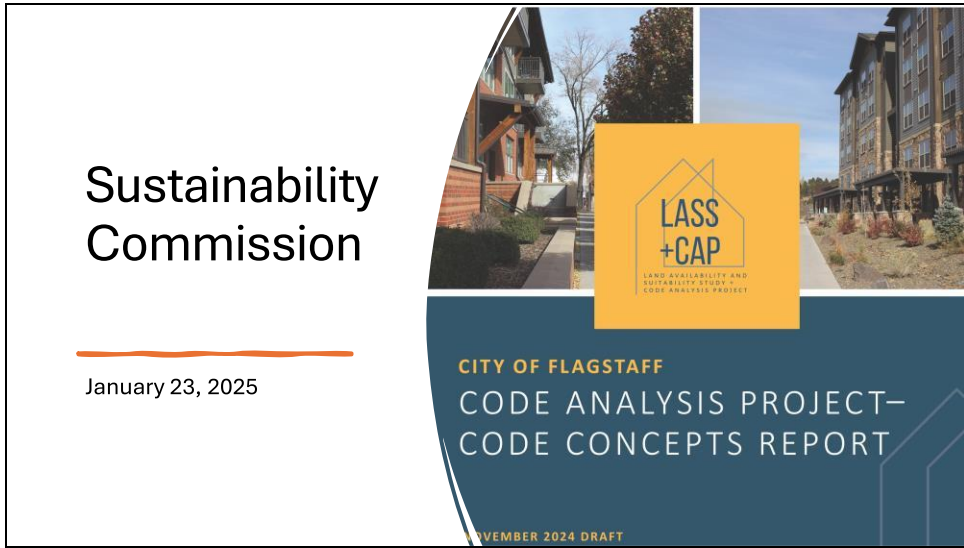


Slide 1




**Sustainability
Commission**

January 23, 2025

**LASS
+CAP**
LAND AVAILABILITY AND
SUSTAINABILITY STUDY -
CODE ANALYSIS PROJECT

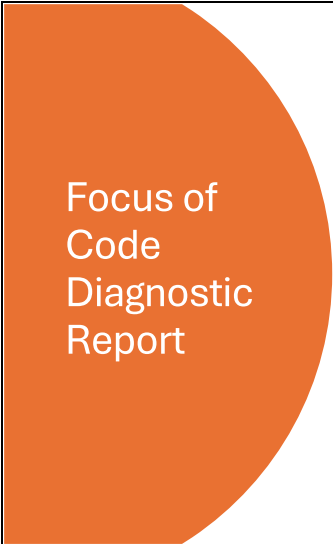
CITY OF FLAGSTAFF
**CODE ANALYSIS PROJECT -
CODE CONCEPTS REPORT**

NOVEMBER 2024 DRAFT

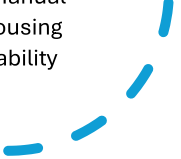


Overview & Objectives of the LASS+CAP Project


- The Land Availability & Site Suitability Study (LASS) examines the suitability of available land to determine opportunities and barriers to housing development (**Complete**)
 - Barriers include development codes, environmental constraints, and gaps in infrastructure
 - Opportunity sites are identified that have the greatest potential for increasing housing supply while promoting compact, walkable, multi-modal, and transit-oriented development, including mixed-use and infill development.
- The Code Analysis Project (CAP) is intended to evaluate development codes and processes to identify areas of improvement towards the City's housing and climate goals. The project has been broken into three separate tasks:
 - Code Diagnostic Report (**Complete**)
 - Code Concepts to address highest priority barriers (**We Are Here**)
 - Final Code Recommendations




Focus of
Code
Diagnostic
Report

- The Code Diagnostic included a review of the following:
 - Fire Code
 - Engineering Design Standards and Specifications for New Infrastructure
 - Zoning Code
 - General Plans and Subdivisions
 - Public Ways and Property
 - Building Code
 - Transportation Impact Analysis Manual
 - Incentive Policy for Affordable Housing
 - Equity and Displacement Vulnerability Assessment
- 


Slide 4




Key Code Barriers




Residential Zones




Commercial Zones




Parking Requirements




High Occupancy Housing




ZONING MAP AMENDMENT PROCESS




SUBDIVISION PROCEDURES




STREET WIDTH AND DESIGN




WINTER PARKING ORDINANCE




Resource Protection Overlay




Affordable Housing Incentives




Sustainable Building Incentives



STREET CONNECTIVITY




TRANSPORTATION IMPACT FEES



TRANSPORTATION DEMAND MANAGEMENT FOR TIAS.

