

**A RESOLUTION RECEIVING AN UPDATE
ON THE MORGAN CREEK GREENWAY CONCEPTUAL MASTER PLAN
Resolution No. 116/2009-10**

WHEREAS, the Carrboro Board of Aldermen support a network of greenways throughout the Town; and

WHEREAS, the Carrboro Board of Aldermen, in 2006, adopted the Recreation and Parks Master Plan update that includes greenways; and

WHEREAS, the Comprehensive Bicycle Transportation Plan of 2009 identified the Morgan Creek Greenway as the “major paved east/west spine of the greenway system”; and

WHEREAS, the Town has been allocated funding for greenway planning and construction from the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization; and

WHEREAS, the Town has allocated funds from the General Obligation Bond for the purpose of greenway planning and construction; and

WHEREAS, the Town has contracted with Coulter Jewell Thames to develop a conceptual plan for greenway sections along Morgan Creek, and the Greenways Commission has forwarded the draft plan with implementation recommendations for Board review.

NOW THEREFORE BE IT RESOLVED BY THE CARRBORO BOARD OF ALDERMEN OF THE TOWN OF CARRBORO:

Section 1. The Board receives this update and supports the continued pursuit of greenway development for these greenway sections.

Section 2. The town staff is directed to pursue a municipal agreement with NCDOT in order to release an RFP and contract with a firm to develop construction documents and initiate environmental permitting for the greenway trail.

Section 3. The Board hereby adopts the conceptual plan developed by Coulter Jewell Thames and the Greenways Commission implementation recommendations as a platform for future planning and implementation of the Morgan Creek greenway trail.

Section 4. This resolution shall become effective upon adoption.



TOWN OF CARRBORO

NORTH CAROLINA

STAFF MEMO

PLANNING DEPARTMENT

DELIVERED VIA: HAND MAIL FAX EMAIL

To: Steve Stewart, Town Manager
Mayor and Board of Aldermen
Greenways Commission

Via: Roy Williford, Planning Director
Anita Jones-McNair, Recreation and Parks Director
Patricia McGuire, Planning Administrator

From: Jeff Brubaker, Transportation Planner
Randy Dodd, Environmental Planner
Brendan Moore, Facilities Administrator

Date: March 10, 2010

Subject: Staff report on the Morgan Creek Greenway Conceptual Master Plan

Background

Town staff and the Greenways Commission have been working with Coulter Jewell Thames (CJT) to develop a conceptual plan for a new greenway trail in the Morgan Creek corridor between the Jones Ferry Park-and-Ride lot and Smith Level Road. The purposes of this memo are to provide staff comments as a supplement to the draft plan prepared by CJT and to facilitate the transition from the conceptual planning process to the next steps in greenway implementation. This report serves as an update to the report provided to the Board of Aldermen in September 2009; the information from that report is not repeated (see Item D.1 at http://www.townofcarrboro.org/BoA/Agendas/2009/09_01_2009.htm).

Information

The proposed greenway addresses environmental protection and enhancement, connectivity, mobility, and accessibility goals. These topics are discussed below, as are coordination activities and recommendations for next steps.

Environmental Considerations

Staff findings related to environmental considerations are:

1. In recognition of the recently adopted Jordan Lake riparian buffer rules, the Town will need to obtain authorization from NCDWQ for any riparian disturbance occurring within 50 feet of the top of the stream bank. It is important to note in this review that DWQ has direct jurisdiction over all municipal projects within state defined buffers in the Jordan Lake watershed. The final alignment should avoid encroachment into the 50' riparian buffer (except for crossings) to the maximum extent practical. The Town should plan to request a buffer authorization from NCDWQ early on in the next phase of greenway implementation.

