

Request for Proposal

Village of Orland Park
May 14th, 2021

Prepared for:

Sean Marquez, Village Engineer
Nicole Merced, Purchasing Coord.
Village of Orland Park
14700 Ravinia Avenue
Orland Park, IL 60462
smarquez@orlandpark.org
nmerced@orlandpark.org

Submitted by:

Charles Stenzel, PE
Senior Vice President
TranSystems
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EXPERIENCE | Transportation



**RFP 82nd Avenue Multi-Use Path
from 135th Street to 151st Street,
Phase I Preliminary Engineering**

May 14, 2021

Sean Marquez, Village Engineer
Nicole Merced, Purchasing Coordinator
Village of Orland Park
14700 Ravinia Avenue
Orland Park, IL 60462

**RE: 82nd Avenue Multi-Use Path from 135th Street to 151st Street
Phase I Preliminary Engineering**

Dear Mr. Marquez and Ms. Merced:

We are pleased to submit our qualifications to provide consultant engineering services for the 82nd Avenue Multi-Use Path from 135th Street to 151st Street – Phase I Preliminary Engineering RFP.

TranSystems has an outstanding reputation and extensive experience in providing Phase I, Phase II, and Phase III engineering services for multi-use trail projects. Our team knows the importance of this project to the Village of Orland Park through our work on the ITEP application submittals last year, and we are excited to help deliver this project to your community. Our firm is uniquely qualified for this assignment as we will provide:

- ▶ A Consultant with experience in similar bike trail projects who has planned, designed, and completed construction engineering services for dozens of trails for local agencies in the past 10 years. Example multi-use trail projects include Gary Avenue Multi-Use Path for DuPage County; Kuhn Road Bike Path and Fair Oaks Road Bike Path in Carol Stream; and IL Route 59 Bridge and Trail in Streamwood.
- ▶ A Consultant with expertise in all of the design disciplines needed to successfully complete this project, including NEPA documentation, multi-use trail design, aesthetics and landscape architecture, drainage design, permitting, coordination with utility companies and public outreach.
- ▶ A Consultant who is prequalified by IDOT in all areas needed for this project and possesses a thorough understanding of the Federal Aid approval process.
- ▶ A Consultant with team members that have developed trusted relationships with IDOT staff within all the Bureaus, which in turn provides value to our clients when coordinating projects through the federal process. **Mr. John Fortmann**, who was the former District 1 Engineer and Bureau Chief of Land Acquisition for IDOT, is a full-time TranSystems employee.
- ▶ A Consultant that will assist the Village in securing funding for this project. Within the last five years we have helped the Forest Preserve District of DuPage County obtain nearly all of the \$2.9M needed (DECO, ITEP, TCM) to construct the County Farm Road Bike Path Bridge, Elk Grove Village obtain \$3.1M (TCSP & CMAQ) for the Busse Woods Bike Path and Pedestrian Overpass, and the City of Elmhurst obtain \$1.8M (STP/TCM via DMMC) for the IL 83 Overpass and Multi-Use Trail.

We will also utilize Hampton, Lenzi & Renwick, Inc. (HLR) to perform the necessary environmental analyses and survey. Testing Services Corporation (TSC) will provide geotechnical services.

Thank you for the opportunity to submit our qualifications. We look forward to working with you and your staff on this important project. Please contact me with any questions at cjstenzel@transystems.com or 847.774.9937.

Very truly yours,

TranSystems

A handwritten signature in black ink, appearing to read "Charles J. Stenzel".

Charles J. Stenzel, PE
Senior Vice President

1 | STATEMENT OF EXPERIENCE



NATIONAL EXPERTS - LOCAL UNDERSTANDING

TranSystems specializes in providing comprehensive planning, design and construction engineering services to the transportation, municipal and private sectors since our firm's inception in 1966. Our experience includes major highways, interchanges, local roadways, bridges, bikeways, railroads, trucking, warehousing, transit, and other transportation improvements. TranSystems has a long and varied history of serving State, County, and municipal governments as well as private sectors.

TranSystems has 30 offices located nationwide with more than 730 employees. We have two local offices within the Chicagoland region with a combined staff of over 120 individuals. Our staff includes licensed professional engineers, licensed structural engineers, traffic engineers, and planners.

TranSystems financials are prepared in accordance with standards generally accepted in the United States of America. The Company is in good standing, is in compliance with all bank covenants and remains current with all vendors. TranSystems is a privately held corporation and our financials are confidential and proprietary information. If you would like to receive any additional financial statements, please contact our Chief Financial Officer and Comptroller, Julie Frigon, at (816) 329-8600 or at jafrigon@transystems.com.

TranSystems does not currently have any conditions, including bankruptcy, pending litigation, or planned office closures, which would impede our ability to complete these projects.

Our IDOT prequalification certification has been attached in the next few pages.

PHASE I EXPERTISE

Over the past 25 years, we have planned, designed, and constructed hundreds of miles of bicycle facilities and multi-use trails within the Chicagoland area. Many of these projects have won local and national awards. Select projects are listed below:

- ▶ Union Pacific Railroad Bike Underpass, Arlington Heights (**APWA National Award**)
- ▶ Barrington Bikeway Corridor, Barrington
- ▶ Kuhn Road Bike Path, Carol Stream
- ▶ Fair Oaks Road Bike Path, Carol Stream
- ▶ Lies Road Bike Path, Carol Stream
- ▶ Conrail Bikeway, Chicago
- ▶ Bloomingdale Trail (606), Chicago (**ENR Midwest Regional Best Projects & Burnham Award for Excellence**)
- ▶ North Central DuPage Regional Trail, Forest Preserve District of DuPage County (FPDDC)
- ▶ Dunham Forest Preserve Trail, FPDDC
- ▶ County Farm Road Bridge & North Central DuPage Regional Trail, FPDDC (**ACEC & APWA National Awards**)
- ▶ Southern DuPage County Regional Trail, FPDDC
- ▶ Gary Avenue Multi-Use Path, DuPage County
- ▶ Illinois Prairie Path/CN Railroad, DuPage County
- ▶ Elgin Bikeway Master Plan, Elgin
- ▶ Elgin Bikeway Route 1 & 4, Elgin
- ▶ Busse Woods Trail and Overpass, Elk Grove (**APWA National Award**)
- ▶ I-290 Overpass and Trail, Elk Grove
- ▶ Shoe Factory Road Bike Path, Hoffman Estates
- ▶ Butterfield Road Bike Path, Lake County
- ▶ DuPage River Trail, Naperville
- ▶ Rohlwing Road Bikeway, Rolling Meadows
- ▶ Meacham Road Bikeway, Schaumburg
- ▶ Woodfield Road Bikeway Underpass, Schaumburg
- ▶ IL Route 59 Bridge and Trail, Streamwood
- ▶ Sheridan Road Trail, Wilmette (**ACEC & APWA Awards**)
- ▶ 83rd Street Bike Path, Woodridge
- ▶ Commonwealth Edison Bikeway, Woodridge

LOCAL OFFICES

1475 E. Woodfield Road
Suite 600
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847-605-9600

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PRIMARY CONTACT

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OF YEARS IN BUSINESS
55

FIRM SIZE
730 Employees Nationwide



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 31, 2020

Subject: PRELIMINARY ENGINEERING
Consultant Unit
Prequalification File

Charles Stenzel
TRANSYSTEMS CORPORATION
1475 East Woodfield Road
Suite 600
Schaumburg, IL 60173

Dear Charles Stenzel,

We have completed our review of your "Statement of Experience and Financial Condition" (SEFC) which you submitted for the fiscal year ending Dec 31, 2019. Your firm's total annual transportation fee capacity will be \$112,000,000.

Your firm's Home Rate rate of 148.69% and Field Rate rate of 128.26% are approved on a provisional basis. The rate used in agreement negotiations may be verified by our Office of Quality Compliance and Review in a pre-award audit.

Your firm is required to submit an amended SEFC through the Engineering Prequalification & Agreement System (EPAS) to this office to show any additions or deletions of your licensed professional staff or any other key personnel that would affect your firm's prequalification in a particular category. Changes must be submitted within 15 calendar days of the change and be submitted through the Engineering Prequalification and Agreement System (EPAS).

Your firm is prequalified until December 31, 2020. You will be given an additional six months from this date to submit the applicable portions of the "Statement of Experience and Financial Condition" (SEFC) to remain prequalified.

Sincerely,
Jack Elston, P.E.
Bureau Chief
Bureau of Design and Environment

SEFC PREQUALIFICATIONS FOR TRANSYSTEMS CORPORATION

CATEGORY	STATUS
Location Design Studies - Rehabilitation	X
Structures - Highway: Simple	X
Structures - Highway: Advanced Typical	X
Structures - Highway: Complex	X
Structures - Highway: Typical	X
Structures - Moveable	X
Structures: Major River Bridges	X
Structures - Railroad	X
Special Studies - Lighting: Typical	X
Environmental Reports - Environmental Assessment	X
Environmental Reports - Environmental Impact Statement	X
Airports - Design	X
Airports - Planning & Special Services	X
Special Studies - Signal Coordination & Timing (SCAT)	X
Special Studies - Traffic Studies	X
Special Studies - Traffic Signals	X
Transportation Studies - Railway Engineering	X
Special Services - Construction Inspection	X
Special Studies - Location Drainage	X
Hydraulic Reports - Waterways: Typical	X
Hydraulic Reports - Waterways: Complex	X
Hydraulic Reports - Pump Stations	X
Highways - Freeways	X
Location Design Studies - New Construction/Major Reconstruction	X
Special Studies - Feasibility	X
Special Services - Landscape Architecture	X
Special Studies - Safety	X
Highways - Roads and Streets	X
Location Design Studies - Reconstruction/Major Rehabilitation	X
Transportation Studies - Mass Transit	X

2 | PROJECT UNDERSTANDING & APPROACH



PROJECT UNDERSTANDING

TranSystems' approach to this project is based on our history with the project through our efforts on the 2020 ITEP application submittal, our full understanding of the federal process required for the project scope, and previous experience with multi-purpose path projects throughout the Chicago area.

Our Team understands the importance of this project to the Village of Orland Park. This project fills the gap in the Orland Park Bikeway Plan, connecting residents to work, schools, and recreational areas. The path will also improve mobility through the Village by connecting to the Orland Bikeway which connects residents to the Cook County Forest Preserve, and recreational parks. The completion of this project would create an indirect connection for residents along the east side of the Village to US 45 and the west side of the Village via the McGinnis Slough project and The Orland Bikeway. Therefore, to achieve a successful project, TranSystems will utilize our past pedestrian trail planning, design, and construction experience by providing key staff directly involved with recent similar and award winning projects.

Our goal with this project is to provide a solution that maximizes the scoring potential for funding sources and minimizes the Village's near term and long term financial commitments to the project. We will build off our alignment and site evaluation provided in the ITEP application to provide an optimal path location and connections. The evaluation process will consider the environmental and utility impacts; local connections; construction cost; and future maintenance.

Our previous history with this project and ability to secure funding will provide value from a time and cost perspective.

The selected alternative will be obtained through consensus building with the project stakeholders, including the Village, CCDOTH, and IDOT. Public involvement will be a key component of the Phase I process to gather input and create a design of which the Village and its residents will be proud.



**82nd Avenue
Tinley Creek Crossing**



**82nd Avenue & 143rd
Street Intersection**



**82nd Avenue at Christ
Lutheran Cemetery**

KEY ELEMENTS/PROJECT CHALLENGES

Delivering a successful project requires addressing these three key elements:

1. Funding Strategies
2. Design Challenges
3. Coordination and Public Involvement

1. Funding Strategies

TranSystems provides full service to local agencies in developing strategies and utilizing alternative funding for transportation improvements. The goal of our assistance is to leverage local agency dollars to maximize construction during each fiscal year. Over the years we have been successful in obtaining over \$200M in transportation funding for local agencies. Within the last five years, we have helped the DuPage County Forest Preserve District obtain nearly all of the \$2.9M needed (DECO, ITEP, TCM) to construct the County Farm Road Bike Path Bridge and Trail, Elk Grove Village obtain \$3.1M (TCSP & CMAQ) for the Busse Woods bike path and pedestrian overpass, and the City of Elmhurst obtain \$1.8M (STP/TCM via DMMC). Our approach to securing outside funding dollars is identified on the following page:

- ▶ **Project Funding Assessment:** Review of 82nd Ave Multi-Use Path project to identify funding opportunities from multiple sources including federal, state, county, and municipal levels. This project is an ideal candidate to receive STP, CMAQ, TAP, and/or ITEP funding.

- ▶ **Multi-Agency Coordination:** Organize meetings to stimulate consensus building, partnering arrangements and implementation strategies. Given the path location, the Cook County Department of Transportation and Highways (CCDOTH) and Cook County Forest Preserve are ideal project partners as we can tie into their existing pedestrian facilities. Involving these partners and securing their support for this project will be a critical part of the funding strategy.
- ▶ **Funding Application Submittal:** Prepare and coordinate all phases of funding application submittal, including pre-application meeting attendance, on-site review, and public presentations.
- ▶ **Agreement Processing:** Prepare and/or review grant and interagency agreements. TranSystems will prepare agreements required by IDOT, CMAP and SWCM for this project.

2. Design Challenges

Along the 82nd Avenue corridor, the multi-use path alignment will encounter several design challenges including two different cross sections: urban (curb and gutter) and rural (road side ditches), and a major culvert crossing over Tinley Creek. Each of these challenges require a different approach. In the urban section, adjacent properties consist of mainly developed residential subdivisions and businesses. The rural section is comprised of large, individual residential properties, a golf course and a cemetery with varying right-of-way limits. TranSystems is experienced in addressing each of these challenges as shown in the sample projects included herein.

