

# **First Public Meeting**

## **HANDOUT**

October 4, 2006  
6:00 pm to 8:00 pm  
Caldwell Hall, North Carolina State University



**Hillsborough Street Roundabouts, Phase I  
from Gardner Street to Oberlin Road**



# First Public Meeting

## Hillsborough Street Roundabouts, Phase I

Sponsored by: City of Raleigh and Kimley-Horn and Associates, Inc.

**October 4, 2006**

### **Welcome**

Welcome to the first public meeting for the design of the Hillsborough Street Roundabouts, Phase I project. This is an open house sponsored by the City of Raleigh to present the project's preliminary (about 25 percent complete) engineering designs, answer your questions, and gather public comments on the streetscape and roadway design. Please walk around the room to view the displayed maps and ask questions of members of the project team here tonight from the City of Raleigh and the City's design consultant, Kimley-Horn and Associates, Inc. Thank you for your participation.

Beginning at 7:00 P.M., the public meeting will convene and a presentation will be made that will explain the design and the associated project schedule. We welcome your comments and questions following the presentation.

### **Your Input is Important**

You are encouraged to complete the enclosed comment sheet tonight or mail your comments to the address at the bottom of the comment sheet. We request that you provide your input by Wednesday, October 25, 2006 in order for your comments to be incorporated into the planning process.

### **PROJECT DETAILS**

- **Location:** See Figure 1. Construction limits on Hillsborough Street extend from Gardner Street on the west to Oberlin Road on the east. They include Pullen Road from Hillsborough Street south to Watauga Club Road, Oberlin Road from Hillsborough Street north past Groveland Avenue, and a new section of Pullen Road connecting Oberlin/Groveland with Hillsborough/Pullen. Striping changes on Hillsborough Street may extend west to Concord Street (vicinity of Cup-a-Joe) and east to the planned roundabout at Morgan/Hillsborough. The purpose of the striping changes would be to develop safe travel lane and speed transitions for vehicular traffic.
- **Genesis of the Project:** A partnership comprising private businesses, homeowner groups, and public agencies began to shepherd the project when the street redesign plan was created in October 1999. Several years later, the Hillsborough Street Partnership was established as a non-profit organization comprised of representatives of the City of Raleigh, North Carolina State University, University Park Homeowners Association, and individuals who own property or manage businesses on Hillsborough Street. Currently, the Partnership is spearheading a wide range of initiatives to reinvigorate "life on the street." They also are serving as an Advisory Committee on the City's design project, advising City staff of concerns about the project. The Partnership is quick to point out that the street plan is a

means to achieve its real objectives, which are to slow the traffic, enhance pedestrian safety, spur private sector reinvestment in Hillsborough Street properties, and increase the overall pedestrian and economic success along the Street.

- **Project Alternatives:** Beginning in 1999 and continuing to this day, engineers have considered design alternatives. It is recognized that this project is unique, because it will possibly lead to seven roundabouts on Hillsborough Street between Morgan Street and Rosemary/Shepherd Streets (a distance of about 1.5 miles).

Few examples of streets with seven roundabouts exist in America. Analogous streets include Avon Road in Avon, Colorado ([www.avon.org](http://www.avon.org)), where five roundabouts were built in 1997 on one street over about a one-half mile distance. The street is hailed as a success on the town's website. In Savannah, Georgia, Bull Street was laid out in the eighteenth century with five squares (rather than roundabouts) over a one-half mile length of street. While the squares function famously as public spaces, the traffic along Bull Street from Forsyth Park to City Hall is similar to the desired effect on Hillsborough Street.

In September 2006, Kimley-Horn and the Institute for Transportation Research and Education (ITRE) performed traffic and pedestrian capacity analyses on Hillsborough Street. The roundabout alternative was compared with existing conditions as well as a *what if* scenario requested by members of the Partnership. The scenario consisted of traffic signalized intersections with one travel lane in each direction and full-time on-street parking on both sides of the street with no median. Using paint to restripe the street, it is assumed sufficient funds would be available to cover the cost to move all existing above-ground utility wires underground. Although the cost of the *what if* scenario has not been estimated, Kimley-Horn's traffic analysis shows back-ups in both directions of Hillsborough Street and many side streets during peak weekday periods. On southbound Oberlin Road, the back-up would extend to Cameron Village, a full quarter-mile north of Hillsborough Street. The back-ups would induce some drivers to cut-through existing neighborhoods via secondary streets such as Clark Avenue, Woodburn Street, and Vanderbilt Street. The City and design team do not endorse this scenario.

NCDOT and City engineers, working with national experts during the October 1999 charrette, spent hours analyzing safety and flow conditions to craft an elegant solution to balance the needs and requirements of a diverse group of participants. The results are described in the next section.

