

The logo consists of three vertical bars of varying heights and widths, colored in shades of purple and white, set against a dark purple background.

East Carolina University

Comprehensive Facilities Master Plan

Martin Alexiou Bryson



East Carolina University \ Comprehensve Facilities Master Plan

- Pedestrian

- Bicycle

- Transit

- Improvements to Date
- Parking Demand Reductions
- Future Transit Service

- Parking

- Main Campus Supply Changes
- Options for Main Campus
- Main Campus Cost Analysis
- Future Main Campus Parking Zones
- TDM Measures
- Options for Health Science Campus

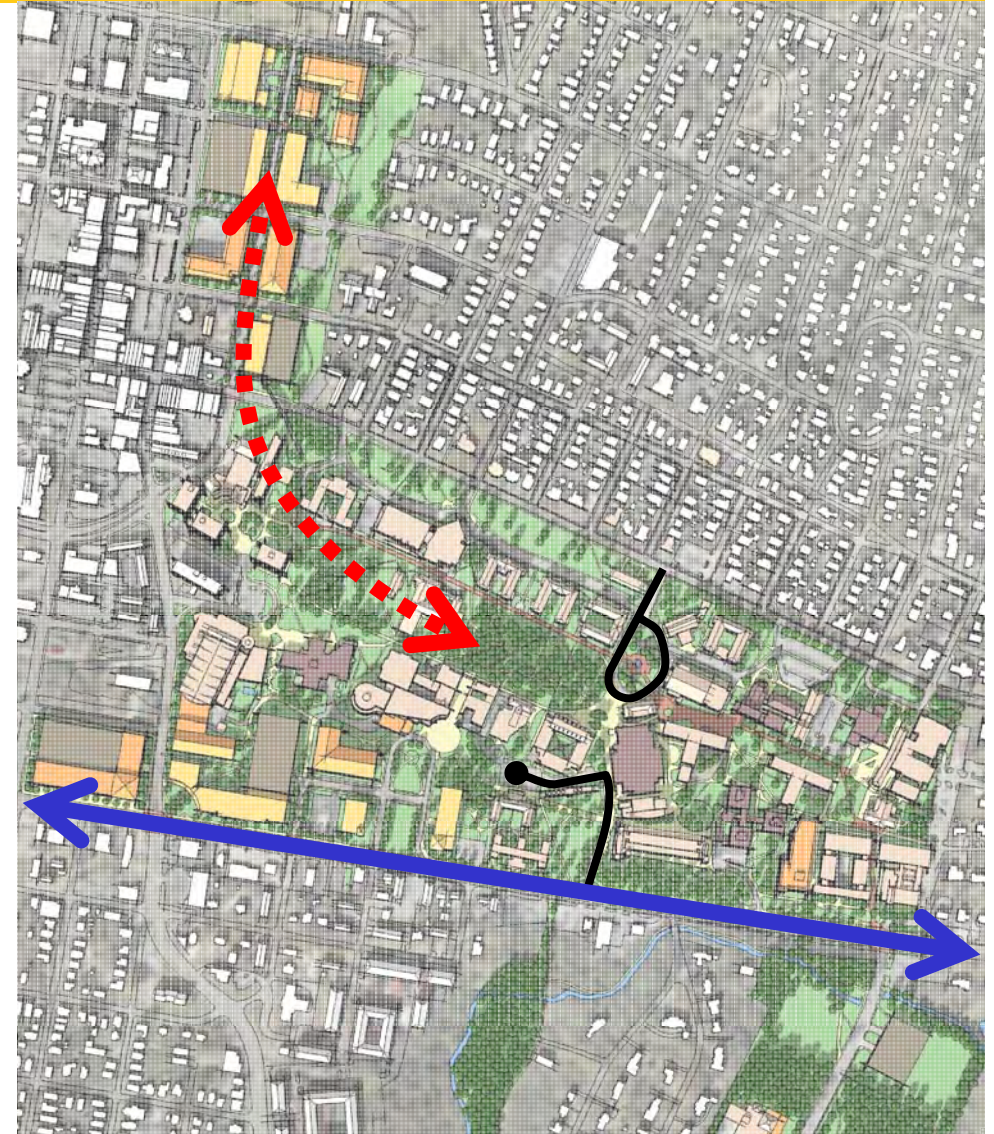


Agenda

Pedestrian

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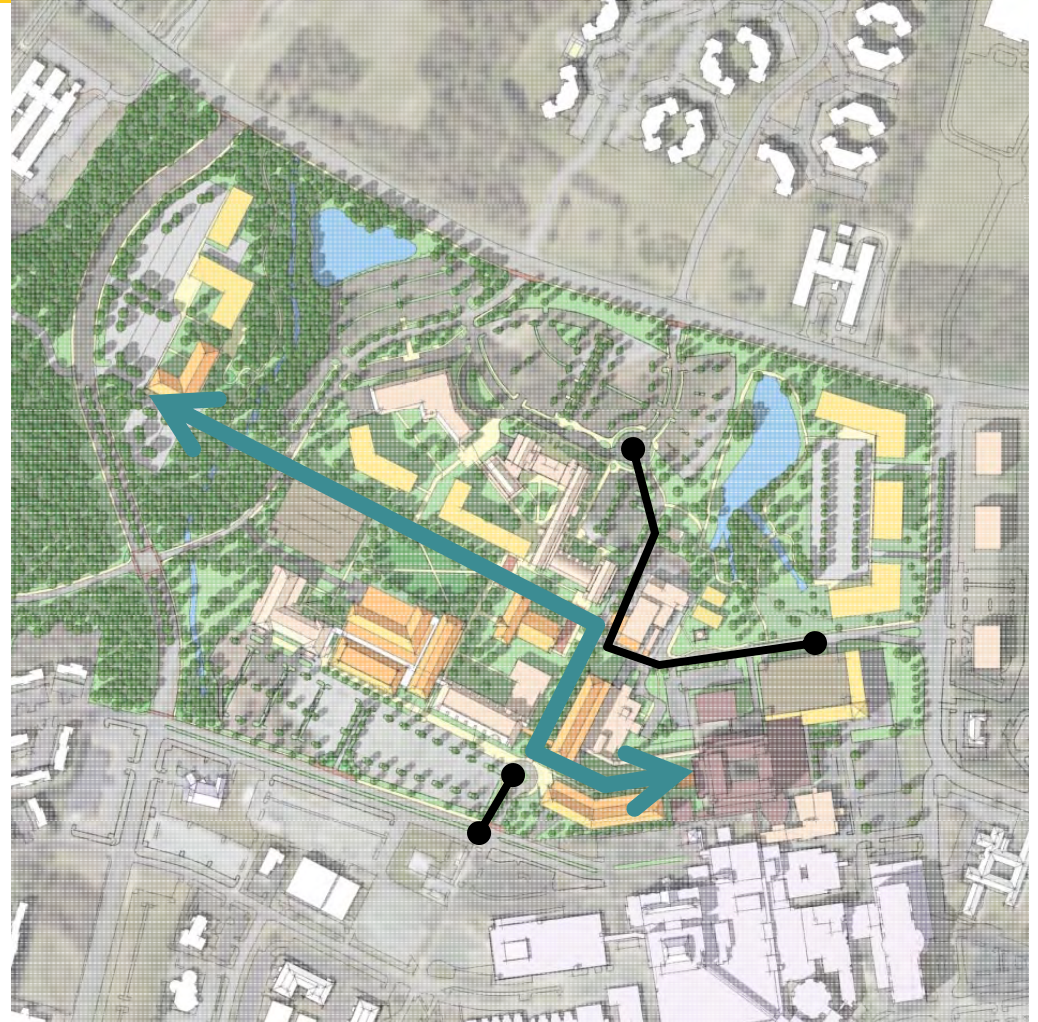
- **Reade Street Developments**
 - Improved connection with campus
- **10th Street Improvement**
 - Complete street for all modes
 - Consistent pedestrian experience
 - Reduced conflicts
- **Founder's Drive Closure**
 - Safety improvement
 - New pedestrian spine
 - Improved connections
 - Maintain loading dock access



Pedestrian

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- **New East-West Pedestrian Spine**
 - Central path
 - Separates medical from teaching
 - Common access
- **Service Drive Closure**
 - Better connection to PCMH
 - Provides unimpeded flow