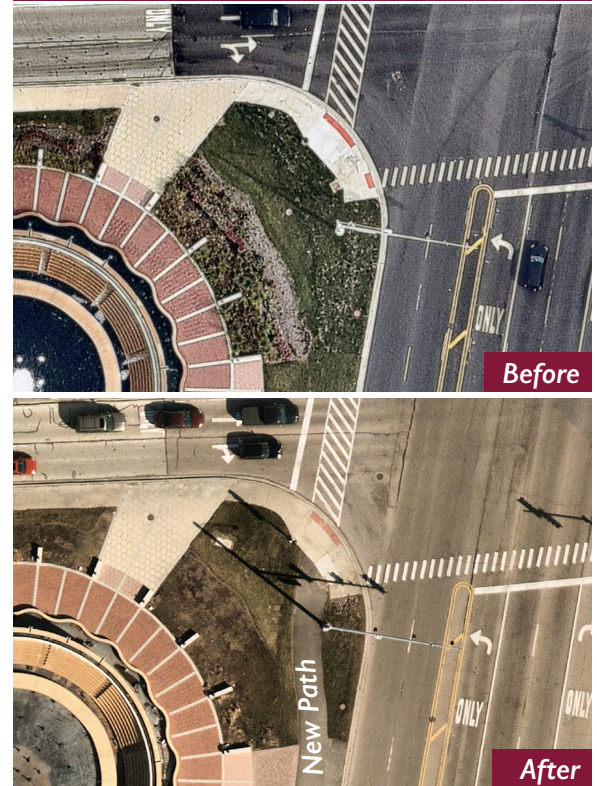
- ▶ **Urban Section:** In general, the multi-use path in the urban section will replace an existing sidewalk. To meet minimum IDOT requirements, the proposed multi-use path will need to provide a minimum clear distance of 2ft from any existing fence, noise wall or retaining wall, while also maintaining a minimum of 4.5ft from the back of curb. For an 8ft wide multi-use path, this will require a minimum parkway width of 14.5ft (back of curb to ROW) or 16.5ft for a 10ft wide multi-use path. This width is available in most areas from 135th to 143rd Street. Ideally, the path would be located along the west side to avoid impacts to existing utilities, such as power poles.

The signalized intersections in this stretch would be upgraded to accommodate the pedestrian/bicycle facilities. No cross walk is proposed at 135th Street as there are no pedestrian facilities along 135th currently. The path will terminate south of 135th Street.

- ▶ **Rural Section:** Compared to the Urban Section, the stretch of 82nd Avenue from 143rd St to 151st St will require additional design features as there is no curb and gutter for drainage, and the right-of-way varies based on available GIS data. To minimize right-of-way or easement impacts, TranSystems proposes to investigate the cost effectiveness of placing the path closer to the roadway and installing a barrier, separating pedestrians/bicyclists from 82nd Avenue traffic. Additionally, the path location will require detailed investigation as the section near Tinley Creek has a golf course and cemetery on the west side, and residential driveways on the east side. Adding limited curb, grading, and small retaining walls will be considered to minimize impacts.
- ▶ **Tinley Creek Culvert:** This crossing is a significant challenge to the southern half of the corridor. In order to accommodate the multi-use path, a longer culvert is required; whether by replacement or extension. A field visit revealed the culvert is located in a low spot along 82nd Ave and has an approximate opening of 10ft x 12ft. The east side includes residential properties approximately 10ft below 82nd Ave with a driveway directly south of the culvert. The west side is mostly open with a cemetery located to the south. While performing research for this proposal, the team discovered this culvert is considered undersized according to MWRD reports; however, conversations with Cook County staff noted no known flooding issues at this location. Based on the data collected during the field visit and in research, Type Size and Location plans will be required for any structural improvement at this location. Path location will be a key factor in determining required structural improvements and overall project costs.

The team anticipates the hydraulic study performed during Phase 1 will indicate the culvert is undersized and an extension would result in adverse impacts upstream, requiring full replacement of the structure. However, based on

Gary Avenue - Carol Stream, IL: Example of Working around Existing Signal Poles



past experience from our **Lead Drainage engineer, Jesse Vuorenmaa**, increasing the size of this opening may have more significant impacts to the residential properties downstream with the driveway culverts needing to convey increased flows. TranSystems proposes to work with CCDOTH and MWRD to negotiate the possibility of maintaining the existing culvert opening and extending the culvert for the multi-use path since the property directly upstream of Tinley Creek is a golf course. This approach would likely require a drainage easement from the golf course for any increased water surface elevations on their property.

3. Coordination and Public Involvement

The proposed path alignment traverses key features of Orland Park, including residential, commercial and educational facilities, making it possible for residents to use non-motorized modes to access school, work and recreational areas. As part of this improvement, several entities may be impacted including utilities, MWRD, Cook County Department of Transportation and Highways (CCDOH), and local businesses. Coordination with key stakeholders and residents will be key to the success of this project. Outlined below is the team's approach to public engagement and coordination.

- ▶ **Coordination:** With 82nd Avenue and the Tinley Creek Crossing Culvert under the jurisdiction of CCDOTH and Tinley Creek a major point of study for MWRD, the TranSystems team will engage each entity leveraging existing relationships to coordinate path improvements along 82nd Avenue to achieve the best possible outcome for the Village. In particular, the Tinley Creek Crossing is a sensitive area and improvements could result in a significant cost impact to the multi-use project. Through these coordination efforts, TranSystems proposes to work with CCDOTH and MWRD to determine alternate funding sources to assist in these improvements.
- ▶ **Public Involvement:** Our Team will conduct a public meeting to identify path design aesthetics and solutions, involving a variety of visioning exercises, including alternatives testing, workshop activities and presentations. These activities are designed to engage participants, ask meaningful questions, identify common themes and threads towards building consensus around design solutions. Our team will also develop a range of materials that are based in technical accuracy and produced to tell a compelling story. We will make use of photography, plans, sections, elevations, and 3D renderings to convey the mood and emotion of spaces. These materials will be useful when evaluating the physical and spatial differences between a variety of connection and path alignments. We recently used a similar approach and worked with the stakeholders to select the best location for the trail and IL 59 overpass in Streamwood.

INNOVATIVE SOLUTIONS

As a way to potentially save the Village money and/or expedite the project, TranSystems proposes the following options for the Village's consideration.

- ▶ **Two Project Segments:** Given the two different cross sections, design approaches, and construction effort, TranSystems recommends that the Village consider splitting this project into two segments: 135th to 143rd and 143rd to 151st. This would allow TranSystems to expedite Phase 1 Engineering on Segment 1, while Segment 2 lags behind due to the additional engineering services and coordination required regarding the Tinley Creek crossing.

Segment 1 (135th St to 143rd St) requires less engineering and construction effort compared to Segment 2 allowing the Village to move through Phase 1 faster, readying this segment for success at the next funding cycle. Segment 2 will require additional analysis and coordination to accommodate the Tinley Creek crossing which could result in delaying Phase 1 approval, and potentially the overall project if combined with Segment 1.

Currently, TranSystems is utilizing this same process for the Village of Streamwood which is considering 4 different segments along IL-59. The team is proceeding with Phase 1 design of Segment 1, while performing a feasibility study on the remaining segments to confirm path alignments, costs and funding opportunities to save the Village upfront engineering costs and secure funding for a portion of the overall improvement early.

- ▶ **Independent Tinley Creek Structure:** The existing culvert carrying 82nd Ave over Tinley Creek has a clear width of 10ft with an approximate clear height of 12ft, and is bordered by a golf course and cemetery on the west and residential properties to the east. The team anticipates the results of the hydraulic study will either require full replacement of the structure to increase the opening size with significant



downstream stabilization improvements or a drainage easement on the golf course property for increased backwater with a culvert extension. To help avoid or minimize these high cost improvements, TranSystems proposes to investigate constructing an independent pedestrian structure adjacent to 82nd Ave carrying the multi-use path over Tinley Creek.

The proposed structure will be placed 3.5ft from the existing roadway to provide for guardrail deflection and will be approximately 12ft wide for an 8ft bike path. The total required width of this improvement will be 16.5ft which is the available distance from the edge of the roadway to existing right-of-way at the cemetery. Although a floodway permit will be required, this approach would avoid impacts to the hydraulic characteristics of the creek and avoid or minimize structure improvements required to the existing culvert. The team's *Lead Structural Engineer, Matt Santeford*, and his team recently completed a similar improvement along Fair Oaks Road in Carol Stream where the multi-use path is carried on an independent structure adjacent to the roadway and avoided extending the existing culvert.

SCOPE OF SERVICES – PHASE I PRELIMINARY ENGINEERING SERVICES

The following section describes the specific scope developed for the 82nd Avenue Multi-Use Path to meet both Village and IDOT/FHWA requirements. As stated in the Request for Proposal, the goal of this project is to receive Phase I design approval from IDOT, making it eligible for federal funding sources for design and construction. Achieving this goal requires adherence to a strict scope to fit into the IDOT/FHWA processing expectations.

1. Project Coordination and Data Collection

- A. Obtain the following information from the appropriate agencies: existing roadway and bikeway plans, ridership and user data, right-of-way data, National Wetland Inventory Maps, public and private utility atlases, existing vehicle and bicycle/pedestrian traffic counts, bench mark and other survey datum information.
- B. Obtain aerial photography at 1"=50' scale for use in the preliminary design studies, environmental survey request, and at public meetings.
- C. Summarize data collection elements in tables, exhibits, and/or maps for use throughout the duration of the project including, Project Location Map and Existing Roadway Typical Sections.
- D. Conduct site visit, perform general site survey, inventory signs, and take pictures of project features. Prepare log of signs and photographs for use by project team during engineering phases.
- E. Provide project administration; prepare monthly invoicing and monthly project status reports. Assume 24-month duration.

2. Field Surveys

- A. Conduct topographic design survey based on the English system including the establishment of horizontal and vertical controls based on published benchmarks. The survey will include topography, cross sections and the proposed trail alignment (at 100-foot increments), existing transmission towers, visible utilities, drainage, and tree limits along the corridor. Additional cross sections will be conducted (as needed) at critical locations. (HLR – for more details, see Attachment A)
- B. Download topographic survey and cross sections for use in the preliminary design studies.
- C. Create project base files, digital terrain model, project design files, project centerline and stationing for use in cross section, alignment, and profile studies. Preliminary plan and profile sheets will be prepared at a scale of 1"=50'.

3. Preliminary Design Studies

- A. Establish design criteria for horizontal and vertical geometrics and develop typical section of path crossings based on bikeway and pedestrian needs.
- B. Prepare two alignment alternatives including turning radii, approach grades, stopping sight distance, and path connections. The alignment alternatives will be located within the ComEd right-of-way or easement and will vary to accommodate differing path connections or to minimize environmental impacts.
- C. Evaluate and summarize environmental issues including tree impacts, floodplains, wetlands, and community impacts, as well as construction costs.
- D. Identify the need for any right-of-way or easements required for the project and access during construction.
- E. Identify specialty landscaping treatments and locations.
- F. Prepare a preliminary bike path plan showing the preferred alignment.
- G. Develop order of magnitude cost estimates for each conceptual design alternative.
- H. Prepare preliminary plans, profile, and working cross sections (100-foot intervals) to identify preferred alignments, trail geometrics, and right-of-way needs. The need for an Intersection Design Study is not anticipated at any crossing. (12 sheets)

4. Environmental Studies and Permitting

- A. Prepare an Environmental Survey Request Form to obtain biological resource and cultural resource reviews and sign-offs of the project study limits.
- B. Perform a Preliminary Environmental Site Assessment based on historical and geological information. (HLR – For more details, See Attachment A)
- C. Prepare wetland delineations, investigations, and report based on Executive Order 11990, “Protection of Wetlands”, Section 404 of the Federal Water Pollution Control Act, and Illinois Environmental Protection Agency regulations. Based on available wetland mapping, this scope of work assumes six wetlands along the proposed multi-use path limits. (HLR – For more details, see Attachment A)
- D. Upon completion of the wetland delineation and report, Wetland Impact Evaluation Forms, if required, will be prepared and submitted to IDOT for review and approval.
- E. Submit the wetland delineation report to the Corps of Engineers for Jurisdictional Determination and permit authorization, outlining permitting requirements. (HLR – For more details, see Attachment A)
- F. Summarize the environmental studies and incorporate into the Project Report.

5. Preferred Improvement Plan

- A. Based on design studies, environmental studies, and public input, prepare the Preferred Improvement Plan meeting CCDOTH and Village requirements. Develop the Preferred Improvement Plan and Profile on topographic survey mapping.
- B. Prepare typical sections for the proposed improvements.

6. Drainage Study

A drainage study will be necessary to confirm that the existing drainage system(s) can adequately convey stormwater flows based on the proposed improvements. This will include preparing Existing and Proposed Drainage Plans and storm sewer and/or ditch capacity calculations. The existing storm sewer and ditches will be modified, as necessary, to adequately convey proposed stormwater flows.

- A. Prepare General Location Drainage Map.
- B. Prepare Existing Drainage Plan. It is anticipated that 10 sheets at 1"=50' will be required.
- C. Prepare Proposed Drainage Plan. It is anticipated that 10 sheets at 1"=50' will be required.
- D. Drainage Study Narrative
 1. Identify Drainage Issues.
 2. Identify Base Floodplains.
 3. Identify Major Drainage Features within the project areas.
 4. Determine proposed design criteria.
 5. Complete an outlet evaluation.
 6. Determine stormwater detention requirements per IDOT and MWRDGC Watershed Management Ordinance. It is assumed stormwater detention will not be required for addition of the multi-use path.
 7. Determine floodplain compensatory storage requirements.
 8. Identify permit requirements for Phase II including Section 404 Army Corps of Engineers Regional Permit 3 for impacts to Waters of the US and Wetlands, IDNR-OWR floodway construction permit (Part 3708 rules), MWRDGC Watershed Management Ordinance Stormwater Permit, and NPDES permit.
 9. Determine Best Management Practices (BMPs) required and identify proposed measures which will be incorporated into the design.

