Transportation, Parking & Roads

CAROLINA NORTH

The UNIVERSITY *of* NORTH CAROLINA *at* CHAPEL HILL

Design Carolina North as a walkable community

- Design the transportation system and development patterns (i.e., urban design elements such as density, building design, mix of uses, open space, etc.) to encourage self-propelled based transportation (walking, biking, etc.) as the primary means of travel and to promote a vibrant community
- Integrate on-site bike and pedestrian routes with existing and planned local facilities
- Design complete streets to minimize speeds, maximize peaceful coexistence of all modes, and minimize conflicts between pedestrian, bicycles and vehicles
- Create vehicle-free zones where appropriate

Main Campus Mode Splits

Mode	Employees		
	2001 Existing Ratio	2004 Existing Ratio	2010 Projected Ratio
Drive alone	0.72	0.61	0.54
Carpool/vanpool	0.06	0.05	0.08
Bus	0.06	0.08	0.12
Bicycle	0.03	0.02	0.03
Walk	0.02	0.02	0.02
Park-and-ride	0.07	0.15	0.17
Other	0.04	0.06	0.04

Other Campus Employee Mode Splits

Mode	UNC Main Campus (2004)	Cornell	U of Wisconsin	Stanford	U of Washington
Drive Alone	61%	56%	50%	58%	39%
Carpool / Vanpool	5%	17%	14%	11%	13%
Transit	8%	14%	10%	18%	36%
Walk	2%	9%	6%	2%	5%
Bicycle	2%	3%	14%	10%	7%
Park & Ride	15%		-	-	-
Other	6%	1%	6%	1%	<1%

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- *Possible metrics:*
  - *100% of employees who live on campus walk/bike to work*
  - *10% of employees who live off campus walk/bike to work*
  - *100% of residents and employees walk/bike between campus activities*
  - *100% of roads/paths have acceptable pedestrian Level of Service*
  - *100% of roads/paths have acceptable bike Level of Service*

  (Employees also includes students working or taking classes on site)

Pedestrian Enhancements

- Sidewalks on both sides of the street
- Separate sidewalk from the travel lanes with landscape buffer
- Minimize pedestrian exposure
  - Reduce crossing width at intersections
  - Limit driveways
- Provide street furniture, shade
- Connectivity, short blocks

Cycling Enhancements

- Provide bike lanes and bike paths
- Encourage biking through amenities:
  - Incorporate covered bike parking into new buildings if possible
  - Showers and lockers
  - Short and long-term bike parking

Design Carolina North as a walkable community (cont)

