilities:

- **Goal One:** increase access to college programs / coursework through collaboration with other PCCD colleges in redesigning college schedules and offerings.
- **Goal Two:** reduce loss of students prior to start of classes.
- **Goal Three:** increase retention and persistence rates.
- **Goal Four:** increase community and educational partnerships.
- **Goal Five:** strengthen business and industry partnerships.
- **Goal Six:** advance CoA teaching and learning.

- **6.1:** Strengthen teaching pedagogy – holistic, contemporary, and relevant curriculum and teaching methods
- **6.1:** Strengthen Distance Education (DE) Program
- **6.3:** Increase college and classroom technology
- **6.4:** Provide faculty and staff professional development
- **6.5:** Improve quality of facilities

- **Goal Seven:** strengthen Data-driven/ informed decision making.
- **Goal Eight:** establish integrated planning and evaluation system.
- **Goal Nine:** design organizational, committee, and governance structures to support student success.
- **Goal Ten:** engage in redesign of PCCD policies and procedures, including the Budget Allocation Model (BAM).

OPPORTUNITIES & CHALLENGES

OPPORTUNITIES
College of Alameda is fortunate to have enough land and parking to build replacement facilities without having to create major swing space needs. It is also located at the busiest corner of Alameda, an area that has experienced great growth and transformation over the last eight years. With its location and proximity to the Alameda Beltline Park (now named Jean Sweeney Open Space Park), College of Alameda has a big opportunity to become a vibrant hub for the community, not only with educational programs, but also with facilities for community use.

CONSTRAINTS
The major constraint for College of Alameda is transportation connections. Although it is only two miles from downtown Oakland, public transportation connections are limited. The other constraint is ironically both an opportunity and a constraint: lots of land, relatively flat, but seemingly under utilized and relatively unattractive / boring. In addition the campus is inwardly focused with main entries off the interior, and back doors (with their accompanying trash/ service yards) facing the city streets. These issues are resolvable, but they require substantial funding set aside for landscaping projects, which with competing priorities can be challenging to obtain.

THE MASTER PLAN

The Master Plan aims to address all the needs identified in the previous chapter, and make the campus more visible and inviting. Placement of new buildings along Webster Street will provide the college more visibility and their architecture will be oriented to both Webster Street and the campus side, thereby taking the first step in making College of Alameda outwardly focused and actively connected with its community.

The plan also calls for an enlarged and enhanced usable Campus Green that marries the two prevalent geometries on campus, and a landscaping treatment of the campus perimeter, complete with a bike/trail loop (A12), that turns the campus into an aesthetically pleasing community asset.

Specifically, the new buildings along Webster Street are the Science & Administration Building (A4) and the Performing Arts Center (A7), placed in line with the College of Liberal Arts that is currently under construction.

Programs from C/D, and the science programs from 860 Atlantic Avenue, will be relocated into the Science and Administration (S&A) Building, allowing for the demolition of Buildings C and D, and the re-purposing of 860 Atlantic Avenue for other District uses.

Administration from Building A first floor will also move to the S&A, allowing the collocation of DSPS (programs and services for students with disabilities) and the Veterans Center into Building A, where the majority of the Student Services are located.

Currently the plan is that the central plant portion of Building C will remain, but it will have its equipment replaced per the assessments. This part of the building has a tall element housing the boiler flue, and the master plan proposes that the exterior of the central plant get a facade treatment, be it artwork, paneling etc. which could turn this element into an icon for College of Alameda. Alternatively the College could study the viability of building a new central plant in another building and demolishing this one when the rest of Building C is demolished.

The former C/D building site areas will be occupied by the permanent ASTI/Career Center Building (A8), and a future growth building (A13). The future growth buildings have been identified to help guide the current development of the campus with respect to outdoor areas, future building pad and parking.

The Automotive/Diesel Complex (A6) is proposed to be located in Parking Lot A, with its back to the tennis courts and its yard open towards the parking lot. This location was deemed best in light of the noise and smells associated with this program. The former Building B area is proposed for another future growth building and replacement parking that is closer to the campus.

The main campus master plan is completed by modernizations of Student Center Building F (A9), Library Building L (A10) and Gymnasium Building G (A11), to address both outdated infrastructure and some reconfigurations of programs within.

At the Aviation campus, the master plan proposes a replacement of the Aviation Complex (A5) in phases to permit the program to keep operating while its facilities are being re-built.