A fact sheet about permitting of trails in riparian buffers is available at <http://h2o.enr.state.nc.us/newetlands/documents/Greenways-Hiking.pdf> (this fact sheet has not yet been updated to acknowledge the Jordan Lake rules which became effective in the summer of 2009). The Town (and UNC for University Lake property) will need to apply for buffer permits prior to pursuing construction

2. **Transportation funding and support can be sought for environmental purposes, along with funds from EPA and State environmental agencies.** Transportation Enhancement funds, provided by the Federal Highway Administration and implemented by state DOTs, may be a source for supporting environmental enhancements to the project (http://www.enhancements.org/12_activities.asp). The eligible activities specifically include “environmental mitigation of runoff pollution and provision of wildlife connectivity” (#11). The American Association of State Highway Transportation Officials (AASHTO), through its Center for Environmental Excellence, offers technical assistance for strategies to decrease the environmental footprint of transportation projects. According to the website (http://environment.transportation.org/center/tech_experts), experts are available for Water Quality assistance, including stormwater quality, erosion prevention, and sediment control on construction sites.
3. **An environmental consideration that is implicit in the conceptual plan is that through the provision of high-quality, multi-use, AASHTO-compliant off road facilities, vehicle miles traveled will be significantly reduced, thereby reducing emissions of multiple pollutants** (nitrous oxides, carbon dioxide, hydrocarbons, etc). These reductions will be important for reduction of both local air quality concerns such as low level ozone concentrations as well as the global concern of climate protection, and will

support Carrboro’s participation in the Cities for Climate Protection program, Triangle Clean Cities Coalition, and the Mayor’s Climate Protection Agreement.

4. While the study area includes multiple constraints, including stream buffers, steep slopes, hardwood stands, and a recognized natural area (the Triangle Land Conservancy owned rhodendron bluffs), perhaps the most important greenway trail planning environmental consideration is the heavily constrained floodplain. This will necessitate pursuit of flood modeling and flood studies as an immediate follow up step to the conceptual planning to determine details of acceptable crossing locations and design prior to completion of construction plans. It is specifically recommended that one flood study that covers all recommended crossings be completed as soon as practical in the next phase of greenway implementation to address flood mapping constraints and considerations.
5. A good deal of trash and construction debris exists in the study area, much of it on steep slopes between Morgan Creek and Highway 54. This material is too large/heavy to be hauled out by hand. The Town should seek funds and partners to clean up this area in a manner that minimizes environmental damage.

Transportation Considerations

Planning

Planning for a greenway along Morgan Creek, as can be seen in below, has occurred for at least a decade as part of multiple planning processes. Most recently, the *Carrboro Comprehensive Bicycle Transportation Plan* of 2009 (“Carrboro Bike Plan”) identified the Morgan Creek Greenway (MCG) as “the major paved east/west spine of the greenway system”.

Year	Plan	Policy / Language	Section / Policy # (page)
2009	<u>Comprehensive Bicycle Transportation Plan</u>	MCG identified as “major paved east/west spine of the greenway system”	3.6 (3-36)
2006	<u>Recreation and Parks Master Plan</u>	MCG on list of Action Plan projects. Trails to meet AASHTO standards.	III (17) App. (28)
2000	<u>Vision 2020</u>	Network of connected greenways throughout town	1.11, 1.14, 5.31, 5.32 (9,18)

Table 1. Selected local plans including a greenway in the Morgan Creek Corridor.

Connectivity

It is important to note that the proposed facilities are being designed to maximize facility use and alternative transportation through several approaches. As much as possible, the proposed alignments follow gentle grade changes, although steeper terrain along parts of the corridor makes this objective more challenging.

The proposed alignment represents an improved bicycle and pedestrian transportation route with enhanced access to the following trip origins and destinations:

- Over ten neighborhoods and-or apartment complexes
- Three schools (Frank Porter Graham Elementary, Carrboro High School, Culbreth Middle School)
- Recreational activities at University Lake and the Chapel Hill Tennis Club
- Jones Ferry Park-and-Ride

On a more regional scale, the project is proposed to connect to Chapel Hill's Morgan Creek Greenway project. Various phases of Chapel Hill's greenway are at different stages of implementation. At the time when both towns' greenway segments are completed, there will be an off-road bicycle and pedestrian route connecting University Lake with multiple destinations in southern Chapel Hill.

