



June 3, 2025

S. Khurshid Hoda, CPP
Director, Engineering Department
Village of Orland Park
14700 Ravinia Avenue
Orland Park, Illinois 60462

Proposal: Phase II Design Engineering | Ravinia Avenue South Extension_Traffic Signal Installation at LaGrange Road

Dear Mr. Hoda,

Thank you for the opportunity to submit our proposal to provide Phase II Engineering for the extension of Ravinia Avenue from approximately Costco to LaGrange Road. Since 2006, V3 Companies has been assisting the Village with developing Ravinia Avenue from 159th Street to LaGrange Road. Starting with the extension south through the current Costco property. As development continued in this area as well as the LaGrange Road project, completed in 2013, V3 has continually updated various site plans, wetland determinations, topographic surveys, and traffic studies. During my time at the Village, overseeing the LaGrange Road project, I was able to work with IDOT to maintain the full access of 161st (Ravinia Avenue) and LaGrange with the understanding that the Village would install a traffic signal at this location once a traffic signal is warranted.

In 2013 V3 submitted a traffic signal warrant analysis to IDOT for concurrence. The traffic signal, at that time, did not meet warrants and therefore the installation of the signal was not pursued at that time. A new signal warrant analysis with updated traffic volumes and development information will need to be submitted to IDOT, which is included in our scope and fee. In addition, the Village will need to provide any current development plans for the areas adjacent to Ravinia Avenue as well as any access information to Ravinia Avenue related to these developments. As you know, we are currently working with Costco on the roundabout at the main entrance to the facility and the proposed fuel station site.

Jason Holy, P.E. will be the Village's Project Manager for this project. Jason has been working on Village projects, including the Ravinia Avenue extension since 2006. Attached is our scope of services and proposed fee to execute the work. We look forward to continuing our relationship with the Village of Orland Park and are available immediately to begin work. If you have any questions regarding our qualifications, please feel free to contact me or Jason Holy at Jholy@v3co.com or via phone at 630.254.1522.

Sincerely,
V3 Companies, Ltd.

Kurt Corrigan, P.E.
Vice President of Municipal Services

Attachments: Exhibit A – Scope of Services
Exhibit B – Fee Schedule



EXHIBIT A – SCOPE OF SERVICES

RAVINIA AVENUE EXTENSION – FROM LAGRANGE ROAD WEST 1500 FT

Scope of Services – Phase II Engineering

The following is the scope of services necessary to successfully deliver plans, specifications and construction estimates to the Village of Orland Park for the extension of Ravinia Avenue from LaGrange Road west for approximately 1500 feet. The services will meet Village of Orland Park, MWRD WMO and IDOT policies, procedures, and guidelines.

TASK 1 – TOPOGRAPHIC SURVEY

A Topographic Survey will be conducted within the survey area of the proposed path for Ravinia Ave extension as well all the intersection of Ravinia Ave and LaGrange Rd. In addition to the full rights-of-way, the survey areas shall include up to an additional 50' north and south of Ravinia Ave and 1000' north and south on LaGrange Rd at the intersection.

The Topographic Survey services will include the following:

- Recover and measure a source benchmark published by the National Geodetic Survey, County or Municipality near the project and establish two site benchmarks within the survey area. Elevations will be referenced to the North American Vertical Datum of 1988 (NAVD88). Description of the location and elevation of the source and site benchmarks to which the topographic surveying is referenced to, will be indicated on the survey.
- A contour survey with 1'-0" contour intervals will be prepared from field spot elevations. Spot elevations obtained in the field will be of sufficient quantity to generate a contour survey, which properly represents the ground surface. Additional elevations will be indicated on the survey as required to establish accurate profiles (including all changes or breaks in grade) and cross-sections of walks, curbs, gutter, pavement edges, and centerlines.
- Spot elevations will be shown to the nearest 0.01 foot on all "hard surfaces" and utility structures. Spot elevations in unpaved areas such as grass and dirt shall be accurate to the nearest 0.1 foot.
- Pavement types such as concrete, asphaltic concrete, gravel, etc. will be indicated.
- Existing improvements, such as mailboxes and signs shall also be located.
- Individual trees of 6" diameter or greater within unimproved areas and ornamental parkway trees of 3" diameter or greater within improved properties (all callipered 4' above the ground) along the proposed extension area for Ravinia Avenue will be located within one-foot tolerance. Where brush exist, the perimeter outline of the brush will be additionally shown.
- V3's International Society of Arboriculture (ISA) certified arborist will identify all trees 3" DBH and greater within the project area to be impacted by construction. The trees will be tagged as part of V3's topographic survey scope of services. The tag number, diameter, and tree species will be recorded for each tree identified. A rating will be assigned to each tree which will consider the size, species, condition, location, and aesthetics of each. A summary table will be prepared listing the scientific name, common name, DBH, and rating of each tree identified. In addition, V3's Certified Arborist will evaluate the potential for bat habitat during the tree identification process.
- The information provided by V3 regarding tree quality is based on an interpretation of observed tree growth habit and health at the time of the field investigation. V3 provides the best information available at the



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time of the field investigation, but outside factors may affect tree characteristics with time, including weather, vegetation maintenance, altered drainage, disease, or other events.

- Mean elevations of water in retention ponds, lakes, or streams will be shown as depicted at the time the survey field work was conducted.
- Top of curb, flow line, and edge of pavement elevations of all roadways and streets within the survey area shall be shown.
- The centerline profile of the road and certain utility conflicts may be shown in the profile section of the drawing. This shall be negotiated with the client.
- Apparent Right-Of-Way lines will be shown on the map from public record maps, plats and other documents and coordinated with monumentation found in the field via a limited search and apparent occupation.

3D/Open Roads Survey Processing

- Upon completion of the field data collection survey, base sheets will be prepared in Bentley's Open Roads Design (ORD) in accordance with the State of Illinois Department of Transportation Computer Aided Design, Drafting, Modeling and Deliverables Manual.

TASK 2 -EASEMENT, ROW, AND IDOT PLAT OF HIGHWAY

The Right-Of-Way scope item within Task 1 will be escalated to a Boundary Survey defining the public right of way property limits using available public record documents, those provided by the City, County Department of Transportation, or others in conjunction with a more comprehensive field investigation of monumentation and occupation. V3 will examine existing record easements for each parcel along the corridor through title commitment research and depict the limits. It is anticipated that approximately six (6) title reports will be required for this task. Each title commitment research report is estimated to cost approximately \$950 per unsubdivided parcel or subdivision plat. A Plat-of-Highways and legal descriptions conforming to IDOT standards shall be prepared for those approximate six (6) properties at the LaGrange Road intersection that may require easement and right-of-way parcel acquisition.

TASK 3 - GEOTECHNICAL INVESTIGATION AND CCDD SOIL DISPOSAL EVALUATION

Our subconsultant, NASHnal, will perform soil borings and prepare a geotechnical report to determine the suitability of the soils for the roadway construction. 3 soil borings are estimated in the construction section.

V3 will conduct an LPC-662 CCDD Soil Disposal Evaluation in accordance with IL Title 35 Part 1150 Subtitle J: Clean Construction or Demolition Debris. Based on a cursory environmental review of the project area, this scope of work assumes the project will qualify for Source Site Certification by Owner or Operator (LPC-662). If a Potentially Impacted Property (PIP) is identified in the project area, the project will require an Uncontaminated Soil Certification by a Licensed P.E. or P.G. (LPC-663), and additional fees will be required to complete the soil certification. The CCDD Soil Disposal Evaluation will be conducted to screen and characterize potentially excavated soils generated from proposed construction activities that cannot be reused or managed onsite.



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[Note: CCDD facilities and Uncontaminated Soil Fill Operations are privately owned and maintain the right to accept or reject materials on any criteria decided on by the facility. Consequently, adherence to IL Title 35 Part 1150 Subtitle J does not guarantee acceptance at every CCDD facility. This proposed scope of work is consistent with IL Title 35 Part 1150 Subtitle J and industry standards.]

