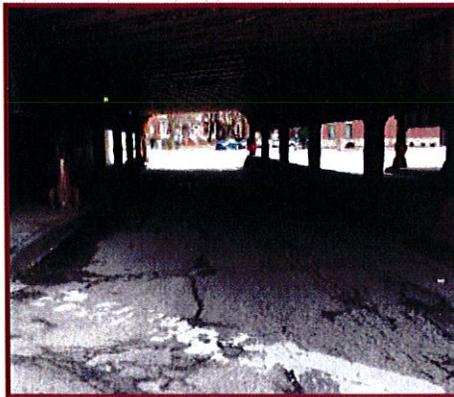




PROPOSAL

SUBMITTED TO: VILLAGE OF OAK PARK | DUE: MARCH 31, 2017



DESIGN AND CONSTRUCTION ENGINEERING FOR THE 17-17 WATER AND SEWER MAIN IMPROVEMENT PROJECT

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TABLE OF CONTENTS

- SECTION 1:** COVER LETTER
- SECTION 2:** V3 CAPABILITIES & STRENGTHS
- List of Similar Contracts - Matrix
 - Relevant Experience
- SECTION 3:** PROJECT TEAM
- Project Team Qualifications
 - Organizational Chart
 - Resumes
- SECTION 4:** PROJECT UNDERSTANDING & APPROACH
- Scope of Work
 - Deliverable Expectation Document
- SECTION 5:** REQUIRED FORMS
- SEPARATE
SEALED
ENVLEOPE:** COST PROPOSAL
- Fee Summary
 - Schedule of Hourly Rates
 - Cost Estimate of Consultant Services



March 31, 2017

Mr. Bill McKenna, Village Engineer
Village of Oak Park
201 South Blvd,
Oak Park, IL 60302

**Re: Request for Proposal
17-17 Water and Sewer Main Improvement Project**

Dear Mr. McKenna:

V3 Companies (V3) is pleased to respond to the request for proposal for the 17-17 Water and Sewer Main Improvement Project along North Boulevard, South Boulevard, Clinton Avenue, and Kenilworth Avenue. The enclosed information presents our team, approach and fee to provide Phase I, Phase II and Phase III design and construction engineering services for the project.

The main challenge on this project will be meeting the condensed project schedule. The project schedule presented in the RFP allows nine weeks to complete the final design and 13 weeks for construction to be substantially complete. With the preliminary plans prepared by the Village, we are confident our team can meet this aggressive schedule, and we have prepared our proposal accordingly.

We do, however, believe this project is a good candidate for an alternative, design/build, approach. As both a professional engineering firm and a construction company, V3 has completed similar design/build projects for other municipalities.

Some of the advantages to this approach include:

Time Savings: With a design/build delivery method, V3 would act as the Construction Manager for the Village, and would publicly bid and award individual trade contracts. By using this approach, the work could be advanced as portions of the design were completed, vs. the traditional design/bid/build method using a general contractor method where the entire design would have to be complete before it could be bid and awarded. For example, the sewer lining could be started immediately. Additionally, we would expedite the work that may result in a conflict with an existing utility, so that any such conflicts could be addressed as early as possible in the schedule.

Reduction in Cost: Initializing construction as early as possible reduces the cost of the project. Costly delays may be avoided as unknown underground information becomes available, potentially eliminating the need for re-design and expensive contractor claims.

Increased Flexibility: By working collaboratively with the contractor, we can achieve the desired outcome by making adjustments in the field when underground utility conflicts and other unforeseen issues arise.

Considering the potential for unforeseen construction issues to delay the project schedule (particularly unforeseen conflicts with existing underground utilities) a design/build contract would allow the project team more flexibility to address construction challenges as they arise. It would also provide more time to work with the stakeholders to reduce impacts to both commuters and property owners.

We have prepared our response to this RFP assuming the Village will proceed utilizing the traditional, design/bid/build approach. However, we would be happy to further discuss the benefits of using a design/build delivery method on this project if the Village is interested.

Statement of No Objections

V3 Companies of Illinois Ltd. (V3) has reviewed the agreement and included with the RFP and is willing to abide by the Village's standard form professional agreement with no objectives or changes.

If you have any questions or require additional information please contact Vince Del Medico at (630) 729-6320 or at vdelmedico@v3co.com.

Sincerely,
V3 COMPANIES



Vince Del Medico P.E.
Director of Transportation and Municipal Engineering



V3'S CAPABILITIES & STRENGTHS

The V3 project team possesses both the technical knowledge and management skills necessary to undertake this unique project. Our team has extensive experience in all of the areas that will be critical to the success of this project. The following is a summary of V3's capabilities, strengths, and relevant experience for designing and managing utility projects in municipalities similar in character to Oak Park.

BENEFITS OF CHOOSING THE V3 TEAM

- ✓ V3's demonstrated ability to engage stakeholders during the design and construction phases ensures a smoother construction process that benefits the community and the Village.
- ✓ V3 has extensive experience with the design and construction of utility and roadway reconstruction projects in urban areas and will apply that expertise to deliver a high quality design with a streamlined construction process.
- ✓ V3's wide range of experience in completing streetscape projects, particularly within central business districts
- ✓ V3 is able to provide roadway, utility, structural and lighting design as well as survey, environmental, and construction engineering services all in-house. Our groups work seamlessly together and strengthen our projects at every phase.

Utility Design in Urban Environments

V3 has extensive experience designing, inspecting, and constructing infrastructure projects in urban environments. V3 provides both design and construction engineering services for combined sewer improvement projects for the Chicago Department of Water Management (CDWM). To date, the V3 team has designed more than 17 miles of combined sewer improvements for CDWM alone. Design services include structural engineering design for deep connections and junction chambers, ADA ramp design, roadway restoration, maintenance of traffic, utility coordination, IDOT and MWRD permit assistance, environmental services and preparation of contract documents. Our construction engineering team has successfully managed more than \$115 million of sewer construction for CDWM including many designed by V3, resulting in improved designs for the city by incorporating feedback from the field. The V3 professionals have managed a wide variety of sewer projects that have been installed via open cut or jack and auger methods to depths exceeding 45 feet.

V3 has extensive experience in the design of watermain improvements. We recently completed the following projects, which all involved watermain design: Ashland Avenue Viaduct at Pershing Road improvements, Ardmore Avenue Streetscape Enhancements, 75th Street Reconstruction, 143rd Street and LaGrange Road Corridor improvements, IL Route 25 and I-90 Interchange Reconstruction and US 20 (Maumee Street) Streetscape improvements. V3 has provided construction engineering services for multiple water main improvement projects including the 143rd Street and LaGrange Road Corridor improvements as designed by V3.



Utility Coordination

V3 possesses a unique perspective with regard to private utilities as we currently provide a variety of engineering services for both AT&T and ComEd. For AT&T, V3 performs SUE Level A and B locating services and prepares design plans for adjustments/relocations to AT&T facilities that are required as a result of roadway and bridge improvements. We also provide AT&T with structural engineering services including: the design of adjustments to existing manholes, the design of hanging systems for duct packages under bridge decks and the creation of standard details for temporary



V3's CAPABILITIES & STRENGTHS

and permanent duct supports. With regard to ComEd, V3 provides construction inspection services for improvements to substation facilities throughout the region. We have also assisted ComEd in developing standard contract specifications for civil and structural elements. By having a good understanding of how two major utilities within the corridor operate, V3 will be able to ensure that the utility coordination process runs smoothly and remains on schedule.

Resurfacing Projects

V3 has deep experience with local roadway resurfacing projects. V3 recently completed the design and the construction engineering services for the 71st Street Resurfacing and the 83rd Street Resurfacing projects for the Village of Woodridge. Both projects included Phase I and II design engineering coordinated through IDOT-Local Roads. In addition to pavement resurfacing, these projects included ADA ramp reconstruction, pavement markings, landscape restoration, detector loop replacement, pavement patching, drainage structure repairs and sidewalk/curb and gutter replacement (based on observed field conditions). The 75th Street Reconstruction project also included nearly one-half mile of pavement resurfacing on two cross roads under the jurisdiction of DuPage County. The Addison Avenue Streetscape improvements project also included a significant length of pavement resurfacing.

Phase I/II Design Engineering

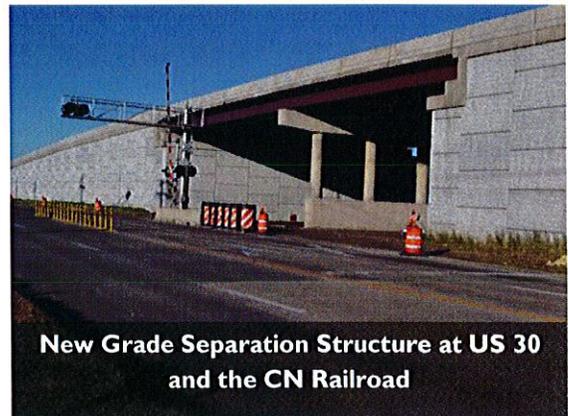
V3 has successfully completed numerous Phase I/II design projects directly for IDOT as well as for local municipalities and transportation agencies. V3's experience with transportation and infrastructure projects will be invaluable for meeting the demands of a compressed project schedule. Some of V3's more recent Phase I/II project experience includes: Ashland Avenue Viaduct at Pershing Road improvements (CDOT), US 30 at CN Railroad Grade Separation (IDOT), Ardmore Avenue Streetscape Improvements (Villa Park), 75th Street Reconstruction (DuPage County DOT), IL Route 72 and IL Route 31 Intersection Improvements (West Dundee) and Ardmore Avenue over the CN Railroad (Villa Park).

