**EXHIBIT “A”
SCOPE OF SERVICES
FLORIDA DEPARTMENT OF TRANSPORTATION – DISTRICT ONE
DISTRICT WIDE PLANNING STUDIO
COMPLETE STREETS ANALYSES/CORRIDOR PLANS
FM No. 439029 1 12 01**

1. **OBJECTIVES**

The purpose of this contract is to provide the Florida Department of Transportation (FDOT) with professional services in support of Intermodal Systems Development and Planning Studio. The work may involve, but is not limited to, the major and minor services described within this document including Complete Street Analysis for arterial or collector road corridors according to the FDOT’s Complete Streets Policy and Complete Streets Implementation Plan – 2015. It will also plan for the design, construction or reconstruction, and operation of a context-sensitive, community-oriented transportation network that works for all modes of travel and promotes economic development in Florida. This analysis will identify cost feasible complete street improvements and strategies within their respective corridors that improve safety, mobility and access, and quality of life for all users of the transportation system.

The CONSULTANT may also provide support in major and minor tasks including but not limited to: review of local government Comprehensive Plans, Sector Plans, Geographic Information System mapping, transit access and pedestrian safety reviews, developing and testing alternative land use scenarios, assistance to Metropolitan Planning Organization, conducting Planning Workshops, development of policy guidance, research on transportation planning topics, production of context classification and target speed documents, and public involvement activities as they relate to all of the above efforts.

This contract will be Task Work Order driven based on needs and funding availability by the DEPARTMENT. All major and minor tasks enumerated below may not be specifically requested of the CONSULTANT during the contract term. The CONSULTANT shall minimize the DEPARTMENT’S need to apply its own resources to assignments authorized by the DEPARTMENT. Additionally, the CONSULTANT shall independently ensure that all deliverables have undergone a thorough quality assurance procedure and quality control review.

1. **SERVICES**

Major Tasks

1. **Complete Streets Analyses**

The CONSULTANT may be required to identify, screen, and review candidate corridors for complete street treatment, using sound planning and engineering standards consistent with chapter 21, Volume 1 of the Florida Design Manual, chapter 19 of the Florida Green Book, Florida Strategic Highway Safety Plan, and the Complete Streets Implementation Plan – 2015

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as appropriate. This work may include public outreach to community stakeholders (property owners, residents, businesses, advocates and government agencies) to identify key issues and needs in the subject corridors; analyses of users and roadway characteristics to identify missing complete street components; identification of complete streets treatment options and development of a “Project Purpose and Need Statement” and for each corridor that addresses safety issues and community concerns; feasibility/fatal flaw analyses for corridor improvement options to include a review of right of way availability, access issues, utility impacts, permitting and environmental impacts, constructability issues (specific project concerns) and maintenance of traffic; development of project cost estimates, phasing, funding, and feasibility for potential public-private partnership opportunities for candidate projects; and preparation of Complete Street Action Plans for the respective corridors including a summary of recommended cost feasible complete street improvements/ strategies and associated project phasing and funding which will reference AASHTO’s *Guide for Geometric Design of Transit Facilities*, *Guide for Planning, Designing, and Operating Pedestrian Facilities*, *Guide for the Development of Bicycle Facilities*, and National Association of City Transportation Officials’ *Urban Street Design Guide*, *Urban Bikeway Design Guide*, and Institute of Transportation Engineers’ *Designing Walkable Urban Thoroughfares: a context sensitive approach*, and FHWA’s *Bicycle Facilities and the Manual on Uniform Traffic Control Devices* as appropriate.

