

August 7, 2026

Mr. S. Khurshid Hoda, CPP
Director, Engineering Department
Village of Orland Park
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Re: RFP # 26-043 Traffic Improvement Studies
Orland Park, Illinois
Detailed Scope of Work

Dear Khurshid,

Thank you for allowing TERRA Engineering to provide you with our scope of work for this Request for Proposal. Per your request, we provide the following scope which has been updated based upon the conversations which took place during our interview on July 28, 2026. We hope this helps to clarify our assumptions for the pricing and effort which is expected from the Village for this project.

A specific list of scope of work and anticipated deliverables are listed below.

SCOPE OF WORK/ANTICIPATED DELIVERABLES

A. Corridor Traffic Study:

- i. **Project Management and Coordination:** TERRA will overall project management, administration, and coordination necessary to successfully complete the Corridor Traffic Study. This task will include:
 - a. Project Kickoff meeting with Village Staff
 - b. Assumes up to two (2) public meetings as follows:
 - (1) Existing Conditions and issues meeting
 - (2) Recommendations/Open House meeting
 - c. Monthly Progress meetings and coordination Calls
 - d. Coordination with Village Staff, IDOT, Cook County and other stakeholders
 - (1) Assumes up to three (3) meetings with IDOT
 - (2) Assumes up to three (3) meetings with Cook County DOT
 - e. Quality Control and Quality Assurance reviews throughout the project
- ii. **Field Investigation/Equipment Preparation:** TERRA will field verify locations with respect to considerations for performing the counts in the most efficient and appropriate manner. TERRA will discuss the count schedule with the Client to verify locations, identify special needs, and to detail turning movement count locations. This task also consists of Quality Assurance/Quality Control (QA/QC) of the count data.
- iii. **Corridor Data Collection:** TERRA Engineering will perform traffic counts at nineteen (19) locations following two roadway corridors La Grange Road from 143rd Street to 167th Street and 159th Street from 108th Street to 88th Avenue from 12:00 AM to 11:59 PM on a typical weekday and 8:00 AM to 8:00 PM on Saturday and additionally from 8:00 AM to 8:00 PM during a holiday period or some other combination totaling 48 hours at each intersection.
- iv. **Count Locations:** Traffic counts will be collected at the following intersections. It should be noted that the traffic data will be collected using typical count procedures such as no work on days where a well-publicized threat of frozen precipitation has been forecast, on state-recognized holidays, nor during the times influenced by holidays. Traffic counts will be collected in 15-minute increments and summarized hourly for each movement at noted intersections. Data will be provided in both excel format as well as PDF format. The locations to be collected are as follows:
 - a. **La Grange Rd Corridor – 48-Hour Turning Movement Counts**
 - (1) La Grange Road and 167th Street
 - (2) La Grange Road and 163rd Street

- (3) La Grange Road and W 159th Street
- (4) La Grange Road and 158th Pl
- (5) La Grange Road and 156th St
- (6) La Grange Road and 154th Pl
- (7) La Grange Road and 153rd St
- (8) La Grange Road and W 151 St
- (9) La Grange Road and 149th St
- (10) La Grange Road and W 147th St
- (11) La Grange Road and W 144th Pl
- (12) La Grange Road and 143rd St
- b. **159th Street Corridor – 48-Hour Turning Movement Counts**
 - (1) 159th Street and S 88th Ave
 - (2) 159th Street and 91st Avenue
 - (3) 159st Street and Orland Towne Center driveway
 - (4) 159st Street and S 94th Avenue
 - (5) 159st Street and Ravinia Ave
 - (6) 159st Street and 104th Ave
 - (7) 159st Street and 108th Ave
- v. **Travel Time Analysis:** TERRA Engineering will utilize the wi-fi tracking capabilities of the Miovision cameras to collect Wi-Fi signal data within each corridor during the peak hours of traffic on the weekday AM period, PM period and Saturday which will be utilized to establish travel times and average speeds throughout the corridor.
- vi. **Corridor Infrastructure Review:** TERRA will perform an existing infrastructure review using aerial mapping, field observations, GIS mapping and other publicly available services to establish lane configurations, turn lane lengths, pedestrian facilities, sidewalk gaps, transit stop locations, posted speed limits and access management controls.
- vii. **Safety Assessment:** TERRA will evaluate existing safety performance along the study corridors and identify locations exhibiting elevated crash frequencies, severity patterns, or multimodal conflicts. TERRA will request and obtain crash data along both corridors and will evaluate crash frequency trends, severe and fatal crash locations, crash patterns by type and location. This task will be supplemented with field observations of driver behavior and driver tendencies and identified high crash locations along each corridor. TERRA will evaluate sight distance limitations, vehicle queues, vehicle speeds and pedestrian and bicycle crossings in the field to identify potential crash countermeasures.
- viii. **Existing Traffic Operations and Signal Progression and Timing Improvements:** This task will mostly be completed in another portion of the work, but this analysis will inform the traffic corridor study and any recommended improvements to the signal timing will be discussed within the report to estimate how these changes will be expected to improve the corridor safety and progression.
- ix. **Pedestrian Safety and Accessibility Assessment:** This assessment will evaluate the sidewalk connectivity, ADA compliance, crossing distances, transit accessibility, bicycle accommodations and pedestrian delays, and any barriers to connectivity for these users. The assessment will then look to recommend appropriate treatments to improve safety for bicycles and pedestrians.
- x. **Development of Corridor Alternatives:** TERRA will evaluate the existing information collected to develop practical implementable solutions for the corridor to address safety and operational concerns. These recommendations will be divided into short-term, mid-term and long-term groupings based on ease of implementation, construction/implementation costs, engineering complexity, safety benefit and operational effectiveness. These recommendations will utilize best practices from the Highway Safety Manual and consider the impact of potential Crash Modification Factors (CFM) to help score proposed solutions for implementation.
- xi. **Opinion of Probable Construction Costs:** TERRA will prepare planning level Opinions of Probable cost for each recommended improvement which will estimate the potential engineering costs, construction costs, and construction administration costs based on typical estimation methods. These estimates will also include contingencies for construction and for mid-term and longer term projects will estimate the potential inflation impact on future costs.
- xii. **Grant Applications:** TERRA will assist the Village in identifying, evaluating, and pursuing federal, state, regional, and county funding opportunities to support implementation of the recommended corridor improvements identified through the Corridor Traffic Study. TERRA will review the proposed corridor

recommendations and identify grant programs that best align with the anticipated project benefits, implementation schedule, and funding eligibility requirements. TERRA will prepare and submit up to three grant applications on behalf of the Village for funding opportunities selected by the Village.

