

Owner's Construction Engineering and Inspection (CEI) Services and Owner's Verification Consultant

I-285 @ SR 400, PI# 0013546, Dekalb
and Fulton Counties

RFQ 484-110615

1. TECHNICAL APPROACH

a. Provide special or unique qualifications for delivering the Scope of Work.

The AECOM philosophy in building this team was to create a mix of highly-qualified individuals who have relevant and applicable construction experience, and also have experience working on both the owner's and contractor's side of a project. AECOM's roles across the Southeast as owner's (DOT's) representative, developer, designer or contractor give us a clear understanding of the Departments goals in order to ensure a high quality project is delivered to the State of Georgia.

AECOM Team Staffing Resources

Construction Management / Inspection	45
Traffic	30
Roadway	95
Bridge / Structural	15
Planning, Transit, Aviation	100
Environmental	70

With the passing of HB170, the Northwest Corridor Construction, I-85 HOT Lane Construction, two stadiums under construction and the increase of construction activities throughout the Atlanta market, available resources are going to drive the timely delivery of all construction projects. The AECOM Team has been assembled with this in mind. We have brought together four highly qualified and capable firms that have the depth of resources to ramp up or down as the I-285/SR 400 project construction schedule demands. AECOM, KCI, ICE and Kennedy Engineering (KEA) are the four members of the AECOM Team. Each of these team members has never failed to provide qualified staff to the Department when a contract or schedule demanded additional staffing. KCI, AECOM and KEA have been providing Construction Engineering and Inspection (CEI) services as an extension of GDOT staff in District One for over a decade.

In addition, with over **350** transportation staff in Georgia, the **AECOM Team** has ample manpower to ramp up or ramp down as this contract progresses. The above table shows a breakdown of Atlanta staff relevant to this contract.

The AECOM Atlanta office is located at the interchange of Abernathy Road and SR 400, which is **on the project corridor**. While our staff will sit with GDOT personnel in the project office, having an office this close to the project allows our team to be responsive to all of GDOT's project needs and quickly provide project resources as required.

BENEFITS OF OUR PRIMARY OFFICE:

Low turnover rate: AECOM Team staff will provide a continuity of personnel that GDOT can rely on throughout the life of the program.

One easily-accessible location with many resources: AECOM can quickly provide the myriad of resources the GDOT Team needs from one location.

Training and workforce development: A unique aspect of AECOM is its ability to assist GDOT in accomplishing key training elements that relate to the successful delivery of the I-285/SR400 project. Our lead trainer in the construction arena is Charles Crowell. Charles has successfully trained dozens of GDOT construction and senior staff, as well as many of the consultant construction staff working on behalf of GDOT on a daily basis. The Abernathy Road AECOM office provides a convenient training location so the project staff can effectively obtain training at the project site, then be back on the project performing the Owner Verification Responsibilities.

b. Provide a specific written plan describing awareness or understanding of the project.

AECOM has practical experience with this project spending three years developing and submitting the SR400 and I-285 unsolicited Public Private Partnership (P3) Proposal in 2004. The proposal included multiple iterations including some that were directed by the Department. Several of the proposed project specifics include CD lanes on GA400, a full redesign of the SR 400/I-285 Interchange, bridge replacement along with half diamond ramps at Hammond Road and reconstruction of the Abernathy Road/SR400 Interchange. Many of the proposed improvements in the P3 submittal have been constructed, are currently under construction, or are included in this current solicitation. AECOM developed engineering plans (including highway, bridge, ITS, drainage, and right-of-way); traffic and revenue studies, construction cost estimates, and construction schedules/phasing plans. The phasing plans laid out by the four developers provided on GDOT's website are very similar to the plan presented in 2004. AECOM will pull from this understanding of the proposed corridor and project to successfully deliver the Owner's Construction Engineering and Inspection (CEI) Services and Owner's Verification Consultant for GDOT.