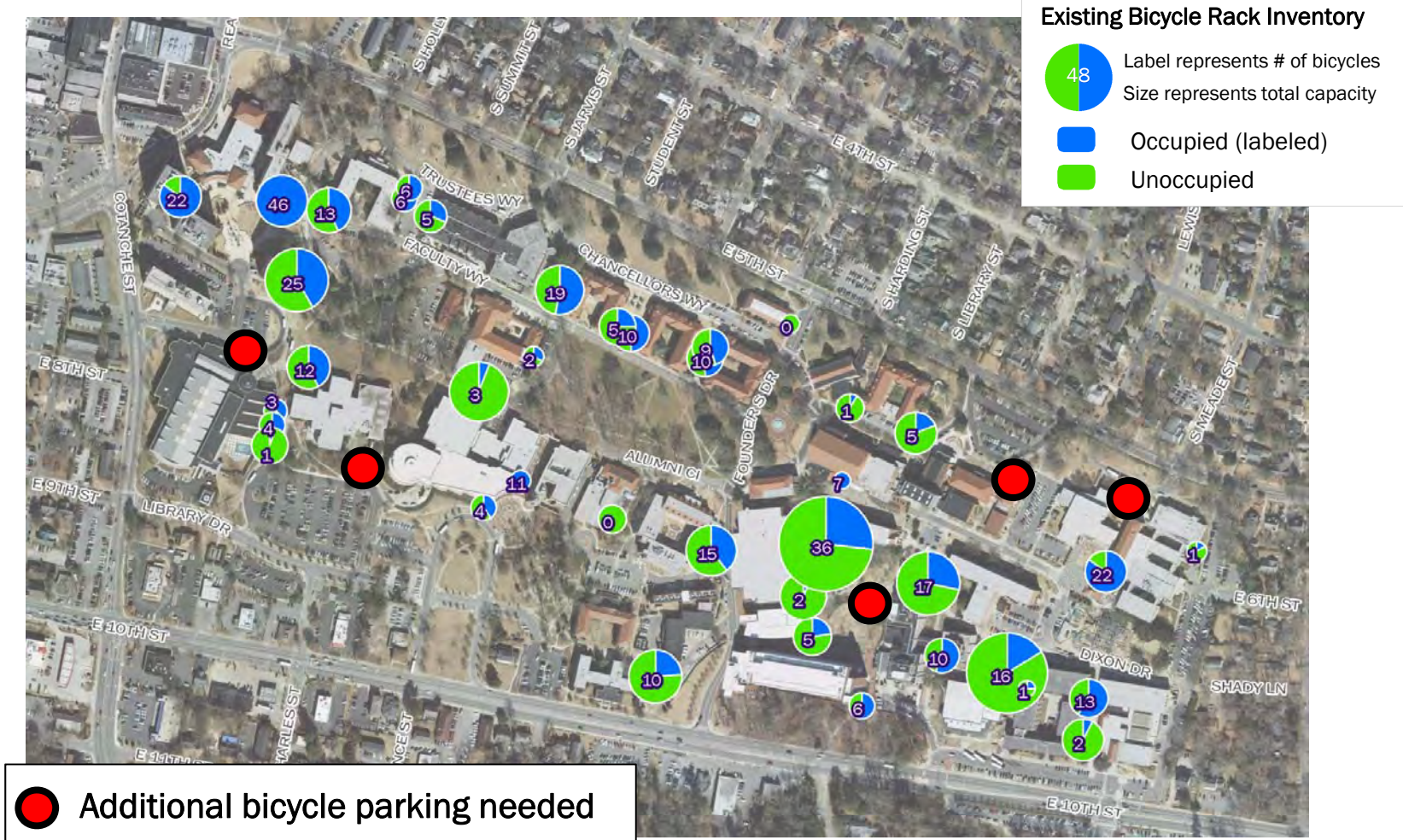


Pedestrian

Bicycle

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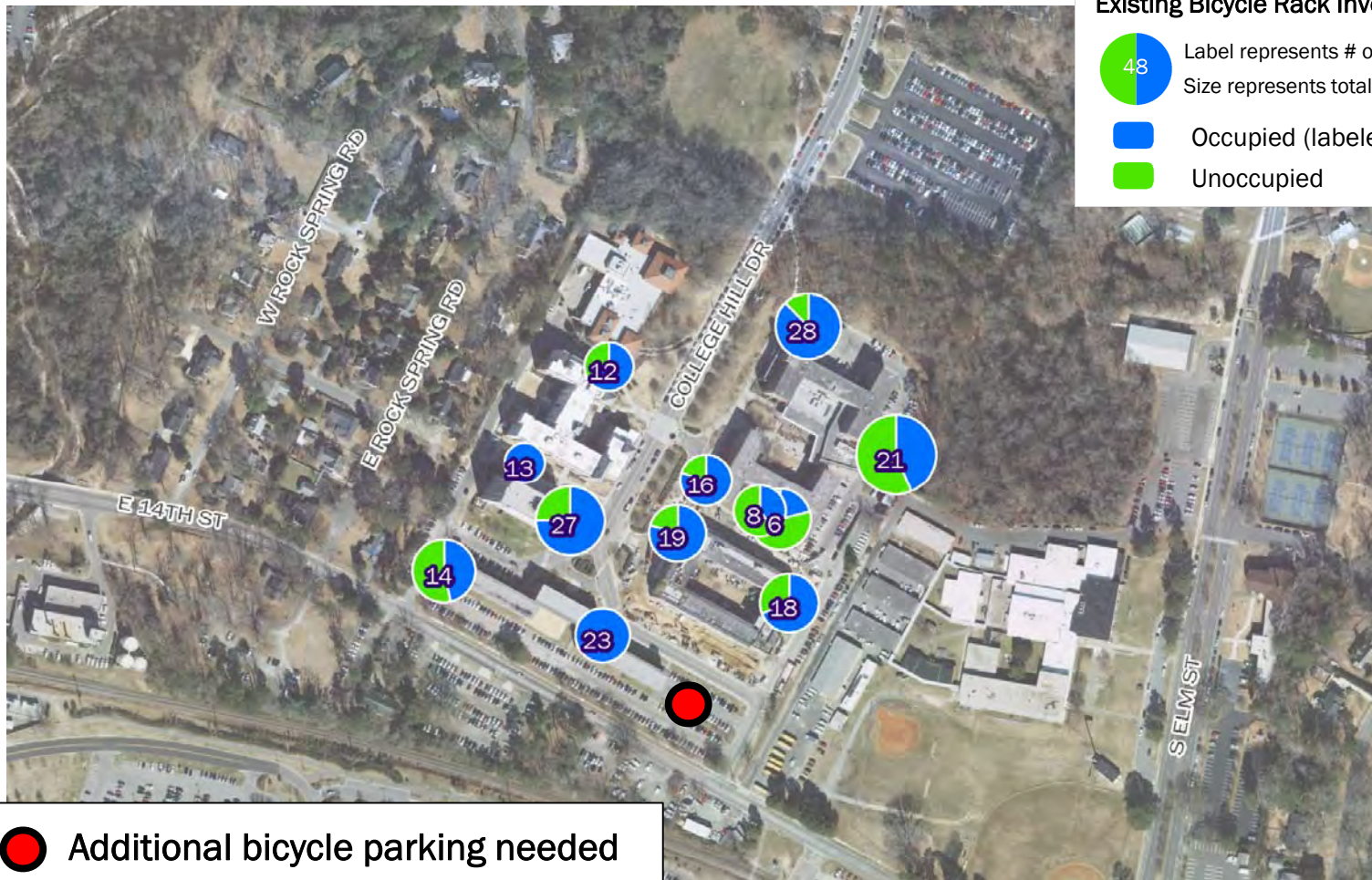
Existing bicycle supply & demand



Bicycling

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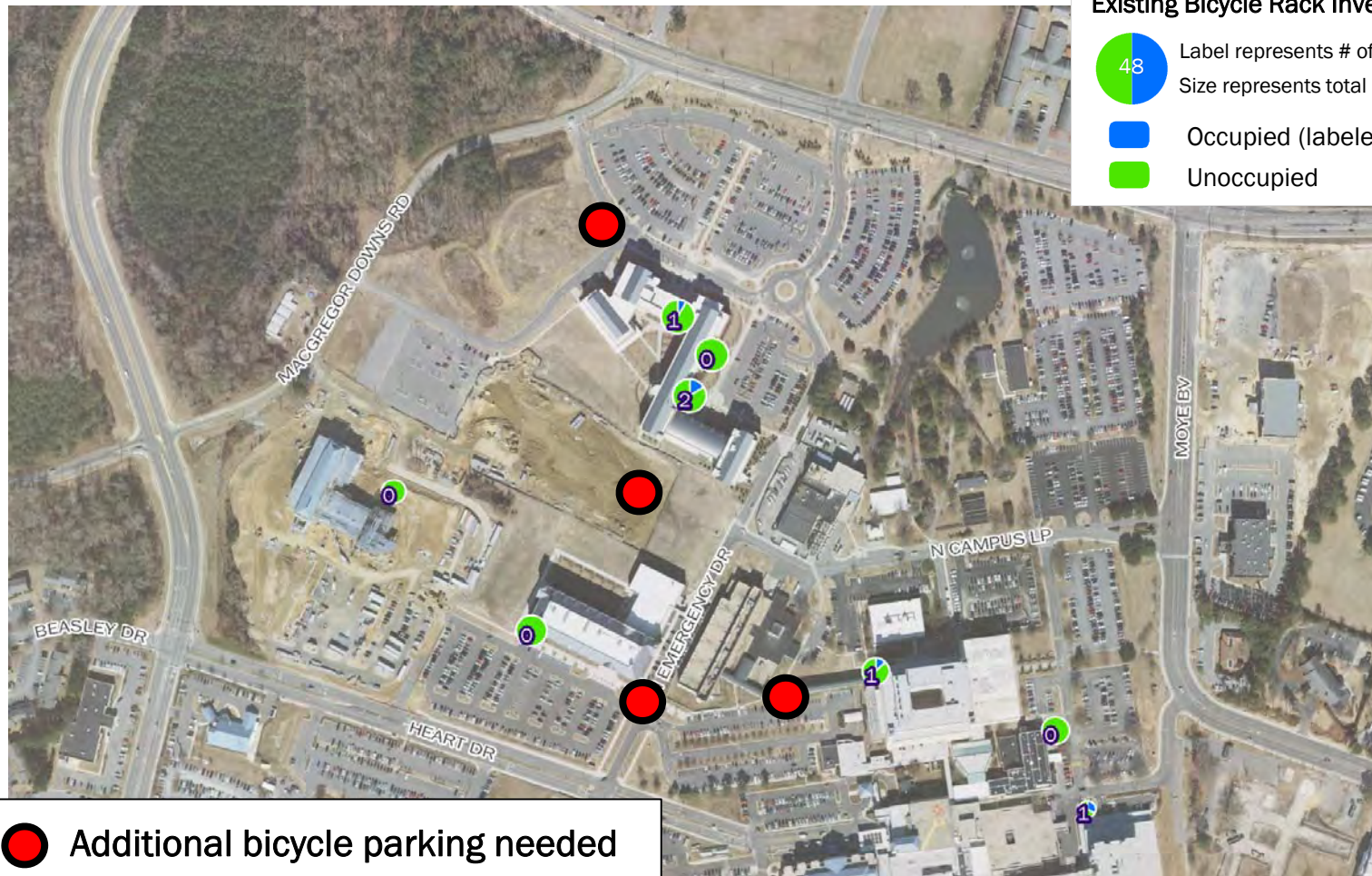
Existing bicycle supply & demand



Bicycling

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Existing bicycle supply & demand