- xiii. **Final Report:** TERRA will provide a final report for the corridors which will be expected to include the following information or sections within the document:
- Executive summary.
 - Existing conditions assessment
 - Traffic operations analysis
 - Safety assessment
 - Pedestrian and accessibility assessment
 - Future conditions evaluation
 - Improvement alternatives
 - Recommended improvements
 - Implementation strategy.
 - Opinions of Probable Construction Cost

B. Traffic Signal Progression and Timing Improvements:

- Project Initiation and System Screening:**
 - Conduct a kickoff meeting with the Village of Orland Park (Village), Illinois Department of Transportation (IDOT), Cook County Department of Transportation and Highways (CCDOT), and TERRA Engineering (TERRA) to confirm project objectives, schedule, agency coordination requirements, and data needs.
 - (1) This meeting will facilitate a systemwide evaluation of all signals within the Village using the Federal Highway Administration (FHWA) framework of goals, context, objectives, strategies, and tactics (GcOST).
 - Partition all signalized intersections into corridors, sub-networks, and isolated intersections based on similar operating characteristics, agency priorities, and other criteria determined during the study kickoff meeting
 - Develop an Excel matrix of candidate strategies and tactics based on the corridor/sub-network/intersection goals and objectives identified in coordination with the Village, IDOT, and CCDOT.
- Existing Conditions Assessment and Data Collection:**
 - Compile and review available traffic signal timing plans, controller databases, signal phasing information, traffic studies, traffic counts, and existing Synchro models from the Village, IDOT, and CCDOT.
 - Other Signalized Intersection Data Collection:** TERRA Engineering will perform traffic counts at an additional sixty-six (66) intersections from 6:00 am to 9:00 am and from 11:00 am to 1:00 pm and from 3:00 pm to 7:00 pm on a typical weekday traffic day (Tuesday through Thursday) and 11:00 am to 2:00 pm on Saturday or some other variation totaling twelve (12) hours at each location. The time frames of the counts will be determined based on mainline counts to determine the peak periods.
 - Count Locations:** Traffic counts will be collected at the following intersections. It should be noted that the traffic data will be collected using typical count procedures such as no work on days where a well-publicized threat of frozen precipitation has been forecast, on state-recognized holidays, nor during the times influenced by holidays. Traffic counts will be collected in 15-minute increments and summarized hourly for each movement at noted intersections. Data will be provided in both excel format as well as PDF format. The locations to be collected are as follows:
 - (1) **ATR Counts – 48-Hour Mainline Counts**
 - Counts to be completed for a minimum of 48 hours and maximum of seven (7) days at up to two (2) locations along five (5) corridors to determine peak traffic periods, timing plan schedules and operational characteristics. (Total of 10 count locations)
 - (2) **Additional Signalized Intersections – 12-Hour Turning Movement Counts**
 - Wolf Rd and 183rd St
 - Wolf Rd and 179th St
 - Wolf Rd and US Rte 6

4. Wolf Rd and Brook Hill Dr
5. Wolf Rd and 167th St
6. Wolf Rd and 159th St
7. Wolf Rd and 153rd St
8. Wolf Rd and 151st St
9. Wolf Rd and 143rd St
10. Will Cook Rd and 143rd St
11. Will Cook Rd and 159th St
12. 159th St and 113th Ct
13. Will Cook Rd and 167th St
14. 143rd St and 108th Ave
15. 153rd St and 108th Ave
16. 167th St and 108th Ave
17. 179th St and 108th Ave
18. 167th St and 104th Ave
19. 179th St and 104th Ave
20. West Ave and 143rd St
21. Union Ave and 143rd St and Southwest Hwy
22. Ravinia Ave & 143rd St
23. West Ave and 153rd St
24. 151st St and Ravinia Ave
25. 153rd St and Ravinia Ave
26. La Grange Rd and 171st St
27. La Grange Rd and 179th St
28. La Grange Rd and Orland Pkwy (183rd St)
29. 143rd St and Harlem Ave (IL Rte 43)
30. 143rd St and 82nd Ave
31. 143rd St and Clearview Dr
32. 143rd St and John Humphrey Dr
33. 143rd St and 95th Ave
34. La Grange Rd and 142nd St
35. La Grange Rd and 135th St
36. La Grange Rd and Southmoor Dr. (Carl Sandburg)
37. La Grange Rd and 131st St
38. 131st St and Carl Sandburg High school driveway
39. 131st St and Southwest Hwy
40. 135th St and Southwest Hwy
41. 135th St and 82nd Ave
42. 135th St and Harlem Ave
43. 159th St and Oak Park Ave
44. 159th St and Harlem Ave
45. 159th St and Park Center Dr
46. 159th St and 76th Ave
47. 159th St and 80th Ave
48. 159th St and 84th Ave
49. 151st St and Harlem Ave
50. Wheeler Dr and Harlem Ave
51. 157th St and Harlem Ave
52. 88th Ave and 171st St
53. 94th Ave and 171st St
54. 94th Ave and 167th Ave
55. 94th Ave and Broadwalk Ln
56. 94th Ave and Sunrise Ln
57. 94th Ave and 156th St
58. 94th Ave and Wheeler Dr
59. 94th Ave and 151st St
60. Regent Dr and 151st St

