AGENDA

• PROJECT STATUS

• DRAFT RECOMMENDATIONS
  o Facilities
  o Circulation + Parking
  o Campus Landscape
  o Sustainability
  o Functional Zoning

• NEXT STEPS
## Timeline

### Discover
- **Cabinet MTS** (March 18)
  - Review material and define scope of CMP

### Analyze
- **Committee MTS** (April 15)
  - Review scope, process and timeline
  - Review CMP purposes and draft TOC
  - Define measures of success
- **Committee MTS** (May 15)
  - Update on background chapter B 1.1
  - Review analysis of site/facilities - part 3
  - Transportation Meeting (August 21)
- **Town Hall Presentation** (Sept 5)
- **Sustainability Visioning Workshop** (Sept 5)
- Interviews - Insti + student services (Sept 10-17)
- **Committee MTS** (Sept 17)
  - CMP Update

### Frame
- **Technology Meeting** (Sept 25)
- **Committee MTS** (Nov 8)
  - Updates on Chapters 1, 2, and 3
  - Review implications for planning
  - Review site inventory
  - Review analysis of site/facilities - part 3

### Explore
- **Committee MTS** (Dec 6)
  - Review space analysis
  - Review and evaluate options
  - Select preferred options
- **Facilities Needs Meeting** (Jan 13)
- **Community Partners Meeting** (Jan 15)
- **Flex Day Presentation** (Feb 7)
- **BCT Facilities Needs Meeting** (Feb 10)
- **Technology Teleconference** (Feb 11)
- **Secondary Effects Teleconference** (Feb 17)

### Recommend (Document)
- **Presidet's Cabinet Meeting** (Feb 25)
- **Committee MTS** (Mar 14)
  - Review draft IP recommendations
  - Sustainability Analysis
- **Technology Visioning Sessions** (Mar 20)
- **Technology Town Hall** (April 1)
  - Develop draft CMP document
  - College review of draft CMP
  - College review of draft CMP
  - Board approval
MEASURES OF SUCCESS

PROCESS
• transparent
• participatory
• well-communicated

GENERAL
• forward thinking
• obtainable and practical
• understood and used
• reflects the desires of the college community
• defines who we are and who we want to be for our community
• focused on preparing students for the next stages of their lives
• provides a framework for site and facilities development

FOCUSED
• addresses site and building infrastructure
• addresses emerging technology
• plans for flexible, functional facilities
• provides pleasant and accessible learning / working environments
• promotes collaboration among faculty, staff, and students
CHALLENGES + OPPORTUNITIES

SITE
• The topography + geology present opportunities and constraints.
• Open spaces are underutilized; not connected to the natural surrounds.
• Outdoor and indoor spaces are not well-connected.

CIRCULATION
• College Drive is the one primary campus gateway.
• Parking is currently at 97% utilization during peak demand.
• Pedestrians cross primary vehicular routes to navigate the campus.

ZONING
• Functional zoning is not clearly organized.
• Buildings clusters are disconnected.

SPACE NEEDS
• Additional space is needed to accommodate the projected growth.
DEVELOPMENT CONCEPTS
RECOMMENDATIONS
FACILITIES PLANNING PRINCIPLES

- Maximize functional space
- Eliminate non-functional space
- Improve efficiency/utilization of site and facilities
- Right-size the campus to address program needs
- Plan for flexible, functional facilities
- Provides pleasant and accessible learning / working environments
- Promotes collaboration among faculty, staff, and students
- Improve campus identity, connections, and circulation
- Simplify implementation
ENTRY AND ARRIVAL

ENTRY PLAZA

ENTRY PLAZA

ENTRY GARDEN
GATHERING GROVE
READING ROOM
HUMANITY GARDENS

ACADEMIC CORE: THE YARDS
ACADEMIC CORE: THE YARDS

LAWN BOWL

SCIENCE PLAZA

LABORATORY GARDENS
JAEGER INSTITUTE
AMPHITEATRE
OUTBACK LABS
STORM WATER BMP’S

BIO SWALES/
AND BASE LAYER RETENTION

PERMEABLE PAVING
BASE LAYER RETENTION

GREEN STREET

PERMEABLE PAVING

RAIN GARDEN

TREATMENT PLANTERS

BIO SWALE CONVEYANCE

RAIN GARDEN
RIPARIAN MEADOW

BIO-BOWL

BIO-SWALLES/
AND BASE LAYER RETENTION

LEARNING CENTER

FUTURE	
LIBRARY	
ALLIED HEALTH

KINESIOLOGY

FUTURE

INSTR BLDG

SCIENCE BLDG

STUDENT SERVICES TOWER

STUDENT SERVICES

HUMANKIN

COUDER PLAZA

HUMANITIES

SCIENCE + TECH

INSTR BLDG

ED. CTR

PARKING STRUCTURE

STUDENT SERVICES

LASSELINE ELEMENTARY SCHOOL

BIO SWALE

CONVEYANCE

PERMEABLE PAVING

PERMEABLE PAVING
MORENO VALLEY COLLEGE SUSTAINABILITY WORKSHOP

A vision and knowledge sharing

We want to make sure we use our resources wisely and build buildings that will last well into the future.