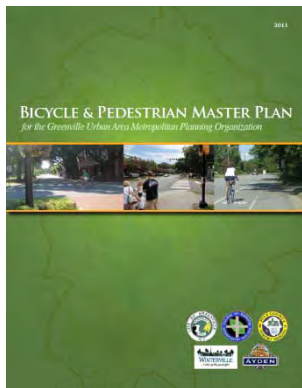


Bicycling

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•Bicycle connections

- Support the Greenville Urban Area MPO Bicycle & Pedestrian Master Plan

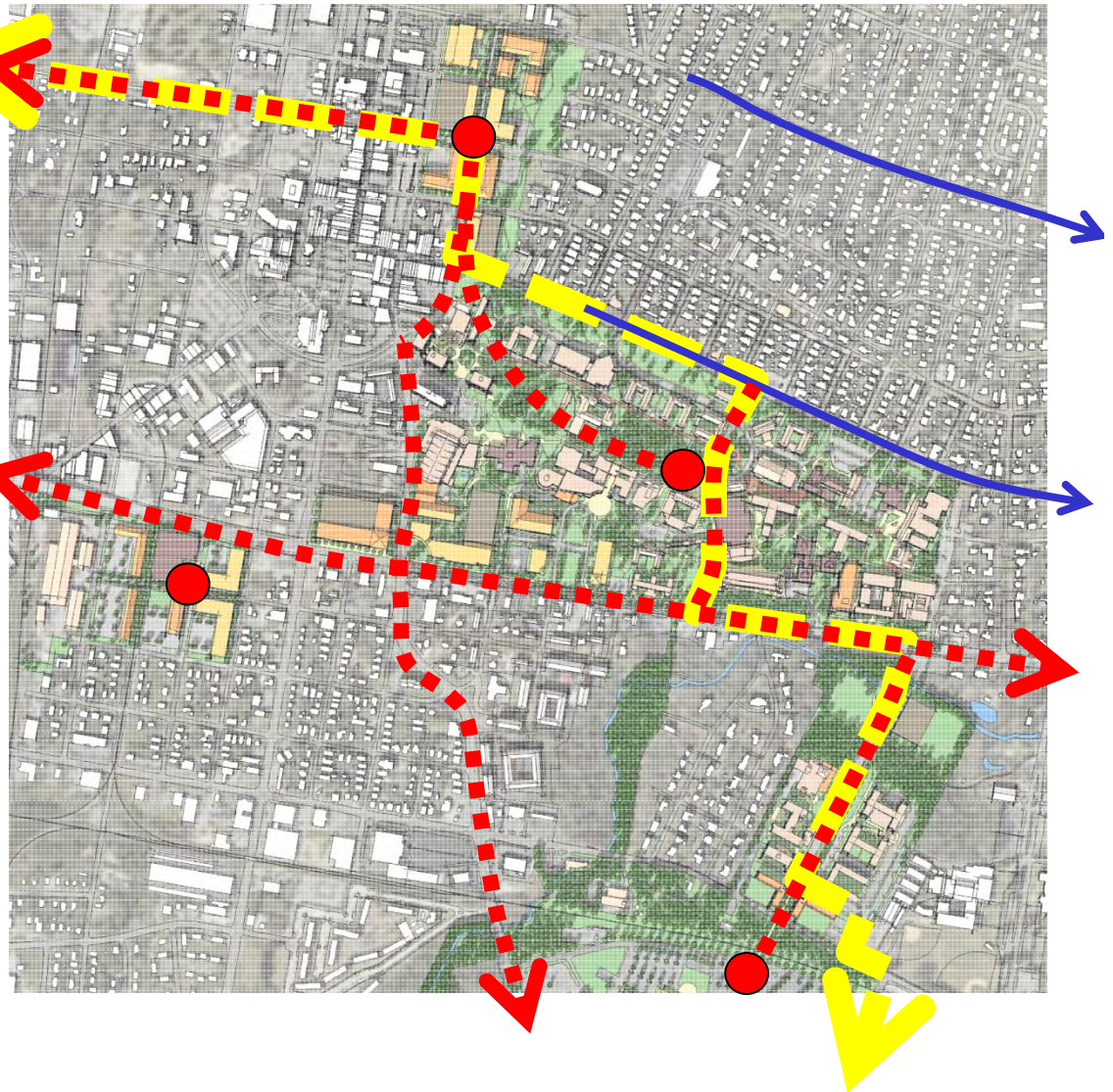


● Origin / Destination areas

■ ■ ■ ■ ■ Possible bicycle connections

— Existing bicycle routes

■ ■ ■ ■ Proposed Greenville bike trail



Bicycling

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- Bicycle Friendly University
 - Ultimate goal of bicycle planning efforts





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The Bicycle Friendly University (BFU) program recognizes institutions of higher education for promoting and providing a more bicycle-friendly campus for students, staff and visitors. The BFU program provides the roadmap and technical assistance to create great campuses for cycling.

The first round of Bicycle Friendly Universities are announced at the National Bike Summit. See the winners here.

BICYCLE FRIENDLY UNIVERSITY

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- > Apply
- > About
- > The 5 Es
- > Resources
- > FAQs
- > Bicycle Friendly Blueprint

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Bicycling

SMITHGROUP | JJR

Transit

Improvements to Date

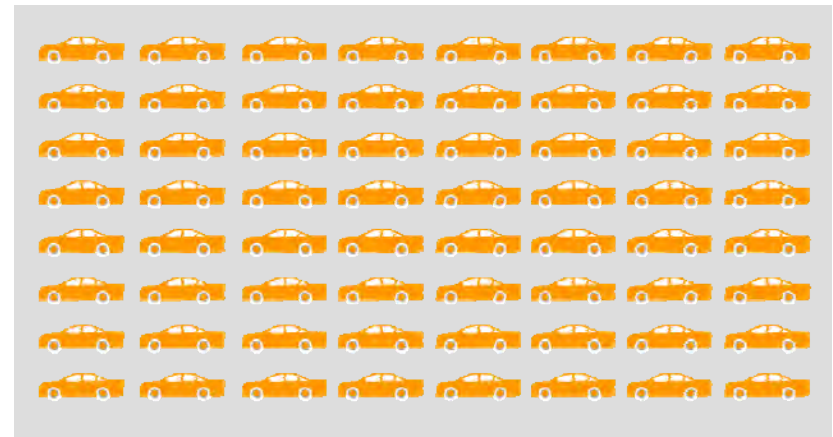
- **Numerous improvements noted in Needs Document and made prior to 2010-11**
 - Route reduction/consolidation
 - Stop consolidation
 - Service hour reduction
- **More efficient operations still possible**
 - Service hour reduction to apartment communities in afternoon
 - First Street Place serviced by 506 route
 - 304 route becomes a circulator



Transit parking reductions



=



The ECUSTA reduces parking demand by ~ **2,000** parking spaces at peak period!

Where would these **2,000** vehicles park?



OR



OR



 Area of additional 2,000 spaces = 600, 000 SF of land

Transit

Future Needs

- **New service/maintenance center**
- **Campus focus vs. student focus**
 - **Student Transit Authority → Transit Authority**
- **Closer relationship with parking**
 - **Revenue transfer from parking**
 - **Closer daily operations**
- **New mission statement to reflect service**
- **Campus transit committee**

Parking

Main Campus Parking Demand Assumptions

- Consistent space per person ratio – The ratio of 0.333 spaces per person through 2025
- No major changes in commuting patterns – No drastic changes to commuting patterns
- Linear growth of demand – Supported by Eva Kline Associates report



Parking

0-5 years*

- Student Union (#9)
- Bio Sciences (#1)
- Alumni Center (#13)

5-10 years

- Academic A Building (#3)
- Student Recreation Center Expansion (#11)
- Foundation Building / Office / Swing Space (#19)
- Facilities Building (#6)
- Police (#7)
- Parking, Environmental Safety, Mail Services (#8)
- IT / Data Center (#20)
- Belk Hall Replacement

10-15 years

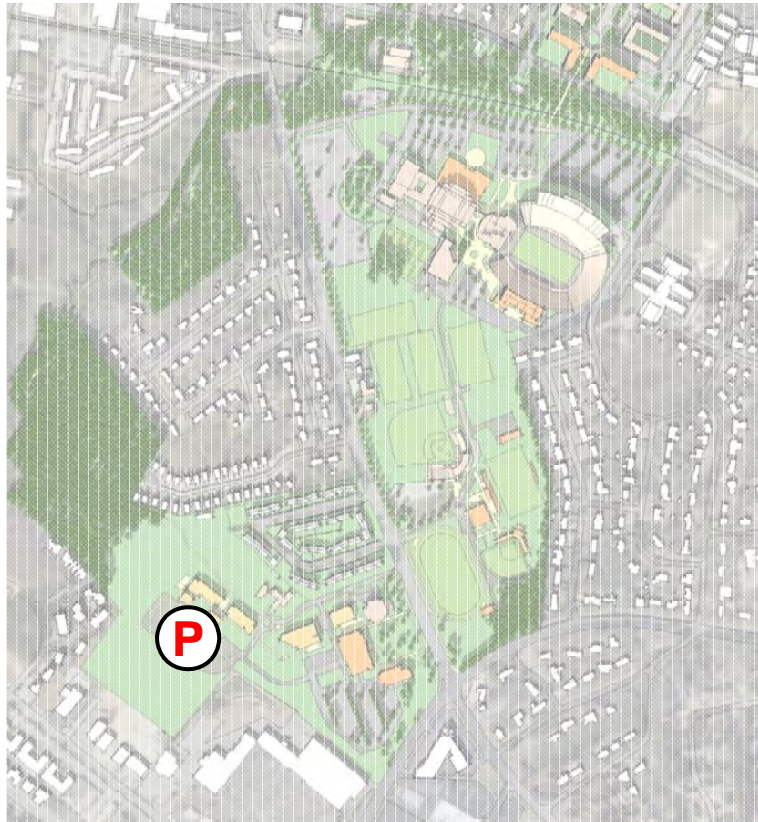
- Performing Arts

* - Also assumed Founders Drive closure within this phase

Main Campus Scenarios

- **Surface Lots**
- **All Decks**
- **Remote Parking and Two Decks**
- **Student Union Deck, Remote Parking and New Storage Lot**
- **Student Union Deck, New Storage Lot and Aggressive Demand Reductions**

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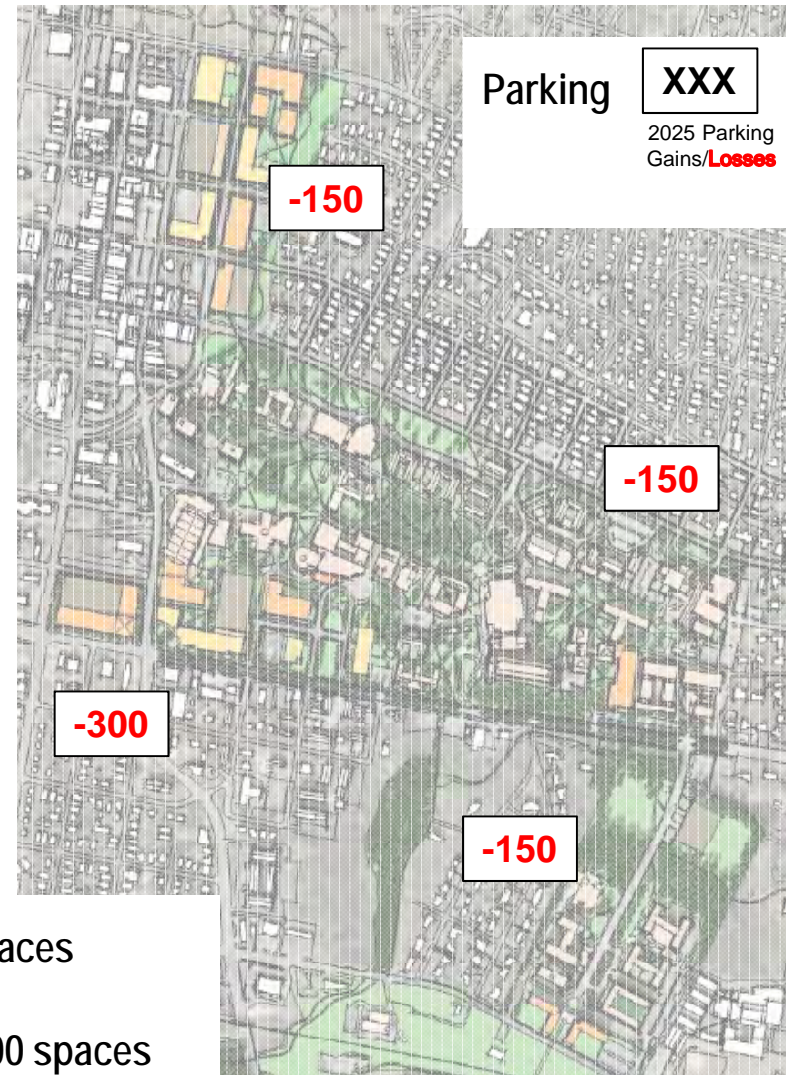
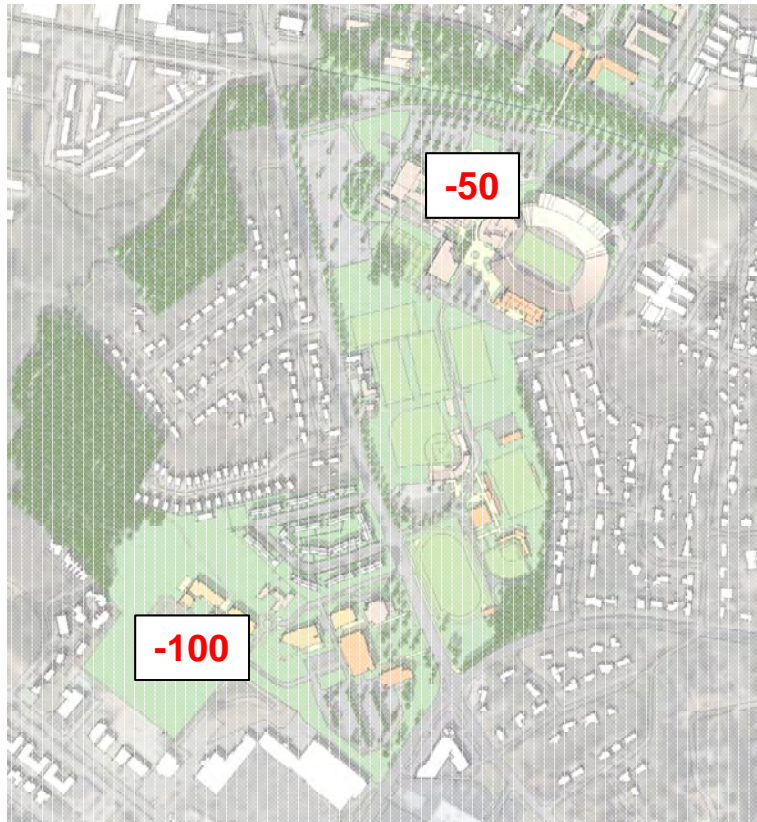
Parking Locations