- Design the transportation system and development patterns (i.e., urban design elements such as density, building design, mix of uses, open space, etc.) to encourage self-propelled based transportation (walking, biking, etc.) as the primary means of travel and to promote a vibrant community
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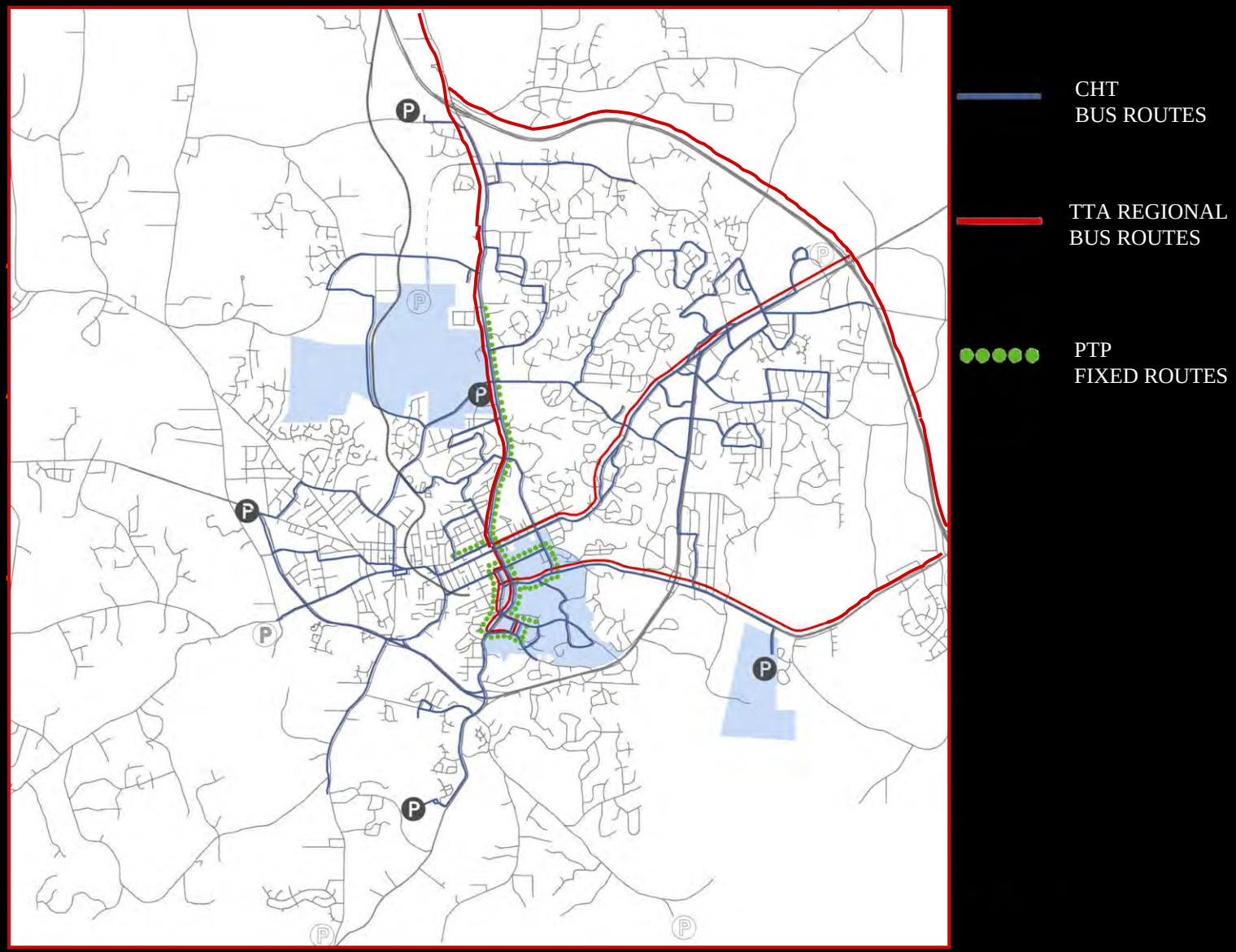
- Create vehicle-free zones where appropriate

- *Possible metrics:*
  - *Internal transportation system connects to 100% of external pedestrian paths and bike routes*
  - *The 85 percentile for traffic speeds on any street does not exceed the design speed limit for that street*

