



CITY OF MERCED

PROGRAMMATIC CLIMATE ACTION PLAN FOCUS GROUP MEETING

MARCH 12, 2015
BILL KING, CITY OF MERCED PRINCIPAL PLANNER
PAM JOHNS, PMC



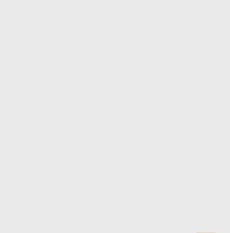


Agenda

- Welcome and introductions (5 minutes)
- Project Update(15 minutes)
- Regulations and CAP Strategies(5 minutes)
- Development Code Index(30 minutes)
- Unified Design Manual(45 minutes)
- Next steps (5 minutes)
- Time for additional comments, questions, and discussion (15 minutes)



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PROJECT UPDATE



WHY

- Development Community Perspective
 - CEQA is a **state-mandate**/not an option
 - Permit Streamlining Option (nimble)
- City Perspective
 - Staff 12 to 7; Efficient Office Operations
 - Programmatic Plans to Lessen Impact of CEQA/Calculated Approach
 - PFFP
 - Water and Sewer Master Plans
 - Park and Open Space Master Plan
 - General Plan



Anticipated Timeline



GHG reduction strategy
and feasibility analyses

Development Code Index and Unified Design Manual



Monitoring
tool

CAP implementation plan



Project Outcomes

Tools to Streamline Regulations

Stand-alone
implementation plan

Monitoring and reporting
tools

Development Code Index

Unified Design Manual

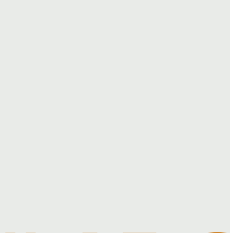


December 8 Focus Group Meeting

- Last meeting
 - Emissions Forecast Update
 - GHG Reduction Target for Development
 - Performance Based Approach
 - Feasibility Analysis/Measure Prioritization
(focus group live polling exercise)



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REGULATIONS AND CAP STRATEGIES

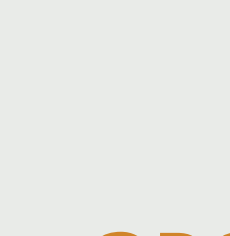


CAP Implementation Strategies

- Initial strategies to achieve CAP reduction targets:
 1. Community actions
 2. Code Amendments vs. **Code Index**
 3. Unified Design Manual
- In reality, strategies are implemented in wide variety of ways (e.g., programs) with less emphasis on code amendments
- Relationship to UDM



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GROWTH PROJECTION



Issue

- Growth Rates are Variable
 - Forecasts enable programmatic *planning*, whether for the GP, Master Utility Plans, PFFP, or the PCAP;
 - Recognition that forecasts may not mirror existing rates is important *during implementation/project analysis*
- Need for Consistency with GP
 - Provides safe-harbor for PCAP and City actions to approve all development projects
 - Does not preclude use of a workaround, however



Recommended Workaround

- **Project Monitoring Tool/Calculated Element**
 - PMC has created tools to monitor GHG emission reductions keyed to actual growth;
 - Tool monitors year-by-year emissions and adjusts reductions to assure target is met; and
 - At next meeting, PMC can present the monitoring tool to show how this is accomplished.

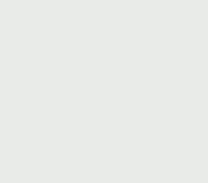


Tools to Enable Streamlining

- Development Community Perspective
 - CEQA is a state-mandate
 - Project-by-project Approach; or
 - PCAP Permit Streamlining Urban Design Manual
- City Perspective
 - Leadership Role to Implement PCAP Strategies
 - Monitor Actual Emissions/Actual Reductions
 - Tool Created for Use by City



