

Post Design-Build Evaluation Report

Project Description: I-20 East Bound Collector Distributor

P.I. Number: 0009542

Project Number:

County: DeKalb

GDOT District: District 7

Date Conducted: September 17, 2013

1. Project Description:

This project is located in DeKalb County, Georgia on I-20 in the vicinity of the eastern I-20/I-285 interchange, near the towns of Lithonia and Decatur, Georgia. The project is 4.54 miles long and begins at approximate I-20 mile log 66.62 (DeKalb mile log 7.15), just east of the eastbound I-20 off ramp to I-285, and ends at I-20 mile log 71.16 (DeKalb mile log 11.68) at the Panola Road interchange. The project affected only the eastbound lanes of I-20.

This project consisted of constructing approximately 1.2 miles of collector-distributor (CD) lanes from the I-285 / I-20 interchange to Wesley Chapel Road. Three CD lanes were constructed within the existing roadway right of way on the south side of I-20 and are separated from the I-20 through lanes by a continuous barrier.

To serve the I-20 traffic entering the CD, an auxiliary lane was constructed which widened I-20 from 3 to 4 lanes from just east of the gore area of eastbound I-20 off ramps to I-285 continuing approximately 2700 feet eastward to the proposed slip ramp to the CD lanes.

Additionally, I-20 was widened from 3 to 5 lanes from just east of Wesley Chapel Road, where the 2-lane CD merges with I-20, for approximately 4700 feet; from there to Panola Road (approximately 1.7 miles), one lane is dropped and I-20 was widened from 3 to 4 lanes.

To provide more adequate ramp storage capacity and to accommodate the widening, the eastbound on and off ramps for Wesley Chapel Road and the eastbound off ramp for Panola were partially realigned. The I-285 NB and SB ramp to I-20 EB was also realigned to form the beginning of the proposed CD lanes.

Sound walls were constructed in 9 different locations along the corridor – 6 along eastbound I-20 and 3 westbound. The sound wall locations include walls in the northwest and southwest quadrants of the I-285/I-20 interchange.

2. Design-Build delivery goal(s): *Expedited delivery, and to make use of available funds.*

3. Project stakeholders:

- *GDOT - Project Delivery and Inspection*
- *C.W. Matthews – Prime Contractor*
- *Michael Baker Corporation (formally known as The LPA Group) – Prime Designer*

4. Project Summary:

Project Milestone	Date	Procurement Summary	
Public Notice Advertisement (PNA)	2/17/2010	No. of SOQ's received	4
Request for Qualifications (RFQ)	9/16/2010	No. of teams shortlisted/prequalified	4
Statement of Qualifications (SOQ)	10/18/2010	No. of price/technical proposals received	4
Request for Proposals (RFP)	11/19/2010	Amount of lowest responsive bid	\$30,954,796.73
Letting	1/21/2011		
Award	2/4/2011		
NEPA Approval (CE)	3/15/2011		
NTP 1 - Design	3/21/2011		
NTP 2 - Construction	1/11/2012		
Contract Completion Date	7/31/2013		
Open to Traffic	7/31/2013		
Construction Complete	7/31/2013		

5. **Design-Build Proposers:**

	Contractor	Designer	Shortlisted or Prequalified (Y/N)	Total Bid
1	C.W. Matthews Contracting	Michael Baker Corporation (formally known as The LPA Group)	Y	\$30,954,796.73
2	E.R. Snell Contractor, Inc	Moreland Altobelli	Y	\$31,751,602.00
3	Sunbelt Structures, Inc.	URS Corporation	Y	\$34,190,770.00
4	Prince Contracting, LLC	ATKINS (formally known as PBS&J)	Y	\$38,559,800.00

6. **Stipend**

- a. Was a stipend (stipulated fee) offered to proposing Design-Build teams? Yes No
 If yes, how much per firm: -