Phase III Construction Engineer – Design Engineering

V3's engineering staff has extensive combined sewer and water main construction experience having managed numerous projects within CDWM and other municipalities. Some of V3's most recent work is similar in nature; utility improvements along heavily congested areas such as: Damon Avenue, Peterson Avenue, Diversey Parkway, Talcott Avenue, and 37th Street. These successful projects contained combined sewer, watermain, pipe jacking, ADA sidewalk, MOT staging, and partial to full pavement restoration while maintaining extensive outreach to residents and business owners. Our engineers recognize the benefits of constant communication with businesses, residents and Village officials and will make communication a priority on this project as we routinely do on all projects.

Detailed Site Grading/ADA Ramp Design

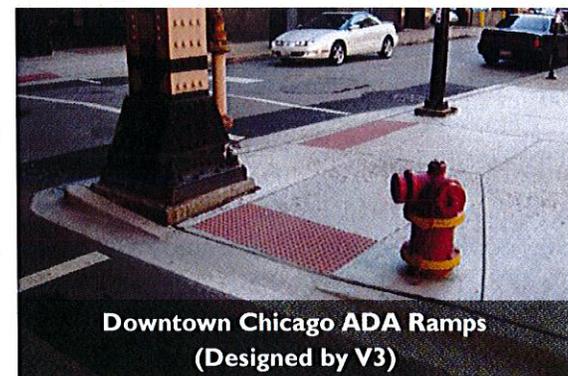
The V3 team members assigned to this project have significant experience in detailed site grading and ADA ramp design and construction engineering - having designed improvements to hundreds of intersection corners for the City of Chicago in some of the most challenging urban settings. V3 was responsible for designing and providing construction engineering services for ADA ramps in a



New Grade Separation Structure at US 30 and the CN Railroad



Diversey Sewer Improvement Project
Chicago Department of Water Management



Downtown Chicago ADA Ramps
(Designed by V3)



V3'S CAPABILITIES & STRENGTHS

wide range of settings throughout the city for CDOT, including many intersections located within the Chicago Loop. These experiences will be invaluable in developing the proposed sidewalk and ramp improvements for the 17-17 Improvement project.

Public Involvement

Public Involvement and coordination with the three business districts, property owners, commuters and various other stakeholders will be extremely important to the success of this project. V3 is a public involvement specialist and has performed these services on numerous recent projects. We are currently managing two Phase I projects that are following Context Sensitive Solutions (CSS) guidelines; 47th Street at East Avenue (IDOT) and I-55 at Airport Road/IL 126 (Bolingbrook, Romeoville and Plainfield). Both projects include an actively managed project website: <http://www.47eastavestudy.com/> and <http://www.airportand126study.com/>. V3 also created and maintains the website <http://www.washingtonunderpass.com/> to share information with project stakeholders for the Washington Street Reconstruction project for the Lake County DOT. V3 proposes to create a website for the 17-17 Project to keep stakeholders informed of roadway and parking closures, detours, pedestrian access routes and project schedules. During construction V3 will continue to reach out to project stakeholders by having a representative on-site during construction to answer questions and providing frequent updates to the website.

Environmental Services

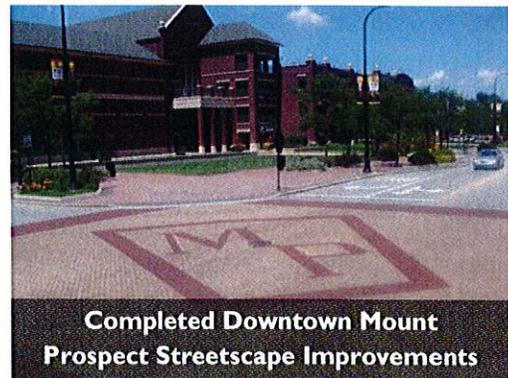
The environmental scientists at V3 have performed countless PESA's. Project experience in the Village of Oak Park include UST removal and SRP services at South Boulevard and Harlem Avenue, limited PSI and CCDD Evaluations for Oak Park project 16-07, and Taylor Park soil borings and monitoring well.

Railroad Coordination

V3 has an experienced staff of railroad professionals, including two former long-time Union Pacific employees, Ted Niemeyer and John Klein. Our experience in railroads includes design, negotiation and execution of permits and agreements. V3's engineers will be an asset in coordinating work the Union Pacific and Metra.

Streetscape Design

V3 has extensive experience in developing streetscaping projects for a variety of municipalities throughout the Chicagoland area. Much of our streetscape experience has occurred within the heart of several central business districts including: Mount Prospect, Elmhurst, Wheaton, Lockport, Naperville and Angola (Indiana). Those projects have involved some of the same features that may be implemented within the project limits; brick paver sidewalks, parking reconfiguration, street furniture, ornamental lighting, and landscaping. V3 recently completed the design and implementation of the 143rd Street and LaGrange Road Corridor Improvement project in Orland Park which included many unique streetscape features, all of which were approved and permitted by IDOT.



Lighting Design

V3 has designed lighting systems for a variety of transportation agencies, local municipalities as well as residential subdivisions and business parks. All of these projects were designed in accordance to the respective municipality's standards for public street lighting. Some of V3's recent transportation lighting projects include: Mount Prospect Downtown Streetscape and Parking Lot Improvements, 75th Street Reconstruction, Ardmore Avenue Streetscape Enhancements, 143rd Street and LaGrange Road Corridor improvements and Ashland Avenue Viaduct at Pershing Road.



V3'S CAPABILITIES & STRENGTHS

Other V3 Capabilities and Strengths

Although not specifically mentioned in the Request for Proposal, V3 offers the following specialized expertise that may add to the success of the project:

Design-Build Construction

As a professional engineering firm and a construction company, V3 is uniquely qualified to complete projects using a design-build delivery method. We have completed similar projects for other municipalities using this alternative delivery method, which allows for a single point of responsibility, quick conflict resolution, and improved coordination. Projects with aggressive schedules and the potential for unforeseen construction challenges, such as underground utilities, are well suited for a design-build approach. V3 will help the Village mitigate the many construction risks presented by this project through our expertise in project management, technical knowledge and best management practices. V3 can self-perform the following work with its own union labor and equipment:

- Abandonment of utilities and structures
- Excavation and grading
- Staging and site preparations
- Traffic Control
- Surveying and construction lay-out
- Erosion protection and maintenance
- Underground utility installation

We can also publicly bid the work listed above, as well as the remaining trades necessary to complete the project. We will commit to assembling the most efficient and cost-effective team for Village and its citizens.

Topographic Survey Services

V3 can provide any supplemental survey services as needed for this project. Our team of surveyors has experience in all phases of land surveying including topographic survey and construction staking. Current work in Oak Park includes the survey of many streets for Capital Improvements. V3 has also provided construction staking for the Oak Park Station.

Sustainable Infrastructure

V3 is a leader in the area of sustainable infrastructure. Our staff has been designing and constructing sustainable projects for many years. As a result, we have the practical experience to know what works. Based on our previous design experiences, V3 will work closely with the Village to identify sustainability measures that could potentially be incorporated into the subject project. Such measures may include: pavement recycling, permeable brick pavers (particularly within parking lanes), LED lighting and the use of warm-mix asphalt instead of hot-mix asphalt for street resurfacing.

Village of Oak Park
RFP 17-17 Water & Sewer Main Improvements
Matrix of V3's Relevant Project Experience

Project Name	Client	Contract Cost/Cost of Engineering	Project Setting (suburban, urban, CBD)	Phase I / Preliminary Engineering	Phase II / Design Engineering	Phase III / Construction Management	Streetscape Design	Lighting	ADA Design	Watermain Design	Combined Sewer Design	Public Outreach
Projects Completed for Local Municipalities												
Mount Prospect Downtown Streetscape and Parking Improvements	Village of Mount Prospect 1700 West Central Road Mount Prospect, IL 60056 William Cooney, 847-818-5307	\$2,000,000 \$224,686	Urban/CBD		X		X	X	X			X
Ardmore Avenue Streetscape Enhancements	Village of Villa Park 20 S. Ardmore Avenue Villa Park, IL 60181 Vydas Juskelis, 630-834-8505	\$1,622,204 \$104,356	Urban	X	X	X	X	X	X	X		
143rd Street and La Grange Road Corridor Improvements	Village of Orland Park 15655 South Ravinia Avenue Orland Park, IL 60462 Jon Ingram, 708-403-6350	\$20,808,000 \$656,525	Suburban		X	X	X	X	X	X		X
US 20 (Maumee Street) Streetscape Improvements	City of Angola (Indiana) 210 North Public Square Angola, IN 46703 Bill Boyer, 260-665-6748	\$1,000,000 \$70,702	Urban/CBD	X	X		X	X	X	X	X	X
Addison Avenue Streetscape Improvements	City of Elmhurst 209 North York Street Elmhurst, IL 60126 Kent Johnson, 630-530-3024	\$670,000 \$55,000	Urban/CBD		X		X	X	X			
Projects Completed for Transportation Agencies and other Government Agencies												
Ashland Avenue Viaduct at Pershing Road Improvements	CDOT 30 North LaSalle Chicago, IL 60602 Mohammad Pakshir, 312-744-3561	\$8,000,000 \$591,167	Urban	X	X			X	X	X	X	X
75th Street Reconstruction (Adams Street to Plainfield Road), Darien IL	DuPage County DOT 421 North County Farm Road Wheaton, IL 60187 Chris Snyder, 630-407-6910	\$16,100,000 \$587,122	Suburban	X	X			X	X	X		X
Arterial Resurfacing ADA Ramp Program*	CDOT 30 North LaSalle Chicago, IL 60602 Charlene Walsh, 312-744-3600	\$170,505 (fee)	Urban (including CBD)		X	X			X			
Department of Water Management - Various Task Order Design Requests and Construction Engineering	Chicago Department of Water Management 1000 East Ohio Street Chicago, IL 60611 Sid Osakada, 312-744-0344	\$1,859,963 (design fee) \$8,828,319 (CE fee)	Urban		X	X			X		X	
Diversey Avenue Sewer Improvement*	Chicago Department of Water Management 1000 East Ohio Street Chicago, IL 60611 Bulent Agar, 312-742-7100	\$150,040 (CE fee)	Urban			X			X	X	X	X
Talcott Avenue Sewer Improvement*	Chicago Department of Water Management 1000 East Ohio Street Chicago, IL 60611 Bulent Agar, 312-742-7100	\$612,592 (CE fee)	Urban			X			X	X	X	X
Peterson & Fairfield Avenues Sewer Improvement*	Chicago Department of Water Management 1000 East Ohio Street Chicago, IL 60611 Bulent Agar, 312-742-7100	\$476,062 (CE fee)	Urban			X			X	X	X	X
37th Street Sewer Improvement*	Chicago Department of Water Management 1000 East Ohio Street Chicago, IL 60611 Bulent Agar, 312-742-7100	\$790,339 (CE fee)	Urban			X			X	X	X	X
60th Street Sewer Improvement*	Chicago Department of Water Management 1000 East Ohio Street Chicago, IL 60611 Sid Osakada, 312-744-0344	\$268,699 (CE fee)	Urban			X			X	X	X	X

