

Statewide ITS DMS Deployment Phase II Project



Volume II: Technical Proposal - P.I. No. 0017916
Submitted by Lumin8 Transportation Technologies, LLC
6 June 2024

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C.1.1. Construction Staging and Traffic Management Narrative

The Lumin Team, comprised of Lumin8 Transportation Technologies and Kimley-Horn and Associates, is pleased to offer a comprehensive plan aimed at efficiently managing construction staging and traffic dynamics for your consideration. Our proposal is tailored to address the unique challenges posed by your project while minimizing disruptions to daily traffic flow. We outline a clear and strategic approach to construction phasing, identifying the most significant challenges and detailing how we intend to address them effectively. Our traffic management and control plan prioritize the safety and convenience of commuters, ensuring smooth and seamless traffic flow throughout the construction process. We are committed to collaborating closely with stakeholders to ensure the successful implementation of our plan and the timely completion of the project.

a.) Lumin8 follows an established process with clearly defined milestones. We only able to identify one construction phasing challenge. Due to material lead time and strict completion timeline, materials must be ordered before the finalization of plans to achieve substantial completion. Overall Traffic management will be implemented after review and approval of traffic control plans and revised Traffic Interruption Report (TIR). Traffic Management impacts will be at a minimum based on size and scope of this D-B Project.

b.) Lumin8 does not see any major impacts to the traveling public minimizing impacts and public recreational users, and stakeholders within work existing construction areas.

Construction Phasing Approach

Phase 1: Notice to Proceed (NTP) 1

Item No.	Submission Description	Timeline
020160	ITS Infrastructure Implementation Plan	After NTP 1
020180	Safety Plan	After NTP 1
020190	Project Schedule Workplan (PSWP)	After NTP 1
020215	NTP1 Baseline SOV TP Section 2	Within 5 Business Days of NTP 1
020245	NTP1 Baseline Project Schedule (BPS)	Within 5 Business Days of NTP1 issuance and at the same time as the NTP1 Baseline SOV

Phase 2: Notice to Proceed (NTP) 2

Item No.	Submission Description	Timeline
020200	D&C Closeout Plan	After NTP2 issuance
020220	NTP3 Baseline SOV	After GDOT acceptance of NTP1 Baseline SOV
020250	NTP3 Baseline Project Schedule (BPS)	After GDOT acceptance of NTP1 BPS, Basis of D&C & PSWP
-	Final Design Approval	Before NTP3 issuance

Phase 3: Substantial Completion

Item No.	Submission Description	Timeline
-	Implementation of D&C Closeout Plan	min. 90 days before Substantial Completion

-	Project Inspection	During Construction
-	Draft Final Acceptance Punch List	Prior to Final Acceptance Phase

Phase 4: Final Acceptance

Item No.	Submission Description	Timeline
-	Execution of D&C Closeout Plan	During Final Acceptance
-	FA Punch List items Completed	During Final Acceptance
-	Furnish Spare Materials/ Warranties to GDOT	During Substantial Completion
-	Submit remaining EOR submissions/As-builts	Prior to Final Acceptance Phase

Traffic Management and Control Sequencing Approach

The maintenance of traffic and construction phasing will follow the standard three-part approach for the Transportation Management Plans (TMP).

- Evaluate Traffic Operations that may be impacted during construction
- Develop and design of the Temporary Traffic Control Plans (TTCP) that will be the most significant portion of the TMP
- Provide Public Information that is deemed necessary. This will be accomplished with extensive coordination with the GDOT Public Information Office and local officials as needed.

Traffic Control Requirements: The requirements of the TMP will be dictated by the field conditions, the construction technique selected and the proper application of all temporary traffic control devices to be implemented. The specific parameters for what are required to construct will be greatly determined by the distance from edge of pavement the installation and equipment are located.

Maintaining Traffic / Time Restriction Understanding: All traffic will be maintained in the existing lane configurations and no closures will occur as instructed by the time restrictions indicated for the various facilities. Lane Closure Notification (LCN) shall be given with thirty (30) Days or GDOT required notice prior to any time the Team intends to implement a lane closure.

C.1.2. Project Management Approach

Lumin8’s Project Management Plan (PMP) details and documents the low-risk level associated with the Program’s delivery within budget, on time, and as planned. The purpose of this is to document the Program’s structure and procedures for:

- Performance Management
- Personnel Management
- Communications Plan
- Business Processes
- Risk Management
- Exit Strategy

A Project Management Team (PMT) oversees the implementation of policy goals, establishes outcomes, and ensures the successful day to day management of the project. The PMT is charged with initiation and ongoing operation activities. The PMT will meet regularly with the Department to discuss project development and issues that need resolution. In addition, frequent meetings and internet communications, conference calls, and small group meetings will be utilized to discuss the

program's progress, needs, and developments, as well as address any items that need immediate attention. The goals and objectives will be evaluated and refined throughout the program. Any significant modifications to these goals will be documented for future changes to the PMP. The organizational and management structures have been established with defined responsibilities that support an effective decision-making and management process. Appropriate lines of communication and coordination have been established at various levels.

C.1.3. Proposal Schedule

C.1.3.c.i

The Lumin8 Team has provided a PDF copy of the Proposal Schedule as a Gantt Chart in **Appendix A**. Our schedule is consistent with the requirements for a NTP1 Baseline Project Schedule as prescribed in TP Section 2.4 (Project Schedule and Schedule of Values), TP Attachment 2-5 (Project Schedule Technical Requirements), and TP Attachment 2-6 (Project Schedule Software Requirements). The Lumin8 Team understands that the Department expects an official NTP1 Baseline Project Schedule (BPS) within 5 Business Days of NTP1 issuance, along with the NTP1 Baseline Schedule of Values (SOV). Additional information on the schedule narrative has also been provided in **Appendix G** due to the page limit.

Resources and Staffing Levels: Lumin8 has over 100 employees in Georgia, with 50 field personnel allocated to our construction division. We plan to allocate 1-2 dedicated crews, each paired with experienced underground subcontractors, to ensure that the project stays on track to meet or accelerate substantial completion.