PROPOSED PROJECTS

	INFRASTRUCTURE
A1	Replace All Campus Major Electrical Equipment
A2	Upgrade / Replace Central Heating Hot Water Plant
A3	Civil Infrastructure Replacements

	FACILITIES*
A4	**C/D Replacement: Science & Administration**
A5	**Aviation Complex (Replacement)****
A6	**Automotive/Diesel Complex (Replacement)**
A7	**Performing Arts**
A8	**ASTI / Career Center Replacement**
A9	**Modernize Student Center Building F**
A10	**Modernize Library Building L**
A11	**Modernize Gymnasium Building G**
A12	**Perimeter Site Landscaping (Bike/Trail etc.)**
A13	**Future Growth Building**

	TECHNOLOGY
A14	Main Campus Complete Wi-Fi Deployment
A15	Main Campus Complete Network Upgrade Project
A16	Aviation Site Complete Wi-Fi Deployment
A17	Aviation Site Complete Network Upgrade Project

* Bolded Projects are depicted on the Master Plan (Fig. 3.1)
** Courtesy of JRDV Urban International

Webster Street

performing arts drop-off

A7

A4

A12 bike/trail loop

A9

campus green

A10

A8

A13

campus quad

A13

A2

A11

Willie Stargell Avenue

Ralph Appezzato Memorial Parkway

A6

5th Street

A5

LEGEND

New Facility/Addition

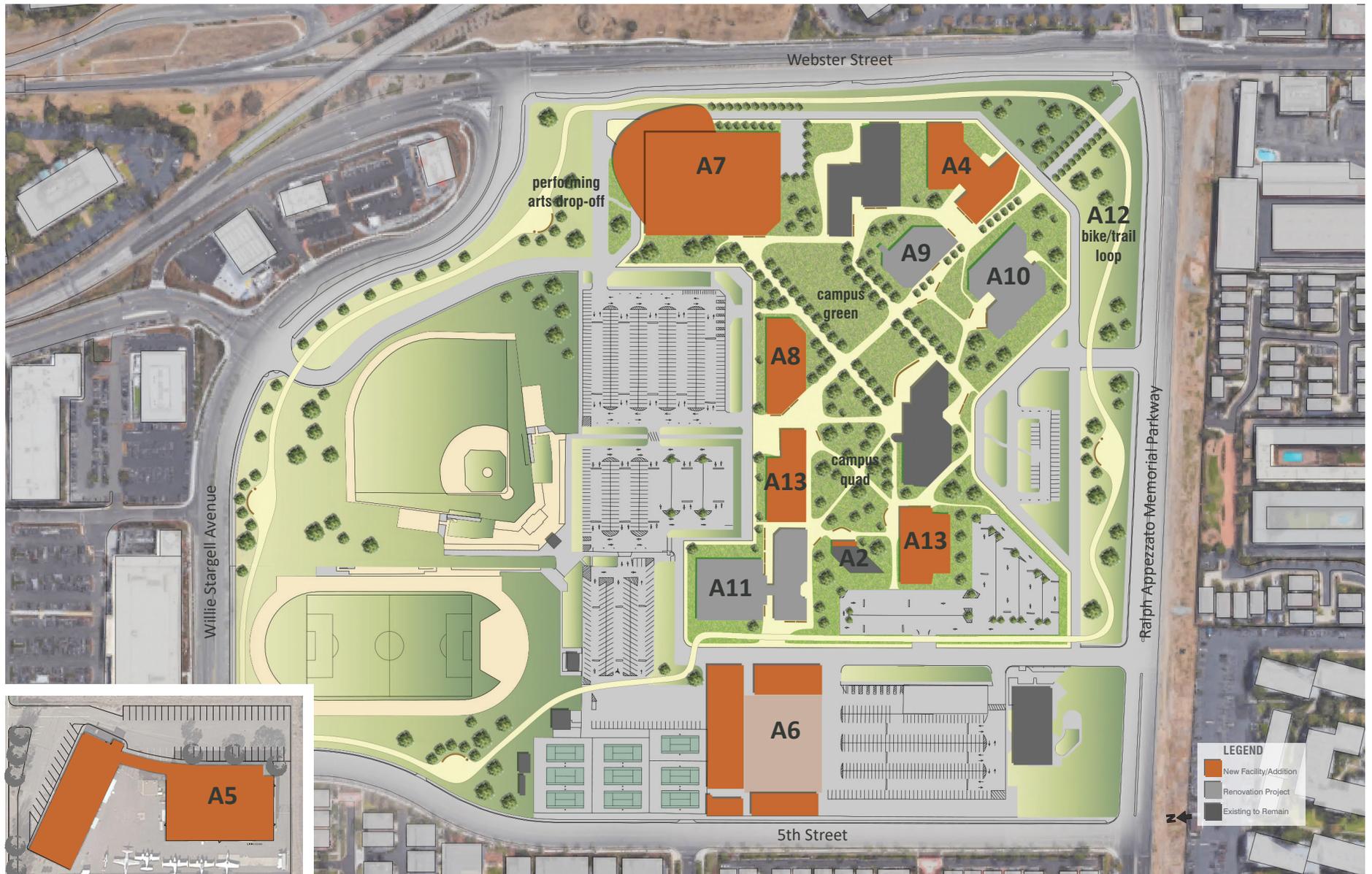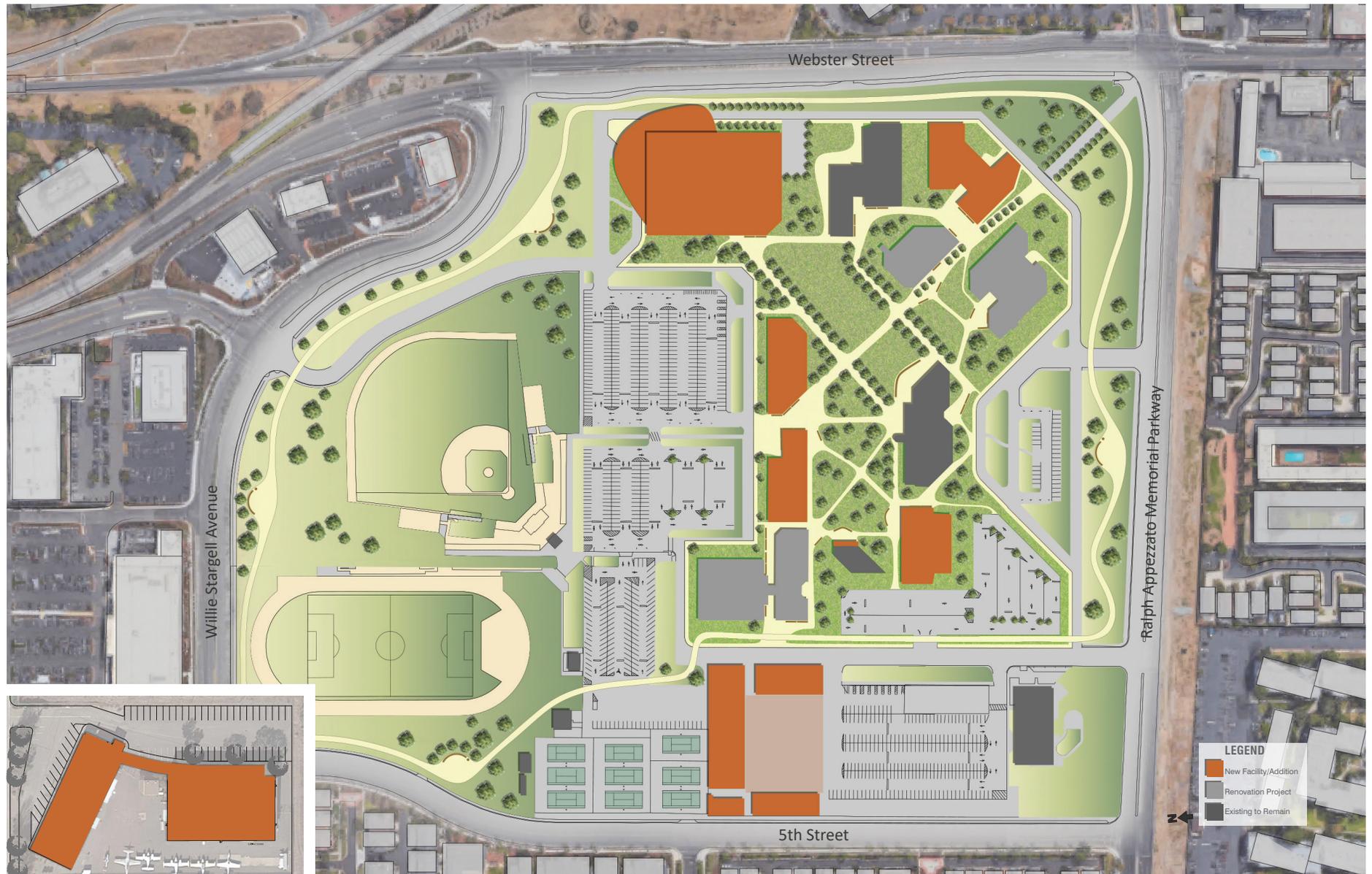Renovation Project

Existing to Remain

N

**Figure 3.2: 2017 Facilities Master Plan (No Labels)**

PROPOSED DEMOLITION

The Master Plan proposes to demolish the following build-
ings (shown as dashed red outlines in Figure 3.3) for their
associated reasons:

	RATIONALE FOR DEMOLITION
B	Existing Automotive Building is outdated both program and infrastructure wise. Building can not be renovated for modern teaching pedagogy and premier Toyota T-Ten program; also remote from E Building
C & D	More expensive building to retrofit; inefficient
CV	Temporary portables buildings used for Swing no longer needed
E	Existing Diesel Building is outdated both program and infrastructure wise. Building can not be renovated for modern teaching pedagogy; remote from B Building
S	Portable buildings beyond their useful life; programs need permanent space
AVIATION (not shown)	Major infrastructure issues and concerned that regulatory agency (DSA) will not accept retrofit of these structures (they have not in the past, no reason to believe they will now)

Figure 3.3: 2017 Facilities Master Plan Buildings to be Demolished
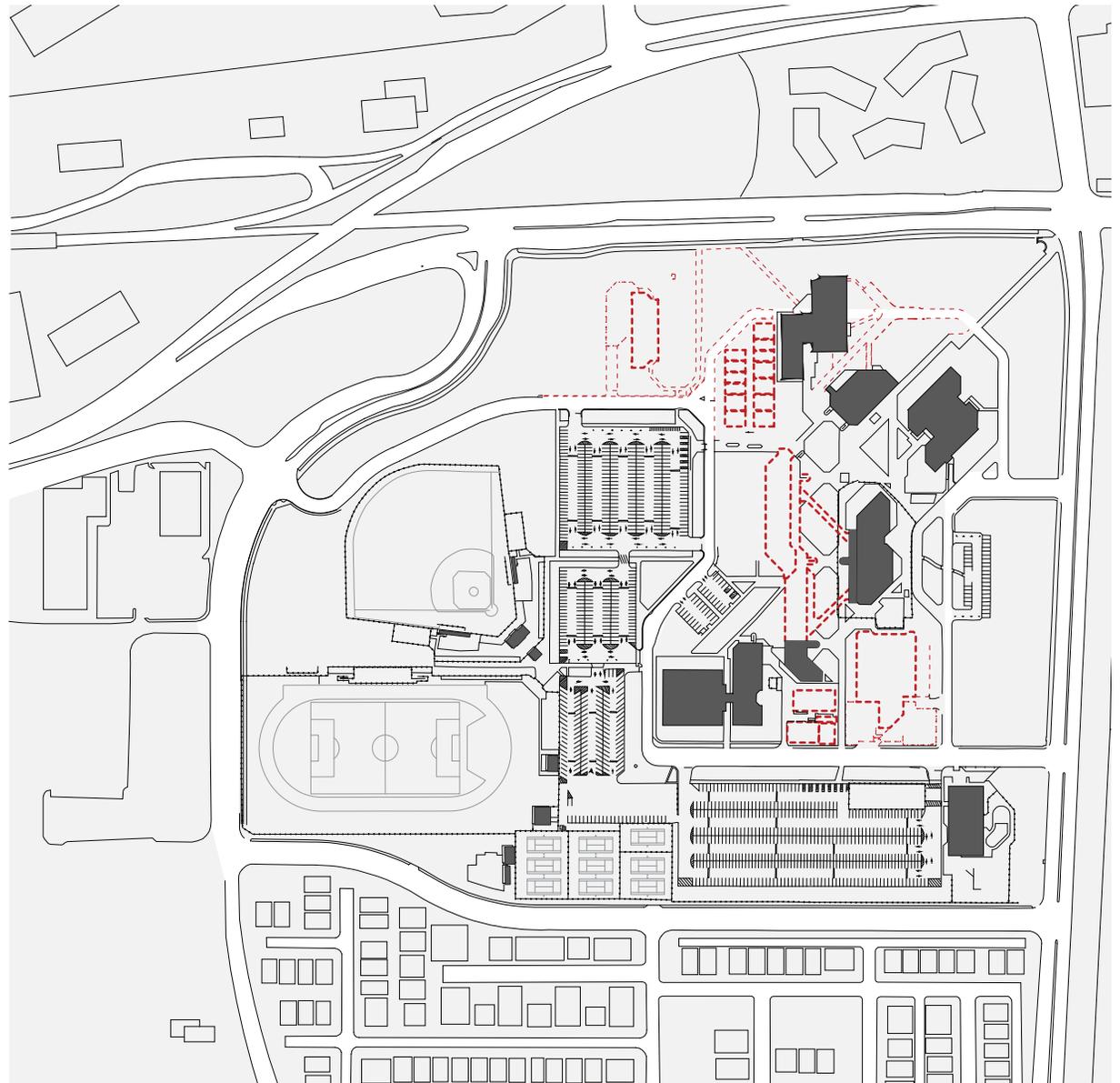
PRIORITIZATION

After the Draft FMP Site Plan was shared at a college wide campus forum in September 2017, the College confirmed their priorities by conducting an Online survey pursuant to the forum and meetings with the College Executive Cabinet and College Council. The priorities in order are:

- C/D replacement: Science and Administration (A4)
- Aviation Complex Replacement (A5)
- Automotive/Diesel Complex (A6)
- Performing Arts Center (A7)
- Modernize Student Center F Building (A9)
- ASTI/Career Center Replacement (A8)
- Modernize Library Building L (A10)
- Modernize Gymnasium Building G (A11)
- Growth Building (A13)

Note: the Bike/Trail Site Perimeter Landscaping project (A12) was not on original list of projects for prioritization.

