



Implementing Smart Growth for the Department of Defense

Mark L. Gillem, PhD, FAIA, AICP
Principal, The Urban Collaborative
Associate Professor, The University of Oregon
Lt Col (ret), USAFR

Andrea Wohlfeld Kuhn, AICP, LEED Green Associate
Senior Planner
HQ U.S. Army Corps of Engineers

Mary Jane Brady
Installation Community Planner
Buckley Air Force Base

Session Outline

A Quiz

PART I: THEORY

PART II: UFC STRATEGIES

PART III: CASE STUDIES

Image 1



Image 2



Image 3



Image 4



Images 1 & 3



Images 2 & 4





Part I: Theory

Andrea Wohlfeld Kuhn



The Problem: Energy-Inefficient Development

Auto-Focused



Abundantly Paved

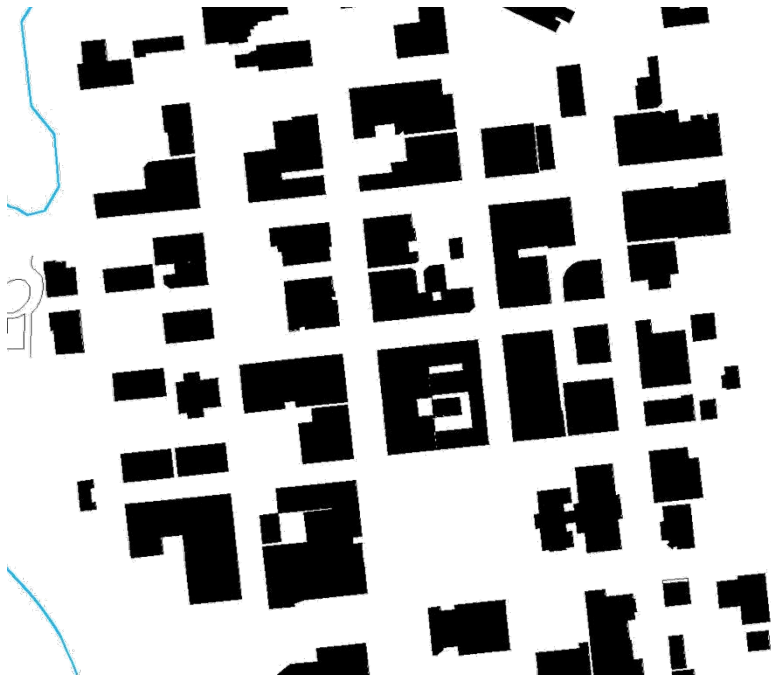


Suburbia may be paved with good intentions, but mainly it is paved.

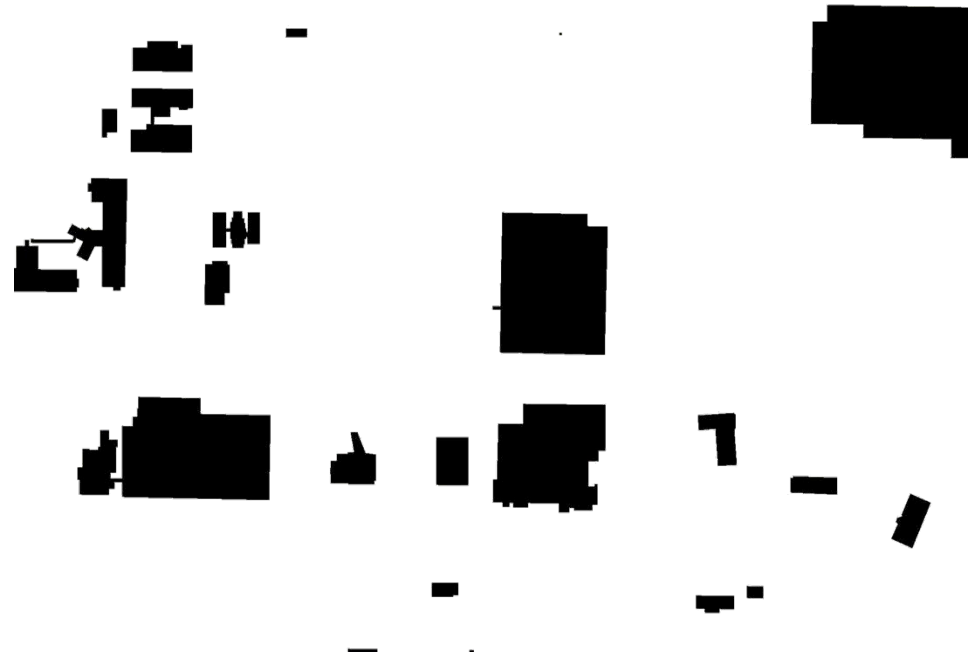
Douglas Kelbaugh

86a: 34a [40%]

