

*Department of Commerce Boulder Laboratories  
Draft Master Plan  
Boulder City Council Briefing  
October 18, 2016*



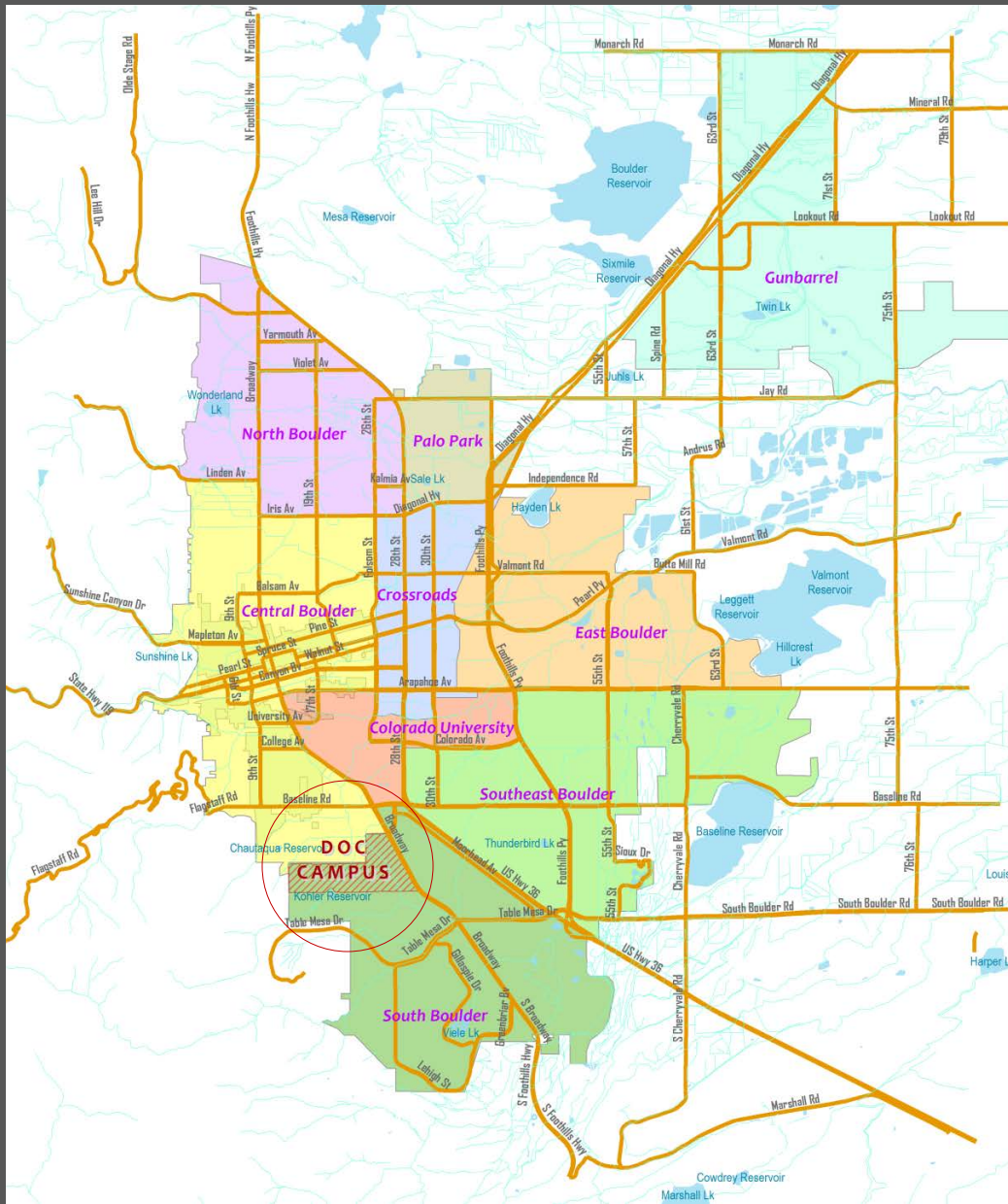
United States Department of Commerce

# DoC Boulder Laboratories: Draft Master Plan

- Delineates a 20-year vision and framework for future development
- Maintains all Protected Areas and trails
- Fully adheres to the Memorandum of Agreement:
  - All proposed construction and site improvements within Development Zone
  - Complies with square footage, parking and height limits, and views to the Mesa
- Incorporates public input
- Funding not anticipated before 2020 with exception of current improvements to two lab buildings



