



SECTION 3. PROPOSED SOLUTION

Proposed Solution

Based on our experience of serving government agencies under our current continuing transportation and traffic engineering contracts, including having served Lake County under this same contract since 2012, the **TEDS** Team is highly experienced with these type contracts and is organizationally structured to accommodate Lake County's need to address transportation engineering issues on short notice. Additionally, having worked closely with several Lake County staff members on our past contract, including Jeff Earhart, George Gadiel, Larry Gobel, Sharon Lewis, and James Globig, TEDS has developed a strong working relationship and critical understanding of the County's preferences. Additionally, the County has come to understand TEDS responsiveness, particularly during elevated issues such as the preparation of the signal warrant analysis and signal design for the Wolf Branch Road/Round Lake Road intersection to address safety issues that arose with the opening of new sections of the Wekiva Parkway.

Under this contract, once an assignment has been established by the County, the development of a scope of services, schedule, and budget will commence immediately. **TEDS'** Project Manager, **Chris Walsh, PE**, will assign staff from the **TEDS** Team needed to complete the work order in the most efficient and timely manner. **TEDS** Team performance on similar projects and our proven track record with current and previous clients clearly indicates our ability to manage staff resources and develop project schedules and adhere to them in order to provide the quality services necessary for a fast-paced and multiple-assignment contract such as this contract for Lake County. As an example, **TEDS** has undertaken over 250 work assignments for FDOT District Five over the past five (5) years, with upwards of 10 to 15 projects being assigned at any one time and all due within a two- to three-month period.

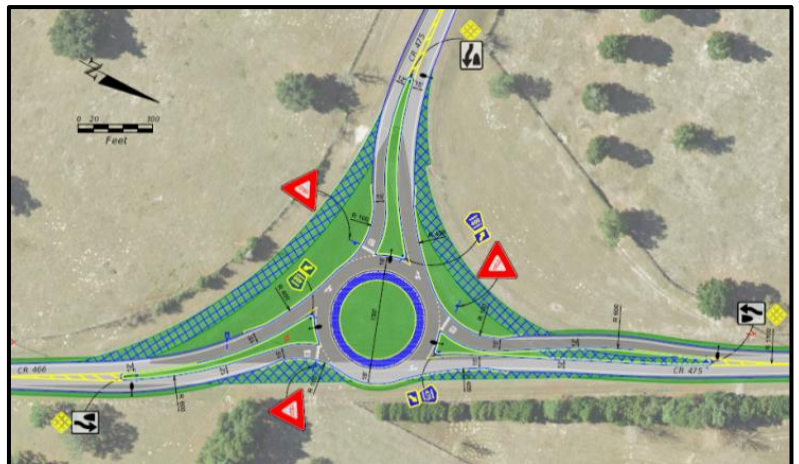
Traffic Operational/Safety Studies

Studies are typically initiated due to expressed concerns by a concerned citizen, elected official or internal staff. Understanding the concerns, available data, area of focus and all details of a study request is critical in developing a sound scope and project fee and producing a quality study. As overall Project Manager, **Chris Walsh** will review the study request and assign the most appropriate resources based on experience, availability, relationships, unique project-related knowledge, special expertise, etc., to ensure the preparation of a high-quality submittal in the most efficient and timely manner.

Upon authorization, **Chris** will assign a study team which will include a lead professional engineer and staff engineers/analysts. Concurrently, the required data collection will be assigned to **TEDS'** in-house data collection team(s). The study team will immediately proceed with a thorough investigation of data and pull, review, and summarize applicable crash data from Signal Four Analytics. Additionally, where detailed concept development will be needed, we will obtain and review pertinent information including existing plans, permits, right-of-way (ROW) information, utility locations, etc., specifically critical items needed for detailed concept development and accurate cost estimation.

Our team will begin a preliminary assessment of issue/concerns and improvement considerations. This preliminary assessment enables our team to better direct our focus on effective improvements for the project resulting in targeted field observations. As a result, we are able to focus in on the issue(s) at hand and cost-effectively/efficiently identify targeted and implementable improvement alternatives while addressing the concerns raised in the original request.

Based upon this assessment, the study team will then formulate recommendations utilizing such resources as the Manual on Uniform





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Traffic Control Devices (MUTCD), FDOT’s Manual on Uniform Traffic Studies (MUTS), FDOT’s Traffic Engineering Manual (TEM), the AASHTO Green Book, and the Florida Design Manual (FDM). Equally important, and depending upon the type of study, resource documents from Lake County will also be considered, including the Comprehensive Plan, Land Development Code, etc. Many times, these recommendations include short-term improvements which can be implemented quickly along with long-term improvements that will be constructed at a later date depending on funding sources and availability.