Widely Spaced

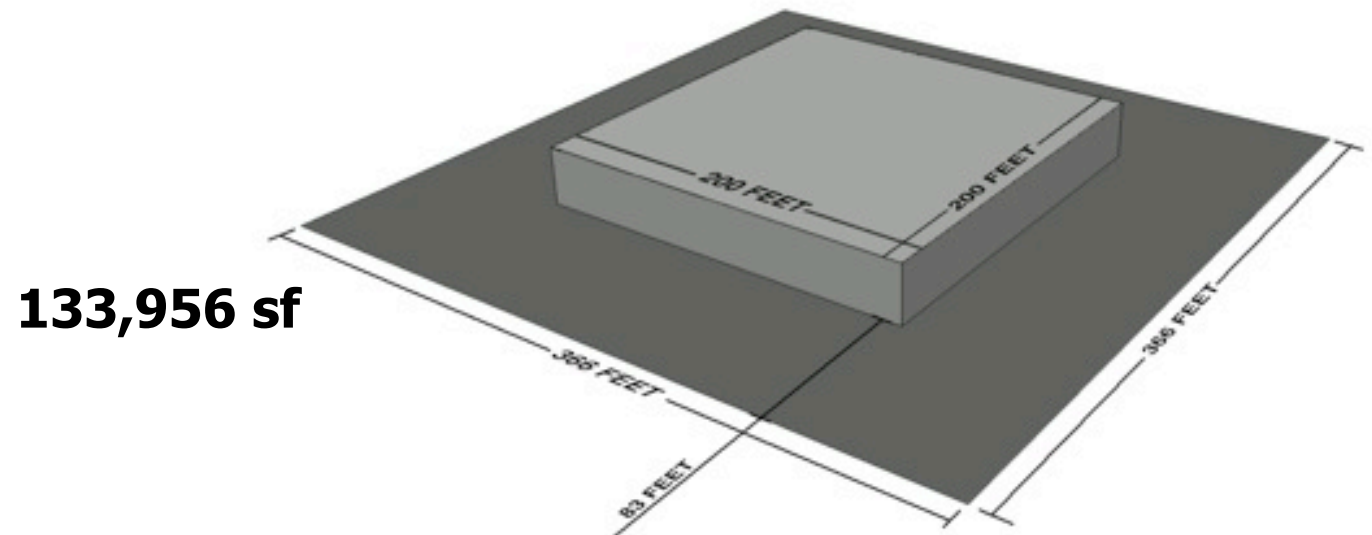
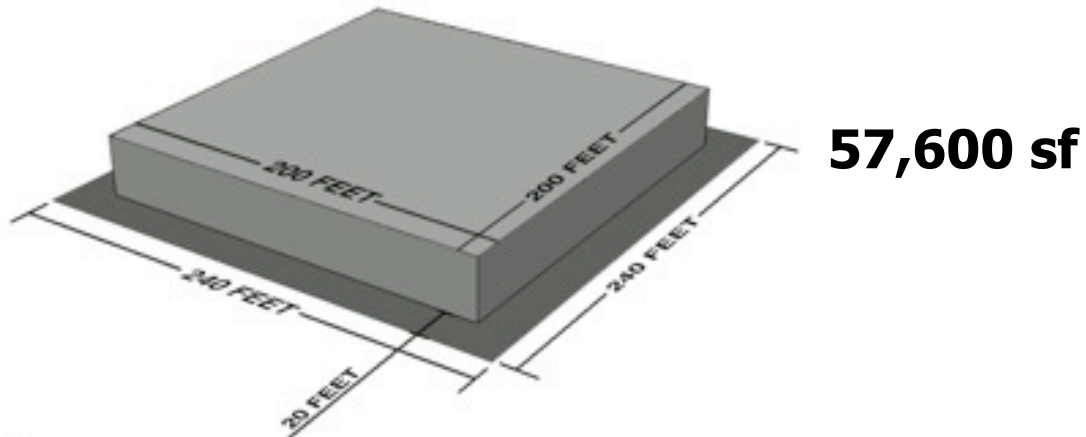


Downtown Olympia, Washington



Downtown Joint Base Lewis-McChord

The Impact of AT/FP Setbacks



Increasingly Franchised

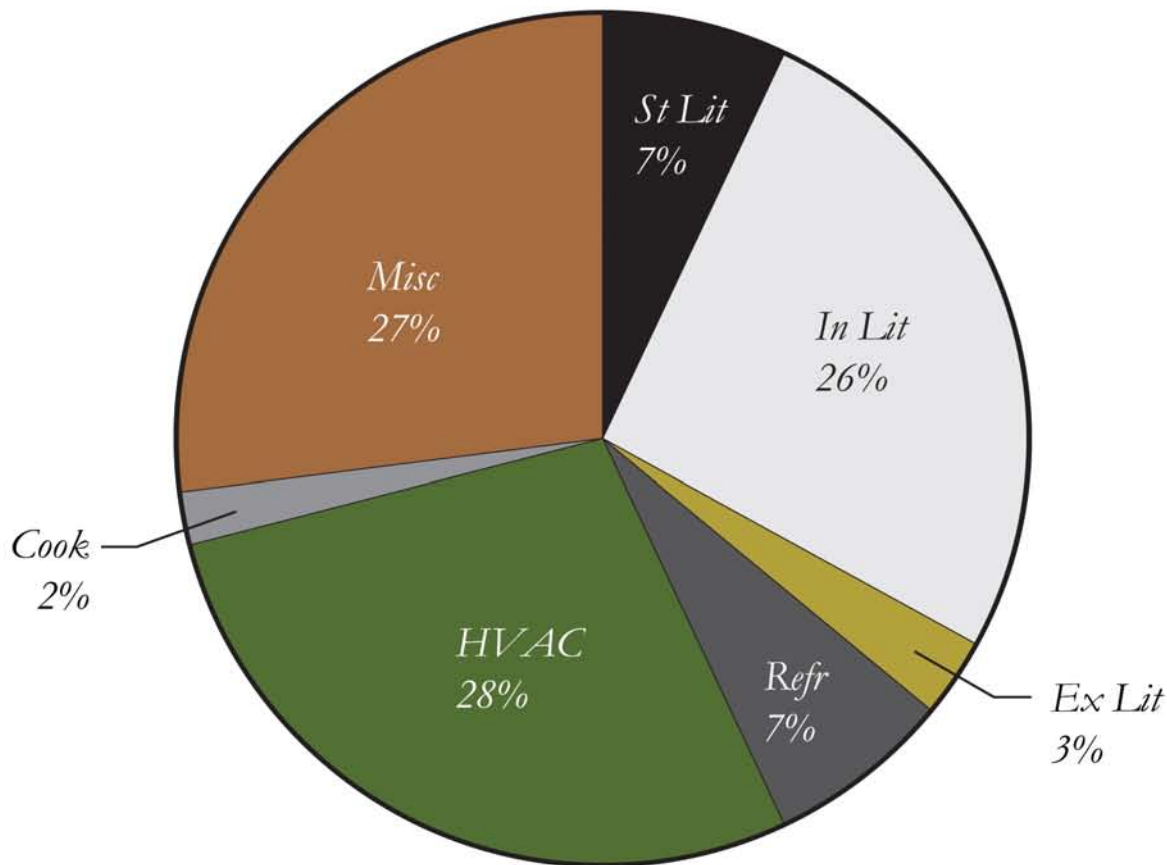


Clearly Segregated



Just look at any base and you'll see the same land use pattern.
Military Planner

Energy Inefficient



KEY FINDINGS

1. Interior lighting and HVAC account for 54% of total energy consumption
2. Strategies that can reduce need for interior lighting and HVAC will produce biggest benefits
 - Narrow Wings
 - Operable Windows

Bottom Line

To significantly reduce energy use, planning of the built environment must accommodate narrow wings.