The Carrboro Bike Plan proposes a "safe and connected bicycle network for all cyclists" throughout Carrboro (p. 3-3). The recommended network includes the Morgan Creek Greenway eventually extending north from its western terminus in the current conceptual plan through Henry Anderson Park. The proposed greenway alignment also provides enhanced access to public transportation routes. Routes in the area include the J, D, CW, CM, and JFX routes.

School travel

Given the Morgan Creek corridor's proximity to Frank Porter Graham Elementary School, Carrboro High School, and Culbreth Middle School in Chapel Hill, the greenway has the potential to enhance safety for walking and bicycling to school.

Chapel Hill-Carrboro City Schools has a walk zone policy through which CHCCS is not required to provide bus service for students living adjacent to a route to school which is 1.5 miles or less, features continuous pedestrian facilities, and does not require students to cross railroad tracks or a heavily-trafficked intersection. Construction of the Morgan Creek Greenway could make some neighborhoods eligible for the Frank Porter Graham Elementary and Carrboro High School walk zones. For example, the Canterbury, Westbrook, Chambers Ridge, and Weatherhill Pointe neighborhoods are assigned to Frank Porter Graham Elementary but are not in the walk zone due to lack of contiguous pedestrian-bicycle facilities. The proposed crossing underneath Smith Level Rd. would allow the route to school to avoid the Smith Level Rd. / Public Works Driveway intersection, where the crosswalk traverses five lanes of motor vehicle traffic. Note that the ultimate decision to designate an area a walk zone for a school is the responsibility of the CHCCS Board of Education.

Design considerations and trail surface

There are several design stipulations for transportation projects using federal funding and being administered by NCDOT. These stipulations, among many others, are laid out in the Municipal Agreement – the document that enables municipalities to be reimbursed for design and construction of transportation projects if they are managed locally. Both the AASHTO *Guide for*

the Development of Bicycle Facilities (1999) and the NCDOT *Bicycle Facilities Planning and Design Guidelines* (1994) – incorporated by reference into federal and state standards¹ – state that for bicycle facilities, hard, all-weather surfaces such as asphalt or Portland cement concrete are preferred over crushed aggregate, clay, sand, or stabilized earth materials. The latter materials present a lower level of service for bicyclists and are not recommended in floodplains.

Transportation projects must also conform to applicable standards of the Americans with Disabilities Act of 1990. Applicable ADA standards are incorporated by reference in the Municipal Agreement. Furthermore, bicycle projects using federal Surface Transportation Program (STP) funding must be used for projects with a primarily transportation-related, rather than recreational, purpose.² This is not incompatible with the significant number of Carrboro residents who bicycle for utilitarian purposes – for example, 34% of those surveyed for the Carrboro Bike Plan. At the same time, bicycle facilities constructed primarily for a transportation purpose may have the *co-benefit* for recreational use.

For conceptual planning purposes, CJT has provided preliminary cost estimates that assume that either concrete or asphalt will comprise the primary trail surface for various segments. The preliminary cost estimate's apportionment of concrete and asphalt along the corridor is:

- Concrete – 9,430 linear ft. (lf)
- Asphalt, no base – 1,330 lf – for installing an all-weather surface on the Rosewalk gravel trail
- Boardwalk – 465 lf – proposed for a portion of trail crossing a wetland near Jones Ferry Park-and-Ride

This distribution of trail surface is non-binding and primarily for estimating the cost of the trail. There will be ample opportunity for further technical review and public input prior to the final specification. Staff recommend that final trail surface design be completed as part of construction document preparation, and that the following design guidelines be adhered to:

1. That no material that is prone to washing and high maintenance be used in flood-prone areas. This includes organic and inorganic aggregates.
2. That AASHTO and NCDOT guidelines be followed for a multi-use path.