# Goals & Purpose of the Master Plan



- Comprehensive and coordinated framework for future development (20 years)
- Appropriate facilities and infrastructure for advanced research
- Respects its location, historic context, and agreements with community and tribes
- Facilities that encourage collaboration, welcome outside colleagues
- Attractive campus that advances sustainable design goals
- A plan for gradual change, complete at each step
- Compliance with NEPA through development of Environmental Assessment

- **Campus Established in 1950**

Purchased & donated by Boulder Chamber of Commerce & citizens

- **Department of Commerce (DOC) Agencies on the Boulder Campus:**

National Institute of Standards and Technology (NIST)

National Telecommunications and Information Administration (NTIA)

National Oceanographic and Atmospheric Administration (NOAA)

- **Boulder Campus:**

206 Acre site

34 Buildings & Structures; 1,254,000 GSF

Approximately 1,760 personnel

- **Mission for Advancing Science & Technology:**

Requires flexible, integrative, collaborative space

Requires highly controlled research environments



- 1992 Master Site Development Plan and 1995 Environmental Impact Statement

New NOAA facility – David Skaggs Research Center

Improvements to NIST facilities:

New research facility - Katharine Blodgett Gebbie Laboratory

New Central Utility Plant & Site Utility Distribution System

Renovations to older laboratory buildings

- 1995 Agreement with Native American Tribes

Protected area: Approximately 50 acres

Easement for use, management and maintenance

- 1995 Memorandum of Agreement (MOA) with City of Boulder, with 1998 Update

Defines research, development and protected zones

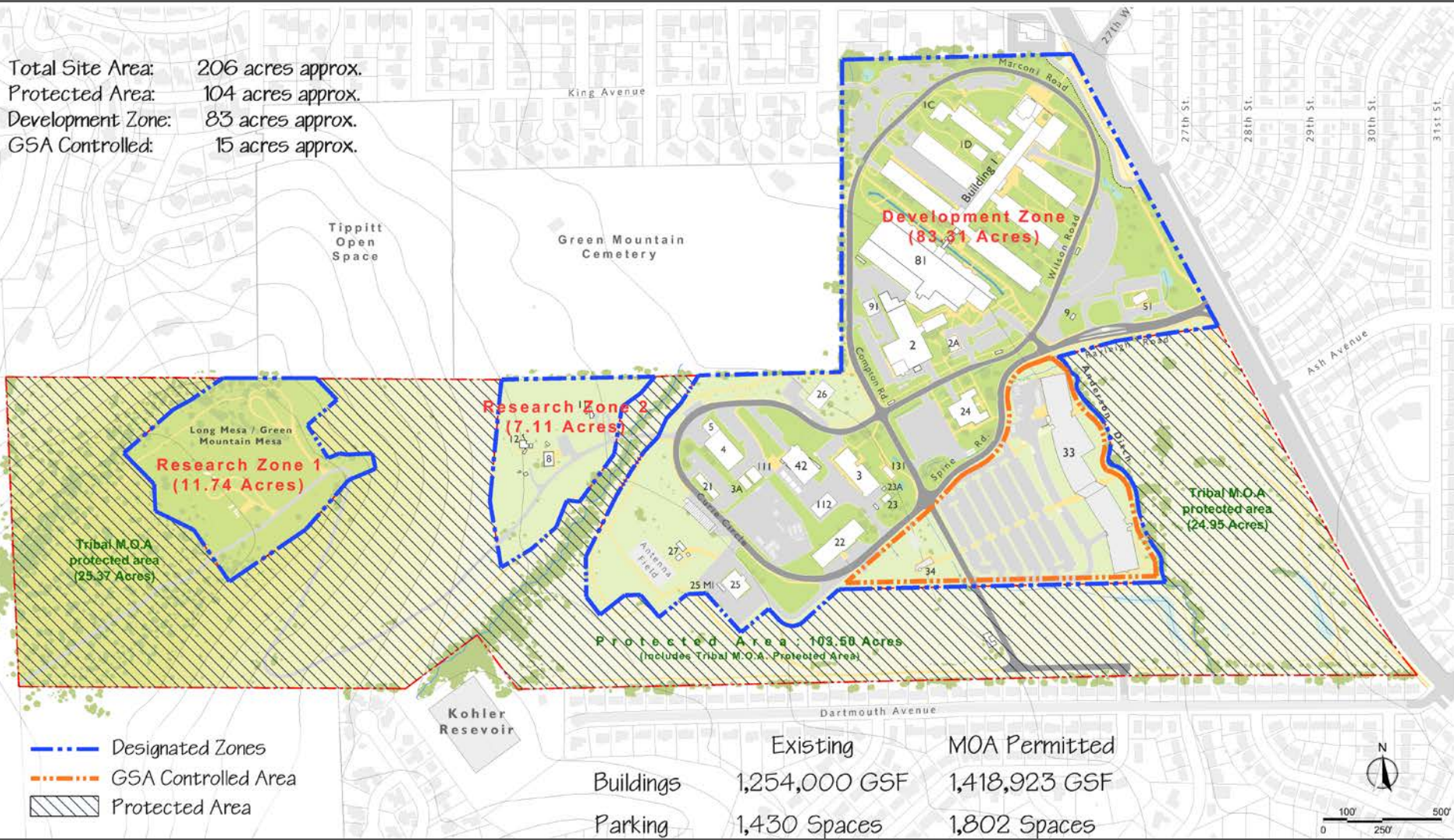
Sets limits on development, parking, building heights