Parking



New Parking Locations

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Parking Changes – Parking Surface Lots

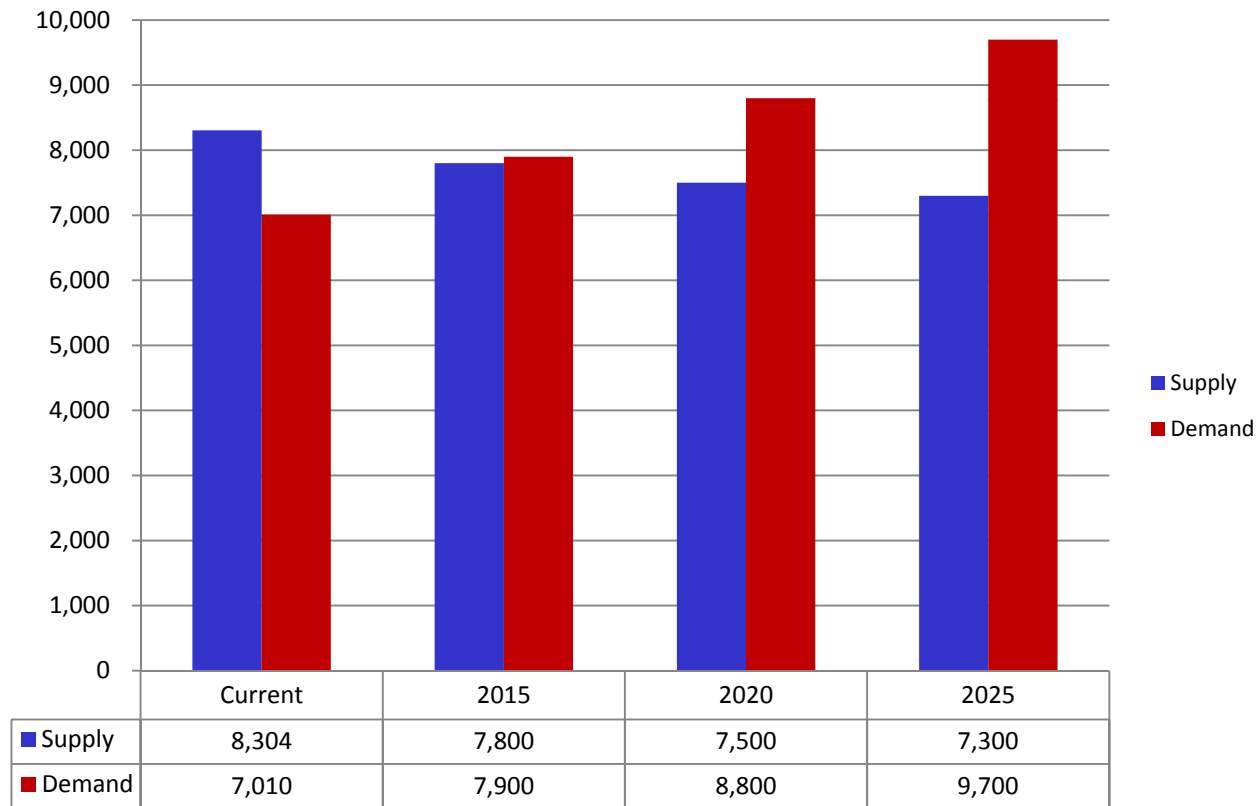
Net Loss: ~1,000 spaces

Future Deficit: ~2,400 spaces

Surface Lots

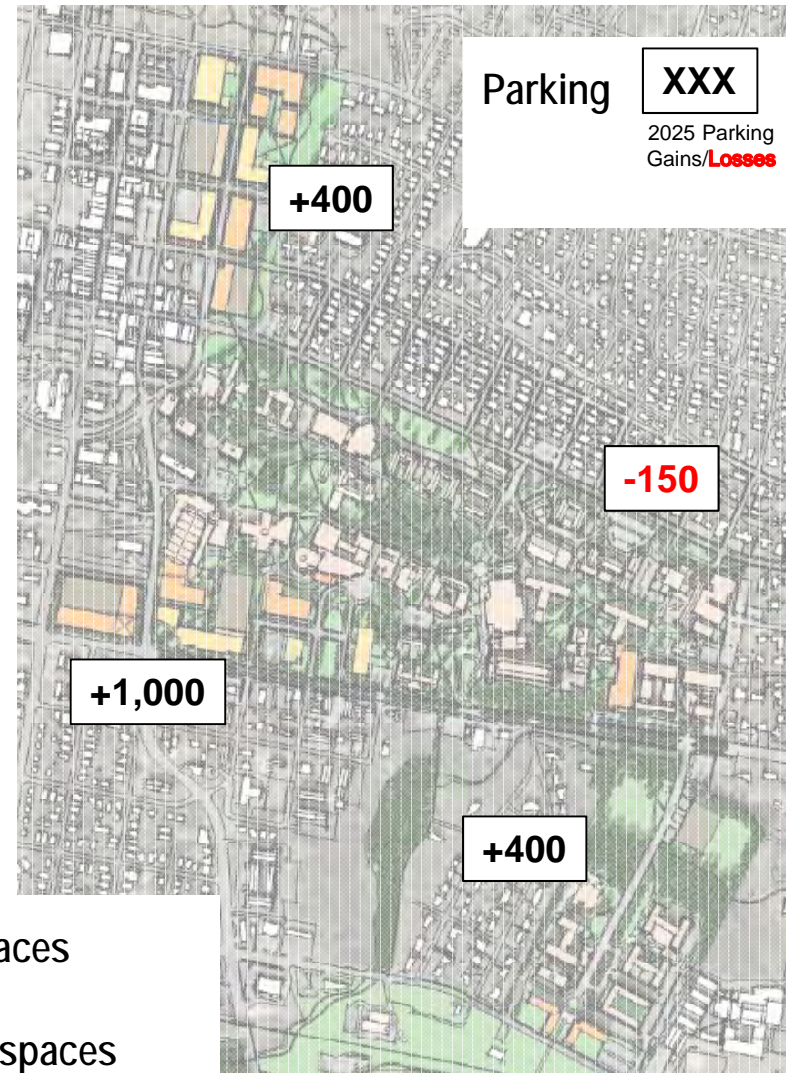
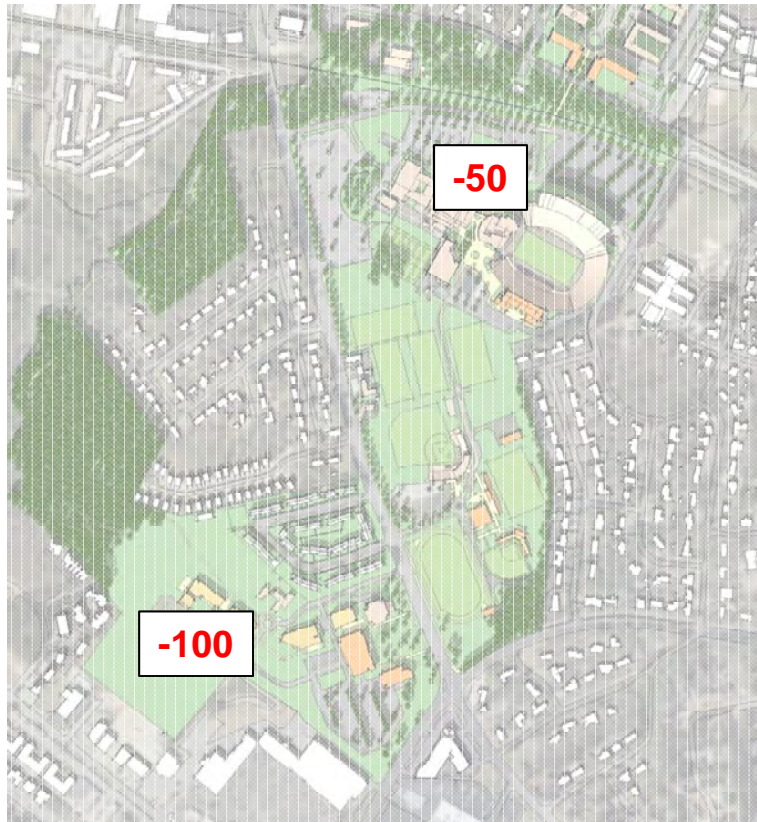
Deck locations built as surface lots.
 Costs are low but fails to meet demand.
 Supply issues within 5 year horizon.