Critical Paths: In our assessment, the construction project is relatively straightforward for completion. However, we have identified that power service coordination and establishment, as well as material lead time, occupy the majority of the available construction days for completion. These aspects are critical and near-critical paths that require close monitoring and management to ensure timely progress and successful completion of the project.

Starts or Completions Imposed on the Baseline Schedule: As briefly mentioned in our “Critical Paths” response, we identify that our non-work periods would include preliminary design plans, anticipation of materials due to lead time, utility coordination, unfavorable weather, and observed holidays resulting in holiday/event lane restrictions.

Lag: In our proposed schedule, we have identified lag times greater than zero days for several key categories. Safety training and holidays have also been factored into the schedule, allowing for appropriate lag time to account for non-working days.

C.1.3.c.ii

Design-Build Team:

Name	Title	Experience	Certifications
Roderick Ware, P.E.	Lead Contractor Project Manager (CPM) & Project Scheduler	10 years	Professional Engineer in Georgia (#043409)

Kenneth Fink, P.E.	Lead Design Consultant Project Manager (DPM)	31 years	Professional Engineer in South Carolina (#19918), Georgia (#028334)
Kenneth Fink, P.E.	Engineer of Record	'	'
Jarrod Swales	Contractor Superintendent	16 years	IMSA Technician Level I
Curtis Powell	Quality Control Manager	21 years	IMSA Technician Level I
Casey Cannady	Environmental Compliance Manager (ECM)	27 years	N/A
Marc Plotkin	Right of Way Project Manager (ROW PM)	10 years	N/A
JP Braden	Utility Manager (UM)	17 years	IMSA Level I and II Technician

Coordination of Activities: Our team will coordinate activities, durations, work sequences, resource constraints, scheduled value amounts, status updates, and activities with GDOT and third parties, into the Baseline Project Schedule for all scopes of work to be performed.

Approval Process: The approval process workflow for the project scheduling involves a structured approach to solicit input and obtain internal approvals from various stakeholders involved in planning and scheduling the work.

Quality Control: Lumin8’s Quality Assurance/Quality Control (QA/QC) plan provides GDOT and the Lumin8 Team management with appropriate visibility into the process used by the project and its deliverables to meet contract requirements.

Coordination with the Department: One of the key factors to the success of a project is the use of standard procedures and well-established communications between the customer and the support team.

Work Breakdown Structure (WBS): When developing a Work Breakdown Structure (WBS) for inclusion in the project schedule as the work plan, it is important to follow a detailed approach to ensure that all essential activities are defined and organized systematically. The following approach can be used to develop a comprehensive WBS:

1. Identify the Major Deliverables
2. Break Down Deliverables into Sub-Deliverables
3. Define Work Packages
4. Review and Validate
5. Integrate with Project Schedule

C.1.3.c.iii

Within the framework of this proposal, Lumin8 has demonstrated how the Proposal Schedule accommodates critical aspects such as construction staging and traffic management, environmental considerations, permitting procedures, and other pivotal elements crucial for the successful execution of the work is imperative. Our strategy is outlined in Section C.1.1 with each project phase.

C.2. Project Differences from the Basic Configuration

The Lumin8 Team does not intend to modify the Schematic Plans for the project, however, during our review we have noticed opportunities within the plans that could potentially save the Department money over the course of the project timeline.

C.3. Substantial Completion and Final Acceptance Proposal - Form M

Georgia Department of Transportation
P.I. No. 0017916 – Statewide ITS DMS Deployment Phase II Project

Instructions to Proposers
March 22, 2024

FORM M
SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE PROPOSAL

Proposer Name: Lumin8 Transportation Technologies

The Proposer shall complete the fields below for each portion (segment) of the Work for which the Proposer will commit to the Milestone Deadlines as set forth below. All days are calendar days.

Table M-1: Milestone Deadlines

Milestones	Deadlines
NTP 2 Conditions Deadline	Not later than 90 Days after the date GDOT issues NTP1
Substantial Completion Deadline	395 Days after the date GDOT issues NTP1
Final Acceptance Deadline	90 Days after the Substantial Completion Date

Date: 5-23-24

Proposer: Lumin8 Transportation Technologies

Signature: [Handwritten Signature]

Title: SVP of Business Development

C.4. Work Product Requirements

The Lumin8 Team has provided all Work Products, i.e., information, materials (including electronic materials), and other work products (including maps and other data (including Project Data)), available to the Department within our proposal.

C.5. Organizational Chart

To address the requirements for this contract, our team is staffed by highly qualified personnel with a proven ability to manage and deliver high-quality services. Lumin8 will serve as the Lead Contractor, operating out of local offices in the Atlanta area, leading and overseeing the project, including program management, quality control, planning/execution and construction/installation activities. Accura Engineering and Consulting Services will also be providing additional engineering services on an as needed basis.