* Total costs are not available



37TH STREET SEWER IMPROVEMENTS

CLIENT: CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Construction Management
- Construction Inspection
- Project Documentation
- Change Orders & Pay Estimates
- Material Testing & Inspection
- Public Relations
- Record Drawings
- Construction Layout
- Measurement of Quantities
- Owners Representation

PROJECT DETAILS

- Location: Chicago, IL
- Total Construction Cost: \$11,200,000



- Part of Chicago's \$7-billion "Building a New Chicago" infrastructure improvement program, the 37th Street sewer improvements were designed to reduce the number of storm overflows by increasing the combined sewer capacity for an area on the north side of McKinley Park
- This project included the installation of approximately 1,000 feet of 84-inch-diameter sewer, nearly 4,000 feet of up to 84-inch-diameter sewer, tumbling basin, large connection structures, manholes, catch basins and private drain connections
- The downstream outlet for the new 84-inch sewer required a new connection structure be installed into an existing 100-year, 12'x14' overflow tunnel
- Incidental construction activities included capping and reconnecting watermains, reconstructing roadway pavement, patching pavement, removing and replacing concrete sidewalks, driveways, curbs and gutters, installing ADA compliant ramps and restoring landscape restoration
- The project streets are located in arterial business and residential areas, requiring coordination of street closures and service interruptions
- V3 coordinated all work with Alderman's offices, various city services departments, businesses and residents



60TH STREET & MERRIMAC AVENUE SEWER IMPROVEMENTS

CLIENT: CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Constructability Reviews
- Construction Inspection
- Construction Layout
- Construction Management
- Material Testing & Inspection
- Measurement of Quantities
- Budget Review & Cost Estimating
- Preparation of Pay Estimates & Change Orders
- Watermain Shutdown Coordination
- Utility & City Department Coordination
- Traffic Control Inspection & Coordination
- Owners Representation
- Project Documentation
- Public Relations
- Record Drawings
- Schedule Preparation & Analysis



- This project included the installation of drainage structures, private drain connections and storm sewer for a \$2.7 million sewer improvement project for the Chicago Department of Water Management (CDWM)
- Additional work performed included watermain modifications, HMA pavement restoration, PCC base course reconstruction, curb and gutter replacement, construction of ADA compliant ramps, sidewalk replacement, driveway reconstruction, pavement markings and landscape restoration
- The sewer installation included sewers up to 78-inch in diameter and more than a half mile in length along W. 60th Street; requiring extensive community outreach to facilitate safe access and travel for both vehicles and pedestrians due to street and sidewalk closures, traffic detours and variable traffic patterns
- The project included the installation of a \$560,000 cast-in-place junction chamber with 62 cubic yards of PCC and 14,500 pounds of steel reinforcement on the existing 78-inch diameter sewer line on S. Mobile Avenue
- The contractor for this project was on the CDWM's small business initiative. There was considerable coordination between the contractor, V3 and CDWM to ensure that the contractor was able to follow the procedures and guidelines expected by the CDWM and ease in the constructability of the project. Ultimately the project was finished three months ahead of schedule
- Due to the location of the project, V3 coordinated all work with both Ward 13 and Ward 23 Aldermen. Communication with both Alderman offices continued throughout the duration of the project in order to address any concerns of the property owners and to keep both offices up to date on the schedule and status of the work

PROJECT DETAILS

- Location: Chicago, IL
- Total Construction Cost: \$2,700,000



75TH STREET RECONSTRUCTION FROM ADAMS STREET TO PLAINFIELD ROAD

CLIENT: DUPAGE COUNTY DIVISION OF TRANSPORTATION

V3 SERVICES

- Stormwater Management Design & Permitting Assistance
- Traffic Impact Studies & Analysis
- Watermain Design
- Roadway Design
- Traffic Signal Design
- Public Involvement Assistance
- Geotechnical Study
- Roadway Lighting Design
- Construction Document Preparation
- Cost Estimating
- ADA Ramp Design
- Topographic Survey
- Platting Services



- Phase II engineering services were performed for the reconstruction of one mile of 75th Street (County Highway 33) from west of Adams Street to east of Plainfield Road, upgrading it from a four-lane rural roadway section to a six-lane urban facility
- The scope also included adding turn lanes at the Cass Avenue and Plainfield Road intersections to further enhance traffic flow through the corridor. 75th Street within the project limits is designated as a Strategic Regional Arterial
- Updated traffic projections were performed to evaluate proposed intersection geometrics approved several years earlier as part of the original Phase I Study. The new data, along with a detailed review of potential access, pedestrian and constructability issues, were used to modify the geometrics accordingly
- The project involved improving access to two schools, a historic civic property and the future Darien Town Center development which required extensive coordination with the City, Darien School District #61 and the Darien Historical Society
- A stormwater management permit for submittal to the DuPage County Department of Economic Planning and Development was completed
- Temporary traffic signals were designed for construction staging and all traffic signals within the project were modernized and replaced. A new interconnected traffic signal system was also designed as part of the project
- The project also included the removal of the City of Darien's existing lighting system and replacement with new decorative light poles
- An addendum to the approved 75th Street Phase I Study was completed to document revisions to the roadway geometrics originally proposed within the project limits
- Two public information meetings were held to present the proposed improvements to stakeholders

PROJECT DETAILS

- Location: Darien, Illinois
- Project Value: \$16,100,000



143RD STREET & LA GRANGE ROAD CORRIDOR IMPROVEMENTS

CLIENT: VILLAGE OF ORLAND PARK

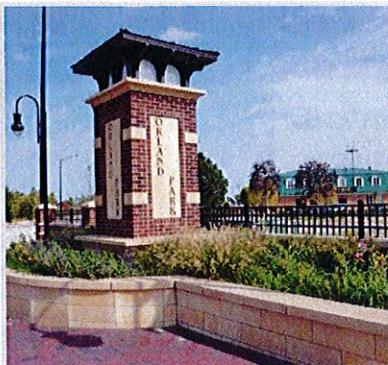
V3 SERVICES

- Traffic Studies
- Intersection Design Studies
- Traffic Signal Design
- Roadway Lighting
- Roadway Design
- Storm Sewer Improvements
- IDOT Permitting & Coordination
- Watermain Design
- Construction Document Preparation
- Right-of-Way Studies
- Construction Engineering



PROJECT DETAILS

- Location: Orland Park, Illinois
- Project Value: \$20,800,000



- This reconstruction project included extensive corridor aesthetic enhancements and improvements of the roadway and intersection along LaGrange Road from Southwest Highway to 144th Place and along 143rd Street from the Norfolk and Western Railroad crossing west of Ravinia Drive
- Extensive coordination with IDOT was required to secure permits for the corridor enhancements
- The project included roadway widening for additional through lanes in each direction, with dual left turn lanes and single right turn lanes on all legs of the intersection, as well as new storm sewer and watermain design
- Aesthetic enhancements included extensive parkway and median landscaping, median planters, monument signage and brick paver sidewalks
- Electrical enhancements included street lighting, decorative lighting, holiday tree lighting system, lighted holiday festoons, illuminated street name signage, black powder coated streetlight fixtures and traffic signal equipment
- Irrigation enhancements included an automated system for parkway and median landscaping on both 143rd Street and LaGrange Road
- This project included the design and permit approval of a special detail for brick paver crosswalks across LaGrange Road, representing the only permitted location of a brick crosswalk on a state-marked arterial roadway in IDOT District I
- The project scope included full depth pavement removal and replacement and widening of more than one mile of existing concrete pavement on 143rd Street and LaGrange Road with full-depth PCC pavement
- Other construction activities included new watermain, storm sewer, new traffic signals at three intersections and roadway lighting
- V3 coordinated adjacent projects with the Village, contractor, IDOT and associated consultants to minimize impacts to the traveling public
- This project received a 2013 ACEC-IL Special Achievement Award



ADA RAMP IMPROVEMENTS CONSTRUCTION & DESIGN

CLIENT: CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION

V3 SERVICES

- ADA Ramp Layout & Design
- Adjacent Roadway & Alley Design
- Private & Public Utility Adjustment Design
- Storm Sewer Extension Design
- Topographic Survey
- Pavement Marking & Signing Design