1. **Corridor Plans Analyses and Action Plans**

The CONSULTANT may be required to identify and review candidate corridors for complete street treatments and prioritize the most critical corridors (or portions of critical corridors) for the development of Complete Street Action Plans. This work may include identification of candidates based on review of crash data and pedestrian and bicycle network needs; review or development of Pedestrian and Bicycle Safety Action Plans; identification of transit, pedestrian, and bicycle supportive land use areas; screening corridors to identify the best candidate corridors for short-term improvements; development and application of methods to rank candidate corridors based on crash data, local plans, and/or Metropolitan Planning Organization (MPO)/Transportation Planning Organization (TPO) performance measures; and selection of corridors for the development of action plans based on corridor rankings and demonstration of local support.

1. **Corridors Feasibility Analyses – Evaluation of Candidate Complete Street Treatment Options**

The CONSULTANT may be required to conduct detailed evaluation of selected corridors to identify cost feasible facility-specific complete street improvements to address safety, connectivity, mobility and access issues, and community concerns within the respective corridors. This work may include developing analysis methodologies summarizing project information, assumptions, and analysis approach; conducting public outreach to community stakeholders within corridors, e.g., interviews with sample of property owners, businesses and residents to identify key issues and needs; identification of missing complete streets components through an evaluation of roadway users and characteristics which may include a detailed review of:

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* traffic operations;
* automobile, pedestrian and bicycle crash trends;
* pedestrian crossing safety;
* bicycle usage and accessibility;
* physical improvements, e.g., sidewalks, bicycle facilities, medians, lighting and landscaping;
* transit locations, amenities, and accessibility;

linking of existing, programmed, or planned bicycle lanes and multi-use trails; reviewing local land use and transportation plans and recent development activity and trends as applicable to each corridor; developing a “Project Purpose and Need Statement” for each corridor that addresses issues and concerns and identifies general corridor characteristics; identifying complete street treatment options for each corridor using best practices; and conducting feasibility/fatal flaw analyses for corridor improvement options to include a review of:

* rights-of-way availability;
* access issues;
* utility impacts;
* permitting and environmental impacts;
* constructability issues (specific project concerns);
* cost-effectiveness; and
* maintenance of traffic.

The CONSULTANT may be required to develop technical memoranda for the respective corridors documenting:

* existing conditions including identified safety and access issues, as well as community concerns;
* missing complete streets components;
* project Purpose and Need Statement;
* evaluation of complete streets options; and
* feasible corridor improvement options.

The CONSULTANT may be required to conduct or review assessments of the operational and safety effects of proposed geometric design and/or traffic control features for selected corridors. This task may also require the CONSULTANT to prepare Dynamic Traffic Assignment (DTA) simulation and/or micro/mesoscopic-simulation, using CORSIM, VISSM, CUBE AVENUE, or other traffic simulation software, for operational analysis and presentation purposes. The CONSULTANT may be required to conduct reevaluations of previously approved Project Development and Environmental (PD&E) documents based on proposed changes in corridor geometry and traffic control features.

**D. Transit Access and Pedestrian and Bicycle Safety Review**

The DEPARTMENT desires to integrate the evaluation and inclusion of potential Transit-Pedestrian and Bicycle Safety enhancements and improvements within projects included in the District’s Work Program. The CONSULTANT may be asked to review a corridor for pedestrian and

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bicycle crash history, existing/planned transit service, or other criteria. The CONSULTANT may be asked to coordinate with the various stakeholders during the study, including issue identification and evaluation of recommendations. It is anticipated that some or all of the following data may be collected by the CONSULTANT as part of the transit/pedestrian and bicycle safety integration process:

* Crash History.
* Context Classification
* Roadway Characteristics
* Traffic Characteristics.
* Traffic Operations.
* Existing and Planned Transit Service and Facilities; and
* Roadway Horizontal Alignment.

Based on data collected, the CONSULTANT may be required to identify and document transit, pedestrian, bicycle safety, and Americans with Disabilities Act (ADA) issues and opportunities. The issue identification process and resulting recommendations should consider traffic operational impacts and overall traffic safety objectives, and will reference the Manual on Uniform Traffic Control Devices (MUTCD), Manual on Uniform Traffic Studies (MUTS), FDOT Florida Design Manual (FDM), Americans with Disabilities Act Accessibility Guidelines (ADAAG), and Traffic Engineering Manual (TEM) as appropriate. It is anticipated that recommended countermeasures and best practices may include mid-block crossing, signalized

intersection, or corridor-wide countermeasures. Proposed recommendations will be

considered by corridor stakeholders in order to evaluate the feasibility of individual

recommendations, implementation method for feasible recommendations, and potential funding sources.