Slide 5

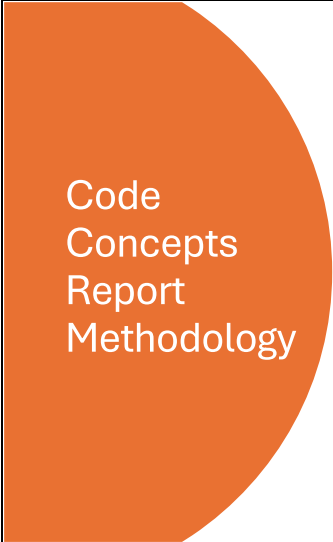


Code Concepts Report

The purpose of this phase of the project is to develop conceptual alternatives for code updates that address some of the most significant barriers identified in the Code Diagnostic report.


The report is organized in two sections:

- Scenarios for Core Standards and Incentives
 - Use Regulations and Housing Types by Zone District
 - Maximum Density and Floor Area Ratio by Zone District
 - Maximum Parking Requirements
 - Affordable Housing Incentives
 - Sustainable Building Incentives
- Code Concepts
 - Sustainability Requirements and Incentives
 - Resource Protection Overlay Zone
 - Reduced Street Widths
 - Winter Parking Ordinance and Snow Removal



Code
Concepts
Report
Methodology

- Impact Modeling – Prototypes
 - Intended to test both the revenue impacts of potential codes changes and the cost of impacts of code changes, in addition to options to reduce costs
- Impact Modeling – Spatial Analysis
 - Intended to test the impact of the code concepts on the capacity for new housing in certain locations across the City for the purpose of reducing transportation-related greenhouse gas emissions
- Best Practices Research
 - Transportation Demand Management strategies for parking reductions
 - Resource Protection Overlay
 - Sustainability Incentives and Requirements
 - Winter Parking Ordinance



Scenarios for Core Standards and Incentives

- **Scenario 1 – Optimize Incentives for Sustainable Design and Affordable Housing**
- **Scenario 2 – Elevate Sustainable Design and Increase Market Rate Housing Production**
- **Scenario 3 – Support Sustainability Through Density and Maximize Market Rate Housing Production**



Prioritization of Outcomes Under Each Scenario

Outcome	Scenario 1	Scenario 2	Scenario 3
Increase overall housing production by reducing key barriers to development	↓	⊖	✓
Elevate the sustainable design of all new projects	↓	✓	↓
Encourage more private market developers to use incentives for sustainable design and affordable units	✓	⊖	⊖
	↓ = Low Priority	⊖ = Medium Priority	✓ = High Priority

Slide 9

Summary of Scenarios for Core Standards and Incentives

Scenario	By-Right Standards	Incentives
Existing Code	<ul style="list-style-type: none"> Density from 6-29 units per acre² Parking from 1-3 spaces per unit 	<ul style="list-style-type: none"> Density bonus for sustainability: 25% Density bonus for affordable units: Up to 45% Parking reduction limited to affordable units at 1 space per unit
Scenario 1 – Optimize Incentives for Sustainable Design and Affordable Housing	<ul style="list-style-type: none"> No increase in max density No parking reduction 	<ul style="list-style-type: none"> No change to incentive requirements. Major increase in density bonus and major parking reduction for incentive projects
Scenario 2 – Elevate Sustainable Design and Increase Housing Production	<ul style="list-style-type: none"> Increase max density to 10-80 units per acre Reduce base parking to between 1-1.5 spaces per unit Single-use residential buildings permitted in commercial zones. Introduce FAR caps in most zones Apply new sustainability requirements to all projects 	<ul style="list-style-type: none"> Elevated sustainability standards for projects that use sustainability incentives Minor increase in density bonus for incentive projects Major parking reduction for incentive projects
Scenario 3 – Support Sustainability Through Density and Maximize Housing Production	<ul style="list-style-type: none"> Increase max density to 10-80 units per acre Reduce base parking to between 1-1.5 spaces per unit Single-use residential buildings permitted in commercial zones. 	<ul style="list-style-type: none"> No change to incentive requirements. Minor increase in density bonus for incentive projects Major parking reduction for incentive projects