Where safety analyses are involved and require the identification and benefit of specific countermeasures, the **TEDS** Team will utilize sources such as the Federal Highway Administration’s (FHWA’s) Highway Safety Manual, CMF Clearinghouse, and Desktop Reference for Crash Modification Factors, to identify potential countermeasures to address identified safety issues. From there, we can conduct a cursory benefit/cost analysis for the purposes of understanding the cost range for improvements recognizing that to qualify for desired benefit-cost ratios (where it is desired to obtain FDOT assistance with Federal Highway Safety funds a benefit-cost ratio of 2.0 (or greater than 1.0 for high crash locations) must be achieved). This preliminary assessment enables our team to better direct our focus on reasonable improvements for the project resulting in targeted field observations. In fact, our understanding and experience of this process enables us to quickly convert an alternatives study into a benefit-cost safety study that satisfies Lake County requirements and possibly consider the pursuit of Federal Highway Safety funds for a project.

As a result of our safety study experience, while in the field, we are able to hone in on the safety issue(s) at hand and cost-effectively/efficiently identify implementable improvement alternatives while addressing critical design considerations such as ROW constraints (including constructability considerations), potential utility impacts, ADA challenges, as well as drainage considerations, etc., which each issue can have a significant impact on the viability of a solution. In the end, Lake County relies upon accurate cost estimates to understand the viability of a project. As part of the study phase, detailed design concepts must be developed that are constructible and, ideally, within the ROW and the supporting cost estimate must be thoroughly vetted.

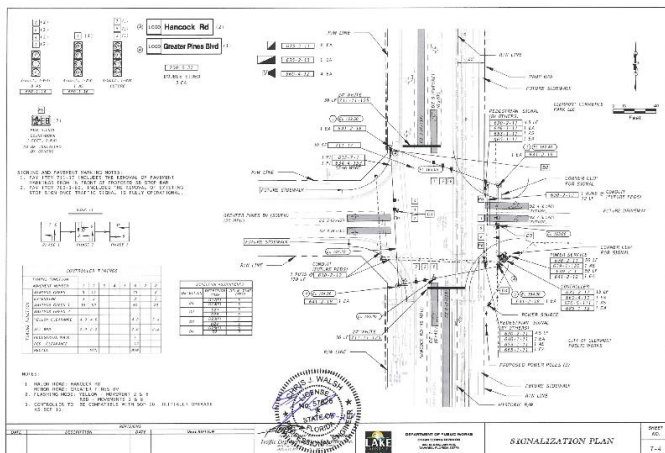
Traffic Data Collection

Over the past few years, Lake County has grown to understand our effective and effective traffic count program. The **TEDS** team has played a key role in leading the Lake County annual traffic count program while also promptly providing data collection services on short notice to assess such items like the closing of the CR 435 interchange with the Wekiva Parkway and providing traffic counts for at the CR 44A/CR 437 intersection to expedite a County internal-assessment of potential signalization needs. **TEDS** in-house data collection teams complete thousands of traffic counts annually that specifically prioritize local government requests, and many in a short time period. For example, **TEDS** recently completed over 100 traffic counts in a two-week time period within the City of Lakeland. Our in-house team, completes automated and manual

counts in accordance to the FDOT MUTS and the FDOT Data Collection Handbook (annual automated “tube” counts), using advanced equipment to collect the data. While video is used to record turning movement data, **TEDS’** in-house staff manually count the data, allowing a higher degree of accuracy and quality control, while maintaining the schedule for deliverables.