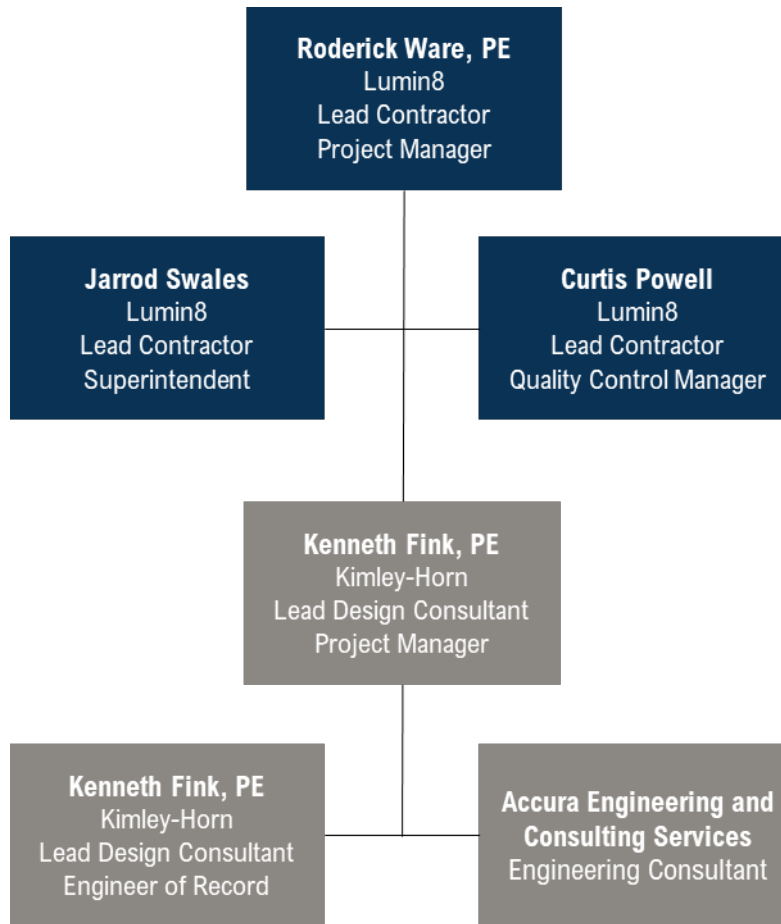
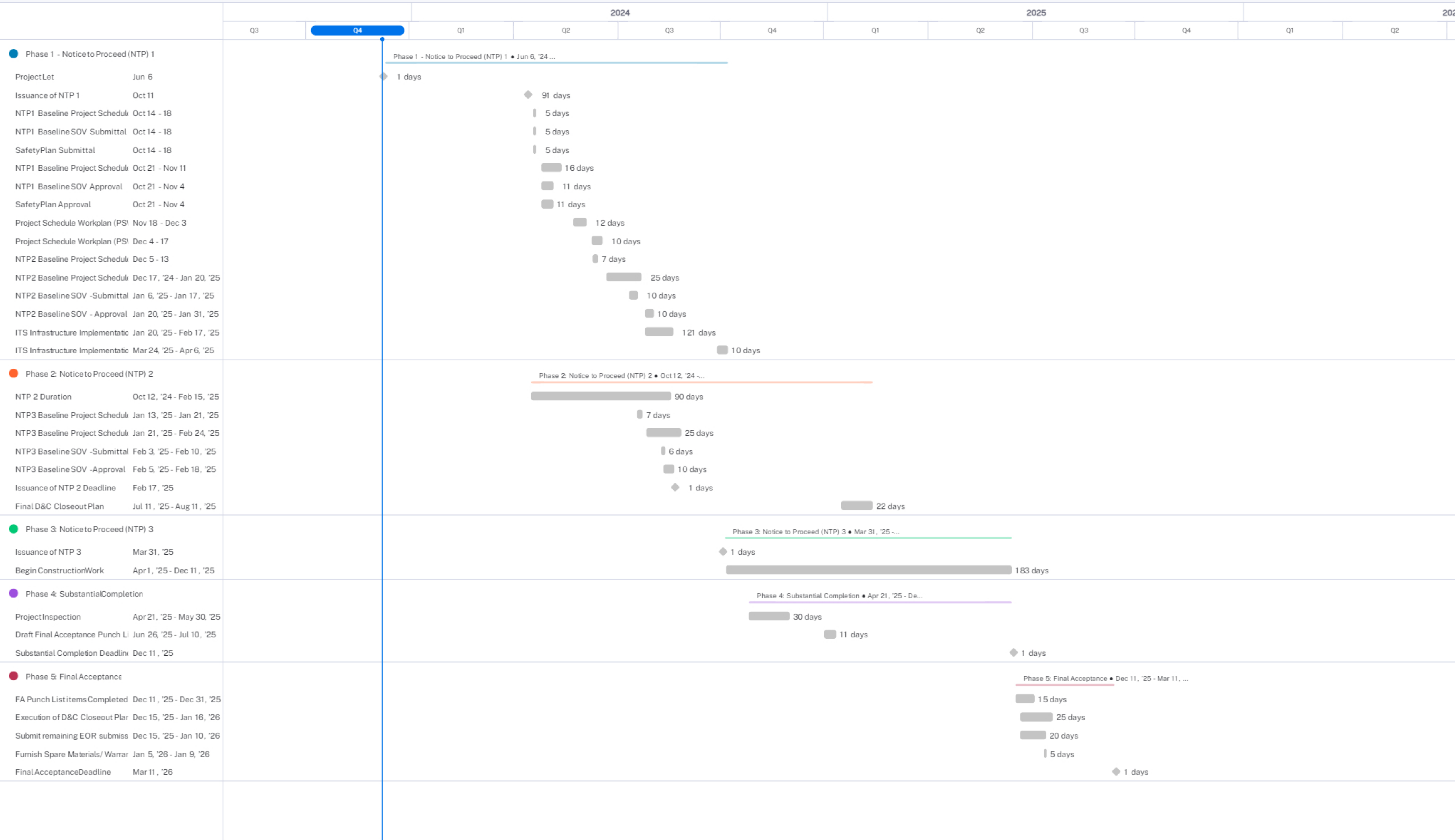
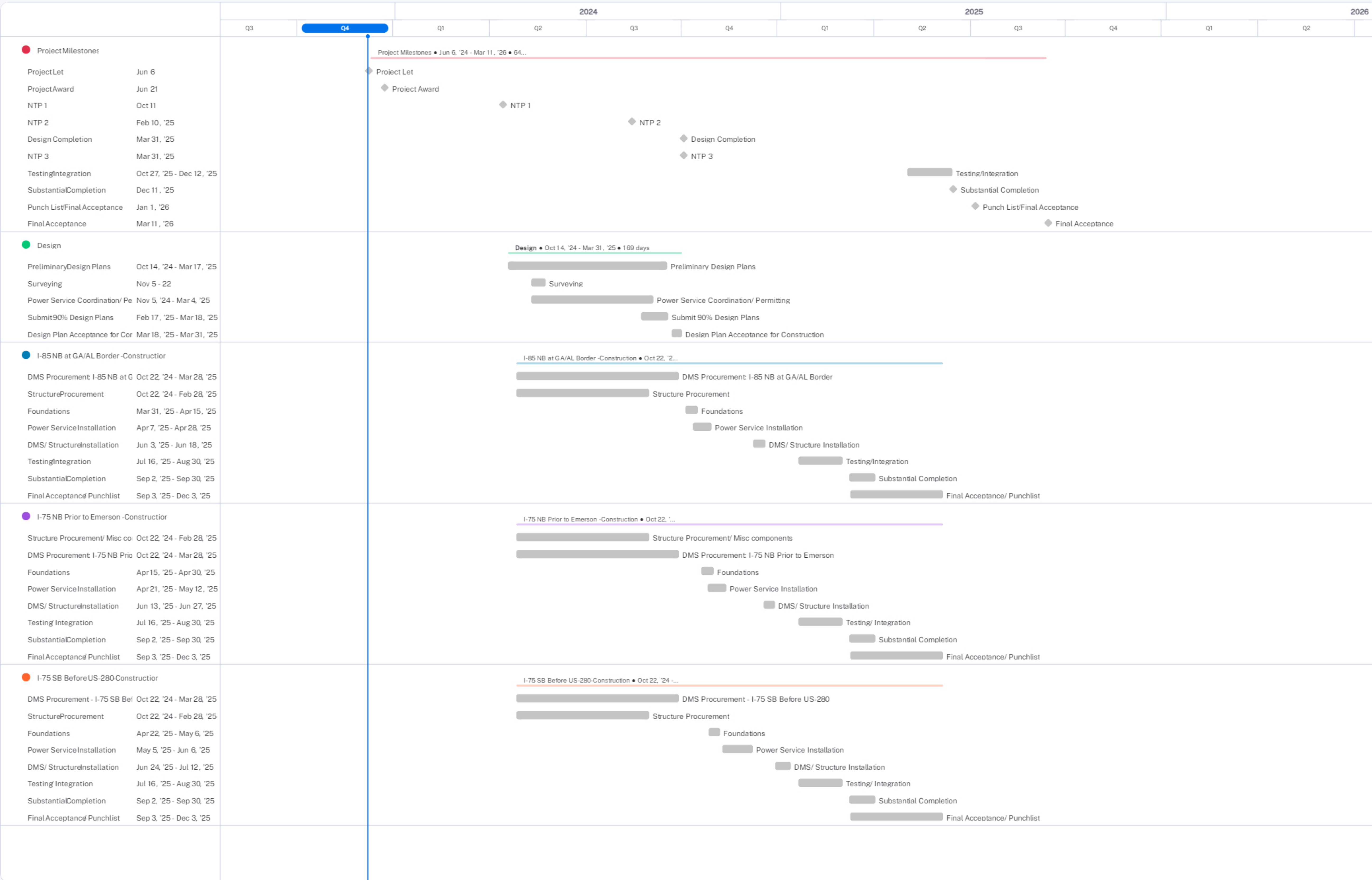