**E. Development of Complete Street Action Plans**

The CONSULTANT may be required to outline and illustrate recommended, feasible complete street improvements as part of corridor implementation plans with appropriate project phasing and funding strategies. This work may include consensus building with project steering committee and local government representatives for each corridor to:

* rank the feasible complete street improvements with an emphasis on projects that improve safety and can be completed in the shot-term (0-5 years);
* prepare cost estimates for the short-term improvements;
* develop maps or graphics to depict the planned complete street improvements;
* identify potential funding sources including opportunities for public-private partnerships; and
* identify project costs, timing, phasing and funding as part of implementation strategies.

Periodic presentations to project steering committees, Technical and Citizen’s Advisory Committees and MPO/TPO Boards, and other county and city government entities to review study findings and interim work products and build consensus may be required.

**F. Geographic Information Sciences (GIS) Mapping**

The Use of GIS in urban planning serves as a vital tool and serves many functions including data analysis and mapping, feasibility assessment, community engagement, equity analysis, and impact evaluation.

The CONSULTANT may be required to transfer any findings and data onto GIS deliverables including but not limited to dashboards, reports and documents, raster maps, point maps, storymapping, etc. Some work orders involving GIS that may or may not happen during the contract’s lifespan include: Context Classification, Target Speed, Complete Street Corridor Priorities, Pedestrian and Bicyclist and Transit Activity Patterns, Story-mapping for Community Partners, Land Use Scenario Planning, Designing safe intersections, and evaluating accessibility for people with disabilities.

**G. Context Classification and Target Speed Memo Production**

Context Classification is one way how FDOT practices implementing context-sensitive solutions within our right-of-way. Units aside from Planning, such as Safety, Design, PD&E, depend on reliable context classification as well as target speed information to design and estimate costs projects down the pipe.

 The CONSULTANT may be required engage in research and analysis to better understand what the context classification of a roadway should be and document such findings in a report. Target Speed is also responsibility of the Complete Streets Coordinator, who may ask in assistance of determining an appropriate Target speed for use of future projects. The CONSULTANT may be asked to sit in on meetings where projects are discussed for the purpose of providing context classification and target speed support.

 H. **Review of Local Government Comprehensive Plans (LGCP) and Amendments**

The CONSULTANT may be required to review LGCP and their amendments. Review of LGCP amendments must be performed in accordance with the laws and rules which are in place at the time of the review, currently found in Chapter 163, Florida Statutes (FS), Chapter 73C-40.0256, Florida Administrative Code (FAC), or their successors, and other District procedures that may be formulated during the contract period such as the DEPARTMENT’s *Transportation Impact Handbook*. The CONSULTANT may be required to prepare the agency comments for the DEPARTMENT’s submittal to local governments and the Florida Department of Economic Opportunity (DEO) in response to a local government Comprehensive Plan Amendment proposed action. The CONSULTANT review should identify and provide comments on issues within the DEPARTMENT’S jurisdiction related to state transportation resources and facilities of state importance that may be adversely impacted by the plan amendment, if adopted. The CONSULTANT may be required to attend meetings with the FDOT PM and local government staff to discuss issues and/or concerns. The CONSULTANT may be required to assist DEPARTMENT staff in various community outreach or coordination efforts as part of this task.