The College also identified the following items that need to be integrated into the projects:

- Technology (wired/wireless network infrastructure)
- Computing (Servers)
- Computing (Lab Refreshments)
- SMART Classrooms
- Library Materials
- Basic infrastructure (sewer, power, water)
- Sustainability[1]
- Drought tolerant landscaping
- Water well for irrigation
- Electric vehicle charging stations
- Solar Panels
- Signage and Wayfinding
- Roadway and Parking Pavement

1 The District was engaged in a concurrent effort to develop a Sustainability and Resiliency Master Plan (SRMP) that captured Sustainability Goals, Recommendations etc.

The priority projects selected are shown in Figure 4.5 and listed below:

- C/D replacement: Science and Administration (A4)
- Aviation Complex Replacement (A5)
- Automotive/Diesel Complex (A6)
- Performing Arts Center (A7)
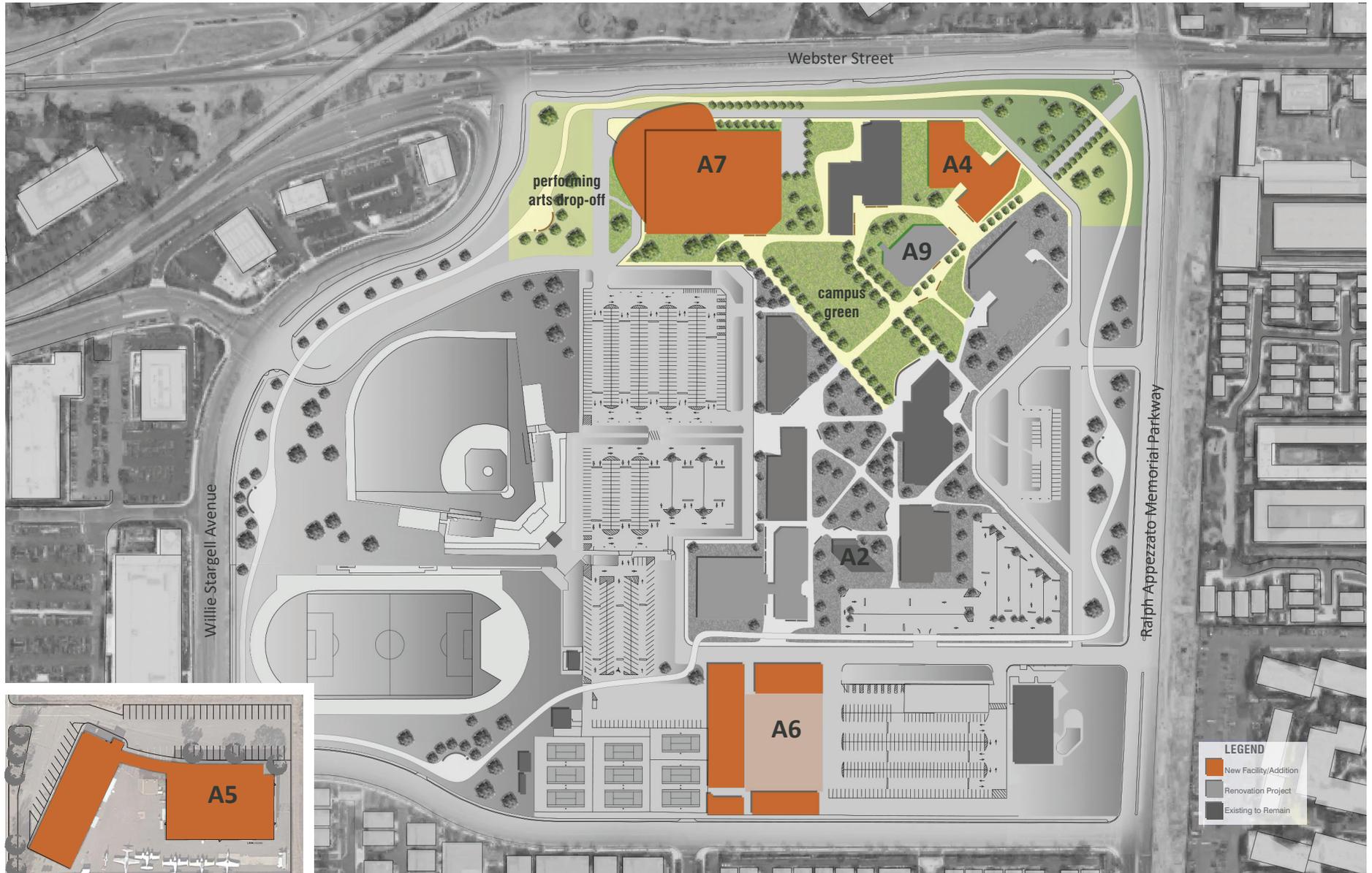- Modernize Student Center F Building (A9)