Use Regulations and Housing Types

All three scenarios include the following two changes to permitted uses/housing types:

- Allowing middle housing types (duplex, triplex fourplex and townhomes) in the R1 zone (as required by state law)
- Allowing single-use residential buildings in commercial zones as an incentive option (Scenario 1) or for by-right development (Scenarios 2 and 3)

Maximum Density by Scenario and Zone (units per acre)

Scenario	R1			MR			HR			CB			CC-HC-CS		
	B	S	A	B	S	A	B	S	A	B	S	A	B	S	A
Existing Code	6	8	9	14	18	20	29	36	42	29	36	42	29	36	42
Scenario 1: Optimize Incentives	6	9	12	14	21	28	29	44	58	29	73	87	29	73	87
Scenario 2: By-Right Sustainability	10	14	18	20	28	36	40	56	72	80	100	120	60	75	90
Scenario 3: By-Right Housing Production	10	14	18	20	28	36	40	56	72	80	100	120	80	100	120

B = By-Right; S = Sustainable Incentive Projects; A = Affordable Incentive Projects

Density Bonuses by Scenario and Incentive Program

Concept	Residential Zones		Commercial Zones	
	Sustainable	Affordable	Sustainable	Affordable
Existing Code	25%	5-45%	25%	5-45%
Scenario 1	50%	100%	250%	300%
Scenario 2	40%	80%	25%	50%
Scenario 3	40%	80%	25%	50%

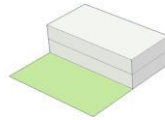
Floor Area Ratio

$$\text{FLOOR AREA RATIO} = \frac{\text{Gross Floor Area}}{\text{Parcel Size}}$$

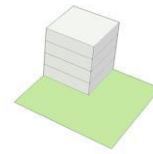
Floor Area Ratio (FAR)
An example of 1.0 FAR



1 storey
(100% lot coverage)



2 storeys
(50% lot coverage)



4 storeys
(25% lot coverage)

Maximum Floor Area Ratio (FAR) by Scenario and Zone

Scenario	R1			MR			HR			CB			CC-HC-CS		
	B	S	A	B	S	A	B	S	A	B	S	A	B	S	A
Existing Code	--	--	--	--	--	--	--	--	--	--	--	--	2.5	2.5	2.5
Scenario 1	--	--	--	--	--	--	--	--	--	--	--	--	2.5	2.5	2.5
Scenario 2	0.5	0.7	0.9	0.8	1.1	1.2	0.9	1.1	1.3	1.8	2.0	2.2	1.2	1.4	1.8
Scenario 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B = By-Right; S = Sustainable Incentive Projects; A = Affordable Incentive Projects

Parking Standards by Scenario

Scenario	Residential Uses (spaces/unit)			Commercial Space in Mixed Use Building		
	B	S	A	B	S	A
Existing Code	1.75 ³	1.75	1.00 / 1.75 ⁴	1 per 300 GSF		
Scenario 1: Optimize Incentives	1.75	0.75	0.50	1 per 300 GSF	None required	
Scenario 2: By-Right Sustainability	1.25	0.75	0.50	None required		
Scenario 3: By-Right Housing Production	1.25	0.75	0.50	None required		

B = By-Right; S = Sustainable Incentive Projects; A = Affordable Incentive Projects

