General Principles

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<th>HWCC report</th>
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<tr>
<td><strong>Principle 1:</strong> Carolina North shall adhere to the following basic sustainability principles as defined by the Sustainable Development Task Force in its October 1998 Report to the Chapel Hill Town Council: Create healthy living environments; protect, restore and maintain ecological integrity; conserve energy and natural resources, and use them efficiently; balance social, economic and environmental concerns in decision-making; promote equity, human dignity and social justice.</td>
<td><strong>Initial presentation:</strong> Carolina North will • Provide room to grow in new directions while preserving the special qualities of main campus; • Bring researchers together for closer collaboration; • Nurture new businesses inspired by our innovations; • Foster partnerships with industry and government; • Provide a setting for outreach and service; • Engage the community in the life of the university; • Help us compete for funding and talent.</td>
<td><strong>No general proposals</strong></td>
<td>The Horace Williams Tract is developed into Carolina North, a mixed-use campus investing in research and innovation to advance the University’s mission. Carolina North promotes science and health research advancing the economic future and opportunity of the people of our state and region. Carolina North creates incubator space to retain and grow UNC technology transfer and other spin-off businesses.</td>
<td>Sustainable development, balancing social, economic and environmental at a local and County scale over the long-term. Technology – Distance learning, teleconferencing and a high tech learning environment could be considered as an international conference center.</td>
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| **Principle 2:** Development on the Horace Williams property shall benefit the University, the towns of Chapel Hill and Carrboro, Orange County, and the surrounding areas, as well as the state of North Carolina. The planning and execution of Carolina North shall be a model of cooperation for the mutual benefit of all stakeholders. | **Infrastructure report** • Site Planning: The plan should mitigate hazardous conditions, and respect environmental resources and naturally recurring constraints on the site. • Sustainability: The design of structures and facilities should sustain natural systems and employ renewable energy to the maximum extent possible. • Streets: Streets should follow a grid pattern, and buildings should address a street or a public space and be consistent with precedents in Chapel Hill’s built environment. • Parking: Off-street parking for long term use should be convenient to buildings but not highly visible from primary circulation routes, and on-street parking for short term use should be provided on streets. • Walkability: The plan should provide pedestrian and bicycle facilities to enable convenient movement to all parts of the site, so as to facilitate one-time parking for those driving to the site. • Accessibility: The plan should establish a range of effective and attractive connections to the site for transit, automobiles, bicycles, and pedestrians, to serve the access needs of this regional activity center. • Mixed Use: The plan should create a livable community of University-related, compatible uses that integrate living, working, recreating, and shopping areas, both horizontally around the site and vertically within buildings. | | | |

| **Principle 3:** Both the Town and the University need to recognize that there could very well be a point when the cumulative impacts of University and Town growth on our natural resources and our public facilities are such that no amount of mitigation would be possible and still retain the charm of the Town and the quality of life which both the citizens of the Town and the State of North Carolina expect from Chapel Hill. | Working Assumptions • **Assumption 1:** The University shall have a remediation | | | |

Standard: Areas of agreement

**Underlined:** Further discussion needed to clarify

**Bold:** Current disagreement; discussion needed to develop principle.

**Italics:** Specific strategies, not principle-level.
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**DEVELOPMENT MANAGEMENT PRINCIPLES**

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| **Principle 1: Manage development of Carolina North to minimize impacts on neighborhoods and the environment.**  
**Goal 1:** Phase the development of Carolina North to ensure that transportation infrastructure, retail, recreation and civic facilities and housing will be provided concurrently with and in proportion to academic and research uses to minimize disruption to the surrounding neighborhoods and ensure the sustainability of the mixed-use area.  
**Strategies**  
a) Build infrastructure (on-site and off-site) so that roads, transit, installation of utilities, and other construction will not be an ongoing disruption to the surrounding neighborhoods.  
| University | Initial presentation | Carolina North will support the university’s mission and provide a sustainable community with a mix of uses.  
**Infrastructure report (Guidelines below address implementation of principles above)**  
**Site Planning Guidelines**  
- Locate structures outside of stream buffers, wetlands, and respect critical natural habitats.  
- Do not place structures on steep slopes.  
- Maintain existing stream corridors as connected natural open spaces.  
- Minimize stream and critical natural area crossings.  
- Minimize impacts on adjacent uses through siting of compatible project uses, perimeter transition area screening and landscaping, and appropriate setbacks.  
- Plan for the removal of the Horace Williams Airport.  
- Acknowledge the former landfill and chemical disposal sites in the site design.  
| **Sustainability Guidelines**  
- Plan for minimum site disturbance  
- Respect the natural contours  
- Limit removal of existing natural vegetation  
- Keep building and parking envelope as compact as possible  
- Maintain the riparian buffer  
- Maintain the natural hydrologic cycle  
- Allow no net increase in volume of runoff  
- Avoid unnecessary impervious surface  
- Maintain recharge of runoff to groundwater  
- Provide retention beds to mitigate stormwater runoff  
- Maintain infiltration for existing vegetation  
| **Street Guidelines**  
- Design streets in a grid pattern, as spaces in the public realm to function and be furnished as outdoor  
| **Strategies**  
a) Establish a standing Town/Gown advisory committee to monitor and report regularly to Town Council on the development and implementation of Town-approved plans for Carolina North.  
b) Establish a planning review process that will allow Council adequate time for input from the public and from Town staff on development plans and modifications of those plans.  
c) Actively enforce the LUMO (Land Use Management Ordinance), including requiring a Traffic Impact Analysis.  
| | | Plan development at Carolina North to be compatible with surrounding neighborhoods and uses.  
| | | The development of Carolina North expresses a commitment to long-term community sustainability.  
| | | High performance building standards and Smart Growth design attributes; Crime Prevention through Environmental Design (CPTED).
d) Use Resource Conservation District principles and practices to guide development of the site.
e) Require that any industrial use, including power plants, be subject to an individual Special Use Permit review by the Council.