In addition to the experience on the I-285 and SR400 corridor, AECOM is extremely experienced in the owner verification role. A great example of this experience is shown in our role as the Independent Engineer for the LBJ Express project in Dallas, Texas. The LBJ Express Project is a \$2.7 billion P3 to re-develop and expand the IH 35/IH 635 corridor in north Dallas. The project encompasses approximately 17 miles of improvements along IH 635 from Luna Road to Greenville Avenue. Construction includes direct connectors between IH 35 and IH 635, and a combination of depressed and elevated managed lanes within the existing IH

35 and IH 635 right-of-way. When construction is complete, drivers will be able to bypass existing traffic congestion using nearly 13 miles of six-lane managed toll roads. As part of this project, AECOM has provided owner verification and auditing services throughout the design, construction, operations and maintenance phases of the project. Some of the activities that are identical to the I-285 @ SR 400 Owner's Verification role are as follows:

- I. Develop a Quality Assurance Plan or Owner's Verification Testing and Inspection Plan (OVTIP)**
- II. Maintain a web-based electronic document management system**
- III. Review and comment on the Developer's Construction Quality Management Plan (CQMP)**
- IV. Inspect construction activities, including substantial completion and final acceptance**
- V. Owner Verification Testing (OVT)**
- VI. Track and advise TxDOT regarding non-compliance points**
- VII. Monitor Developer activities, including attending project meetings**
- VIII. Report to TxDOT**

The AECOM Team plans on bringing David Weeks, MBA, PE to participate in the I-285 @ SR 400 Owner's Verification role. Mr. Weeks brings 32 years of experience designing and constructing transportation infrastructure projects including his five-year assignment as Project Manager of the Independent Engineer for the LBJ project in Texas. He will have two primary roles on the AECOM Team; first he will lead the Fast Start team and second, he will lead AECOM's Team in the preparation of the reports to GDOT and FHWA. Mr. Weeks will utilize his experience to help the AECOM Team start the I-285 @ SR 400 project strong and hard. He will help our Project Manager/Resident Engineer, Bob Galante, PE, and Assistant Resident Engineer, Billy Cantrell, PE, develop the Owner Verification and Inspection Plan (OVTIP) and participate in reviewing and commenting on the Developer's CQMP. Getting these two critical path activities correct will set the stage for the entire project's owner's verification role. In addition, Mr. Weeks will lead AECOM's team in preparation of the quarterly reports to GDOT and FHWA for concurrence with project compliance per the approved CQAP. Mr. Weeks' understanding of FHWA's requirements and reporting structure will facilitate the preparation and submittal of these reports. Mr. Weeks can also participate in the annual report that assesses the quality of the acceptance sampling and testing program.

In addition to the P3 history along the corridor and Owner's Verification role on the LBJ Project in Texas, AECOM has developed a plan on our approach to delivering the project. It begins with a thorough understanding of the Construction Quality Assurance

Program (CQAP) for the I-285 & SR 400 Reconstruction Project. This manual outlines the Developer's responsibilities for Quality Acceptance by the Construction Quality Acceptance Firm (CQAF), the Independent Assurance (IA) Program and the Owner's Verification Firm (OVF). The AECOM Team is proposing to provide OVF services for the Department as part of this solicitation. As part of this contract, the AECOM Team will be responsible for the verification and validation of the QA results provided by the CQAF. The final acceptance will be provided by GDOT once the QA results are validated and verified by AECOM. The sampling and testing by the CQAF and OV are outlined within the CQAP, Appendix E. Each AECOM Team member and staff has or will have a thorough understanding of the CQAP before we get notice to proceed (NTP) on this contract. Our project team will at the expense of AECOM and our subconsultants ensure that this knowledge is carried into the start of the contract. This knowledge will support the fast start of this contract and enable success of the owner verification program.

c. Provide the proposed management approach of the project.