7. Hydraulic Studies

82nd Avenue crosses Tinley Creek which is designated as a FEMA delineated floodway. Due to the likely extension of the existing box culvert, a hydraulic analysis will be required as part of the Phase 1 study and associated permits to confirm that the proposed extension does not increase the 100 year flood profile by more than 0.1 feet.

- A. Obtain the FEMA FIRM and FIS maps/profiles and HEC RAS models from the appropriate agencies. It is assumed that both the FEMA Effective and MWRD HEC-RAS models will be required.
- B. Conduct field review, including photographs of the 82nd Avenue crossing, of Tinley Creek.
- C. Convert survey (to be completed by others) and plot cross sections, stream profile, and structures.
- D. Complete hydrologic and hydraulic modeling of the dual box culvert extension to assure an increase of less than 0.1 feet in water surface elevations.

- E. A hydrologic model will not be completed. It is assumed that the FEMA flows will be utilized.
- F. Prepare hydraulic models using HEC-RAS. A backwater analysis of Tinley Creek will be completed using the best available data.
 - 1. Design models will include the following:
 - i. FEMA Effective Base Model
 - ii. iPre-Project Model with survey data incorporated
 - iii. Natural Conditions Model – If required
 - iv. Post Conditions (proposed) Model for the dual box culvert extension
 - 2. Permit Models - In order to permit this project through IDNR-OWR, the FEMA effective models will be used which match current FEMA water surface elevations. The following Permit Models will be completed for the dual box culvert extension:
 - i. Duplicate Effective Model
 - ii. Corrected Effective Model
 - iii. Pre-Project Model
 - iv. Post Conditions Model
 - 3. MWRDGC Model – An MWRDGC Watershed Management Ordinance permit will be required for this project. However, MWRD models will not be updated as part of this project.
- G. Prepare Preliminary Design and Hydraulic Report for IDOT BLR 10210 which includes the following:
 - 1. Narrative
 - 2. Prepare Design and Permit Waterway Information Tables (WITs) for the box culvert extensions with accompanying calculations.
 - 3. Hydraulic Report Data Sheets
 - 4. Streambed Profile Exhibit
 - 5. Culvert Cross-Section plots
 - 6. Permit Summary Form
 - 7. QA/QC
 - 8. Report Assembly. It is anticipated that 2 submittals will be required

8. Geotechnical Investigation

- A. Conduct structural borings at the 82nd Avenue Culvert over Tinley Creek (2 total) (TSC – for more details, see Attachment B).
- B. Prepare Geotechnical Report, including recommendations for bridge substructure design, embankment stability and undercut requirements. (TSC – for more details, see Attachment B).

9. Structural Engineering (Type, Size, and Location Plans)

- A. Inspect the existing culvert and complete a Bridge Condition Report in accordance with IDOT requirements.
- B. Investigate structural alternatives for the Tinley Creek crossing.
- C. Upon selection of the preferred alternative, a TS&L plan will be prepared for review.
- D. Prepare Preliminary Design and Hydraulic Report for IDOT BLR 10210 for the Tinley Creek crossing meeting IDOT Bureau of Bridges and Structures requirements.

10. Village, CCDOTH, IDOT Coordination and Public Meetings

- A. Conduct a Kick-off meeting with the Village to discuss goals and objectives of the project. (1 meeting)
- B. Conduct meetings with CCDOTH, IDOT and MWRD to present design studies, coordinate project issues, and discuss the project schedule. (3 meetings)
 - 1. TranSystems anticipates additional meetings will be required with stakeholders, specifically to address the Tinley Creek crossing, but is only providing scope and fee for one kick-off meeting and 4 project meetings per the RFP.
- C. Attend FHWA/IDOT Coordination meetings to present the Preferred Improvement Plan and obtain approval of proposed design and any variances. It is anticipated the FPCC would also be in attendance at the meetings. (1 meeting)
- D. Prepare for and host one public meeting in a traditional open house format. Coordinate with the Village to prepare all notifications, handouts, presentation text, exhibits, and minutes. The first meeting will be conducted to introduce the project to the stakeholders and obtain feedback on project goals from the community.
- E. Conduct monthly project coordination meetings with the Village for the duration of the study. (Assuming 24 month duration - 24 meetings). ***Unit price for additional meetings is \$450/meeting/hr which includes two representatives.**

11. Project Report

- A. Prepare a Draft Project Report following IDOT Project Development Report (PDR) requirements for Categorical Exclusion eligible projects. The PDR will summarize the preliminary engineering efforts including data collection, coordination documentation, alternatives analysis, and Preferred Improvement Plan.
- B. Prepare a preliminary estimate of cost based on the Preferred Improvement Plan.
- C. Submit the Draft PDR for CCDOTH and IDOT concurrent reviews.
- D. Revise and submit the Final PDR based on review comments.
- E. Submit the Final PDR to IDOT for Design Approval.

12. QA/QC Plan and Reviews

- A. Provide project QA/QC for all major submittals.

13. Funding Application Assistance

- A. Review of 82nd Ave Multi-Use Path project to identify funding opportunities from multiple sources from federal, state, county, and municipal levels.
- B. Prepare and coordinate all phases of funding application submittal, including pre-application meeting attendance, on-site review, and public presentations.
- C. Prepare and/or review grant and interagency agreements. TranSystems will prepare agreements required by IDOT, CMAP and SWCM for this project.

SERVICES NOT INCLUDED: Path Borings (defer to Phase II); Right-of-Way Acquisition and Boundary Survey; Tree Survey and Studies; PESA Report Update (initial report only valid for 6 months); and Type, Size and Location submittals for retaining walls (assumed any required are less than 7ft.)

3 | SIMILAR PROJECT EXPERIENCE



GARY AVENUE MULTI-USE PATH

CAROL STREAM, IL



DuPage County selected TranSystems to provide preliminary and design engineering services for the 2.2 mile Gary Avenue Multi-Use Path along the west side of Gary Avenue from Lies Road to the Great Western Trail.

This project improved both pedestrian and bicycle travel and access to transit. Running north-south, the Gary Avenue Multi-Use Path originates on the south end at a major regional trail, the 11-mile long Great Western Trail, which extends east-west in central DuPage County from Villa Park to West Chicago, linking seven communities and numerous local destinations. On the north end, the trail terminates at Lies Road and a local trail by the same name that runs three miles through central Carol Stream and connects to the West Branch DuPage River Trail. Gary Avenue is currently served by Pace Bus Route #711. The Village of Carol Stream, under a separate contract, provided bus shelters with assistance from Pace. The multi-use path and bus shelters improved accessibility to existing Pace service.

CLIENT

DuPage County, IL

CONTACT

Dan Nowak
Engineer of Design/
Environmental
630-407-6909
Daniel.nowak@dupageco.org

COMPLETION

2020

COST

\$1.5M



KUHN ROAD BIKE PATH - KLEIN CREEK TO LIES ROAD

CAROL STREAM, IL



TranSystems provided Phase I Preliminary Engineering Studies, Phase II Design Engineering, and Phase III Construction Engineering services. The Kuhn Road Bike Path is a 2.31 mile path that provides a direct connection from residential neighborhoods, four parks, three churches, Glenbard North High School, College of DuPage, a fire station, future library and shopping center to the Great Western Trail and Lies Road Bikeway.

Regionally, the bike path provides an important link for the community to an established bikeway network. Connection with the Great Western Trail and ultimately, the Illinois Prairie Path, provides linkages to county forest preserves, municipal parks and recreational trails throughout DuPage, Kane and Cook Counties.

The Red Hawk Trail crosses Klein Creek by way of an existing pedestrian/bike bridge and traverses under North Avenue via an existing bikeway culvert opening. This 1,000 foot segment of Red Hawk Trail was constructed by the Carol Stream Park District in 2005 and was an omission in this project. From the North Avenue culvert the proposed 10-foot bituminous path continues north along Kuhn Road within the west parkway until it terminates at the Lies Road Bikeway.

One signalized intersection exists within the project limits at Lies Road. This intersection has pedestrian actuation that was modified accordingly to accommodate users of the proposed path. A 4-way stop is located at Thunderbird Trail and Birchbark Trail.

Phase I, II and III were funded with CMAQ and local matching funds. Construction was funded with STPU and local matching funds. The project was coordinated through IDOT's Bureau of Local Roads. The project also involved acquiring right-of-way from four parcels via the Federal Process. One of the parcels was obtained from Glenbard North High School.

**CLIENT**

Village of Carol Stream, IL

CONTACT

William Cleveland
Village Engineer
(630) 868-2260

COMPLETION

2013

COST

\$597K

FAIR OAKS ROAD BIKE TRAIL

CAROL STREAM, IL



TranSystems provided Phase I Preliminary Engineering Studies, Phase II Design Engineering, and Phase III Construction Engineering services for the Fair Oaks Road Bike Trail. Fair Oaks Road is a two-lane rural roadway without curb and gutter. The existing ADT was 5,100. There is no sidewalk. The Fair Oaks Bike Path connects several local and regional trails. The West Branch DuPage River Trail - Fair Oaks Road Trail begins at the Great Western Trail (GWT) in the Timber Ridge Forest Preserve and continues north along the West Branch of the DuPage River under North Avenue to St. Charles Road east, and then to Fair Oaks Road north until it meets the existing path just south of Army Trail Road. The section between the GWT and Lies Road is considered part of the West Branch DuPage River Trail system. North of Lies Road the trail is the Fair Oaks Road Trail. The segment between the GWT and St. Charles Road was completed by the Forest Preserve District as part of another project.

A small bridge was constructed to span a tributary to the West Branch of the DuPage River. This design was used to mitigate wetland and floodway impacts. A 500 foot trail spur was proposed along St Charles Road, connecting the trail to Benjamin Middle School. Within the project limits the 2.2 mile path connects several neighborhoods, two schools, five parks, two churches, West Branch Reservoir Forest Preserve, Timber Ridge Forest Preserve, and Fair Oaks Plaza shopping center to the Great Western Trail and Lies Road Bikeway. The newly constructed 2.8 mile Lies Road Bikeway connects to the West Branch Reservoir Forest Preserve, 13 parks, six schools, two churches, Simkus Recreation Center/Carol Stream Water, and Town Center.

This project used CMAQ funding for design and STP-TCM funding for construction. Design and right-of-way acquisition followed the federal guidelines and was processed through the IDOT Bureau of Local Roads and Streets.



CLIENT

Village of Carol Stream, IL

CONTACT

William Cleveland
Village Engineer
(630) 868-2260

COMPLETION 2017

COST

\$597K

IL 59 BRIDGE AND TRAIL IMPROVEMENTS

STREAMWOOD, IL / COOK COUNTY



Existing Conditions

TranSystems was selected by the Village of Streamwood to work on this Phase I study to create a new bicycle and pedestrian overpass above Illinois Route 59 in Streamwood.

TranSystems completed a feasibility study to study various alternatives to connect an existing path near Hummingbird Lane on the west side of Illinois Route 59 to an existing sidewalk along Madison Drive on the east side of Illinois Route 59. The area considered for the new trail and overpass is along property donated to the Village of Streamwood as the area subdivisions were developed. The Village owned property is primarily undeveloped wetland areas; therefore, all alternatives included a boardwalk style path elevated above the wetlands to create the connection. The total distance of the boardwalks and overpass is approximately 2,200 feet.

After selection of the preferred alternative, TranSystems is completing the Phase I study following the Federal-Aid process so that the project will be eligible for future state or federal funding. A Bridge Type Study has been completed that evaluated multiple bridge and boardwalk styles, aesthetic options and other design elements that will create this signature bridge for the Village of Streamwood.