TASK 4 – TRAFFIC STUDY, WARRANT ANALYSIS, AND IDS

The construction of the Ravinia Avenue extension will result in an adjustment to the existing traffic patterns in the area as adjacent developments will have additional options to access the area roadways and vehicles will be able to use the new extension to avoid some travel movements and intersections. For instance, currently traffic from the south on LaGrange Road has to use 159th Street to access the Costco or northbound Ravinia Avenue. The construction of the extension will allow vehicles to use the Ravinia Avenue extension at the 161st Street intersection from LaGrange Road and not travel through the 159th Street intersection.

Traffic Counts: Existing 14-hour (6 am – 8 pm) traffic counts will be collected at the unsignalized intersection of US 45/LaGrange Road and 161st Street. The traffic data will be collected by vehicle classification (passenger car, heavy vehicles) and include pedestrian and bicycle data.

V3 will coordinate with CMAP to obtain 2050 traffic projections with the construction of the Ravinia Avenue extension at LaGrange Road and at 159th Street. Growth rates will be calculated and used to estimate the hourly volumes for the opening year of the extension. The existing traffic that will be re-routed to the extension will also be estimated and included in the traffic projections.

Capacity Analysis: A Synchro traffic model will be created that will analyze the intersection operations of the LaGrange Road and 161st Street intersection for the existing and future with Ravinia Avenue extension scenarios. The analysis will provide delays and queue lengths by movement which will be used to determine any capacity improvements needed at the intersection.

Traffic Signal Warrant Analysis: V3 will conduct a traffic signal warrant analysis using nine signal warrants in the latest version of the MUTCD at the intersection of US 45/LaGrange Road and 161st Street. The analysis will focus on the eight-hour and four-hour warrants but the other warrants will also be reviewed.

Traffic Analysis Technical Memorandum: V3 will provide a technical memorandum summarizing the existing and future traffic data and the results of the capacity analysis and traffic signal warrant analysis: V3 will provide a recommendation on intersection traffic control and any potential intersection improvements needed. The Memorandum will be submitted to IDOT for their review and approval if any improvements are proposed within the IDOT right of way.

Intersection Design Study (IDS): If a traffic signal is warranted and upon IDOT's review and concurrence of the traffic analysis, V3 will prepare an IDS utilizing traffic volumes, capacity analyses data, confirmed intersection geometry, and design vehicle turning movements. The IDS will contain a plan sheet, roadway profiles if necessary, and turning movement diagrams. It will include the proposed lane configuration and projected storage lengths for each approach turn lane as well as AutoTurn plots for all turning vehicle movements. Design exceptions will be documents following IDOT standards.



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All drawings for the IDS will be in accordance with IDOT formatting requirements. V3 will submit the IDS documents and supporting analysis reports to IDOT for review and revise up to two times based on comments received. A disposition will be provided with each resubmittal

TASK 5 – FIELD RECONNAISSANCE

Upon completion of the survey, V3 will walk the site to verify the existing pavement condition on either end of the extension, identify potential conflicts with existing utilities and verify existing conditions collected during survey, data collection and JULIE survey. In addition, V3 will evaluate the existing condition of the drainage structures. V3 will also evaluate the intersection of Ravinia Ave and LaGrange Rd.

TASK 6 - UTILITY COORDINATION

Timely coordination with the utility companies is important to meeting the design and construction schedule. The following is included under this task:

- V3 will prepare letters and exhibits to initiate coordination with utility companies within the project corridor.
- V3 will review and identify potential utility conflicts according to the proposed design.
- Utility Coordination Field Verification Meetings – up to two (2) field meetings with one V3 project team member present. Hours for utility coordination meetings are included in the meetings task below.

Plans will be submitted to private utility companies at the 75% and 100% level of completion to coordinate any required utility adjustments/relocations.