To assist the District in evaluating the myriad needs across its five campuses, the master planning team created an evaluation matrix. Below in Figure 4.4 is the excerpt as it applies to College of Alameda projects (see District-wide FTMP for footnotes and detail).

Figure 3.4: Prioritization Evaluation Matrix based on 2017 Draft Facilities Master Plan Proposed Projects

		Overall Score	Meets PCCD Strategic Goals[1]	Meets Some Goals from College 2016 EMP	Rectifies Life Safety Concerns	Rectifies Accessibility Barriers	Has State Match Funding Potential or Approval	State Facilities Condition Index[2]	FMP Team Assessments Index[3]	Rectifies Multiple Aged Infrastructure Issues	Improves the Teaching & Learning Conditions in More than 1 Building	Improves the Teaching & Learning Conditions in One Building	Essential Student Service/Support	Improves Student Retention & Success	Improves Sustainability Energy & Water	Consolidates Space and Improves Efficiency	Was Identified as a Need in Previous EMP/FMP	Other
A1	College of Alameda Upgrade and Replacement of Main 3000A Electrical Switchboard	TOP	ESSENTIAL SERVICE FOR ENTIRE CAMPUS															
A2	College of Alameda Major Upgrade for New Central Heating Hot Water Plant	TOP	ESSENTIAL SERVICE FOR ENTIRE CAMPUS															
A3	College of Alameda Civil Infrastructure High Priority Projects	TOP	ESSENTIAL SERVICE FOR ENTIRE CAMPUS															
A4	College of Alameda C/D Replacement (Science On Campus)	17	1	1	1	1		2	3	1	1	1		1	1	1	1	Science is currently Remot...
A5	College of Alameda Renovate Aviation Complex	18	1	1	1	1	1	3	5	1		1		1			1	Waiting List for This Progra...
A6	College of Alameda Automotive Center (Replacement)	16	1	1	1	1	1	2	2	1	1	1		1	1	1		
A7	College of Alameda Performing Arts	6	1	1				n/a	n/a	n/a				1				3	Engages Community, Loca...
A8	College of Alameda ASTI/Career Center Replacement	11	1	1				3	excluded	1		1	1	1	1		1	High Community Use
A9	College of Alameda Moderize Building F (Student Center)	14	1	1		1		2	3	1		1	2	1	1			
A10	College of Alameda Moderize Building L (Library)	15	1	1	1	1		2	2	1		1	2	1	1		1	
A11	College of Alameda Moderize Building G (Gym)	13	1	1		1		2	3	1		1		1	1		1	
A12	College of Alameda Site Improvement Projects	9	1	1		1		n/a	n/a	n/a			2	1	1		1	1	Engages Community
A13	College of Alameda Growth Building	9	1	1		1		n/a	n/a	n/a			2	1	1	1		1	Veteran's growing in numb...
A14	College of Alameda Technology Complete Wi-Fi Deployment (Main Campus)	8	1	1		1					1	1	1	1	1			
A15	College of Alameda Technology Complete Network Upgrade (Main Campus)	8	1	1		1					1	1	1	1	1			
A16	College of Alameda Technology Wi-Fi Deployment (Aviation Complex)	8	1	1		1					1	1	1	1	1			
A17	College of Alameda Technology Complete Network Upgrade (Aviation Complex)	8	1	1		1					1	1	1	1	1			

PRIORITY PROJECTS

Figure 4.5: 2017 Facilities Master Plan for Priority Projects Only (Inset: Aviation Campus)

Webster Street

A7

A4

A9

performing arts drop-off

campus green

A2

Willie Stargell Avenue

Ralph Appezzato Memorial Parkway

A6

A5

LEGEND
New Facility/Addition
Renovation Project
Existing to Remain

PRIORITY PROJECTS
Facilities Project Descriptions

A4: THE SCIENCE AND ADMINISTRATION BUILDING
is a new facility that will replace the existing Buildings C and D, as well as 860 Atlantic Avenue (an off campus facility housing the Sciences). In addition to housing the Sciences, the building will house the Administration offices currently located in Building A. Relocating Administration to this building will allow the vacated spaces in Building A to be re-purposed for DSPS (currently located in Building D), and the Veterans Center (currently located in Building G) to be collocated with other Student Services.
Preliminary Assumptions:

- Size: 42,000 GSF / 28,000 ASF
- Height: 2 stories
- Programs: Biology, Chemistry, Physics, Engineering, STEM Center, Computer Lab, Administration and Faculty Offices and Support Spaces
- Site Improvements: campus road realignment; corner gateway entry landscaping/path including portion of bike/trail; landscaping/plaza around building
- Other: iconic signage on/near roof

Other Considerations:
- Demolition/Relocation: Demolition of Building D and Building C (except Central Plant (portion) and associated site improvements
- Secondary Effects: project to include tenant improvements of vacated administration area in Building A for DSPS and Veterans Center
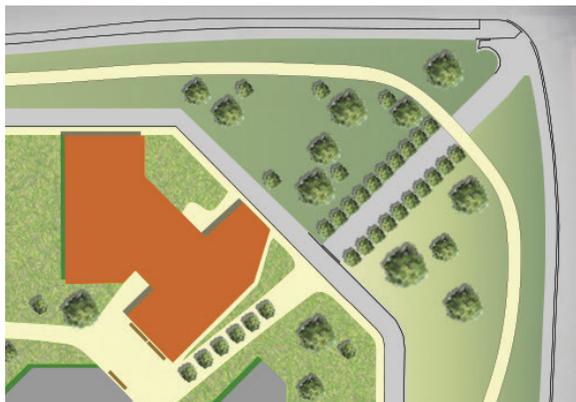
- Structural Comments (for both demolition and new construction): the demolition of freestanding buildings need not impact the structural integrity of adjacent buildings. The proposed partial demolition of Building C leaves behind only a portion of the structure supporting the central plant equipment. A structural analysis will determine the demand, capacity, and adequacy of the remaining structure.

A5: THE AVIATION COMPLEX
will collocate the core science disciplines, mathematics, engineering and art programs in a state-of-the art laboratory building. Preliminary Assumptions:

- Size: 32,000 GSF / 25,500 ASF
- Height: 1 and 1/2 stories
- Programs: Aeronautics Technology Labs, Classrooms, Support Spaces, Offices, Study Area and Lounge
- Site Improvements: complete renovation of parking lot to address grading and ADA compliance issues
- Project requires: phased construction to allow program to remain open during construction

Other Considerations:
- Demolition/Relocation: Existing Buildings A, B and C
- Swing Needs: phased construction might require on site portables as buildings are replaced one at a time
- Structural Comments (for both demolition and new construction): project proposes to renovate the two buildings, Building A and B. The proposed renovations to each Building may increase the risk category or decrease the existing structural capacity, either of which would trigger a mandatory upgrade. There is also a proposed addition of an elevator, a stair, or a glass connector which could potentially be designed to be freestanding in order to avoid a mandatory upgrade, if the rest of the interior renovations did not trigger one on their own.

PRIORITY PROJECTS
Facilities Project Descriptions

A6: AUTOMOTIVE/DIESEL COMPLEX

College of Alameda is one of six campuses in California to host a Toyota T-TEN program and the only one within the Bay Area. This program is of great value to the College and to the community. This and other technology changes in the automotive and diesel world (alternative fuels, emission standards revisions) require a new state-of-the art Auto Technology and Diesel Mechanics Complex.
Detail per State approved FPP:

- Size: 35,000 GSF / 32,178 ASF
- Height: 1 story
- Programs: Automotive Technology & Diesel Mechanics Labs, Support Spaces, Classrooms and Offices
- Site improvements: 29,000 GSF yard enclosed with a fence; adjustments to parking lot A and new driveway

Other Considerations:
- Demolition: Building B and E

A7: THE PERFORMING ARTS CENTER

will be a dual use facility for the campus and the community. The Dance and Music programs within Building G will relocate to the Performing Arts Center, allowing configurations within the Gymnasium (A11) to occur.
Preliminary Assumptions:

- Size: 50,000 GSF / 40,000 ASF
- Height: 2 stories
- Programs: 250 seat Theater and Support Spaces (22,000 ASF); Black Box (3,000 ASF), Dance Lab and Support Spaces (5,000 ASF), Music Recital Hall and Labs, Practice Rooms etc. (10,000 ASF)
- Other: gateway building
- Site improvements: drop off; realignment of campus road; screened loading dock; portion of perimeter site landscaping (bike/trail) along Webster Street and Willie Stargell Avenue; portion of Campus Green landscaping improvements
- Project requires: demolition of Building E, therefore construction of Automotive/Diesel Complex (A6)

Other Considerations:
- Secondary Effects: vacated spaces from Dance and Music in Building G to be renovated for Gymnasium purposes (see A11)