- 61. 88th Ave and 151st St
 - 62. Orlan Brook Dr and 151st St
 - 63. 82nd Ave and 151st St
 - 64. 80th Ave and 151st St
 - 65. 80th Ave and Wheeler Dr
 - 66. 80th Ave and 157th St
- d. **Desktop Reviews:** Conduct desktop reviews of approximately 85 signalized intersections throughout the Village to verify roadway geometry and lane configurations.
 - e. **Evaluation of Existing Signal Timing Plans:** Evaluate existing signal timing plans, coordination groups, signal phasing, clearance and change intervals, detector settings, pedestrian timing parameters, and corridor operational characteristics to identify opportunities for operational improvements and enhanced progression and develop detailed recommendations. Vehicle and pedestrian change and clearance parameters will be reviewed for compliance with MUTCD and PROWAG requirements.
 - f. **Technical Memo:** Prepare a brief 1-2 page technical memo detailing recommendations to changes in clearance change intervals, detector settings, and other controller parameters
- iii. **Development of Existing Conditions Traffic Models**
 - a. Review collected traffic count data and operational characteristics to determine peak periods and timing plan schedules.
 - b. Conduct spot field checks to observe field conditions.
 - c. Develop and/or update traffic models representing existing conditions for the AM Peak, Midday, PM Peak, Weekend, and Off-Peak periods using Synchro 12.
 - d. Utilize traffic counts, travel time data, and agency-provided signal timing information to calibrate the operational models and accurately represent existing traffic conditions.
 - e. Perform traffic volume balancing and develop corridor-wide operational models for the Village signal system.
 - f. Export existing conditions measures of effectiveness, including Level of Service (LOS), delay, volume-to-capacity (v/c) ratios, and 95th-percentile queuing.
 - g. Prepare an Existing Conditions Technical Memorandum summarizing field findings, operational constraints, corridor deficiencies, and opportunities for systemwide signal timing improvements.
 - iv. **Development of Optimized Signal Timings and Implementation Documentation**
 - a. Develop optimized signal timing plans for all study intersections and corridors. Optimization efforts will evaluate cycle lengths, phase splits, offsets, phase sequencing, coordination strategies, pedestrian timing strategies, and other operational parameters to improve overall system performance. Optimized timing plans will be developed for the following operational periods:
 - (1) AM Peak
 - (2) Midday
 - (3) PM Peak
 - (4) Weekend
 - (5) Off-Peak
 - (6) Holiday/Special Event Operations
 - b. Prepare implementation-ready timing documentation, including signal timing sheets, coordination diagrams, time-space diagrams, and supporting materials necessary for implementation by the Village, IDOT, and Cook County.
 - c. Assist the Village with coordination among operating agencies regarding recommended timing plan implementation and identify implementation priorities based on anticipated operational benefits.
 - v. **Implementation, Fine-Tuning, and Performance Evaluation**
 - a. Perform field implementation of optimized signal timings at all signals within Village boundaries.
 - b. Perform field reviews following implementation to identify operational issues and opportunities for additional timing refinements.
 - c. Develop final fine-tuning recommendations for implementation by the responsible operating agencies.
 - d. Perform field implementation of fine tuned signal timings. It is assumed that fine tuning changes may be needed at up to 20% of all signals within Village boundaries.
 - e. Conduct before-and-after operational evaluations utilizing travel time data, field observations, and traffic modeling to quantify the benefits of the recommended signal timing improvements.

- f. Develop a summary memo documenting the Measures of Effectiveness (MOE) analysis comparing existing and optimized conditions, including:
 - (1) Travel Time
 - (2) Delay
 - (3) Level of Service (LOS)
 - (4) Volume-to-Capacity Ratios (v/c)
 - (5) Queue Lengths
 - (6) Fuel Consumption
 - (7) Vehicle Emissions
 - (8) Corridor Progression Performance
- vi. **Technical Documentation and Reporting**
 - a. Prepare a draft technical memorandum documenting:
 - (1) Existing Conditions Assessment
 - (2) Traffic Operations Analysis
 - (3) Signal Timing Optimization Methodology
 - (4) Recommended Timing Plans
 - (5) Measures of Effectiveness
 - (6) Implementation Recommendations
 - b. Update and submit a final technical memorandum incorporating Village review comments and providing final recommendations, optimized timing plans, implementation documentation, and performance evaluation results.
- vii. **Meetings and Coordination**
 - a. The following Meetings and Coordination are anticipated as part of this task for the Mead and Hunt team:
 - (1) Attend a virtual kickoff meeting with the Village, IDOT, and CCDOTH.
 - (2) Attend monthly virtual coordination meetings with the Village, IDOT, and CCDOTH (up to 6 anticipated).
 - (3) Attend monthly virtual check-in meetings with the Village (up to 6 anticipated).

C. Driveway Consolidation Study:

- i. **Project Management and Coordination:** TERRA will overall project management, administration, and coordination necessary to successfully complete the Corridor Traffic Study. This task will include:
 - a. Project Kickoff meeting with Village Staff
 - b. Monthly Progress meetings and coordination calls
 - c. Coordination with Village Staff, IDOT, Cook County and other stakeholders
 - (1) Assumes up to three (3) meetings with IDOT
 - (2) Assumes up to three (3) meetings with Cook County DOT
 - (3) Assumes up to 5 meetings with various stakeholders and property owners
 - d. Quality Control and Quality Assurance reviews throughout the project
- ii. **Existing Access Inventory:** TERRA will develop a comprehensive inventory of existing access conditions along the LaGrange Road/US 45 Corridor from 143rd Street to 167th Street and along 159th Street from 108th Avenue to 88th Avenue.
 - a. **GIS Based Driveway Inventory:** TERRA will prepare a GIS-based inventory of all existing access points along the corridors within the study area which will include:
 - (1) Driveway location
 - (2) Driveway type
 - (3) Number of approach lanes
 - (4) Entry and Exit restrictions and median configuration
 - (5) Shared Access locations/Cross Access connections
 - (6) Adjacent parcel ownership
 - (7) Traffic control method
- iii. **Driveway Data Collection:** TERRA will also conduct mainline counts at up to a total of forty-five (45) driveways 7:00 am to 9:00 am and from 11:00 am to 1:00 pm and from 3:00 pm to 7:00 pm on a typical weekday traffic day (Tuesday through Thursday) and 10:00 am to 2:00 pm on Saturday or some other variation totaling twelve (12) hours at each location. These driveway locations will be determined based on potential consolidation options or as a supplement to the Corridor Traffic Study.