7. **Design-Build Request for Qualifications (RFQ)**

- a. Did GDOT employ a shortlist of between 3 and 5 Design-Build teams? Yes No
 If yes, list reasons why a shortlist was utilized for this project: -
- b. General observations of the RFQ process: *None*

8. **Design-Build Request for Proposals (RFP)**

- a. Type of procurement: Two Phase/Low Bid
- b. Advertisement duration: 30 days 60 days 90 days
- c. Was a draft RFP released for this project? Yes No
 If yes # of releases: -
- d. Was a Q&A format provided? Yes No
- e. Were One-on-One meetings held with proposers? Yes No
- f. List GDOT offices involved in the RFP development: *Design Policy & Support, Environmental Services, Innovative Program Delivery, Utilities, Construction, Maintenance, Bridge*

9. **Design-Build RFP Package**

- a. List items included in the RFP package:

Item	Yes	No	Notes
Costing plans	X		
Approved bridge layouts		X	Not required
Approved concept report/concept revision	X		
Approved IJR/IMR	X		
Approved Environmental Document		X	Environmental document was not approved prior to letting.
CAiCE or InRoads files	X		
Microstation files	X		
Approved Design Exceptions/Variances	X		
Approved BFI		X	Not required
Approved WFI	X		
Approved Soils Report	X		
Geotechnical borings	X		

Approved Pavement Design	X		
Pavement Design Alternative		X	
Overhead/Subsurface Utility Engineering (SUE) Quality Level "B" (QL-B)	X		
Utility Memorandum of Understanding (MOU)	X		Several MOUs were provided as amendments.
Costing Plan Review Report	X		
Draft Transportation Management Plan (TMP)	X		
Special Provision 999	X		
Other	X		Plans from past projects in project limits

- b. General observations of the RFP contents and/or procurement process:
- o *RFP was very prescriptive on project scope requirements and were written to mimic the costing plans. This level of prescriptiveness did not allow for much deviation during final design by the Design-Build Team. Future design-build projects should look to be less prescriptive to allow for Design-Build Team innovation and potential project cost savings where such innovations and deviations will not impede any planned future expansions within the project limits.*
 - i. *Construction Office noted that the ATMS and retain pavement Supplemental Agreements were both caused by the prescriptiveness of the scope. If more flexibility had been in the contract, then these supplemental agreements may have been avoided.*
 - o *C.W. Matthews: Suggestion to revise MOU process to include prior rights information. Contractors have difficulty obtaining this information from utility owners.*
 - o *IPD: The MOU is currently being evaluated to improve clarity on the requirements of the Design-Build team. C.W. Matthew’s concern about obtaining prior rights was noted, but this information is also difficult for the Department to obtain from utility owners and waiting on this information could cause project delay.*
- c. Were conflicts in project scope identified: Yes No
- If yes, what sections should be revised for future RFPs:
- o *The GDOT Maintenance Office has requirements and needs for sound barriers that haven’t been enforced on past Design-Bid-Build projects such as angle iron at the top of the sound barrier and the need for access doors. This should be spelled out in future RFPs.*
 - o *Ensure power lines are accurately surveyed and width and height of lines are identified in areas where they cross proposed sound barriers. This should be identified accurately in the NEPA document to ensure that the constructible sound barrier is modeled in the Noise Barrier Impact Study.*

10. Environmental

- a. Type of document: NEPA: Level: PCE CE EA/FONSI EIS/ROD
 GEPA: Level: Type A Type B EER/NOD
- b. Was the environmental document approved prior to the RFP advertisement? Yes No
- c. Was a re-evaluation performed post-let? Yes No
- If yes, describe scenario why a re-evaluation was required: - *The Design-Build Team minimized impacts to streams and wetlands and moved sound barriers*
- If yes, did the Design-Build team perform the re-evaluation? Yes No

If yes, did the Design-Build team provide supporting documentation? Yes No

d. General observations of the pre-let or post-let environmental process:

- o *The CE was approved on March 15, 2011 and the Re-Evaluation process was started less than 3 months later.*
- o *The Re-Evaluation was triggered by the DB Team reducing the impacts to streams and wetlands and shifting sound barriers to optimize their locations for construction staging and earthwork.*
- o *Due to changes to the NEPA requirements for sound barrier evaluation, the Re-Evaluation included updating the noise study to comply with the new requirements.*
- o *A less prescriptive NEPA document regarding the impacts to streams and wetlands as well as sound barrier locations may have prevented the need for a re-evaluation.*

11. Environmental Permitting

a. Type of 404 permit required: NWP IP Other None

b. Was mitigation required as part of the permit? Yes No

If yes, did the Design-Build team perform mitigation and/or acquire credits? Yes No

c. Was a Stream Buffer Variance (SBV) required? Yes No

d. List any other permits required by the project (not counting NPDES Permit): *None*

e. General observations of the environmental permitting process:

- o *As part of the RFP, GDOT required the Design-Build team to be responsible for all environmental permits and variances. The DB team prepared the permits and submitted them to the Department for submittal to regulatory agencies.*
- o *A No-Rise certification was also required from DeKalb County that ensured that no permanent fill was added to the flood plain.*

12. NPDES Permit

a. Did the Design-Build team prepare the Notice of Intent (NOI)? Yes No NA

b. Did the Design-Build team pay the NPDES permitting fee? Yes No NA

c. Were the ESPCP regularly redlined? Yes No NA

d. Did any self-report actions occur? Yes No

If yes, describe the reason(s) and outcome(s): -

e. Was a consent order filed? Yes No

f. If yes, describe the reason(s) and outcome(s): -

i. Additional comments:

- o *NPDES permit was revised as the total disturbed area changed during construction. A permit revision was processed through EPD to document the change; GDOT paid the permit change fees. The change revised the disturbed area from 65.6 acres to 68.2 acres.*
- o *C.W. Matthew's requested that the plans be fully reviewed by EPD prior to submitting with the NOI, if possible.*

13. Right of Way (R/W)

a. Was R/W required? Yes No

If yes, who was responsible for R/W? GDOT Locals Design-Build team

If yes, was it acquired prior to award of the Design-Build contract? Yes No

If yes, did R/W acquisition activities impact the project schedule? Yes No

- b. How were R/W commitments or cost-to-cure elements handled on this project: -
- c. List any special circumstances, conditions, or property owner commitments of R/W acquisition: -
- d. General observations of the R/W acquisition process: -

14. Utilities

a. Was SUE performed pre-let and included in the RFP package? Yes No

If yes, what level? QL-D QL-C QL-B QL-A

If No, was a 'SUE waiver' approved by the State Utilities Office? Yes No

If No, what was the mitigating activity (e.g. white lining specification, "no-conflict" letters, first submission plans): -

b. Were Design-Build Utility MOU's executed? Yes No

c. List the utility owners, if any, which were included in the Design-Build contract: *AT&T, AGL, and DeKalb County Water and Sewer*

d. Generally describe observations with respect to Design-Build utility coordination:

- o *Design-Build team was able to avoid all conflicts and "no conflict" letters were received from all Utilities post-let.*

e. Generally describe any areas of improvement with respect to Design-Build utility coordination:

- o *Quality Level-B plans that were provided with the RFP package had several lines identified as "unknown size or type" and locations labeled as "unable to locate". C.W. Matthews noted that during their verification they were able to locate and label all of the utilities relatively easily.*
- o *C.W. Matthews requested that the provided SUE information be complete so that the verification step is truly a verification and not a combination of verification and location.*

f. What was the frequency of utility coordination meetings: *Monthly until "no-conflict" letters were received.*