- **Need/Benefit:** The Partnership's objective, as stated above, is to reinvigorate "life on the street" and spur private sector response by investments in private properties. The project objective and justification for use of City transportation bond funds is to improve safety for all travelers, including pedestrians, bicyclists, bus patrons, and motorists. The reduction from four to two travel lanes on Hillsborough Street has multiple benefits, including shortened crosswalk distances for pedestrians, space to add full-time on-street parking on both sides of the street, and traffic speed reductions. The roundabouts keep traffic flowing, albeit at slower speeds compared with traffic signals, even with just one travel lane in each direction. There will be two lanes at the Pullen/Hillsborough roundabout where the higher traffic volumes justify two lane approaches and two circulating lanes in the roundabout. Studies show significant reductions in injury crashes when signalized intersections are converted to roundabouts. This is primarily due to the elimination of left-turn movements and a reduction in vehicle speeds (source: [www.ihs.org](http://www.ihs.org)).

- Description of Hillsborough Street and environs:** Existing Hillsborough Street generally varies from three lanes west of campus to four lanes along the campus frontage to five lanes east of campus. There are six signalized intersections and two signalized pedestrian crossings on Hillsborough Street between (and including) Gardner and Oberlin. It is rare when a motorist drives more than a mile on Hillsborough Street without stopping for a red light, stopped bus, or left-turning vehicle. Left-turn lanes do not exist at most intersections. Sidewalk widths and conditions vary considerably. On-street parking rules vary. Off-street parking restrictions can be confusing. The presence of street trees varies from none to large stands of prominent oaks. The presence of attractive brick walls along many sections of the campus frontage (south side) create well-designed walls to compensate for steep changes in topography. A bus transit center is located on the south side of the Gardner/Hillsborough Street intersection. In terms of commercial status, many stores change tenants frequently, but most stores stay vacant for short periods. The physical conditions of some buildings, however, suggest deferred maintenance is typical.
- Traffic Maintenance:** Hillsborough Street will be constructed under traffic with pedestrian access to each business during final design. Traffic control plans and pedestrian access plans will be prepared to maintain traffic during construction.
- Pedestrians:** Sidewalks on the north side of Hillsborough Street will be improved with bricks that follow interesting and varied patterns. The existing brick sidewalk on the south side will be modified in some locations as needed to fit the new roundabouts and provide the desired street section. In other words, there will be on-street parking on both sides, one narrow travel lane in each direction, a safety buffer between parked cars and moving vehicles, and a narrow raised-curb median. Pedestrians will be encouraged to cross at well-designed crosswalks, some of which will be signalized. Pedestrians crossing elsewhere will have the benefit of a three-foot wide paver-topped raised-curb median. For variety, some small pockets of colorful plant material may be grown in the median. As pedestrians walk along the edges of Hillsborough Street (both sides) near the roundabouts, the crosswalks will be moved out of their normal path compared to existing crosswalks.
- Bicyclists:** The adopted Raleigh Comprehensive Plan shows a signed bicycle route parallel to Hillsborough Street, using Clark Avenue, Brooks Avenue, and Hawthorne Road. It is surmised by Kimley-Horn that the reasoning was to avoid the busy traffic conditions on Hillsborough Street, even though many bicycle destinations are along Hillsborough Street rather than the parallel streets to the north. The Capital Area Metropolitan Planning Organization (CAMPO) adopted a bicycle plan for all of Wake County in March 2003. It shows Hillsborough Street as a “Priority Corridor of Greater Need.” The project enhances conditions for bicyclists by creating a wide outside travel lane. However, once the project is complete, novice cyclists may be intimidated by car doors opening, sharing roundabouts with cars and trucks, and sidewalks brimming with pedestrians and perhaps café tables. The Hawthorne-Clark-Brooks alternate route will remain viable for novice cyclists.
- Bus Riders:** Three different transit operators provide bus service on Hillsborough Street. Key transfer stops between these bus systems allow riders to connect from campus to city to regional buses. The NC State *Wolfline* system operates the highest frequency of bus service and carries the highest ridership among the three systems. No changes are planned to the Wolfline Transit Center at Gardner/Hillsborough in the current project phase. Wolfline buses may continue to turn left onto westbound Hillsborough at Gardner and may continue to turn left and right at Horne/Hillsborough. Bus stop locations along eastbound Hillsborough

between Horne Street and Pullen Road may be adjusted to allow other traffic to pass a stopped bus. Mid-block crossings are envisioned for pedestrians walking to and from bus stops.