CLIENT

Village of Streamwood
565 S. Bartlett Road
Streamwood, IL 60107

CONTACT

Matt Mann
Director of Public Works
630.736.3850
MMann@streamwood.org

COMPLETION

On-Going

COST

\$7M



Existing Conditions

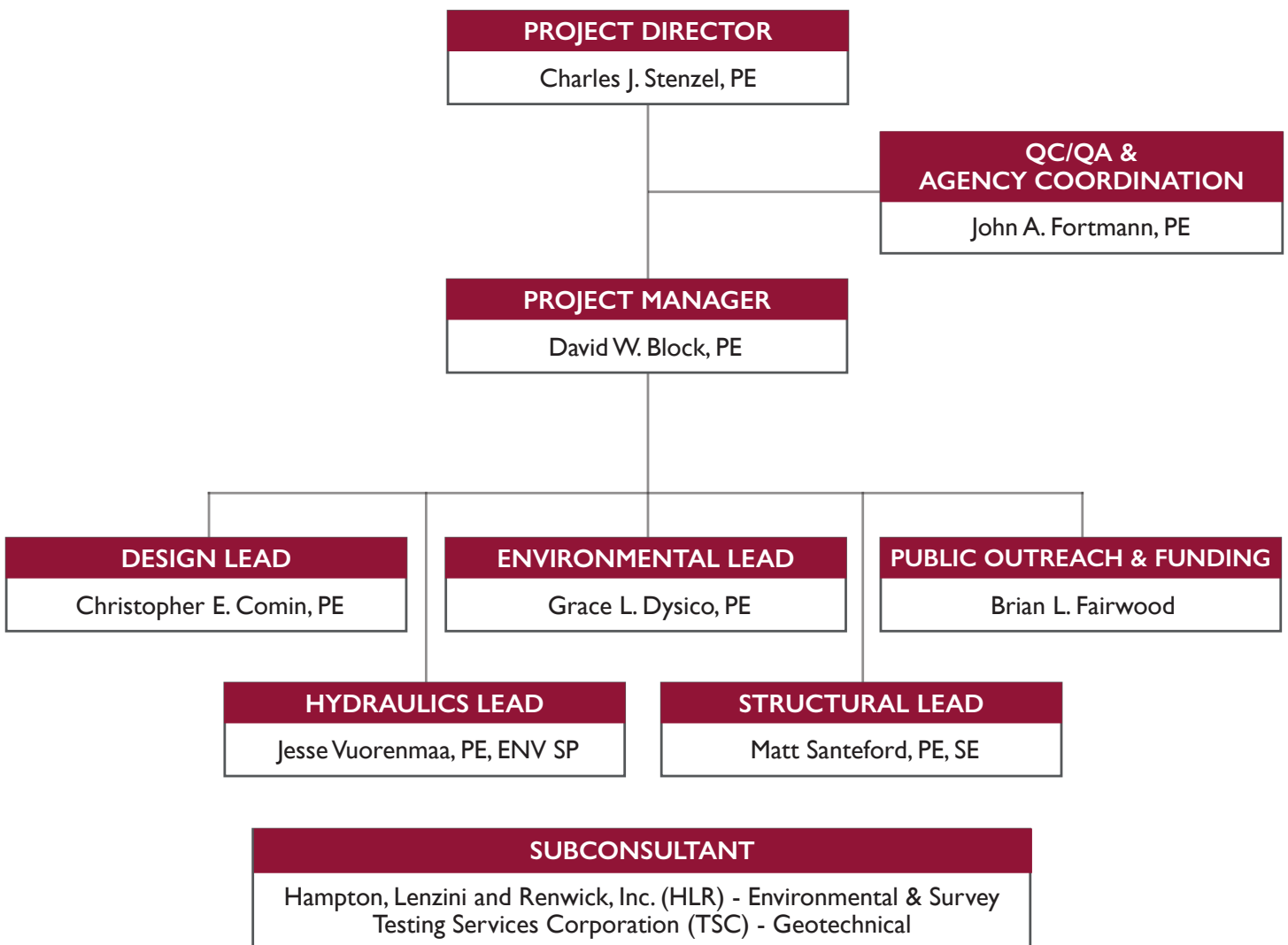
3 | STAFF CAPABILITIES/RESUMES



PROJECT TEAM ORGANIZATIONAL CHART



ORLAND PARK





TranSystems

REGISTRATIONS

Professional Engineer (Civil):
MI, 2006

Professional Engineer (Civil):
IL, 1989

EDUCATION

M.S., Civil Engineering
University of Illinois, Urbana-
Champaign, 1985

B.S., Civil Engineering
University of Illinois, Urbana-
Champaign, 1984

TRAINING

OSHA 10-Hour
Construction Safety

AFFILIATIONS & MEMBERSHIPS

American Council of
Engineering Companies
American Public Works
Association
American Society of Civil
Engineers

YEARS OF EXPERIENCE

36 (32 with firm)

CHARLES STENZEL, PE PROJECT PRINCIPAL

Chuck has over 36 years of professional experience in transportation engineering, including design and environmental studies, contract plan and document preparation, horizontal and vertical geometrics, intersection and interchange design studies, parking lot layout and design, traffic and accident analysis, traffic signals, roadway lighting design, public involvement, and right-of-way acquisition.

North Aurora Road/CN Grade Separation, Phase I & II, Naperville, IL

Principal-in-Charge for the Phase I and II engineering studies for the improvement of the North Aurora Road/CN grade separation. The scope of the project includes major improvements of the CN Bridge at North Aurora Road to accommodate the widening and reconstruction of the currently narrow vehicular underpass. Roadway designs also address lowering the roadway and providing drainage and lighting improvements. Additionally, the designs provide a dedicated passageway for pedestrian and bicycle traffic. TranSystems was recently selected to provide Phase III services.

Arsenal/Manhattan Road, Phase I, Will County, IL

Principal-in-Charge for the preliminary engineering studies for the interchange reconstruction and relocation. The project includes preparation of Combined Design Report, Environmental Assessment, Location Drainage Study, Access Justification Report, Interchange Design Study, wetland impact evaluation, geometric alternative studies, right-of-way studies and public hearings.

Quentin Road, Phase I, Cook County, IL

Principal-in-Charge for the preparation of an Environmental Assessment (EA) and Project Development Report to improve the safety and mobility along Quentin Road. The project included widening Quentin Road, currently a rural two-lane roadway, to an urban two or four-lane roadway with a left-turn lane at several locations. The project is flanked by the Deer Grove Forest Preserve. A Programmatic 4(f) and coordination with the Forest Preserve District of Cook County has been required. As part of this project, the following enhancements will be included: bridge replacement, new drainage system, water quality treatment areas, wetland enhancements, and a new traffic signal for safer at-grade crossings for the existing equestrian and bicycle trails.

Wilson Road at Nippersink Road, Phase I & II, Lake County, IL

Project Manager for this project that included contract plans and documents for the widening and reconstruction of 2.1 miles of arterial highway. The project included earth excavation, pavement removal, combination curb and gutter removal, construction of storm sewers and drainage structures, PCC pavement, bituminous pavement, combination concrete curb and gutter, rumble shoulder, pavement markings, signing, and traffic signals.

Barrington Road at Higgins Road, Phase I & II, Hoffman Estates, IL

Principal-in-Charge for the preparation a Feasibility Study, Project Development Report and contract plans and documents for widening and reconstruction of the at-grade intersections of Barrington Road with Illinois Route 72 and Hassell Road. Responsibilities included traffic studies, environmental analyses, drainage system and detention design, geometric realignment, traffic signal and interconnect design, structural borings and retaining wall design, plat of highway preparation, lighting design, and construction plans.

Diehl Road Reconstruction, Phase I & II, Naperville, IL

Principal-in-Charge for the reconstruction and widening of Diehl Road from Eola Road to west of Illinois Route 59. Engineering services included the preparation of an Environmental Class of Action Document (ECAD), Project Development Report (PDR), Contract Plans and Documents, and construction inspection. Chuck was responsible for overall project administration and staffing. The project involved new pavement, new enclosed storm sewer system, wetland mitigation, retaining wall construction, roadway lighting, railroad crossing coordination, multi-path, and traffic signal installation.



REGISTRATIONS

Professional Engineer (Civil):
IL, 1991

EDUCATION

B.S., Civil Engineering
Bradley University, 1987
M.S., Civil Engineering
Illinois Institute of
Technology, 1992

TRAINING

OSHA 10-Hour
Construction Safety

AFFILIATIONS & MEMBERSHIPS

Bradley University Civil
Engineering Construction
Advisory Committee
University of Illinois Circle
Civil Engineering Professional
Advisory Committee

YEARS OF EXPERIENCE

37 (5 with firm)

JOHN FORTMANN, PE

QA/QC & AGENCY COORDINATION

John has over 37 years of experience in roadway design, programming, right-of-way, construction management, and project coordination. Prior to joining TranSystems, John worked in many roles for the Illinois Department of Transportation, with his final position serving as Region One Engineer. In John's current role with TranSystems, he leads design teams and works with clients to facilitate the design and implementation of roadway and transportation improvements.

Kautz Road, IL 38 to IL 64, Phase I & II, Cities of St. Charles & Geneva, IL

Project Principal and QA/QC for this project in which the City of Geneva and City of St. Charles are looking to provide improvements to the Kautz Road corridor between Commerce Drive in St. Charles to north of IL Route 38 in Geneva. The work will include widening Kautz Road to add a third lane, reconstruction of the majority of the roadway, connection of a recreational trail and formal designation of Kautz Road as a truck route. All Phase I and Phase II work will follow the same process and guidelines as the Federal Aid process.

North Aurora Road East, Naperville, IL

Project Principal for the reconstruction of North Aurora Road to provide two through lanes in each direction separated by a median from Frontenac Road to Weston Ridge Drive. The proposed roadway will include curb and gutter and an enclosed drainage system along with sidewalk/bicycle accommodations on the south side of the roadway as well as connections to existing sidewalks on the north side of the roadway. The project also includes traffic signals will be upgraded and lighting will be replaced. The proposed improvement will match into the five-lane cross section east of the North Aurora Road/Weston Ridge Drive intersection. The plans, specifications, and estimates were prepared according to IDOT Bureau of Local Roads and Streets (BLRS) requirements as the project involved STP funding.

Church Street & Main Street Two Way Conversion, Rockford, IL

QA/QC reviewer and coordination for this project that aims to convert the north-south one-way streets into two-way streets to simplify traffic circulation in their CBD. Additionally, the two-way street conversion design needs to improve access, mobility, and safety for all modes, including pedestrians and bicyclists alike. complete the traffic analysis, phasing strategy, downtown transportation plan, public coordination, IDOT approval, and ultimately contract documents.

Old McHenry Road, Phase I & II, Long Grove, IL

Project Principal & QA/QC for preliminary and design engineering for the reconstruction of Old McHenry Road through the Village of Long Grove's downtown district. The proposed improvements included measures to improve pedestrian safety such as installation of a traffic signal with pedestrian countdown timers at the Robert Parker Coffin Road intersection, construction of curb and gutter to improve drainage, pedestrian accommodations including sidewalk and lighting, and tight corner radii to minimize crossing distances.

Russell Road Intersection Improvements, Phase I & II, Lake County, IL

Project Principal & QA/QC for this Federally funded study which evaluated alternatives for the intersections at Russell Road at Kilbourne Road, Kenosha Road, and Lewis Avenue. TranSystems was selected by the Lake County DOT to develop and evaluate viable intersection alternatives that address the capacity, mobility, and safety requirements which the public can support. A multi-agency Road Safety Audit (RSA) was conducted to identify safety deficiencies and viable solutions at each of the intersections. From these accepted alternatives, a preferred improvement plan will be selected and documented in the Phase I Project Development Report.



DAVE BLOCK, PE PROJECT MANAGER

David has more than 29 years of private consulting experience as a Project Manager, Project Engineer, Design Engineer, and Construction Resident Engineer. He is a clear and direct communicator with versatile and logical problem-solving skills. He has a wide range of experience managing preliminary engineering studies, design engineering projects, and construction contracts for many municipalities, counties, and IDOT, including roadway geometrics, storm sewer design, multi-use path designs, traffic signals, and right-of-way requirements. His knowledge of the programming, funding, and agreement processes allows him to guide many local agencies from project inception through construction.

TranSystems

REGISTRATIONS

Professional Engineer (Civil):
IL, 1996

EDUCATION

B.S., Civil Engineering
Valparaiso University, 1991

TRAINING

OSHA 10-Hour
Construction Safety

YEARS OF EXPERIENCE

30 (14 with firm)

North Central DuPage Regional Trail, Phase I & II, DuPage County, IL

Project Manager for preliminary engineering services for the North Central DuPage Regional Trail (NCDRT) Improvements as part of the DuPage County Regional Bikeway Plan. The 1.7 mile project is located in the Village of Wayne and Pratt's Wayne Woods Forest Preserve and will run along the west side of Munger Road from just north of Smith Road at the Illinois Prairie Path to Forest Preserve Drive. It will cross Army Trail Road (Key Route 9-1368; County Route 022) west of Munger Road. This last remaining trail segment will complete the NCDRT which connects to major regional trails including the Illinois Prairie Path, West Branch DuPage River Trail, Carol Stream-Bloomington Trail, Fox River Trail, East Branch DuPage River Greenway Trail, Salt Creek Greenway Trail and Busse Woods Trail. The completion of this missing link is a high priority in DuPage County's Regional Bikeway Plan.

County Farm Road Bridge and Trail, Phase I & II, Hanover Park, IL

Project Manager for the County Farm Road Bridge and Trail Improvements. Project included preliminary and design engineering services for pedestrian bridge over County Farm Road, a pedestrian bridge over a tributary to the West Branch of DuPage River, and a trail to connect Hawk Hollow and Mallard Lake Forest Preserves. Scope included evaluating conceptual designs for the multi-purpose trail, evaluating conceptual bridge designs, performing topo surveys, performing borings and structural geotechnical report, performing wetland survey and PESA, designing the bridges, and preparing Phase II plans, specs, and estimates. The bridge over the branch of the DuPage River required hydraulic analysis and permitting through the DuPage County DEC and the USACE.

Fair Oaks Bike Path, Phase I, Carol Stream, IL

Project Manager for a 10-foot bituminous path along the West Branch of the DuPage River and Fair Oaks Road between the Great Western Trail and Army Trail Road. Within the project limits the 2.2 mile path connects several neighborhoods, 2 schools, 5 parks, 2 churches, West Branch Reservoir Forest Preserve, Timber Ridge Forest Preserve, and Fair Oaks Plaza shopping center to the Great Western Trail and Lies Road Bikeway. The 2.8 mile Lies Road Bikeway connects to the West Branch Reservoir Forest Preserve, 13 parks, 6 schools, 2 churches, Simkus Recreation Center/Carol Stream Water, and Town Center.

Roselle Road Bike Bridge, Phase III, Schaumburg, IL

Project Engineer for this Phase III project. The designed trail alignment (performed by another firm) through the forest preserve required significant tree removal and incurred a cost of a quarter million dollars, assessed by the Forest Preserves of Cook County, based on a tree size and condition evaluation. Schaumburg asked TranSystems to explore and design an alternative trail alignment to reduce this cost. The area was re-surveyed for a more accurate and current representation of the existing tree locations, tree sizes, and topography, and the information was provided to TranSystems' design support team. The design effort to realign the trail not only reduced costs of tree losses, but entirely

eliminated them. The tree valuation was also improved by planting more trees, and the construction and design teams worked together to revamp the planting plan. The trail realignment effort was able to maintain the designed bridge structure alignment, preventing costly construction revisions.

Illinois Prairie Path, Aurora Branch, Phase I, DuPage County, IL

Project Manager for preliminary engineering services for realignment of the Illinois Prairie Path - Aurora Branch from the Canadian National Railroad to Eola Road, with the preferred route most likely requiring bridge widening on Eola Road over I-88 to accommodate a multi-use path. Total project distance is 3,200 feet (0.61 miles). Total anticipated cost of the project is \$2.0 million.