The Costs of Energy-Inefficient Development

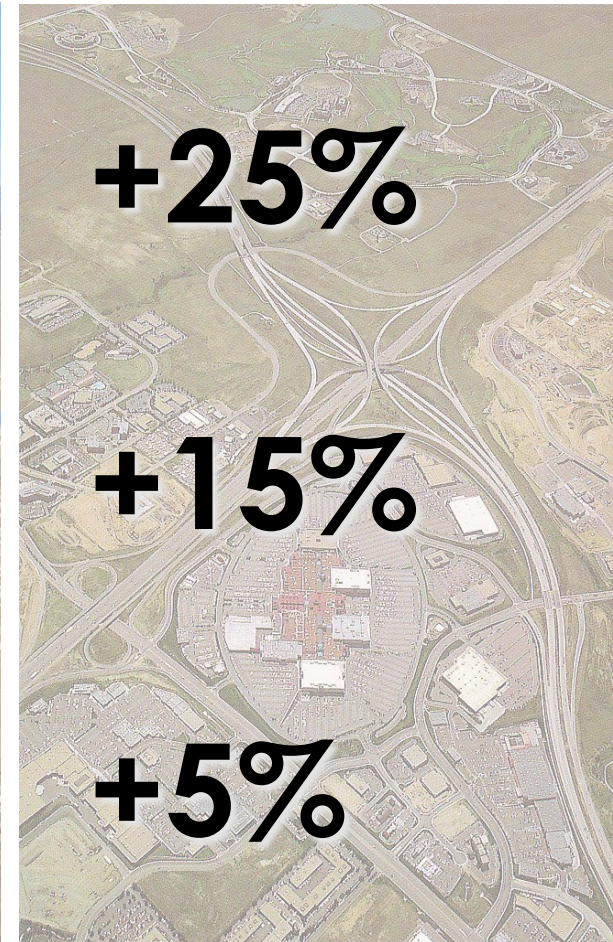
Non-Mission Oriented Land Consumption

■ area for a pedestrian (4sf)

■ area for a car (1400sf)



Excess Costs to the Installation



Source: *Economic and Fiscal Impacts of Alternative Land Use Patterns*, by Robert Burchell, Rutgers University

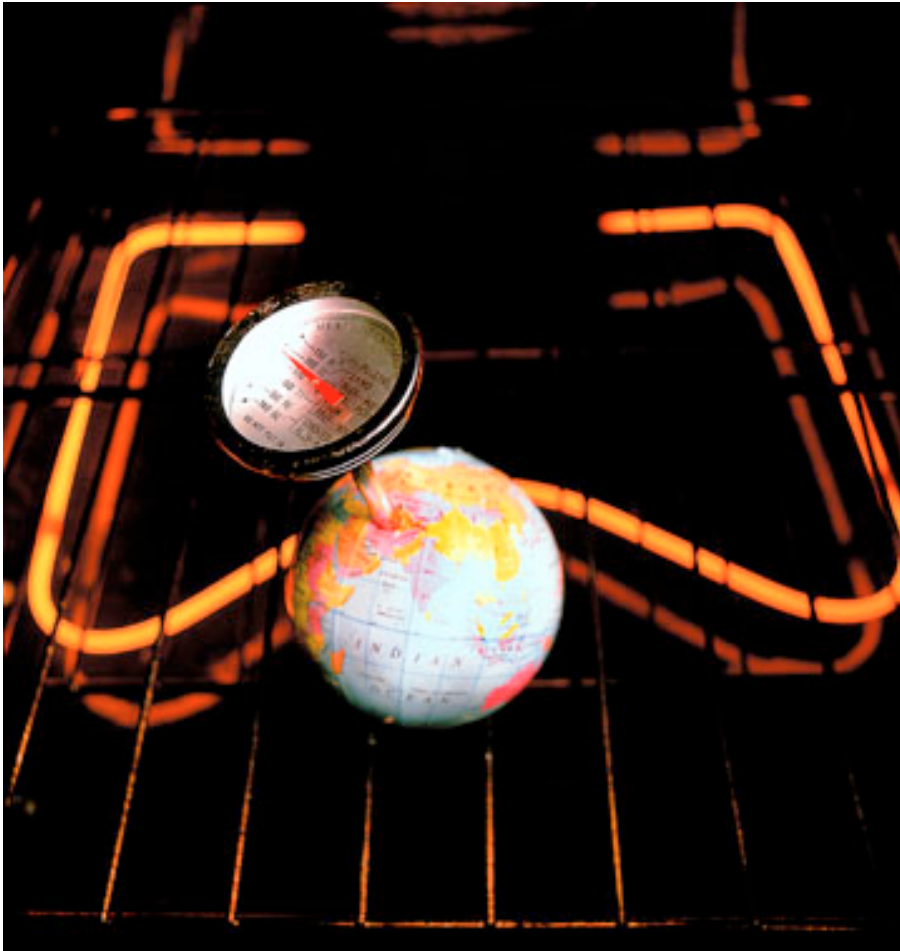
Increased Pollution



Driving a car is probably a typical citizen's most polluting daily activity.

EPA

Climate Change



“Climate change and energy will play significant roles in the future security environment. Climate change will shape the operating environment, roles, and missions that we undertake...[and]... DoD will need to adjust to the impacts of climate change on our facilities and military capabilities.”

Critical Infrastructure Concerns

*DoD Quadrennial Defense Review,
2010*

Personal Economics





The Solution: Implementing Overarching Guidance on Sustainable Planning

FY13 NDAA

“§ 2864. Military installation master plans

“(a) PLANS REQUIRED.—At a time interval prescribed by the Secretary concerned (but not less frequently than once every 10 years), the commander of each military installation under the jurisdiction of the Secretary shall ensure an installation master plan is developed to address environmental planning, sustainable design and development, sustainable range planning, real property master planning, and transportation planning.