Figure 1: Organizational Chart

Appendix A: Proposal Schedule





Appendix B: Construction Phasing Approach

Phase 1: Notice to Proceed (NTP) 1

The Lumin8 Team is looking forward to receiving NTP 1 (Notice to Proceed 1) 90 days after the Department officially awards and contracts the project. NTP 1 is an important milestone that marks the beginning of the initial phase of the project. Lumin8 is fully aware of the required submissions that need to be made after the issuance of NTP 1. Below are a few critical paths Lumin8 identified in order to achieve NTP2.

Item No.	Submission Description	Timeline
020160	ITS Infrastructure Implementation Plan	After NTP 1
020180	Safety Plan	After NTP 1
020190	Project Schedule Workplan (PSWP)	After NTP 1
020215	NTP1 Baseline SOV TP Section 2	Within 5 Business Days of NTP 1
020245	NTP1 Baseline Project Schedule (BPS)	Within 5 Business Days of NTP1 issuance and at the same time as the NTP1 Baseline SOV

Phase 2: Notice to Proceed (NTP) 2

Our team is feeling confident about finishing these tasks ahead of schedule. This will help reduce construction constraints and risks, allowing us to achieve substantial completion with minimal issues.

Item No.	Submission Description	Timeline
020200	D&C Closeout Plan	After NTP2 issuance
020220	NTP3 Baseline SOV	After GDOT acceptance of NTP1 Baseline SOV
020250	NTP3 Baseline Project Schedule (BPS)	After GDOT acceptance of NTP1 BPS, Basis of D&C & PSWP
-	Final Design Approval	Before NTP3 issuance

Phase 3: Substantial Completion

Our extensive experience with Intelligent Transportation Systems (ITS) projects and maintenance coordination ensures that the transition to the Georgia Department of Transportation's (GDOT) existing infrastructure and NaviGator platform upon substantial completion and final acceptance will be smooth and seamless.

Item No.	Submission Description	Timeline
-	Implementation of D&C Closeout Plan	min. 90 days before Substantial Completion
-	Project Inspection	During Construction
-	Draft Final Acceptance Punch List	Prior to Final Acceptance Phase

Phase 4: Final Acceptance

Item No.	Submission Description	Timeline
-	Execution of D&C Closeout Plan	During Final Acceptance
-	FA Punch List items Completed	During Final Acceptance
-	Furnish Spare Materials/ Warranties to GDOT	During Substantial Completion
-	Submit remaining EOR submissions/As-builts	Prior to Final Acceptance Phase

Appendix C: Traffic Management and Control Sequencing Approach

The maintenance of traffic and construction phasing will follow the standard three-part approach for the Transportation Management Plans (TMP).

- Evaluate Traffic Operations that may be impacted during construction
- Develop and design of the Temporary Traffic Control Plans (TTCP) that will be the most significant portion of the TMP
- Provide Public Information that is deemed necessary. This will be accomplished with extensive coordination with the GDOT Public Information Office and local officials as needed.