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DEVELOPMENT CODE INDEX



Attachment 1 - Options

| Development Code Index and Unified Design Manual Options to Implement CAP Strategies | | | | |
|---|--|--|--------------------|----------------------------------|
| 2012 CAP Strategies | Development Code Topics/Categories | Unified Design Manual Topics/Categories | Admin Practices | Other Implementation Tools |
| CAP Strategies and Actions for New Development (Appendix E) | | | | |
| Strategy EM 1.5: Mobility Development Review Policies | | | | |
| EM 1.5.1 (Apply transit standards to new development projects) | ZC - Pedestrian standards, special site design requirements SO – subdivision design | Subdivision design, block lengths, pedestrian access/circulation | | TMP, BMP, PMP |
| EM 1.5.2 (Apply bicycle standards to new development projects) | ZC - Bicycle parking standards and connectivity standards | Bicycle parking design | | BMP |
| EM 1.5.3 (Apply pedestrian standards to new development projects) | ZC - Pedestrian standards, landscape standards | Pedestrian connectivity concepts and design | | PMP |
| EM 1.5.4 (Consider amendments to ordinances for transit shelters, secure bike parking, and pedestrian pathways) | ZC - Bicycle parking standards, pedestrian standards | | | TMP, BMP, PMP |
| EM 1.5.4 (Encourage improved accessibility to transit system for projects within 2K ft. of transit stop) | ZC - Pedestrian standards, special site design requirements | Site design concepts for access | | |
| EM 1.5.5 (Ensure multiple access points for new development) | ZC - Pedestrian standards | Site design concepts for access | | |



Code Analysis

- Potential Code and UDM topics:
 - CAP strategies and measures
 - Co-benefits

| DEVELOPMENT CODE INDEX AND UNIFIED DESIGN MANUAL TOPICS TO IMPLEMENT 2012 CAP STRATEGIES AND OTHER CO-BENEFITS | | | | | | | | | | | | |
|---|------------------------------------|-----------------|----------------|----------------|-----------------|-----------------|-------------------|--|--|--|-------|---|
| DEVELOPMENT CODE INDEX AND UNIFIED DESIGN MANUAL ITEMS | 2012 CAP STRATEGIES IMPLEMENTED | | | | | | OTHER CO-BENEFITS | | | | NOTES | |
| | Strategy EM 1.5 | Strategy SC 2.5 | Measure WC 3.4 | Measure AR 4.4 | Strategy SR 5.2 | Strategy RE 6.2 | Strategy BE 7.6 | Supports the Bicycle Plan/ Implements Bicycle Plan | Implements General Plan Environmental Impact Report mitigations for GHG reductions | Supports San Joaquin Valley Air Pollution Control District Standards | | Facilitates Adaptation to Climate Change Impacts |
| ZONING CODE | | | | | | | | | | | | |
| Pedestrian standards | X | X | | | | | | | X | X | X | Pedestrian access and connectivity standards (including or referencing landscaping and lighting), and transit shelters |
| Special site development standards and/or design requirements | X | X | | X | X | | | | X | X | X | Design requirements for passenger loading and unloading at destination places, transit accessibility, quasi-public building orientation to parks and greens |
| Bicycle parking standards | X | | | X | | | | X | X | X | | |



Development Code Index

Relevant CAP Strategy Issue Areas:

1. Land Use And
Transportation
2. Energy Efficiency
3. Water and
Wastewater
4. Solid Waste



Development Code Index

- Each CAP Issue Area has one or more subcategories including:
 - Issue/CAP Measure Context
 - Existing/Draft Zoning Code
 - Additional Opportunities and Recommendations

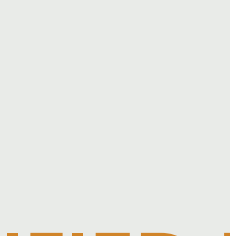


Sample Recommendations for Future Code Amendments

1. ZC could expand pedestrian and bicycle connections and circulation standards and include infill compatibility standards.
2. Additional setback standards and landscape standards in mixed-use districts could allow for transit-supportive facilities.
3. ZC could include shade tree requirements for areas outside parking lots.
4. ZC could add standards for locating and operating small-scale recycling facilities.



CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN



UNIFIED DESIGN MANUAL (UDM)



Preliminary UDM Materials

- TOC
- Introduction
Chapter
- Sample Chapter



Purpose and Intent

- User-Friendly Guidance
- Tool for use by Applicants and Staff
- Content is Representative of Existing Regulation:
 - Policies
 - Existing Codes (State or Local)
 - Adopted Mitigation Measures
 - SJAPCD Design Standards