Executive Order 13514

FEDERAL LEADERSHIP IN ENVIRONMENTAL, ENERGY, AND ECONOMIC PERFORMANCE (5 Oct 2009)

It is therefore the policy of the United States that Federal agencies shall...design, construct, maintain, and operate high performance sustainable buildings in sustainable locations....

Ensure that planning for new Federal facilities or new leases includes consideration of sites that are **pedestrian friendly**, near existing **employment centers**, and accessible to **public transit**, and emphasizes existing central cities and, in rural communities, existing or **planned town centers**.

Department of Defense

The DoD Component exercising management responsibility over each installation shall develop a master plan by **1 October 2018** that defines opportunities for site development and alternative land use and incorporates the following planning strategies:

- **sustainability**
- **resource management**
- **transportation alternatives**
- **defensibility**
- **area and network planning**
- **form-based planning**
- **local and regional coordination**

DOD 2012 UFC

UFC 2-100-01
15 May 2012

UNIFIED FACILITIES CRITERIA (UFC)

INSTALLATION MASTER PLANNING



APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

- Created with active input from all services
- Establishes 10 key strategies
- Outlines common process and set of products
- Describes evaluation and training approach

UFC: Process and Products



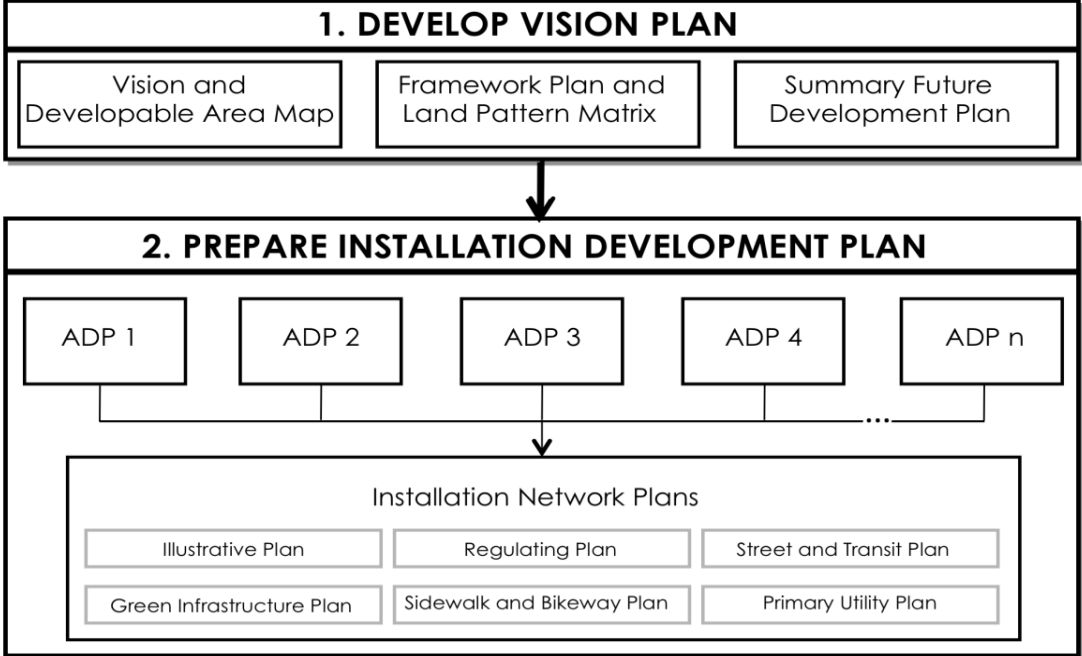
UFC: Process and Products



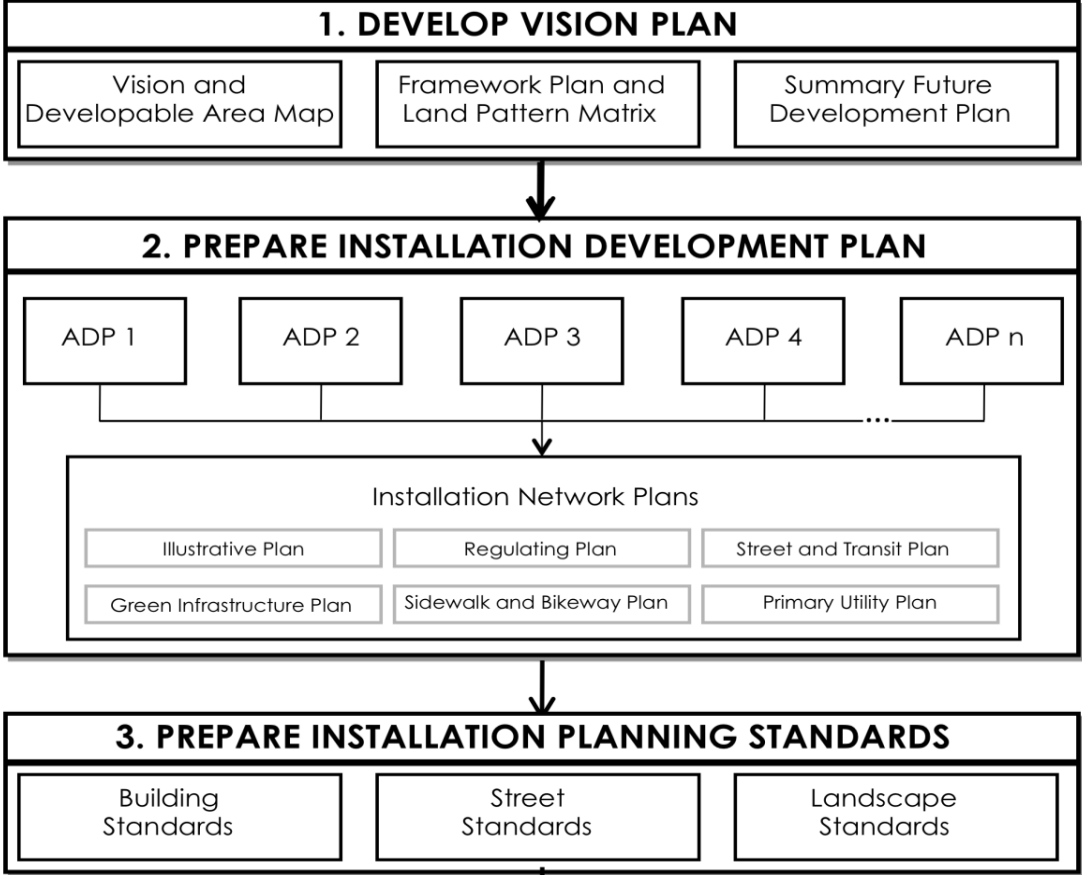
The installation's **mission statement** cites the specific responsibilities the installation must support. It is near-term and meets the current needs. Missions change as national security requirements and economics change.