Sustainability Standards by Scenario

Sustainability Features	Existing Code			Scenario 1 Optimize Incentives			Scenario 2 By-Right Sustainability			Scenario 3 By-Right Housing Production		
	B	S	A	B	S	A	B	S	A	B	S	A
Energy-Efficiency Standard	No	(1)	No	No	(1)	No	(1)	(2)	(1)	No	(1)	No
All-Electric Building	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
On-Site Solar	No	No	No	No	No	No	No	Yes	No	No	No	No
Water Resource Protection	No	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No
Sustainable Materials	No	No	No	No	No	No	Yes	Yes	Yes	No	No	No
Materials Management Plan	No	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No
Deconstruction Required	No	No	No	No	No	No	Yes	Yes	Yes	No	No	No
EV Charging Spaces	No	Yes	No	No	Yes	No	30%	50%	30%	No	Yes	No
Secure Bike Parking	No	No	No	No	No	No	Yes	Yes	Yes	No	No	No
Transit Passes	No	No	No	No	No	No	Yes	Yes	Yes	No	No	No

(1) Bronze-level certification within the National Green Building Standard (ICC-700) and a greater than a 15 percent improvement over the City of Flagstaff's current energy code
(2) Net Zero Energy Building as defined by U.S. Department of Energy.

B = By-Right; S = Sustainable Incentive Projects; A = Affordable Incentive Project

Carbon Emissions Modeling – Buildings

Analysis considered carbon emissions associated with site development, construction, and operation of the buildings over a 30-year timespan in a multifamily development in the HR zone:

- **Embodied Carbon Emissions.** Cumulative emissions associated with building materials, their replacements, and with landscape maintenance.
- **Electricity Emissions.** Cumulative emissions associated with the energy use from the electrical grid.
- **Fossil Fuel Emissions.** Cumulative emissions associated with onsite fossil fuel use.
- **Refrigerant Emissions.** Cumulative emissions associated with the refrigerant use in the building services.
- **Biogenic Carbon Storage.** Sequestered emissions from building structure and landscape planting.
- **Avoided Energy Emissions.** Avoided emissions from onsite energy generation in excess of use.

Carbon Emissions Modeling – Key Findings

- **Scenario 1 and Scenario 3** perform similarly to existing code.
 - By-right & affordable incentives projects: 160-170 metric tons of CO₂ emissions per dwelling unit over 30-years.
 - Sustainability incentives projects: 108-112 metric tons of CO₂ per dwelling unit (35% fewer emissions than current code).
- **Scenario 2** achieves substantial reductions in emissions for all development.
 - By-right and affordable incentive projects: 103-117 metric tons of CO₂ per dwelling unit (30-40% fewer emissions).
 - Sustainability incentives projects: 43 metric tons of CO₂ per dwelling unit (60% fewer emissions)

Prototype	30-Year Net Emissions (tCO ₂ e) ¹	30-Year Emissions Per Dwelling Unit (tCO ₂ e)
Existing Code - By-Right	19,925	166
Existing Code - Sustainable	16,399	108
Existing Code - Affordable	30,668	173
Scenario 1 - By-Right	19,925	166
Scenario 1 - Sustainable	20,708	112
Scenario 1 - Affordable	39,899	163
Scenario 2 - By-Right	19,756	117
Scenario 2 - Sustainable	10,215	43
Scenario 2 - Affordable	31,452	103
Scenario 3 - By-Right	27,461	162
Scenario 3 - Sustainable	26,036	110
Scenario 3 - Affordable	52,963	174

¹Emissions reported as metric tons of CO₂ emitted over 30-year time span (tCO₂e)

Total Capacity (New Net Units) for Code Scenarios

Table A3-7. Total Capacity (Net New Units) for Code Scenarios

Scenario	All Areas			Low VMT Areas			
	Net New Units	Increase from Existing Code	Percent Increase	Net New Units	Increase from Existing Code	Percent Increase	Share of Units in Low VMT Areas
Existing Code	47,592	N/A	N/A	9,607	N/A	N/A	20.7%
Scenario 1	63,599	16,007	34%	13,276	3,669	38%	21.3%
Scenario 2:	79,971	32,379	68%	17,202	7,595	79%	21.8%
Scenario 3	96,748	49,157	103%	20,807	11,200	117%	21.7%



