

NOTES FOR R-2547 DESIGN-BUILD Pre-RFQ Meeting Sept. 28, 2001

Good Morning!

I would like to share some information with you on the US 64, Knightdale Bypass.

The project is located in eastern Wake County, which is in Division 5. This project is approximately 9.6 miles (15.5 km) in length and is currently broken down into 3 parts-Part BB, Part C and Part CC.

Part BB and Part C were scheduled to be let in FY 03 and Part CC in FY 05, by allowing this project to go Design-Build we will hopefully complete the project in less time. The estimated completion date is May 2005.

The project begins approximately a ½ mile east of New Hope Road, bypassing Knightdale to the south and tying back into the existing US 64 Bypass just east of US 64 Business and Rolesville Road. The future I-540, East Wake Expressway which is not part of this project will eventually tie to the Knightdale Bypass and is scheduled for construction in post years.

The public hearing map used for the project and copies of the 3 Title Sheets for each part is posted for your review. This information will also be available on the Design Services Website.

All of the major Planning Studies are complete. Copies of the Draft EIS, Final EIS, and ROD will be made available to the short-listed firms.

A Final Noise Report on Part C has been submitted to FHWA for approval and should be available by the time we select the short-listed firms in December of this year. A Private Engineering firm is currently working to complete the Noise Reports for Parts BB and CC. The Draft Noise Reports for Parts BB and CC should be available to the short-listed firms by this time as well.

The Department has already done a lot of the design and coordination between the permitting agencies, the Railroad and the City of Raleigh for this project - a lot more than previous projects selected for Design-Build.

The different DOT units will develop a scope of work for each area of work by November 1 of this year.

I would like to briefly go through each area of work to let you know what information is available and what your general responsibilities will be.

Roadway Design Work:

- Check and complete the existing design and construct a new location 6-lane freeway with 14m (46') median. NCDOT has already designed approximately 80% of the project. On the plans, there are interchanges designed for Hodge Road, the future East Wake Expressway, Smithfield Road, future Eagle-Rock Rd. and Taylor Rd. relocation, and at US 64 Business and Rolesville Road. Some slight modifications and additions will be required to get the plans into a final plan stage. Every effort should be made to retain the existing design, since Right of way acquisition is almost completed and the permit application will be submitted to the Corps for the entire project in October 2001.
- The mainline design should meet Freeway Standards with a 110 km/hr (70 mph) design speed in rolling terrain. The design and construction should follow the 2001 AASHTO design guidelines and NCDOT January 2002 Standard Drawings and Specifications. From our design there should be no design exceptions.
- The D/B Team will complete the design work in Metric Units using Microstation J and GEOPAK 2001 software.
- On Part C of the project, Noise Walls are recommended at the Baywood Forest Subdivision along Ramp C in the southwest quadrant of the Smithfield Road interchange. As of right now we are not expecting anymore noise walls, but Part BB and CC are being studied again as I mentioned earlier, design noise reports will be furnished to the short-listed firms. NCDOT's standard pile and panel walls are to be recommended.
- On Part BB of the project, A Privacy Wall for visual screening and to some extent noise reduction is to be constructed for the City of Raleigh's Anderson Point Park. The wall height in the fill areas along the outside shoulder is 3m high and along the cut slope is 1.8m high. We are working on details for a pile and panel wall to be used here as well.

R-2547 Design-Build

9/28/2001

Page 3.

- Coordination between contractors will be required on the western end of the project where this project ties to the

R-2547BA project. Project R-2547BA is currently scheduled to be let to contract in April 2002, therefore, construction operations will be occurring at the same time.

- Also, there will need to be some cooperation with contractors working on the 2 mitigation sites at Mango Creek and Marks Creek. They should be out of your way by the time construction begins, but there maybe times when they need to get back the the sites.

Structure Design Work:

- We have 20 bridges and 2 box culverts that are under design contract. (9 bridges for Part BB and 11 bridges and 2 culverts for Part CC.) The design for 5 bridges on Part C will be the responsibility of the D/B Team. The sites are at Bethlehem Rd, a set of dual mainline bridges over Poplar Creek and a set of dual mainline bridges over Smithfield Road. The bridge for the future interchange at relocated Eagle Rock Rd. and Taylor Rd. is not included.
- The design for the 20 bridges and 2 culverts will be completed and turned over to the D/B Team for construction. The approach and trailing ends of bridges are being designed using the new Jan. 2002 standards for guardrail attachment.
- The Structure Design Unit has developed standard Noise Wall details using standard pile and panel noise walls. These detail drawings will be provided to the short-listed firms.
- There is 1 retaining wall, which is on Part BB along the mainline underneath the Rogers Lane Bridge, which will eventually serve Anderson Point Park. From our preliminary design, the majority of the wall is 2m in height, however, there are locations where the wall height exceeds 3m. It will be the D/B Teams responsibility to investigate and develop the retaining wall design.

Hydraulics and Permitting Work:

- The hydraulics design is done. The permit application is being completed and should be submitted to the Corps in

October for approval. The department has worked through the stages of avoidance and minimization with the agencies.