TTCPs are expected to be a combination of implementing GDOT's Standard Drawing Details sheets and site-specific detail drawings designed by the Lumin8 Team, as required. A library of drawings will be developed and utilized that consists of standard drawings and our team's site-specific drawings. All details developed will be submitted, reviewed, and approved prior to implementation to determine the proper application for which traffic control details are used as the field conditions warrant. This will allow our team to put into practice a rolling type system where the main phase is under construction in one area while other team members are working ahead to determine the limits and setup the next main work area with the proper traffic control devices. This will allow for safe and continuous construction of the conduit and fiber optic corridor and ITS devices.

Traffic Control Requirements

The requirements of the TMP will be dictated by the field conditions, the construction technique selected and the proper application of all temporary traffic control devices to be implemented. The specific parameters for what are required to construct will be greatly determined by the distance from edge of pavement the installation and equipment are located.

Maintaining Traffic / Time Restriction Understanding

All traffic will be maintained in the existing lane configurations and no closures will occur as instructed by the time restrictions indicated for the various facilities. Lane Closure Notification (LCN) shall be given with thirty (30) Days or GDOT required notice prior to any time the Team intends to implement a lane closure.

Appendix D: Anticipated Project Challenges

The following areas have been identified as potential project challenges. Our team will work with the Department and the larger project team to identify potential issues early and then proactively work to minimize their potential negative impacts to project schedule and budget.

Environment Impacts. It will be the Lumin8 team's goal to design and construct each of the three proposed DMS in accordance with the environmental documentation prepared and approved for the project. Our team will avoid unnecessary environmental impacts that could require additional environmental documentation and/or approvals which will ultimately impact the design and construction schedule while also adding to overall project costs.

Materials Procurement. Based on current market conditions, we do not anticipate problems procuring the materials needed for the project. That being said, the industry continues to deal with lingering effects of the COVID-19 pandemic and its impact on worldwide supply chain. To avoid or minimize potential delay associated with materials procurement, our team will work to secure any historically longer lead time items as quickly as possible after project NTP.

Existing Utility Conflicts. Based on an initial review of the three proposed DMS locations, there do not appear to be any existing utilities in the immediate area that would require relocating the proposed DMS or existing utility. Immediately upon receipt of NTP for the project, our team will conduct a detailed field assessment to determine the presence of any existing utilities that may require subsurface utility exploration (SUE) or changes to the location and design of the DMS and supporting infrastructure.

Appendix E: Minimizing Impacts and User Distractions

Lumin8's approach to the TMP begins with and is a never-ending focus on safety. All methods of construction and/or maintenance of ITS assets shall be accomplished with safety in mind for all. This includes the safety of our project Team, GDOT and stakeholders, all vehicular traffic, and even the occasional pedestrian or bicyclist.

Safety is Lumin8's number one priority. Our tenet is that safety starts with every employee taking personal ownership for their own safety and the safety of their team members. In turn they are relied upon to do their part to protect the safety of the traveling public and local constituents. Our team members are trained on applicable safety standards including but not limited to:

- National Electrical Code (NEC) handbook
- National Electric Safety Code (NESC)
- Manual on Uniform Traffic Control Devices (MUTCD)
- American Traffic Safety Services Association (ATSSA)
- Occupational Safety & Health Administration (OSHA) guidelines
- Lumin8 Safety Policies/Procedures and Reporting including hazard awareness, defensive driving, and incident reporting requirement

Lumin8 has a comprehensive Safety Manual which identifies safe working practices within our organization and our customer locations. These policies are regularly reviewed, and each employee is expected to adhere to the policy to allow for a safe work environment. Employees and departments are tracked using a variety of safety metrics and if found deficient remedial training is provided for improvement.

Lumin8 provides safe working conditions for all projects nationwide, meeting or exceeding the requirements of local, state, and federal laws, standards, and regulations. Our Team's goal is to provide our staff a place of employment that is free from recognized hazards which have the potential to cause injury, illness, or loss.

Appendix F: Approach to Design and Construction of the Project

Approach to Design

Upon issuance of NTP, the Lumin8 team will immediately schedule an external project kick-off meeting with all project stakeholders and a separate internal project kick-off meeting with all project team members. The goal of these meetings will be to make sure all parties agree on the proposed project goals, objectives, and ultimate outcomes. These meetings will clearly define the roles and responsibilities of each stakeholder and team member and how they fit into the overall delivery of the project. The Lumin8 team will develop a detailed project schedule such that all parties understand key project milestones and deliverables. Our team will also review potential project risks, including those noted in the Anticipated Project Challenges section of our proposal,

The Lumin8 team begin collecting all relevant information required to design and construct each of the three project DMS as quickly as possible upon receiving NTP. This includes conducting a field assessment and preliminary design to locate each DMS and supporting infrastructure, including power and communications. Our team will also look for preliminary design feedback from the Department before moving forward with additional field work including survey, geotechnical, and SUE. Our team will also look to confirm that the design is consistent with and does not deviate from any of the conditions outlined in the project environmental documents. If additional environmental verification and/or documentation is required, the project team will immediately work to prepare and submit for review and approval to avoid project delays.

As for our team's approach to the project design, we do not anticipate the design will differ materially from the design indicated in the RIDs included in the project RFP. Our design will look to minimize environmental impacts and construction costs while adhering to the project requirements outlined in the project RFP.

Approach to Construction

Lumin8 will kick off the project by leveraging our current operations situated in Marietta. Our plan involves mobilizing Lumin8's management and technical resources and submitting a comprehensive final schedule and installation plan. We take pride in our well-rounded team that will be responsible for executing the work. To ensure competitiveness and efficient project management, we believe it's crucial to have the capability to self-perform a significant portion of the work.