RECYCLE more materials
Solar PV support
Greywater system
Native plants
XERISCAPE
Sustainable Landscape

Understand our site's hydrology
Drought Tolerant
Observation of Night Sky
Drought Tolerant Demonstration Garden
Use natural slope on site for building
Sustainable Landscape

Proactive conservation
Provenstorm
Collect rainwater
Drought Tolerant Design

Promote Reusable Water containers
Create LESS WASTE
More efficient and SMART energy use

More innovative resources
Transportation
Buses
Bikes
Parking
Sustainable Partnerships

Green Technology in Curriculum

MORENO VALLEY COLLEGE
HMC Architects
SUSTAINABILITY
1. Leadership and Culture in Sustainability
   Be role models by demonstrating sustainability throughout the campus, restoring the natural environment and celebrating the unique character of the desert.

2. Water and Landscape
   Conserve water through efficient plumbing fixtures, drought tolerant landscaping and retention and reuse of water.

3. Energy
   Conserve energy through best practices such as passive solar building design, upgrades to existing systems, and clean energy production.

4. Environmental Quality, Comfort, Health and Wellness
   Support a healthy indoor and outdoor environment by providing access to fresh air, views, natural lighting and walking trails.
5. Waste
   Reduce meaningless waste by organizing a campus culture based on the principle of reduce, reuse and recycle.

6. Curriculum and Training
   Create a ‘green’ mentality for the campus by supporting professional development in sustainability and capitalizing on the classroom by implementing researched based learning.

7. Transportation
   Reduce emissions caused by transportation to the campus by promoting and/or providing alternative transportation practices such as carpooling, mass transit, biking amenities and preferred parking for alternative fuel vehicles.

8. Green Business Practices
   Adopt green purchasing practices, rely on efficiency of technology rather than hardcopy materials, and opt to reuse rather than repurchase.
Comfort Zone:
May to October, the temperature is higher than (warmer) than the comfort zone.
Wind Rose:
North and Northeast @ avg. of 7 mph with gusts up to 35 miles per hour from the North
SUSTAINABILITY
CLIMATIC DATA

Wind Rose:
Primarily northwest winds @ avg. of 7-10 mph with gusts up to 35 miles per hour; @ 75-100 degrees from the north, northwest and east. Winds cool down by 15-20 degrees at night
SUSTAINABILITY

ENERGY USE: kBTU/sf/year

- 76.6 kBTU/sf/yr (CEC Higher Ed. Average)
- 49.9 kBTU/sf/yr (EnergyStar)

2011-2012: 56 kBTU/sf/yr
2012-2013: 51 kBTU/sf/yr
2013-2014: 40 kBTU/sf/yr
SUSTAINABILITY

BUILDING WATER USE: gallons/sf/year

*median water use averaged between K-12 and office building types

<table>
<thead>
<tr>
<th>Year</th>
<th>Gallons SF/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2012</td>
<td>26</td>
</tr>
<tr>
<td>2012-2013</td>
<td>18</td>
</tr>
<tr>
<td>2013-2014</td>
<td>15</td>
</tr>
</tbody>
</table>

*11 gallons/sf/yr

EPA EnergyStar Portfolio Manager
SUSTAINABILITY
IRRIGATION WATER USE: gallons/sf landscape/year

* 608,705 sf of landscape area at Moreno Valley
SUSTAINABILITY

WASTE PRODUCTION: total lbs. of waste to landfill

- 2012-2013: 234,900 lbs.
SUSTAINABILITY

WASTE PRODUCTION: total lbs. of waste to landfill + recycling

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Trash Diverted (Recycled)</th>
<th>Annual Trash to Landfill</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2012</td>
<td>234,900 lbs. 75%</td>
<td>69,600 lbs. 23%</td>
</tr>
<tr>
<td>2012-2013</td>
<td>234,900 lbs. 75%</td>
<td>69,600 lbs. 23%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>313,200 lbs. 75%</td>
<td>69,600 lbs. 18%</td>
</tr>
</tbody>
</table>

CALGreen *50% diversion rate
SUSTAINABILITY

TRANSPORTATION: total miles/year

* Average of 1,458 miles/student/year
SUSTAINABILITY

CARBON FOOTPRINT WITH TRANSPORTATION: lbs. of CO$_2$e/sf/yr

- 97.4 lbs of CO$_2$
- 92% Operational Energy
- 8% Transportation
- LESS THAN 1% Water
- LESS THAN 1% Waste