Supply vs. Demand For Surface Lots



Parking

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**Parking Changes – All
Parking Decks**

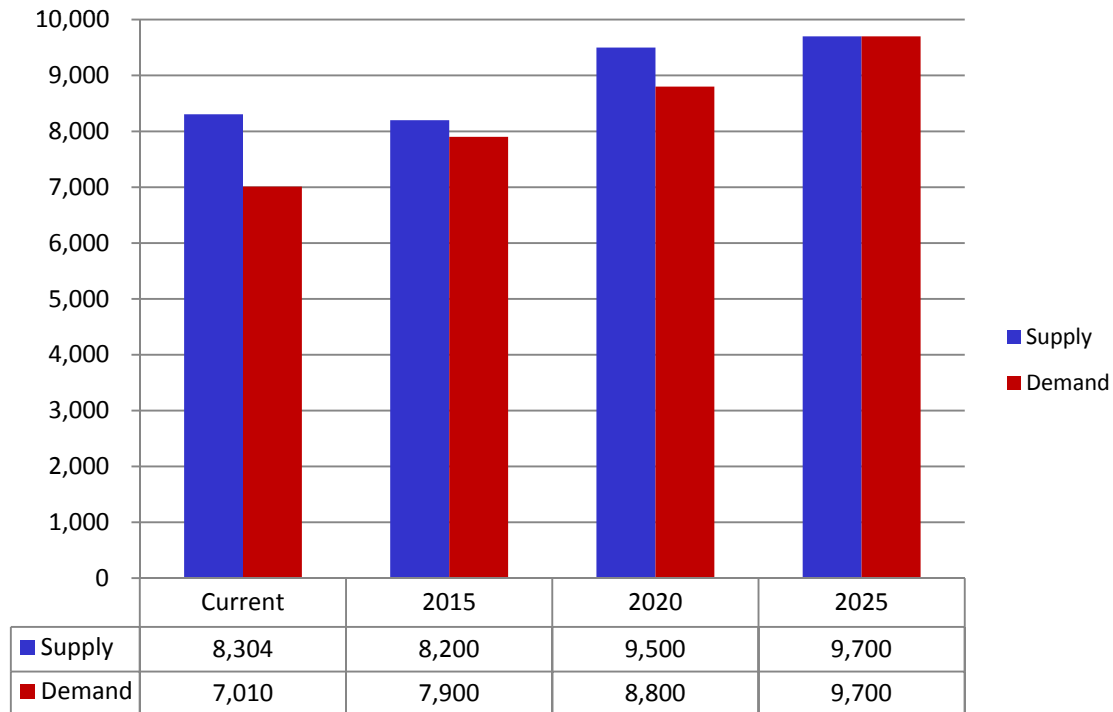
Net Gain: ~1,400 spaces

Future Surplus: ~ 0 spaces

All Decks

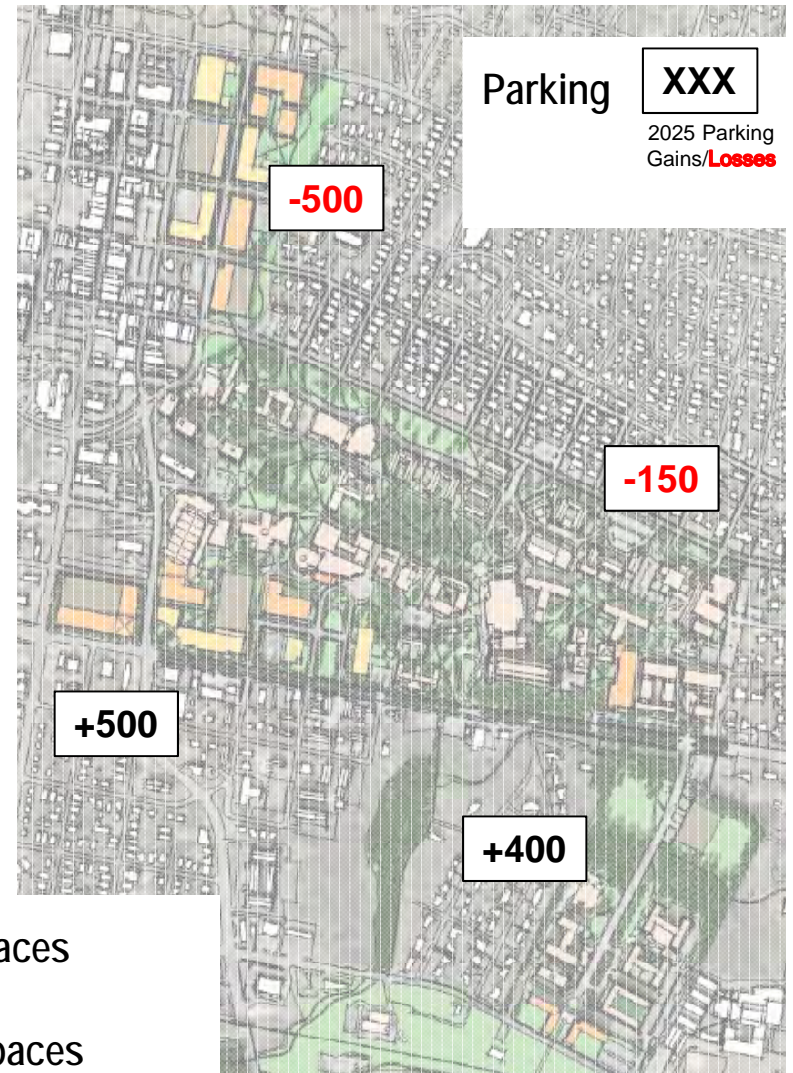
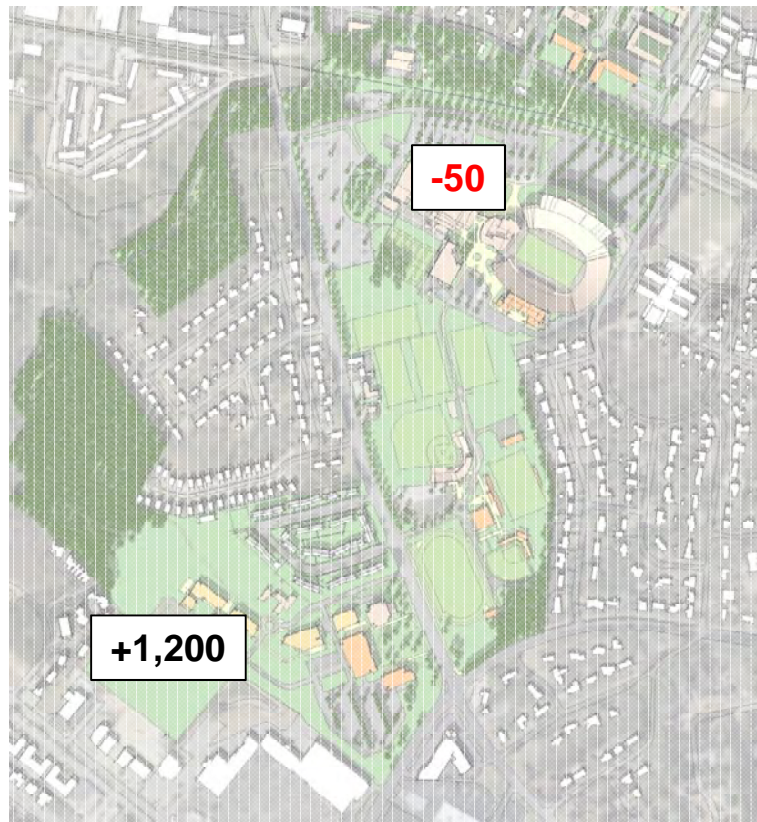
Deck locations in Master Plan are built.
 Includes 5 decks total (3,500 spaces).
 Demand is met but costs are high.

Supply vs. Demand For All Decks



Parking

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**Parking Changes –
Remote Parking + Two
Parking Decks**

Net Gain: ~1,400 spaces

Future Deficit: ~0 spaces

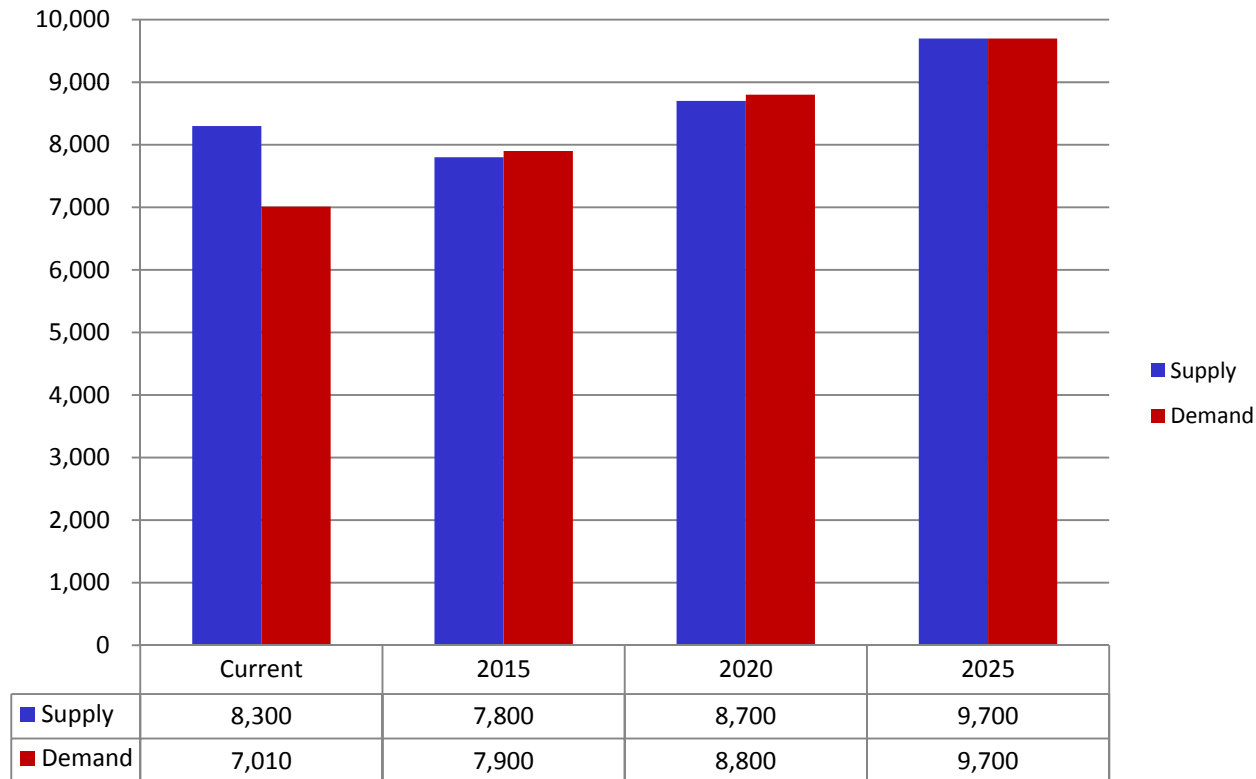
Remote Parking + Two Decks

Assumes only the Student Union Deck and a second deck are constructed.

1,900 total deck spaces.