**Goal 3:** Minimize environmental and community impacts of construction.

**Strategies**

a) Adopt sedimentation and erosion control plans in consultation with the Town to control stormwater during construction with necessary temporary devices to ensure that water run-off will not adversely affect adjacent properties; Bolin Creek; Crow’s Branch; Eastwood Lake; and Lake Ellen.
b) Seek commitment from the University to strengthen erosion control and sedimentation inspections, such as funding for inspections positions as necessary to fully inspect and enforce applicable regulations at the Carolina North development.
c) Protect specimen trees and natural areas as designated on plan during construction. Write protections into permits and construction specifications. Prohibit heavy equipment and parking within tree drip lines or critical root zones, whichever is greater, and in areas delineated on plan as undisturbed areas.
d) Identify and mitigate localized flooding problems likely to occur during storm events.
e) Ensure that at least two lanes of all Town roads are kept open for local traffic during peak traffic periods. Include Chapel Hill - Carrboro School System in agreement on hours of construction.
f) Provide a plan to protect the safety of bicyclists, pedestrians, and motorists during construction.
g) Roads damaged during construction shall be repaired to safety standards.

- Provide three basic types of streets with rights of way:
  - 95-105 foot wide boulevards, similar to Franklin Street,
  - 70-80 foot wide streets, similar to Rosemary Street,
  - 55-65 foot wide minor streets, similar to Henderson Street.
- Limit block size to 500 feet by 250 feet, measured from street right of way lines (block area of approximately 125,000 sq. ft.)
- Bisect blocks with alleys for service access as appropriate.
- Use property lines as build-to lines, so that buildings have zero front setbacks.

**Parking Guidelines**
- Place off-street parking behind or between, rather than in front of, buildings.
- Provide on–street parking in parallel or diagonal layouts, as appropriate.
- Encourage sharing of parking between adjacent mixed uses.
- Anticipate provision of structured parking, including underground parking, when demand justifies it.

**Walkability Guidelines**
- Connect surrounding neighborhoods and community activity centers with pedestrian pathways.
- Provide sidewalks with trees aligned on both sides of all streets.
- Insulate and protect pedestrians from traffic with street trees and on-street parking.
- Design street intersections for safe pedestrian crossing movements.
- Light pedestrian pathways for safe and secure passage.

**Accessibility Guidelines**
- Provide both on-street lanes and off-street trails for safe bicycle travel.
- Provide secure bicycle storage facilities convenient to transit stops and public spaces.
- Maximize external accessibility to the site by connecting it to transit, automobile, bicycle, and pedestrian routes.
- Maximize internal accessibility within the site by providing transit, automobile, bicycle, and pedestrian routes to serve all locations.

**Building Guidelines**
- Limit building height generally to five stories on the interior of the site and three stories at the periphery.
- Select building materials to be consistent with the character of a campus environment.
- Arrange buildings to create outdoor rooms, by defining the edges of shared open space.
- Incorporate green design principles, such as solar orientation and day lighting of interior spaces.

**Phasing Guidelines**
- Plan the project to be developed in phases, geared to market demand.
- Design the buildings, facilities, parking, and infrastructure to be developed concurrently.
- Encourage early provision of housing, in order to support mixed uses such as commercial.
- Develop buildings on both sides of streets, rather than solely within blocks, in order to enhance street life.
a) Provide safe pedestrian corridors when sidewalks are closed due to construction at Carolina North.

**NEIGHBORHOOD / COMMUNITY INTERFACE PRINCIPLES**

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| Principle 1: Planning for Carolina North shall address community needs for housing, schools, and other facilities. | Initial presentation
Carolina North will support the university’s mission and offer a range of housing for university employees. It will be built wisely on land already cleared (airport). It will support public education, providing a school site. | Provide community access to recreational amenities at Carolina North campus. | Carolina North develops with a compact, dense, mixed-use urban form that accommodates growth and provides for affordable, workforce housing. | Sustainable Community – Affordable housing and “meaningful jobs”, as they were characterized by the Chamber of Commerce, scratch the surface of the notion of a sustainable human community. Carolina North should have sufficient and affordable housing for all of its workers, students and faculty. The University should also consider addressing the shortage of beds on the main campus, and thus the adverse effect on the local market of off-campus housing. |
| Goal 1A: Create a diversity of housing levels, types and values that reflect the range of salaries at the University. Provide a minimum of 25% of housing units calculated based on the total daytime population (employees and students) at Carolina North; the 25% also needs to reflect the range of salaries. | Infrastructure report
Mixed Use Guidelines
- Provide a mix of uses that includes work, recreation, living, and shopping areas, all of which should support the University’s mission.
- Include a range of housing types and prices, to serve the needs of University faculty, staff, and students.
- Include service establishments (light commercial) uses to serve Carolina North residents, employees, and visitors.
- Coordinate plans with the Chapel Hill-Carrboro School System to discuss the education needs of the Carolina North residents. | | | |
| Goal 1B: Provide housing on the site to **address the shortage of student housing** with the goal of one bed for every head. | | | | |
| Goal 1C: Provide adequate residential parking. Goal 1D: Produce housing in an environmentally sound manner with respect to design, siting, materials, and resource use. Goal 1E: Reserve school sites at Carolina North and secure financial commitment from the University to build schools needed to meet the additional demand for pre-kindergarten through high school as a result of the development. | Goal 1F: Include civic uses in the built environment. Strategies
a) Evaluate and provide as necessary the facility needs of neighboring and Carolina North residents with respect to recreation, commerce, and civic uses such as fire and police stations, polling places, libraries, senior and civic meeting space.
b) Encourage the formal integration of public art in the fabric of the built environment, extending traditional expectations of “building decoration” in order to define the spaces between the neighborhoods and the proposed buildings as well as aesthetic | | | |