Recreation Considerations

Design guidelines are provided in the Conceptual Plan to maximize multi-use goals. These guidelines will support pedestrians, bicyclists, strollers, rollerbladers, wheelchairs, and maintenance and public safety access. For usability and accessibility, staff specifically find that including an AASHTO-compliant trail will:

¹ See, for example: 23 CFR 652.13. "Design and construction criteria".

<http://www.fhwa.dot.gov/legsregs/directives/cfr23toc.htm>.

NCDOT. (2009). *Local Programs Management Handbook*. Local Programs Management Office, p. 20.

² 23 U.S.C. 217 (i). <http://www.fhwa.dot.gov/environment/bikeped/sec217.htm>.

1. Provide a safe, consistent surface for the widest range of user groups. Pavement markings provide defined corridors for safe two-way traffic and help minimize the risk of accidents during high-volume traffic with multiple user groups.
2. Allow for the highest number of user groups, thus encouraging physical activity for the highest number of citizens.
3. Allow for more programming opportunities through special events (e.g. running events, biking events, guided nature hikes, etc.).
4. Be accessible to wheelchairs, road bikes, roller blades, and strollers, and provide access to natural areas currently inaccessible to a large percentage of persons with mobility issues.

Public Input

Public workshops were held in June and October at Frank Porter Graham Elementary School and the Chapel Hill Tennis Club, respectively. At the first workshop, attendees expressed interest in access to University Lake, safer access to Frank Porter Graham Elementary, and concern about trail traffic to the private recreational facility in the Berryhill neighborhood. Comments at the October public workshop focused on the importance of the High School connector trail, trail safety, the Smith Level Rd. crossing, and other issues. Further details on these two public input sessions can be found in the conceptual plan.

Implementation Plan and Funding

Staff recommend that, concurrent with approval of the Morgan Creek Greenway Conceptual Master Plan, the Board direct staff to proceed with implementing the plan's recommendations expeditiously. Project implementation will require, but not be limited to, pursuit of a Municipal Agreement with NCDOT to authorize federal transportation funding; FEMA flood studies that determine the permissibility, from a flood management standpoint, of building the recommended bridges; right-of-way acquisition; environmental documentation; and design and construction bidding and award. The flood studies should be undertaken as soon as possible, given the length of time it takes to complete them and how essential they are to confirming the feasibility of the proposed alignment.

Federal funding for design and construction of the Morgan Creek Greenway was originally programmed for FY 2007 in the Transportation Improvement Program (TIP) of the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC-MPO), the regional transportation decision-making body. The funding category used is the Surface Transportation Program-Direct Attributable (STP-DA) category, which is apportioned by the Federal Highway Administration directly to MPOs, instead of the state DOT as is the case for other Surface Transportation Program funding. In September 2009, STP-DA funds were subject to a rescission which jeopardized STP-DA projects. DCHC-MPO has made the preliminary determination that it has enough future funding capacity to prevent any projects from losing funding; however, the MPO is now expecting STP-DA projects to be implemented in a timely manner, as close as possible to the fiscal year in which their funding is programmed.

On the other hand, the rescission also means that not all MPO projects that are eligible to be funded this year will be funded. This is because the Federal Highway Administration only apportions a limited amount of STP-DA funding each fiscal year. Because of this, funding for the construction of Morgan Creek Greenway segments may not be available to be obligated until October 2010. This does not necessarily represent a project delay, as construction cannot occur until detailed design has been completed based on information on bridge placement gained from flood studies.

STP-DA funding in the amount of \$480,000 of is programmed for detailed design and construction activities associated with the greenway. This is supplemented by a \$120,000 (20%) local match, which is budgeted with local bonds approved by Carrboro voters in 2003.