- **Overhead (private) utility lines:** Kimley-Horn is evaluating three options to reduce the visual clutter evident today when looking at the utility poles. These wood poles are staple-magnets, accumulated after years of posting handbills. The poles are shorter than typically found on other streets, leading to excessive trimming of street trees or the planting of small trees species. One alternative under consideration is to replace with taller poles made of a hard surface that resists staples. The utilities would be lifted so that healthier street trees can flourish underneath. A second option is to aerially relocate utilities to a public alley north of Hillsborough Street that stretches between Horne Street and Logan Court. This would require extensive reworking of the service lines into each business. A third option is to install a utility vault under the sidewalk or edge of street, enabling each of the private utility companies to bury its wires. The companies include Progress Energy, BellSouth, Time Warner Cable, and the City of Raleigh's traffic signal interconnect wires. The vault would be located to avoid existing subsurface water, sanitary sewer, and stormwater pipes. Lastly, changes to the curb locations on Hillsborough Street and the Pullen Road extension will require adjustments to the stormwater pipes.
- **Assessments:** There have been no discussions of assessments to private property. Periodically, the Partnership has discussed the idea of a Business Improvement District like downtown Raleigh, but no action has been taken.
- **Required Permits:** Permits will not be required from the US Army Corps of Engineers, the North Carolina Division of Water Quality, or the Division of Land Quality. However, an encroachment permit will be required from the North Carolina Department of Transportation and a Certificate of Appropriateness from the Raleigh Historic Districts Commission.
- **Funding:** The transportation bond initiative supported by voter referendum in 2005 and subsequent direction by the Raleigh City Council will fund the project.

### Design Information

- Street Alignment Follows existing with some realignment
- Sidewalk Alignment Diverts up to 20% out-of-direction for pedestrians at roundabouts
- Signals Removes traffic signals on Hillsborough Street at Oberlin Road, Pullen Road, Enterprise Street, Horne Street, and Pogue Street Retain signalized pedestrian crossings near the existing locations on Hillsborough Street at Logan Court and Chamberlain Street
- Typical Street Section Sidewalks on both sides of street at least 8 feet wide, on-street parking both sides 7.5 feet (includes curb and gutter), safety buffer of 5 feet between parked cars and travel lanes on both sides, travel lane 11 feet wide, and raised curb median 7 feet wide with curb
- Traffic Volume 19,000 vehicles per day (vpd) existing; 19,250 vpd future
- Length 3,071 linear feet
- Design Speed 25 miles per hour
- Posted Speed 25 miles per hour

- Access Control                      Raised median prohibits all left-turns between, but not including Gardner Street to Woodburn Street. Instead, u-turns at the roundabouts on Hillsborough Street at Horne Street, Logan Court, and Pullen will replace left-turn movements. All turns become right-turns and right-in merges, adding to the significant reduction in injury-producing crashes.
- Construction Cost                      Project A = \$1.9 million  
    Project B = \$2.4 million

### **Next Steps**

The project schedule is structured so that, should the Raleigh City Council approve that the project go to final design, construction can occur during the summer of 2007 while activity and enrollment at NC State University is not as busy. To stay on schedule, we are planning a presentation to the City Council on November 7, 2006, at which time Council direction will be sought regarding which of the two segments of Hillsborough Street should be built first. Project A is from Gardner Street to Logan Court, and Phase B is from Enterprise Street to Oberlin Road and it includes the extension of Pullen Road to Oberlin Road.