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interpretations of how common space may be used.
c) Require that all structures in the Carolina North development complex be built with fire sprinkler systems regardless of size or occupancy as part of a life safety and sustainable building plan, as is being done on the main campus.
d) Address needs of older citizens and family caregivers at Carolina North.

Principle 2: Create a campus facility that is open, welcoming and part of the community fabric while at the same time respecting the privacy and integrity of adjoining neighborhoods.

Goal 2A: Integrate community concerns in the design of Carolina North.

Strategies
a) Orient the development to Airport Road so that it is visible from the street, enhances access and creates an urban aesthetic. Place buildings closer to Airport Road than the 250-foot setback suggested in the Ayers Saint Gross plan.
b) Buffer neighborhoods from Carolina North. Develop standards working with the Town and neighbors to protect neighborhoods from noise, light pollution, parking facilities and mechanical buildings and providing for protective buffers.
c) Limit motor vehicle access to and from existing neighborhoods through roadway design and placement, and create non-motorized-only access such as walking routes or bikeways.
d) Roadway design within Carolina North should be used to limit the use of the campus as a cut-through for automobiles from any direction.
e) Prohibit direct automobile access from North Haven and Glen Heights to the tract but encourage and develop non-motorized access.
f) Make the campus accessible to the existing downtowns and UNC’s main campus.

housing of students, by providing residential options that would accommodate more than the population of Carolina North. Workers at Carolina North should be guaranteed a living wage and adequate health care. Given crucial shortages in the community at-large, Carolina North should provide adequate childcare for its workers and students. UNC currently contributes approximately $200,000 annually for childcare subsidies, but with 75 of its employees requiring assistance and an average subsidy of $6,000 per client, this falls far short of

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public schools on High School Road and Seawell School Road.

g) Encourage neighborhood scale retail at Carolina North.

h) Ensure safe crossing of Airport Road for pedestrians and bicyclists.

i) Modify Seawell School Road, Homestead Road and Estes Drive Extension to allow pedestrians and bicyclists to cross safely.

Goal 2B: Create a built environment with a sense of place and a feeling of permanence.

Strategies

a) Place along Airport Road, especially at the intersection with Estes Drive Extension, buildings that architecturally enhance the entranceway to Carolina North.

b) Develop distinguishable front facades that create a sense of orientation.

c) Relate the scale and design of street level frontage to the planned pedestrian-scale activity at the street level.

d) Coordinate building and architectural styles throughout the tract, using landscaping to create linkages throughout the site and to enhance connectivity.

e) Exercise special care in the location and design of any utility facilities such as water, sewer, and power generation due to the potentially large impacts that these activities pose to the surrounding community. Propose and communicate design, performance, environmental, and aesthetic standards to the Town Council before any plans are finalized.

f) Consolidate utility corridors and bury power lines, both those on-site and those which bring energy to the site.

"g) Roads, to be accepted for Town maintenance, have to be designed and constructed to Town standards. There are special specifications for roads to be used as bus routes. To the extent feasible, bus routes should be identified in advance.

The University should consider providing senior services to its faculty and workers at Carolina North, as well as sufficient recreational opportunities, in order to promote the health of its staff and students.

County-wide Impact – Carolina North is a project whose public service impacts will be experienced throughout the County. Stress will be placed on many County programs and services, as well as on transportation infrastructure that extends beyond the Chapel Hill-Carrboro urban area. Primary
emphasis should be placed on servicing Carolina North via public transportation, with direct, robust connections to Hillsborough to serve the central and northern parts of Orange County. Multi-modal connections should be created with the main campus of the University.

Integrated into Larger Community – Carolina North should be integrated into the fabric of the surrounding community physically, so people may walk, bike, run on and off the campus, and conceptually. While the focus of other efforts has rightly focused on protecting existing neighborhoods,
### FISCAL EQUITY PRINCIPLE

#### HWCC

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<tr>
<th>Principle 1: The University or State or Carolina North tenants shall bear the cost of Town services required by Carolina North so that Town residents do not subsidize those uses through their local taxes. The Carolina North development shall be either revenue positive or revenue neutral for the Town. Goal 1: The Town shall establish a process at the outset to identify the costs and the revenues associated with Carolina North and receive appropriate support from the University for Town services and resources.</th>
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<td>Strategies</td>
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<tr>
<td>a) A process involving the Town and University should be established to develop a set of standards regarding natural resources and public facilities and our expected quality of life and then to monitor and evaluate the impacts of growth on those standards and look for alternatives for development when a saturation point has been reached.</td>
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<td>b) The Town recommends UNC to explain its financial model to the Town and to articulate how the project will serve the needs of North Carolina citizens and to explain the impacts on Chapel Hill citizens. The Town shall employ outside expertise to evaluate the financial model.</td>
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<td>c) A fiscal impact statement shall accompany every building or project at Carolina North. Any facility used for non-academic purposes should be subject to taxes or fees paid by the public.</td>
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| UNC |
| Carolina North will support the university’s mission and achieve fiscal equity with the towns. |