Existing ITS infrastructure on the project has been identified. To assure all existing devices are protected and minimize any emergency outages, locates will be performed around existing ITS infrastructure and electrical service routes until permanent devices are operational. The ITS Construction Manager is included in utility coordination correspondence to stay informed on potential construction that may impact TMC operations and will notify TMC/ PMC if potential conflicts may arise. We have identified 1 potential conflict at the GA/ AL border site, which will have minimum to no impact to existing operation of the device(s). Field location reviews will take place prior to beginning excavation operations with the personnel performing the work and ITS personnel to identify the location for new and existing and ITS infrastructure, conduits, boxes, and devices based on approved design plans.

Construction operations will occur on the outside shoulder and will be coordinated between the construction management personnel and the GDOT ITS Maintenance Project Management team prior to commencing.

Base Mapping

The Design-Build Team will use field surveys to develop base plans for the project. The survey information will be used to check the accuracy of GIS and/or aerial photos. Any differences between the provided maps/plans and field conditions will be adjusted based on field measurements and included in the base plans.

During the field survey, the team will verify right of way limits, overhead utilities, subsurface utilities, and surface features. Any necessary adjustments to plan locations will be made. Utility owners have been contacted to provide locates and facility type information, which has been included in the plan sets.

Appendix G: Proposal Schedule Narrative

Resources and Staffing Levels

Lumin8 has over 100 employees in Georgia, with 50 field personnel allocated to our construction division. Our fleet of vehicles and equipment is robust, as Lumin8 performs similar services under task orders on a statewide basis for the Department under the Statewide ITS Maintenance project.

We plan to allocate 1-2 dedicated crews, each paired with experienced underground subcontractors, to ensure that the project stays on track to meet or accelerate substantial completion.

As this project has SVWBE requirements, Lumin8 is open to partnering with disadvantaged firms to meet the department's 10% goal.

Critical Paths

In our assessment, the construction project is relatively straightforward for completion. However, we have identified that power service coordination and establishment, as well as material lead time, occupy the majority of the available construction days for completion. These aspects are critical and near-critical paths that require close monitoring and management to ensure timely progress and successful completion of the project.

Starts or Completions Imposed on the Baseline Schedule

As briefly mentioned in our "Critical Paths" response, we identify that our non-work periods would include preliminary design plans, anticipation of materials due to lead time, utility coordination, unfavorable weather, and observed holidays resulting in holiday/event lane restrictions.

Lag

In our proposed schedule, we have identified lag times greater than zero days for several key categories.

For the QA/QC review process, we have allocated sufficient lag time to ensure a comprehensive and thorough review of all quality control and quality assurance measures. This additional time allows for meticulous examination and validation of the project's adherence to quality standards.

Similarly, lag time has been incorporated into the schedule for safety training activities. We recognize the importance of providing adequate time for comprehensive safety training to all personnel involved in the project. This includes training on the use of safety equipment, emergency procedures, and adherence to safety protocols, thus ensuring a safe working environment throughout the project duration.

Observed holidays have also been factored into the schedule, allowing for appropriate lag time to account for non-working days. This ensures that the project timeline accommodates scheduled holidays without impacting the overall project schedule adversely.

Additionally, lag time has been strategically allocated for holiday/event lane restrictions. This lag time allows for the necessary adjustments in traffic management and construction activities to accommodate any lane restrictions or closures during holidays or special events, ensuring minimal disruption to traffic flow and public access.

By incorporating lag time for these specific categories, we aim to proactively address potential delays and contingencies, thereby enhancing the overall efficiency and effectiveness of the project schedule.

Project Schedule Workplan

Design Build Team

Name	Title	Experience	Certifications
Roderick Ware, PE	Lead Contractor Project Manager (CPM) & Project Scheduler	10 years	Professional Engineer in Georgia (#043409)
Kenneth Fink, P.E.	Lead Design Consultant Project Manager (DPM)	31 years	Professional Engineer in South Carolina (#19918), Georgia (#028334)
Kenneth Fink, P.E.	Engineer of Record	'	'
Jarrod Swales	Contractor Superintendent	16 years	IMSA Technician Level I
Curtis Powell	Quality Control Manager	21 years	IMSA Technician Level I
Casey Cannady	Environmental Compliance Manager (ECM)	27 years	N/A
Marc Plotkin	Right of Way Project Manager (ROW PM)	10 years	N/A
JP Braden	Utility Manager (UM)	17 years	IMSA Level I and II Technician

Lead Contractor Project Manager

Roderick Ware, P.E. will serve as the project manager and will be the point of contact between Lumin8 and the Department. He will have the authority to manage and execute all facets of the project, including all project work, establishing performance budgets, defining project management parameters (technical schedule and cost), monitoring / controlling the performance of participating vendors and sub-consultants, and maintaining processes for maintenance management and contract execution.

Roderick has worked in the transportation industry for 8 years working directly for the Georgia Department of Transportation (GDOT) as an Assistant State ITS Engineer. Roderick oversaw and managed all ITS infrastructure of the state and oversaw the state's MMIP project program for GDOT. This involved a series of P3 projects that included the South Managed Toll Lane project and the Northwest Express Toll project. Roderick also oversaw the \$150 million Statewide ITS Maintenance project while working for GDOT, making him an important asset to the Lumin8 Team.

Roderick has a deep understanding of DOT policies, procedures, and design manuals. He has training on the Plan Development Process (PDP), and in-depth knowledge of ITS Design Guidelines, Signing and Marking Guidelines, Electronic Data Guidelines, Plan Presentation Guides, and Design Policy Manuals.

Lead Design Consultant Project Manager & Engineer of Record

Kenn Fink has 31 years of experience specializing in ITS, fiber-optic communications, and design. Kenn also specializes in traffic operations and advanced signal systems. He has extensive ITS and communications design experience throughout Georgia and the Southeast. Kenn designed the first fiber-optic signal systems in the states of North Carolina and South Carolina and the first fully redundant fiber-optic systems in the states of Virginia and Florida. He has coordinated numerous systems projects from feasibility through design and construction. Kenn has provided technical expertise on operational and systems projects throughout the U.S. while maintaining a primary focus within Georgia for the past 20 years. Kenn has been critical in the development, successful implementation, and evolution of regional traffic signal operations throughout metro Atlanta and Georgia. Kenn continues to provide technical training, leadership, and guidance throughout the industry. He is a resource not only within Kimley-Horn but also for other consultants, vendors, local agencies, and GDOT.

