

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0006335, Fulton-Forsyth Counties **OFFICE** Preconstruction
CSNHS-0006-00(335)
SR 400 Revised Project Limits for NaviGator **DATE** June 21, 2007

FROM *Genetha Rice* Genetha Rice-Singleton, Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

GRS/cj

Attachment

DISTRIBUTION:

Brian Summers
Harvey Keeper
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Bryant Poole
BOARD MEMBER
FHWA

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE *CSNHS-0006-00(335), Fulton/Forsyth Counties* OFFICE Traffic Operations
P. I. Number 0006335 DATE April 18, 2007

FROM: *Kathy Pauley for*
Keith Golden, P.E., State Traffic Operations Engineer
TO: *Genetha Rice-Singleton, Assistant Director of Preconstruction*
SUBJECT **Revised Project Concept Report**

Attached is the original copy of the Revised Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

The concept revision request is made due to the project limits being revised.

The revised concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Program (RTP) and/or the State Transportation Improvement Program (STIP).

DATE 4-25-07

Angela T. Alexander ew
State Transportation Planning Administrator

Distribution:

Brian Summers, Project Review Engineer
Harvey Keepler, State Environment/Location Engineer
Angela Alexander, State Transportation Planning Administrator
Jamie Simpson, State Transportation Financial Management Administrator
Bryant Poole, District Engineer
Paul Liles, State Bridge Design Engineer

REVISED PROJECT CONCEPT REPORT

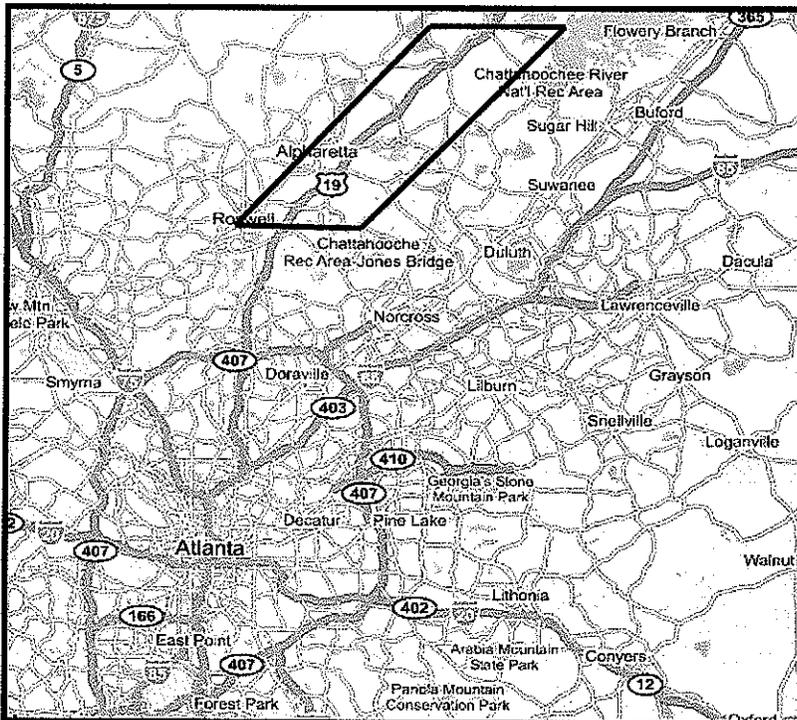
Need and Purpose:

The purpose of this project is to increase the efficiency and safety of the corridor by expanding the NaviGator system in Fulton and Forsyth Counties to provide coverage on SR 400 from 3600 ft South of the SR 120/Old Milton Parkway interchange to 4400 ft North of the SR 20/Buford Highway interchange. The expansion of the NaviGator system in this region will help mitigate the congestion currently experienced along this corridor during peak hours. Efficiency and safety will be improved by reducing incident response/clearance times, prevention of secondary accidents, and providing information to motorists of roadway/traffic conditions. Ramp meters will control the release of vehicles onto the corridor during peak hours, therefore reducing congestion and stabilizing the flow of traffic that typically occurs at heavy volume merge locations. The operation of the ramp meters will create a smoother flow of traffic and reduce the potential for traffic crashes during peak hours.

