

BOARD OF ALDERMEN

ITEM NO. C(5)

AGENDA ITEM ABSTRACT

MEETING DATE: November 22, 2011

TITLE: Approval of a Municipal Agreement with NCDOT and Capital Projects Ordinance to Design and Construct Bicycle Loop Detectors

DEPARTMENT: Planning	PUBLIC HEARING: YES ___NO__X__
ATTACHMENTS: A. Resolution and Capital Projects Ordinance B. Pages from Carrboro Comprehensive Bicycle Transportation Plan C. Pages from Carrboro Downtown Traffic Circulation Study	FOR INFORMATION CONTACT: Jeff Brubaker – 918-7329 Arche McAdoo – 918-7439

PURPOSE

The Board is asked to consider approval of a Municipal Agreement with the North Carolina Department of Transportation to design and construct bicycle loop detectors at signalized intersections, as well as an associated Capital Projects Ordinance.

INFORMATION

Bicycle loop detection at signalized intersections allows bicyclists to request a green light by placing their bicycles over an inductive loop that communicates with the traffic signal. Loop detectors have the potential to discourage red-light running by providing an alternative to quickly cross the intersection.¹ The propensity to run a red light is exemplified in the following public comment during the Comprehensive Bicycle Transportation Plan process: “the intersection of W. Main and W. Weaver is frustrating (both as a bicyclist and a car).. the light is way too long even when there is no traffic, and there is no loop detection for cyclists. I often bike through this intersection on a red light” (p. B-32). A local example of bicycle loop detection is on Ransom St. in Chapel Hill, approaching Cameron Ave.

The Comprehensive Bicycle Transportation Plan recommends placement of bicycle detectors at various intersections, including:

- Smith Level Rd. and Culbreth Rd.
- Estes Dr. and N. Greensboro St.
- Old NC-86 and Homestead Rd.
- Weaver St. and Main St.
- Old Fayetteville and NC-54
- Hillsborough Rd. and Old NC 86
- North Greensboro and Weaver St.
- Main St. and Lloyd St.

¹ University of California. (2007). Bicycle Detection and Signalization. *Tech Transfer Newsletter – Spring 2007*. http://www.techtransfer.berkeley.edu/newsletter/07-2/bike_detection.php

- Weaver St. and West Main St.
- Poplar Street and NC-54

Design considerations for bike loop detectors from the Bike Plan are included in *Attachment B*. Loop detector locations will be finalized during the preliminary engineering phase.

Recommendations from the Downtown Traffic Study are included in *Attachment C*. The study suggested that the Town consider use of a video detection system as opposed to inductive loops. Given the study's ballpark cost estimate of \$25,000 to \$100,000 per intersection, it is not likely that the currently-allocated funding could permit implementation of this technology (see Fiscal and Staff impact).

Figure 9C-7. Bicycle Detector Pavement Marking



Proper placement of a bike over a loop detector can be encouraged by pavement markings shown in the *Manual on Uniform Traffic Control Devices*, Figure 9C-7.

The Municipal Agreement for the installation of bike loop detectors (NCDOT TIP # U4726-DF) will allow the Town to begin the preliminary engineering phase of the project. The agreement also stipulates that the Town designate a “Person in Responsible Charge,” in accordance with 23 CFR 635.105. The draft resolution authorizes the Interim Town Manager or Town Manager to designate this person.

FISCAL AND STAFF IMPACT

The loop detectors are funded by \$30,000 of federal STP-DA funding (80%) and require a local match of \$7,500 from local revenues (20%). The Board of Aldermen approved this STP-DA project on November 20, 2007 and subsequently designated fund balance for the local match required to install ten bike loop detectors. The designated fund balance resolution for FY 2010-11 approved by the Board on June 21, 2011 designated \$8,650 for STP-DA Local Match and Smith Level Road. Of this amount \$7,500 is to be used to match the federal funding to install 10 bike detectors throughout the Town; and \$1,150 to contribute to the installation of bike detectors on Smith Level Road (NCDOT Project U-2803).

It is estimated that 200-250 staff hours will be necessary to manage the project. An engineering firm will need to be procured to complete the preliminary engineering phase.

RECOMMENDATION

Staff recommend that the Board consider approval of the municipal agreement and capital projects ordinance in *Attachment A*.