1. **Transportation Impact Assessment Review**

The DEPARTMENT may review transportation studies associated with land use proposals by a local government. The CONSULTANT may be required to review technical data and analysis and prepare comments. The review of technical data may include trip generation estimates, trip distributions, estimates for modal split based on qualitative and quantitative methodologies, operational analyses of facilities and intersections, and the identification of potential appropriate transportation mitigation and strategies. The CONSULTANT may be required to provide review comments in consideration of the DEPARTMENT’s authority, transportation impact assessment best practices, and consistency with provisions of LGCPs and Land Development Regulations (LDRs) and their codes and ordinances. The CONSULTANT should monitor and understand changes in legislative requirements that may affect the DEPARTMENT’s authority or local government requirements regarding provision of necessary transportation infrastructure.

1. **Corridor Plans and Sub-Area Analysis**

The CONSULTANT may be required to prepare various corridor plans and sub-area transportation analysis that includes evaluation of the transportation system and the surrounding land uses and land use plans that impact the corridor. Corridor Studies should follow guidance provided by FDOT. The planning process should include defining the problem, defining the guiding principles, then defining & selecting alternatives. The CONSULTANT may be required to collect existing transportation data, perform stakeholder outreach, identify a vision, evaluate existing and future characteristics and operating conditions, define a purpose and need, define performance measures, identify deficiencies, define alternatives, evaluate and compare alternatives, select alternatives, and determine the next steps. The CONSULTANT maybe required to propose remedial measures and projects.

1. **Collect, Analyze, and Expand Transportation Survey Data**

The CONSULTANT may be required to perform various types of data collections which may include, but are not limited to:

1. Streetlight data to achieve origin and destination (O&D);
2. Transit user profile and transit usage;
3. Spot speed, travel time and delay;
4. Travel time value and “Willingness to Pay” assessments;
5. Household characteristics and their trip making;
6. Worksite trip generation/attraction;
7. Saturation flow rate assessment;
8. Vehicle utilization assessment;
9. Traffic volume and vehicle classification counts;
10. Turning movement counts; and
11. Parking demand and supply.

For complex data collection efforts, the CONSULTANT may be required to develop data collection plans to determine sample rates, design data collection/survey methodologies, design survey instruments and define staffing and logistics for conducting pilot tests and final survey/data collection. The CONSULTANT will be responsible for data cleaning and collecting the quantity of quality data specified in the data collection plans. The CONSULTANT may be required to develop data expansion algorithms and to draw pertinent inferences from collected sample data. The CONSULTANT will be required to apply advanced statistical analysis techniques for inference when elements of sample data are correlated. The most cost-effective, state-of-the-art data collection/survey methodology should be utilized.

1. **Develop and Test Alternative Land Use Scenarios**

The CONSULTANT may be required to develop alternative land use and/or demographic scenarios for transit hub analyses, corridor studies, or larger scale land use changes. These scenarios may also incorporate assumptions on changes of policies, such as changes in building codes on parking requirements for residential, office, and/or retail land uses. The CONSULTANT may be required to test the interaction between alternative land use scenarios and their consequential changes on lifestyle and trip making patterns of personal and business type trips. These changes may include level of auto ownership, types of auto being owned, participation of car ownership sharing, uses of transit and carpooling, change of shopping locations, participation of telecommuting, and extent of web-conferencing utilization. The CONSULTANT may be required to apply multiple land use modeling tools to develop land use scenarios whereby the effects and merits of different land use models can be compared and their projections can be reconciled for a final forecast of each land use scenario. The CONSULTANT may be required to interconnect land use model(s) with multi-modal models to iteratively perform time-series micro simulations to demonstrate the evolutional effect of travel behavior changes and travel demands.

**M. Project Development**

The CONSULTANT may be required to prepare various Project Development plans utilizing planning studies or other information available to support further analyses. The Project Development process should follow guidance provided by the FDOT PM and may include developing, comparing, and evaluating alternatives, stakeholder buy-in, alternative selection, developing final concept plans, and developing implementation strategies for programming subsequent phases. The CONSULTANT may be required to propose remedial measures and projects.