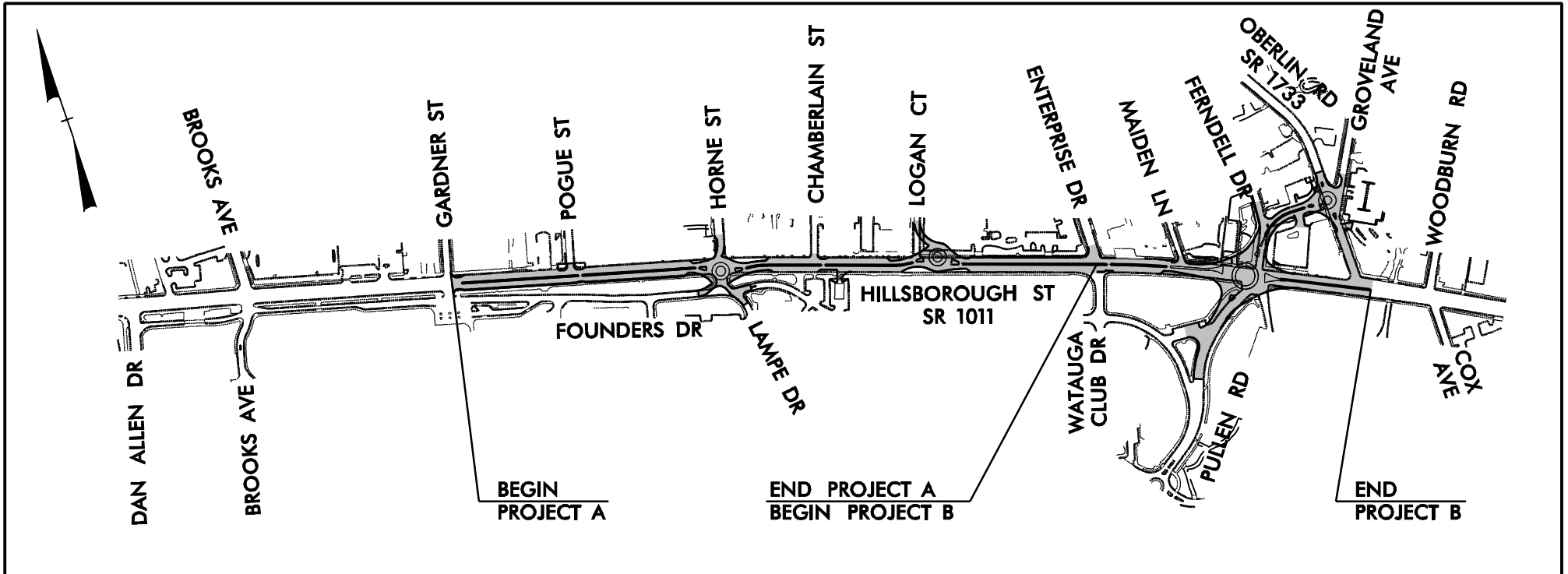
# FIRST PUBLIC MEETING

CITY OF RALEIGH

Hillsborough Street Roundabouts, Phase I

Project A: Gardner Street to Enterprise Drive

Project B: Enterprise Drive to Oberlin Road



NOT TO SCALE

PROJECT LOCATION



FIGURE 1

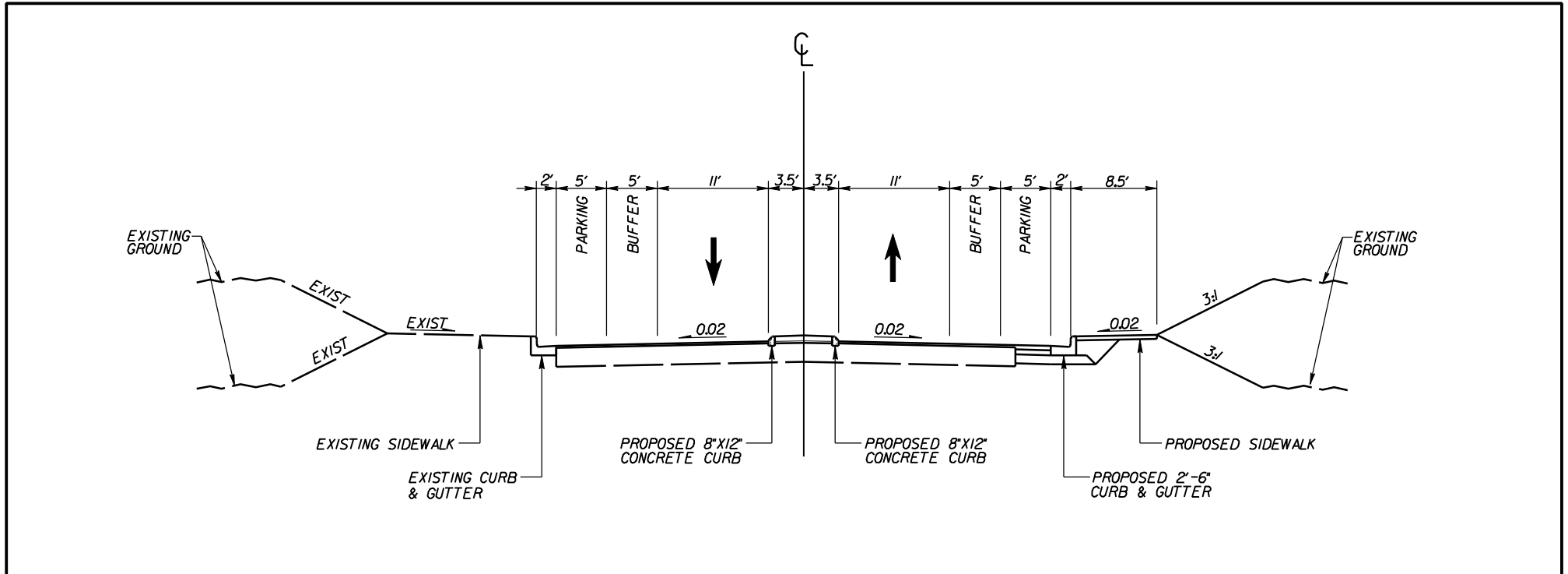
# FIRST PUBLIC MEETING

## CITY OF RALEIGH

### Hillsborough Street Roundabouts, Phase I

Project A: Gardner Street to Enterprise Drive

Project B: Enterprise Drive to Oberlin Road



NOT TO SCALE

TYPICAL SECTION



FIGURE 2