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<td>Ensure that Carolina North development will be cost neutral to local government. A fiscal equity model in place prior to submittal of any application.</td>
<td>Carolina North achieves fiscal equity with the resources generated and financial contributions that equal or exceed the public’s expense in supporting it.</td>
<td>A variety of County impacts must be considered in calculating fiscal equity, especially sales tax revenues and the cost of a wide variety of services, not the least of which is the provision of schools. With a proposed 6 million square feet of Institutional/Research space, 2 million square feet of Residential, and 300,000 square feet of Service/Retail, the impacts are significant. Depending on the final mix of housing types, there could be between 1,500 to 2,000 new units, or more if dormitories are included. The local school impacts, again depending on housing type, could...</td>
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d) The report produced jointly by the Town and University in 1999 on fiscal equity shall be revised in light of the proposed development.

e) Establish a committee to develop the indicators and produce a report on fiscal equity. This committee shall be composed of citizens not affiliated with Town or University governance, though representatives of Town and University governance would serve as valuable resources to this group.

f) The Town shall take the opportunity offered by the zoning approval process to advance the goals identified by the Town’s Horace Williams Citizens’ Committee.

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**WATER AND SEWER / STORMWATER MANAGEMENT / AIR QUALITY PRINCIPLES**

**HWCC**

**Principle 1:** Assume a leadership position in sustainable water management and wastewater treatment and reuse.

**Goal 1:** Seek innovative solutions to minimize water demand and ensure adequate supply for the greater community as well as Carolina North.

**Strategies:**
- a) Collaborate with Orange Water and Sewer Authority in water and sewer planning. Quantify and address the impact of Carolina North on water supply and water and wastewater treatment infrastructure as the development is phased in.
- b) A negotiated payment should be made in addition to the OWASA rate structure to account for capital improvements required to accommodate this development or some similar mechanism to mitigate increased subsidies by the general rate base.

**Infrastructure report**
- Our objective is for Carolina North to be a model development, following state-of-the-art sustainability, stormwater and environmental standards.
- Plans for Carolina North parking, transit, utilities and design guidelines and general infrastructure should remain flexible, to take advantage of new technologies and opportunities.
- The Committee assumed that industrial activities, if any, would be clean, limited, light and consume minimal water and other resources.
- The development and operation of Carolina North should minimize and strive for zero waste, including energy, water and solid waste. Waste minimization performance standards should be developed.
- Developers and builders should be trained and held responsible for meeting Carolina North’s environmental standards and for any damage they may cause.

**Major Recommendations**
- Use stormwater management best practices
- Use energy and water conservation best practices
- Meet and exceed CRed carbon reduction goals
- Employ best practices to make sure Carolina North strives to make the most efficient use of energy in all phases of planning, design and construction.

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**Italics:**
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c) Apply water conservation principles to all facilities.
d) Reuse treated wastewater.
e) Landscape to minimize need for pesticides and fertilizers.

Principle 2: Ensure that development of Carolina North results in no net increase in stormwater discharge. Establish the stormwater requirements that were adopted for the main campus by the Town Council on July 2, 2001 as the minimum standards for the development of Carolina North.

Goal 2: Follow University Campus Master Plan Best Management Practices for stormwater. Develop a stormwater master plan for the entire site, including all existing intermittent and perennial streams, water features, jurisdictional wetlands and riparian areas as baseline conditions for master planning.

Strategies
a) Use pervious pavement/sidewalks.
b) Use vegetative roofs.
c) Capture and reuse wastewater and stormwater.
d) Control sediment and erosion during development to ensure no off-site impacts.

Principle 3: Ensure that Carolina North has no negative impact on the air quality of Chapel Hill.

Goal 3: Ensure there is no net increase in greenhouse gases, nitrogen oxides and sulfur oxides. Particulate pollutants should be included in the evaluation of air pollution.

Strategies
a) Use alternative energy sources; do not use coal and nuclear energy sources.

Details of stormwater best management practices, including infiltration.
a) Utilize the A/S/G sustainability plans described in the “Carolina North Master Plan—Design Guidelines Sub-Committee.”

Accent Environmental Decisionmaking
Because environmental issues will change during the decades over which Carolina North will be developed, the process established for environmental decisionmaking will have a long-lasting impact.
- The design review process should verify that proposed projects meet the Master Plan’s sustainability and environmental protection standards, and minimally impact the environment.
- Design review standards for sustainability and environmental protection should be periodically updated to take advantage of new approaches, technologies and opportunities.
- To aid in decisionmaking and assess developmental impact, baseline assessments of environmental parameters (recommended below) should continue to be monitored.
  b) Use an inclusive and deliberate process for making environmental decisions, while evaluating costs, impacts and technological opportunities. For example, provide regular opportunities for public input.