1. **Plan Reviews**

The CONSULTANT may be required to provide support to the DEPARTMENT in reviewing plans against the governing documents for the project; requests for proposals (RFPs), minimum technical requirements (MTRs), standard and supplemental specifications, standard drawings, ADA guidelines and District preferences. The efforts may also include the need to review crash data and provide appropriate recommendations to address concerns.

1. **Public Involvement Activities**

The CONSULTANT may be required to assist the DEPARTMENT in public involvement activities. This work may include, but not be limited to, Public Relations tasks, public notification, creation and placement of advertisements, meeting preparation, facilitation, coordination, and attendance at public hearings/workshops, recording meeting notes and follow up documentation, scheduling and notification, and any other tasks related to public involvement activities as directed by the FDOT PM. The CONSULTANT may be required to participate in other meetings with the public, elected officials, special interest groups, or public agencies. The CONSULTANT’S involvement may be limited to participation during the meeting, note taking, and summarizing the meeting for the FDOT PM.

**Minor Tasks**

1. **Project Traffic Development**

The CONSULTANT may be required to develop traffic demand forecasts for proposed facility designs. The work required for this task may include but is not limited to preparing Design Traffic Reports for Interchange Proposals, Design projects and PD&E Studies. The CONSULTANT will be required to project future Annual Average Daily Traffic (AADT), design hour traffic volumes, and turning movements using travel demand models (FSUTMS), historical traffic growth, land use data, or other appropriate traffic forecasting methodologies. The CONSULTANT may also be required to provide recommendations, such as intersection turning movement queue lengths, for Design projects.

The CONSULTANT may be tasked to review project traffic reports previously completed by the DEPARTMENT or support peer review of other studies. This may involve review of these documents for completeness and technical accuracy. The CONSULTANT may be required to provide an evaluation of previously completed work including review of the age of the collected data, significant changes in travel patterns or demand volumes, land use, or changes in other key study assumptions.

1. **Traffic Data Collection**

The CONSULTANT may be required to conduct traffic counts at various locations throughout the District for Concept Development projects, PD&E studies and Design projects. The type of counts may be vehicle classification, bi-directional, or turning movement counts for any duration (period of time) required by the DEPARTMENT. The CONSULTANT may be expected to document the field conditions at the time of the counts. Field documentation may include counter location and geometric measurements such as number of lanes, length of storage and taper for turn/merge lanes, type of traffic control, and the location and/or presence of signal boxes and loop detectors. In addition, the Consultant may be required to collect and analyze existing data which may include but not be limited to accident data, land use data, access features, highway characteristics, transit service, freight management, signalization information and environmental features. The CONSULTANT may be required to fully document the data collection effort and provide this documentation and collected data in Excel, Nuance, and PDF format.

1. **Corridor Traffic Analysis**

The CONSULTANT may be required to prepare and/or review various corridor traffic operational studies such as level of service analysis, capacity calculations, and other transportation/traffic studies for Concept Development projects, PD&E studies and Design projects. The CONSULTANT may be required to forecast and analyze demands for all modes of transportation facilities at different horizon years and provide engineering guidance on traffic mitigation analysis to achieve an acceptable level of service. This task may also require the CONSULTANT to analyze potential improvements to current traffic signal system.

1. **Strategic Intermodal System (SIS) Support**

The CONSULTANT may be required to provide general assistance to the DEPARTMENT as related to the Strategic Intermodal System through a variety of transportation planning tasks. Tasks may include, but are not limited to, coordination of SIS projects between the DEPARTMENT and various stakeholders, collection and analysis of data, conducting studies, and review of reports and documents for SIS facilities.