Protects approximately 54 acres for public use; Preserves view of Long Mesa



# Background: Site Plan

Total Site Area: 206 acres approx.  
 Protected Area: 104 acres approx.  
 Development Zone: 83 acres approx.  
 GSA Controlled: 15 acres approx.



## Phase I

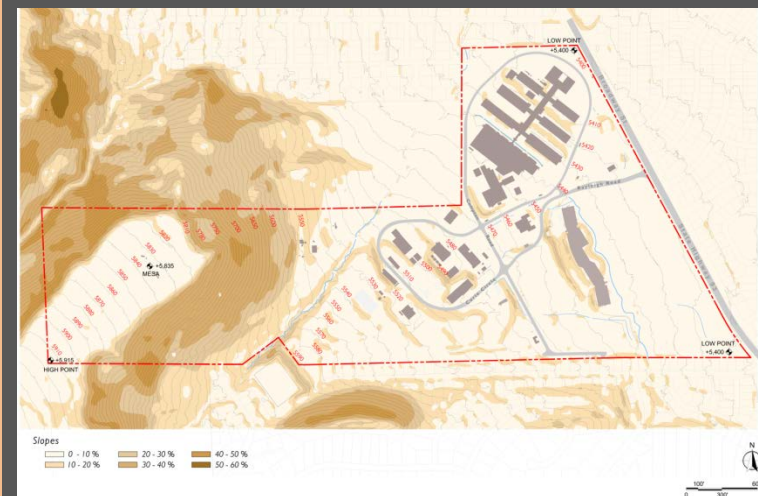
- Data Collection
- Contextual Analysis
- Historic Assessment
- Program Development
- Alternatives Development
- NEPA Scoping/Public Participation

## Phase II:

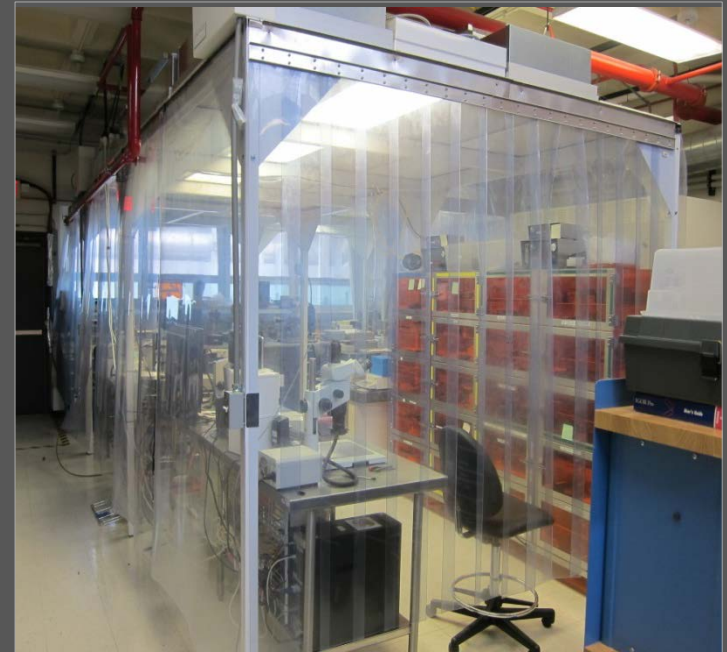
- Draft Master Plan document
- Draft Environmental Assessment
- Public Comment Period