Kuhn Road Bike Path, Phase I, Carol Stream, IL

Project Manager for the 10-foot bituminous path constructed along Kuhn Road. The Kuhn Road Bike Path provides a direct connection to residential neighborhoods, four parks, three churches, one high school, one college, one fire station, and one shopping center and provide access to other facilities along the Lies Road Bikeway and the Great Western Trail. This includes the nearby West Branch Reservoir Forest Preserve. Regionally, the bike path provides an important link for the community to an established bikeway network. Connection with the Great Western Trail and ultimately, the Illinois Prairie Path, provides linkages to county forest preserves, municipal parks and recreational trails throughout DuPage, Kane and Cook Counties.

Gary Avenue Multi-Use Trail and Pedestrian Crossings, Phase I, DuPage County, IL

Project Manager for the Phase I preliminary engineering study for the Gary Avenue Multi-Use Trail and Pedestrian Crossing in DuPage County, Illinois. This project incorporates a previous project to provide pedestrian crossings at two locations along the CNRR. The pedestrian crossings are on the west side of Gary Avenue and the CNRR and on both north and south sides of Army Trail Road and the CNRR. The Gary Avenue multi-use trail will be located primarily along the west side of Gary Avenue from Army Trail Road to the Great Western Trail, providing both local and regional connectivity. The project will be funded utilizing STP funds through DuPage Mayors and Managers Conference.

Lies Road Bike Path, Phase I & II, Carol Stream, IL

Project Manager for preliminary engineering services for a 10-foot wide bituminous bike path along Lies Road from Gary Avenue to Schmale Road. Land use adjacent to Lies Road bike path consists of recreational facilities, parks, churches, and community centers, as well as existing bike trail systems located at both ends of the project limits. This project provided an alternate transportation mode and a regional link with the existing trail systems and multiple points of interest. Preliminary engineering services included alignment selection, topographic survey, right-of-way acquisition, open house public meeting, and preparation of a Project Development Report.

Illinois Prairie Path at York Street Feasibility Study, Elmhurst, IL

Project Manager for this feasibility study which was prepared to select a preferred crossing alternative for the Illinois Prairie Path at York Street. This intersection has a large volume of pedestrians and bicyclists crossing a heavily traveled roadway. The study evaluated numerous alternatives and developed a conceptual improvement plan that provides the desired level of safety and operation for both motorized and non-motorized users, fits within the context of the community, and minimizes impacts to adjacent properties.

Southeast Bike Path, Phase I, Carol Stream, IL

Project Manager for preliminary engineering services for a new multi-purpose path to connect businesses and residents in the southeast part of Carol Stream to the Great Western Trail and to Community Park. The existing path in Community Park will be reconstructed to improve deteriorating conditions and widen the footprint. The 2.2 mile path system will also connect to proposed shared lane facilities in the City of Wheaton at Schmale Road and President Street.

Kuhn Road Bike Path (Bloomingdale Trail), Phase I & II, Carol Stream, IL

Project Manager for an off road bikeway along Kuhn Road using CMAQ/TCM funds. This project involved construction of a 0.71 mile segment of the Carol Stream-Bloomingdale Trail. This specific segment of the trail is an off-street bikeway along Kuhn Road from Lies Road to Army Trail Road in the Village of Carol Stream. The facility connects into several miles of existing bicycle and pedestrian facilities that are both locally and regionally significant. These include off-street bikeways along Lies Road, Fair Oaks, and Kuhn Road, as well as Great Western and West Branch Trails.



CHRIS COMIN, PE

DESIGN LEAD

Christopher has over 20 years of experience in transportation design and construction engineering. His strengths include design of horizontal and vertical alignments and analyzing right-of-way impacts from cross sections. Chris also has significant experience in construction surveying and using the Global Positioning System (GPS).

North Central DuPage Regional Trail, Phase I, DuPage County, IL

Design Engineer for preliminary engineering services for the North Central DuPage Regional Trail (NCDRT) Improvements as part of the DuPage County Regional Bikeway Plan. The 1.7 mile project is located in the Village of Wayne and Pratt's Wayne Woods Forest Preserve and will run along the west side of Munger Road from just north of Smith Road at the Illinois Prairie Path to Forest Preserve Drive. It will cross Army Trail Road (Key Route 9-1368; County Route 022) west of Munger Road. This last remaining trail segment will complete the NCDRT which connects to major regional trails including the Illinois Prairie Path, West Branch DuPage River Trail, Carol Stream-Bloomington Trail, Fox River Trail, East Branch DuPage River Greenway Trail, Salt Creek Greenway Trail and Busse Woods Trail. The completion of this missing link is a high priority in DuPage County's Regional Bikeway Plan.

Kuhn Road Bike Path, Phase I & II, Carol Stream, IL

Design Engineer for the proposed 10-foot bituminous path to be constructed along Kuhn Road. The Kuhn Road Bike Path will provide a direct connection to residential neighborhoods, four parks, three churches, one high school, one college, one fire station, and one shopping center and provide access to other facilities along the Lies Road Bikeway and the Great Western Trail, including the nearby West Branch Reservoir Forest Preserve. Regionally, the proposed bike path provides an important link for the community to an established bikeway network. Project is funded with CMAQ and local matching funds. Construction will be funded with STPU and local matching funds. The project is being coordinated through IDOT's Bureau of Local Roads. The project also involves acquiring right-of-way from three parcels via the Federal Process.

Fair Oaks Bike Path, Carol Stream, IL

Design Engineer for a 10-foot bituminous path along the West Branch of the DuPage River and Fair Oaks Road between the Great Western Trail and Army Trail Road. Within the project limits the 2.2 mile path connects several neighborhoods, 2 schools, 5 parks, 2 churches, West Branch Reservoir Forest Preserve, Timber Ridge Forest Preserve, and Fair Oaks Plaza shopping center to the Great Western Trail and Lies Road Bikeway. The 2.8 mile Lies Road Bikeway connects to the West Branch Reservoir Forest Preserve, 13 parks, 6 schools, 2 churches, Simkus Recreation Center/Carol Stream Water, and Town Center.

Com-Ed Bikeway, Phase III

Phase III Resident Engineer responsible for preparing IDOT documentation, measurements and quantity calculations, construction layout, and process change orders.

Illinois Prairie Path, Aurora Branch, Phase I, DuPage County, IL

Project Engineer for preliminary engineering services for realignment of the Illinois Prairie Path - Aurora Branch from the Canadian National Railroad to Eola Road, with the preferred route most likely requiring bridge widening on Eola Road over I-88 to accommodate a multi-use path. Total project distance is 3,200 feet (0.61 miles). Total anticipated cost of the project is \$2.0 million.

TranSystems

REGISTRATIONS

Professional Engineer (Civil):
IL, 2003

EDUCATION

B.S., Civil Engineering
University of Wisconsin,
Platteville, 1997

TRAINING

OSHA 10-Hour
Construction Safety

YEARS OF EXPERIENCE

23 (21 with firm)



GRACE DYSICO, PE ENVIRONMENTAL LEAD

Grace has 36 years of experience in management of projects and preparation of Environmental Assessments, Environmental Class of Action Determination documents, and Project Development Reports within Illinois and several other states. She offers extensive knowledge and experience in transportation projects including major interchanges, roadway, railroad, high-speed rail, transit, bikeway and pedestrian improvements. Grace is well versed in the NEPA process and is certified as our Environmental Lead for EIS. As the Environmental Lead on several projects, Grace has been the primary author on several NEPA documents, including EAs, CEs, Section 4(f), and Socioeconomics. She is also well versed in Context Sensitive Solutions (CSS) and has led public involvement and outreach activities as a meeting facilitator and consensus builder.

TranSystems

REGISTRATIONS

Professional Engineer (Civil):
IL, 1991

EDUCATION

B.S., Civil Engineering
University of Illinois, 1985

CERTIFICATIONS

NDOR Certified NEPA
Consultant
CE&I Issues/Contact Admin/
Consultant Series

TRAINING

AREMA IPRE Trainer,
Environmental Unit
Categorical Exclusion (Initial
Training)
FHWA/NHI NEPA and the
Transportation Decision
Making Process
IDOT Phase I Training
Managing the Environmental
Review Process
National Environmental
Policy Act (Initial Training)
NDOR Certified NEPA
Consultant Training
Women's Transportation
Seminar

AFFILIATIONS & MEMBERSHIPS

ACEC
APWA

YEARS OF EXPERIENCE

36 (25 with firm)

DuPage River Trail along the West Branch of the DuPage River, Phase I, Naperville, IL

Project Engineer for the Phase I portion of the project, which consisted of preliminary engineering and the preparation of contract plans for the north section, and a feasibility study for the south section for the placement of the bikeways in the City of Naperville. Engineering services included project and environmental coordination, evaluation of feasible alignments, preliminary alignment analysis, development of a preferred improvement plan, bikeway layout, grading and earthwork analysis, and final contract plans.

Illinois Prairie Path, Aurora Branch, Phase I, DuPage County, IL

Environmental Lead for preliminary engineering services for realignment of the Illinois Prairie Path - Aurora Branch from the Canadian National Railroad to Eola Road, with the preferred route most likely requiring bridge widening on Eola Road over I-88 to accommodate a multi-use path. Total project distance is 3,200 feet (0.61 miles). Total anticipated cost of the project is \$2.0 million.

Woodward Avenue Bikeway (TCM) and 75th Street, Phase I & II, Woodridge, IL

Project Engineer for the preparation of a Project Development Report, contract plans for the placement of the bikeways, sidewalks, and pedestrian crossing improvements in the Village of Woodridge. Engineering services included bikeway layout, environmental coordination, traffic signal design, grading and earthwork analysis, and final contract plans.

Major Taylor Trail/Conrail Bikeway, Chicago DOT

Environmental Lead for a new designated bikeway in the City of Chicago approximately 7 miles long consisting of off-road bike paths and on-road bike routes. Performed an Environmental Site Review for an analysis of the project area to determine potential impacts to environmentally sensitive conditions. Performed a site investigation and prepared a summary document. Additional engineering services included grading and earthwork analysis, alignment design, final contract plans, and preparation of the maintenance agreement for the project.

Arsenal/Manhattan Road from Baseline Road to Brandon Road, Phase I, Will County, IL

Environmental Lead for the preparation of Phase 1 Engineering services for Arsenal/Manhattan Road from Baseline Road to Brandon Road. The proposed improvements included widening and reconstructing Arsenal/Manhattan Road. The project was funded with federal funds and complied with FHWA requirements. The project involved preparing a Phase 1 Categorical Exclusion report, environmental resources reviews, drainage designs, cross section analysis, ROW determination, and improvements at the Brandon Road intersection. The Brandon Road intersection required preparation of an Intersection Design Study, traffic volume projections, capacity analysis, geometric designs, and accident analysis.



TranSystems

EDUCATION

Certificate of Completion,
Highway Program Financing-
Certificate
National Highway Institute,
2001

B.S., Civil Engineering
Marquette University, 1993

AFFILIATIONS & MEMBERSHIPS

APWA - Fox Valley Branch

YEARS OF EXPERIENCE

28 (28 with firm)

BRIAN FAIRWOOD

FUNDING & PUBLIC OUTREACH

Brian has 28 years of experience with planning reports, contract plan preparation, and coordination for municipal projects, including roadway and intersection geometrics, bikeway and pedestrian facilities, streetscape design, capacity analysis, traffic and accident studies, signal warrants, right-of-way requirements, funding analysis, and public coordination and involvement. Brian has also worked with our clients within the Chicago region in utilizing more than 40 distinct funding sources for transportation improvements. He specializes in stakeholder coordination, including working with local businesses, utility companies, affected municipalities, and the public. He also excels at securing and processing "outside dollars" for our clients. His expertise in the area of funding has laid the foundation for accelerating projects through to the construction phase.

Shoe Factory Road Bike Path, Phase I & II, Hoffman Estates, IL

Principal-in-Charge for this Phase I and Phase II project for a multi-use path. Key stakeholders are Hoffman Estates Park District and the Forest Preserve District of Cook County. The project will complete a missing gap in the off-street trail system along Shoe Factory Road, adjacent to CN railroad right-of-way, and connecting to the Prairie Stone Business Park. Coordination with the Tollway will create the Village's first grade-separated trail crossing of the Tollway.

Randall Road Corridor, Phase I (partial) and Phase II, McHenry County, IL

Communication and Stakeholder Outreach Lead for the Randall Road Corridor improvement project in McHenry County. The new design improves the corridor by widening and reconstructing this vital arterial to provide three (3) through lanes in each direction, a fourth outside auxiliary lane within critical segments, improved access, and dual left turn lanes with exclusive right turn lanes at the major signalized intersections. Comprehensive outreach plan was conducted to obtain input on the final design.

Central Avenue, Phase I & II, Wilmette, IL

Public Outreach for the Phase I preliminary engineering and Phase II design engineering for Central Avenue between Green Bay Road and Sheridan Road. Central Avenue is a major collector, providing access to both residential and downtown business sections of the community. The improvements include reconstruction of the deteriorating roadway conditions, replacement of the aging watermain, upgrades to the existing combination sewer system, a new storm sewer system, a modernized traffic signal at Central Avenue and Wilmette Avenue, PACE bus stop enhancements, and pedestrian and bikeway improvements. The project required extensive coordination with the downtown business owners, merchant's group, and Village staff to gain consensus on the scale of streetscape improvements. TranSystems is currently providing Phase III engineering services for this project.

Funding Assistance, Various Communities, IL

Project Manager for funding management assistance for various transportation improvements for a number of communities as part of their annual capital improvements program. Prepared funding applications for State and Federal funding programs such as ARRA, CMAQ, ICC, IDNR, ITEP, Illinois FIRST, STP, and TIGER.