PROJECT DETAILS

- Location: Chicago, Illinois
- Total Construction Costs: \$4,221,000
- Year Completed: 2012



- V3 is providing construction management for the City of Chicago's reconstruction of non-compliant alley and intersection crossings to meet the City's ADA Curb Ramp Design Criteria, of which V3 helped establish
- V3 has assessed more than 1,600 intersection corners and provided detailed designs for nearly 1,500 corners as part of various City programs
- V3 evaluated locations where pedestrian accommodations could be improved by re-aligning crosswalks, adding new crossings and removing conflicting crossings
- At corners containing CTA bus stops, ADA ramps were provided such that accessibility between bus shelters and intersection crossings was provided
- Scope of work includes the removal and replacement of sidewalk, curb and gutter, alley and roadway pavement, drainage structures, as well as pavement marking and signage
- Construction engineering services included the layout and design of ADA ramps, concrete bus pads within the pavement and new bus pad shelters in parkways



ADDISON AVENUE STREETSCAPE IMPROVEMENTS

CLIENT: CITY OF ELMHURST

V3 SERVICES

- Change Orders/Pay Estimates
- Construction Inspection
- Grading Design & Earthwork Analysis
- Streetscape Design
- Roadway & Pedestrian Lighting
- Permeable Paver Design
- Maintenance of Traffic Planning & Design
- Brick Paver sidewalk Design
- Project Documentation
- Roadway Design
- Storm & Sanitary Sewer Design
- Topographic Mapping



PROJECT DETAILS

- Location: Elmhurst, Illinois
- Project Value: \$670,000

- V3 provided planning, design and on-call construction observation for streetscape and roadway improvements along Addison Avenue between 1st Street and 2nd Street in Downtown Elmhurst
- One of the goals of the project was to redesign the roadway to converted the north portion from one-way to two-way to allow better access to the parking garage that was being constructed along the east side of Addison Avenue
- Parking along the east side of Addison Avenue was changed from angled parking to parallel parking to provide increased sidewalk width and increased roadway width for a future on-street bicycle lane
- The streetscape enhancements included brick paver walks, roadway reconstruction and resurfacing, relocation of ornamental lighting, installation of permeable pavers in parking lanes, revised signage and stripping to support the revised roadway configuration, trees in tree wells and various aesthetic enhancements
- Due to the small budget for this project, V3 prepared detailed grading studies to minimize the amount of roadway reconstruction that would be required for the project. Since the pavement centerline and parking lane was being altered, matching into the existing pavement and curb along the west side of the roadway required highly detail analysis
- Addison Avenue is locate in the City's central business district and is lined with restaurants, bars and retail businesses that require sidewalk and roadway access during normal business hours and to allow sufficient access to these businesses, V3 prepared detailed maintenance of traffic plans that provide sidewalk and roadway access to all businesses along roadway during construction
- In addition to this project, the City was constructing a new parking structure on the east side of Addison Avenue so construction access was required through our project as the parking structure construction schedule was concurrent with the streetscape enhancements



ARDMORE AVENUE STREETSCAPE ENHANCEMENTS

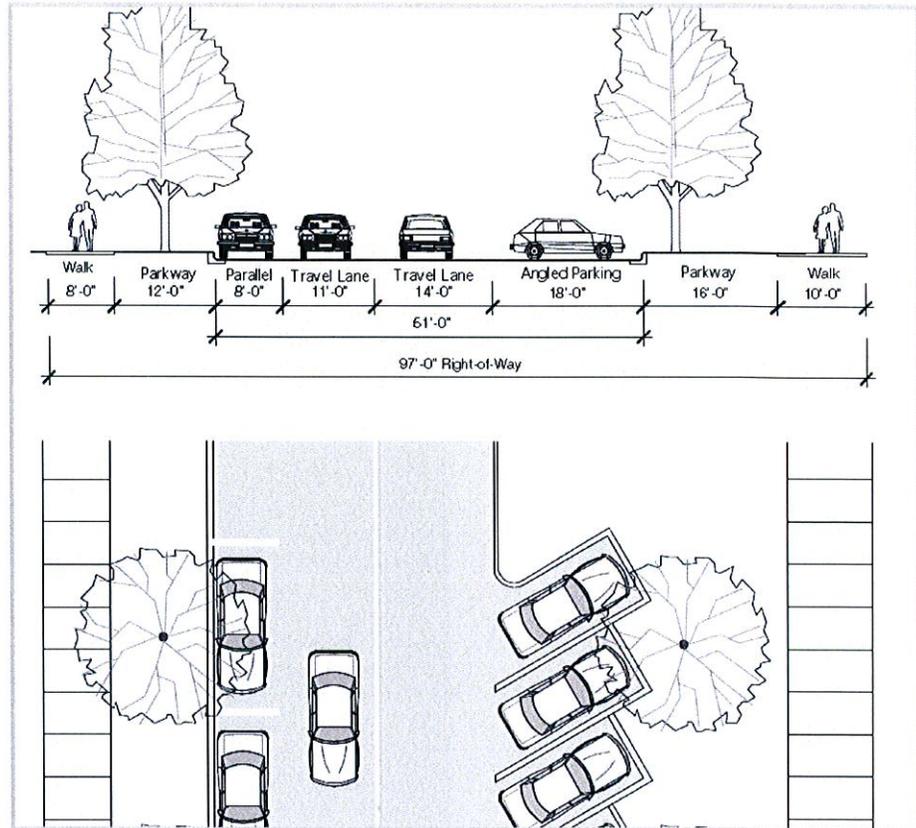
CLIENT: VILLAGE OF VILLA PARK

V3 SERVICES

- Pedestrian Lighting
- Sidewalk Design
- Gateway Signing
- Streetscape Improvements
- Construction Observation & Inspection
- Project Documentation
- Survey Control
- Materials Testing

PROJECT DETAILS

- Location: Villa Park, Illinois



- Funded by the Illinois Transportation Enhancement Program, this project consisted of two segments of streetscape enhancements along Ardmore Avenue. The first segment is between the Metra railway tracks and Vermont Street and the second segment is from West Ridge Road to West Schiller Street
- Streetscape enhancements to both segments included gateway features (signage, landscaping, irrigation and water fountains), LED ornamental pedestrian streetlights, hardscape features, landscaping and wayfinding signage
- Sidewalk construction near the Ardmore Avenue bridge over the Canadian National Railway involved embankment construction to support the sidewalk as well as the relocation and installation of guard rail
- Accommodations for pedestrian lighting were included in the Ardmore Avenue bridge replacement project, which V3 was the prime consultant
- The project was processed through the IDOT Bureau of Local Road
- Phase III construction engineering included sidewalk improvements consisting of installation of ADA compliant ramps and detectable warnings. The sidewalk also included decorative features utilizing stamped and colored concrete at the street returns
- HMA widening was provided to improve on-street parking within the commercial area
- Enhancement features included the installation of gateway signs, decorative benches and landscaping planter boxes



ARTERIAL STREET RESURFACING & ADA RAMP IMPROVEMENTS

CLIENT: CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION

V3 SERVICES

- Topographic Survey
- Private & Public Utility Adjustment Design
- ADA Ramp Layout & Design
- Adjacent Roadway & Alley Design
- Pavement Marking & Signing Design
- Cost Estimates
- Preparation of Contract Documents
- Permit Coordination with IDOT & the Office of Underground Coordination



PROJECT DETAILS

- Location: Chicago, Illinois
- The project scope involved the design of ADA compliant corner ramps in association with the 2009 and 2010 Arterial Street Resurfacing Program
- Two separate sets of contract documents were prepared for the north and central areas resurfacing program along more than miles of Chicago roadways
- More than 980 intersection corners were evaluated in the program with detailed site inspections
- Corners were categorized in one of three areas: corners that could be constructed by the contractor utilizing the CDOT standard details; corners that needed plan layout with dimensions to supplement the CDOT standard details; and complex corners that needed full vertical and horizontal design to be compliant with CDOT ADA guidelines
- V3 prepared contract documents consisting of plans, specifications and estimates for each contract and coordinated through CDOT contracts section for bidding through the City's Bid and Bond Room
- All plans were coordinated through IDOT Bureau of Local Roads
- V3 assisted with the permit applications to IDOT and the Office of Underground Coordination





ARTERIAL STREET RESURFACING COOK COUNTY NORTH AREA

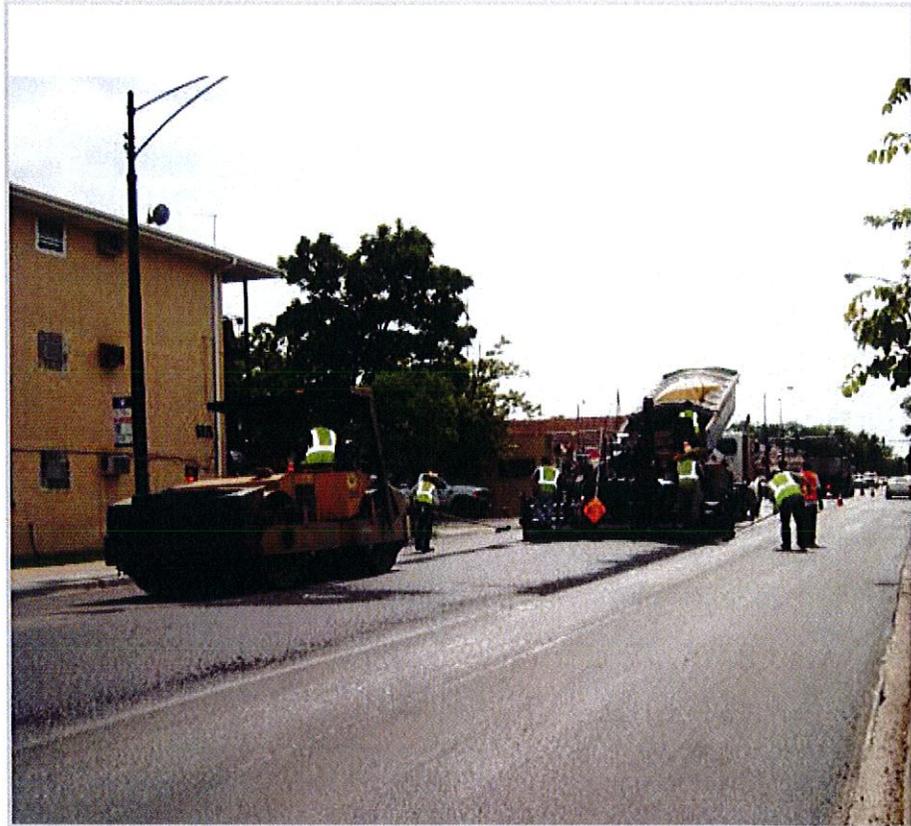
CLIENT: CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION

V3 SERVICES

- Resident Engineering
- Construction Inspection
- Construction Layout & Layout Verification
- Project Documentation
- ADA Sidewalk Ramp Quality Control Testing

PROJECT DETAILS

- Location: Chicago, Illinois
- Total Construction Cost: \$1,990,000



- This project included the rehabilitation of three arterial streets
- Street pavement was patched, reprofiled and resurfaced
- More than 50 existing sidewalk ramps were reconstructed to meet the City's ADA sidewalk ramp standards
- The construction of concrete bus pads were included to reduce the deterioration of the street surface at CTA bus stops
- V3 designed construction staging plans to ensure pedestrian paths were open to users at all times
- Construction activities were carefully scheduled to minimize impacts on local businesses
- The project required extensive coordination with aldermanic offices and City departments including the Department of Signs & Markings, Office of Emergency Management & Communication and the Department of Planning & Development





ASHLAND VIADUCT AT PERSHING ROAD IMPROVEMENTS

CLIENT: CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION

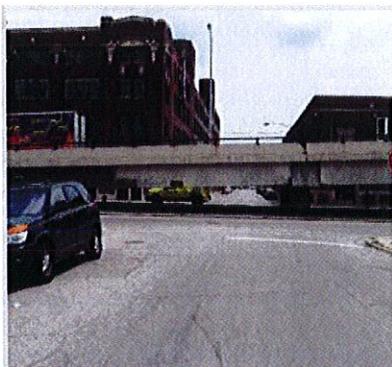
V3 SERVICES

- Roadway Design
- Bridge Inspection
- Bridge Condition Report
- Stormwater Management Permitting
- Traffic Studies
- Intersection Design Studies
- Special Waste Screening
- Detour Route Study
- Public Coordination
- Cost Estimates
- Landscaping Restoration



PROJECT DETAILS

- Location: Chicago, Illinois
- Project Value: \$8,000,000



- Improvements included the demolition of an existing 1,162-foot-long and 47-foot-wide structure consisting of 13 spans of pre-stressed box beams supported by reinforced concrete piers
- The preliminary design included the inspection of the bridge to determine the need for any emergency and remedial repairs, ongoing monitoring of the conditions identified and preparation of a bridge condition report following the IDOT and CDOT requirements, which substantiated the final scope of the project
- The bridge condition report evaluated alternative structure types, repair and rehabilitation options and a detailed costs estimate for construction and force work
- Additional services included the preparation of a project development report, FHWA and IDOT coordination, traffic studies, intersection and geometric design studies, environmental assessments and remediation and recommendations as appropriate, right-of-way acquisition, and other requirements
- V3 analyzed several design alternatives, including eliminating the bridge and reconstructing Ashland Avenue at grade
- Project scope also included improvements to the intersection geometrics, particularly the merge lanes at the ends of the structure
- V3 managed coordination with stakeholders including adjacent property owners and permitting agencies such as CDOT, IDOT, Cook County Highway Department and the City of Chicago



ASHLAND VIADUCT AT PERSHING ROAD IMPROVEMENTS - PHASE II

CLIENT: CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION

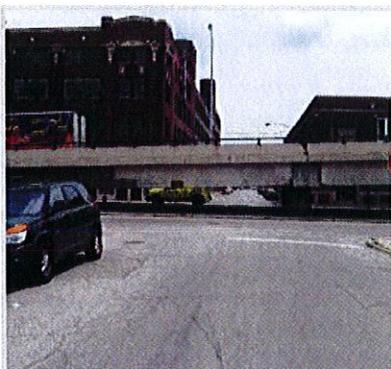
V3 SERVICES

- Roadway Design
- Bridge Demolition
- Storm Sewer Drainage
- Watermain Relocation
- Traffic Signals
- Roadway Lighting
- Construction Staging
- Detour Route Signing
- Pavement Striping
- Cost Estimates
- Landscaped Medians
- Construction Document Preparation



PROJECT DETAILS

- Location: Chicago, Illinois
- Project Value: \$8,000,000



- Phase II design services included the preparation of final plans for the demolition of the Ashland Avenue Viaduct over Pershing Road and the construction of an at-grade intersection at Ashland Avenue and Pershing Road
- Ashland Avenue improvements extended 2,157-feet from 40th Street to 37th Street and extended 1,226-feet west and east of Ashland Avenue along Pershing Road.
- Improvements also included traffic signal modernization, signal interconnects and the addition of left and right turn lanes at the intersection of Ashland Avenue and Pershing Road
- Additional services included pavement reconstruction, combined sewer drainage, watermain installation, lighting, landscape medians with irrigation, pavement marking and signage, sidewalks and landscaping
- A preliminary site investigation was performed to identify and delineate contaminated soils within the project limits
- Construction staging and maintenance of traffic plans were an important aspect of the project due to heavy traffic volumes
- The project was federally funded and was processed through IDOT



DEPARTMENT OF WATER MANAGEMENT CONSTRUCTION ENGINEERING TASK ORDER REQUESTS

CLIENT: CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Construction Management & Inspection
- Project Documentation
- Preparation of Change Orders & Pay Estimates
- Material Testing & Inspection Management
- Public Relations
- Measurement of Quantities
- Owners Representation
- Submittal Review
- Constructability Reviews
- Schedule Preparation & Analysis
- Budget Review & Cost Estimating
- Claim Resolution
- Watermain Shutdown & Traffic Control Coordination
- Verification of Construction Layout
- Preparation of Record Drawings

PROJECT DETAILS

- Location: Chicago, Illinois



- V3 provides construction engineering services for sewer improvements throughout the City of Chicago on a task-order basis. These projects include installation of drainage structures, jacked-in-place sewers, cast-in-place junction chambers, modification of existing connection structures, installation of manholes, modifications to Metropolitan Water Reclamation District of Greater Chicago junctions, catch basins, concrete collar connections and installation of drain connections on residential and arterial streets
- Incidental construction includes capping and reconnection of watermains, full reconstruction of roadway pavement, removal and replacement of concrete sidewalks, ADA ramps, driveways, curb and gutter, pavement patching, asphalt paving and landscape restoration
- V3 is involved in preconstruction evaluation and coordination with residents, businesses, schools, utility companies and various City departments and agencies. V3 reviews all project cost estimates and proposals, provides daily communication and coordinates with contractors to keep roadways open for motorists, school buses and pedestrian traffic. V3 has aided in the development of contract specifications and standardization of pay estimate documentation
- V3 is committed to achieving the MBE/WBE targets established by the City and we coordinate with subconsultants to provide inspection and material testing services
- Specific sewer-related task orders include:
 - TOR #4: Wayne and Carmen/1,136 feet of 24-inch sewer
 - TOR #10 Department Wide Coordinating Engineer
 - TOR #22 Sewer Structure Rehabilitation/Catch Basin and Manhole Lining
 - TOR #32 114th and Cottage Grove/3,000 feet of 18-inch to 30-inch sewer
 - TOR #36 Peterson Avenue/6,172 feet of 24-inch to 84-inch sewer
 - TOR #42 Ancillary Sewer/Emergency projects for 8-inch to 72-inch sewer
 - TOR #48 Sewer Structure Rehabilitation/Catch Basin and Manhole Lining
 - TOR #52 Department Wide Coordinating Engineer
 - TOR #54 Damen Avenue/3,132 feet of 48-inch to 72-inch sewer
 - TOR #56 87th Street/6,903 feet of 24-inch to 66-inch sewer
 - TOR #65 37th Street/5,000 feet of 84-inch to 42-inch sewer
 - TOR #71 Hoyne Avenue/3,650 feet of 48-inch to 66-inch sewer
 - TOR #78 Bryn Mawr Avenue/2,176 feet of 84-inch sewer
 - TOR #80 Talcott Avenue/6,140 feet of 24-inch to 60-inch sewer
 - TOR #88 Department Wide Coordinating Engineer
 - TOR #89 Ancillary Sewer/Emergency projects for 8-inch to 102-inch sewers
 - TOR #104 Diversey Parkway/1,223 feet of 15-inch to 24-inch sewers
 - TOR #108 99th Street, Perry, 102nd Place, 102nd Street/4,458 feet of 24-inch to 30-inch sewers
 - TOR #109 60th Street/ 3,200 feet of 24-inch to 48-inch sewers
 - TOR #119 100th and 101st Streets/2,846 feet of 24-inch to 54-inch sewers
 - TOR #126 Ancillary Sewer/Emergency projects for 8-inch to 108-inch sewers