Development of the Morgan Creek Greenway Conceptual Master Plan itself is being funded by a separate STP-DA allocation. The high school connector study funding was programmed separately after staff determined that the original allocation was not enough to cover this additional analysis. The scope of work was subsequently amended to reflect the feasibility study, and the completed study is incorporated in the master plan.

Table 2 below shows the funding breakdown for the Morgan Creek Greenway.

Description	STP-DA (80%)	Town share (20%)	Status
Conceptual Master Plan	\$40,000	\$10,000	Under contract, reimbursement-based
High school connector trail feasibility study	\$4,000	\$1,000	Under contract, reimbursement-based
Detailed design, environmental documentation, etc. Construction	\$480,000	\$120,000	Programmed for 2010-2011
TOTAL	\$524,000	\$131,000	

Table 2. Funding for Morgan Creek Greenway planning, design, and construction.

As is shown in the conceptual plan, CJT has estimated that the cost of the main greenway corridor is approximately \$2.1 million. The cost of the high school connector trail – which crosses the creek and leads to BPW Club Rd. – is approximately \$640,000. The difference between the combined cost estimate for the main route and high school spur and the \$600,000 of federal/local funding, is over \$2.4 million, as shown in Table 3.

Description	Funding	Cost
Main greenway corridor cost estimate (from conceptual plan)		\$2,425,000
High school connector trail		\$641,775
Federal STP-DA	\$480,000	
Local match	\$120,000	
TOTAL	\$600,000	\$3,066,775
<i>Funding gap</i>	<i>(\$2,466,775)</i>	

Table 3. Funding and cost estimates for the Morgan Creek Greenway

The funding gap suggests that pursuing additional funding will be an essential component of implementation as the project moves forward. Due to the federal rescission, STP-DA funding at the MPO is almost fully programmed through 2015, meaning that it may not be an ideal source for seeking additional funding for construction of later greenway phases until 2016, unless Congress increases its commitment to MPOs in future transportation bills. Staff recommend that funding be pursued for the next available funding cycles from the following sources.

Surface Transportation Program-Direct Attributable (STP-DA)

Consider seeking funding for federal fiscal years 2016-2018.

Congestion Mitigation and Air Quality (CMAQ) program

The Town has submitted an application for CMAQ funds to connect the future Jones Creek Greenway to Orange County's Twin Creeks Greenway, currently under construction at Twin Creeks Park. Future CMAQ funding may be applicable for the Morgan Creek Greenway.

Federal Transportation Enhancement program

See description above.

Adopt-A-Trail

Administered by the North Carolina Division of Parks and Recreation, this \$5000 maximum, non-matching grant is funded through the North Carolina General Fund to support trail improvements and amenities.

Federal Recreational Trails Grant

Administered by the North Carolina Division of Parks and Recreation, this \$75,000 maximum, 25% matching grant is funded through the Safe, Accountable, Flexible, and Efficient Transportation Equity Act. In the latest funding cycle, the Town has applied for an RTP grant to supplement funding for the Wilson Park Multi-use Path.

Partnerships

Staff recommend that the Town consider funding partnerships and seek Board of Aldermen direction in terms of funding partnerships that the Board would like staff to pursue. An example is working with UNC to identify funding opportunities for construction document preparation and trail installation on UNC property.

Recent and Planned Coordination

With regard to coordination activities, staff have contacted or intend to contact in the immediate future a number of parties as indicated in Table 4 in addition to related public workshops and Greenways Commission activities.

Organization	Purpose	Notes
UNC	Coordinate alignment and plan on UNC property	Met with UNC staff
OWASA	Discuss sewer corridor issues	Met with OWASA staff
Duke and Piedmont Energy	Coordinate utility easement issues	Contractor and Staff made preliminary contact; details best dealt with during construction document preparation.
Chapel Hill Greenways Commission	Coordinate planning	Carrboro staff presented to CHGC December 2 nd
Morgan Creek Valley Alliance	Schedule an educational hike along the sewer corridor	Purpose: look at existing environmental impacts and potential approaches for improvements.