- We encourage the D/B team the opportunity to find ways of reducing wetland and stream impacts; we feel this would be a good opportunity to reassure the agencies that the Design-Build process is not a way of ram-rodging projects through.
- If the design changes, the permit modification drawings will be the D/B teams responsibility. The Team will submit the permit modification drawings to the Department's Natural Systems Unit for their coordination and approval with the agencies.
- We are working on the mitigation phase for the project now and we are looking at 2 on-site mitigation sites- one is the Manco Creek site which is located between Hodge Rd., the RR and the Neuse River. This site is approximately 215 acres in size. The proposed mitigation site is for preservation with some stream restoration within the site.
- The Marks Creek site is approximately 75 acres in size and is located on the old Sloan Farm property south of the future interchange at Relocated Eagle Rock Rd. and Taylor Rd. This mitigation site is for restoration and enhancement of the land. The department plans to let a contract for this work in January 2002. Construction and planting should be complete by May 2002.
- There is another mitigation site located in Johnston County named (Benson Grove) which is approximately 35 acres in size that the DOT plans to use for mitigation for this project and another Wake County project.

Pavement Work:

- The pavement designs and shoulder drain details will be provided. The Pavement Management Unit recommends concrete pavement for the mainline with full depth asphalt for both the outside and median paved shoulders.

- Any Temporary Detour pavement designs will be the D/B Teams responsibility. Design Criteria will be provided to Teams for developing the temporary designs.

Geotechnical Work:

- A complete geotechnical investigation package will be provided to the short-listed firms, which includes a full roadway profile and subsurface information on the 20 bridges, which are currently being designed.
- This package also includes subsurface information at the 3 bridge sites, for those (5) Bridges on Part C.

Location-Surveys and Photogrammetry Work:

- The Work is done. Full electronic surveys will be available for the short-listed firms. The surveys were completed in metric units. The existing Utilities are located by X and Y dimensions and are included with the survey data. Any SUE work and any utility lines not shown on the existing plans will be the responsibility of the D/B Team to locate.

Right Of Way Responsibilities:

- R/W acquisition is underway on all 3 projects. The R/W for Parts BB and CC is almost complete. Part C is a little further behind but should be completed by the time this project is awarded. The R/W for R-2641 was purchased under R-2547BB and extends to north of Lynnwood Road.
- The R/W width is basically 90 to 100 meters wide for the majority of the project length. It is greater in interchange locations. If any additional drainage easements or construction easements are needed then it will be the D/B Teams responsibility to coordinate and contact the property owners for an agreement.

R-2547 Design-Build

9/28/2001

Page 6

Utilities Work:

- The D/B Team will coordinate with the Utility Owners who will handle the Utility conflicts with OH power transmission and distribution lines, OH and U/G telephone lines, fiber optic cables, cablevision lines and gas lines.
- The City of Raleigh and the Towns of Knightdale and Wendell have water mains and sewer mains that cross the proposed Bypass alignment in several locations. It will be the

responsibility of the D/B Team to coordinate, design and construct the water and sewer line connections.

- The D/B Team will be responsible for getting power to the lighted overhead signs. There maybe some interchanges on the project that may require lighting. Studies are in progress and a determination should be made by mid October.

Signing Work:

- Sign fabrication and installation will be the D/B teams responsibility. The Signing Unit will provide the sign designs, a concept map showing the proposed sign locations and a copy of the departments sign support software to the D/B Teams.

Traffic Control and Pavement Marking Work:

- The CC part of the project is approximately 25% complete, The US 64 Bypass, US 64 Business and Rolesville Rd. work was looked at and preliminary plan worked up. The available electronic TCP and Pavement marking plan files on Part CC can be transmitted to the short-listed firms.
- Parts BB and C have not had any significant design work started.
- A list of parameters such as lane closures, time restrictions, pavement marking and general TCP guidelines will be developed for the short-listed teams in helping them prepare TCP's. All TCP's must have Division Approval.

Traffic Signal Work:

- There are 7 traffic signals that are involved that will be the D/B Teams responsibility. (2 @ Hodge Rd. interchange, 2 @ Smithfield Road interchange, 2 @ US 64 Business interchange and 1 existing signal to be upgraded at US 64 Business and Rolesville Rd. intersection. There maybe some additional signals outside the project limits pending further review of the signal system.
- Temporary signals due to Traffic control issues will also be the responsibility of the D/B Team.

Roadside Environmental Work:

- An Erosion Control Plan prepared using NCDOT Stds. must be reviewed and approved by the Roadside Environmental Unit before any land disturbing activities can take place.
- The D/B Team must have a Full time Erosion Control Inspector on the project. As part of the Erosion Control scope of work, they are considering penalties for NOV's and lack of response in maintaining the erosion control devices and on the flip side, offering bonuses for doing a good job.

Public Information Work:

- The D/B Team will need to work through the Division Office and the Construction Unit located here in Raleigh for any public involvement.

CONSTRUCTION COSTS

The latest estimated construction cost for the entire project is estimated to be \$132,600,000. The breakdown for each part is:

R-2547BB	=	\$ 55,500,000
R-2547C	=	\$ 35,300,000
<u>R-2547CC</u>	=	<u>\$ 41,800,000</u>
TOTAL	=	\$132,600,000

Thank you for the opportunity to share this information. I hope I have stirred up your interest in this project. I will be available at the end of the presentations to help answer any questions and there are other Engineers here representing each area of the work that I have covered to help answer specific questions. I will now turn this over to Mr. Victor Barbour.