DEPARTMENT OF WATER MANAGEMENT TASK ORDER DESIGN REQUESTS

CLIENT: CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Utility Design
- Utility/Office of Underground Coordination
- Maintenance of Traffic
- Pavement Restoration
- Structural Design
- IDOT, CDOT & Metropolitan Water Reclamation District of Greater Chicago Permitting Assistance
- ADA Ramp Design
- Phase I & Phase II Clean construction or demolition debris



PROJECT DETAILS

- Location: Chicago, Illinois

• V3 is part of a team of consultants hired to provide design engineering services for sewer projects throughout the City of Chicago. These projects vary in size and scope but include sewers ranging in diameter from 18-inch to 72-inch pipes and include the structural design of watermain supports, tumbling basins, steel connections and junction structures

• The projects require utility and Office of Underground Coordination, permitting, maintenance of traffic or detour plans, roadway restoration plans and the preparation of estimates and specifications

• Restoration plans include patching and resurfacing as well as full roadway reconstruction. V3 also provides Phase I and Phase II clean construction or demolition debris evaluations

• V3 is committed to achieving the MBE/WBE targets established by the City and we coordinate with subconsultants to provide topographical survey and geotechnical services

• Specific sewer-related task orders include:

- | | |
|--------------|---------------------------|
| • TOR #20 | Five projects/2.43 miles |
| • TOR #14-6 | Four projects/1.52 miles |
| • TOR #15-3 | Seven projects/2.21 miles |
| • TOR #15-13 | Five projects/2.13 miles |
| • TOR #16-7 | Eight projects/1.91 miles |
| • TOR #17-1 | Two projects/2.22 miles |
| • TOR #17-10 | Four projects/1.79 miles |
| • TOR #18-3 | Nine projects/3.16 miles |





DIVERSEY STREET & KENMORE AVENUE SEWER IMPROVEMENT

CLIENT: CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Change Orders/Pay Estimates
- Claim Resolution
- Constructability Reviews
- Construction Cost Estimating
- Construction Inspection
- Material Testing & Inspection
- Measurement of Quantities
- Verification of Construction Layout
- Submittal Review
- Schedule Analysis & Review
- Public, Utility & City Department Coordination
- Owners Representation
- Project Documentation
- Public Relations
- Record Drawings



PROJECT DETAILS

- Location: Chicago, IL
- Total Construction Cost: \$1,200,000

- This project included the installation of drainage structures, private drain connections, and 1,250 LF of storm sewer for a \$1.2 million sewer improvement project for the Chicago Department of Water Management (CDWM)
- Additional work performed included watermain modifications, HMA pavement restoration, PCC base course reconstruction, curb and gutter replacement, construction of ADA compliant ramps, sidewalk replacement, driveway reconstruction, pavement markings and landscape restoration
- Special care was during construction as this project was located in a high profile business area within close proximity to Wrigley Field. The project was located adjacent to the Diversey CTA Brown Line Station and affected bus services along Diversey. Extensive coordination was needed to minimize the impacts to businesses such as the Lincoln Park Athletic Club, Mini of Chicago car dealership and various restaurants and bars
- The sewer installation extended to adjacent residential streets requiring extensive community outreach in order to facilitate safe access and travel for both vehicles and pedestrians due to street and sidewalk closures, traffic detours and variable traffic patterns
- The contractor for this project was a minority contractor selected on the CDWM's small business initiative. This was the contractor's first project within the City of Chicago and required considerable coordination between the contractor, V3 and CDWM to ensure that the contractor was able to follow the procedures and guidelines expected by the CDWM
- Due to the location of the project, V3 coordinated all work with both Ward 44 and Ward 43 Aldermen. Due to the high profile location communication with both Alderman offices continued throughout the duration of the project to address concerns of the property owners and to keep both offices up to date on the schedule and status of the work



MAUMEE STREET STREETSCAPE IMPROVEMENTS

CLIENT: CITY OF ANGOLA

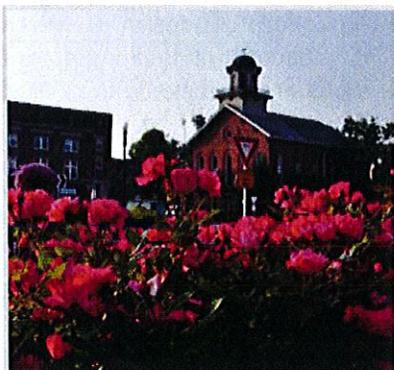
V3 SERVICES

- Topographic Survey
- Streetscape Improvements Design
- Environmental Documentation (including Section 106 & Categorical Exclusion Level 2)
- Street Lighting & Electrical Layout
- Storm & Sanitary Sewer Design
- Utility Coordination
- Restoration Work
- Funding Submittal Package Coordination & Support
- Construction Engineering
- Watermain Design



PROJECT DETAILS

- Location: Angola, Indiana
- Project Value: \$1,000,000



- V3 is provided Phase II engineering services along Maumee Street from the Indiana Northeastern Railroad to Martha Street and on Wayne Street from Gilmore Street to Gale Street
- Project scope included street resurfacing, new curb and gutter, sidewalks, medians, planters, landscaping, lighting, parking area design, water main design and storm and sanitary sewer
- Key challenges were matching grades at existing building structures with new curb grades and designing traffic movements in the public square, which incorporates on-street parking, roundabout traffic flows and heavy truck volume
- The plan, which incorporated traffic-calming medians, was designed to increase pedestrian safety and encourage shopping along Maumee Street, a federal truck route
- V3 was coordinated the submittal packages for potential funding, including INDOT Transportation Enhancement Grant, Office of Community and Rural Affairs and Community Development Block Grant and ARRA and TIGER funds
- The project was constructed in three phases: sidewalk enhancements in public square, median installation and resurfacing and streetscape improvements along the US Route 20 corridor
- As a local public agency project, the project required special certification and followed the INDOT process



MOUNT PROSPECT DOWNTOWN STREETScape & PARKING IMPROVEMENTS

CLIENT: VILLAGE OF MOUNT PROSPECT

V3 SERVICES

- Development of Preliminary Concepts
- Landscape Irrigation System
- Streetscape Amenities
- Lighting, Electrical
- Storm, Sewer, Utility Relocation
- Roadway, Parking Lot Rehabilitation
- Funding & Railroad Coordination
- Resident Engineering
- Topographic Survey



PROJECT DETAILS

- Location: Mount Prospect, Illinois
- Project Value: \$2,000,000



- Conceptual studies of alternatives, final concept approval and final plan preparation for streetscape improvements
- Information used as a guideline for the development of contract documents for construction of the second stage of the downtown redevelopment project
- Final plans included installation of new parking lot and pedestrian decorative lighting, full brick paver sidewalks, parking and roadway reconfiguration, street furniture, landscaping, irrigation system and an automated parking fee collection system
- Project included the planning and design of a new monument signage. A design study was performed that included the conceptual design of several monument sign alternatives, one of which was selected for implementation and use as the standard design for all future monument signage in the Village. Electrical and structural design service for the sign were also provided



NORTH DAMEN AVENUE & WEST ALBION AVENUE SEWER IMPROVEMENTS

CLIENT: CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Change Orders/Pay Estimates
- Claim Resolution
- Constructability Reviews
- Construction Cost Estimating
- Construction Inspection
- Construction Layout
- Construction Management
- Cost Control
- Measurement of Quantities
- Owners Representation
- Project Documentation
- Public Relations
- Record Drawings
- Schedule Preparation & Analysis
- Storm Sewer Installation
- Watermain Installation



PROJECT DETAILS

- Location: Chicago, Illinois



- This more than \$4 million sewer installation project was located in a congested business arterial and residential area of Chicago
- This project included jacking a 54-inch casing for deep connection under live traffic
- Additional sewer work included half mile of up to 84-inch-diameter sewer, manholes, catch basins, a tumbling basin, junction chamber, private drain connections
- Other work performed included pavement restoration, curb, gutter replacement, construction of ADA compliant ramps, sidewalk replacement, driveway reconstruction and pavement markings
- The project was staged with a concrete base through the winter (maintain residential accessibility and drainage) and paved when weather permitted
- Coordination challenges included watermain cut and caps replacements, communication efforts with stakeholders in terms of residential parking and access due to one-way streets within the project limits, staging of the project during the winter months and communication efforts with all alderman's offices, various city services, businesses and residents



PETERSON & FAIRFIELD AVENUES SEWER IMPROVEMENTS

CLIENT: CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Submittal Review
- Constructability Reviews
- Schedule Preparation & Analysis
- Budget Review & Cost Estimating
- Construction Observation & Inspection
- Project Documentation
- Material Testing & Inspection
- Measurement of Quantities
- Preparation of Pay Estimates & Change Orders
- Claim Resolution
- Public, Utility & City Department Coordination
- Watermain Shutdown Coordination
- Traffic Control Inspection & Coordination
- Verification of Construction Layout
- Preparation of Record Drawings



- This project included the installation of drainage structures, private drain connections, modifications to Metropolitan Water Reclamation District of Greater Chicago junction and siphon chambers and more than 1.1 miles of storm sewer improvements, involving the installation of up to 84-inch-diameter sewer on an arterial street in a business district
- One District connection involved modifying a siphon chamber that conveyed sewage under a branch of the Chicago River; including lowering the invert of the siphon chamber two feet to meet the lower elevation of the new sewer
- The other concrete connection structure was joined to a drop shaft to the District's tunnel and reservoir plan system and required about half of the structure to be demolished and reconstructed at a lower invert to align with the elevation of the new 84-inch, reinforced concrete pipe
- The project required extensive earth retention systems based on the project's proximity to Peterson Avenue and the North Shore Channel
- Additional work performed included watermain modifications, pavement restoration, curb and gutter replacement, construction of ADA compliant ramps, sidewalk replacement, driveway reconstruction, pavement markings and landscape restoration