Superintendent

Jarrold Swales will serve as the Superintendent and will ensure work performance is at its highest and most efficient level. Jarrold has fifteen years of experience in the ITS field. Jarrold leads maintenance and construction crews which install, repair, maintain, and troubleshoot ITS devices for Georgia Department of Transportation's Statewide ITS system in the metro Atlanta area. These devices include CCTV, VDS, CMS, Radar Detection, and Ramp Metering. He began as a Fiber Optics Technician (Level I IMSA) and has advanced to his current leadership position at Lumin8. He is well-versed in all aspects of Traffic Signal Installation, Operation, and Maintenance procedures. Jarrold has experience maintaining complex networks of devices which allow real time information updates on traffic congestion, accidents, delays, and other crucial data. As an ITS Maintenance Lead, Jarrold will work with guidance from Roderick in maintaining continuity of work for the NCDOT IT Network. He will also supervise the day-to-day maintenance of ITS assets.

Quality Control Manager

Curtis Powell will act as the Quality Control Manager, as he shall be responsible for collecting, analyzing, and evaluating data (e.g., field inspections, material reviews, etc.) as well as conduct deficiency and corrective action tracking of all inspections and sampling results. Lumin8's primary method of identifying and resolving problems is a monthly surveillance of required services coordinated by the Project Managers. Curtis also has a deep understanding of DOT policies, procedures, and design manuals which will assist with this role.

Coordination of Activities

Our team will coordinate activities, durations, work sequences, resource constraints, and scheduled value amounts into the Baseline Project Schedule for all scopes of work to be performed. This coordination will involve aligning the activities and work sequences to ensure

proper flow and efficient use of resources. The duration of each activity will be carefully estimated, taking into account the specific requirements, risks, and constraints of the project. Resource risks and constraints will be identified and managed to ensure that the project schedule is realistic and achievable. This will involve assessing the availability of resources and making necessary adjustments to the schedule to optimize resource utilization. Additionally,

Monthly updates of the progress schedule activities related to the ITS infrastructure will be submitted for review to E-builder as part of the Baseline Progress Schedule update. Detailed logs of daily conduit, fiber, and power services will be provided for review on a monthly basis. Lead times for procurement of ITS materials and devices will also be provided for review. Procurement of installation issues resulting in negative schedule impacts will be monitored closely and a delay mitigation strategy formed to bring the ITS installation schedule back on track. A monthly construction status report will be generated for review listing the new installations for the month and any pre-requisite testing documents included.

Coordination of Activity Status Information

As an integral part of our meticulous project management process, Lumin8 is dedicated to seamlessly coordinating and integrating activity status information and progress percent complete into every Project Schedule Update for all scopes of work carried out during the Invoice Period. This comprehensive approach encompasses the work performed by Lumin8 itself, as well as the contributions of any subcontractors involved in the underground work. Through the effective tracking and integration of this vital information, our primary objective is to uphold transparency, closely monitor progress, and ensure the successful execution of the project.

Moreover, the Construction Quality Control Manager (CQCM) will play a pivotal role in this process by meticulously reviewing the provided monthly progress reports to ensure the completion of reported work. The CQCM will conduct regular field inspections of the ITS system installation, meticulously comparing field notes with the reported progress status to verify the accuracy of the information. Once the verification process is complete, the CQCM will meticulously upload the monthly progress report to E-Builder, ensuring that all project stakeholders have access to the most accurate and up-to-date information.

Coordination of Activities performed by GDOT and Third-Parties

To ensure smooth coordination and integration of activities involving GDOT and third parties in the project, Lumin8 will adopt a comprehensive approach. The DB Team will depend on GDOT/PMC to provide contact information for GDOT ITS/ATMS/TMC personnel and facilitate coordination. These contacts will be included in the ITS Implementation Plan, along with the roles and responsibilities of GDOT representatives for testing and accepting the ITS system during subsequent updates to the plan.

Lumin8 will also prioritize integrating interfaces with Related Transportation Facilities, localities, municipalities, and other Governmental Entities into the Baseline Project Schedule. This will involve conducting thorough assessments of the impact of these interfaces on the project timeline and making necessary adjustments to accommodate any dependencies or requirements.

By proactively addressing coordination and interface integration, Lumin8 aims to maintain project efficiency and effectiveness while fostering positive working relationships with all involved parties.

Approval Process

The approval process workflow for the project scheduling involves a structured approach to solicit input and obtain internal approvals from various stakeholders involved in planning and scheduling the work. The Design-Build PM will initiate the approval process by coordinating with team, including project superintendent, Design team, and other relevant stakeholders, to gather input and feedback on the proposed schedule.

Subsequently, the Project Scheduler will collaborate with the subcontractors and vendors who This collaboration will involve sharing the proposed schedule, seeking their input on the feasibility of timelines, resource availability, and any potential conflicts with other project activities.

Once the input and feedback have been gathered, the Project Scheduler will consolidate the information and incorporate any necessary revisions into the schedule. The revised schedule will then be circulated for internal approvals, including review and endorsement by the designated project authorities within the Design-Build Team.

After internal approvals have been obtained, the schedule will be shared with the relevant GDOT Project Management Team and stakeholders for their review and formal approval. Throughout the approval process, the Project Scheduler will ensure clear communication and documentation of all feedback, revisions, and approvals to maintain transparency and accountability in the scheduling workflow. This collaborative and systematic approach to obtaining approvals will help in aligning the project schedule with the expectations and requirements of all involved parties, ultimately contributing to the successful execution of the project.

Quality Control

Lumin8's Quality Assurance/Quality Control (QA/QC) plan provides GDOT and the Lumin8 Team management with appropriate visibility into the process used by the project and its deliverables to meet contract requirements. Lumin8 recognizes its responsibility as a provider of quality services for this project. Ensuring the quality of our services is at the core of our business and directly linked to our success for customers.