Traffic Design

For the development of traffic plans, **Chris Walsh** will assign a design team to include a lead professional engineer and a senior designer. Having prepared numerous signal designs for Lake



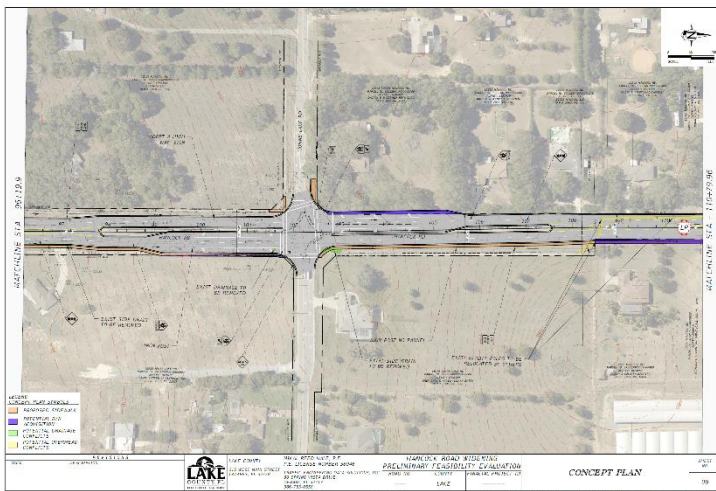


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County, our approach is to work closely and efficiently with George Gadiel, Larry Gobel, and James Globig to thoroughly vet out the needs of the project in advance of scope development. Upon authorization, any necessary survey is immediately initiated along with any other critical start-up tasks (typically the County will provide the survey). If desired, the design can take a cost-savings approach, utilizing aerial imagery and as-built plans.

Using the development of a signal plan as an example for plans development, **TEDS** will quickly prepare preliminary signal plans and meet at the specific intersections with County staff and any others as directed by the County to discuss project-specific items and get buy-in prior to submittal of the initial plan set. This in-depth field review promotes a cohesive and comprehensive understanding of the overall project requirements. Key items addressed at the field meeting typically include mast-arm versus strain pole (depending on utility and ROW constraints as well as local preferences/contributions), vehicular detection (typically video), fiber drop and splicing preferences, advanced SIGNAL AHEAD signs with flashing beacons, etc. These discussions also enable us to better understand the existing infrastructure that is in place and allows us to evaluate the potential re-use of items such as existing pull boxes and/or conduit.

Design will then follow and the project will proceed to the agreed-upon phase submittal, which typically includes a pre-final submittal. Subconsultant activities will also be conducted such as subsurface utility exploration (SUE), geotechnical and structural engineering. The TEDS team includes the same group of highly reliable specialty sub-consultants as our previous contract (see Section 4). Another key item is coordination with the utility companies to obtain the appropriate contact information of the key decision makers of each utility. For SUE efforts, **TEDS** ensures we have field representation to provide real-time field response/adjustments should utilities be encountered. This ensures the design proceeds in a timely and cost-effective manner. However, as we experienced on past projects, where more substantial conflicts are identified, our team will promptly coordinate with the County to identify the challenges and present options for consideration. After submitting a pre-final set of engineering plans, our team will review County comments, coordinate with County staff as necessary to clarify and address the comments, and promptly finalize the plans.



Project Management

We are set up to administer and manage multiple task order type contracts and to succeed using schedule and management tools to ensure nothing “falls through the cracks.” We have established a successful task management methodology to ensure that such projects are well-managed, deliverables are on-time, and staff and resources are allocated appropriately and cost-effectively. Our management approach has proven strong and has produced positive results for work efforts similar to the proposed effort, including our past work with other government entities. **TEDS** takes the time to identify the most applicable team players for each given assignment. We evaluate and balance the

total workload and established deadlines. We capitalize on individual strengths, and avoid overload situations.

Often under these types of contracts, there are relatively tight deadlines and budgets, which must be met. The development of a realistic schedule of work is a key to the successful completion of the task. Task order proposals will be turned around very quickly by the **TEDS** Team. To initiate work as soon as possible, the following critical steps are undertaken/coordinated in a timely manner by our Project Manager, **Chris Walsh**:

- Verbal and/or written notification of Task Order from County’s Project Manager
- Initial project (site review if needed) review



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- Meeting with County staff (if necessary)
- Development and submission of task order scope
- Discussion of task order scope with County staff (optional)
- Revision and submission of task order scope and fee proposal (if necessary)
- Receipt of Notice to Proceed (purchase order) and the immediate initiation of task activities

The **TEDS** Team is aware of and sensitive to absolute deadlines set through normal project scheduling or even political imperatives. By having a sufficient number of well-trained and capable personnel on our team, we are able to adjust to short timelines. Through close interaction with County representatives and the fact that we are located nearby in southwest Volusia County, we are able to gain awareness of new initiatives, and to anticipate sudden priorities which demand immediate resource allocation. The **TEDS** team is flexible and able to react quickly to the needs of the County staff. This ability promotes a healthy relationship and allows the County to respond in a timely manner to their constituents.