## Phase III:

- Final Master Plan
- Final Environmental Assessment

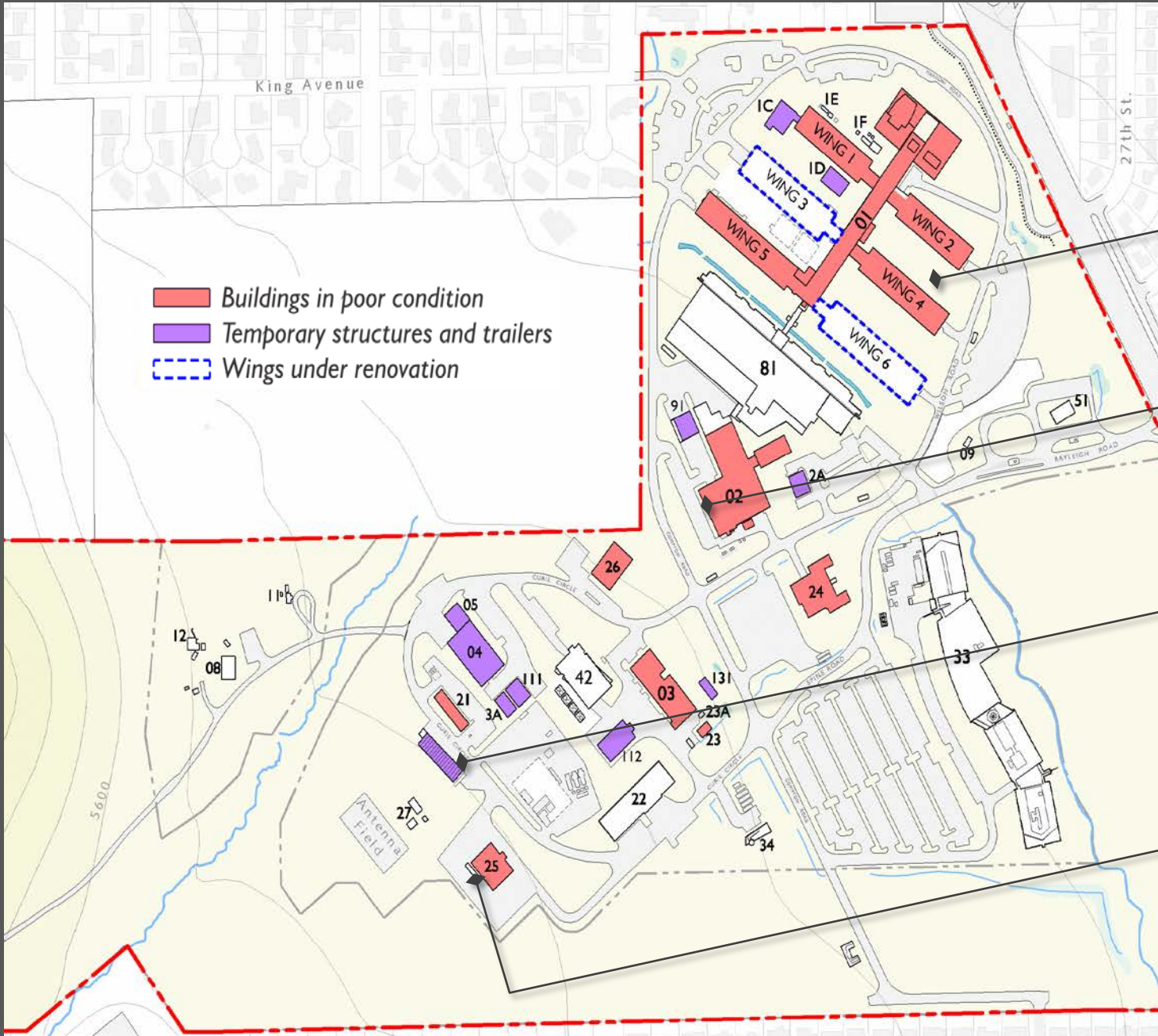


- Aging and obsolete buildings
- Lack of environmental control for many labs
- Inefficiency of small and modular buildings
- No campus organizing principle; limited connectivity
- Challenges associated with hosting public conferences
- Scattered administration & support functions
- Limited collaboration opportunities
- Circulation and screening conflicts





# Building Conditions



	Existing	Master Plan			
		Added	Removed	Total	Difference
<b>Personnel</b>					
NIST	743	112		855	112
NTIA	70	40		110	40
NOAA	939	60		999	60
GSA	9	0		9	0
<b>Total</b>	<b>1,761</b>	<b>212</b>		<b>1,973</b>	<b>212</b>
<b>Space, GSF</b>					
NIST/NTIA	882,174	259,500	(145,672)	996,002	113,828
NOAA/GSA	372,000	32,600	0	404,600	32,600
Shared	incl. above	26,800	(7,776)*	19,024	19,024
<b>Total</b>	<b>1,254,174</b>	<b>318,900</b>	<b>(153,448)</b>	<b>1,419,626</b>	<b>165,452</b>
<p>* Additional shared space is removed from existing buildings, allowing renovation for other functions            Note: MOA permitted additional space is <b>198,241 GSF</b> (Mechanical structures are excluded)</p>					