- iv. **Existing Conditions Assessment:** TERRA will perform a field review to evaluate existing access management conditions. Particular attention shall be given to commercial areas with numerous driveways and locations exhibiting recurring congestion or crash patterns. This assessment will look for the following conditions:
 - a. Closely spaced intersections and driveways.
 - b. Redundant access points.
 - c. Underutilized driveways.
 - d. Operational conflicts.
 - e. Sight distance concerns.
 - f. Queue spillback conditions.
 - g. Left-turn conflicts.
 - h. Pedestrian conflicts.
 - i. Bicycle conflicts.
 - j. Transit access issues.
 - k. Median opening operations.
- v. **Access Management and Safety Analysis:** TERRA will evaluate the operational and safety impacts associated with existing driveway conditions throughout the study corridors with a specific focus on crash patterns and severity. Existing driveway configurations shall be evaluated against applicable access management guidance and industry best practices.
 - a. Available crash records shall be reviewed to identify access-related crash trends including:
 - (1) Rear-end crashes.
 - (2) Left-turn crashes.
 - (3) Angle crashes.
 - (4) Sideswipe crashes.
 - (5) Fixed object crashes.
 - (6) Pedestrian and Bicycle related crashes.
 - b. Crash locations shall be evaluated relative to:
 - (1) Driveway spacing.
 - (2) Median openings.
 - (3) Signalized intersections.
 - (4) Commercial access concentrations
 - c. Access management analysis will consider
 - (1) Driveway spacing.
 - (2) Corner clearance.
 - (3) Traffic volumes.
 - (4) Functional roadway classification.
 - (5) Proximity to intersections.
 - (6) Median operations.
 - (7) Internal circulation opportunities.
 - (8) Shared access potential.
- vi. **Property and Redevelopment Assessment:** TERRA will review land use and parcel information to identify opportunities for future access. This will include review of parcel ownership, easement dedications, access needs, shared parking and cross-access opportunities. Planned land use considerations and adjacent parcel compatibility.
- vii. **Development of Driveway Consolidation Alternatives:** TERRA will develop conceptual access management alternatives designed to improve corridor safety and operations while maintaining reasonable access to adjacent properties. This task will look to identify low-volume, redundant or unnecessary driveways for closures. Combining adjacent access points into shared entrances to serve multiple parcels. Development of cross-access connections between adjacent parcels to reduce roadway usage, relocation of driveways to improve spacing, development of additional right-in/right-out access points to increase safety. Other considerations may include internal property circulation to reduce driveway demand.
- viii. **Recommended Driveway Consolidation Program:** Based on analysis and stakeholder input, the Consultant shall develop a prioritized Driveway Consolidation Program. Recommendations shall be organized into implementation phases.
 - a. **Short-Term Improvements (0–3 Years)** - Improvements that can be implemented with minimal coordination or property impacts including:

- (1) Access restrictions.
 - (2) Signing modifications.
 - (3) Pavement marking improvements.
 - (4) Operational adjustments.
- b. **Mid-Term Improvements (3–7 Years)** - Improvements requiring moderate coordination with adjacent property owners and agencies including:
 - (1) Shared access development.
 - (2) Partial driveway consolidations.
 - (3) Internal circulation improvements.
- c. **Long-Term Improvements (7+ Years)** - Improvements associated with redevelopment opportunities or major capital projects.
 - (1) Complete driveway closures.
 - (2) Major access restructuring.
 - (3) Median modifications.
 - (4) Corridor reconstruction projects.
- ix. **Opinion of Probable Construction Costs:** TERRA will prepare planning level Opinions of Probable cost for each recommended improvement which will estimate the potential engineering costs, construction costs, and construction administration costs based on typical estimation methods. These estimates will also include contingencies for construction and for mid-term and longer term projects will estimate the potential inflation impact on future costs.
- x. **Final Report:** TERRA will provide a final report for the corridors which will be expected to include the following information or sections within the document:
 - a. Executive summary.
 - b. Existing access inventory
 - c. Access management assessment.
 - d. Crash and safety analysis.
 - e. Property access review.
 - f. Consolidation alternatives.
 - g. Recommended access management plan.
 - h. Implementation strategy.
 - i. Funding opportunities.
 - j. Opinions of Probable Construction Cost.

LIMIT OF SERVICES / ASSUMPTIONS

- 1. A proposal for the following will be provided if requested as these items are currently excluded:
 - A. Surveying
 - B. Underground Utility Locating (GPR)
 - C. Sewer televising
 - D. Traffic Engineering, including:
 - i. Intersection Design Studies (IDS)
 - ii. Maintenance of Traffic (MOT)
 - iii. MOT detailed staging narrative, cost opinion, specifications
 - iv. Traffic Signal Design/Modifications
 - v. Specialized Studies (Transit, freight, ITS, etc.)
 - vi. Detailed construction cost estimates for construction purposes
 - E. Geometric Design Plans
 - F. Post Grant Award Administration Services
 - G. Real Estate and Property Acquisition Services
 - H. Construction Phase Services
 - I. Civil Engineering
 - J. Landscape Architecture
 - K. Structural Engineering
 - L. Site Planning
 - M. Site Security/Electrical/Telecommunication Engineering
 - N. Site Lighting/Photometric Studies