The AECOM Team has the management and oversight skills critical to successfully deliver the Owner's Verification for GDOT on the I-285 @ SR400 project. The AECOM management approach begins with our Project Manager/Resident Engineer, Bob Galante, PE. Mr. Galante has over 42 years' experience in construction and engineering. He has served as both the Construction Engineer and the Engineering Division Manager for Cobb County DOT. While in these roles he was responsible for the construction activities and protecting the best interests of Cobb County. He also has 20 years working for construction companies like Moseman Construction Company and Skanska. These past experiences make Mr. Galante a highly qualified Owner's Representative. The greatest asset that he will bring to this role is his ability to manage people and ensure the staff resources are adequately provided to deliver the Owner's Verification. Throughout his career Mr. Galante has worked on multiple interstate and interchange projects along I-75 and I-575 and understands the critical aspects of moving traffic through congested routes while maintaining safety. His experience in Cobb County provided a wealth of experience working side by side with GDOT staff, the Developer and the Developer's CQAF. Mr. Galante will use the three-week look-ahead provided by the Developer to manage the staff resources and plan inspection schedules. These schedules will then be adapted as weather, timing and construction progression change. In addition, Mr. Galante will provide the statistical analysis oversight. He will provide the overall evaluation of the testing and inspection and ensure that FHWA requirements are met for acceptance or if the nonconformance record process will need to be followed. Mr. Galante will lead verification and validation of the Developer's QA results, testing both owner's verification and quality acceptance, which together are the basis for final acceptance. The AECOM Team recognizes that GDOT will provide final acceptance where statistically validated OVF results.

AECOM Team's Assistant Resident Engineer will be Billy Cantrell, PE. Mr. Cantrell will assist Mr. Galante in the management and oversight of staff resources. Mr. Cantrell has more than 30 years

of experience as an employee of GDOT. His tenure with the Department includes experience in construction, maintenance and planning, and programming. At the time of his retirement he was serving as the Assistant District Engineer and District Maintenance Engineer. This multifaceted background provides Mr. Cantrell with the knowledge, skills, and abilities to manage construction engineering and inspection services contracts. Through his years as a GDOT employee, Mr. Cantrell gained valuable understanding of GDOT's processes and polices and will ensure that GDOT's best interests are represented through this owner's verification contract. Mr. Cantrell will be the AECOM Team's primary lead on reviewing the Traffic Interruption Reports (TIR) after GDOT issues NTP 2 to the Developer. Due to the critical issues associated with TIR's, the AECOM Team feels that only a Senior Level individual should be reviewing and accepting these reports. This is a huge point of emphasis for the AECOM Team as we want to ensure that traffic continues to flow throughout construction and that the traveling public has a thorough understanding of where and when delays may occur.

These three individuals - Mr. Galante, Mr. Weeks, and Mr. Cantrell - will be the AECOM Fast Start Team. Upon OVC NTP the AECOM Fast Start Team will begin four very important tasks as part of the initial approach to the Owner Verification role. These four tasks will need to be completed well before the Developer receives NTP 2. The first task will be reviewing and commenting on the Developers CQMP. The Developer has 60 days upon NTP 1 to submit this document to the Department. The AECOM Team will afford the same propriety to reviewing the documents, providing comments and working towards an accepted document. The second task will be the creation of the OVTIP. AECOM understands that it is critical that the plan for identifying the means to perform the validation and the step by step methods of inspection and testing will need to be in place well before the Developer receives NTP 2. The third task is the creation of the communication plan.

Key elements to the AECOM Team and the owner's verification role on this project include communication and responsiveness. With multiple construction activities going on at one time, it will be essential that the AECOM Team communicate effectively with GDOT, the other GDOT Team members and the Developer. During the initial stages of the project while the Developer is still in the design process, the AECOM Fast Start Team will develop this communications plan that will outline, weekly staff coordination meetings, partner meetings, e-builder/document control, and communication policies and procedures. The communication plan will allow the AECOM Team to be responsive to all the needs of the Department. The AECOM communication plan will ensure that there are no surprises for GDOT and GDOT's Team during the development and construction of this project. AECOM will strive to keep GDOT aware of any project issues early and often. Our policy will be "If you see something, say something." It is this responsiveness by AECOM in the owner's verification role that will ensure the success of the project.

The fourth and final task will be the development of the AECOM Team Safe Work Plan. AECOM's global Safety, Health and



Environment (SH&E) policy demonstrates the commitment the organization has made to protecting our most valued asset – our staff members. The AECOM Safe Work Plan developed for the I-285 @ SR400 OVC will be based upon the basic objectives of our overall program and responsibilities derived from AECOM's Core Values:

- ✓ Prevent work-related injuries or illnesses
- ✓ Prevent damage to property and/or equipment from our activities
- ✓ Prevent adverse impacts to the environment from our ongoing projects or operations

Developing the Safe Work Plan will be AECOM's method of providing for the safety of our entire team.