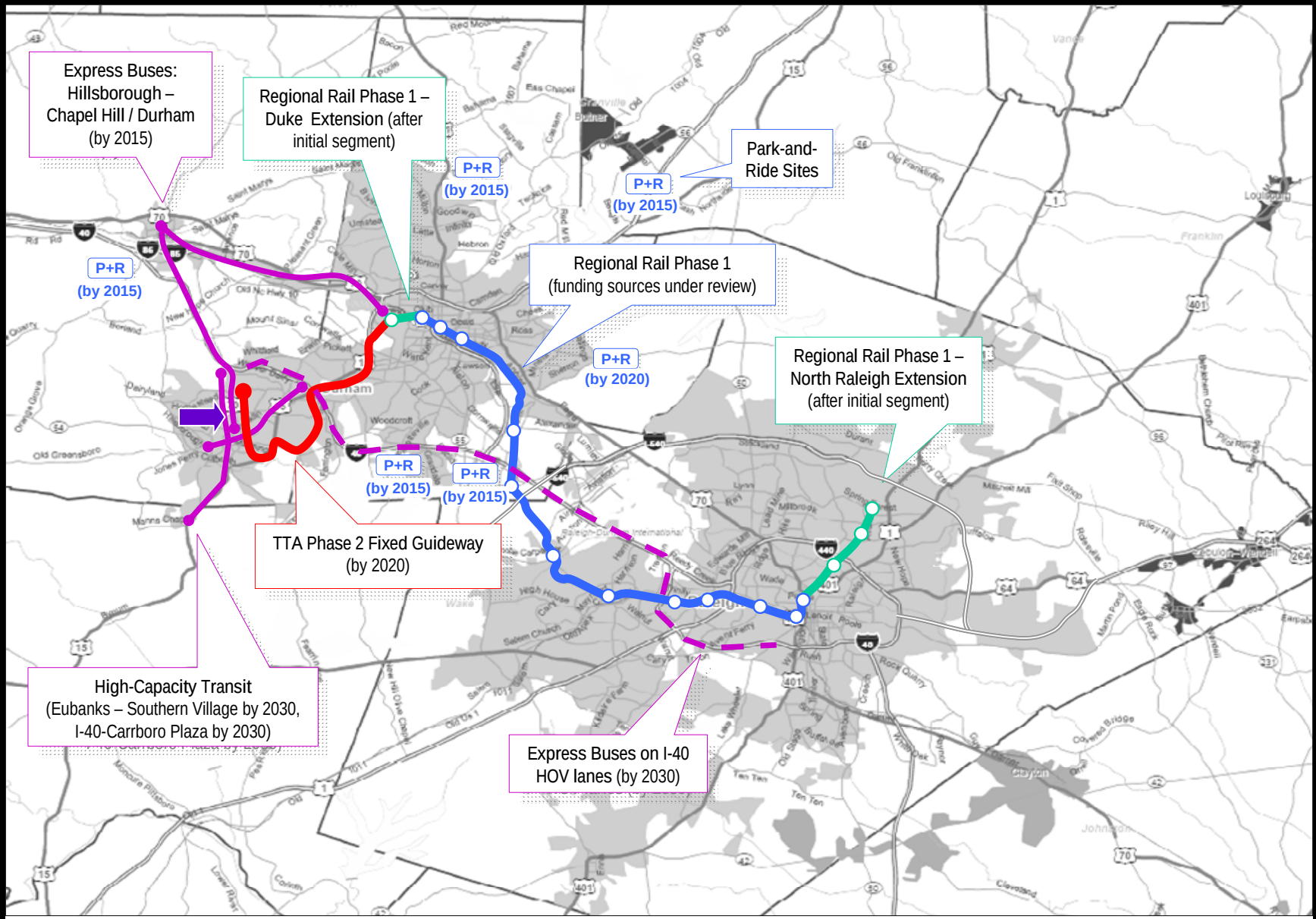
Maximize use of transit at every phase of development

- Design site to maximize opportunities to travel by transit from outset
- Design site for efficient transit movement as a priority element
- Focus most intensive development around transit nodes
- Identify, preserve and retrofit corridors for future transportation needs
- Reserve land for transit center
- Use rail corridor for high speed transit to extent feasible

Existing Transit System



DCHC Long-Range Transit Plan



Based on DCHC MPO and CAMPO 2005 Long Range Transportation Plans. Alignments shown are indicative. Programmed completion dates shown in parentheses.

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- *Possible metrics:*
  - *The following percent of commuters use transit:*
    - *10% within the next 10 years*
    - *25% within the next 25 years*
    - *30% within the next 50 years*
  - *100% of development is located within walking distance of a major transit stop*
  - *Transit vehicles can travel at an average speed of no less than 15 mph within Carolina North*
  - *Land is reserved for transit corridor(s) on and off site*
  - *Land is reserved for transit center(s) on site*

Minimize SOV use through policies, programs, and incentives

- Design each phase of Carolina North to be accessible, and to progressively reduce reliance on SOV use and on-site parking
- Apply travel demand management experience form Main Campus
- Promote greater use of strategies such as telecommuting and flexible work hours
- Automate administrative processes to minimize travel within and between campuses
- Provide incentives for using alternative modes
- Provide services and amenities that minimize the need to leave site
- Provide strong connections to Main Campus

- *Possible metrics:*
  - *No more than the following percent of employees drive alone to work:*
    - *60% within the next 10 years*
    - *50% within the next 25 years*
    - *40% within the next 50 years*

Minimize SOV use through policies, programs, and incentives (cont)