Southern DuPage Regional Trail, Phase I, DuPage County, IL

Project Manager for the Southern DuPage County Regional Trail Feasibility Study which identified a strategy for the planning and construction of marked trail routes throughout southern DuPage County. The trail facilities provided are a combination of off-road paths and on-street lanes and routes. The plan provides a network of trail corridors to encourage bikeway use for the casual user and experienced bicyclists. The recommended Southern DuPage Regional Trail consists of a total of 46 miles with the County planning to construct and/or implement 26 miles.



JESSE VUORENMAA, PE, ENV SP

HYDRAULICS LEAD

Jesse has 16 years of experience in highway design, traffic, safety, and drainage studies. He has been responsible for the development of highway and intersection geometry, crash studies, traffic control and staging plans. He has experience in preparation of Location Drainage Studies, Location Drainage Technical Memorandums, Hydraulic Reports and Phase II drainage plans. He is proficient in the following software programs: WSP-2, HEC-2, HEC-RAS, Hydraflow, HEC-HMS, HY-8, StormCad and PondPack.

TranSystems

REGISTRATIONS

Professional Engineer (Civil):
IL, 2009

EDUCATION

B.S., Civil Engineering
Michigan Technological
University, 2003
M.S., Civil Engineering
Michigan Technological
University, 2010

CERTIFICATIONS

Environmental Sustainability
Professional (ENV SP),
Institute for Sustainable
Infrastructure

TRAINING

Erosion and Sediment
Control Planning and Design
Fundamentals of Storm
Water Pollution and Erosion
and Sediment Control
OSHA 10-Hour
Construction Safety

YEARS OF EXPERIENCE

16 (16 with firm)

Dunham Forest Preserve Trail, Phase I & II, DuPage County, IL

Project Manager for the construction of a 1.2 mile trail in Dunham Forest Preserve to connect the existing trail system from West Chicago Park District to Army Trail Road. The project consists of an off-road, multi-use limestone bike and pedestrian trail that connects to a trailhead made up of an asphalt parking lot, an entrance road, and a historic train depot. ADA accessible concrete sidewalks and ramps are connected to the parking lot and lead to the train depot. Concrete curb and gutter were placed around the parking lot and along the entrance drive to divert water that falls on the impervious surfaces into infiltration basins and swales that will channel the water to Norton Creek. Native landscaping was placed around the parking lot and entrance drive to create a seamless view of the natural landscape and the historic train depot. The Dunham Trail is part of a regional transit route since it has been included in the plans for the DuPage Technology Corridor Trail, a proposed connector trail between the Illinois Prairie Path's Elgin branch and its Geneva spur. This trail will intersect with the Great Western Trail, connecting Dunham Trail to two of the region's larger trail systems.

N. Aurora Road/CN (EJ&E) Grade Separation, Phase I & II, Naperville, IL

Drainage Engineer for the Phase I engineering studies for the improvement of the North Aurora Road/CN grade separation. The scope of the project included major improvements of the CN Bridge at North Aurora Road to accommodate the widening and reconstruction of the currently narrow vehicular underpass and the addition of pedestrian and bicycle accommodations. The project also includes replacing the existing storm sewer system, providing box culverts for stormwater detention, and construction of a pump station to drain the underpass.

Quentin Road, Phase I, Cook County, IL

Drainage Engineer for the preparation of an Environmental Class of Action Determination (ECAD) Document and Project Development Report to increase capacity. The project included widening the rural two-lane roadway, to an urban four-lane roadway with a left-turn lane at several locations. A Programmatic 4(f) and coordination with the Forest Preserve District of Cook County was required. As part of this project, the following improvements will be included: bridge replacement, new drainage system, and grade-separated crossings for the existing equestrian and bicycle trails.

US 45 Improvements, IL 60 to IL 21, Illinois DOT, Lake County, IL

Drainage Engineer for the Phase I engineering studies for the improvement of US Route 45 from IL 60 to IL 22. The scope of work included widening and reconstructing the two-lane roadway, the addition of a barrier landscaped median, modernization of traffic signals, and pedestrian/bicycle accommodations. The project also included replacing the existing storm sewer system, installing oversized storm sewers for stormwater detention, mechanical separators to treat stormwater runoff, and compensatory storage. A Location Drainage Study and three Hydraulic Reports were prepared for the project to document the existing and proposed conditions.



MATT SANTEFORD, PE, SE

STRUCTURAL LEAD

Matt has extensive professional structural experience in the inspection, design, and management of concrete and steel structures for highway, railroad and mass transit projects. His project experience includes bridge inspection, BCRs, TSLs, bridge design, retaining wall design, plan production, specifications, and estimates of cost.

Fair Oaks Bike Path, Phase II, Carol Stream, IL

Structural Engineer for a 10-foot bituminous path along the West Branch of the DuPage River and Fair Oaks Road between the Great Western Trail and Army Trail Road. Within the project limits the 2.2 mile path connects several neighborhoods, 2 schools, 5 parks, 2 churches, West Branch Reservoir Forest Preserve, Timber Ridge Forest Preserve, and Fair Oaks Plaza shopping center to the Great Western Trail and Lies Road Bikeway.

County Farm Road Bridge and Trail, Phase I & II, DuPage County, IL

Lead Structural Engineer for the preliminary and design engineering services for a new pedestrian bridge over County Farm Road, a pedestrian bridge over a tributary to the West Branch of DuPage River, and a trail to connect Hawk Hollow and Mallard Lake Forest Preserves. The new bridges are prefabricated steel trusses. The County Farm Road Bridge utilized geosynthetic reinforced soil abutments to reduce cost and increase construction speed. The bridge over the branch of the DuPage River required hydraulic analysis and permitting through the DuPage County DEC and the USACOE.

Pedestrian Bridge over IL Route 59, Phase II, City of Naperville, IL

Structural Engineer responsible for the complete design and plan preparation. The project connected two existing paths, allowing students safer access to Nequa Valley High School by crossing over IL Route 59. Structural design included two pile bent abutments, four pile supported piers and mechanically stabilized earth retaining walls to support five prefabricated steel truss spans.

Busse Woods Pedestrian Overpass, Phase I & II, Elk Grove Village, IL

Structural Design Engineer for the construction of a pedestrian bridge for the Busse Woods Bike Path over IL Route 72 (Higgins Road). The bridge consists of three simple span prefabricated steel trusses on pile supported stub abutments with MSE walls and hammerhead concrete piers. Bike path improvements included removing the existing path that crosses at the Higgins Road and Frontage Road intersection.

IL 83 Overpass, Elmhurst, IL

Senior Structural Engineer for the preliminary design of a new pedestrian bridge over IL Route 83. The new bridge will connect the Cricket Creek Forest Preserve on the west side to Fay Avenue on the east. The new bridge will provide multi-use path connectivity for the residents of the City of Elmhurst across IL Route 83, which is currently not available at IL 64 (North Avenue) and US 20 (Lake Street). The design will work closely with the Forest Preserve District of DuPage County in order to provide a connection to the Salt Creek Greenway Trail, which is a regional bike trail. The bridge design will clear span the IDOT right-of-way, reducing the impacts from construction on IL Route 83.

Quentin Road, Phase I, Cook County, IL

Structural Engineer for the preparation of an Environmental Class of Action Determination (ECAD) Document and Project Development Report to increase capacity. The project included widening the rural two-lane roadway, to an urban four-lane roadway with a left-turn lane at several locations. A Programmatic 4(f) and coordination with the Forest Preserve District of Cook County was required. As part of this project, the following improvements will be included: bridge replacement, new drainage system, and grade-separated crossings for the existing equestrian and bicycle trails.

TranSystems

REGISTRATIONS

Professional Engineer (Civil):
MI, 2015
Professional Engineer (Civil):
IL, 2008
Structural Engineer: IL, 2012

EDUCATION

B.S., Civil Engineering
Southern Illinois University,
Carbondale, 2003
M.S., Structural Engineering
Illinois Institute of
Technology, 2009

CERTIFICATIONS

CSX/NS Roadway Worker
Protection/Contractor Safety
E-Railsafe System
LEED Green Associate
NBIS Program Manager

TRAINING

OSHA 10-Hour
Construction Safety

AFFILIATIONS & MEMBERSHIPS

APWA
AREMA
ASCE

YEARS OF EXPERIENCE

18 (15 with firm)



HAMPTON, LENZINI AND RENWICK, INC.

Erica E. Spolar, CWS, DECI

Project Role: Environmental Services Manager

Erica is the Executive Vice President and Environmental Services Manager with over 25 years of experience as an Engineer and Environmental Project Manager. She has conducted noise and air quality analyses and overseen wetland delineations and ecological studies for a variety of transportation, utility, and development projects. Erica has obtained wetland and stormwater permits for several projects at the federal, state, and local level. She has also been involved in several wetland restoration projects and involved in resolving wetland violations issues.

Representative Projects – Project Management/Environmental Studies:

Lathan Avenue Project, City of Sandwich, Tom Horak, 815.786.8802, Construction Date – N/A, Est. Const. Cost - \$1,224,000, Actual Const. Cost – N/A. Project Manager overseeing all environmental and survey tasks including wetlands and PESA report.

Illinois Route 59 Bike Trail Overpass, Transystems/Village of Streamwood, Matt Mann, 630.736.3850, Construction Date – N/A, Est. Const. Cost - UNK, Actual Const. Cost – N/A. Project Manager overseeing all environmental and survey tasks including wetland delineation and report, PESA report and stream and topographic surveys.

HSIP Montgomery and Plank Road Phase 1 Project, Kimley Horn/KDOT, Mike Zakosek, 630-406-7346, Construction Date – N/A, Est. Const. Cost - UNK, Actual Const. Cost – N/A. Project Manager overseeing all environmental tasks including the wetland delineation and report, tree survey and PESA.

McLean Boulevard Reconstruction, Village of South Elgin, Mike Millette, 847.695.2742, Construction Date – N/A, Est. Const. Cost - \$8,159,000, Actual Const. Cost – N/A. Environmental Manager responsible for environmental studies and coordination related to the McLean Boulevard Project including the tree survey, wetland delineation, and noise analysis.

North Main Street Reconstruction, City of Crystal Lake, Abby Wilgreen, 815.356.3615, Construction Date – N/A, Est. Const. Cost - \$3,454,000, Actual Const. Cost – N/A. Environmental Manager responsible for environmental studies and coordination related to the Main Street Project including the tree survey, wetland delineation, Preliminary Environmental Site Assessment, and noise analysis.

Longmeadow Parkway, Kane County Division of Transportation, Carl Schoedel, 630.584.1170, Construction Date – N/A, Est. Const. Cost - \$130,000,000, Actual Const. Cost – N/A. Responsible for environmental studies and coordination related to the Longmeadow Parkway Project including: the tree survey, tree mitigation plan, threatened and endangered species and noise, and completed the EA re-evaluation document as required by FHWA and prepared the FONSI.

Wetland Mitigation Facility, Elgin Community College, Completed wetland permitting and assisted in the completion of an on-site wetland mitigation plan for a 20-acre site including the design, construction, and monitoring and maintenance.

Eldamain Road Phase I, Kendall County Highway Department. Environmental Manager for the preparation of the EA including Purpose and Need, Alternatives, and Environmental Resources and Impacts sections. The EA was approved in August 2013, and completion of the Phase 1 design process was received in January 2014. Conducted the wetland delineation, tree survey, and noise analysis, and prepared the related reports. Erica also prepared the Indirect Land Use Report. She was involved in the NEPA 404 merger process and has attended all federal coordination meetings, and public meeting and public hearing.

Professional Registration:

Professional Engineer Intern - Illinois, #062-029096, 2003

Years of Experience:

28 / 10 at HLR

Education:

B.S., Civil Engineering, 1992
Bradley University, Peoria, IL

Professional Certifications:

Environmental Engineering Certificate, Illinois Institute of Technology

Qualified Wetland Review Specialist, (W-067), Kane County

Certified Wetland Specialist, McHenry County

Certified Wetland Specialist (C-051), Lake County

Designated Erosion Control Inspector (DECI), Lake County

Professional Associations:

Illinois Association of Environmental Professionals

American Public Works Association Women in Transportation

Continuing Education:

CWS Wetland Workshop, Lake County SMC, Nov 2020

DECI Workshop, Lake County SMC, Feb 2020

INDOT/FHWA NEPA Refresher Course, Sept 2019

DECI Workshop, Lake County SMC, April 2019

DECI Workshop, Lake County SMC, April 2018

ACEC IL Agency Resource Permitting, March 2018

DECI Workshop, Lake County SMC, Jan 2017



HAMPTON, LENZINI AND RENWICK, INC.

John H. Sweet, PLS

SURVEY CREW CHIEF



PROFESSIONAL REGISTRATIONS

Professional Land Surveyor, Illinois,
#035-003158, 1995

YEARS OF EXPERIENCE

42 / 33 at HLR

EDUCATION

A.A.S., Architecture and Building
Construction Technology, 1978,
Morrison Institute of Technology,
Morrison, IL

PROFESSIONAL CERTIFICATIONS

US Department of Labor, Mine Safety
and Health Administration, 40 hour
Safety Training Certificate, 2012

Illinois Pesticide Commercial Applicator,
Illinois, CA 08939476

CONTINUING EDUCATION

Illinois Boundary Law, IPLSA, February
2013

Floodplain 101, IPLSA, 2012

Illinois Statutes and Standards, Illinois
Ethics, IPLSA, 2011

New ALTA/ACSM Standards, IPLSA,
2011

Early Surveying Techniques and the
Evolution of Surveying Equipment,
IPLSA, 2007

Land Acquisition and the Surveyor's
Role, IPLSA, 2006

GIS/Geo Spatial Imagery, IPLSA, 2004

PROFESSIONAL ORGANIZATIONS

Illinois Professional Land Surveyors
Association

John is a Project Land Surveyor with over 40 years of experience in the field operations of project land and right-of-way surveys and construction layout of land development, utilities, and roadways. He is responsible for the preparation of right-of-way plats, legal descriptions, subdivision plats, annexation plats, and other surveys.