A **planning vision** defines in visual terms ideal development for maximizing the installation's long-term capabilities.

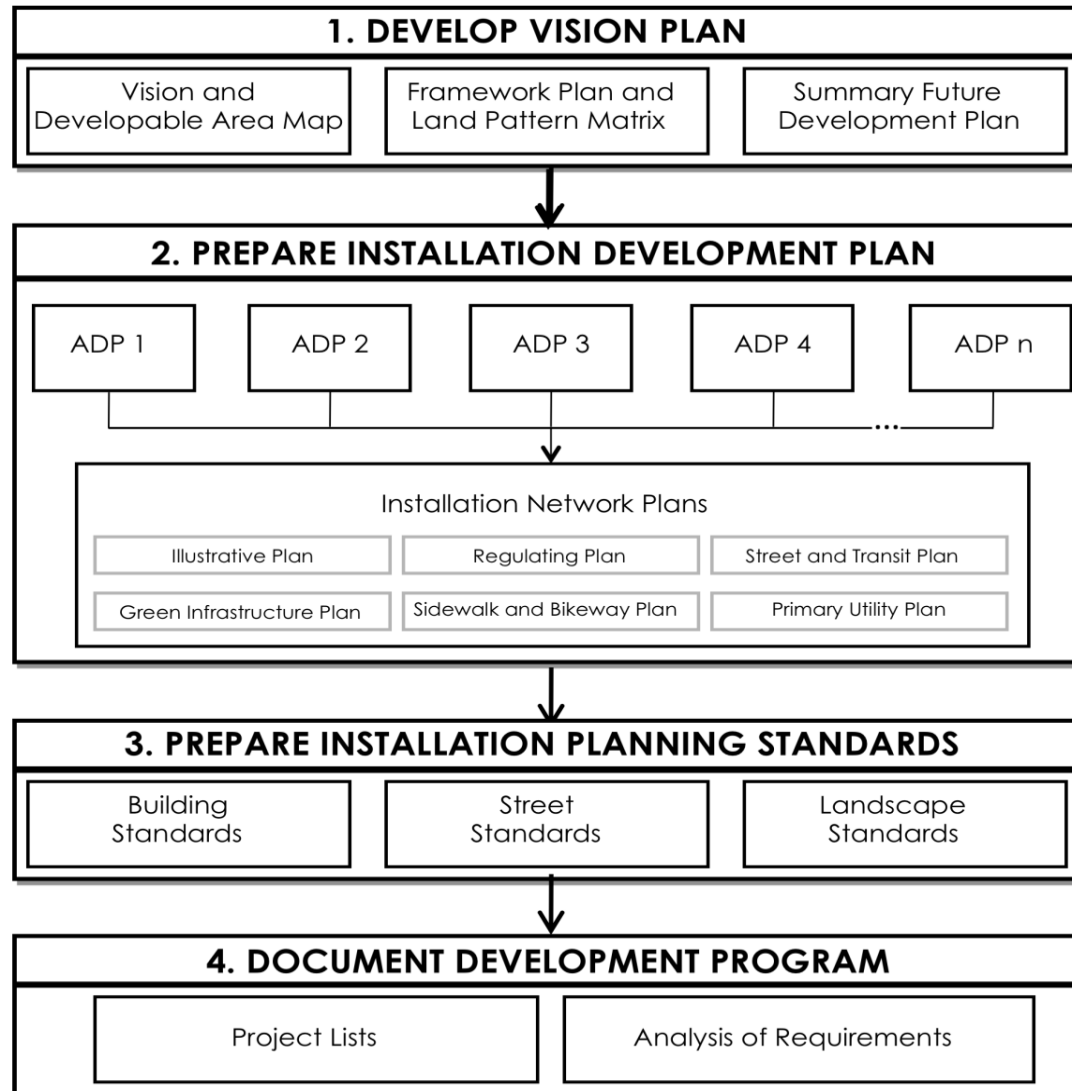
UFC: Process and Products



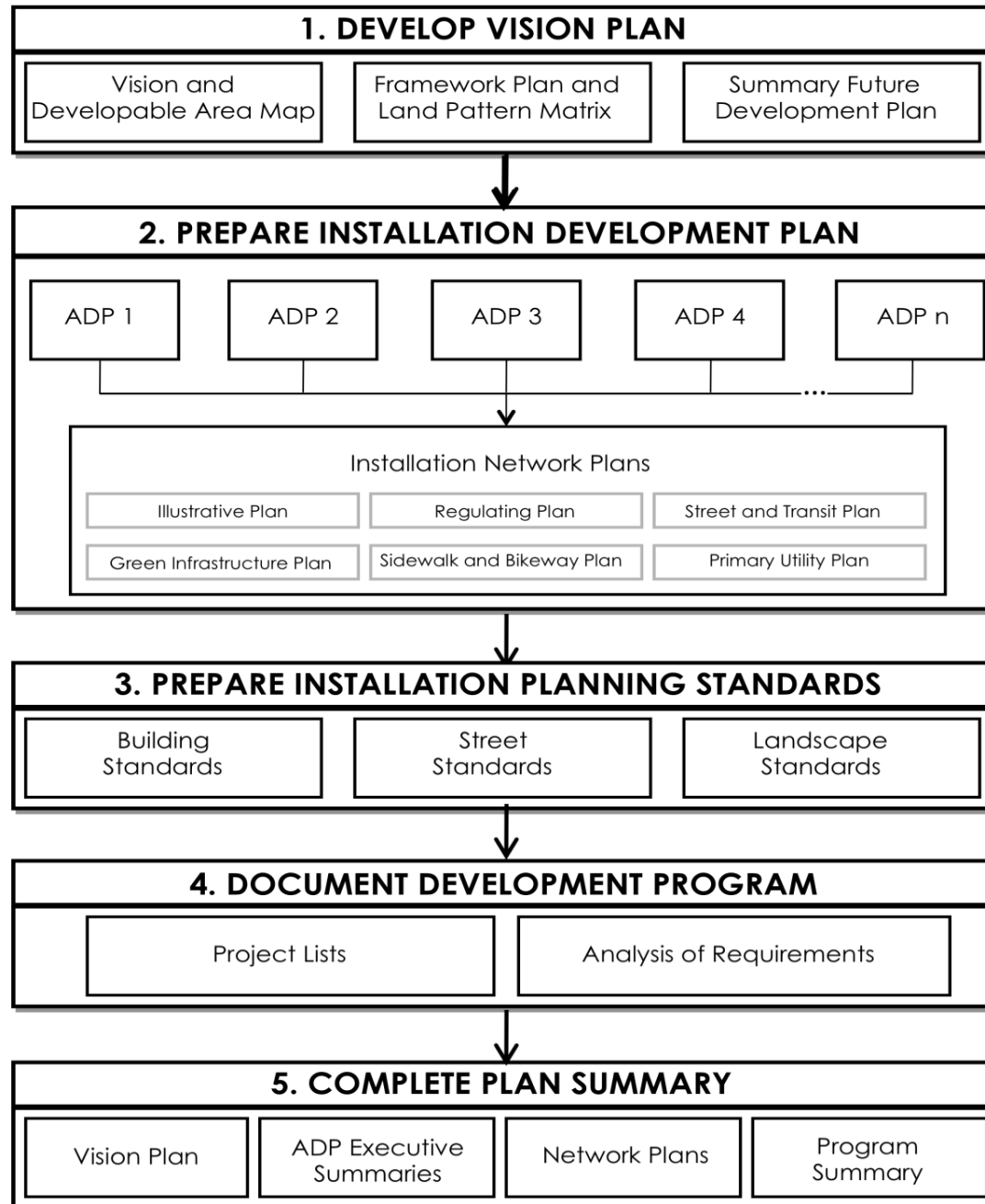
UFC: Process and Products



UFC: Process and Products



UFC: Process and Products





Part II: UFC Strategies

Mary Jane Brady

1. Sustainable Planning



1. Sustainable Planning

Energy-Efficient Compact

JOINT BASE PEARL HARBOR-HICKAM
NORTHSIDE AREA DEVELOPMENT PLAN TRAINING PRACTICUM