TASK 7 – WETLAND DELINEATION/USACE JD/WMO PERMITTING

V3 has conducted numerous wetland delineations of the various properties at the southwest corner of 159th Street and LaGrange Road, including the proposed Ravinia Drive corridor in 2012. Our most recent wetland delineation and report for the adjacent properties and the corridor occurred in June 2024. V3 has also obtained numerous US Army Corps of Engineers (USACE) Approved Jurisdictional Determinations (AJD) for the wetlands in the project area. The latest AJD was obtained in September 2020. This AJD determined that all the wetlands located in the project area were not under USACE jurisdiction but qualify as Standard Isolated Wetlands pursuant to the MWRD Watershed Management Ordinance (WMO). This AJD has expired and will need to be renewed, but it V3's professional opinion is that the potential wetlands in the corridor are regulated under the WMO.

An updated wetland delineation investigation and report will be prepared for the project area, which will include threatened and endangered species consultation with the Illinois Department of Natural Resources (IDNR) for State Species, and the U.S. Fish & Wildlife Services (USFWS) for Federal Species.

The following services will be performed to provide you with information on the location, quality, and extent of wetlands present within the project corridor.

- **2025 GROWING SEASON WETLAND DELINEATION.** V3's Wetland Specialists, including a soil scientist and a botanist from our Natural Resources Division, will conduct a field investigation during the 2025 Cook County



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growing season (approximately May 1-November 1) to locate and delineate wetlands in accordance with the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region*. The limits of delineated wetlands/Waters of the U.S. will be staked in the field, and approximate boundaries will be mapped on a recent large-scale aerial photograph, based on our field assessment of the vegetation, soils and hydrology at the site. The limits of any wetlands within the right of way, and within 50 feet of the right of way, will be located using survey grade equipment during the field investigation portion of the wetland delineation.

- **WETLAND ASSESSMENT.** Since wetlands are present and/or adjacent to the project corridor, wetland assessment is required by the MWRD WMO. Wetland assessment involves an evaluation of wetland characteristics, including wildlife habitat quality, water quality functions, and plant community quality. Wetland Assessment also includes a preliminary jurisdictional determination for isolated or adjacent wetland. Delineated wetlands will be rated as High-Quality Aquatic Resources (HQAR's) in accordance with the USACE, if applicable.
- **WETLAND DELINEATION TECHNICAL REPORT.** A wetland report will be provided with the results of our field investigation, including the location and approximate size of wetlands present, a wetland quality evaluation, a Floristic Quality Assessment (FQA), and the wetland assessment. Floristic inventories and detailed soil classification data for each area investigated will be provided in the report. Areas determined to be wetland within the corridor will be shown on a recent, large-scale aerial photo exhibit. USACE wetland permitting and/or mitigation requirements will be addressed in the report. The wetland report also will contain detailed technical documentation suitable for review and approval by the USACE and Village of Orland Park.
- **THREATENED & ENDANGERED SPECIES CONSULTATION UPDATE.** As required by the USACE, V3 will prepare and submit the EcoCAT request to the Illinois Department of Natural Resources (IDNR) for State species. V3 will also prepare and submit the U.S. Fish & Wildlife Service (USFWS) Section 7 consultation for Federal species. This task does include V3's Certified Arborist assessing any trees within the project corridor for bat habitat.
- **USACE NO PERMIT REQUIRED/JURISDICTIONAL DETERMINATION.** The USACE now requires a permit submittal in order to obtain an approved jurisdictional determination. V3 will prepare a No Permit Required submittal to the USACE which will require an engineering plan for the project. V3 will submit the No Permit Required to the USACE with a request for a jurisdictional determination so that the MWRD Ordinance requirement can be satisfied.
- **SURVEY LOCATE OF WETLANDS.** During the field investigation, V3's wetland team will survey locate wetland boundaries within the project corridor right of way and within 50 feet of the right of way. These wetland boundaries will be able to be transferred directly onto engineering plans for assessment of impacts.
- **VILLAGE OF ORLAND PARK/BUFFER PERMIT SUBMITTAL.** With the assumption that the USACE jurisdictional determination will identify the wetlands within the corridor as not under USACE regulation, V3 will prepare documentation addressing wetland impacts as part of the approval by the City of Orland Park.
- **NATIVE PLANTING DESIGN/BUFFER SETBACK.** The WMO defines a buffer setback for identified wetlands. Impacts or disturbance to existing buffer setbacks will require native planting mitigation. V3 will design proposed native plantings as mitigation and/or restoration for wetland buffer impacts. The native planting design will be incorporated onto the overall engineering plan set.