As part of meeting schedules/commitments, **TEDS** typically prepares an implementation plan/schedule for both traffic studies and design plans to ensure deadlines are met. An example of an implementation plan has been prepared and provided below which is tailored for traffic studies. Although the timeframe provided in this plan is typical for traffic studies we have undertaken, the scope for studies in this contract may differ depending upon the specific work tasks to be conducted which may vary the project schedule.

Task	Time Period (After NTP)					
	WK 1	WK 2	WK 3	WK 4	WK 5	WK 6
Kick-off Meeting w/ County Staff	█					
Data Collection Activities	█	█				
Conduct Initial Traffic Analyses/ Develop Preliminary Recommendations		█	█			
Discuss/Meet with County Staff Regarding Recommendations			█			
Revise/Finalize Analyses/Recommendations			█	█		
Prepare/Submit Draft Report		█	█	█		
County Staff Review of Draft Report					█	
Receipt of Review Comments and Finalize/Submit Final Report						█

The **TEDS** Team understands the success of a project is not only the product developed, but also the process and relationships fostered during the development of the project. The ability to work well with our clients comes through years of hands-on experience and understanding the needs of the client. The **TEDS** Team is led by senior staff that have developed personal and professional relationships with various members of the governmental community and gained the respect of these individuals.



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The County's trust in their consultant is something that is not given, but earned through proven track records. Our focus is clear ... we continue fostering our relationships with our governmental clients through providing quality products in a timely manner at a reasonable price ... over and over again.

Based upon the importance of the relationship between County staff and the consultant, our Project Manager, **Chris Walsh**, will make a commitment to continue to be fully available to manage this contract, including attendance at scheduled in-person and/or virtual meetings. As previously stated, **Chris** is located in the DeBary office, a short distance from Lake County. To ensure accessibility, **Chris** will also include the project lead or Engineer of Record (EOR) on a specific assignment at all appropriate project meetings with County staff to provide accountability.

Quality Assurance and Quality Control

With regard to traffic studies and design plans, the **TEDS** Team fully understands the need for an appropriate and straight-forward quality assurance/quality control (QA/QC) process which will manage and minimize risks, such as potential errors and omissions. Thus, **TEDS** has developed an in-depth QA/QC plan that ensures all projects that are delivered to the client have been reviewed by senior staff of **TEDS**. **TEDS'** QA/QC plan on each task assignment completed by the **TEDS** Team will be overseen by our Senior VP of Transportation, **Rick Morrow, PE**, who signs off on all deliverables prior to submission.

The following is an example of **TEDS** QA / QC effort on design plans prior to submission to **Rick** for his sign-off prior to submission to the Client:

A.	The QA/QC Reviewer uses a yellow highlighter to indicate approval and red ink to indicate corrections and additions.
B.	The Project Manager uses a green highlighter to indicate agreement with the changes that the QA/QC Receiver makes.
C.	The CADD technician and/or Sr. Designer uses a blue highlighter to indicate that corrections have been made.
D.	The QA/QC reviewer uses a green highlighter to verify that the appropriate corrections have been made to the original documents. The QA/QC Reviewer submits the QA/QC plans and corrected documents to the Project Manager.
E.	The Project Manager reviews the corrected documents and QA/QC plans for conformance.



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Firm Qualifications

The TEDS team brings valued diversity in both capabilities and experience. On a daily basis, we provide the following services to our clients:

- Roadway & sidewalk design
- Traffic signal design
- Access management
- Traffic operational/safety studies
- Traffic calming
- Intelligent Transportation Systems (ITS)
- Street lighting design/studies
- Site planning / subdivision design
- Traffic impact analysis review
- Utility infrastructure design
- Stormwater management design
- Permitting
- (WMD's, FDEP, FDOT, County)
- Bid document preparation
- Construction phase services
- (including CEI and final certifications)

TEDS is prequalified (unlimited) through the FDOT in the following work groups:

- 3.1 Minor Highway Design
- 3.2 Major Highway Design
- 6.1 Traffic Engineering Studies
- 6.2 Traffic Signal Timing
- 6.3.1 ITS Analysis & Design
- 6.3.2 ITS Implementation
- 6.3.3 ITS Communications
- 7.1 Signing/Pavement Marking
- 7.2 Lighting
- 7.3 Signalization
- 10.1 CEI
- 13.5 Subarea/Corridor Planning
- 13.6 Land Planning/Engineering
- 13.7 Transportation Statistics