REPRESENTATIVE PROJECTS – ROUTE/TOPOGRAPHIC SURVEY

Big Timber Road and Randall Road, Kane County Department of Transportation. Led the survey crew and established horizontal and vertical control for route survey for intersection improvements. Survey included roadway scanning.

Drainage Survey, York Township, Between Glendenning Road and Sterling Road. Survey Crew Chief responsible for the topographic surveys of the area in an undeveloped Township roadway for a future storm sewer project.

Arbor and Fox Meadow Parks, Village of South Elgin. Survey Crew Chief responsible for the topographic surveys of the parks for future improvement.

School District U-46, Woodland Heights School. Project Land Surveyor responsible for a topographic and boundary survey for sale of school.

Ann Street Park, Village of South Elgin. Land Surveyor responsible for boundary and topographic surveys of the park needed to design a new playground for the Park District.

Topographic Survey, Elgin Community College. Land Surveyor responsible for the topographic survey of the proposed wetland mitigation site off Spartan Drive.

Longmeadow Parkway, Kane County Division of Transportation. Survey Crew Chief responsible for setting control for the Phase II route survey, from Huntley Road across the Fox River to IL 62.

Lions Park, Village of South Elgin. Survey Crew Chief responsible for the 4.5-acre topographic and boundary survey including baseball diamonds, playground areas, shelters, and recreational paths. The improvement consisted of a new parking lot.

Robert Sperry Park and Ann Street Park Village of South Elgin. Survey Crew Chief responsible for the topographic survey of the park and construction layout for the new parking areas.

Thornwood Park, Village of South Elgin. Responsible for the boundary survey and plat preparation of Thornwood Park, located on the Village's west side near the intersection of Randall Road and McDonnell Road. The project involved a 4.0-acre topographic survey for a park expansion. Surveyed areas included parking lots, playground areas, and football fields. The improvement will expand the park to include ballparks, soccer fields, a skate park, and recreational paths.

Brookside Basin, City of Elgin. Performed the topographic and boundary survey for a wetland delineation project.

REPRESENTATIVE PROJECTS – RIGHT-OF-WAY/LAND SURVEY

Kane County Monuments, Kane County GIS Department. Project Land Surveyor responsible for reestablishing section corners along the Kane County boundary with McHenry, Cook, DuPage, Kendall, and DeKalb Counties. Located or reestablished 152 section corners and prepared and recorded monument records.

IL Route 31, City of St. Charles. Performed the survey and prepared the plats of highways and legal descriptions for four parcels required for the widening and streetscape of IL Route 31 from Illinois to Prairie in St. Charles.

REPRESENTATIVE PROJECTS – BRIDGE AND STREAM SURVEY

Smith Road over Blackberry Creek, SN 045-3056, Kane County. Hydraulic stream survey.

Harter Road Culvert, Kane County. Project Land Surveyor responsible for a survey of bridge, roadway, and stream for new structure design. The projects included a Right-of-Way survey.

5 | FEE PROPOSAL



6 | REQUIRED FORMS



PROPOSAL SUMMARY SHEET
82nd Avenue Multi-Use Path from 135th Street to 151st Street
Phase I Preliminary Engineering

Business Name: TranSystems Corporation

Street Address: 1475 E. Woodfield Road, Suite 600

City, State, Zip: Schaumburg, IL 60173

Contact Name: Charles J. Stenzel, PE

Title: Senior Vice President

Phone: 847.605.9600 Fax: 847.463.0565

E-Mail address: cjstenzel@transystems.com

Price Proposal

PROPOSAL TOTAL **\$** 259,000
(On an hourly not to exceed fee basis)

AUTHORIZATION & SIGNATURE

Name of Authorized Signee: Charles J. Stenzel, PE

Signature of Authorized Signee: 

Title: Senior Vice President Date: 5/13/21

REFERENCES

Provide three (3) references for which your organization has performed similar work.

Bidder's Name: TranSystems Corporation
(Enter Name of Business Organization)

1. ORGANIZATION Village of Streamwood
ADDRESS 565 S. Bartlett Road, Streamwood, IL 60107
PHONE NUMBER (630) 736-3850
CONTACT PERSON Matt Mann, Director of Public Works/Village Engineer
YEAR OF PROJECT Current (IL 59 Bridge and Trail)

2. ORGANIZATION Village of Carol Stream
ADDRESS 500 N. Gary Avenue, Carol Stream, IL 60188
PHONE NUMBER (630) 868-2260
CONTACT PERSON William Cleveland, Village Engineer
YEAR OF PROJECT 2020 (North Kuhn Road Bike Path)

3. ORGANIZATION City of Elmhurst
ADDRESS 209 N. York Road, Elmhurst, IL 60126
PHONE NUMBER (630) 530-3000
CONTACT PERSON Kent Johnson, City Engineer
YEAR OF PROJECT Current (IL 83 Ped Bridge & Trail)



**ORLAND PARK
INSURANCE REQUIREMENTS**

Please submit a policy Specimen Certificate of Insurance showing bidder's current coverage's

WORKERS COMPENSATION & EMPLOYER LIABILITY

Workers' Compensation – Statutory Limits
Employers' Liability
\$1,000,000 – Each Accident \$1,000,000 – Policy Limit
\$1,000,000 – Each Employee
Waiver of Subrogation in favor of the Village of Orland Park

AUTOMOBILE LIABILITY

\$1,000,000 – Combined Single Limit

GENERAL LIABILITY (Occurrence basis)

\$1,000,000 – Each Occurrence \$2,000,000 – General Aggregate Limit
\$1,000,000 – Personal & Advertising Injury
\$2,000,000 – Products/Completed Operations Aggregate
Primary Additional Insured Endorsement & Waiver of Subrogation in favor of the Village of Orland Park

PROFESSIONAL LIABILITY

\$1,000,000 Limit - Claims Made Form, Indicate Retroactive Date & Deductible

EXCESS PROFESSIONAL LIABILITY (Umbrella-Follow Form Policy)

\$1,000,000 – Each Occurrence
\$1,000,000 – Aggregate
EXCESS MUST COVER: Professional liability

Any insurance policies providing the coverages required of the Consultant, excluding Professional Liability, shall be specifically endorsed to identify "The Village of Orland Park, and their respective officers, trustees, directors, officials, employees, agents, representatives and assigns as Additional Insureds on a primary/non-contributory basis with respect to all claims arising out of operations by or on behalf of the named insured." If the named insureds have other applicable insurance coverage, that coverage shall be deemed to be on an excess or contingent basis. The policies shall also contain a Waiver of Subrogation in favor of the Additional Insureds in regards to General Liability and Workers Compensation coverages. The certificate of insurance shall also state this information on its face. Any insurance company providing coverage must hold an A VII rating according to Best's Key Rating Guide. Permitting the contractor, or any subcontractor, to proceed with any work prior to our receipt of the foregoing certificate and endorsement, however, shall not be a waiver of the contractor's obligation to provide all of the above insurance.

Proposer agrees that prior to any commencement of work to furnish evidence of Insurance coverage providing for at minimum the coverages and limits described above directly to the Village of Orland Park, Nicole Merced, Purchasing Coordinator, 14700 S. Ravinia Avenue, Orland Park, IL 60462. Failure to provide this evidence in the time frame specified and prior to beginning of work may result in the termination of the Village's relationship with the contractor.

ACCEPTED & AGREED THIS 13th DAY OF May, 20 21

Signature

Authorized to execute agreements for:

Charles J. Stenzel, Senior VP
Printed Name & Title

TranSystems Corporation
Name of Company



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
10/1/2021 10/14/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
E-MAIL ADDRESS:		
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A: Zurich American Insurance Company		16535
INSURER B: The Cincinnati Insurance Company		10677
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

INSURED
1412363 TRANSYSTEMS CORPORATION*
1475 E. WOODFIELD ROAD, SUITE 600
SCHAUMBURG IL 60173

COVERAGES CERTIFICATE NUMBER: 17060539 REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADOL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> SEVERABILITY <input checked="" type="checkbox"/> CLAUSE GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	Y	Y	GLO3707153	10/1/2020	10/1/2021	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 25,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMPI/OP AGG \$ 4,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY	Y	N	BAP3707150	10/1/2020	10/1/2021	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
B	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	Y	N	EXS0591497	10/1/2020	10/1/2021	EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 \$ XXXXXXXX
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	NOT APPLICABLE			PER STATUTE OTH-ER E.L. EACH ACCIDENT \$ XXXXXXXX E.L. DISEASE - EA EMPLOYEE \$ XXXXXXXX E.L. DISEASE - POLICY LIMIT \$ XXXXXXXX

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks 8ochedule, may be attached if more space is required)
 THIS CERTIFICATE SUPERSEDES ALL PREVIOUSLY ISSUED CERTIFICATES FOR THIS HOLDER, APPLICABLE TO THE CARRIERS LISTED AND THE POLICY TERM(S) REFERENCED.
 RE: PROJECT NAME: PRE-QUAL FOR A MASTER AGREEMENT. UPON AWARD OF CONTRACT ADDITIONAL INSURED IN FAVOR OF THE VILLAGE OF ORLAND PARK, AND THEIR RESPECTIVE OFFICERS, TRUSTEES, DIRECTORS, AND EMPLOYEES ARE ADDITIONAL INSUREDS AS RESPECTS GENERAL LIABILITY, AUTO LIABILITY AND UMBRELLA/EXCESS LIABILITY. THESE COVERAGES ARE PRIMARY AND NON-CONTRIBUTORY AS REQUIRED BY WRITTEN CONTRACT. WAIVER OF SUBROGATION APPLIES TO GENERAL LIABILITY WHERE ALLOWED BY STATE LAW AND AS REQUIRED BY WRITTEN CONTRACT.

CERTIFICATE HOLDER 17060539 VILLAGE OF ORLAND PARK ATTN: DENISE DOMALEWSKI, CONTRACT ADMINISTRATOR 14700 S. RAVINIA AVENUE ORLAND PARK IL 60462	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
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A | HLR SCOPE OF SERVICES & CECS





Hampton, Lenzini and Renwick, Inc.

Civil Engineers • Structural Engineers • Land Surveyors • Environmental Specialists
www.hltreengineering.com

82nd Avenue Bike Path Survey and Environmental Scope

The survey and environmental scope are included below.

Task 1: Topographic Survey

HLR will provide topographic survey data for 82nd Street between 135th Street and 151st street. Note 82nd Street appears to be a variable Right of Way. GIS indicates variable roadway dedication from 0 feet to 50'. For this project HLR will consider the centerline of pavement as the centerline of the Right of Way. For topographic data collection purposes HLR will consider the apparent Right of Way to be a constant of 100' wide, being 50 feet to each side of the centerline of existing pavement.

HLR will provide topographic survey data 50 feet to the east and west of the roadway centerline. Topographic data will extend beyond the Right of Way where access allows, data adjacent to the Right of Way and at project boundaries, will be sufficient to ensure contour integrity. Road centerline, edge of pavement, curb and gutter, shoulders, ditches, and sidewalks will be located. ADA ramps will be indicated only by the location of ADA detectable warning mats. Elevation data will be sufficient to generate 100' interval cross sections and include high, low and grade change locations for Roadway cross section control. Spot grades will be collected as needed at earthen break lines and hard surfaces. Village underground utilities of, storm, sewer and water and their respective appurtenances will be indicated for type, invert elevations, pipe sizes, flow direction and pipe material type. Top watermain pipe or nut will be indicated. Surface indications of other public or franchise utilities will be located were observable. Indications of sprinkler systems in the parkway will be indicated as observed while collecting data but are not considered part of this scope.

At the intersections of 135th, 143rd and 151st street, topographic survey will extend 150 feet past the project Right of Way in all directions providing three (3) cross sections at 50' intervals. Topography at minor street intersections will extend 50 feet past the 82nd street Right of Way and will indicate the nearest adjacent high or low point of curb and gutter. A cross section will be taken at the apparent Right of Way line or at the centerline of existing crosswalks. Pavement joint lines of 82nd street and intersecting minor streets will be located.

The Right of Way for Phase I will be indicated per monumentation found at the roadway intersections and Cook County GIS parcel shapes. These shapes will provide preliminary indications of Right of Way areas and probable easement requirements.

A stream survey of Tinley Creek will be conducted for the crossing of Tinley Creek at 82nd street. Stream survey will include cross sections at the face of the control structure and at intervals up and downstream. Data will be sufficient for design purposes and will be coordinated with the design engineer.

The survey will be on Illinois State Plane Coordinates East Zone 1983 datum for horizontal values and NAVD 1988 datum for vertical. Village of Orland Park will be consulted prior to commencing survey work. HLR can

380 Shepard Drive
Elgin, Illinois 60123-7010
Tel. 847.697.6700
Fax 847.697.6753

380 N. Terra Cotta Road, Unit G
Crystal Lake, Illinois 60014
Tel. 847.697.6700
Fax 847.697.6753

3085 Stevenson Drive, Suite 201
Springfield, Illinois 62703
Tel. 217.546.3400
Fax 217.546.8116

323 West 3rd Street
P.O. Box 160
Mt Carmel, Illinois 62863
Tel. 618.262.8651
Fax 618.263.3327

produce Deliverables in a Microstation dgn file using current IDOT seed files or Autocad utilizing IDOT layers and symbology. A csv file of all points and field notes will also be part of the deliverables. Surveying will be done using RTK GNSS, electronic levels and robotic total stations.

The following are not included in the scope of work:

Identify sprinkler systems in parkways. Indications of sprinkler systems in the parkway will be indicated as observed while collecting data but are not considered part of this scope. No, assurance will be made to the completeness of existing private sprinkler systems.