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TASK 8 – ROADWAY AND UTILITY PERMITTING

- IEPA water and sanitary sewer
- IDOT permits.

TASK 9 - ROADWAY DRAINAGE SYSTEM DESIGN AND PERMITTING

• DRAINAGE DESIGN UPDATE

V3 will review the previously prepared engineering plans and confirm that the storm sewer system is properly sized to meet Metropolitan Water Reclamation District (MWRD) Watershed Management Ordinance (WMO) requirements. It is likely that the evaluation using Bulletin 75 rainfall data will result in larger storm sewer pipes.

Drainage areas to sewer inlets will be determined, peak inflow rates calculated, and hydraulic grade line computed for each sewer line. Riprap at each outfall will be sized based on expected discharge rates. V3 will update the storm sewer design as necessary and produce calculations for inclusion in a permit submittal to MWRD. Linework, including plan and profile views of the sewer network, will be prepared and added to the engineering plans.

• VOLUME CONTROL DESIGN

The proposed project creates greater than one (1) acre of new impervious area and is subject to MWRD WMO volume control requirements. The WMO states that volume control for ROW projects should be provided “where practicable” and it may be difficult to provide within the limited project footprint. V3 will coordinate with MWRD staff will design appropriate volume control storage if MWRD indicates that it is required. This requirement may need to be met in an offsite facility.

• DETENTION STORAGE DESIGN

The proposed project creates greater than one (1) acre of new impervious area and is subject to MWRD WMO detention requirements. The WMO states that detention storage for ROW projects should be provided “where practicable” and may be difficult to provide within the limited project footprint. V3 will coordinate with MWRD staff will design appropriate detention storage if MWRD indicates that it is required. This requirement may need to be met in an offsite facility.

• MWRD STORMWATER PERMIT

V3 will prepare a summary report and submit to MWRD for a stormwater management permit. The report will include all necessary narrative, exhibits, and calculations. V3 will respond to any requests for additional information during the review process.



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- **IEPA NOTICE OF INTENT**

The proposed project will disturb greater than one (1) acre and will require submittal of a Notice of Intent (NOI) to the Illinois Environmental Protection Agency (IEPA) to obtain coverage under ILR-10 for construction site discharges. V3 will prepare a SWPPP binder, NOI documentation, and will submit the required documents via the IEPA online portal.

- **WILL-SOUTH COOK SOIL & WATER PERMIT (IF REQUIRED)**

V3 will prepare a submittal to Will-South Cook Soil & Water Conservation District (SWCD) to obtain a permit for proposed soil erosion/sediment control features. V3 will respond to any requests for additional information during the review process.

TASK 10 - PLANS, SPECIFICATIONS & ESTIMATES

Construction plans and specifications for the roadway improvements will be prepared in accordance to Village of Orland Park, IDOT and MWRD standards and guidelines at 75% (pre-final) and 100% (final) stages. The plans will consist of the following sheets:

- Cover sheet
- Index of sheets/general notes
- Summary of quantities
- Typical sections
- Schedule of quantities
- Alignment, ties, and benchmarks
- Maintenance of traffic plans and notes
- Erosion and sediment control plans and notes (SWPPP)
- Removal plans
- Roadway plan/profile
- Intersection/ADA accessibility details
- Drainage and utility plan and profile
- Drainage structure/storm sewer schedules
- Pavement marking and signing plans
- Traffic signal and interconnect plans and details
- Lighting plans and details
- Will-South Cook Erosion Control Details
- Village of Orland Park details
- IDOT construction details
- Cross sections

V3 will prepare quantity computations and engineer's opinion of probable construction costs at both the 75% and 100% stages of the project. The computed quantities will serve as the basis for the Summary of Quantities sheet and the engineer's opinion of probable construction costs.