Upon completion of these four tasks and as the Developer's NTP 2 approaches, AECOM will bring on the Roadway Project Engineer, the Bridge Project Engineer and the Office Engineer. The AECOM Fast Start Team will quickly indoctrinate these individuals on the four critical tasks completed and begin the evaluation and understanding of the Developer's contract. It is important that all the Owner Verification Team members understand the Developer's contract with GDOT, so to ensure that we are following through on commitments by the Developer and GDOT. The AECOM Office Engineer, Robert Goodwin has 30 years' experience providing construction inspection, engineering design and program controls. Mr. Goodwin's program management services consist of a full slate of contract management, program controls, construction oversight, financial auditing, regulatory compliance, right-of-way acquisition, governmental liaison activities, Site Manager and e-builder. By bringing Mr. Goodwin in early, the AECOM Team will develop a smooth transition for the large amount of data transfer and document control that occurs as the Developer moves into NTP 2.

As AECOM approaches the Developer's NTP 2, the AECOM Team will be 100% prepared to handle the full work load of the Developer's construction activities. With the Fast Start period ending Mr. Weeks will transition off his full time responsibilities on the project and provide quarterly support on the FHWA reporting. Mr. Weeks is an asset to the AECOM Team and to the Department and if the Department desires, Mr. Weeks can stay on the project as long as needed. As the AECOM Team moves in to the Developer's NTP 2, we will have the staff, the plans and the

processes ready to successfully deliver and manage the owner's verification throughout construction.

d. Proposed construction quality assurance plan and training procedures. Understanding of GDOT's Construction Quality Assurance Program (CQAP) included in Exhibit VI Construction Quality Assurance Program (CQAP), I-285 & SR-400 Reconstruction Project, Project No. NHS00-0000-00(784) & NH000-0056-01(052).

The AECOM Team understands and appreciates that this project is being constructed utilizing an alternative finance and delivery method that requires a concentrated emphasis on Quality Control and Quality Assurance. Our team is very familiar with the GDOT Construction Quality Assurance Program (CQAP) and possesses the required technical ability, staff and experience required to ensure that the Developer remains in compliance throughout the project. We also understand that we will be acting as an agent for GDOT to ensure that the project and materials used in construction are in compliance with the Contract.

The AECOM Team understands the importance of communication and coordination with the Developer's CQAF team. As established in our communication plan, we will schedule regular meetings beginning before work commences to discuss their CQMP and how they plan to remain in compliance with the CQAP. Our staff will review the certifications of their proposed staff to ensure that they are in compliance with GDOT requirements. We will review their proposed methods and procedures for inspecting and documenting that all components of the Work are on the CQMP. During construction we realize that disputes may arise between the Developer's test reports and the results reported by our technicians. We will work immediately to resolve any disputes to prevent delays in the work and that all stakeholders are notified.

FHWA and GDOT have an established Independent Assurance Program that abides by the guidelines established in the Standard Practice for Independent Assurance (AASHTO R44). AECOM will adhere to the principles of unbiased independent evaluations. One important aspect of this project will be documentation and record keeping by both the Developer and the Owners Verification representatives. We have established methods and procedures in place to both create and maintain document logs on all activities on the project. The contract specifies the Developer must utilize Site Manager and the e-Builder Daily Work Report and furnish these reports to the OVR daily. We will inspect and audit the DWR's for compliance.

The AECOM Team is experienced in producing and submitting reports to FHWA. As mentioned previously, David Weeks will lead AECOM's efforts in preparing and reviewing the reports to ensure they are all correct and submitted on a timely basis.