THE URBAN COLLABORATIVE, LLC

Mixed Walkable Transit-Oriented

1. Sustainable Planning



1. Sustainable Planning



1. Sustainable Planning



1. Sustainable Planning



2. Natural and Cultural Resource Preservation



4. Healthy Community Planning



5. Area Development Planning



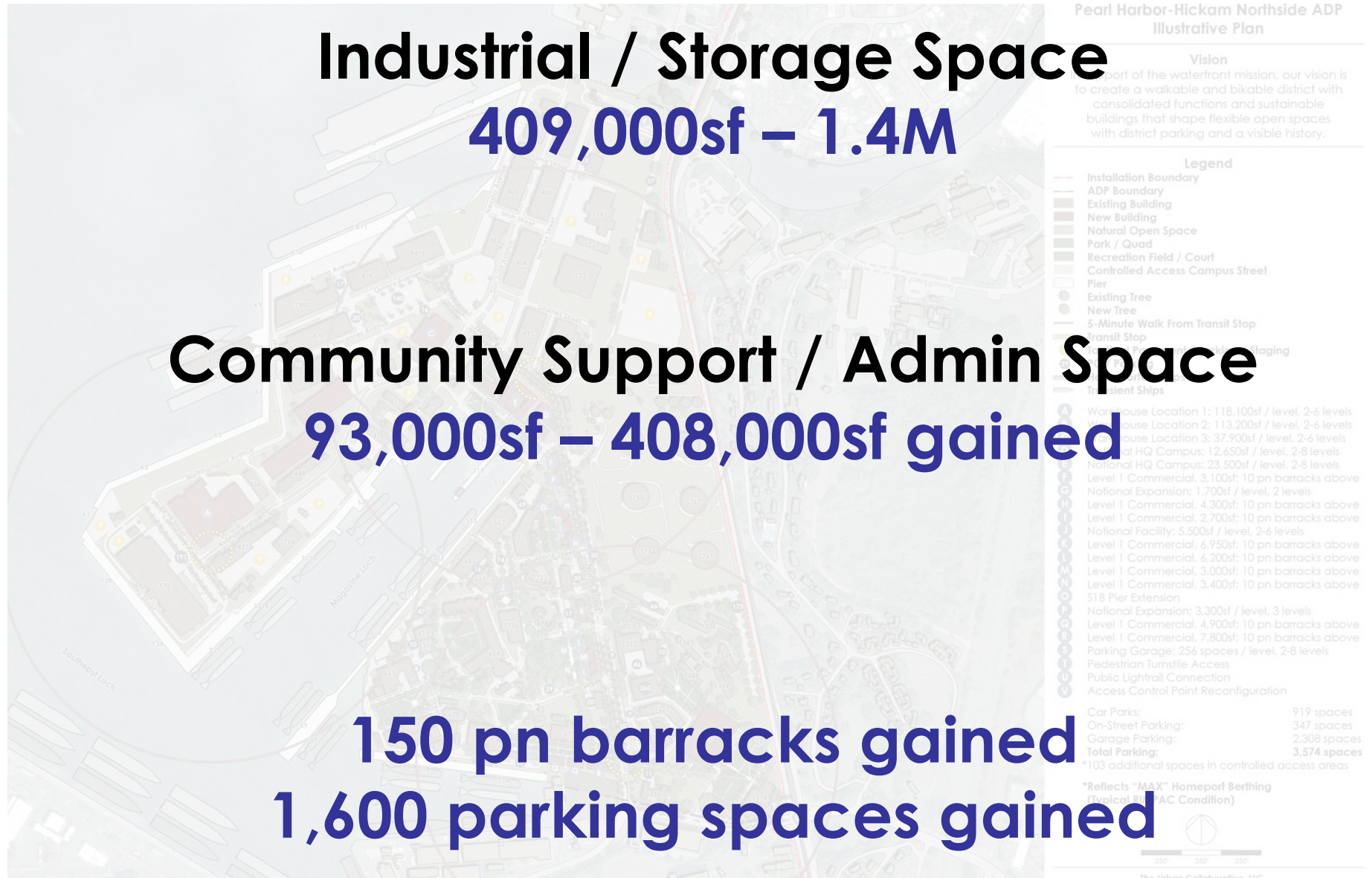
6. Network Planning



7. Form-Based Planning



8. Capacity Planning



9. Facility Standardization

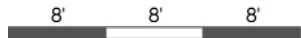
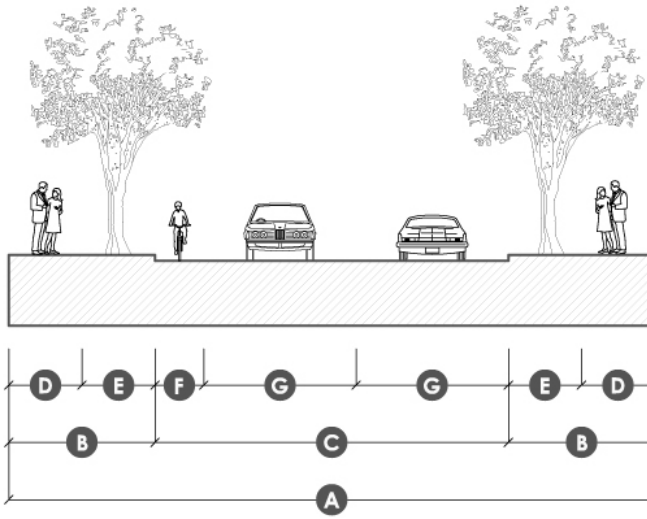