- O. Geotechnical/Environmental Engineering & Testing
 - P. LEED or other “green” accreditation and/or design
 - Q. Multi-phase design or construction plans
 - R. Creation of construction cost opinions.
 - S. Site Logistics Planning
 - T. Permitting through Highway Department(s)
 - U. Driveway Permit
 - V. Earthwork Permit
 - W. Site excavation (“EX”) or earth retention (“ERS”) Drawings
 - X. Graphic Information System (GIS) analysis
 - Y. Planned Development/Zoning/Public Review process/exhibits and meeting attendance/prep
 - Z. Other PD exhibits, including zoning, land use, sub area, PD boundary
 - AA. Discharge of Stormwater to Waters
2. This scope of work is based on documents available as of this date.
3. Our scope of work is based on the following assumptions:
- A. Traffic Data Collection efforts will be limited to the number of total hours and types as described in the scope and any additional traffic data collection will be at an additional cost
 - B. This scope of work assumes that traffic signal timing plans, controller databases, signal phasing information, and other available operational data will be provided by the Village of Orland Park, Illinois Department of Transportation (IDOT), and Cook County Department of Transportation and Highways (CCDOTH).
 - C. Existing Synchro traffic models will be incorporated into the analysis where available. If existing models are not available, new Synchro models will be developed based on available data and field observations.
 - D. Signal timing optimization will be based on existing traffic conditions and current traffic volumes collected as part of this study. Traffic forecasting, future-year traffic projections, and development of future-year signal timing plans are not included in this scope.
 - E. This scope assumes that there are 85 signalized intersections located within the Village of Orland Park, as communicated by the Village, and all will be included in this study regardless of ownership or maintenance jurisdiction. Any intersections beyond the 85 assumed are not included in this scope.
 - F. Signal timing optimization will be completed for the AM Peak, Midday, PM Peak, Weekend, Off-Peak, and Holiday/Special Event operational periods. Up to one holiday/special event timing plan is assumed.
 - G. Synchro traffic operations models will be used to evaluate existing and optimized traffic operations. SimTraffic, VISSIM, or other microsimulation analyses and associated calibration are not included in this scope.
 - H. Signal Timing and Progression operational recommendations will be limited to signal timing, coordination, phasing, and other low-cost operational improvements. Geometric design, signal design, roadway design, signing, pavement marking, and construction documents are not included in this scope.
 - I. Implementation of optimized and fine-tuned signal timings is assumed to require hands-on controller programming by the consultant team. These services are included in this scope assuming review and approval of the recommended timing changes by the relevant jurisdictions.
 - J. Before-and-after operational evaluations will be completed using available travel time data, field observations, and Synchro-based measures of effectiveness. Extended post-implementation monitoring is not included in this scope.
 - K. One round of review comments on the draft technical memorandum is assumed.
 - L. Review and optimization will be completed using existing controller capabilities. Recommendations requiring hardware replacement, communications upgrades, advanced traffic management systems, adaptive signal control software, or signal system modernization are not included in this scope.
 - M. No environmental documentation, permitting, utility coordination, right-of-way services, public involvement activities, or grant application services are included in this scope.

SCHEDULE

Upon agreement on scope of work and receipt of signed fee proposal, TERRA will commence with scheduling the kick-off meeting with the Village. It is expected that the duration of the contract will be approximately 18 months. See attached schedule for additional information.

COMPENSATION

TERRA offers the above services at the lump sum fees outlined below.

1. Orland Park Traffic Improvement Studies

a. Corridor Traffic Study	\$157,015.00
b. Signal Timing and Progression	\$271,202.00
c. Driveway Consolidation	\$111,545.00
(TOTAL)	\$539,762.00

ADDITIONAL SERVICES

Changes to completed documents due to revised input or direction, change of project limits or scope and preparation of additional drawings shall be invoiced as an Additional Service. Work will not be performed without your expressed, written consent. Estimates for additional services will be provided upon your request.

ACCEPTANCE

This proposal, with the signature of the appropriate personnel, constitutes acceptance of fee and terms as stated herein. Please return one copy of the signed proposal to me as authorization to begin work. In the absence of an executed proposal, upon your request for services and the commencement of work, we will proceed in accordance with this proposal, inclusive of scope, fee, terms and conditions and assume your agreement to same.

If you have questions or need clarification on the above, please do not hesitate to call. We look forward to working with you on this project and appreciate you including us on your team.

Sincerely yours,

TERRA ENGINEERING, LTD.



Michael C. Hutchinson, P.E., PTOE
Traffic Practice Lead

Cc: Jamil Bou-Saab, Executive Vice President – TERRA Engineering

ACCEPTED BY

Date: _____

Printed Name: _____

Signed Name: _____

Title: _____

SCHEDULE OF HOURLY BILLING RATES:

LABOR CLASSIFICATION	2026	2027	2028	2029	2030
Principal	\$390	\$406	\$422	\$439	\$456
Executive Director	\$312	\$324	\$337	\$350	\$364
Senior Director	\$251	\$261	\$271	\$282	\$293
Technical Director	\$244	\$253	\$264	\$274	\$285
Department Director	\$234	\$243	\$253	\$263	\$274
Practice Lead	\$228	\$237	\$247	\$257	\$267
Business Administrator	\$171	\$178	\$185	\$192	\$200
IT Manager	\$138	\$144	\$149	\$155	\$161
Administrative Assistant	\$118	\$123	\$128	\$133	\$138
Survey Intern	\$56	\$58	\$61	\$63	\$66
Field Surveyor I	\$94	\$97	\$101	\$105	\$109
Field Surveyor II	\$109	\$113	\$118	\$122	\$127
Senior Field Surveyor	\$148	\$154	\$160	\$166	\$173
Associate Crew Chief	\$116	\$120	\$125	\$130	\$135
Project Surveyor	\$118	\$123	\$128	\$133	\$138
Professional Land Surveyor	\$139	\$144	\$150	\$156	\$162
Survey Project Manager	\$150	\$156	\$162	\$168	\$175
Senior Professional Land Surveyor	\$225	\$234	\$243	\$253	\$263
Landscape Designer I	\$94	\$97	\$101	\$105	\$109
Landscape Designer II	\$105	\$109	\$114	\$118	\$123
Landscape Project Manager	\$143	\$148	\$154	\$161	\$167
Senior Landscape Architect	\$151	\$157	\$163	\$170	\$176
Water Resources Project Engineer II	\$147	\$153	\$159	\$165	\$172
Technician I	\$72	\$75	\$78	\$81	\$84
Technician II	\$87	\$90	\$94	\$98	\$101
Civil Engineer I	\$108	\$112	\$117	\$122	\$126
Civil Engineer II	\$121	\$125	\$130	\$136	\$141
Civil Engineer III	\$135	\$140	\$146	\$152	\$158
Civil Engineer IV	\$147	\$153	\$159	\$165	\$172
Civil Project Engineer I	\$132	\$137	\$143	\$148	\$154
Civil Project Engineer II	\$140	\$146	\$152	\$158	\$164
Senior Civil Engineer	\$156	\$162	\$169	\$175	\$182
Civil Project Manager	\$179	\$186	\$194	\$202	\$210
Senior Civil Project Manager	\$195	\$203	\$211	\$219	\$228
Lead Civil Engineer	\$199	\$206	\$215	\$223	\$232
Electrical Engineer I	\$120	\$125	\$130	\$135	\$140
Electrical Engineer II	\$140	\$146	\$152	\$158	\$164
Lead Electrical Designer	\$194	\$202	\$210	\$218	\$227
Senior Electrical Project Engineer	\$265	\$276	\$287	\$298	\$310
Senior GIS Analyst	\$144	\$149	\$155	\$162	\$168
Traffic Engineer I	\$90	\$94	\$97	\$101	\$105
Traffic Engineer II	\$115	\$120	\$124	\$129	\$135
Traffic Technician I	\$78	\$81	\$84	\$88	\$91
Traffic Technician II	\$94	\$97	\$101	\$105	\$109
Traffic Technician III	\$109	\$114	\$118	\$123	\$128
Senior Traffic Technician	\$125	\$130	\$135	\$140	\$146
Lead Traffic Technician	\$140	\$146	\$152	\$158	\$164
Engineer I, Structural	\$108	\$112	\$117	\$121	\$126
Engineer II, Structural	\$122	\$126	\$132	\$137	\$142
Senior Structural Project Engineer	\$197	\$205	\$213	\$222	\$231
Senior Structural Engineer	\$253	\$263	\$273	\$284	\$296
Senior Structural Manager	\$253	\$263	\$274	\$285	\$296
Documentation Engineer I	\$120	\$125	\$130	\$135	\$140
Documentation Engineer II	\$142	\$148	\$153	\$160	\$166
Construction Engineer I	\$102	\$106	\$110	\$115	\$119
Construction Engineer II	\$122	\$127	\$132	\$137	\$143
Construction Inspector I	\$98	\$101	\$105	\$110	\$114
Construction Inspector II	\$118	\$123	\$128	\$133	\$138
Construction Inspector III	\$132	\$137	\$143	\$149	\$155
Construction Inspector IV	\$146	\$152	\$158	\$164	\$171
Lead Construction Inspector	\$195	\$203	\$211	\$219	\$228
Lead Documentation Engineer	\$193	\$201	\$209	\$217	\$226
Senior Resident Engineer	\$212	\$220	\$229	\$238	\$248
Senior Technician	\$133	\$138	\$144	\$150	\$156
Transportation Engineer I	\$111	\$116	\$120	\$125	\$130
Transportation Engineer II	\$125	\$130	\$135	\$140	\$146
Transportation Engineer III	\$138	\$144	\$150	\$156	\$162
Transportation Engineer IV	\$175	\$182	\$189	\$197	\$204
Transportation Project Engineer I	\$134	\$139	\$144	\$150	\$156
Transportation Project Engineer II	\$156	\$162	\$169	\$175	\$182
Transportation Project Manager	\$188	\$195	\$203	\$211	\$219
Senior Transportation Project Engineer	\$194	\$201	\$209	\$218	\$226
Senior Transportation Project Manager	\$225	\$234	\$243	\$253	\$263



Project Name: Orland Park Traffic Improvement Studies
Prepared For: Village of Orland Park
Date: August 7, 2026

Corridor Traffic Study Task

Management			Traffic										GIS
Principal	Executive Director	Senior Director	Technical Director	Department Director	Practice Lead	Lead Traffic Technician	Sr. Traffic Technician	Traffic Technician III	Transportation Engineer Iii	Transportation Engineer II	Traffic Engineer II	Traffic Engineer I	Sr. GIS Analyst
staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name
\$390	\$312	\$251	\$244	\$234	\$228	\$140	\$125	\$109	\$144	\$130	\$115	\$90	\$144

Task#	Task	Labor Classification/Rates/Hours												Fee
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1.00 Data Collection (TERRA Labor)	0	0	0	0	0	4	0	0	0	0	0	88	16	0	\$12,479
1.01 Project StartUp						2									\$456
1.02 Management															\$0
1.03 Count Planning and Field Verification						2						4	4		\$1,277
1.04 Travel Time Data Configuration												2	4		\$590
1.05 Camera Set Up/Take Down												80			\$9,205
1.06 Data Upload and Verification												2	8		\$950

1.10 Consultants															\$24,000
1.11 Miovision/Data Processing															\$21,000
1.12 Travel Time Processing															\$3,000