MORENO VALLEY COLLEGE

HMC Architects
SUSTAINABILITY
INSTITUTIONAL COMPARISON W/TRANSPORTATION: lbs. of CO$_2$e/sf/yr

- Moreno Valley College: 97.4 lbs.
- Santa Monica College: 61.4 lbs.
- De Anza College: 41.1 lbs.
- UC San Diego: 39.9 lbs.
- UC Davis: 38.7 lbs.
- Cal Poly Pomona: 30.4 lbs.
- UC Santa Barbara: 28.8 lbs.
- UC Irvine: 28.5 lbs.
- UC Santa Cruz: 28.5 lbs.
- Cabrillo College: 23.0 lbs.
- Loyola Marymount: 19.1 lbs.

Legend:
- Campus Housing Avail.
- No Campus Housing
- Moreno Valley College
SUSTAINABILITY

CARBON FOOTPRINT WITHOUT TRANSPORATION: lbs. of CO$_2$e/sf/yr

- Operational Energy: 99%
- Water: LESS THAN 1%
- Waste: LESS THAN 1%

7.9 lbs of CO$_2$
SUSTAINABILITY
INSTITUTIONAL COMPARISON W/OUT TRANSPORTATION: lbs. of CO$_2$e/sf/yr

<table>
<thead>
<tr>
<th>Institution</th>
<th>Energy Consumption (lbs. of CO$_2$e/sf/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC Davis</td>
<td>30.9</td>
</tr>
<tr>
<td>UC San Diego</td>
<td>30.2</td>
</tr>
<tr>
<td>UC Irvine</td>
<td>20.3</td>
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<tr>
<td>UC Santa Barbara</td>
<td>18.1</td>
</tr>
<tr>
<td>UC Santa Cruz</td>
<td>15.4</td>
</tr>
<tr>
<td>Santa Monica College</td>
<td>14.4</td>
</tr>
<tr>
<td>CalPoly Pomona</td>
<td>12.5</td>
</tr>
<tr>
<td>Loyola Marymount</td>
<td>11.7</td>
</tr>
<tr>
<td>De Anza College</td>
<td>11.2</td>
</tr>
<tr>
<td>Cabrillo College</td>
<td>10.4</td>
</tr>
<tr>
<td>Moreno Valley</td>
<td>7.9</td>
</tr>
</tbody>
</table>

12.9 kBTU/sf/yr
8.2 kBTU/sf/yr EnergyStar

- Campus Housing Avail.
- No Campus Housing
- Moreno Valley College
8.5% of the year, able to maintain comfort without doing anything

1. Behavioral changes in building operations, how we use the building has the most impact in building performance.

2. Sun Shading of windows
   Prevent heat gains by using sun shading devices and overhangs to block direct sun and solar radiation.

3. Thermal Mass
   Concrete, masonry, and structurally insulated panel construction can be used to provide a barrier and absorb heat during the day, which can then be flushed out overnight.

5. Natural Ventilation-
   Operable windows and cross ventilation during cooler hours of the day can provide significant comfort, especially when combined with water feature.

6. Evaporative Cooling-
   Mechanical fans which pass through a wet media can provide effective cooling for warm times of the year.
1. Behavioral changes in building operations, how we use the building has the most impact in building performance.

2. Thermal Mass
Concrete, masonry, and structurally insulated panel construction can be used to absorb heat during the day, and then radiate heat overnight, providing a warmer internal environment for the next day.

3. Sun Shading of windows
Prevent heat gains by using sun shading devices and overhangs to block direct sun and solar radiation.

4. Mechanical Heating
Mechanical heating may be required some times of the year. Rely on efficient systems which are properly tested and balanced. Older systems should be retro commissioned.

1.0% of the year, able to maintain comfort without doing anything
REGIONAL CONTEXT

Start with the Google Earth background, then add:

• MVC, city boundary, natural areas + water related
• Freeways and major streets
• Civic Center, libraries, hospitals, K-12 Schools + parks
• March Air Reserve Base
• Ben Clark Training Center
PRELIMINARY RECOMMENDATIONS

• Enter into a long-term ground lease

• Apply for approval for State-recognized Educational Center status

• Apply for state capital outlay funding to support development

• Improve site to connect to existing services and circulation

• Address facilities program needs to accommodate 1,000+ FTES

• Support the following programs:
  Law Enforcement
  Fire Technology
  Emergency Medical Services
  General Education
NEXT STEPS

Instructional Technology Visioning
  • Sessions: Wed March 26
  • Town Hall Meeting: Tues April 1

Draft CMP Document Reviews
  • April

Final CMP Document
  • May

Board Presentation + Approval
  • June