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Specifications and special provisions will be prepared at the pre-final (75%) and final (100%) stages of the project. Where a project item contains work, material, unique sequence of operations or any other requirements that are not included in the Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Recurring Special Provisions or BDE Special Provisions, a project specific Special Provision will be written.

Plans, specifications and estimates will be submitted to the Village, local agencies and utility companies for review at the 75% and 100% stages. All documents will be revised based on comments received from reviewing agencies. A disposition of comments will be prepared with each resubmittal.

TASK 11 - BID SUPPORT AND COORDINATION

During the bidding phase, V3 will:

- Provide responses to bidder questions and answer RFI's that arise during the bidding phase.
- Issue any addendums to perspective bidders as required to interpret or clarify the Bid Documents.
- Assist the Village of Orland Park in reviewing the bid proposals and prepare a recommendation of award of contract letter.
- This project will be let through the Village of Orland Park.

TASK 12 - PROJECT COORDINATION AND MEETINGS

Project administration and management for the project will be performed by the Project Manager. V3 will prepare and submit a project schedule to the Village for review and approval. The project schedule will be utilized for scope of work reviews, work-hour planning and budget control. The project schedule will be updated as work progresses. If requested, V3 will also prepare monthly progress reports.

V3 will attend meetings as required throughout the duration of the project. Anticipated meetings could include, but are not be limited to:

- Progress meetings with Village staff (2)
- Utility coordination meetings (2)

design phase

Ravinia Avenue Extension and Traffic Signal at 161st and LaGrange Road
6/2/2025

Exhibit B

TASK	STAFF																TOTAL HOURS	DIRECT COST	TOTAL FEE
	Project Director	Road Project Manager	Drainage Project Manager	Drain Design Eng II	Design Eng II	Traffic Eng II	Technician	Survey Manager	Survey Crew Chief	Envi Manager	Project Scientist	Soil Scientist	Project Man I	Project Sci I	Eviron Eng III	Project Coor			
Rates with a 2.80 Multiplier	\$260.00	\$ 225.00	\$ 189.00	\$ 113.00	\$ 115.00	\$ 129.00	\$ 149.00	\$ 196.00	\$ 129.00	\$ 219.00	\$ 130.00	\$ 81.00	\$ 161.00	\$ 74.00	\$ 89.00	\$ 78.00			
Task 1 Project Survey							20	10	80								110		\$ 15,278
Task 2 Easement, ROW, and IDOT Plat of Highway							30	10	50								90		\$ 12,885
Task 3 Geotech Investigation and CCDD Soil Disposal Evalution		4			4								10		30	2	50	\$ 10,500	\$ 5,795
Task 4 Traffic Study, Warrant Analysis, and IDS		20			120	140											280	\$ 1,650	\$ 36,304
Task 5 Field Reconnaissance		3			10		5										18		\$ 2,564
Task 6 Utility Coordination		3			10												13		\$ 1,820
Task 7 Wetland Delineation/USACE JD/WMO Permitting										55	90	80					225		\$ 30,170
Task 8 Roadway and Utility Permitting		10			20												30		\$ 4,540
Task 9 Roadway Drainage System Design and Permitting		10	75	390													475		\$ 60,340
Task 10 Plans, Specifications and Estimate		20			225	150	25										420		\$ 53,337
Task 11 Bid Support and Coordination		10			5												15		\$ 2,822
Task 12 Project Coordination and Meetings		4	20		12					8							44		\$ 8,667
Total Hours	4	100	75	390	406	290	80	20	130	63	90	80	10	0	30	2	1770		
																	Total	\$ 12,150	\$ 234,521
Grand Total With Extra Work																			\$246,671