ADA ramps will be indicated only by the location of ADA detectable warning mats. Topo data density sufficient to determine ADA conformance is not considered part of this Phase I work.

Underground design stage utility requests are not included. Underground utility mapping is not included in this Phase I Topographic Survey.

Task 2: Preliminary Environmental Site Assessment (PESA)

This scope includes completing a Preliminary Environmental Site Assessment. The PESA will be prepared using historical and geological information. The specific methods used to conduct the assessment are contained in 1) ASTM Standards E1527-13, 2) A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects (Erdmann et al., 2014), 3) Special Wastes Procedures for Local Highway Improvements (IDOT Local Roads Manual, July 22, 2013), and 4) "IDOT Bureau of Design and Environment Manual (BDE Manual), Section 27-3.03 (b), December 2019). The PESA will include a database search, review of historical records, an on-site evaluation, and review of other project conditions that may give us insight into the existing environmental conditions along the route.

Once the review has been completed, a written report will be completed and submitted as documentation to the on-site analysis. This report will accompany various site photographs, maps, and the above referenced documentation, which will be utilized to assist the project evaluation and any applicable recommendations.

A PESA report is typically valid for 6 months so we would want to make sure the PESA was completed within 6 months of design approval so that no updates would be necessary. This scope does not include a PESA update. This cost assumes ordering 1 EDR report @ \$400.

Task 3: ESR Preparation and Submittal

Task 3 includes preparation and submittal of the ESR.

Task 4: Wetland Delineation and Report

HLR will perform a formal wetland delineation of the proposed project area. The wetland delineation will be conducted to meet the requirements of Executive Order 11990, "Protection of Wetlands", Section 404 of the Federal Water Pollution Control Act as amended by the Clean Water Act (Corps of Engineers, Section 404 Permit), and Illinois Environmental Protection Agency (IEPA Section 401 Guidelines) regulations. These regulations pertain to the placement of fill or alterations of drainage within wetlands of any type and apply to private as well as publicly owned wetlands. The investigation will meet the requirements of these regulations by identifying the type, functions, and boundary of the involved wetlands.

"Wetlands" are defined by the U.S. Army Corps of Engineers (USACE) for jurisdictional purposes as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 323.3(c)).

HLR will conduct a map review of the project. The following maps and documents will be reviewed prior to conducting the field investigation:

- U.S. Geological Survey Topographic Maps
- National Wetlands Inventory Maps
- USDA Soil Survey
- Hydric Soils of the United States
- Regulatory Flood Map

It appears from wetland mapping that there are at least 2 wetlands along the proposed bike path. The cost estimate provided is based on delineating 2 wetlands.

The field investigation will be conducted by our environmental personnel who are experienced in Federal methods for conducting wetland delineations. Our staff will classify and define hydric soils, hydrophytic vegetation, and evidence of hydrology to determine if wetlands are present. The wetland perimeter (s) will be staked and surveyed. Wetland boundary stake locations will be surveyed using a handheld Trimble R1 GNSS receiver.

Wetlands found will be classified according to type using the "Classification of Wetlands and Deep Water Habitats of the United States" by Cowardin. Wetland boundaries will be defined in accordance with the Corps of Engineers Wetlands Delineation Manual: Midwest Region. This includes a soil investigation to determine the presence or absence of hydric soils and an analysis of the dominant plant species. Field observations will be made on any evidence indicating the hydrology of the area and on water sources that are supporting these wetlands. Functions of these wetlands will be evaluated from field observations.

A wetland delineation letter report will be prepared summarizing the findings of the fieldwork. Included in the report will be the required wetland delineation data sheets that summarize the findings of the field investigation as well as figures that detail the maps reviewed and current wetland boundaries of the site. A wetland delineation would be valid for 5 years.

This task will also include submittal of a formal ECOCAT request.

Task 5: Project Administration and Coordination

Task 5 includes project administration and coordination with Transystems and the Village of Orland Park. Also includes invoicing and scheduling.

COST ESTIMATE WORKSHEET

Exhibit E Cost Estimate of Consultant Services Worksheet Fixed Raise

OVERHEAD RATE

COMPLEXITY FACTOR

TASK	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	DIRECT COSTS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
Topographic Survey	296	9,863	15,612		3,255		28,730	70.40%
PESA	56	1,615	2,556	400	533		5,104	12.51%
ESR	18	686	1,085		226		1,997	4.89%
Wetland Delineation and Report	49	1,262	1,997		416		3,675	9.01%
Project Coordination	6	447	707		147		1,301	3.19%
Subconsultant DL								
TOTALS	425	13,873	21,957	400	4,577	-	40,807	100.00%

B | TSC SCOPE OF SERVICES & CECS



**TESTING SERVICE CORPORATION**

Corporate Office

360 South Main Place, Carol Stream, IL 60188-2404
Phone 630.462.2600

May 11, 2021

Mr. Matthew D. Santeford
TranSystems Corporation
1475 East Woodfield Road Suite 600
Schaumburg, IL 60173-5058RE: P.N. 67,030
Geotechnical Exploration
Culvert Extension
82nd Avenue over Tinley Creek
Orland Park, IL

Dear Mr. Santeford:

Testing Service Corporation (TSC) is pleased to submit this proposal to provide Geotechnical Engineering Services for the above captioned project. It is in response to your email dated May 10, 2021. The objectives of the Geotechnical Study are to explore soil and groundwater conditions and provide recommendations for foundation design in connection with a proposed culvert where Tinley Creek crosses 82nd Avenue.

Boring Program:

We are proposing to drill two (2) soil borings as part of our Geotechnical Exploration. They are to be extended to 35 feet below existing grade. Total drilling footage on this basis is estimated to be about 70 lineal feet.

Based on Google Earth the east and west sides of the existing culvert along 82nd Avenue have guard rails and the embankments steeply slopes down. In this regard, it is assumed the soil borings will need to be drilled along the existing roadway just north or south of the existing culvert limits.

For the purposes of this proposal we have assumed that the boring locations will be accessible to a conventional truck or ATV mounted drill. In this regard, they should not be located in standing water, within wooded areas or on steeply sloping ground. No provisions have been made for tree/brush clearing or other obstruction removal should borehole access be impeded. Landscape restoration (if required) is also not included in the project budget.

TSC will utilize personnel who are trained in layout procedures to stake the borings in the field. Ground surface elevations for each borehole will be determined by GPS using a Trimble R8s GNSS receiver. Utility clearance for the borings will be obtained by contacting JULIE (Joint Utility Locating Information for Excavators). Private underground utility lines will have to be marked by the property owner or their agents; a private locator can be hired for an added cost if necessary.

Soil samples will primarily be obtained by split-spoon methods, with thin-walled tubes also taken if conditions dictate. Sampling will be performed at 2½-foot intervals for at least the first 20 feet (and greater if fill or unsuitable soil types extend below that depth), to otherwise not exceed 5-foot intervals. A representative portion of the split-spoon samples will be placed in a glass jar with screw-type lid for

Providing a Full Range of Geotechnical Engineering, Environmental Services, and Construction Materials Engineering & Testing

TranSystems Corporation
Culvert Extension, 82nd Avenue over Tinley Creek
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transportation to our laboratory. Groundwater observations will also be made during and following completion of drilling operations, with the boreholes to be backfilled immediately and any in pavement areas also patched at the surface.

Assumptions for Permits:

82nd Avenue is under the Cook County jurisdiction and will require a county permit.

Traffic Control:

The borings will likely be located along 82nd Avenue. It is anticipated that one traffic lane will have to be temporarily blocked at each boring location using professional traffic control with flagmen or specific traffic control measures. This proposal includes a provision for lane closures by a professional traffic control firm. If it is determined that traffic control is not needed you will not be charged for this service.

Please note that our cost estimate for this project is based on the assumption that TSC will be able to perform all borings and cores during weekdays (Monday through Friday) beginning no later than 9:00 AM and ending no sooner than 3:00 PM. If it is determined that traffic control is not needed you will not be charged for this service.

Laboratory Testing:

Samples obtained from the borings will be examined by experienced laboratory personnel in order to verify field descriptions as well as to visually classify in accordance with the Unified Soil Classification System. Laboratory testing will include moisture content and dry unit weight determinations as well as measurements of unconfined compressive strength by direct or indirect methods, as appropriate. Other tests deemed to be necessary by TSC's Project Engineer may also be recommended for your approval.

Engineering Report:

A geotechnical engineering report will be prepared upon completion of field and laboratory testing, to include typed boring logs and a location plan. The report will provide a summary of soil and groundwater conditions as well as address their impact on the proposed site development. It will also provide recommendations to guide design and specification preparation pertaining to geotechnical issues relevant to the structure or purpose described in this proposal. These may include the following as applicable:

- General earthwork and construction considerations.
- Remedial work and/or treatment of unstable or unsuitable soil types.
- Fill placement and compaction requirements.
- Foundation type, capacity and depth/elevation.
- Anticipation and management of groundwater.

Fees and Scope:

In accordance with the Cost Estimate attached, TSC is proposing a not-to-exceed budget amount of **Eight Thousand Nine Hundred Dollars (\$ 8,900.00)** to provide the Geotechnical Exploration outlined above. Our proposal is based on the understanding that: the boring locations are accessible to conventional drilling equipment; none are to be located in standing water, within wooded areas or on

TranSystems Corporation
Culvert Extension, 82nd Avenue over Tinley Creek
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steeply sloping ground; and the work can be performed during standard business hours. Our fee is further subject to this proposal being accepted by you on or before October 31, 2021.

Should the study reveal unexpected subsurface conditions requiring a change in the scope of work, you will be contacted before we proceed with any additional work. Our invoice would then be based on our standard unit rates given in the attached Cost Estimate or as otherwise agreed upon. While our quoted fee does not include earthwork, excavation, and/or footing observations during the construction phase, the project budget should include a provision for these services. Plan review, preconstruction meetings and/or other consulting and professional services that are provided subsequent to the delivery of TSC's report would be covered by separate invoice.

TSC's geotechnical investigation does not include services required to evaluate the likelihood of the site being contaminated by hazardous materials or other pollutants. Analytical testing which would be required in connection with IEPA Form LPC-663, Uncontaminated Soil Certification is also not included. Should environmental and/or analytical testing be desired, please contact the undersigned for additional details and/or associated costs.

Closure:

The geotechnical engineering services being performed are subject to TSC's attached General Conditions. TSC charges include all state and federal taxes that may be required. However, unless stated otherwise they do not include license, permit or bond fees that local governments may impose, if any to potentially be added to our invoice. The invoice will be sent to the following unless written instructions to the contrary are received:

Mr. Matthew D. Santeford
TranSystems Corporation
1475 East Woodfield Road Suite 600
Schaumburg, IL 60173-5058
Tel: (847) 605-9600
Email: msanteford@transystems.com

If this proposal meets with your approval, please indicate your acceptance by signing one copy and returning it to our Carol Stream, Illinois office. It would be helpful if you could also complete the attached Project Data form indicating who is to receive copies of TSC's report and other related information.

TranSystems Corporation
Culvert Extension, 82nd Avenue over Tinley Creek
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Your consideration of our proposal is appreciated. We look forward to being of service to you on this project.

TESTING SERVICE CORPORATION

Timothy R. Peceniak, P.E.
Geotechnical Engineer

Enc: Cost Estimate
General Conditions
Project Data Sheet

Approved and accepted for _____ by:

(NAME)

(TITLE)

(DATE)

TranSystems Corporation
 Culvert Extension, 82nd Avenue over Tinley Creek
 Proposal 67,030 - May 11, 2021



COST ESTIMATE
 Culvert Extension
 82nd Avenue over Tinley Creek
 Orland Park, IL

ITEM		UNIT	QTY	RATE	COST
STAKING AND UTILITY CLEARANCE					
1.1	Layout Person to Mark Boring Locations, Obtain Surface Elevations and Arrange for Clearance of Underground Utilities	Hour	3.0	110.00	\$ 330.00
1.2	Utility Locator to Mark Private Underground Lines incl. Inside Existing Buildings	Cost + 10%	0	Est. 750.00	\$ 0.00
PERMITS					
1.3	Cook County Bond and Direct Charges	Estimated Cost	1	750.00	\$ 750.00
1.4	Engineer to Prepare and Submit Permit to Cook County	Hour	4	140.00	\$ 560.00
DRILLING AND SAMPLING					
2.1	Drill Mounted on Truck or ATV with Two-Person Crew (Portal-to-Portal)	Lump Sum	1	3,125.00	\$ 3,125.00
TRAFFIC CONTROL (for Soil Borings and Pavement Cores)					
3.1	2-Man Flagging Crew, Regular Time (Portal to Portal)	Hour	8	300.00	\$ 2,400.00
3.2	2-Man Flagging Crew, Overtime	Hour	1	350.00	\$ 350.00
LABORATORY TESTING					
4.1	Examine Samples to Describe by Textural System and Classify Using the Unified Soil Classification System	Each	22	4.00	\$ 88.00
4.2	Water Content Determination (Includes Pocket Penetrometer Reading on Cohesive Samples)	Each	20	8.00	\$ 160.00
4.3	Unconfined Compressive Strength of Cohesive Soils or Torvane Shear Strength Measurement	Each	10	16.00	\$ 160.00
4.4	Dry Unit Weight Determination	Each	5	8.00	\$ 40.00
ENGINEERING SERVICES					
5.1	Prepare Geotechnical Report with Typed Boring Logs and Location Plan	Lump Sum	1	950.00	\$ 950.00
5.2	Senior Geotechnical Engineer to Consult or Attend Project Meetings	Hour	0.0	200.00	\$ 0.00
ESTIMATED TOTAL					\$ 8,913.00
RECOMMENDED BUDGET					\$ 8,900.00



TESTING SERVICE CORPORATION

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C. § 6901, et. seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to

perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to \$50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

GENERAL CONDITIONS Geotechnical and Construction Services

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to \$500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence. These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

REV 09/08