15. Geotechnical

a. Was an approved Soils Report included in the RFP package? Yes No

If no, was a Soils Report required for the project? Yes No

b. Was an approved BFI included in the RFP package? Yes No

If no, was a BFI required for this project? Yes No

c. Was an approved WFI included in the RFP package? Yes No

If no, was a WFI required for this project? Yes No

d. Was an approved High Mast Found Investigation report included in the RFP package? Yes No

If no, was a HMFI required for this project? Yes No

e. Were there any geotechnical issues encountered on construction? Yes No

If yes, describe issues and outcome:

- o *Extensive rock was encountered when placing the posts for the sound barriers. Additional subsurface information may have helped mitigate this.*

- *C.W. Matthews requested that any and all information be provided during the bid process to help quantify and mitigate project risks.*

16. Design and Construction Phases

- a. Did the Design-Build team advance portions of the project to the construction phase while other portions of the project continued to be designed and/or permits obtained? Yes No

If yes, describe:

- b. Describe the typical frequency for progress meetings? *As needed.*

- c. Were the Design-Build team plans/submittals of acceptable quality? Yes No

If no, describe issue and any corrective actions taken: -

- d. Were GDOT's review times adequate? Yes No

If no, describe:

General observations of review times:

- *Review times were met on most submittals. Review times did not cause delay to the project.*

- e. Was the Asphalt Index specification included in this project? Yes No

- f. Was the Fuel Index specification included in this project? Yes No

- g. Was construction staging/Maintenance of Traffic (MOT) acceptable? Yes No

If no, describe:

- h. Was the Schedule of Values adequate? Yes No

If no, describe:

General observations of Schedule of Values:

- *FHWA commented on sound barriers and requested additional breakdown for each wall.*
- *IPD to discuss further and determine ways to standardize the Schedule of Values.*

- i. Was the pay voucher and overall payment process acceptable? Yes No

If no, describe:

- j. Was the Critical Path Method (CPM) schedule specification used on this project? Yes No

If yes, describe general experiences (pro or con) using the CPM specification: -

- *A CPM Schedule was not required or submitted for this project, but was used by C.W. Matthews to track the project.*
- *A progress schedule was submitted when requested during construction.*

If yes, any suggested improvements to the use of CPM schedule: -

- k. Were there any unique issues (to Design-Build) that occurred? Yes No

If yes, describe?

- l. Were sound barriers required on this project? Yes No

If yes, describe the material/color?

If yes, was the sound barrier material/color specified in the contract? Yes No

- *Acceptable sound barrier types were provided as options: Type B, Type C, or absorptive panels were allowed*
- *Color was not specified in the contract;*
- *Type B – Beige sound barriers were installed*

- *An adjacent property owner complained about the sound barrier blocking the view of his commercial property from I-20. IPD and C.W. Matthews worked together to work around this wall while a resolution that the property owner was amenable to could be reached. Ultimately the property owner chose to relocate and the walls were built as specified in the plans.*

If yes, was the sound barrier height/location specified in the contract? Yes No

- *Due to the specified locations, the Design-Build team triggered a re-evaluation by moving the sound barrier to optimize the design for the project.*

m. Were there lane closure restrictions on this project? Yes No

If yes, were they adequate or could they have been modified for efficiency:

- *The lane closure restrictions were modified to allow for construction in certain areas and to allow C.W. Matthews additional time for lane closures as a supplement for lost time due to several events that prevented their ability to work.*

n. Were there ITS outage restrictions on this project? Yes No NA

If yes, were they adequate or could they have been modified for efficiency:

o. Were there new or existing Traffic Signal modifications required? Yes No

If yes, were the traffic signal permits obtained by GDOT: Yes No

p. Were As-built plans prepared by the Design-Build team? Yes No

17. Design-Build Innovations

a. Were there innovative designs, solutions or materials used on this project? Yes No

If yes, describe:

- *Lightweight fill (geo foam) was used on top of an existing box culvert which allowed the culvert to be retained in place.*
- *Innovative sound barrier options were examined to reduce impacts to a property owner adjacent to I-20 including clear sound barrier. This was ultimately not installed as the property owner relocated during the project's construction.*
- *Special foundation design was used on MSE retaining walls to allow for larger sound barriers to be installed on top of them. Ultimately the bridge office decided to lower the height of the sound barriers to meet their standards.*
- *A special design was developed for cast-in-place retaining walls to allow sound barriers to be attached to them.*
- *C.W. Matthews proposed to retain the existing shoulder pavement that became the auxiliary lane into the collector distributor system as part of the final configuration. By retaining this pavement, the Department received a cost savings and C.W. Matthews saved construction time.*

b. Were any Value Engineering Change Proposals (VECP) submitted? Yes No

If yes, fill out the below information:

No.	VECP Description	Total Savings	Approved

e. List other benefits that are not reflected in the cost savings:

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18. Supplemental Agreement Summary

SA No.	Amount	Description
1	\$70,462.80	Replacement of existing damaged ROW fence at the request of the District Construction Office.
2	\$0	Additional lane closures were allowed to supplement work hours lost due to local events.
3	(\$ 71,255.13)	Additional compensation for power service connections for Georgia Power. Service points were provided as part of the costing plans and were unable to be met by Georgia Power at the time service was required. Credit compensation was provided which was based on the DB team proposal to retain existing concrete pavement in the shoulder that was converted to the onramp into the CD system.
4	\$27,128.37	Additional paving as requested by the District Construction Office.

19. DBE

- a. What was the project’s DBE goal? 12%
- b. Was it or will it be met? Yes No

If yes, generally describe utilization: *trucking, MSE walls, sound barriers, ITS cabling and equipment*

If no, then describe reasons: -

20. Summary of observations from Office of Innovative Program Delivery (IPD)

- a. *Design-Build delivery goals were achieved.*
- b. *The progress meetings that were conducted were beneficial and productive.*
- c. *The Preliminary Plan Submittal included inconsistencies between the cross sections, profiles, typical sections, and construction plans. This was due to receipt of the final survey confirmation package very close to the preliminary plan submittal date which caused the inconsistencies in the information shown on the plans that generated the need for a re-submittal of certain portions of the plans. The DB team should allow more time from receipt of final survey deliverables to submission of plans to ensure all information in the plans is updated accordingly.*
- d. *The Design-Build team’s ability to avoid all utility relocations and to minimize stream and wetland impacts expedited the delivery of the project.*

21. Summary of observations from Office of Construction

- a. *Design-Build provided flexibility during construction which was beneficial and allowed for changes to be made on the fly without requiring supplemental agreements.*
- b. *Requiring the Design-Build team to develop and then maintain/enforce their own erosion control plans is a major benefit as issues arise. In a Design-Bid-Build contract unforeseen issues and design changes would result in a supplemental agreement that would not be required on Design-Build contracts.*

22. Summary of observations from Design-Build team

- a. *Good overall project.*

23. Recommendations

- a. *Evaluate the close-out process for Design-Build projects.*
- b. *Materials certification process needs to be evaluated for Design-Build projects*

24. Notable achievements by early interaction of design and contractor

- a. *Optimization of sound barriers and retaining walls*
- b. *Design of the light weight fill on top of the existing culvert and working through that solution.*
- c. *Overall constructability of the project.*

25. Post Design-Build Evaluation participants:

Design-Build Team:

- a. Tony Bradley
- b. Bob Thompson
- c. Al Bowman
- d. Tyler McIntosh

GDOT Construction:

- a. Obi Ezenekwe
- b. Ira Witherspoon
- c. Shun Pringle
- d. Melissa Harper

Engineering Services:

- a. Steve Matthews
- b. Matt Sanders

Innovative Program Delivery:

- a. Marlo Clowers

HNTB Corporation:

- a. Rob Lewis
- b. David Hannon