To facilitate this assurance, our Quality Control Plan (QCP) outlines the procedures necessary to satisfy the following goals:

- Planning the project's quality management activities
- Defining measurable goals for services and product quality with defined priorities
- Quantifying and managing actual progress toward achieving the quality goals for the applications and products

To verify implementation of this quality plan, the Lumin8 Team:

- Reviews quality activities with GDOT and the Lumin8 Team senior management on a periodic basis
- Reviews quality activities with the Project Manager on a periodic and event-driven basis
- Ensures the QA team reviews and audits the activities and work products for quality management and reports the results
- We integrate our Quality Management Plan (QMP) with GDOT PMP quality program to provide comprehensive evidence to all customers, suppliers, and project staff of the required controls to ensure service quality
- Our QMP governs the creation of quality related documents as well
- Lumin8 revises the quality plan as necessary to reflect the quality system currently in use
- We will continually maintain and improve these processes in accordance with best practice requirements

Our QMP uses systematic, checklist-oriented processes to evaluate and improve the timeliness and quality of daily services provided under this contract. Ongoing QC inspections are performed by the Project Management team to ensure the following:

- Detection and correction of deficiencies as early as possible
- Effective oversight of operations plan work items and deficiency reporting
- Conformance with contract performance requirements
- Elimination of deficiency root causes by adjusting the operations and quality management plans
- Data integrity, correctness, and completeness

We work to continuously improve our processes. A properly managed, well organized, and communicative team will more efficiently meet the goals of GDOT.

Our approach focuses on the following to ensure a successful partnership with our subcontractors:

- Effective Organizational and Work Planning;
- Accurate and Timely Tracking and Reporting; and
- Compliance with current GDOT Procedures, State Statutes and Administrative Code Rules, and Department and Federal regulations.

All staff of the Lumin8 Team are members of the Quality Compliance Team. Everyone performing work, whether responding to a customer issue or performing routine maintenance is responsible for the conformance and quality of that work. To ensure that all areas consistently achieve and exceed their targets, the Project Manager and his team review the contractual requirements and importance of these items with all in-house staff during training sessions, and subcontractors during the pre-work meetings.

Coordination with the Department

One of the key factors to the success of a project is the use of standard procedures and well-established communications between the customer and the support team.

Our communication strategy adheres to industry best practices, as well as utilizing many years of experience working with State DOT partners. Over the years, the Lumin8 Team has implemented various communication approaches and defined communication strategies that address the concerns of, and has been effectively used at, many agencies. A key part of our Project Management methodology is developing a thorough communication plan to develop and maintain communication channels between all parties (e.g., clients, stakeholders, data center, developers, etc.). Our Team will collaborate with GDOT stakeholders to document, review and establish the Communication Management Plan.

To meet the needs of the project, the Lumin8 Team will:

- Be accessible to the Department (24/7/365)
- Provide the baseline project schedule within 5 Business Days of NTP1 issuance.
- Attend the project kick-off meeting with the Department within twenty days of NTP1 issuance.
- Host weekly project update meetings via teleconference using Microsoft Teams

Weekly Status Meetings

Lumin8 will host a weekly project update meeting using Microsoft Teams or some other similar teleconference application. These weekly meetings are intended to coordinate with the Department's project management team regarding any concerns or issues with maintenance notifications and requests, as well as questions and updates regarding the project. The Project Manager, supervisory personnel, and technicians assigned to this contract will be available to participate in weekly meetings either by telephone conference call or in person.

Weekly Status Reports

Though not required by this RFP, in addition to the status meetings, each week the Lumin8 Project Manager will electronically submit a Program Status Report to GDOT. The elements of this report include a summary of the weekly contract activities. The purpose of these reports will be to update the Team regarding the proposed work for the day and any outstanding issues that need to be resolved. The reports will include the locations that the teams are working, the type of work being performed, and identify any outstanding issues or concerns that GDOT should be made aware of.

Work Breakdown Structure (WBS)

When developing a Work Breakdown Structure (WBS) for inclusion in the project schedule as the work plan, it is important to follow a detailed approach to ensure that all essential activities are defined and organized systematically. The following approach can be used to develop a comprehensive WBS:

6. Identify the Major Deliverables: Begin by identifying the major deliverables of the project. These are the primary outcomes or results that need to be achieved.

7. Break Down Deliverables into Sub-Deliverables: Once the major deliverables are identified, break them down into smaller, more manageable sub-deliverables. This helps in creating a hierarchical structure for the WBS.
8. Define Work Packages: Each sub-deliverable should be further broken down into work packages, which are the smallest units of work that can be planned, scheduled, and budgeted. Work packages should be specific, measurable, and achievable.
9. Review and Validate: Once the WBS is developed, it should be reviewed and validated by project stakeholders to ensure that all essential activities are included and that the WBS accurately represents the scope of the project.
10. Integrate with Project Schedule: Finally, integrate the WBS into the project schedule as the work plan. The WBS will serve as the foundation for organizing, planning, and managing the project activities, and will provide a framework for tracking progress and managing resources.

By following this detailed approach, a robust and comprehensive WBS can be developed and integrated into the project schedule as the work plan, ensuring that all essential activities are defined and included for successful project execution.

Proposal Schedule: Construction Staging and Traffic Management

In navigating the complexities of executing any construction project, meticulous planning is essential to ensure seamless integration of various operational facets. Within the framework of this proposal, Lumin8 has demonstrated how the Proposal Schedule accommodates critical aspects such as construction staging and traffic management, environmental considerations, permitting procedures, and other pivotal elements crucial for the successful execution of the work is imperative. Our strategy is outlined in Section C.1.1 with each project phase. Our plan involves mobilizing Lumin8's management and technical resources and submitting a comprehensive final schedule and installation plan. We take pride in our well-rounded team that will be responsible for the design and execution of the work.