Table 4. Town staff coordination with stakeholders in the Morgan Creek corridor

Recommendations

1. Staff recommend that the Board adopt the attached resolution directing staff to immediately pursue Municipal Agreements with NCDOT; to initiate the processes for FEMA flood studies, buffer authorization from NCDWQ, and any necessary right-of-way acquisition; initiate environmental review (NEPA) documentation; and release an RFP to contract with (a) firm(s) to develop construction documents. Staff recommend that the Town act immediately to ensure timely obligation of STP-DA funding.

Staff recommend that Phase 1 of the Morgan Creek Greenway be implemented as soon as possible. This will provide increased access for the Canterbury Townhomes and Berryhill neighborhoods.

2. Staff recommend that the Board adopt the attached resolution adopting the plan as a platform for future planning and implementation of the Morgan Creek Greenway. In doing so, staff and the Greenways Commission are directed to proceed with necessary steps such as pursuit of funding, continuing coordination with landowners and stakeholders (including acquisition of easements and other cooperative arrangements), and public outreach.

**GREENWAYS COMMISSION
Town of Carrboro**

RECOMMENDATION

February 15, 2010

SUBJECT: Morgan Creek Greenway Conceptual Master Plan

MOTION: The Greenways Commission recommends that the Board of Aldermen approve the Morgan Creek Greenway Conceptual Master Plan with the following review comments:

Phase 1 review comments:

1. The Commission strongly endorses the *Phase 1 alignment* in light of the connectivity it affords the surrounding communities with access to Abbey Ln.
2. The Commission finds the aesthetics of the bridge placement in the *Phase 1 alignment* – even if it has to be moved slightly to the north or south – far preferable to the placement of the bridge adjacent to Smith Level Rd.
3. In support of the *Phase 1 alignment*, the Commission recommends that all possible bridge crossings be explored along the *Phase 1 alignment* before resorting to the *Phase 1 alternate alignment*.
4. The *Phase 1 alignment* is preferable due to minimal disturbance to trees.
5. The *Phase 1 alignment* is preferable due to the availability of Abbey Ln. as a public access point.
6. If the *Phase 1 alternate alignment* is selected, this decision should be presented to the Greenways Commission and Board of Aldermen for review before implementation.

Phase 2 review comments:

7. The Commission recommends the Phase 2 alignment with the consideration that all possible locations near the described location of the bridge crossing from Berryhill to Weatherhill Pointe be considered for a final bridge crossing.
8. On the east side of the Berryhill soccer field, the trail should be projected north as close to the creek as possible so that it directs users around, rather than onto, the soccer field.
9. Areas for privacy screening should be considered throughout the Phase 2 alignment.

Phase 3 review comments:

- 10. The Commission recommends that the *Phase 3 alignment* connect Phase 2 with Rosewalk, crossing Tom's Creek.

Phase 4 review comments:

- 11. The Commission recommends that the *Phase 4 alignment* be the development of a spur trail connecting the main greenway alignment to BPW Club Rd. and the High School.

Phase 5 review comments:

- 12. The Commission recommends that the *Phase 5 alignment* be the completion of the project by extending from the Rosewalk trail to University Lake and the Jones Ferry Park-and-Ride, resurfacing the existing Rosewalk trail with an ADA-compliant surface, and adding a nature trail.


The Commission also offers the following general comments:

- Stormwater impacts and water quality testing are important considerations.
- The Town should aggressively seek funding to clean up large trash and debris in the study area that is too heavy or inaccessible for volunteers to clean up.

Moved: Dave Otto

Second: Gary Junker

VOTE: Ayes (9): Daniel, Otto, Haven-O'Donnell, Kirschner, Benedict, Junker, Randall, Allman, Arnsberger. Nays (0). Abstain (0). Absent (2): Paulsen, Michler.



 Greenways Commission Chair

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 DATE