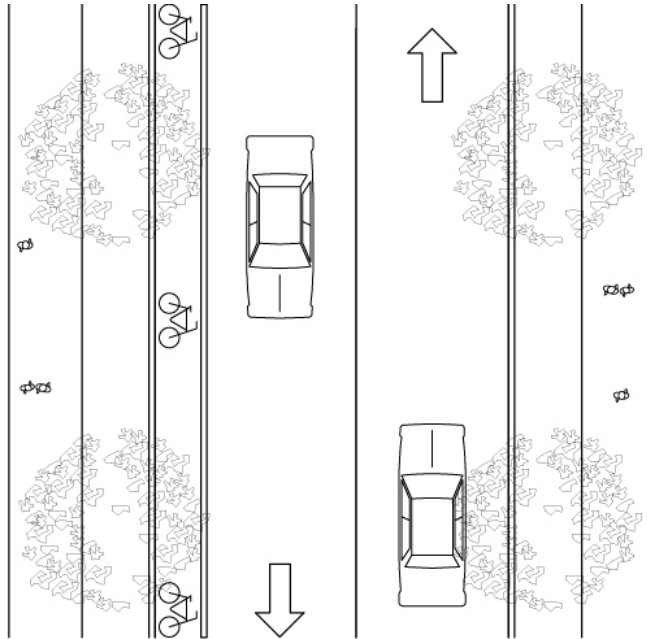


Diagram Reflects Recommended Dimensions

Overall Widths	Min.	Max.	Recommended
Right-of-Way (ROW) Width	47'	68'	53' (A)
Verge Width	8'	16'	12' (B)
Curb to Curb Width	23'	36'	29' (C)

Lane & Edges	Min.	Max.	Recommended
Sidewalks	4'	8'	6' (D)
Planting Strip	4'	8'	6' (E)
Bike Lane	3'	6'	4' (F)
Traffic Lanes	10'	15'	12'6" (G)

Street Trees

Native Street Trees 25' - 35' o.c.

Typical Lane Width for Desire Street Speeds

25 Miles or Below 10'

26 - 35 Miles 11'

36 and Above 12'