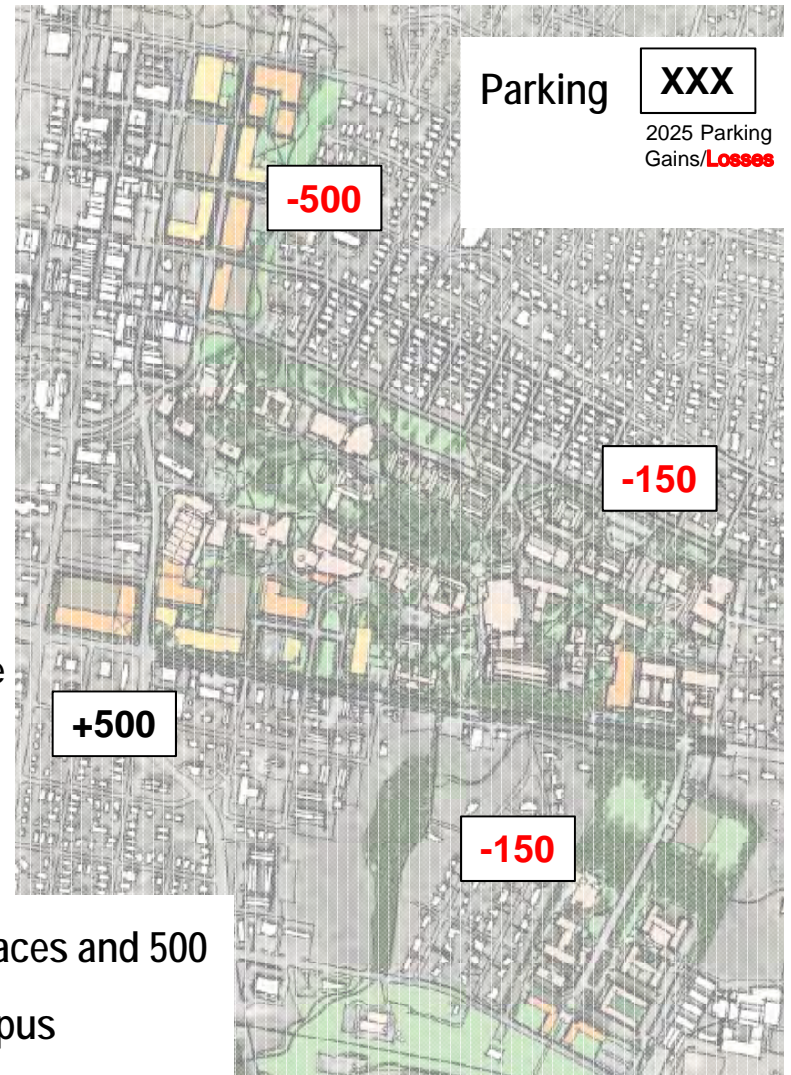
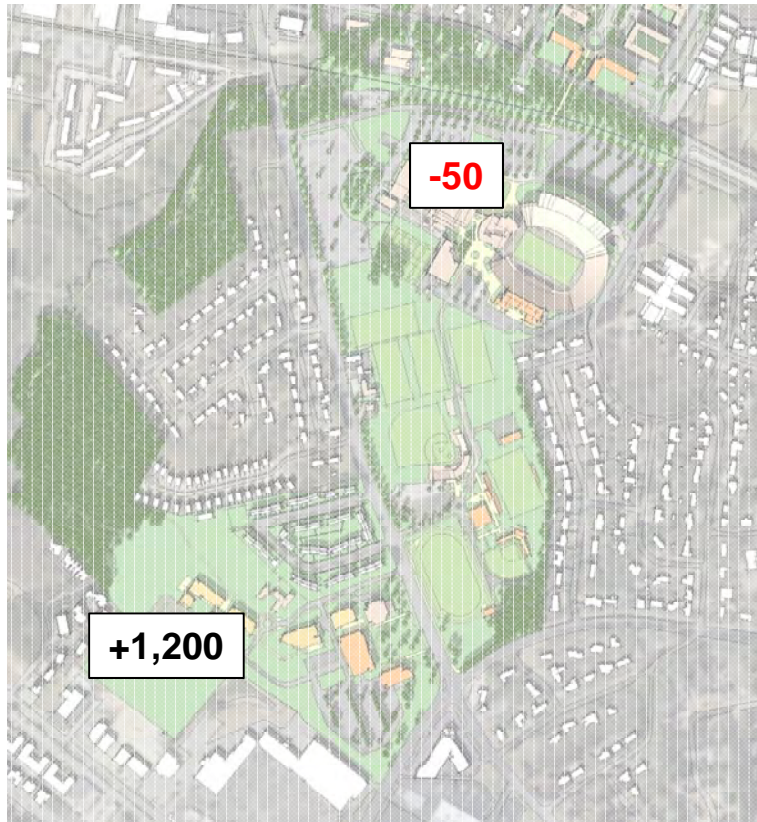
Adds new P&R lot near HHP which requires improved transit service.

Supply vs. Demand For Two Decks and New HHP Lot



Parking

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Parking **XXX**
2025 Parking
Gains/Losses

+500
New Storage
Lot

**Parking Changes – Student
Union Deck, Remote
Parking + Storage Lot**

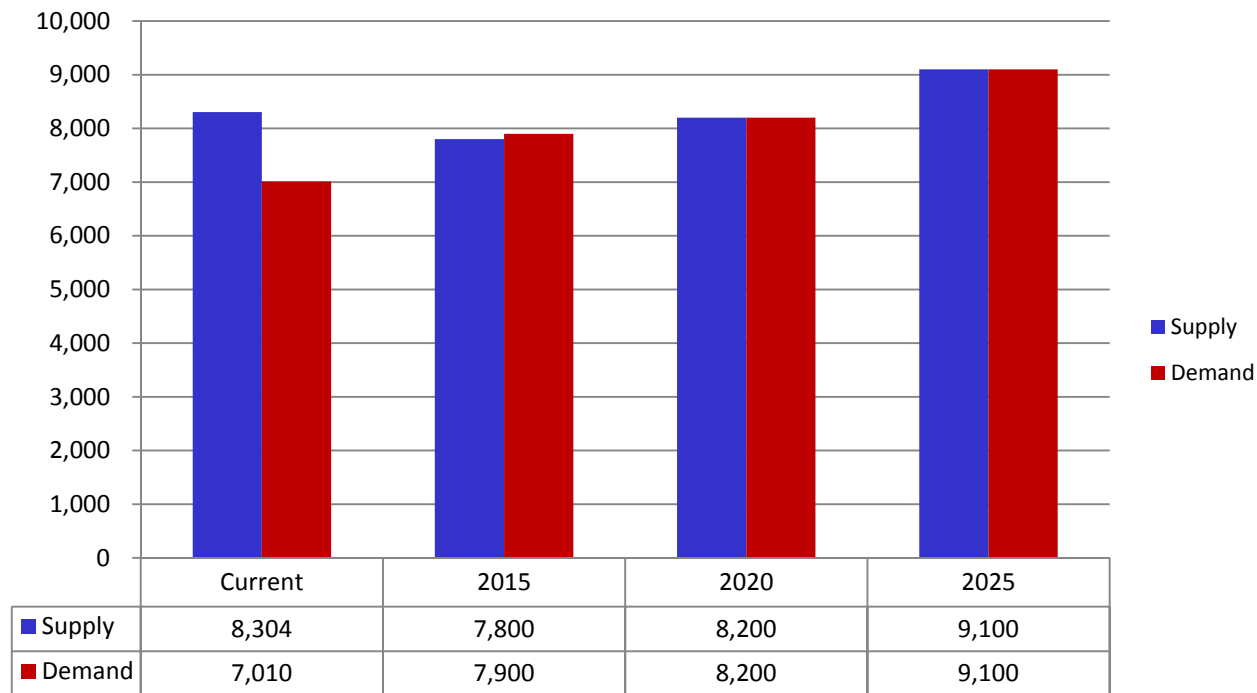
Net Gain: ~1,400 spaces and 500
spaces off-campus

Future Deficit: ~0 spaces

Student Union Deck, Remote Parking, and Storage Lot

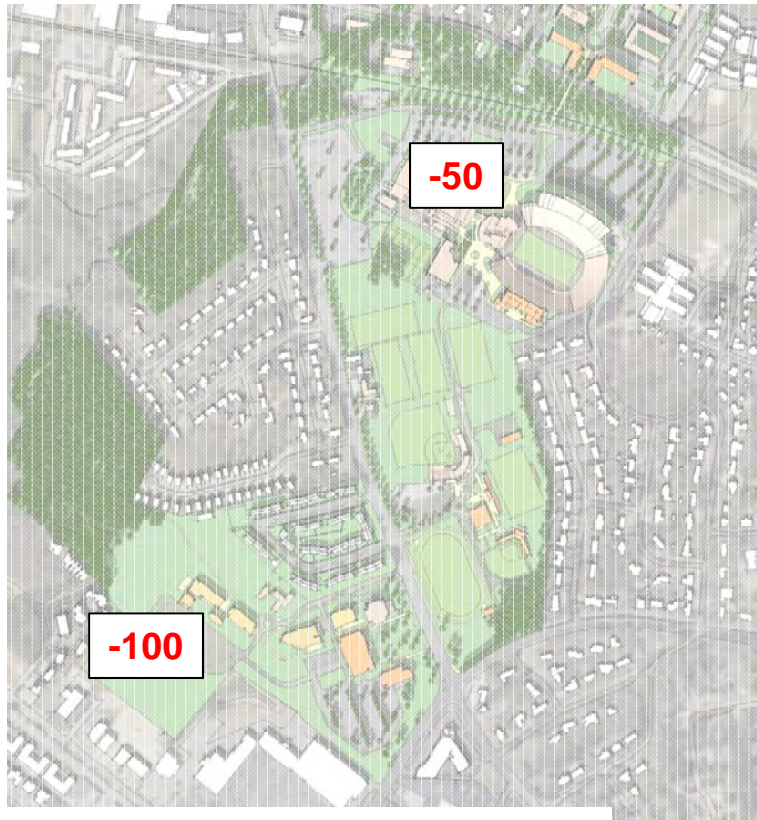
Assumes only the Student Union Deck is constructed.
 Replaces second deck with resident student storage lot.
 ~1,000 total deck spaces.

Supply vs. Demand For Student Union Deck, HHP Lot and New Storage Lot



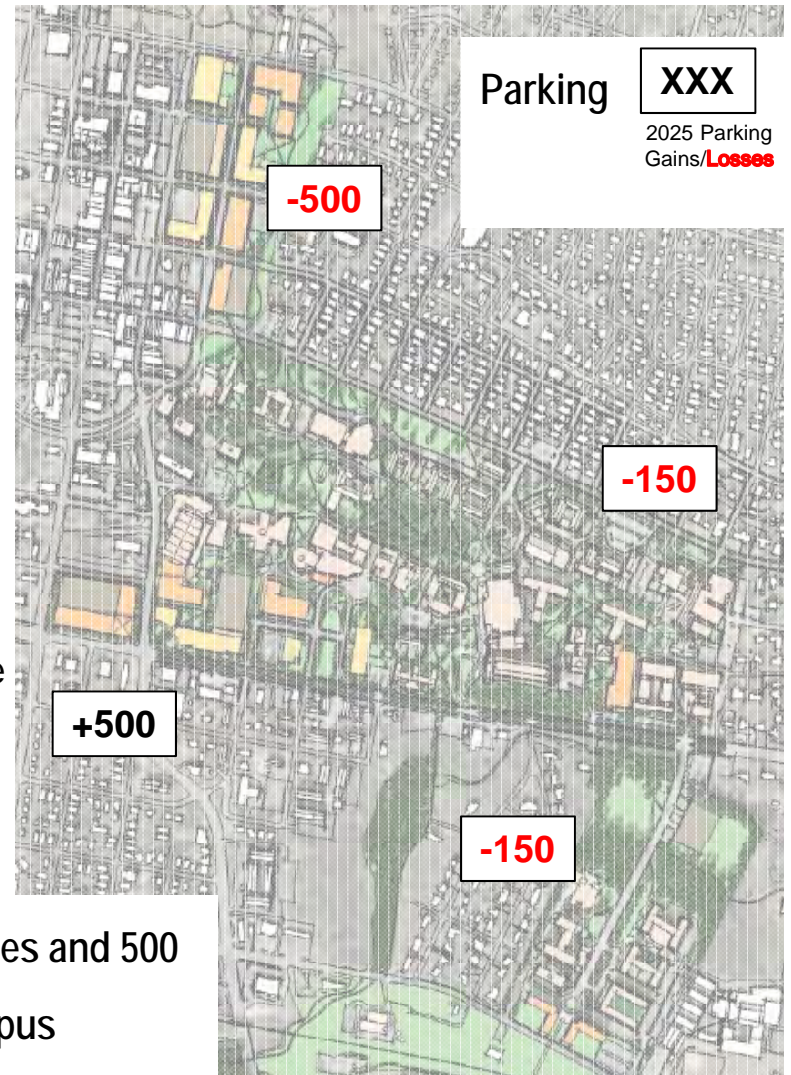
Parking

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Parking Changes – Student Union Deck, Storage Lot, Aggressive Demand Reductions

