

M E M O R A N D U M

TO: TOWN OF CHAPEL HILL PLANNING BOARD MEMBERS
TOWN OF CHAPEL HILL TRANSPORTATION BOARD MEMBERS
TOWN OF CHAPEL HILL COMMUNITY DESIGN COMMISSION
MEMBERS

FROM: Michael L. Hammersley, PE

RE: TOWN OPERATIONS CENTER CONCEPTUAL PLANS

DATE: JUNE 9, 2003

This memorandum reviews the initial planning and conceptual work completed to-date on the Town Operations Center. You are being requested to consider these drawings and contribute your comments to the Designers tonight and to the Town Council on June 23rd. This would be a courtesy review, requested by the Town in its role as Owner; it is not required by the Land Use Management Ordinance.

BACKGROUND

The Public Works and Transportation Departments are located on the Horace Williams Tract, on land leased from the University of North Carolina. The term of the lease expires on December 31, 2006, and will not be extended.

The Council has acquired 88.6 acres of land for a new site on Millhouse Road, north of Eubanks Road, between I-40 and the railroad. On December 13, 2002, the Council authorized a contract with a consultant team lead by Corley Redfoot Zack, Inc., to prepare a site analysis, needs assessment, conceptual site plan, and preliminary cost projections for the new operations center.

Since mid-December, 2002, surveys and site analyses have been completed, as well as a design criteria manual, which included input from employees in the Public Works, Transportation, Engineering, and Public Housing Maintenance departments. Based on the information described above, and after two four-day interactive workshops on site with a staff group, many employees from the affected departments and the *ad hoc* Design Advisory Committee, the consultants developed a draft conceptual site plan. These drawings should not be mistaken for plans. They still are at the conceptual level, and will need to be refined through further iteration.

Preliminary cost projections will be ready when the draft conceptual plan is presented to the Town Council on June 23rd. We anticipate that the Town Council will provide some important feedback after they listen to the comments of the advisory boards and the public, ask questions of the Designers, and learn the cost implications of the preliminary design decisions made to-date.

DISCUSSION

Existing Site Zoning:

The creek that runs through the middle of the property is also the jurisdictional boundary between the northern 29.7 acres in Orange County's planning jurisdiction and the southern 58.9 acres in the Town's planning jurisdiction. Considering the Resource Conservation District overlay in the Town's jurisdiction, the site includes the following three zoning districts:

Chapel Hill Mixed Use Residential-1 (MU-R-1)	44.9 acres
Chapel Hill MU-R-1 in Resource Conservation District	14.0 acres
Orange County Rural Buffer (RB)	<u>29.7 acres</u>
Total Site:	88.6 acres

In the Chapel Hill MU-R-1 district, development of a "Public Use Facility" is a permitted use requiring approval of a Special Use Permit, if more than 40,000 square feet of land disturbance is proposed. In the Resource Conservation District, development is restricted.

In the Orange County Rural Buffer district, development of a "Government Facility or Office Building" is a permitted use, but the approval process is not under the purview of the Town Council. It is also possible that an amendment would be needed to the Joint Planning Land Use Plan; such an amendment would need to be approved by Orange County and the Towns of Carrboro and Chapel Hill.

Site Context Issues:

I-40 borders the site on the east, and this proximity results in relatively high ambient-noise levels on the eastern portion of the site. The railroad tracks on the west side separate the site from seven residential properties along Millhouse Road. One residential property on Millhouse Road is surrounded by the Town property to the north, east and south.

Existing Vegetation:

The site is a mix of open and wooded areas, including a large central field, several areas dominated by young pine trees and stands of mature hardwoods around the three streams that cross the property. In addition, two other stands of significant trees are noteworthy, including a concentration of large hardwoods on the slope north of the existing pond and a large area of mature hardwoods south and east of the site's central field. A small area above the pond, where no site disturbance is anticipated, meets the Army Corps of Engineers' Wetlands definition, and additional areas are likely along Old Field Creek as well. A final delineation by the Army Corps of Engineers will be completed later this year.

Existing soil and Subsoil Conditions:

In general, the soils on all of the upland sections of the site are suitable for development, with most of the MU-R-1 zoning district being in the "Greenville" soil series, which is suitable for urban-type uses. Although a complete analysis of recent subsurface borings is still being completed, preliminary information indicates that subsurface conditions are not

anticipated to constrain development on sections of the site outside of the Resource Conservation District.

Existing Topography:

With the exception of limited areas within the Resource Conservation Districts, essentially the entire site includes slopes less than 10%, with the large majority of this area with slopes less than 5%.

Anticipated Buffers and Buildable Areas:

The buffers anticipated for the development include the required 100'-wide Type "E" buffer along I-40 and the required and proposed buffers around the remaining property. Considering the anticipated buffers along with stream setback requirements consistent with the Town's Resource Conservation District regulations, two "buildable envelopes" can be quantified. These envelopes include approximately 20.2 acres in the Orange County's Rural Buffer zoning district and approximately 30.9 acres in Chapel Hill's MU-R-1 zoning district.