Identify and Plan to Resolve Environmental Liabilities
- Make plans (including timelines and budget) for the closure of sites to be vacated (i.e., Town of Chapel Hill Transit and Public Works facilities, APS Shelter, UNC Airport). Assess post-closure environmental risks and plan to remediate impacts as necessary.
- Assess erosion and drainage problems, invasive species, pond stability, rail line impacts and other environmental liabilities. Explore ways to minimize future impacts of rail line maintenance.
- Address other existing uses of the property, such as recycling, wood waste processing, construction lay down and fabrication, car impoundment, surplus storage, etc. These operations require long term plans for their proper management and most appropriate location. Consider minimizing operations, or relocating offsite. Onsite relocation should minimize the environmental impact or disturbance to Carolina North.
- For other areas, identify and explore the possibility of environmental restoration, revegetation, habitat creation and reintroduction of native species.

Build Sustainable Buildings
- Utilize and expand upon UNC-Chapel Hill’s experience with sustainable practices and design guidelines.
- Ensure that all buildings will establish sustainability goals based on the Leadership, Energy Efficiency and Environmental Design check list or other state of the art best practices and approaches.
- Orient buildings for optimal orientation for daylighting, solar energy use and natural ventilation.
- Utilize designs and construction methods that maximize pest prevention and minimize the need for remedial pest control treatments. For example, choose materials that minimize future pest risks.

Manage Stormwater
- Manage stormwater onsite in a way that minimizes impervious surfaces and causes no damage offsite.
1. Utilize stormwater/infiltration best management practices developed to date by A/S/G for Carolina North in their “sustainable site design” goals, sustainability plans (described in the “Carolina North Master Plan—Design Guidelines Sub-Committee”) and the University’s Stormwater Master Plan.

2. Update A/S/G goals to include new stormwater standards for steep slopes and riparian corridor protection. Adopt other new innovations as they are developed.

3. Manage stormwater as a resource and substitute for potable water as feasible.

4. Avoid the use of detention basins to manage stormwater.

Mitigate Carolina North’s greenhouse gas emissions and other air quality impacts

- Explore the possibility of developing Carolina North as a carbon-neutral site.

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**NATURAL AREAS / PARKS AND RECREATION FACILITIES PRINCIPLES**

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<td><strong>Principle 1: Preserve in perpetuity the maximum amount of open space possible with a goal of preserving 75% of the Horace Williams property as stated by the University.</strong></td>
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<td><strong>Goal 1A: Protect water features and large areas of land.</strong></td>
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<td><strong>Strategies</strong></td>
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<tr>
<td>a) Preserve large portions of the Horace Williams Property for open space in the form of conservation easements.</td>
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<td>b) Encourage construction on already cleared and graded land to preserve more of the existing natural area, while adhering to Neighborhood &amp; Community Interface principles.</td>
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<td><strong>Goal 1B: Designate and protect areas that serve as passive recreation opportunities, as wildlife habitat, and public amenities such as schools, parks, conference facilities, performance space, trails and greenways that are open and welcoming to the general public.</strong></td>
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**University**

- Initial presentation
- Carolina North will support the university’s mission and will protect environmentally sensitive areas.

**Infrastructure report**

- Assess Carolina North’s Environmental Assets
  - Assess Carolina North’s environmental assets, such as streams, ponds, nature trails, plant inventories, bird census and other natural features. Involve students and faculty in conducting these assessments.
  - Include an assessment of archaeological, historic and cultural assets, such as the Bolin Creek millrace and old home sites.

**Protect Bolin Creek and Its Corridor**

- Protect and manage the natural and recreational assets of Bolin Creek.
as buffers along Bolin Creek and Crow Branch. Establish as much of the open space as possible as a contiguous area. Provide this “non-fractured” area to maintain wildlife, a sense of forest and green space. Protect as much of the natural environment as possible.

**Strategies**
- Roads shall be located so as not to subdivide large environmentally sensitive tracts.

Goal 1C: Build active recreation facilities within the developable area (25% of the Horace Williams property).

Principle 2: Develop and maintain a network of trails and greenways at Carolina North.

Goal 2A: Partner with Chapel Hill, Carrboro, Orange County and community groups to develop trails and greenways along the rail line, Bolin Creek and Crow Branch.

Goal 2B: Develop trails along the creeks in a sensitive manner to protect the fragile ecology of the corridor.

Principle 3: Conduct and maintain an inventory of natural resources and use it as a guide for planning and development.

Goal 3A: Implement the recommendation of the Carolina North Infrastructure Report (May 2003) to permanently protect designated environmental assets as follows:

- **“Identify and delineate Carolina North’s most valuable environmental assets that merit protection.”**
  - These assets include critical habitat, hardwood forests, steep slopes, streams, perennial and intermittent tributaries, stream buffers identified and easements by A/S/G in their “Carolina North Master Plan,” and other riparian buffers. Preserve these assets by inviolable means, such as conservation easements or land trusts.

- **“Identify other environmental assets that merit protection.”** These assets include green space, open space, tree stands and a specified protected acreage or percent. Preserve these assets by means that are durable and allow the best future environmental decisions (e.g., Board of Trustees policy). (Page 20)

Principle 4: Follow sustainable site design principles and goals.

- **While allowing recreational access, retain a well-defined, permanent, undeveloped buffer adjacent to Bolin Creek. Consider a permanent protected buffer on the Carolina North property west and south of Bolin Creek.**
- **Avoid development near Bolin Creek and its corridor.**
- **Integrate the Carolina North Master Plan with Bolin Creek greenways plans of Orange County and the Towns of Carrboro and Chapel Hill. Involve citizen groups in this planning.**
  - Plan and establish formal community access to the Bolin Creek corridor greenway. Include resources to maintain this access in future budgets. (Current community access is unmanaged.)