Key Findings & Implications from Scenarios

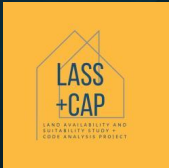
- The existing development environment is extremely challenging with the high cost of construction and land.
- Scenario 1 presents a viable opportunity for increasing the attractiveness of incentive programs.
 - It is a higher risk strategy for increasing housing production and achieving carbon neutrality.
 - It is the lowest risk option for Proposition 207 claims.
- Scenario 2 illustrates there is a viable opportunity to elevate sustainability standards for all new developments, so long as those increased costs are offset by the economic benefits of increased densities and reduced parking.
- Scenario 3 achieved similar results as Scenario 2 in improving housing outcomes but did not elevate sustainability outcomes relative to Scenario 2.



Key Findings & Implications from Scenarios

- Across all scenarios, parking reductions were critical to the market feasibility of higher density prototypes.
- If the City desires to concentrate density in areas where households are likely to drive less, then targeted rezoning, a new overlay zone, or proximity-based code regulation would be more effective than using existing base zones.
- If the policy goal is to broadly increase density throughout the community, then Scenarios 2 and 3 are a more effective approach for achieving this end. The increase in housing capacity under Scenario 1 is highly dependent on increased uptake of density bonuses under the incentive program.


Core Standards & Incentives Decision Points



Generally, what scenario outcomes are preferred?


- Are there certain zone districts where you think it would make more sense to apply a different scenario or approach than citywide?
- Should the density bonus for affordable housing be higher than sustainability (as is generally true under current code and we applied to the scenarios) or should density bonuses be equal for both?
- Do you support moving forward with the substantial parking reductions that were modeled for incentive projects?
- Do you want to pursue a code and map concept that would more narrowly target upzoning to areas that are Low VMT or some other similar geography, such as areas close to transit? This may require area-wide rezoning or a new overlay zone.

Code Concepts




Sustainability and Transportation Demand Management Requirements

These code concepts propose adopting a menu or points-based approach to require and incent a higher level of sustainable design in all projects. Transportation Demand Management is a critical component of the menu.



Resource Protection Overlay.

These code concept propose migrating from a broad overlay zone that requires site-specific inventories to a more focused overlay that focuses on resources that were inventoried as part of a city-wide study. This concept could apply to both forest and slope resources. Resource protection standards should not restrict density more than base zoning and should allow overlapping slope and forest resources to count towards meeting both requirements.



Code Concepts



Reduced Street Widths

These code concepts propose new options for narrower street designs that would allow slightly higher density for some development types, reduce street construction costs for all developments, and calm traffic speeds.

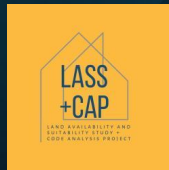


Winter Parking Ordinance and Snow Removal

Alternative code concepts include:

- Designating specific streets for snow removal based on traffic volumes and necessity for emergency services.
- Implementing a form of alternative/odd-even parking limitations so that at least one side of a public street is available for overnight parking during snow removal.
- Only prohibiting on-street parking during a declared snow accumulation event based on a specific amount of snow and ice accumulation so that on-street parking is available during non-accumulation.

Code Concepts Decision Points



Sustainability and TDM:

- Do you support the concept of a new points-based sustainability requirement?
- Should a wider menu of TDM strategies be included as an option for meeting this requirement or should the standards focus more solely on reducing emissions from construction and energy use?

Resource Protection Overlay:

- In the longer term, do you support the concept that the City should replace the RPO with a more narrowly drawn overlay that is based on a citywide inventory of resources (Concepts 1 and 2)?
- In the short term, do you support concepts for providing more flexibility for development in current RPO (remove additional density restriction below base zone, allow slopes and trees to be double-counted)?

Street Width:

- Do you support us developing a strategy and outlining a process for creating a narrower local street design option?

Winter Parking Ordinance:

- Do you support us developing a strategy and outlining a process for replacing the current Winter Parking Ordinance?

Next Steps

- Public Outreach
 - Will occur at several points in the overall process.
- Resolve outstanding Decision Point questions for consulting team
- Formal Code Recommendations
- Preparation and adoption of Code Amendments