# Alternatives Considered for the Master Plan

## Campus Center

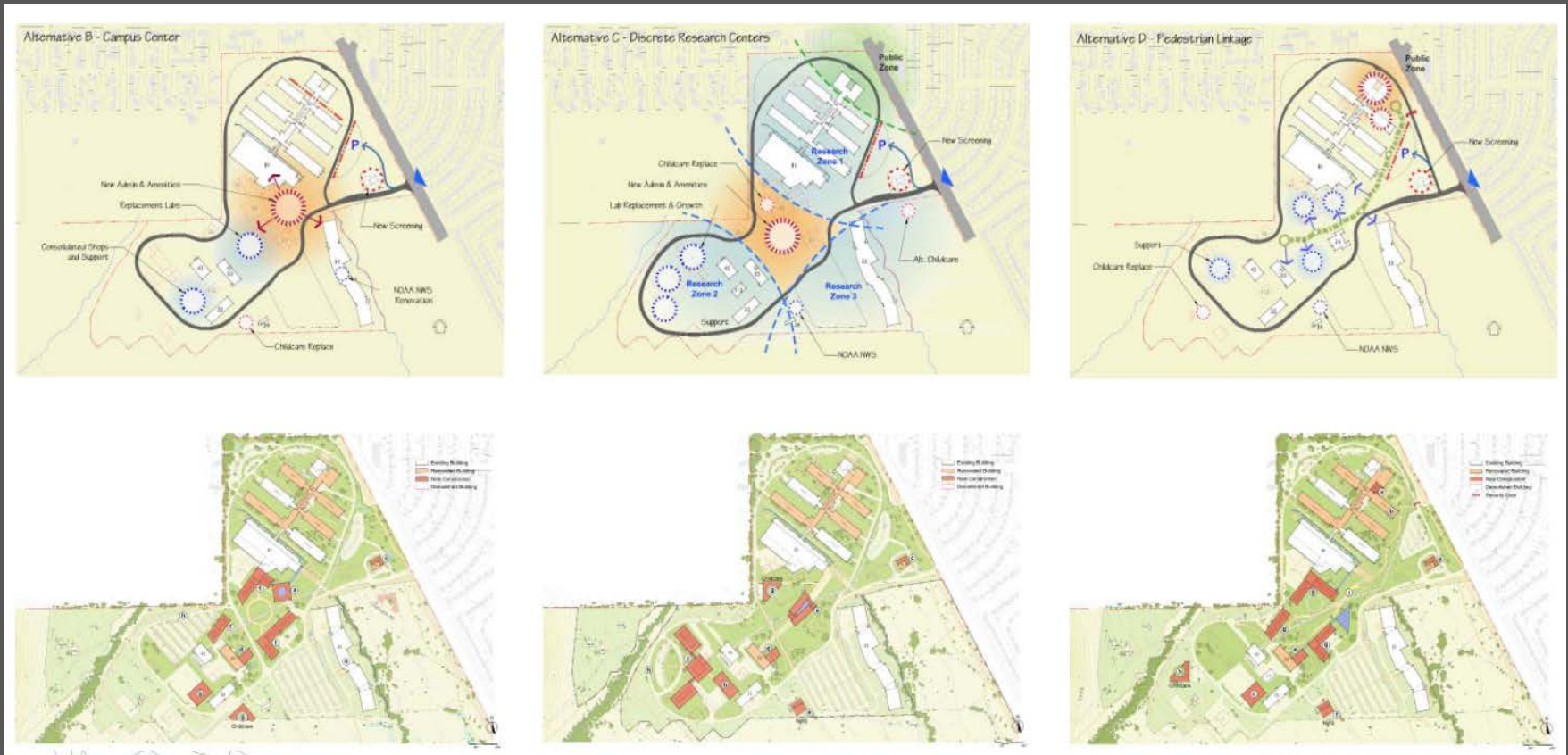
A new central campus service building consolidates administration, services and amenities, to encourage collaboration and link the research buildings. Replacement research buildings organized around a quad.

## Discrete Research Centers

A second research zone organizes the research buildings and Campus center opens up for services and recreation.

## Pedestrian Linkages

A new entrance pavilion supports public and conference center space. Management resources offices located adjacent. This focal point anchors a pedestrian link to new and existing buildings.