We will submit a detailed plan (OVTP) prior to any work beginning that demonstrates our plan to comply with the CQAP. We understand that at a minimum we must perform oversight inspections and verifications on at least ten percent of the CQAF inspections, a

minimum of one audit per month on each category of the Critical Activity Point inspections as well as any other audits as directed by GDOT. We are also familiar with the Levels for Materials Validation, Qualification Performance Reports, and the established Schedule of Sampling and Testing as outlined in the CQAP, Appendix E.

The most important asset of any successful business is the employees. This fact is strongly recognized by the AECOM Team. It remains our intent to provide our employees with the opportunity and training to advance their personal and professional development. This development empowers our employees to perform in a professional and highly productive manner, exhibit confidence in the performance of duties and make informed decisions on projects.

The AECOM Team has adopted a training philosophy to ensure that our team is prepared to meet the needs of the Department in delivering the I-285 @ SR 400 improvement project. The concept is to bring together the broad range of expertise from each employee of each member of the team and share that expertise so that it may be widely applied in the field. The ultimate goal would be to round out the experience and expertise of all construction inspection staff on the project.

Classroom training is an ongoing effort for our construction inspection staff. We will mandate continued attendance to keep the requisite certifications current, as well as provide training to broaden an employee's expertise. All meaningful formal training opportunities within the profession will be considered and utilized as appropriate. A unique aspect of AECOM is its ability to assist GDOT in accomplishing key training elements that relate to the successful delivery of the I-285/SR400 project. The Abernathy Road AECOM office provides a convenient training location so the project staff can effectively obtain training near the project site, then be back on the project performing the Owner Verification Responsibilities.

On-the-job training will be utilized to enhance each individual's skills. The AECOM Team will make an effort to assign junior staff a mentor to assist and guide their individual advancement. Our inherent, strong sense of teamwork readily lends itself to this type of personal development. All employees strive to assist in the development of their fellow employees as well as to take responsibility for their own professional development. Hands-on experience for new inspectors with oversight from a seasoned inspector is invaluable in the training process. This process would utilize a "buddy" system to introduce less experienced staff to actual construction activities. This training will ensure that any inspector placed to work on this contract will be familiar with GDOT procedures and will be prepared to perform important inspection duties.

A discussion will be held with each Inspector and each Inspector Aide at least once monthly by the coordinators to evaluate their progress and training needs. Our Team possesses a sufficient quantity of well-trained Project Engineers and Senior Inspectors, and these people will be made available to provide guidance for the Inspectors and Inspector Aides.

We offer online training as well as requiring that inspectors complete a series of GDOT Engineering Skills Development courses. Each employee will be given names and phone numbers, including home

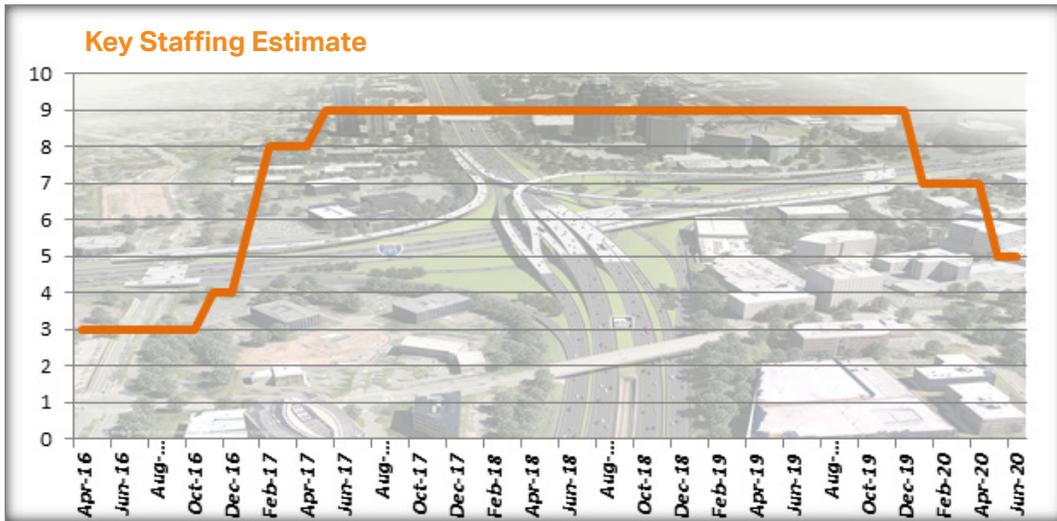
phone numbers, for mentors who are completely knowledgeable in these study areas. This will help prevent inspectors in training from getting “stuck” on problems by providing individuals from whom they can receive immediate response and assistance. Satisfactory completion of the basic training will be required for promotion from Inspector Aide to Inspector. Staff initially hired as inspectors will be examined by mentors.