- Design each phase of Carolina North to be accessible, and to progressively reduce reliance on SOV use and on-site parking
- Apply travel demand management experience form Main Campus
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- *Possible metrics:*
  - *Reduction in vehicle miles traveled compared to a typical mixed-used development in the Triangle Region*
    - *X % within the next 10 years*
    - *X % within the next 25 years*
    - *X % within the next 50 years*
  - *5% employees who participate in telecommuting, flex-hours and compressed work weeks*

Minimize SOV use through policies, programs, and incentives (cont)

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- Promote greater use of strategies such as telecommuting and flexible work hours
- Automate administrative processes to minimize travel within and between campuses
- Provide incentives for using alternative modes
- Provide services and amenities that minimize the need to leave site
- Provide strong connections to Main Campus

- *Possible metrics:*
  - *50% of daily service/retail needs satisfied on site*
  - *Frequent transit service is provided to primary off-site service centers*
  - *Provide at least one full-time TDM coordinator on site*
  - *100% of employees receive orientation and on-going education/information on transportation options*

Minimize SOV use through policies, programs, and incentives (cont)

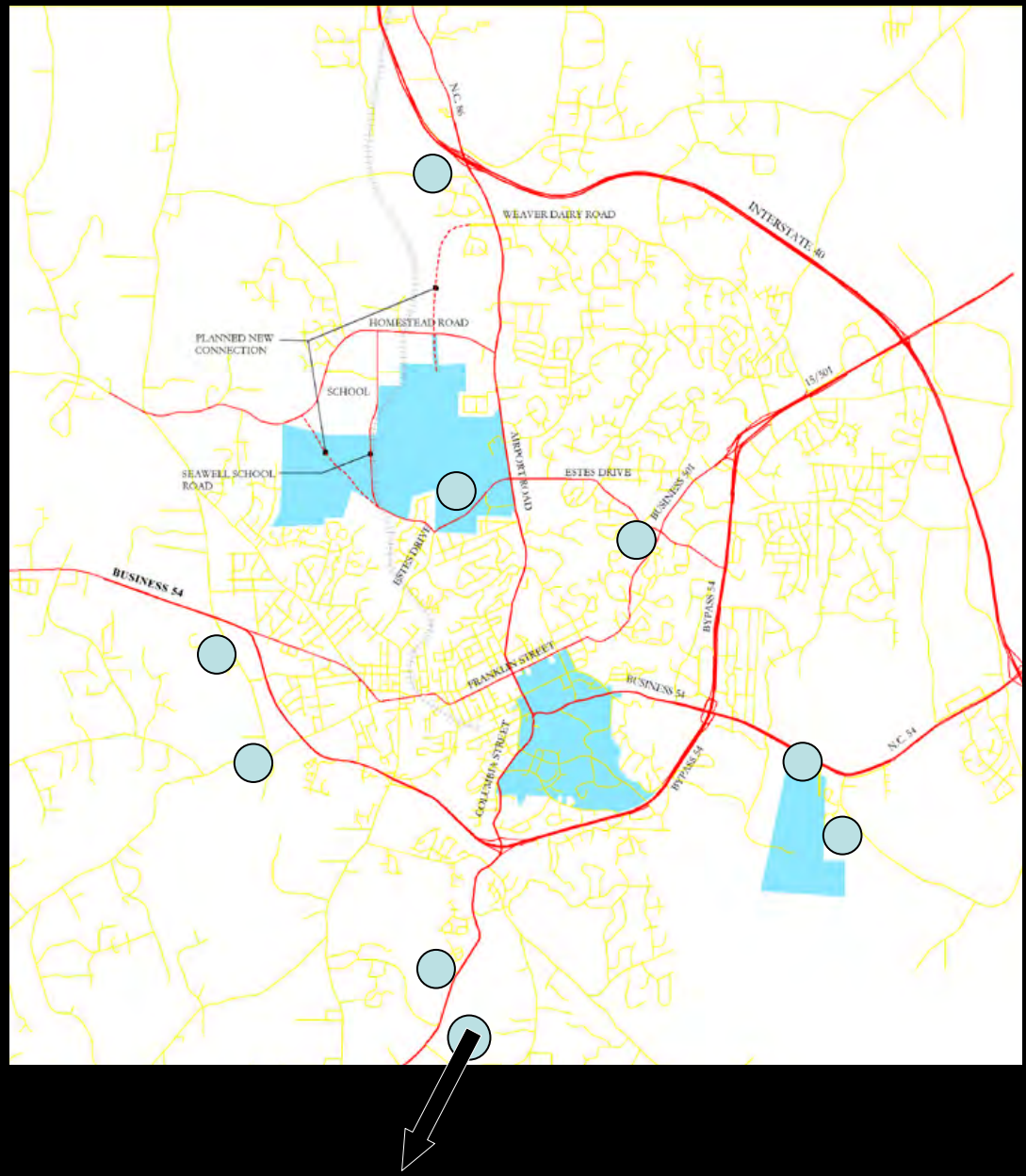
- Provide strong connections to Main Campus