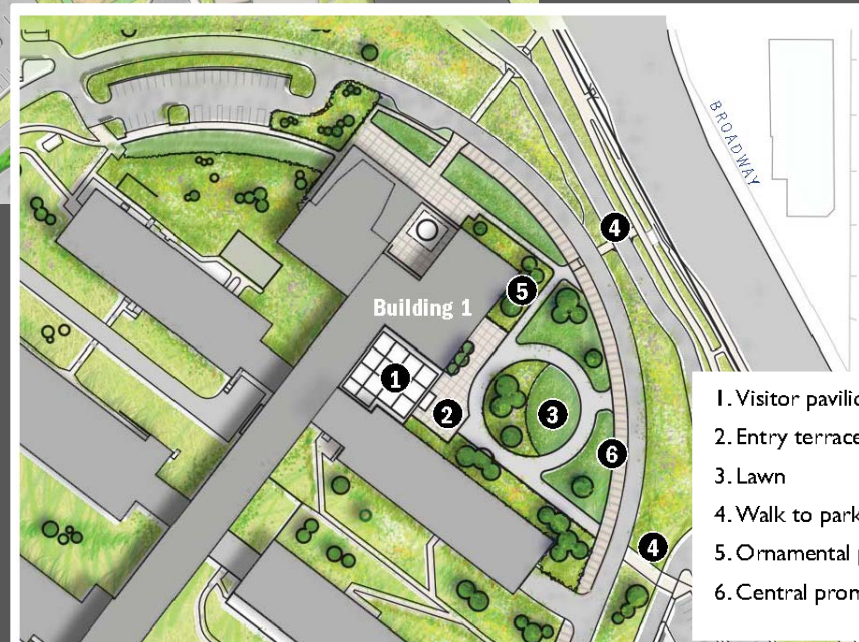
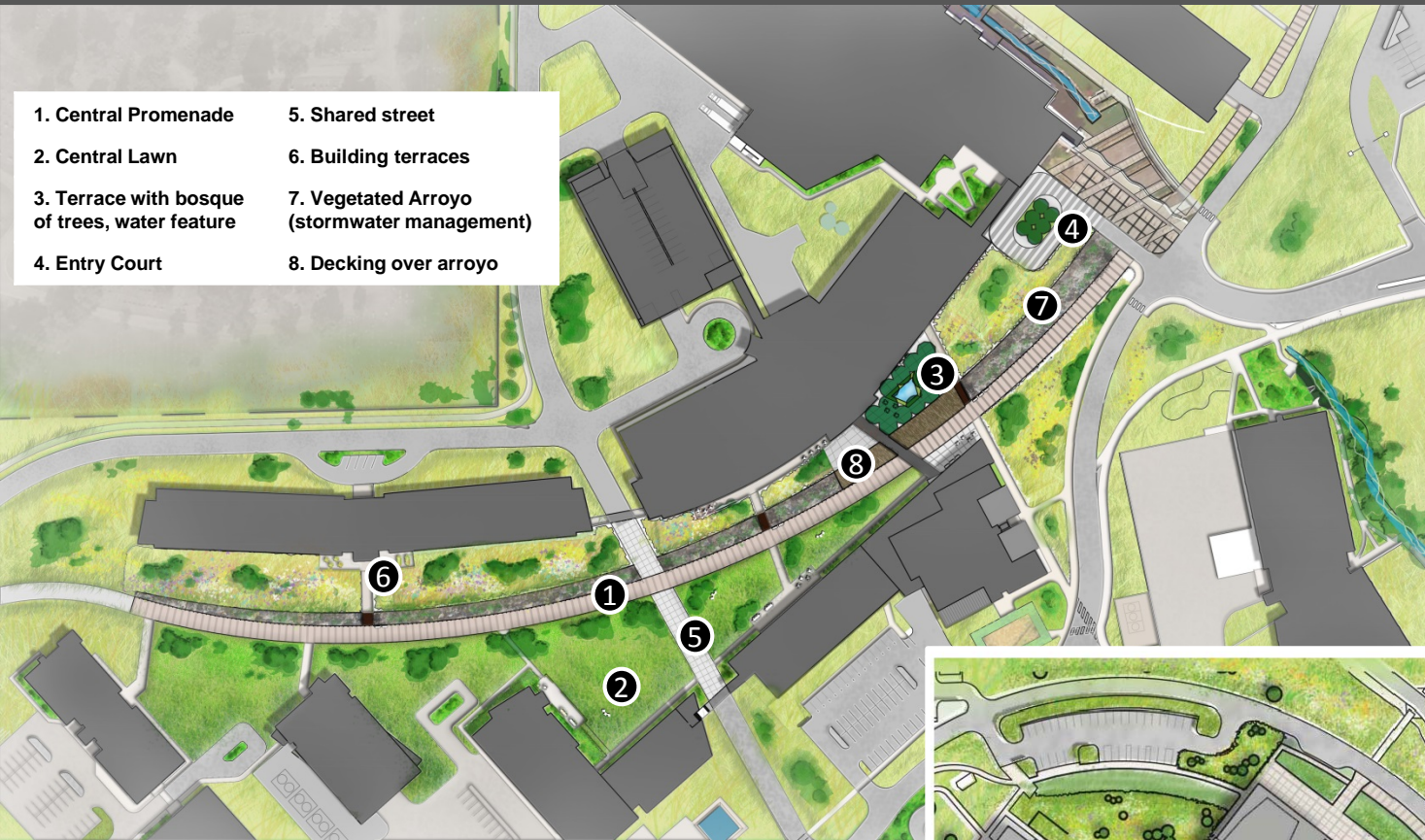