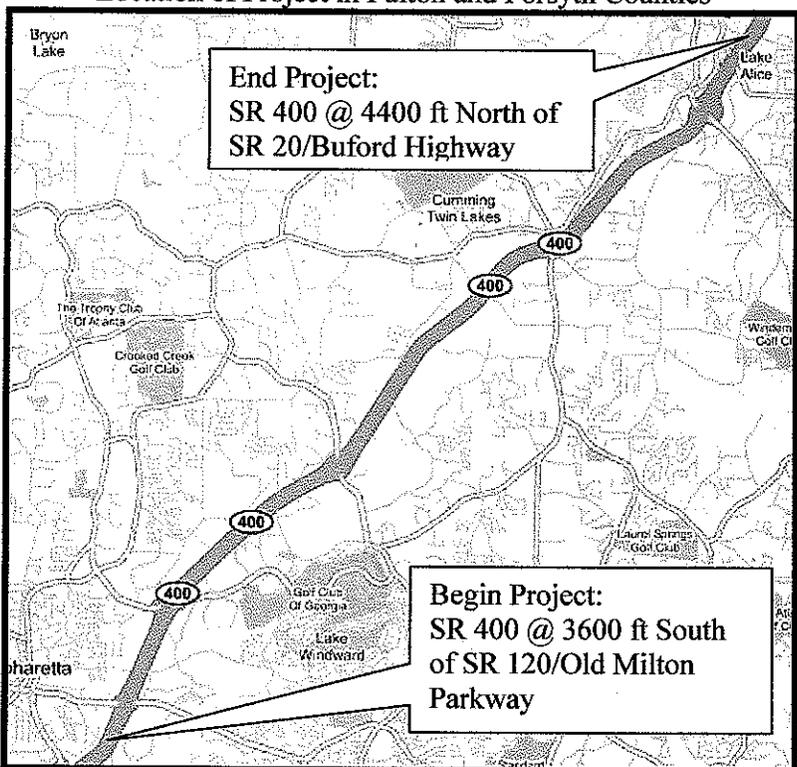
The Georgia DOT's NaviGator – Intelligent Transportation System has been in operation since April 1996. Initially providing coverage on Interstates 75 and 85, primarily within the I-285 Perimeter Highway, it is currently being extended along Langford Parkway (SR 166) in Fulton County and Peachtree Industrial Boulevard (SR 141/Peachtree Parkway) in DeKalb and Gwinnett counties, with additional projects on I-20, I-75, I-85, I-285, I-575, I-675, I-985, SR 316, SR 400, and US 78 planned as part of the Fast Forward Program. The system consists of closed-circuit television (CCTV) surveillance cameras, vehicle detection system cameras (VDS), Changeable Message Signs (CMS), and ramp meters. By use of a fiber optic communications backbone, all the devices are tied to the Transportation Management Center (TMC) and various Traffic Control Centers (TCCs) in the Metro Atlanta area. Operators located at the TMC are able to detect incidents and dispatch, with minimal delay, appropriate response teams. The NaviGator program benefits the trucking industry and motorists by reducing incident response/clearance times, and providing better information with consequential safety improvements.

On April 14, 2004 Governor Sonny Perdue introduced the Fast Forward Congestion Relief Program which includes accelerated growth of the NaviGator system throughout the Metro Atlanta region. The Fast Forward Program provides \$211 million to expand the Navigator and Highway Emergency Response Operator (HERO) coverage with a goal of reducing peak hour delays by 30%. This project covers SR 400 from 3600 ft South of the SR 120/Old Milton Parkway interchange to 4400 ft North of the SR 20/Buford Highway interchange. This work will assist in faster incident detection at the TMC, resulting in quicker response by emergency personnel, better information to travelers, and improved highway safety.

Project Location:



Location of Project in Fulton and Forsyth Counties



Detailed Map of Project Corridor

Description of the approved concept:

Coverage

This project will include complete CCTV and VDS coverage necessary to provide roadway condition information to the NaviGator system. CMS are to be installed to communicate roadway condition information to drivers. NaviGator equipment will be installed along SR 400 from 3600 ft South of State Route 120 to 4400 ft North of State Route 20. This project will extend the fiber trunk line along SR 400 from 3600 ft South of SR 120/Old Milton Parkway to the northern project limit at 4400 ft North of SR 20/Buford Highway as well as two proposed mini hubs. See figures on page 2 for location maps of the project area.

Communications Plan

This project will use the new digital communications architecture. The video data and control communications from the new devices will be sent via Gig Ethernet network, as opposed to the older analog method involving switches and multiplexers. All network electronics required to operate and communicate with the devices in this project are included as well as two proposed mini hubs located at Windward Pkwy and SR 20.

A 144-fiber optic trunk line will be located on both the northbound and southbound sides of GA 400, as close to the back of the clear-zone as possible. The trunk line may enter the paved shoulder to cross bridges and at other locations where it is not feasible to locate outside the paved shoulder. The trunk will be carried within continuous conduit duct banks, which will have 4-2" conduits.