**Permanently Protect Designated Environmental Assets**

- **Identify and delineate Carolina North’s most valuable environmental assets that merit permanent protection.** These assets include critical habitat, hardwood forests, steep slopes, streams, perennial and intermittent tributaries, stream buffers and other riparian buffers. Preserve these assets by inviolable means, such as conservation easements or land trusts.

- **Identify other environmental assets that merit protection.** These assets include green space, open space, tree stands and a specified protected acreage or percent. Preserve these assets by means that are durable and allow the best future environmental decisions (e.g., Board of Trustees policy).

**Plan and Establish Community Access to Recreational Resources**

- **Plan and establish formal recreational trails for the benefit of Carolina North tenants, UNC students, faculty and staff, and the community. Include resources to maintain them (e.g., to prevent erosion) in future budgets.**
- **Integrate plans for Carolina North greenways and bikeways with those in local master plans.**
- **Explore opportunities with University environmental, Botanical Garden, urban planning and other educators for use of Carolina North as a learning laboratory.**
- **Consider planning, establishment and future resources for management of other recreational resources that can be shared with the community, such as green space or a running trail.**

**Conservancy**

| Preserved natural areas through conservation easements, land trusts or other durable means.

**Preserve slopes, wildlife corridors, and significant natural or historical areas.**

**Conservancy.**

Standard: Areas of agreement

Underlined: Further discussion needed to clarify

**Bold:** Current disagreement; discussion needed to develop principle.

*Italics:* Specific strategies, not principle-level.
Goal 4A: Endorse the following environmental principles and goals for conserving land and water resources specified in the 2/5/01 Town-Gown Committee Report:

a) Minimize disturbance.
   - Disturb as little of the proposed site as possible.
   - Work with the natural contours; avoid excessive earthmoving.
   - Limit removal of existing natural vegetation.
   - Avoid placing structures in floodplains and sensitive areas.
   - Keep building and parking envelope as compact as possible.
   - Maintain [or re-establish if needed] riparian buffer along stream [with additional allowance for wildlife corridors]

b) Maintain natural hydrologic cycle.
   - Prevent net increase in volume runoff.
   - Avoid unnecessary impervious surfaces—make pervious if possible.
   - Maintain recharge of rainfall to groundwater.
   - Provide retention beds to mitigate stormwater.
   - Maintain infiltration for existing vegetation.
   - Use “best management practices” such as porous pavement.
   - Collect rainwater for plant and garden watering.

c) Maintain water quality.
   - Use native species and omit future chemical site maintenance. [Landscape to minimize need for pesticides and fertilizers.]
   - Limit artificial areas such as maintained lawns.
   - Avoid discharge of wastewater to creeks and ponds.
   - Avoid earthwork which creates erosion and sediment problems.
   - Maintain native vegetation.

Standard: Areas of agreement
Underlined: Further discussion needed to clarify
Bold: Current disagreement; discussion needed to develop principle.
Italics: Specific strategies, not principle-level.
TRANSPORTATION AND LAND USE PRINCIPLES

Goal 1A: Carolina North will be designed and built as a pedestrian-, bicycle-, and transit-oriented development from the outset.

Principle 1: Carolina North will create minimal impact on traffic and will promote commuter safety. The Transportation Plan will be developed around a transit system including use of Chapel Hill Transit rather than single occupancy motor vehicles.

Strategies

a) Any new transportation infrastructure other than new roads should be built early in the development process to anticipate transportation demand and to maximize and establish early use of alternatives to automobiles.
b) Strictly limit parking (for example 1 space for every 3 employees and/or a specified cap), and develop different parking limits for retail, residential, and institutional uses for this site. Ensure that Carolina North does not become a park-and-ride lot for the main campus.
c) Types of parking suggested include pervious pavement and parking structures under buildings in order to minimize impervious surfaces.
d) Park and ride lots using pervious pavement shall be established to the north, south, east and west of Chapel Hill and Carrboro to provide the bulk of the parking for non-residential Carolina North traffic. UNC shall bear their proportionate share of costs of building and maintaining park and ride lots.
e) Establish enhanced bus service on Airport Road.
f) Call for continued detailed technical study of options for a fixed-guideway transit corridor as an effective alternative to automobile use. Any fixed guideway transit corridor and technology shall protect

UNC

Infrastructure report

General
- The accessibility of Carolina North should be maximized.
- A well-integrated, multi-modal transportation system should be developed to provide a range of transportation options and reduce reliance on the single-occupant vehicle.
- The use of alternative modes should be encouraged to minimize traffic congestion, emissions, energy consumption, and safety hazards.
- The use of alternative fuels vehicles should be encouraged.
- The transportation system should be designed to minimize environmental pollution and noise impacts.
- A mix of land uses should be included to reduce the need to travel off the campus, thereby minimizing automobile travel.
- The transportation system should be planned and designed to maximize safety for users of all modes (particularly pedestrians and cyclists).
- The transportation system for the campus should meet or exceed all applicable standards for handicapped accessibility (including the University’s).
- Technology, especially intelligent transportation systems, should be applied to reduce delays and queuing, and to provide information to users, e.g., parking availability information to minimize unnecessary vehicular circulation.
- Stakeholders should be involved in developing the transportation strategies and plan.
- Use Federal and State funding to the maximum extent possible.
- Smart (Intelligent Transportation Systems, ITS) technologies should be applied to maximize roadway capacity, efficiency, and safety (e.g., to improve the capacity of Airport Road).