- *Possible metrics:*
  - *100% of travel between Carolina North and Main Campus is non-SOV*
  - *100% of the pedestrian route between Carolina North and Main Campus has acceptable pedestrian Level of Service*
  - *100% of the bike route between Carolina North and Main Campus has acceptable bike Level of Service*
  - *The maximum waiting time for transit service for travel between Carolina North and Main Campus is:*
    - *10 minutes in peak periods/15 minutes in off-peak period within the next 10 years*
    - *5 minutes in peak periods/10 minutes in off-peak period within the next 25 years*
  - *The transit trip between the center of Carolina North and UNC Hospitals takes no longer than:*
    - *15 minutes in peak periods/10 minutes in off-peak period within the next 10 years*
    - *10 minutes in peak periods/10 minutes in off-peak period within the next 25 years*

Provide minimum amount of needed parking

- Maximize use of satellite parking for those who choose to drive
- Minimize amount of impervious surface
- Maximize opportunities for shared use of parking

Existing Park-and-Ride



Parking Space Comparison

- UNC Main Campus: 1 space per 2 employees
- Other campuses
  - Cornell: 1 space per 2 employees
  - U of Wisconsin: 1 space per 2.4 employees

Provide minimum amount of needed parking

- Maximize use of satellite parking for those who choose to drive
- Minimize amount of impervious surface
- Maximize opportunities for shared use of parking

- *Possible metrics:*
  - *The following number of employee parking spaces is provided on site:*
    - *1 spaces for every 2 employees within the next 10 years*
    - *1 spaces for every 2.5 employees within the next 25 years*
    - *1 spaces for every 3 employees within the next 50 years*
  - *Provide adequate satellite parking, served by high quality transit, for those who choose to drive but are not accommodated on campus*

Design site and individual phases to minimize impacts of construction traffic

- *Possible metrics:*
  - *100% of construction traffic uses designated truck routes for all projects*

Design a delivery and servicing system that provides convenient access to each building while minimizing conflicts w/ other modes

- *Possible metrics:*
  - *All buildings have 2 or more available delivery/service parking spaces that can be accessed without impacting pedestrian circulation*
  - *No delivery/service vehicles are parked on sidewalks or illegally*

Design site and transportation system with the flexibility to adapt to a variety of future transportation scenarios

- *Possible metrics:*
  - *All recommendations from agencies (Towns, County, DCHC MPO, NCDOT, and University) regarding flexibility are incorporated into the plan*

Respect surrounding neighborhoods

- Minimize undesirable transportation impacts
- Provide appropriate connections

- *Possible metrics:*
  - *No more than a 10% increase in vehicles traveling on neighborhoods streets*
  - *No increase in vehicles parked on neighborhoods streets*
  - *100% of people living in adjacent neighborhoods who walk/bike to campus*

Develop a plan to address capital and recurring funding needs for transportation, particularly transit

- *Possible metrics:*
  - *A funding plan is prepared that ensures 100% of capital and recurring funding*

Partner with local, regional and state transportation agencies

- Develop a phased transportation plan and improvements
- Develop regional transportation initiatives to encourage use of alternatives
- Obtain and leverage funding for transportation improvements

- *Possible metrics:*
  - *100% of all transportation improvements are incorporated into adopted local, regional and state transportation, plans, programs and initiatives*