Table of Contents

Merced Unified Design Manual

Draft Table of Contents 3-5-15

- CHAPTER 1 INTRODUCTION**
- 1.1 State Requirement and Alternative Permit Approach
 - 1.2 Purpose and Intent of the UDM
 - 1.3 Applicability and Process
 - 1.4 Organization and Use
 - 1.5 Relationship to Other Plans and Policies
- CHAPTER 2 COMMUNITY DESIGN**
- 2.1 Land Use Patterns
 - A. Land use compatibility
 - B. Development patterns for transit
 - C. Secondary Dwelling Units
 - 2.2 Community Design for Connectivity
 - A. Access
 - B. Circulation
 - C. Blocks and midblock connections
 - D. Multiuse Pathways and Off-Street Bike Pathways
 - 2.3 Street Design
 - A. Pedestrian-Friendly Street Designs: This section would reference the City's adopted Circulation Plan and adopted street standards. Depending on the City's practices and preferences, the UDM could include any or all of the following items:
 - o On-street parking
 - o Sidewalk extensions or bulb-outs
 - o Traffic circle
 - o Median
 - o Paved and/or raised crossings
- CHAPTER 3 SITE DESIGN FOR MOBILITY**
- 3.1 Designated Vehicle Parking Provisions. At a minimum, this section would address the items listed below.
 - A. Compact parking
 - B. Electric vehicle charging stations
 - C. Priority parking (e.g., carpool, car share)
 - D. Neighborhood Electric Vehicles
 - 3.2 Site Planning for Transit, Bike, and Pedestrian Access.
 - A. Pathways and access from sidewalks/Transit Stations to building entrances
 - B. Access between adjacent developments
 - C. Loading and unloading areas at destination places
 - D. Transit Facility Improvements
 - E. Information display about alternative travel modes

Merced Unified Design Manual

Draft Table of Contents 3-5-15

- 3.3 Bicycle Facility Standards and Guidelines. At a minimum, this section would address:
 - A. Bicycle parking, short-term and long-term
 - B. Showers and lockers
- CHAPTER 4 LANDSCAPE IMPROVEMENTS**
- 4.1 Shade Trees. At a minimum, this section would address:
 - A. Street trees in new subdivisions and larger projects with internal streets
 - B. Shade trees in parking lots
 - C. Shade trees alongside buildings and pedestrian paths
 - 4.2 Water-Conserving Landscape. At a minimum, this section would address:
 - A. Drought-tolerant/native planting
 - B. Minimizing turf areas
 - 4.3 Stormwater Considerations
 - A. Direct Runoff to Planters
 - B. Green Roofs
 - C. Rain Gardens and/or vegetated bioswales to filter and detain rainwater
 - D. Retention of existing natural vegetation
- CHAPTER 5 RENEWABLE ENERGY FACILITIES AND RESOURCE EFFICIENCY**
- 5.1 Solar Orientation and Solar Energy
 - A. Site Planning for Solar Orientation
 - B. Roof Mounted Renewable Energy Design and Siting
 - C. Ground Mounted Renewable Energy Design and Siting
 - D. Passive Solar Design
 - 5.2 Other
 - A. Cool Pavements
 - B. Cool Roofs
- CHAPTER 6 RECYCLING AND COMPOST FACILITIES AND ACTIVITIES**
- 6.1 Reduce Waste Sent to Landfills
 - A. Food/Green Waste
 - B. Recyclable Collection
- APPENDICES**
- A.1 UDM Checklist
 - A.2 List of Referenced Policies and Regulations



Introduction Chapter

- Alternative Permit
- Purpose and intent
- Applicability and process
- Organization and use
- Relationship to other plans and policies

Merced Unified Design Manual

Chapter 1 Introduction (Dated 3-5-15)

CHAPTER 1 INTRODUCTION

1.1 State Requirement and Alternative Permit Approach

The purpose of the Unified Design Manual (UDM) is to provide design-related guidance to projects seeking to demonstrate consistency with the City's adopted Programmatic Climate Action Plan (PCAP). When projects demonstrate consistency with the PCAP and UDM, they can benefit from permit streamlining. Ultimately, the PCAP is designed to streamline environmental



- Specific Design Topics – each design topic section is structured as follows:
 - Intent – explains the purpose of the design considerations
 - Design considerations – identifies recommended design guidelines, and a menu of design options for the physical design elements to be addressed. Design considerations are reiterations of General Plan policies and implementation measures existing development codes, adopted design standards or suggested best design practices. The following icons are used to identify where a design consideration is a reiteration of Zoning Code standards or General Plan Policies or Implementation Measures:
 - Zoning Code
 - General Plan
 - Accompanying images or graphics – illustrate each design concept.

among other community goals. Regulations already applied locally to site designs that reduce global warming impacts include: a) existing zoning codes; b) current General Plan policy; c) mitigation measures from the City's certified General Plan Environmental Impact Report; and d) strategies that would aid projects meeting the San Joaquin Air Pollution Control District's Rule 9410 (Indirect Source Review). To inform and encourage the local development community to build high-quality projects, "Design Best Practices" supplement these existing regulations. These design considerations provide design professionals, property owners, residents, staff, and decision-makers with a clear and common understanding of the City's expectations for the planning, design, and review of development proposals to implement Merced's Programmatic Climate Action Plan.