Typical Parking Width for Desire Street Speeds

25 Miles or Below 7'

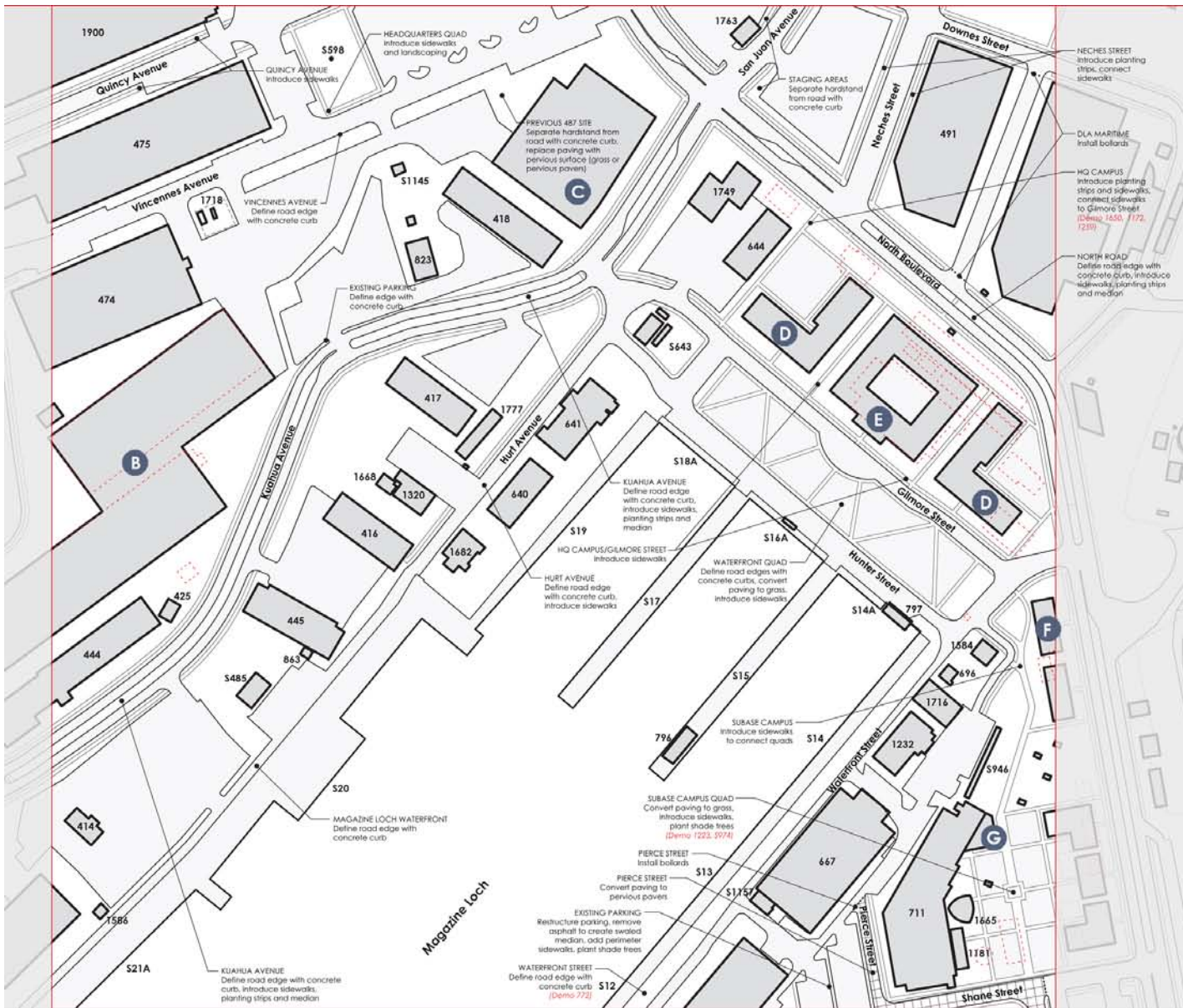
26 - 35 Miles 8'

36 and Above 9'

Building Setbacks

Building Setback shall be minimum allowable
Anti Terrorism Force Protection Standards

10. Plan-Based Programming



Pearl Harbor-Hickam Northside ADP ADEP Area 4 Technical Plan

Vision

In support of the waterfront mission, our vision is to create a walkable and bikable district with consolidated functions and sustainable buildings that shape flexible open spaces with district parking and a visible history.

Legend

- Installation Boundary
 - ADP Boundary
 - ADEP Areas
- MILCON/Special/Specific/Energy Projects (Over \$750K)**
- B** Warehouse Location 2: 113,200sf / level, 2-6 levels (Demo 451K, 452K, S1144)
 - C** Warehouse Location 3: 37,900sf / level, 2-6 levels
 - D** National HQ Campus; 12,650sf / level, 2-8 levels (Demo 1258, 1594, 5633, 626)
 - E** National HQ Campus; 23,500sf / level, 2-8 levels (Demo 1252, 3965, 1257)
 - F** Level 1 Commercial, 3,100sf; 10 pn barracks above (Demo 236, 1904)
 - G** National Expansion; 1,700sf / level, 2 levels
 - S15** FY15 (S109-0391) Repair Historic Pier (Special)
 - S17** FY15 (RM12-06) Repair Pier & Quaywalls (Special)
 - 444** FY12 (838102) Replace Fire Alarm System (Energy)
 - 474** FY12 Upgrade Fire Alarm System (Specific)
 - 475** FY12 Upgrade Fire Alarm System (Specific)
 - FY12 (141203) Repair Elevator (Specific)
 - FY12 (RM10-7423) Replace Roof (Special Proj)
 - FY12 Upgrade Electrical System (Specific)
 - FY12 (141152) Repair/Consolidate A/C (Specific)
 - FY12 (141189) Reroof / PV (Specific)
 - FY12 (141259) Install Historic Windows (Specific)
 - 491** FY12 (741090) Repair/Modify Warehouse (Specific)
 - 641** FY12 (P-713) Construct Compress Plant (MILCON)
 - 667** FY12 (091122) Paint Interior & Exterior (Specific)
 - FY12 (RM09-1950) Repair Historic Gym (Energy)
- SRM/Special/Specific/Energy Projects (Under \$750K)**
- 416-7** SRM/Special/Specific Projects (See Area 4 Chart)
 - 425** SRM/Special/Specific Projects (See Area 4 Chart)
 - 444-5** SRM/Special/Specific Projects (See Area 4 Chart)
 - 474** SRM/Special/Specific Projects (See Area 4 Chart)
 - 475** SRM/Special/Specific Projects (See Area 4 Chart)
 - 491** SRM/Special/Specific Projects (See Area 4 Chart)
 - 641** SRM/Special/Specific Projects (See Area 4 Chart)
 - 644** SRM/Special/Specific Projects (See Area 4 Chart)
 - 667** SRM/Special/Specific Projects (See Area 4 Chart)
 - 711** SRM/Special/Specific Projects (See Area 4 Chart)
 - 796** SRM/Special/Specific Projects (See Area 4 Chart)
 - 1232** SRM/Special/Specific Projects (See Area 4 Chart)
 - 1682** SRM/Special/Specific Projects (See Area 4 Chart)
 - 1716** SRM/Special/Specific Projects (See Area 4 Chart)
 - 1749** SRM/Special/Specific Projects (See Area 4 Chart)
 - 1763** SRM/Special/Specific Projects (See Area 4 Chart)
 - S12-14** SRM/Special/Specific Projects (See Area 4 Chart)



The Urban Collaborative, LLC



Part III: Case Studies



Case 1: Buckley AFB



Case 2: Joint Base Pearl Harbor-Hickam

Mark Gillem



Case 3: Marine Corps Air Station Miramar



Case Study 4

Fort Hunter Liggett

Sustainability Component

Plan



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