The AECOM Safe Work Plan will lay out a plan to train all team staff ensuring the continual safety of every employee throughout the life of the project. Our inspectors receive rigorous training and reminders on a continuing basis in the area of safety. This includes those elements necessary to ensure the safety of the traveling public as well as our staff. We recognize the importance of this, and will draw upon our past experience and resources to instill a “safety first” mentality throughout our involvement.

A condition of employment is that all inspectors possess and maintain their WECS, GSWCC Level 1A, and Field Concrete Inspection (FCOI) Certifications.

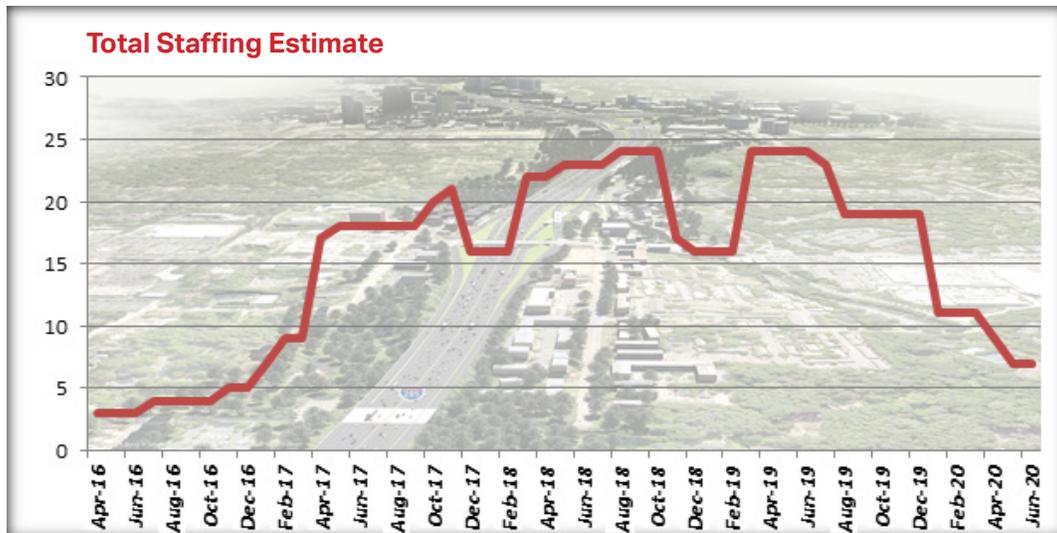
e. Provide the proposed staffing and approach to managing the required inspection personnel for the project.

The AECOM staffing plan follows the outline explained in section b and c within this Phase II submittal. A more visual explanation is outlined in the graphic below:



Upon NTP, the AECOM Team will bring on our Fast Start Team to review/comment on the CQMP, develop the OVTIP, develop the communication plan and develop the safe work plan. As the project approaches the Developers NTP 2 in April 2017, the AECOM Team will fully staff up the key staff as required in the RFQ.

The full staffing plan including the inspection personnel will fluctuate throughout the life of the project. During the winter season, we will staff down as the construction activities slow. We have visual provided a graphic of the full staffing plan below:



Our team's management approach to a successful OV inspection team is accomplished by managing for the best performance possible. Projects of this size often present unique construction issues. Like any major urban interstate projects a significant degree of work is projected to occur at night and on weekends to minimize the impact to the travelling public. The AECOM Team expects, and is committed to meet these challenges by staffing the project with the leadership and experienced staff required to maintain safety and quality. Mr. Galante and Mr. Cantrell will coordinate all daily inspection operations with the onsite Developer's CQAF staff and GDOT. This daily coordination is critical to maximize quality and reduce the risk of inaccurate inspections and audits. Daily reviews and weekly staff meetings will be held to review the upcoming contractor's activities so that personnel are scheduled for inspection services, resources are acknowledged and reviewed, and testing frequencies and sampling requirements are confirmed