CCTV

CCTV Type B Dome cameras will be designed to provide continuous coverage of SR 400 within the project limits, as well as coverage of metered on-ramps. These cameras will be mounted on eighty-foot concrete poles located off the shoulder of the highway at the back of the clear zone. However, where appropriate, some cameras may be mounted on poles behind guardrail, on bridge overpasses, or on overhead sign structures. This project will include surveillance cameras with typical spacing every 2/3 mile to provide interchange coverage as well as at ramp meter locations. The poles or other mounting apparatus for the cameras are included in this project.

VDS

VDS camera locations have been chosen to provide an average spacing of 1/3 mile along the project limits, as well as at each ramp meter location. These cameras will be mounted on eighty-foot concrete poles located mainly off the shoulder of the highway at the back of the clear zone. However, where appropriate, some cameras may be mounted on existing sign structures or on poles behind guardrail. The poles or other mounting apparatus for the cameras are included in this project.

Changeable Message Signs (CMS)

Five (5) CMS are proposed for this project. Each sign will be 3' x 21', mounted on full-span overhead structures. The locations of each of the five signs are as follows: The first CMS will be located on SR 400 northbound, prior to the Old Milton Pkwy interchange, just south of Kimball Bridge Rd. The second CMS will be located on SR 400 northbound, prior to the McFarland Road interchange. The third CMS will be located on SR 400 northbound, prior to the SR 141/Peachtree Pkwy interchange. The fourth CMS will be located on SR 400 southbound prior to the SR 20/Buford Highway interchange, just north of Buford Dam Rd. The fifth CMS will be located on SR 400 southbound prior to the McFarland Road interchange. Each sign will provide information on SR 400 and I-285 travel conditions, as well as local construction and delay information.

Ramp Meters

Ramp Meters will be installed along SR 400 at all northbound and southbound entrance ramps, with the exception of northbound and southbound approach ramps at SR 120 (Old Milton Parkway). Ramp meters at these locations are being designed separately under the GRTA bus/shoulder lanes project, PI 100752. This project (PI 0006335) will install fiber on the north and south sides of GA 400 to connect the GRTA ramp meters to the NaviGator system and the TMC.

Hubs

This project will include installation of two new mini hubs along the SR 400 corridor. The new mini hubs will be located at Windward Pkwy and SR 20, and will serve as field connection points for the various devices installed on this project.

PDP Classification: Major Minor

Federal Oversight: Full Oversight Exempt State Funded or Other

Functional Classification: Urban Principal Arterial

U. S. Route Number(s): 19

State Route Number(s): 400

Traffic (2004 AADT)

source: http://www.dot.state.ga.us/dot/plan-prog/transportation_data/traffic_counts/index.shtml

SR 400 from SR 120/Old Milton Parkway to Windward Parkway	67,750
SR 400 from Windward Parkway to McFarland Road.....	76,070
SR 400 from McFarland Road to SR 141/Peachtree Parkway	54,730
SR 400 from SR 141/Peachtree Parkway to SR 20 Buford Highway	69,970

~~Proposed features to be revised:~~

- *The project limits are revised to be SR 400 from 3600 ft South of SR 120/Old Milton Parkway to 6800 ft North of McFarland Road.*

Describe the revised feature(s) to be approved:

- *The project installs new fiber optic communications in new conduit duct bank, surveillance cameras (CCTV), video detection system cameras (VDS), changeable message signs (CMS), and ramp meters on SR 400 from 3600 ft South of SR 120/Old Milton Parkway to 6800 ft North of McFarland Road.*

Updated traffic data (2005 AADT):

source: http://www.dot.state.ga.us/dot/plan-prog/transportation_data/traffic_counts/index.shtml

SR 400 from SR 120/Old Milton Parkway to Windward Parkway	101,720
SR 400 from Windward Parkway to McFarland Road.....	74,420

Programmed/Schedule: *Construction fiscal year FY 07.*

VE Study Required Yes() No(X)

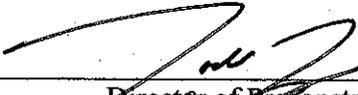
Revised cost estimates:

- *See attached Cost Estimate*

Is the project located in a Non-attainment area? Yes No

No impact resulting from the revised concept report design features.

Recommendation: Recommend that the proposed revision to the concept be approved for implementation.

Concur: 

Director of Preconstruction

Approve: 

FSL: Division Administrator, FHWA

Approve: 

Chief Engineer

Attachments:

1. Cost Estimate