Applicability and Process

- Optional Process
- Use by Projects that are subject to CEQA
 - Including: Site Plan based Projects (subdivisions, CUP's, site plan review and design review)
 - Not Including: General Plan Amendments, Community and Specific Plans, Annexation, and Zone Changes.



Sample UDM Chapter - Solar

- Overall chapter description
- Chapter contents
- Objectives
- Relationship to CAP

CHAPTER 6 SOLAR ORIENTATION AND SOLAR ENERGY FACILITIES



Description

This chapter provides design considerations for solar access and solar energy facilities. By following the requirements and suggestions outlined in this chapter, projects can be designed to reduce reliance on non-renewable energy sources while maintaining an aesthetically pleasing environment.

Objectives

- Design projects to conserve energy and minimize impacts on natural resources.
- Site buildings to take advantage of natural heating and cooling.
- Site solar energy facilities to maximize solar access and minimize visual nuisance.
- Enhance aesthetics of solar energy facilities.

Chapter TOC

- 6.1 Site Planning for Solar Orientation
- 6.2 Building-mounted Solar Energy Design and Siting
- 6.3 Ground-mounted Solar Energy Design and Siting

Relationship to CAP



Energy

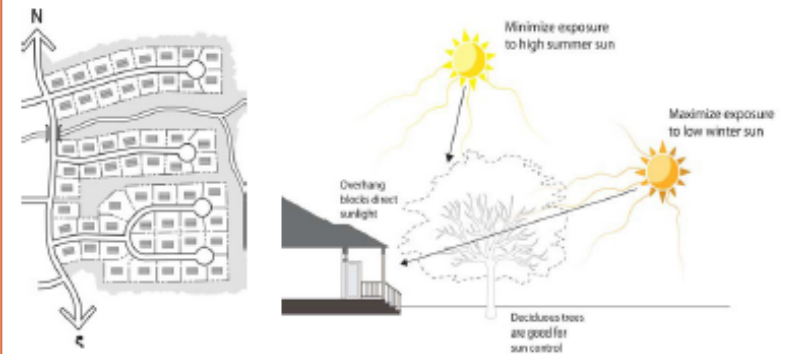


Sample UDM Chapter - Solar

- Each topic includes:
 - Intent language
 - design considerations (recommendations, not mandates)
 - Graphic support and imagery with labels and text as appropriate

6.1 Site Planning for Solar Orientation

A. Passive Solar Heating and Cooling



Buildings elongated on east-west axis

Intent

Design considerations for passive solar heating and cooling are intended to reduce energy consumption and to provide a comfortable environment.

Design Considerations

When orienting buildings and building features on a site, the following items should be incorporated into the project design as applicable:

Recommended:

1. Orient buildings and windows to be south-facing and place buildings on the site to maximize winter sun exposure (per General Plan Sustainable Development Element).
2. Elongate the building on its east-west axis for increased winter sun exposure.
3. To minimize direct sun exposure in summertime, utilize exterior shading devices for southern- and western-facing windows. These devices may include trees, overhangs, awnings, and trellises to block direct light and heat before they pass through the building.
4. Arrange buildings and openings to allow cool air to enter and hot air to leave the building during summertime.
5. Use light-colored reflective materials on rooftops, sometimes referred to as "cool roofs" to minimize heat gain in the building.