Drainage Patterns:

In general, natural surface drainage flows to the site's three streams, which then cross under I-40 in existing culverts. Drainage flow onto the site from surrounding properties is essentially non-existent due to grading associated with the railroad tracks along the western property line. Three low areas exist on the site, outside of the Resource Conservation District, that are suitable locations for stormwater ponds.

Existing Municipal Operations Facility:

For purposes of comparison, the Town's leasehold on the Horace Williams Property includes 24.2 acres. This site is approximately 70% impervious surface, and includes no surface stormwater improvements.

Traffic Impact Statement:

The Town Operations Center Traffic Impact Analysis Report, dated May, 2003, was prepared for the Town of Chapel Hill in its role as Regulator by HNTB North Carolina, PC. Recommendations for improvements are as follows:

- Improve Millhouse Road to a collector street standard, which includes a 5'-wide sidewalk along the east side, and wide travel lanes to accommodate bike lanes.
- Provide new exclusive right-turn lane from Eubanks Road onto Millhouse Road.
- Provide new exclusive right-turn lane from Millhouse Road on to Eubanks Road
- Widen Eubanks Road to include two 12'-wide travel lanes and bike lanes.
- Provide turn-lanes from the new driveways exiting from the Operations Center
- Align the railroad crossing to provide a four-way perpendicular intersection on Millhouse Road at the entrance to the Town Operations Center. (This change, and possibly all improvements to Millhouse Road, will require the approval and cooperation of Norfolk Southern Railroad).
- Eubanks Road at Airport Road needs to be widened to accommodate:
 - 12'-wide travel lanes at the intersection
 - Storage of left-turn lane be lengthened to 300' to accommodate future traffic.

In addition to these recommendations, we recommend the following improvements at the intersection of Millhouse Road and Eubanks Road:

- Install a four-way traffic signal at intersection of Millhouse Road and Eubanks Drive. Traffic signal warrant analysis at the intersection of Millhouse Road and Eubanks Road "marginally" met the MUTCD warrants based on the 2006 projected volumes. Due to the nature of the traffic (buses and heavy equipment making left turn from Millhouse Road to Eubanks Road) from the proposed Town Operations Center, we strongly recommend a traffic signal at this location to minimize the delay to the side street traffic and reduce potential accidents.
- Widen Eubanks Road to provide an exclusive left-turn lane from Eubanks Road to Millhouse Road.

DRAFT CONCEPT PLAN DATED MAY 23, 2003

Buildings:

- Transportation Department Administration and Operations.
- Transportation Maintenance Department.
- Public Works Administration, Engineering and Shared Areas.
- Public Works Operations.
- Public Works Fleet Maintenance.
- Public Works Building Maintenance/Public Housing Maintenance.
- Surplus Storage.

Fuel and Wash Facilities:

- Public Works
- Transportation

Bus Storage:

- 2006: 101 buses
- 2036: 150 buses

Miscellaneous:

- 98-vehicle Police impoundment lot
- 42-vehicle auction storage lot

Employee parking spaces:

- 2006: 272 total spaces
- 2036: 396 total spaces

Operational Issues:

- Two points of access from Millhouse Road
- Separate access for Transportation Department and Public Works/Engineering/Public Housing Maintenance
- Public and employee parking separated from work areas by security measures.
- Fueling area separated from public access
- Emergency access connection between the compounds
- Shared areas centrally located on the site and available for public access
- Material-handling area located north of the site, away from compound
- Limit internal movements around fleet maintenance areas
- Ice machine located adjacent to exit route at pull-off area

- Safe pedestrian access throughout the compounds
- Provide additional space on the site for the Orange County Animal Shelter and a daycare center.

Sustainable Design:

- Single-story buildings and their orientation allow utilization of daylighting
- Design of energy-efficient building systems.
- Allow for reuse of stormwater runoff for supplementing the wash bays.
- Allow for reuse of stormwater runoff for toilet flushing and irrigation
- Allow for use of photovoltaic system
- Allow for use of solar hot-water-heating system
- Allow for use of alternative fuels

Environmental Sensitivity:

- A large portion of the development is located within the existing open field.
- Plan will preserve large areas of existing specimen trees
- Plan will preserve large, undisturbed areas in the rural buffer
- Stormwater management is possible through natural means, along with treatment via wet ponds, open grass swales, bioretention areas, filter strips, etc.
- A large passive recreation area is available through a future trail system and greenway
- Large natural area and RCD allow connector for wildlife corridors
- Public and administration buildings are located next to green spaces and have easy trail access
- Limit amount of impervious surface by use of permeable pavements and phasing of construction.

Fiscal Prudence:

- Plan minimizes use of retaining walls to limit grading
- Stormwater management in natural areas with low maintenance
- Balancing earthwork
- Utilizing existing fields/cleared areas to reduce sitework; leave natural buffers

Schedule:

- After the June 23rd Town Council meeting and comments, the draft concept plans and probable cost projections will be refined throughout the Summer, and further action on these items is scheduled for the August 25, 2003, Town Council meeting.