PROJECT DETAILS

- Location: Chicago, IL
- Total Construction Cost: \$12,700,000



TALCOTT AVENUE SEWER IMPROVEMENT PROJECT

CLIENT: CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT

V3 SERVICES

- Change Orders/Pay Estimates
- Claim Resolution
- Constructability Reviews
- Construction Cost Estimating
- Construction Inspection
- Construction Layout
- Construction Management
- Cost Control
- Measurement of Quantities
- Owners Representation
- Project Documentation
- Public Relations
- Record Drawings

PROJECT DETAILS

- Location: Chicago, Illinois
- Construction Cost:
\$ 7,650,000



- As part of Chicago's \$7-billion "Building a New Chicago" infrastructure improvement program, the Talcott Avenue sewer improvements were designed to reduce flooding within the highly-utilized area north of the Kennedy Expressway (I-90) near Harlem Avenue which included numerous schools, churches and the Presence Resurrection Medical Center
- This project included approximately 6,040 linear feet of 60-inch diameter sewer pipe, three cast-in-place junction chambers, installation of manholes, catch basins and installation of drain connections and maintenance of traffic (MOT) staging along residential and arterial streets
- Incidental construction included capping and reconnection of watermains, structural support of watermains and full reconstruction of roadway pavement, installation of ADA compliant sidewalks, private driveways, asphalt paving and landscape restoration
- Project challenges included providing constant access to the Presence Resurrection Medical Center and local schools through extensive MOT staging and detours for the construction of numerous deep shaft assemblies
- V3 coordinated utilities and other projects within the surrounding neighborhood to ensure project conflicts were avoided
- An extensive community outreach reduced the impacts to the local hospital, schools, businesses and churches along this heavily-traveled arterial road on Chicago's north side. The outreach program included community meetings, bi-weekly updates and mass communication of the project status and future construction staging
- V3 also spearheaded an effort to find a manufacturer to precast one of three proposed cast-in-place structures which was a major factor in delivering the completed project six weeks early



PROJECT TEAM

V3 has assembled a proven team that will serve the Village of Oak Park well for the 17-17 Water & Sewer Main Improvements Project. Listed below are experience summaries for the key staff members assigned to this project. Supporting staff are listed on the attached organizational chart which depicts project roles and lines of authority. Full resumes for all staff are also found at the end of this section.

Statement of Commitment

The proposed staff is committed to this project and will be available and dedicated solely to this project based on the expected timeframe for the work.

PROJECT TEAM QUALIFICATIONS

Heidi Voirol, P.E., LEED AP BD+C

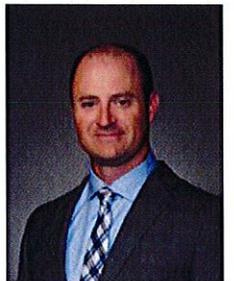
Project Manager



Heidi Voirol is proposed as the Project Manager for the 17-17 Water & Sewer Main Improvement project. She will be responsible for the overall project management and coordination and will be the main contact with the Village. Heidi has more than 17 years of civil engineering experience with the planning, design and implementation of site and roadway improvement projects. She has extensive experience with utility and roadway reconstruction projects having managed more than nine miles of infrastructure and roadway reconstruction design for the City of Chicago Department of Water Management. The CDWM work is very similar in scope and requires a high level of communication with utilities, permit agencies and City of Chicago Departments. She has worked on several Phase I and Phase II projects for IDOT in addition to working with MWRD, the Illinois Tollway and local municipalities. Heidi has extensive experience managing public involvement processes.

Ed Benesh, P.E.

Construction Project Manager/ Constructability Review



Ed is a detail oriented professional with 13 years of experience in bridge, roadway, and utility construction. Ed brings a unique combination of experience in construction management, inspection, documentation, and survey on various IDOT, Illinois Tollway, CDOT, CDWM, and Metra projects. His background includes bridge and roadway rehab and construction, water main, storm sewer, sanitary sewer, and survey. He is a highly motivated problem solver with strong analytical, organizational, and communication skills. As a former municipal employee, Ed understands the importance of budgets, maintaining schedules, and residential outreach. This experience has enabled Ed to deliver many recent large diameter sewer projects for the City of Chicago on time, under budget, and with extensive coordination with local stakeholders. Ed will be responsible for providing a review of the design plans for constructability concerns as well as providing construction engineering assistance.

Andy McDonald, P.E.

Resident Engineer



Andy will lead V3's phase III team as the Resident Engineer. Previous experience includes design and construction management of various aspects of municipal infrastructure. With recent experience in heavily congested areas of the City of Chicago, he brings a high level of expertise on projects of a similar scope and project environment. This work involved the installation of sewers, water main, and all incidental restoration including full and partial roadway reconstruction, resurfacing, and ADA ramp installation. Andy's responsibilities as a Resident Engineer include coordination with the client, contractor, and other City departments; community outreach, project oversight, preparation of pay estimates, and all associated project documentation to IDOT specifications. His communication and organizational skills will make him an asset to the complexities of this project, which will require extensive public outreach to the community and coordination of the work to meet the desired completion date.



PROJECT TEAM

Vince Del Medico, P.E.

QA/QC



Vince Del Medico will provide Quality Assurance and Quality Control for this project. Vince has 23 years of experience in the planning and design of transportation and municipal infrastructure improvements and is V3's Director of Transportation and Municipal Engineering. He has prepared, reviewed, and managed multiple street improvement projects with municipalities as well as IDOT and the Illinois Tollway. Most recently, he has served as the Project Manager for the 75th Street Reconstruction project and the Phase I study on 143rd Street between Lemont Road and Bell Road in Homer Glen.

Shauna Urlacher P.E., CFM, CPESC

Project Engineer



Shauna will act as the project engineer and be responsible for the contract documents and permit assistance. Shauna has 14 years of experience in municipal engineering, which includes the Stormwater Master Plan for Robert's Road Drainage area where she prepared green infrastructure design guidelines. Shauna is currently assisting the City of Des Plaines with their floodplain management and CRS Program. Prior to joining V3, Shauna worked in the Franklin Park Village Hall as the Assistant Village Engineer for seven years (part time for five years and full-time for two years). As Assistant Village Engineer, Ms. Urlacher worked with the citizen's infrastructure committee to prioritize infrastructure improvements and develop a capital improvement plan (CIP). She also oversaw infrastructure improvements on behalf of the Village, which included combined sewer lining, sewer separation, water main improvements, roadway rehabilitation, sidewalk and other public infrastructure. Through Shauna's efforts in grant writing, the City of Des Plaines was recently awarded \$15 Million from FEMA and MWRD to complete flood mitigation activities for repetitive loss structures within the Des Plaines River.

Lauren Montero, P.E., LEED AP BD+C

Utility Design



Lauren will be responsible for the sanitary sewer and water main design. Lauren has over 12 years of experience in infrastructure and roadway design. Lauren has been the project engineer responsible for the preparation of contract documents for the Chicago Department of Water Management since 2012. During that time she has prepared infrastructure and roadway resurfacing plans for over 17 miles of sewer for the City of Chicago under 44 separate projects. Through these projects she has developed extensive experience in roadway reconstruction plans, utility coordination, maintenance of traffic plans and permit coordination. She has assisted in acquiring permits from the IEPA, IDOT, CDOT and MWRD. In addition to the work that she has performed with CDWM, Lauren also has experience with CDOT, IDOT and municipalities.

Jason Holy, P.E.

Roadway Engineer/Utility Coordination



Jason Holy, P.E., has over 16 years of experience in transportation engineering with a focus on the areas of utility design/coordination, roadway and intersection improvements, bicycle and pedestrian facilities (including ADA design) and construction inspection/observation. Jason's leadership role on V3's AT&T and ComEd contracts will be a tremendous asset during the utility coordination process that will be critical for this project. His experience also includes a wide range of Phase I and Phase II projects for the Illinois Tollway, IDOT, county transportation agencies and municipalities. Jason's track record of success makes him ideally suited to serve as Utility Coordination and Roadway Engineer on this project.



PROJECT TEAM

Mike Rechterik, P.E., PTOE

Lighting Design



Mike has 24 years of experience specializing in design engineering services for state, county and local municipalities and private developers in a variety of areas that include traffic engineering, traffic signals, traffic operations, safety, intersection and roadway improvements, ADA design, ITS, lighting design and traffic signal construction. He has been a certified Professional Traffic Operations Engineer (PTOE) for 12 years. Mike's experience also includes a wide range of projects that received federal funds (processed through IDOT) as well as projects that received local funds (processed through the county or the local municipality). Mike will be responsible for the street lighting design alternate.

Lynn Smith, P.G.

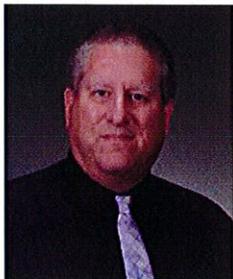
Environmental Coordination



Lynn directs V3's Due Diligence Practice. She has 23 years of experience successfully managing interdisciplinary teams of scientists, engineers and support staff in the performance of environmental site assessments, underground storage tank (UST) removals, geotechnical, geophysical, remediation and regulatory closure projects for industrial, commercial, institutional and governmental clients. Lynn manages all aspects of the due diligence services including quality assurance/quality control, evaluation of properties through the performance of ASTM Phase I, Phase II and Phase III environmental site assessments, regulatory program investigations and Petroleum UST reimbursement programs. Lynn will prepare the necessary PESA reports and, if necessary, provide environmental support during construction.

Phil Maloney, P.E., S.E.