- Welcoming Entry
- Cohesive Campus
- Modest Growth
- Advanced Research Facilities
- Conference Center Enhancement
- Consolidated Support Facilities
- Campus Center
- Connected Laboratories
- Historic Preservation
- Natural and Sustainable Campus
- Energy Conservation Emphasis
- Structured Parking
- Open Space Preservation
- Flexible, Incremental Change

# Landscape Plan

- 1. Central Promenade
- 2. Central Lawn
- 3. Terrace with bosque of trees, water feature
- 4. Entry Court
- 5. Shared street
- 6. Building terraces
- 7. Vegetated Arroyo (stormwater management)
- 8. Decking over arroyo

- Campus green linking the buildings
- Native & adaptive species plantings
- Sustainable design emphasis



- 1. Visitor pavilion
- 2. Entry terrace
- 3. Lawn
- 4. Walk to parking/bus
- 5. Ornamental planting
- 6. Central promenade

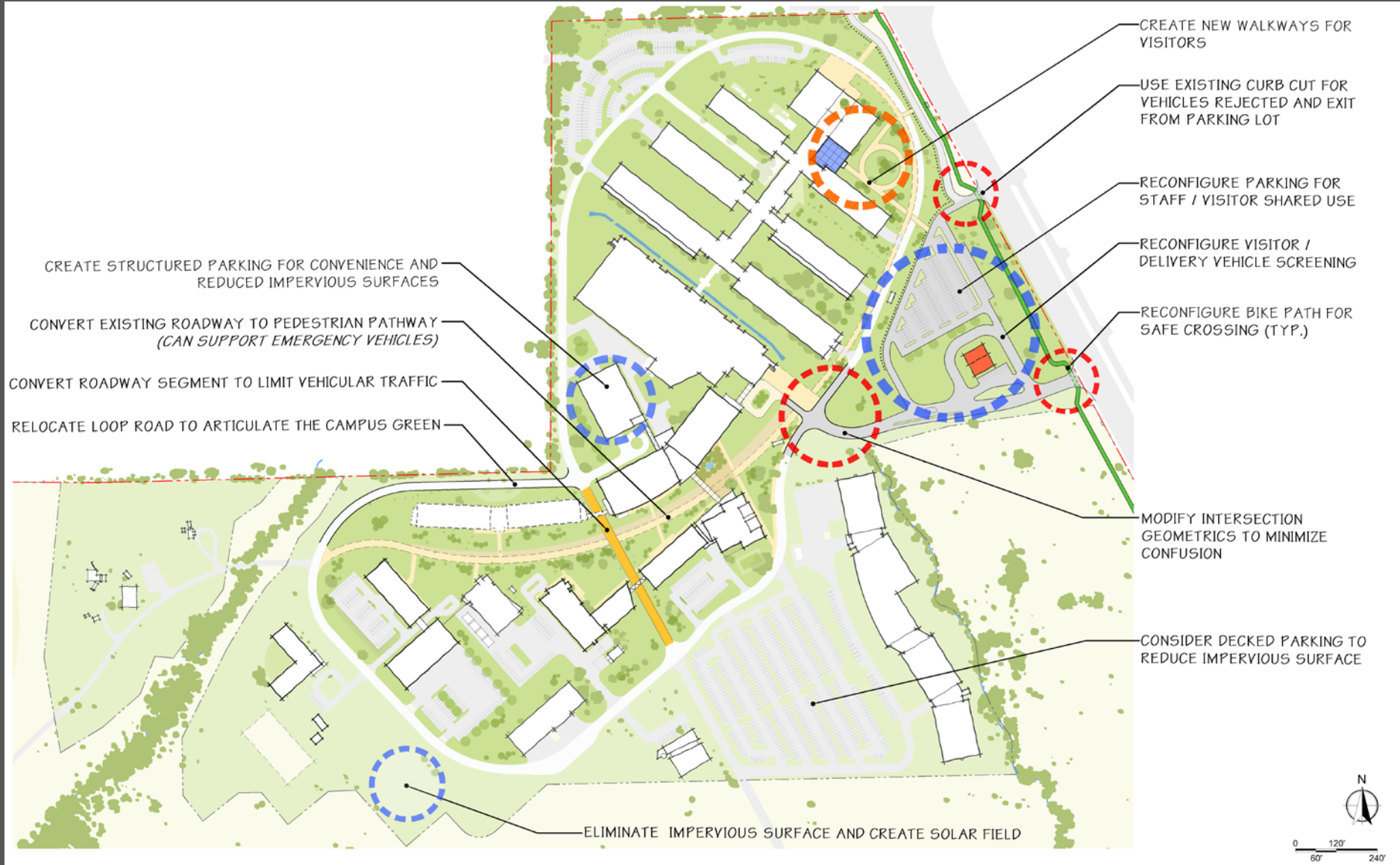


# Sustainable Design Features





# Campus Entry & Circulation



# National Environmental Policy Act (NEPA) Overview

## NEPA:

- Serves as the basic national charter for protection of the environment
- Ensures that environmental information is available to public officials and citizens **before** decisions are made
- Helps public officials:
  - Make **informed decisions** that are based on understanding of environmental consequences
  - Take actions that protect, restore, and enhance the environment
- Applies to actions of all Federal agencies



# Three Tiers of NEPA Review

## Categorical Exclusion (CE)

- Actions with no significant effect on human environment, individually or cumulatively
- Predefined categories of action

## Environmental Assessment (EA)

- Actions that do not qualify for a CE
- EA determines if action would have significant impacts
  - If yes/maybe → Environmental Impact Statement
  - If no → Finding of No Significant Impact (FONSI)

## Environmental Impact Statement (EIS)

- Actions with significant and/or highly controversial impacts
- Most detailed environmental review
- Most extensive public involvement, including comment response

DOC has prepared an EA



Greater impacts = more review

# Summary of Draft Environmental Assessment

- Summarizes alternatives considered
- Reviews environmental consequences of:
  - Proposed Action Alternative (i.e. the Master Plan)
  - No Action Alternative
- Identifies effects (if any) on various resource areas such as:

Land use	Utilities	Air Quality
Socioeconomics	Waste Generation	Climate Change
Biological Resources	Transportation	Sustainability
Land /Water	Noise Levels	Cultural Resources

- Summarizes cumulative effects and finds that:
  - For most resource areas, impacts are positive overall, with some minor temporary adverse effects during construction
  - For others, impacts are generally minor and can be managed and/or mitigated

## Highlights of Environmental Assessment

- Projected increase: 12% in staffing; 13% in facility space - over 20 years
- Moderate changes in heating /cooling and electric load (1-3%)
- Improved viewscales - no obstruction in the visibility of the top 1/3<sup>rd</sup> of the Mesa from Broadway and 27<sup>th</sup> Street
- Slight decrease in impervious surfaces (4.8%); targeted improvement in stormwater management through BMPs
- Landscape includes native vegetation, additional tree cover and shade
- No direct impact on wetlands; removal of building from 100 year flood plain;
- Minor economic benefits from staff increase, construction, and increased productivity from campus improvements
- Improved campus connectivity; reduced in-campus trips; no impacts on trails and open spaces
- Improved energy efficiency through removal or modernization of obsolete or inefficient buildings & systems
- Net-zero energy facilities, renewable energy

## Draft Master Plan and Draft EA Comments

- Comment period ends December 5, 2016
- Submit written comments to:

Dept. of Commerce Boulder Laboratories  
Master Plan Comments  
National Institute of Standards and Technology (NIST)  
325 Broadway, MS-194.00  
Boulder, CO 80305-3328

*Or*

BldrLabsMPcommentsPublic@nist.gov

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The Draft Master Plan and Draft  
Environmental Assessment are available at:  
<https://www.nist.gov/ofpm/boulder-master-plan>

Hard copies are available at the:  
Boulder Main Library  
1001 Arapahoe Ave, Boulder, CO 80302



<https://www.nist.gov/ofpm/boulder-master-plan>



Send Comments to: [BldrLabsMPcommentsPublic@nist.gov](mailto:BldrLabsMPcommentsPublic@nist.gov)