Pedestrian Movement
- The campus should be designed to be pedestrian-friendly: the transportation system, and particularly the streets and pedestrian paths, should be designed to prioritize the safety, comfort, and convenience of pedestrians over the movement and parking of automobiles.
- Activity centers should be located to facilitate walking.
- The design should provide a mix of land uses that allows employees, residents and other users to walk to a range of daily activities.

Bicycles
- The campus should be designed to be bicycle-friendly: bicycle amenities and the needs of cyclists should be integral to the development of the campus.
- The campus should be readily accessible by bike.

Transit
- The campus should have a high level of transit accessibility.
- All major locations on the campus should be accessible by transit.
- The campus should be planned and designed as a transit-oriented development to maximize opportunities for transit use.

Travel Demand Management

UNC

General

- Carolina North supports multiple forms of transportation to increased connectivity and partners to develop transportation and transit solutions that ensure a multi-modal infrastructure sufficient to handle projected demand.

Carrboro

Plan transit oriented development to keep commuter traffic off road system

Chamber of Commerce

Use existing right-of-way for efficient transit access to downtown

Orange County

Transportation and Land Use – All modes of public transportation should be implemented including use of the rail line as appropriate. The coordination of transit-oriented development land uses at appropriate densities should be considered at Carolina North and also work with local governments (Carrboro, Chapel Hill and Hillsborough) for off-site programs.
g) Support Triangle Transit Authority’s efforts to develop regional mass transit serving Carolina North and ties into Chapel Hill Transit routes.

h) Concentrate uses in such a way as to support the 2025 DCHC (Durham/Chapel Hill/Carrboro Metropolitan Planning Organization) Transportation Plan.

i) Require off-site road sidewalk and bikeway improvements (not to include road widening) from Carolina North along Airport Road north to I-40 and south to US 15-501 and all other perimeter roads to the tract.

j) Sidewalks, natural paths and/or bikeways shall serve all buildings and be conducive to walking and biking.

k) Create direct routes for walking or biking through the entrances to the Carolina North campus.

A flourishing transit system and limited parking will support Carolina North as a transit-oriented development. Encourage the use of public transit by limiting parking but provide minimum adequate retail parking.

Goal 1B: Carolina North will be a mixed-use development.

Strategies:

a) Create a mixture of affordable and market-priced housing.

b) Establish retail businesses that address the needs of the people at and in the vicinity of Carolina North, residents, students, faculty, employees and guests.

c) Design public recreation facilities to create a community focus.

d) Concentrate buildings within a small footprint designed for walkability.

e) Design Carolina North as a park-once environment for automobile users.

f) De-emphasize auto use by establishing a smaller ratio of parking spaces to square

Strategies for meeting the transportation needs of all campus users should be developed (including occasional visitors, private employees, UNC-Chapel Hill employees, students, and residents).

Travel demand management (also referred to as trip reduction) strategies should be employed to minimize vehicular traffic.

Internal Streets and Traffic

• The street system should be designed to accommodate the projected traffic loads.

• The street system should be designed to minimize pedestrian, bicycle, and vehicular conflicts.

• Allowable traffic speeds should be consistent with the level of pedestrian activity.

• The street system should be designed to facilitate the efficient movement of transit vehicles, and allow transit vehicles to safely and conveniently pick up and discharge passengers.

• A street system hierarchy that identifies the predominant role of each street should be developed, and be the basis for the design of the street and appropriately locating land uses.

• The street system should provide multiple access options that are sensitive to uses bordering Carolina North and disperse traffic entering and exiting the campus.

Parking

• The amount of parking on Carolina North should balance the needs of the various land uses, different users, the travel demand management program, and the high level of transit accessibility.

• A parking management strategy should be developed to meet the needs of the various users.

• Parking facilities should be located and designed to be safely and efficiently accessed, without interfering with traffic flows or creating pedestrian hazards.

Phasing

• Transportation improvements and policies should be phased in commensurate with campus needs, travel demands, and the transportation system.

• Each phase of the transportation plan should function efficiently and safely as a self-contained module, and be designed as a component of a final transportation and land use plan.

Major Recommendations

General

• Work with the Towns, the North Carolina Department of Transportation, and other agencies to develop a multimodal transportation plan and to obtain funding.

Pedestrian Movement

• Provide a rich network of pedestrian routes throughout the campus.

• Provide a street and pedestrian path network that provides multiple pedestrian routes and provides convenient access to transit stops.

• Provide a network of pedestrian paths that connects all key activity centers.

• Design streets and pedestrian paths so that pedestrians are naturally channeled to safe locations for crossing streets.

• Provide street furniture and landscaping to make walking more pleasant and comfortable.

Bicycles

• Provide and design greenways, bike lanes and shared, low-speed streets that make cycling convenient and safe.

• Provide strong connections to public pedestrian and bike facilities surrounding the campus.

Work within current plans for Estes Dr. and Sewell School Rd.

Provide primary access for Carolina North employees via park and ride and other transit options
Creation of a mixed-use development with the opportunity to live, work, and shop in the same vicinity is a key Comprehensive Plan strategy. Principle 2: Carolina North will comply with the Town’s Comprehensive Plan.

Goal 2A: Conserve and protect the Town’s existing natural setting.

**Strategies**

a) Protect environmentally sensitive areas identified by the JJR study and establish a percentage of the overall acreage that will remain completely undeveloped in perpetuity, perhaps under a land trust or permanent deed restrictions.

b) Endorse the University’s maximum footprint of 25% of the Horace Williams property and seek a firm commitment not to exceed that percentage.

c) Complete the bike and greenway system.