A9: MODERNIZE STUDENT CENTER BUILDING F

for infrastructure and programmatic deficiencies. The Health Center in particular is in need of additional space and reconfigurations are going to be required to accommodate their needs.
Preliminary Assumptions:

- Size: 22,762 GSF / 17,547 ASF
- Height: 2 stories
- Programs: ASCOA, Bookstore, Health Services, Police Services, Student Activities, Student Lounge, Cafeteria, CalWorks and Cybercafe
- Renovation: roof, HVAC, electrical, lighting and windows/doors replacement; technology upgrades; new restrooms; interior finishes replacement and reconfigurations; furniture replacement; structural voluntary upgrades
- Site improvements: landscaping around building and completion of Campus Green

Other Considerations:
- Swing: Building F occupants
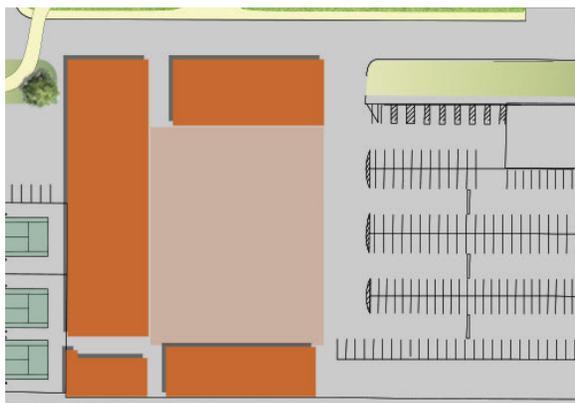
OTHER MASTER PLAN PROJECTS
Facilities Project Descriptions

A8: ASTI/CAREER CENTER REPLACEMENT

will replace the S temporary portables that are past their useful life with a permanent facility that is closer to the other college buildings and the center of campus.
Preliminary Assumptions:

- Size: 22,000 GSF / 18,000 ASF
- Height: 2 stories
- Programs: Alameda Science and Technology Institute (Early College High School); and One Stop Career Center
- Site improvements: entry plaza from west, and landscaping improvements around the building including portion of Campus Green (Campus Green to be completed with this project, if not earlier)
- Project requires: demolition of Building D, therefore construction of the Science and Administration Building (A4)

Other Considerations:
- Demolition/Relocation: removal of S Portables and clearing of the site; temporary landscaping

A10: MODERNIZE LIBRARY BUILDING L

for infrastructure and programmatic deficiencies. Over the last several decades libraries have changed drastically due to changes in technology and a more heavy reliance on tutoring needs.
Preliminary Assumptions:

- Size: 41,536 GSF / 33,029 ASF
- Height: 2 stories
- Programs: Library, Assessment, Audio-Visual, Learning Resource Center, Open Computer Lab and Tutoring
- Renovation: roof, HVAC, electrical, lighting and windows/doors replacement; technology upgrades; new restrooms; interior finishes replacement and reconfigurations; furniture replacement; structural voluntary upgrades
- Site improvements: landscaping around building

Other Considerations:
- Swing: Building L occupants unless it can be phased
- Library Materials: Update aged collection of non-electronic materials such as periodicals and books and add/expand access to online resources, database subscriptions, videos and materials to address different learning styles and 21st Century learning modalities

A11: MODERNIZE GYMNASIUM BUILDING G

for infrastructure and programmatic deficiencies. The vacated spaces from Dance and Music will provide opportunities for some required reconfigurations.
Preliminary Assumptions:

- Size: 40,088 GSF / 28,179 ASF;
- Height: 2 stories
- Programs: Gym, Mens and Womens Locker Rooms and associated Support Spaces; Offices
- Renovation: roof, HVAC, electrical, lighting and windows/doors replacement; technology upgrades; new restrooms; interior finishes replacement and reconfigurations; structural voluntary upgrades
- Site improvements: landscaping around building

Other Considerations:
- Swing: phased and/or during Summer
- Structural Comments: this project includes a renovation of the existing gymnasium. It may be possible to avoid triggering a mandatory upgrade, however there are existing potential structural deficiencies found in the building, as outlined in the Building G structural narrative.

OTHER MASTER PLAN PROJECTS
Facilities Project Descriptions

A12: PERIMETER SITE LANDSCAPING (BIKE/TRAIL)
proposes to landscape the perimeter of the campus with a bike running trail loop and consistent drought tolerant landscape within which "secret" themed gardens can be discovered. The themes could be color, smell, succulents, grasses etc. These gardens would be arranged around stretch out areas for the biking/running trail that will envelop the entire campus perimeter, with the exception of the tennis courts area where it will migrate to the campus edge before joining the perimeter edge. This trail could link into the other park systems of Alameda, namely the Jean Sweeney Open Space Park.