+500
New Storage Lot



Parking **XXX**
2025 Parking Gains/Losses

Net Gain: ~600 spaces and 500 spaces off-campus

Future Deficit: ~0 spaces

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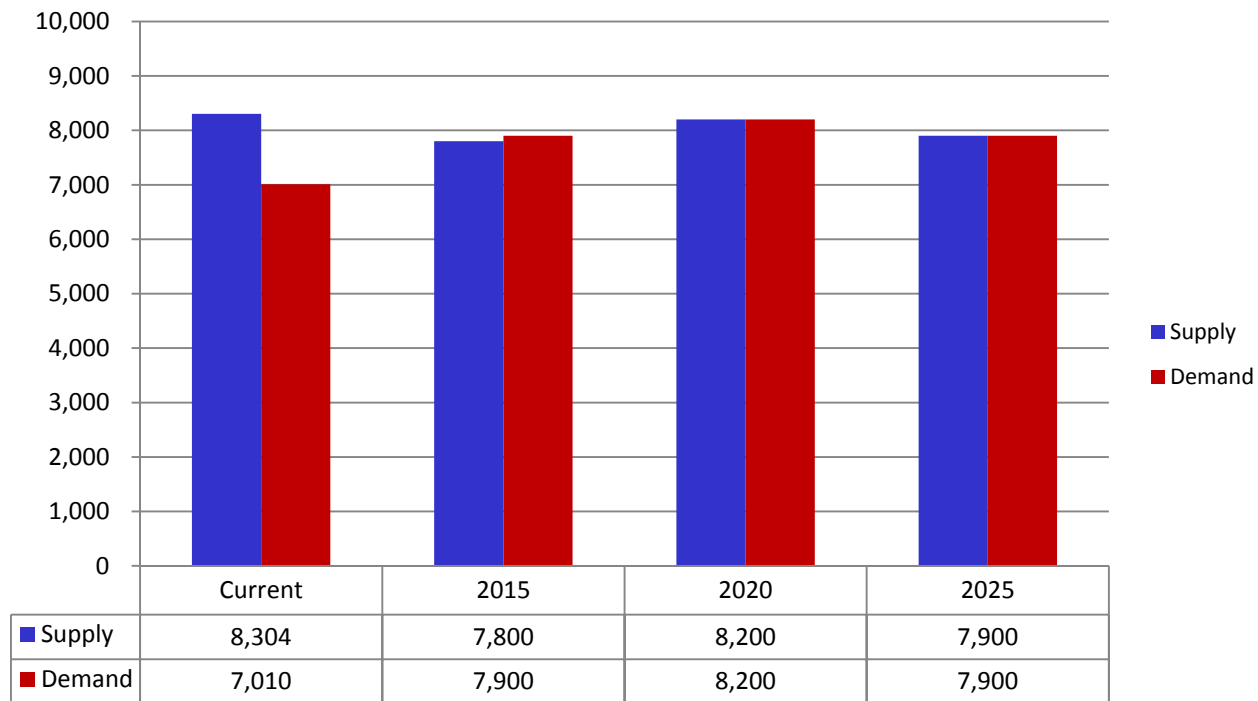
Student Union Deck, Storage Lot and Aggressive Demand Reductions

Assumes only the Student Union Deck is constructed.

Includes resident student storage lot, student parking ban, and new park and ride lots.

Is very aggressive on demand reductions which will require a culture change.

Supply vs. Demand For Student Union Deck, Storage Lot and Aggressive Demand Reduction



Parking

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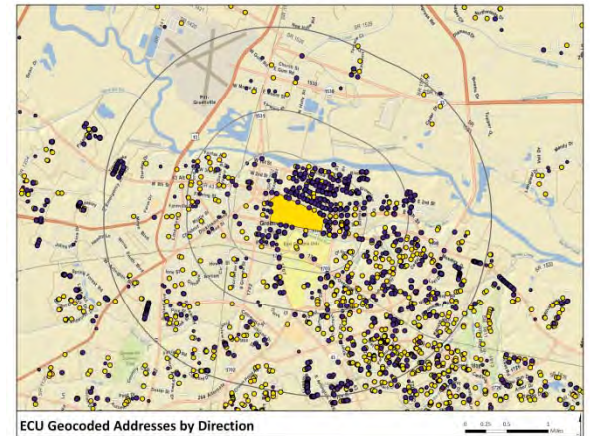
Costs Analysis

Scenario	Annual Costs					Total
	Deck Construction	Surface Space	Storage Lot	Transit	TDM Programs	
All Decks	\$ 5,250,000	\$ -	\$ -	\$ -	\$ -	\$5,250,000
2 Decks and Remote Parking	\$ 3,000,000	\$ 585,000	\$ -	\$ 247,500	\$ 50,000	\$3,880,000
1 deck, Remote Parking, and a Storage Lot	\$ 1,650,000	\$ 585,000	\$ 276,000	\$ 307,500	\$ 65,000	\$2,880,000
1 deck, Storage Lot, and Demand Reductions	\$ 1,650,000	\$ 100,000	\$ 276,000	\$ 600,000	\$ 400,000	\$3,030,000

Parking

How can parking demand be reduced?

- Incentives for alternative modes
 - Guaranteed ride home program
 - Passes to park on campus
 - Reduced GREAT transit passes
- Alternative parking options
 - Park and ride lots (off-campus)
 - Storage lots (resident students)
- Parking prohibitions
 - By group
 - By distance to campus



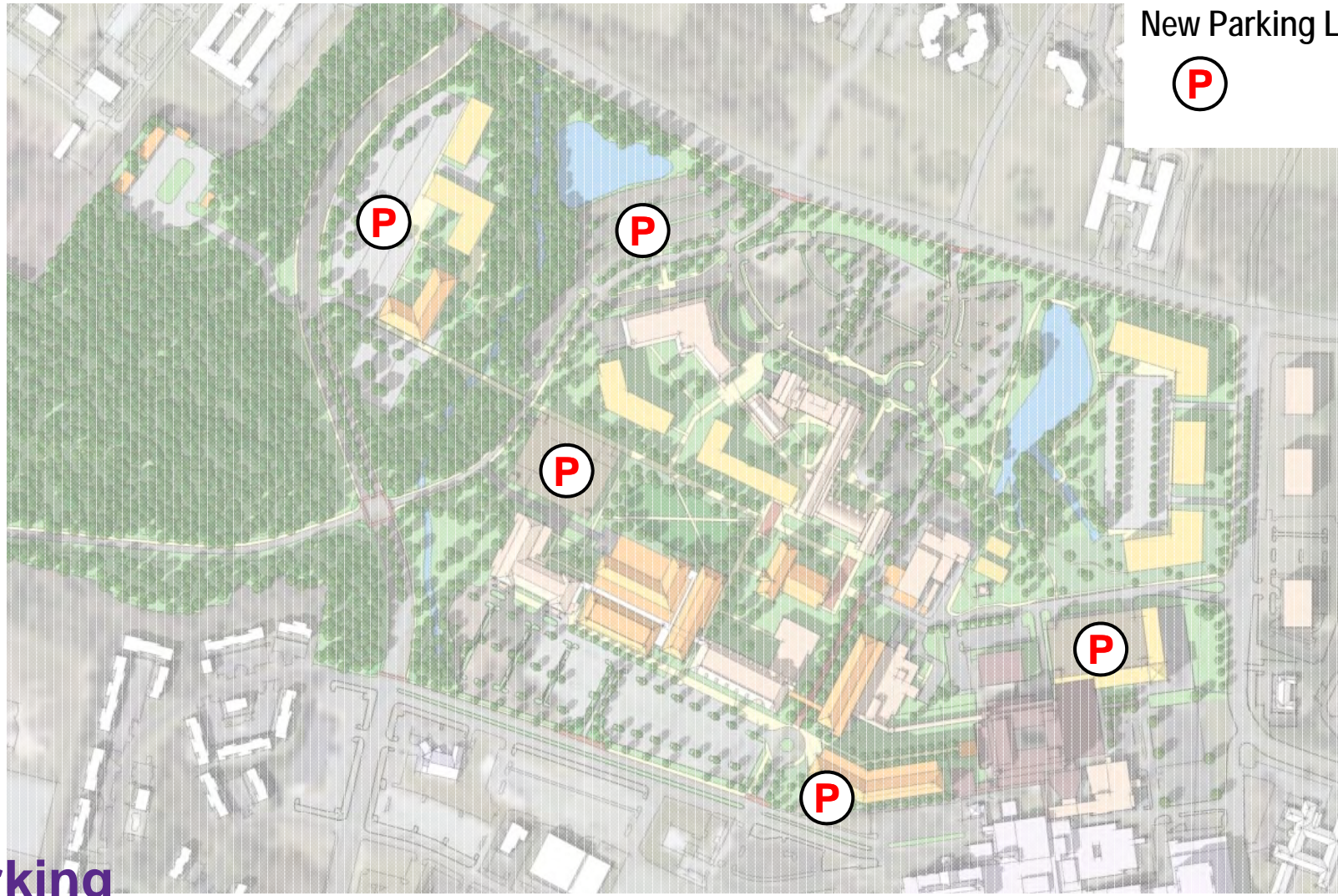
Parking

Benefits to parking demand reduction

- Lower costs
 - Reduced debt service
 - Better utilization of existing programs
- Sustainability
 - Reduced emissions
 - Less impervious surface
 - Lower costs to students
- Maintains core property for academic purposes