The implementation of these strategies will serve to protect and preserve open spaces and critical natural areas as specified by the Town’s Comprehensive Plan.

Goal 2B: Protect the surrounding neighborhoods.

**Strategies**

a) Protect adjoining neighborhoods through the use of buffers, noise and height restrictions, building design, and vehicular traffic control.

b) Implement use of traffic calming devices in a manner that protects surrounding neighborhoods.

c) Provide a process for perimeter neighborhoods to apply for restricted on-street parking.

The Comprehensive Plan states that preservation of the physical and social fabric of Chapel Hill neighborhoods is key to maintaining the Town’s community character.

Principle 3: Retain existing zoning of OI-2 and rezone balance of property OI-2. Engage University officials in dialogue about the regulatory approach to the Horace Williams tract at the early stages of planning for Carolina North.

1. Provide bicycle amenities that encourage cycling in the design of open space, streets, and buildings (bicycle racks, bicycle lockers, showers in buildings, and streetscape and furniture, signage, etc.).

2. Provide frequent and fast transit connections to Main Campus (including the UNC Health Care facilities), and Chapel Hill and Carrboro downtowns.

3. Phase in transit service to meet the near-term passenger demands (beginning with improved and increased bus service along Airport Road, as proposed in the current draft update of the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHIC MPO) 2025 Long-Range Transportation Plan (LRTP)).

4. Study the longer-term feasibility of rapid transit in the railroad corridor (also proposed in the DCHIC MPO LRTP update), particularly bus rapid transit which may be more appropriate and feasible than rail, and potentially Airport Road (refer to Appendix for description of transit options).

5. Ensure that the railroad corridor is preserved for long-term transit use, including bus rapid transit.

6. Work with other stakeholders, and local and regional transit agencies to enhance transit access, including strong and extensive regional transit connections within Orange County and key points in the Triangle region.

7. Design the campus so that all major locations are within a 1,200-foot walk of a transit stop.

8. Partner with local and regional transit and transportation agencies to obtain federal, state, local and private funding for transit feasibility studies and implementation.

**Travel Demand Management**

1. Provide a mix of land uses that satisfies the typical daily needs of employees and residents on the campus.

2. Identify and quantify the results of acceptable trip reduction strategies (e.g., ridesharing, parking management, tax and financial incentives, telecommuting, staggered work hours).

3. Develop a park-and-ride program for commuters to Carolina North to minimize peak period traffic to the campus.

**Parking**

1. Develop a parking management plan to ensure that parking is available and easily found for those users identified as needing parking (e.g., real-time information directing visitors to available spaces).

2. Maximize the opportunities for the shared use of parking.

3. Provide on-street parking on the lower order (local) streets to enhance the pedestrian environment and provide short-term parking for visitors.

4. Locate the access points of major parking facilities on lower order streets and away from major intersections.

**Streets and Traffic**

1. Develop a street network that spreads traffic and provides multiple traffic and pedestrian routes.

2. Develop a hierarchy of streets so that the priority function of each street is defined and the street is designed accordingly (particularly regarding traffic speeds and volumes).

3. Use traffic calming techniques to control traffic speed and improve pedestrian safety.

4. Provide multiple connections to the surrounding road system.

5. To the extent possible, design streets to Town and NCDOT standards so that ownership may be
Goal 3: Ensure that the development of Carolina North abides by the Town’s Comprehensive Plan.

**Strategies**

- **Delineate specific areas of Carolina North including** 1) **environmentally sensitive areas where development should be prohibited**, 2) **neighborhood and perimeter areas which should be limited to low-impact development and**, 3) **core areas where the denser mixed-use development should occur.**
- **Establish permitted uses specific to the neighborhood and perimeter areas and to the areas for more intensive development.**
- **Prohibit some uses in the neighborhood and perimeter areas that are allowed in the more densely developed areas.**
- **For the identified more densely developable areas, implement a mixed-use concept, possibly adding an expedited review procedure. This mixed-use concept could be similar to that of the MU-V (Mixed Use – Village) zone.**
- **Establish different processes for review, approval, and amendments of plans specific to each area in which development is permitted.**
- **Require that modifications shall be individually specified and reviewed.**

Any zoning district would protect the surrounding neighborhoods and the environment from the impact of Carolina North development while allowing growth necessary to the University.

- **Work with the Towns, the North Carolina Department of Transportation, and other agencies to identify feasible capacity improvements for roads used to access the campus.**
- **Partner with local, regional and state transportation agencies to obtain and leverage federal, state, local and private funding for street and roadway improvements.**

**Phasing**

- **Prepare a transportation plan to serve as a blueprint for the long-term development and build-out of Carolina North.**
- **Determine the accessibility needs of each phase of development, and design the various elements of the transportation system accordingly.**
- **Introduce transit service improvements for connecting to Main Campus and the downtowns (trip time, frequency of service, hours of service) based on the needs for each phase.**
- **Serve the campus with transit initially by making cost-effective improvements to the existing bus services along Airport Road.**
- **If studies determine that rapid transit is feasible and can be funded in the longer-term, partner with other agencies to ultimately implement rapid transit.**
- **Add entrances and develop the internal street system based on traffic needs and the building program.**
- **Initially, when land will be more available, provide surface parking which is less costly, and gradually transition to structured parking as Carolina North builds out.**

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