1.20 Direct Expenses	QTY	Unit Cost													\$2,870
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1.30 Total Data Collection															\$39,349
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2.00 Traffic Impact Study	0	0	0	0	0	204	0	0	0	182	98	172	100	0	\$114,286
2.01 Project Management						40									\$9,127
2.02 Public Meetings						16				8	16	16	16		\$10,164
2.03 IDOT Coordination						12				8					\$3,890
2.04 Cook County Coordination						12				8					\$3,890
2.05 Villlage Meetings						12				6	4	8	8		\$5,763
2.06 Infrastructure Inventory and Review						4					10	20	20		\$6,314
2.07 Safety and Crash Analysis						4				12	8	16	12		\$6,602
2.08 Pedestrian/ADA Assessment						4					8	16	16		\$5,234
2.09 Existing Operations Assessment						4				8	8	16	16		\$6,386
2.10 Alternative Development						16				16	16	32			\$11,717
2.11 Grant Applications						60				100					\$28,090
2.12 OPCC Development						4				16	8				\$4,257
2.13 Engineering Report						4					16	40	12		\$8,675
2.14 QAQC						8									\$1,825
2.15 Review/Respond to Comments						4					4	8			\$2,353

4.00 Reimbursable (Indirect) Expenses	QTY	Unit Cost													\$3,380
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4.00 Total Traffic Engineering Cost	0	0	0	0	0	208	0	0	0	182	98	260	116	0	\$157,015
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Project Name: Orland Park Traffic Improvement Studies
Prepared For: Village of Orland Park
Date: August 7, 2026

Signal Timing and Progression Task

Management			Traffic										GIS
Principal	Executive Director	Senior Director	Technical Director	Department Director	Practice Lead	Lead Traffic Technician	Sr. Traffic Technician	Traffic Technician III	Transportation Engineer Iii	Transportation Engineer II	Traffic Engineer II	Traffic Engineer I	Sr. GIS Analyst
staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name
\$390	\$312	\$251	\$244	\$234	\$228	\$140	\$125	\$109	\$144	\$130	\$115	\$90	\$144

Task#	Task	Labor Classification/Rates/Hours												Fee
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1.00	Data Collection (TERRA Labor)	0	0	0	0	0	4	16	0	16	0	0	106	18	0	\$18,723
	1.01 Project StartUp						2									\$456
	1.02 Management															\$0
	1.03 Count Planning and Field Verification						2					2	2			\$866
	1.04 Travel Time Data Configuration											0	0			\$0
	1.05 Camera Set Up/Take Down/ Traffic Counters							16		16			100	0		\$15,500
	1.06 Data Upload and Verification											4	16			\$1,900
	1.07															\$0
	1.08															\$0
1.10	Consultants															\$21,850
	1.11 Miovision/Data Processing															\$19,000
	1.12 Travel Time Processing															\$2,850
1.20	Direct Expenses	QTY	Unit Cost													\$4,175
1.30	Total Data Collection															\$44,748
2.00	Traffic Impact Study	0	0	0	0	0	76	0	0	0	0	0	80	80	0	\$33,747
	2.01 Project Management						20									\$4,563
	2.02 Existing Synchro models						20					80	80			\$20,970
	2.03 Signal Model review						12									\$2,738
	2.04 Mead & Hunt Report Review						12									\$2,738
	2.05 QAQC						8									\$1,825
	2.06 Review/Respond to Comments						4									\$913
4.00	Reimbursable (Indirect) Expenses	QTY	Unit Cost													\$0
4.00	Total Traffic Engineering Cost	0	0	0	0	0	80	16	0	16	0	0	186	98	0	\$78,495

MEAD & HUNT | HOUR ESTIMATE/COST PROPOSAL

Village of Orland Park RFP 26-043

Traffic Signal Progression and Timing Improvements - Option #1 Traditional Retiming Approach