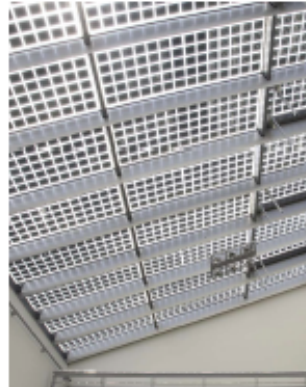


Sample UDM Chapter - Solar

6.2 Building-Mounted Solar Energy Design and Siting



Solar panels integrated into roof tiles



Solar panels integrated into glazing

Design Considerations

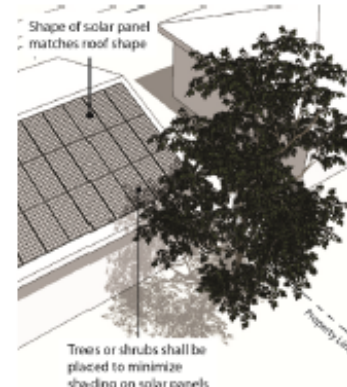
When designing roof-mounted solar energy facilities, the following items should be incorporated into the project design as applicable.

1. Roof-mounted photovoltaic solar panels should meet the height requirement of the designated zoning district, but may be allowed to extend higher in accordance with the California Building Code.
2. Whenever feasible, photovoltaic solar panels should be integrated into the structure design as one of its architectural elements. Building integrated photovoltaics are visually attractive and can be incorporated into roof tiles or glazing for awnings or glass roofs.
3. The City encourages the use of solar arrays or other types of solar-based energy generation into all new roofing structures.
4. Consider the pitch of roofs and orientation of the building when designing the project so as to maximize solar energy generation.
5. Select tree types and plant trees in locations that will minimize shade on solar energy systems.

Intent

Design considerations for energy design and siting are intended to encourage aesthetically designed solar energy facilities that protect and enhance the natural environment.

6.2 Building-Mounted Solar Energy Design and Siting



Brick tower element screens solar panels from the street

3. Select tree types and plant trees in locations that will minimize shade on solar energy systems.
4. Design and locate structures on the property so that they will not shade the solar energy facility.
5. For flat roofs, consider architectural styles and features that can screen the solar energy facilities. A parapet or tower architectural feature can effectively and attractively screen solar energy system.
6. For sloped roofs, reduce visual clutter by avoiding breaking up the array into multiple irregular shaped areas. Instead, match the shape and proportions of the array with the shape and proportions of the roof.
7. Use panels with non-reflective coatings and non-reflective surfaces on exposed frames and components to minimize glare.
8. Solar panels should be angled and oriented to minimize glare on neighboring windows and, to the extent possible, away from public areas.
9. Allow for the future installation of solar facilities by designing one section of the roof with at least 300 square feet of space for solar installations that is south-facing, and where all mechanical equipment and skylights are absent.



Sample UDM Chapter - Solar

6.3 Ground-Mounted Solar Energy Design and Siting



Building height panels serve as shade



Solar panels serve as shade structures in parking lots

Design Considerations

When installing ground-mounted solar energy systems, the following items should be incorporated into the project design as applicable:

Mandatory:

1. Ground-mounted photovoltaic solar panels shall be screened from public view (Per Zoning Code section 20.44.110)

Recommended:

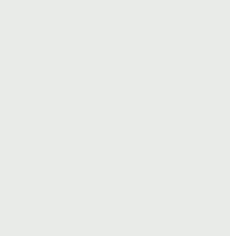
1. The ground-mounted solar energy system should not be located within a building setback or front yard area.
2. Consider using the solar energy system to serve as a shade structure in parking lots (see photos above).
3. The ground-mounted solar energy structure should not exceed the height of the main structure on the parcel and must comply with all applicable height restrictions.
4. At maximum tilt, the ground-mounted solar energy structure should not exceed the maximum height allowed in that zoning district for accessory buildings.
5. Prevent glare on the adjacent public right-of-way as well as any adjacent inhabited structure.

Intent

Design considerations for ground-mounted solar energy design and siting are intended to minimize the visual impacts of solar panel shade facilities on adjacent properties and the streetscape environment.



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NEXT STEPS

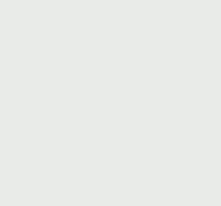


Next Steps

- Finalize Development Code Index (PMC/CITY)
- Write Complete Draft Unified Design Manual (PMC/CITY)
- August 2015: Final Review of Draft PCAP and UDM
- Fall 2015: Focus Group Vote on PCAP Project



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ADDITIONAL DISCUSSION



Thank you

Please use comment cards for any additional thoughts you'd like to share. You can also provide any additional thoughts later by email directly to Bill King.

For additional questions, please contact Bill King

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