1. **Review of Sector Plans and Detailed Specific Area Plans (DSAPs)**

The CONSULTANT may be required to review Sector Plans and provide comments to the Department of Economic Opportunity (DEO) in accordance with FS 163.3245, Sector Plans, and the State Coordinated Review (SCR) process as described in FS 163.3184. The CONSULTANT review may include attending scoping meetings held by the applicable regional planning council or local government(s), coordination with the RPC and applicable local government(s), and identification of transportation facilities necessary to serve the future land uses in the long term master plan, including guidelines to be used to establish each modal component intended to optimize mobility. The CONSULTANT may be required to provide support to the DEPARTMENT to provide information to DEO regarding location, capacity, design, and phasing or staging of major transportation facilities in the planning area of a DSAP.

1. **Access Management Support**

The CONSULTANT may be required to participate in the classification or reclassification of the State Highway System, in accordance with the guidelines and regulations set forth in Rule Chapter 14-97, FAC and any other supporting documentation. The CONSULTANT may be required to conduct field inventories of the State Highway System to confirm access management classification and perform public involvement duties, as needed, to support this task.

1. **Metropolitan Planning Organization (MPO)/Transportation Planning Organization (TPO) Assistance**

The CONSULTANT may be required to provide support to the DEPARTMENT in preparation of various documentation and correspondence with MPO/TPOs regarding projects and work program activities. The following task activities are representative of the types of assignments that the CONSULTANT may be required to perform under this contract:

1. *Long Range Transportation Plan (LRTP) Review*

The CONSULTANT may be required to provide reviews associated with an MPO/TPO’s LRTP. This may include, but not be limited to, review of document for completeness, verification of project’s inclusion in LGCPs, and ensure State and Federal planning requirements have been met.

1. *Unified Planning Work Program (UPWP) Support*

The CONSULTANT may be required to coordinate with DEPARTMENT work units to identify planning activities that integrate into MPO/TPOs work efforts and overlap with their areas of responsibilities. This effort may include editing or drafting work activity descriptions and providing estimates of costs.

1. *Project Priority Lists*

The CONSULTANT may be required to collect, review, and aggregate MPO/TPOs priority lists. This review may address completeness of information and involve coordination with MPO/TPOs and local governments to verify accuracy and resolve any questions.

1. *Meeting Attendance*

The CONSULTANT may be required to attend various MPO/TPOs related meetings which include those of the MPO/TPO Board, Technical Advisory Committee (TAC), Citizen Advisory Committee (CAC), and various other MPO/TPO specific subcommittees that may include, but are not limited to, Land Use, Level of Service, Bicycle and Pedestrian Advisory Committee (BPAC), or others. The CONSULTANT may be required to take notes at these meetings or prepare information on topics on which DEPARTMENT staff may be asked to speak.

1. **SPECIFICATIONS FOR WORK PRODUCTS**

The CONSULTANT shall ensure that all Task Work Order (TWO) products be prepared on PCs using DEPARTMENT approved software, stored on DVDs/CDs, and copies provided to the DEPARTMENT. All documentation shall be in Microsoft Word, Microsoft Excel, and/or Adobe Portable Document Format (PDF). Any analysis files, programming source codes, form designs, raw source databases and other ancillary files shall be transferred to the DEPARTMENT at the closure of each work order, or at any moment specified by the DEPARTMENT Project Manager. The CONSULTANT shall complete all work performed under this contract in accordance with current DEPARTMENT Policies, Procedures, Guidelines, Standards, and other information applicable to the services. The CONSULTANT shall correct or revise, without any additional compensation, any work product that is found to be in error or deficient. The CONSULTANT shall perform all analyses, develop recommendations, and document all by specific time as defined in each of the TWO assignments. The CONSULTANT shall copy the FDOT PM on any and all correspondence (phone calls, email etc.) related to task assignments. All work prepared by the CONSULTANT as part of this contract will be the sole property of the DEPARTMENT. All files, software, graphics, or any related materials developed for the DEPARTMENT through this contract will be specified in each TWO as a deliverable.