The AECOM OV key staff will be on site for the duration of the project and this assignment will be their sole responsibility. Their experience scheduling and managing staff on projects of this type will enable them to anticipate schedule changes or the demands created by construction staging and adjust the staffing levels to provide the desired level of inspections. The AECOM Team realizes that as an agent of GDOT it is imperative that they are good stewards of the tax dollars and they will be diligent in their efforts to monitor budgets and inspection cost to ensure efficiency.

1. PROVIDE ANY SPECIFIC QUALIFICATION, SKILLS, KNOWLEDGE OF THE PROJECT AND PROJECT AREA WHICH MAY UNIQUELY BENEFIT THE FIRM AND PROJECT

Commitment to DBE: The AECOM Team will always remain committed to exceeding the DBE goals on this project. AECOM provides equal employment opportunity to all qualified employees and applicants for employment without regard to race, religious creed, color, religion, sex, sexual orientation or preference, national origin, ancestry, age, marital status, medical condition, physical or mental disability, or Vietnam Era veteran's status in all employment decisions, including but not limited to recruitment, hiring, compensation, training and apprenticeship, promotion, upgrading, demotion, downgrading, transfer, termination, and all other terms and conditions of employment.

AECOM is committed to complying with its obligations to Affirmative Action. Affirmative Action is a policy of inclusion rather than exclusion, having as its goal to attract and retain qualified individuals of either sex and of all races and ethnicities. We assess our program towards that goal by analyzing how representation of minorities and women at all levels in the organization compares with the sex, ethnic and racial composition of the qualified available workforce in the appropriate geographical area from which employees are drawn.

The AECOM Team will utilize our two DBE firms to exceed the GDOT DBE goal to reach a 15% commitment. Kennedy Engineering & Associates Group, LLC (KEI) and MC Squared, Inc. (MC2) will

provide services on the owner's verification throughout the life on this contract.

Innovative Documentation: Due to the vast amount of data to be collected, analyzed and reported on the LBJ project in Texas, AECOM created a multi-functional reporting tool. Through the use of I-Phones and I-Pads, each inspector has the ability to photograph, input inspection data in the field and record location through GPS on a project map. This information is also tied to the Developer's schedule and assets. The field recording of data and documentation provides flexibility in reporting, as queries can be based upon asset, schedule, corrective actions, etc. In addition, the inspector can upload his report directly to e-builder from the field, creating additional efficiencies for the owner verification team. AECOM plans on bringing this technology to the I-285 @ SR 400 project as part of the OVC.

Communication: The need for coordination of staff in the dynamic Design-Build-Finance environment demands innovative ways to inform and direct OV resources. Weekly team teleconferences, task specific webinars, in addition to the use of the team calendar, email and co-location are the various methods used for internal communication.

Past Corridor Experience: AECOM has practical experience with this project spending three years developing and submitting the SR 400 and I-285 unsolicited Public Private Proposal (P3) in 2004. AECOM will pull from this understanding of the proposed corridor and project to successfully deliver the Owner's Construction Engineering and Inspection (CEI) Services and Owner's Verification Consultant for GDOT.

Depth of Team Resources: The AECOM Team includes four highly qualified and capable firms that have the depth of resources to ramp up or down as the I-285/SR 400 project construction schedule demands. Each of these team members have never failed to provide qualified staff to the Department when a contract or schedule demanded additional staffing.

Utility Coordination: Utility adjustment is a major constraint and risk item for the builder of the new I-285 @ SR 400 Interchange Project. To mitigate this risk, AECOM has assembled a seasoned utility coordination team, led by Infrastructure Consulting & Engineering, PLLC (ICE). ICE is prequalified for Utility Coordination (3.10).

AECOM has developed a responsive Team that has the corridor experience, the owner's verification/inspection experience and the resources to successfully help GDOT deliver the I-285 @ SR 400 Project.