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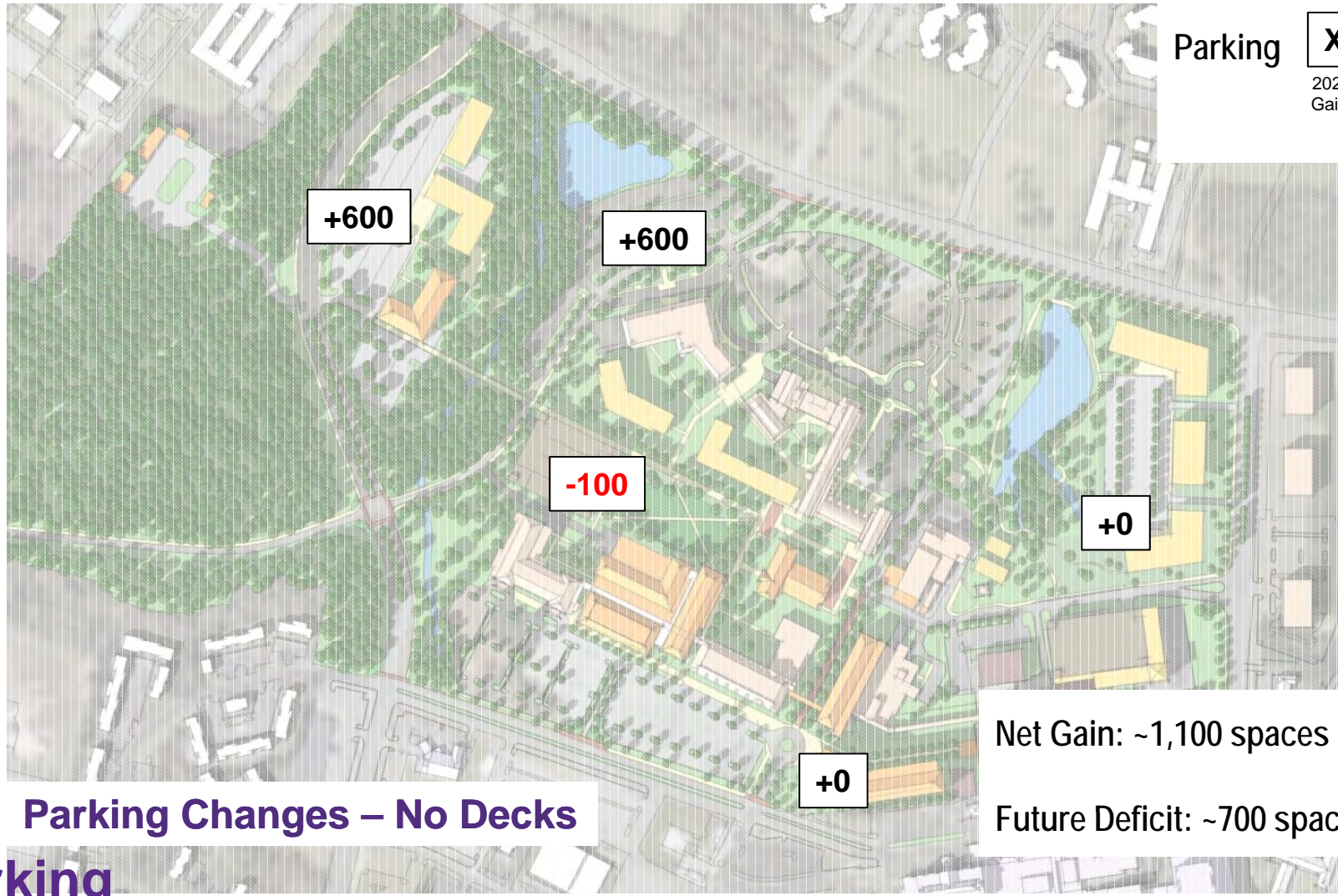


New Parking Locations



Parking

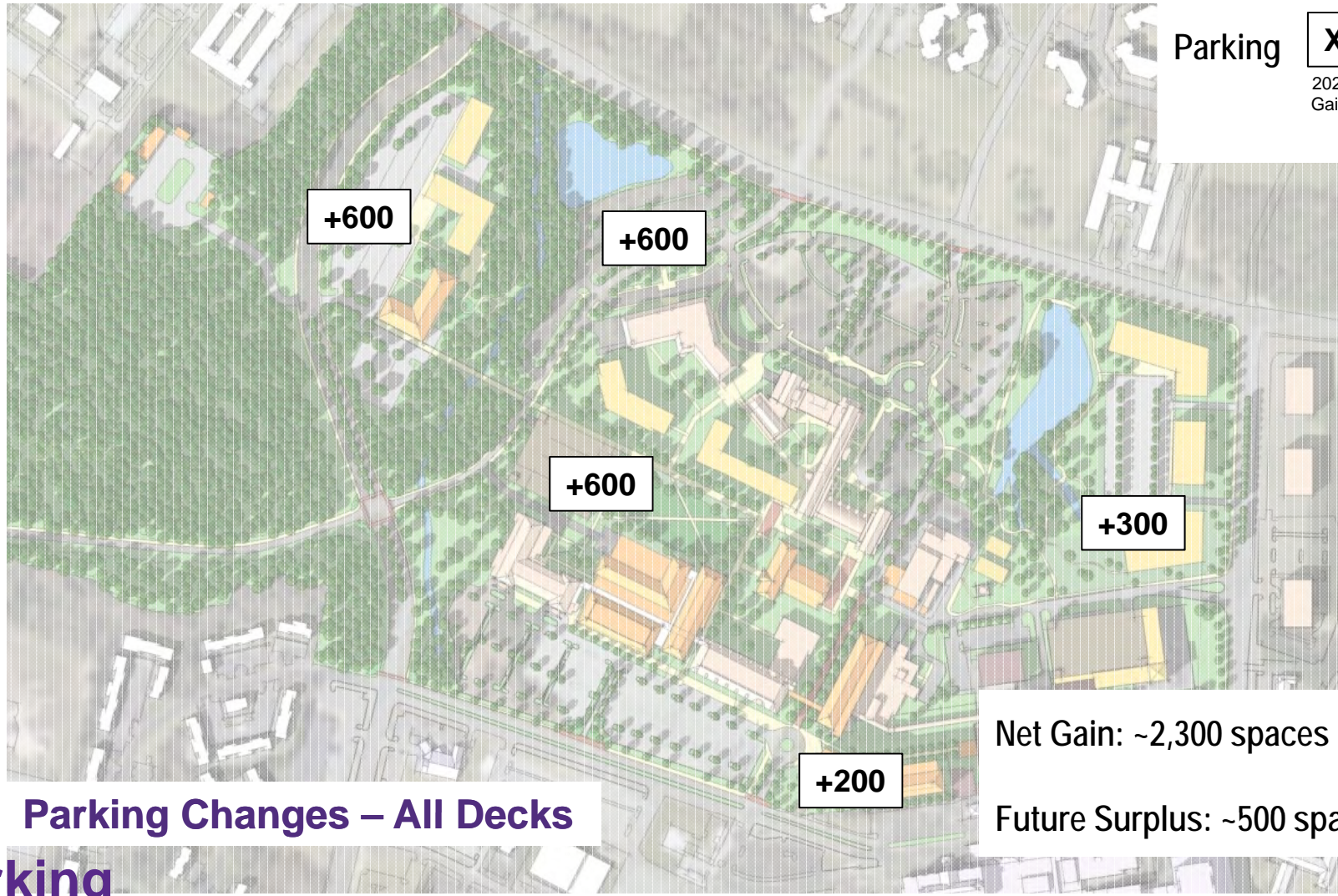
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Parking Changes – No Decks

Parking

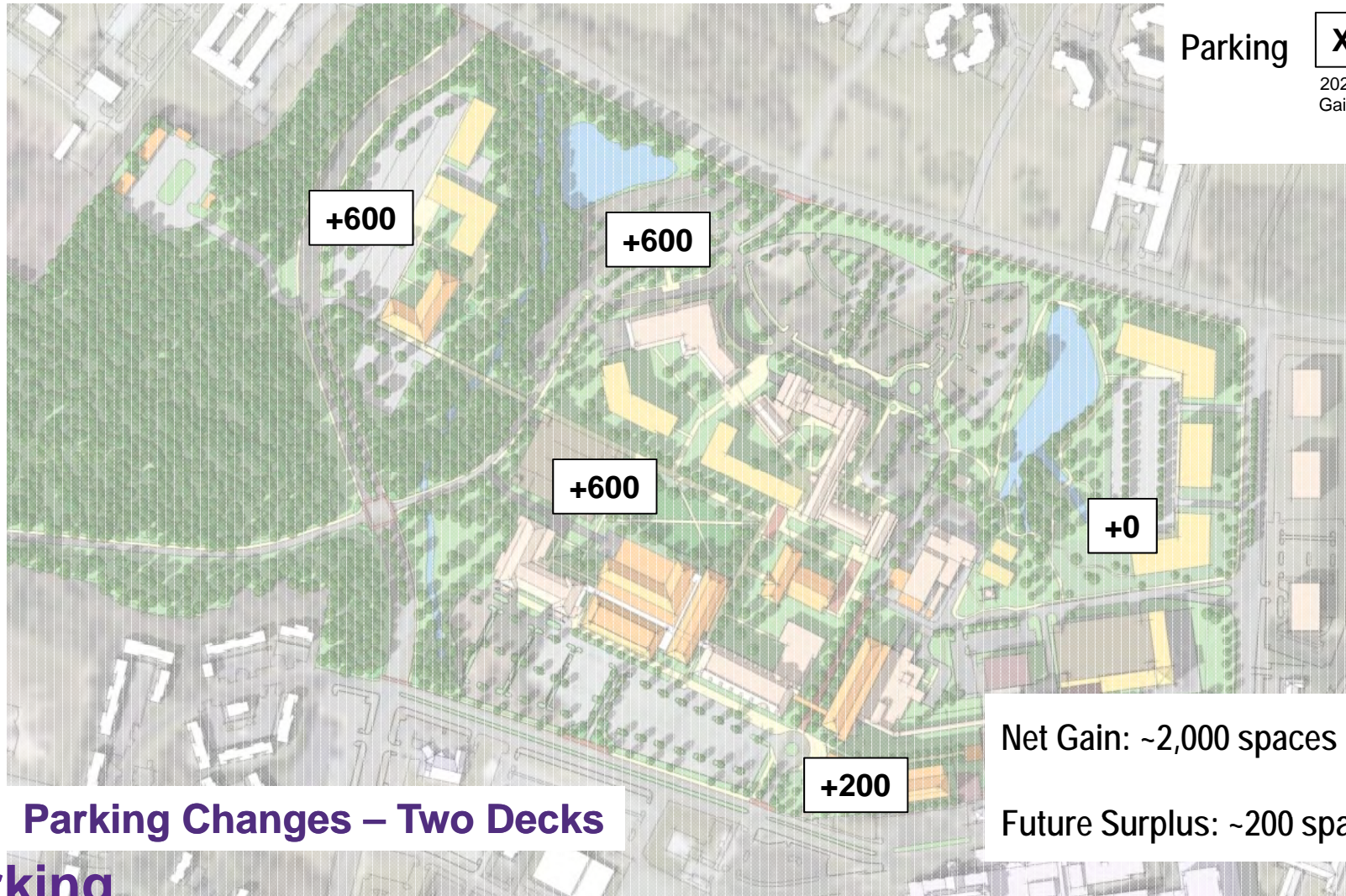
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Parking Changes – All Decks

Parking

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Parking

XXX
2025 Parking
Gains/Losses

Parking Changes – Two Decks

Parking

Health Sciences Campus Potential Parking Supply and Demand

Scenario	Current Spaces	Parking Increase/ Decrease	2025 Parking Supply	2025 Demand	Surplus/ Deficit
No Decks	3,100	1,100	4,200	4,900	<i>700</i>
All Decks	3,100	2,300	5,400	4,900	<i>500</i>
Two Decks	3,100	2,000	5,100	4,900	<i>200</i>

Health Science Campus Parking Keys

- **Begin charging visitors to park**
 - **Consistent with PCMH**
 - **Reduced financing for decks in the future**
- **Determine level of surplus**
 - **Higher surplus can provide better experience to customer**
 - **Additional spaces have significant cost**