1. **METHOD OF COMPENSATION**

Payments for each TWO will be specified on the corresponding Letter of Authorization. After negotiations, the DEPARTMENT will issue the Letter of Authorization for each TWO, which will include a Scope of Services (containing a description of the expected work tasks, schedules, staffing requirements, and documentation requirements), a staff hour estimate, and the total allowable cost. The required FDOT TWO form must be prepared and signed by both the CONSULTANT PM (or designee) and the FDOT PM prior to the initiation of any associated work.

1. **RESPONSIBILITIES OF THE DEPARTMENT**

The DEPARTMENT will provide a FDOT PM, who will be responsible for the day-to-day management of this contract, including coordination with the CONSULTANT pertaining to the development and execution of all TWOs. The FDOT PM will direct the CONSULTANT’s work through TWOs that describe the project (or task) requirements for which CONSULTANT services are required. The CONSULTANT may assist in the preparation of a given TWO, including the clarification of production and technical details. The DEPARTMENT will designate a FDOT Professional Services Contract Manager who shall represent the DEPARTMENT in all matters pertaining to contract administration.

1. **RESPONSIBILITIES OF THE CONSULTANT**

**A.** The CONSULTANT shall provide an overall PM who will be the CONSULTANT’s primary point of contact for the scope, schedule and staff coordination, negotiation of task man-hours and completion of all TWOs. The CONSULTANT PM shall meet with the DEPARTMENT PM on a regular or scheduled basis, and shall provide a project schedule and submit monthly progress reports for all active TWOs to the FDOT PM that details staff hours worked by task. These progress reports shall be the basis for evaluation, processing, and approval of all CONSULTANT invoices presented to the DEPARTMENT for payment.

**B.** The CONSULTANT shall provide and maintain a list of staff of the following classifications that would be available to be assigned to specific TWOs:

* Project Manager;
* Engineer or Senior Engineer;
* Engineer Intern;
* Senior Planner;
* Planner;
* Engineering Technician or Senior Engineering Technician; and
* Clerical.

**C.** The CONSULTANT shall provide sufficient staff, either the specific staff person requested or acceptable staff at defined levels of expertise as agreed to by the FDOT PM, in a timely manner within the TWO schedules. These key personnel, including the CONSULTANT PM, shall possess superior verbal and writing communication skills, be capable of translating complex technical analysis findings into common language, and be capable of presenting results and conclusions in a concise manner that is intuitively understandable to elected officials and the general public. If, at any time, the FDOT PM determines that the number or expertise of particular staff assigned to a specific task is inadequate, the FDOT PM shall coordinate with the CONSULTANT PM to immediately remedy the situation to ensure the timely completion of the TWO assignments.

equipment such as a traffic responsive or transit priority systems. Dynamic traffic simulation or micro-simulation, using CORSIM or other similar traffic simulation software, for operational analysis and presentation purposes may also be required.

1. **Feasibility and Special Studies**

The CONSULTANT may be required to develop or review Feasibility Studies and Special Studies including, but not limited to, Lane Repurposing, Freeway Managed Lanes and Ramp Metering Studies, Freight Studies, Traffic and Revenue Studies, and Interstate Master Plans. The CONSULTANT may be required to conduct or review Maintenance of Traffic / Lane Closure Analyses, including evaluation of lane and/or roadway/bridge closures or detours on the highway network. This task may also require the CONSULTANT to perform dynamic traffic or micro-simulation for operational analysis and presentation purposes.

1. **Mesoscopic Modeling Support**

Due to the depletion of right-of-way reservations in large urbanized metropolises, transportation investments are shifting from building new highway capacities to maximizing their usage. Consequently, transportation planning is becoming more operational oriented. This paradigm shift requires a modeling approach that caps the flow of traffic demands to network capacity. Accordingly, the CONSULTANT may be required to perform mesoscopic modeling analyses using Dynamic Traffic Assignment (DTA) tools such as CUBE AVENUE. The CONSULTANT may be required to apply DTA in conjunction with other multi-modal models for rapid decision-making analysis on strategies of operating existing or proposed new roadway network facilities.