FEE ESTIMATE

Task No.	Task / Subtask Description	Senior Project Manager Hours	Project Engineer Hours	Engineer II Hours	Engineer I Hours	Technician I Hours	Total Hours	Labor Fee
	Hourly Rate	\$336.00	\$261.00	\$188.00	\$160.00	\$131.00		
Task 0	Project Initiation and System Screening							
0.1	Conduct kickoff meeting with the Village, IDOT, CCDOTH, and TERRA	2.0	2.0				4.0	\$1,194.00
0.2	Partition signalized intersections into corridors, sub-networks, and isolated intersections		1.0		4.0	4.0	9.0	\$1,425.00
0.3	Develop GcOST strategies and tactics matrix		1.0	4.0	8.0		13.0	\$2,293.00
	Task 0 Subtotal	2.0	4.0	4.0	12.0	4.0	26.0	\$4,912.00
Task 1	Existing Conditions Assessment and Data Collection							
1.1	Compile and review traffic signal timing plans, controller databases, phasing information, traffic studies, traffic counts, and Synchro models		4.0	8.0	8.0		20.0	\$3,828.00
1.2	Coordinate with TERRA regarding collection and review of operational datasets		2.0	12.0		12.0	26.0	\$4,350.00
1.3	Conduct desktop review of approximately 85 signalized intersections		0.5	4.0	42.0		46.5	\$7,602.50
1.4	Evaluate signal timing plans, coordination groups, phasing, clearance intervals, detector settings, pedestrian timing parameters, and corridor operations		4.0	24.0	60.0		88.0	\$15,156.00
1.5	Prepare Controller Parameter Recommendations Technical Memorandum	1.0	2.0	6.0	12.0		21.0	\$3,906.00
	Task 1 Subtotal	1.0	12.5	54.0	122.0	12.0	201.5	\$34,842.50
Task 2	Development of Existing Conditions Traffic Models							
2.1	Determine peak periods and timing plan schedules		1.0	2.0	4.0	8.0	15.0	\$2,325.00
2.2	Conduct spot field observations		8.0	8.0			16.0	\$3,592.00
2.3	Develop and update existing conditions traffic models		0.0	0.0	0.0		0.0	\$0.00
2.4	Calibrate traffic models using counts, travel time data, and signal timing information		4.0	20.0	20.0		44.0	\$8,004.00
2.5	Perform traffic volume balancing and develop corridor-wide operational models		4.0	20.0	20.0		44.0	\$8,004.00
2.6	Export existing conditions measures of effectiveness		1.0	8.0			9.0	\$1,765.00
2.7	Prepare Existing Conditions Technical Memorandum	1.0	2.0	8.0	8.0		19.0	\$3,642.00
	Task 2 Subtotal	1.0	20.0	66.0	52.0	8.0	147.0	\$27,332.00
Task 3	Development of Optimized Signal Timings and Implementation Documentation							
3.1	Develop optimized signal timing plans		20.0	40.0	120.0		180.0	\$31,940.00
3.2	Prepare implementation-ready timing documentation	2.0	8.0	20.0	60.0		90.0	\$16,120.00
3.3	Assist the Village with agency coordination and implementation prioritization		16.0	16.0			32.0	\$7,184.00
	Task 3 Subtotal	2.0	44.0	76.0	180.0	0.0	302.0	\$55,244.00
Task 4	Performance Evaluation and Fine-Tuning							
4.1	Perform field implementation of optimized signal timings		64.0				64.0	\$16,704.00
4.2	Perform post-implementation field reviews		24.0	24.0			48.0	\$10,776.00
4.3	Develop final fine-tuning recommendations	0.5	4.0	12.0	6.0		22.5	\$4,428.00
4.4	Perform field implementation of fine tuned signal timings		12.0				12.0	\$3,132.00
4.5	Conduct before-and-after operational evaluations		8.0	20.0	60.0		88.0	\$15,448.00
4.6	Develop summary memo of MOE analysis	0.5	1.0	2.0	8.0		11.5	\$2,085.00
	Task 4 Subtotal	1.0	113.0	58.0	74.0	0.0	246.0	\$52,573.00
Task 5	Technical Documentation and Reporting							
5.1	Prepare draft technical memorandum	1.0	4.0	16.0	24.0		45.0	\$8,228.00
5.2	Update and submit final technical memorandum	0.5	2.0	8.0			10.5	\$2,194.00
	Task 5 Subtotal	1.5	6.0	24.0	24.0	0.0	55.5	\$10,422.00
	Meetings and Coordination Subtotal							
M.1	Attend monthly project coordination and Village check-in meetings, excluding kickoff meeting	12.0	12.0				24.0	\$7,164.00
	Meetings and Coordination Subtotal	12.0	12.0	0.0	0.0	0.0	24.0	\$7,164.00
Other Direct Costs	Other Direct Costs							
ODC.1	Mileage (300 miles)	\$217.50						
ODC.2	Supplies, Postage, Printing, Parking, Transit Fares, Tolls & other miscellaneous expenses	\$0.00						
ODC Subtotal		\$217.50						

[illegible]

Total Hours by Labor Classification	20.5	211.5	282.0	464.0	24.0	1002.0
Total Labor Fee	\$6,888.00	\$55,201.50	\$53,016.00	\$74,240.00	\$3,144.00	\$192,489.50
Total Other Direct Costs						\$217.50
TOTAL FEE						\$192,707.00



Project Name: Orland Park Traffic Improvement Studies
Prepared For: Village of Orland Park
Date: August 7, 2026

Driveway Consolidation Task		Management			Traffic									GIS		
		Principal	Executive Director	Senior Director	Technical Director	Department Director	Practice Lead	Lead Traffic Technician	Sr. Traffic Technician	Traffic Technician III	Transportation Engineer Iii	Transportation Engineer II	Traffic Engineer II	Traffic Engineer I		Sr. GIS Analyst
		staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name	staff name		staff name
		\$390	\$312	\$251	\$244	\$234	\$228	\$140	\$125	\$109	\$144	\$130	\$115	\$90		\$144
Task#	Task	Labor Classification/Rates/Hours													Fee	
1.00 Data Collection (TERRA Labor)		0	0	0	0	0	4	0	0	0	0	0	84	18	0	\$12,198
	1.01 Project StartUp						2									\$456
	1.02 Management															\$0
	1.03 Count Planning and Field Verification						2						2	2		\$866
	1.04 Travel Time Data Configuration												0	0		\$0
	1.05 Camera Set Up/Take Down												80	0		\$9,205
	1.06 Data Upload and Verification												2	16		\$1,670
1.10 Consultants																\$9,000
	1.11 Miovision/Data Processing															\$9,000
	1.12 Travel Time Processing															\$0
1.20 Direct Expenses		QTY	Unit Cost												\$2,588	
1.30 Total Data Collection																\$23,786
2.00 Traffic Impact Study		0	0	0	0	0	124	0	0	0	56	100	196	88	40	\$85,574
	2.01 Project Management						20									\$4,563
	2.02 Existing Access Inventory and GIS Database						20				8	16	20	20	40	\$17,640
	2.03 Existing Condition Assessment						8					16	20	16		\$7,647
	2.04 Access Management and Safety Analysis						8				8	8	20	20		\$8,119
	2.05 Property and Redevelopment Assessment						4				8	8	20			\$5,406
	2.06 Development of Driveway Consolidation Alternatives						16				8	8	60	16		\$14,187
	2.07 Recommended Program and Implementation Strategy						8				8	12				\$4,537
	2.08 OPCC Development						4				8	4	8			\$3,505
	2.09 Stakeholder Meetings						20									\$4,563
	2.10 Engineering Report						8				8	16	40	16		\$11,100
	2.11 QAQC						4					8				\$1,953
	2.12 Review/Respond to Comments						4					4	8			\$2,353
4.00 Reimbursable (Indirect) Expenses		QTY	Unit Cost												\$2,185	
4.00 Total Traffic Engineering Cost		0	0	0	0	0	128	0	0	0	56	100	280	106	40	\$111,545

[illegible]