Structural Design



Phil brings 28 years of experience to the team position of Structural Engineer, including managing highly diverse and multi-million dollar rail transit and highway design projects. Phil specializes in providing design excellence with a balance of strategic alignment, team engagement and quality assurance that meet client, governmental and financial requirements. As Structural Engineer, Phil will review the soil borings and prepare structural plans and calculations for the drop manhole and retaining wall design plans for the ADA ramp switchback.

Ted Niemeyer, P.E.

Railroad Coordination



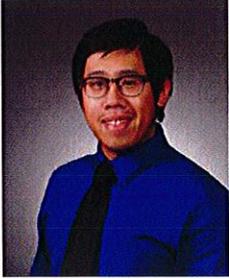
Ted Niemeyer, P.E., Railroad Engineer & Coordination, has 45 years of experience in railroads, including economic viability studies, bridge inspection and bridge/track rehabilitation. He worked for the Chicago & North Western Transportation Company (now the Union Pacific RR) from 1971 - 1989. His railroad experience includes route selection, environmental statement preparation, negotiation and execution of permits and agreements for construction and preparation of bid packages. Ted will assist in permit applications and coordination with the Union Pacific Railway.



PROJECT TEAM

Alexander Huynh, E.I.T.

Construction Inspection

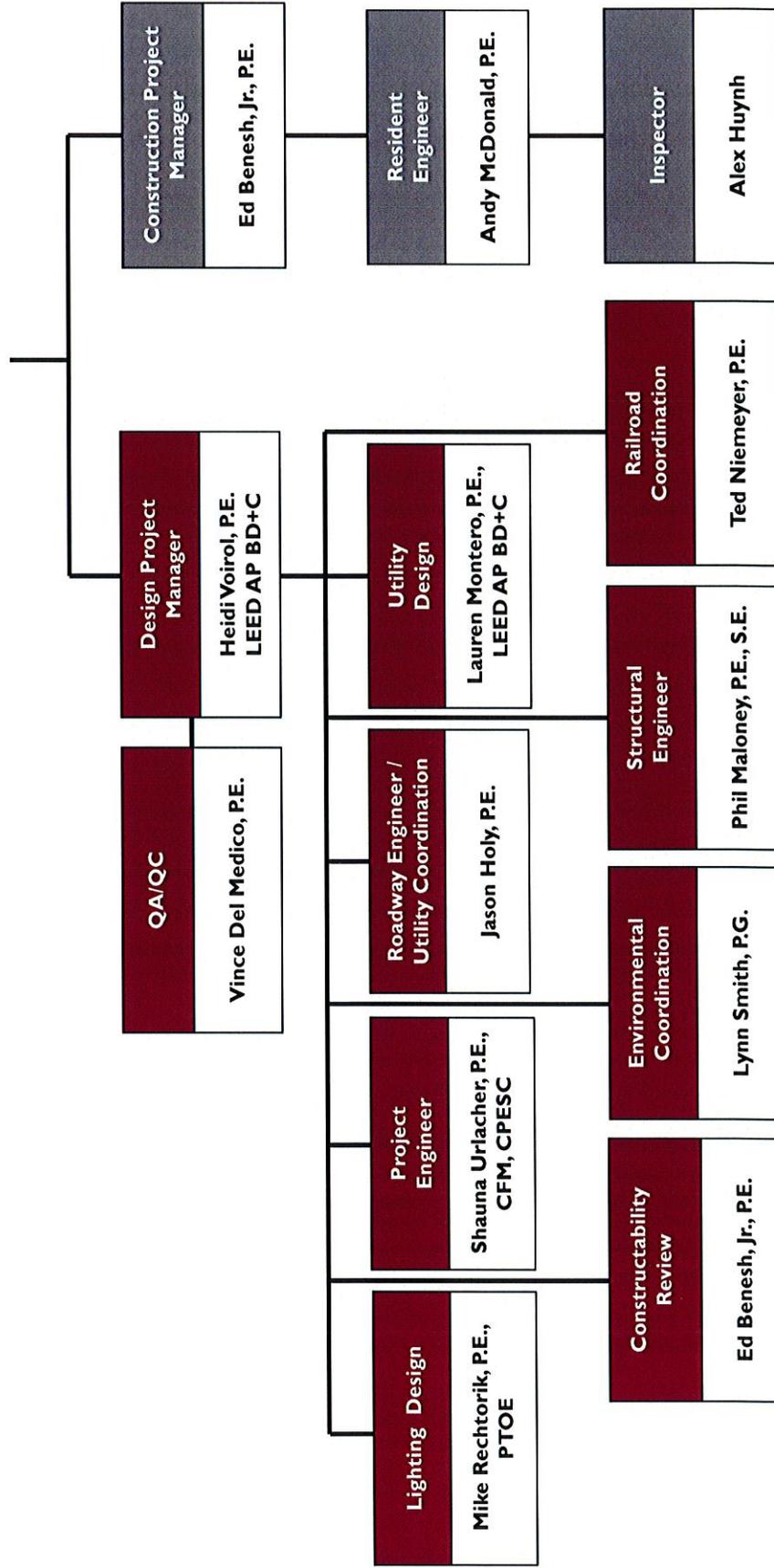


Alex has four years of construction engineering experience with civil and railroad projects. His foundation of construction inspection and documentation was built from his work on various types of City of Chicago infrastructure including Department of Water Management, CDOT, Metra, and various CN railway projects. Software skills include AutoCAD, ArcGIS and SAP2000. Alex will provide construction inspection services.

V3 Team – Organizational Chart



- Phase I & II Design
- Phase III Construction





HEIDI VOIROL, P.E., LEED AP BD+C

Project Manager

YEARS OF EXPERIENCE

With V3: 17
Other: 0

EDUCATION

Bachelor of Science
Civil Engineering
Marquette University

REGISTRATIONS

Professional Engineer:
Illinois, 062-057225, 2004

Leadership in Energy &
Environmental Design –
Building Design &
Construction (LEED), 2007

PROFESSIONAL ASSOCIATIONS

American Council of
Engineering Companies
(ACEC)

Women's Transportation
Seminar (WTS)

American Public Works
Association (APWA)

designMs. Voirol has 17 years of civil engineering experience and has experience in managing multi-discipline project teams. Ms. Voirol is responsible for design and permitting strategies, preparation of plans, specifications, estimates and project coordination. Project work includes roadway design, Phase I studies, commercial development and residential development.

NOTEWORTHY PROJECT EXPERIENCE

City of Chicago Department of Water Management, Bureau of Engineering Services - Sewer Section:

Project Manager for in-house, term and private contract sewer design from 18-inch to 66-inch sewer with connection structures. Work includes utility coordination, IDOT permitting, maintenance of traffic, roadway restoration, and preparation of contract documents. Restoration plans included patching and resurfacing as well as full roadway reconstruction of arterial and collector streets. Projects include:

- TOR 16-7: PN 6549, PN 6859, PN 7041, PN 7049, PN 7050, PN 7052, PN 7055 and PN 7058 consisting of approximately 3,410 feet In-house, 2,285 feet term agreement and 3,745 feet private contract sewer design.
- TOR 17-1: PN 6963 and PN 6338 comprised of approximately 11,695 feet of private contract sewer design currently under design.
- TOR 17-10: PN 7021, PN 6823, PN 7114 and PN 7166 with 3,116 feet of In-house, 3,150 feet of term agreement and 2,970 feet of private contract sewer design currently under design.
- TOR 18-3: PN 7027, PN 7169, PN 7002A, PN 7018, PN 6383A, PN 6854, PN 7009A, PN 6941 and PN 7188 with 570 feet of In-house, 8,599 feet of term agreement and 7,540 feet of private contract sewer design currently under design.

Melvina Ditch Reservoir Expansion, Metropolitan Water Reclamation District of Greater Chicago, Bedford Park & Burbank, Illinois – Project Engineer for contract documents for the expansion of the Melvina Reservoir in Burbank, Illinois. The expansion will provide some flooding relief for Bedford Park and Burbank, Illinois. These communities, totaling an eight-square-mile watershed, had received severe flooding for three consecutive years which caused structural flooding of many residents and businesses. The August 22, 2014 storm event produced 3.6 inches of rain within 40 minutes in this watershed. Existing stormwater storage facilities; Bedford Park Reservoir and Melvina Ditch Reservoir; were overtopped and up to five feet of ponding depth occurred in some of the hardest impacted areas. V3 provided creative engineering and technology solutions to address the problems, including vertical expansion of the Melvina Ditch Reservoir by retrofitting the existing pump station which minimized the footprint of resident buyouts and created cost effective storage solutions in this urbanized community that has limited open space. Ms. Voirol assisted the Metropolitan Water Reclamation District at the public meetings and managed the contract plan and specification documents.

Size: 16+ Acres **Responsibilities:** Project Engineer

Time Assigned: 02/2015-present

NSMJAWA Watermain Relocation, Illinois Tollway, Cook County, Illinois – Project Engineer for the joint venture (BV3) with Alfred Benesch – for this \$40 million roadway reconstruction project, part of which involves relocating Northwest Suburban Municipal Joint Action Water Agency's water transmission system to accommodate the Illinois Tollway's Jane Addams Memorial Tollway (I-90) Widening and Reconstruction Project. Because the water transmission system serves more than 300,000 residents in



HEIDI VOIROL, P.E., LEED AP BD+C

Project Manager

seven member communities and approximately 500,000 daily users, a principal project concern was to minimize service shutdowns. The project scope included relocating approximately 25,000 feet of 30-inch to 60-inch prestressed concrete cylinder pipe and 1,300 feet of 6-inch to 24-inch ductile iron pipe. Watermain appurtenances include butterfly and gate valves and vaults, combination air/vacuum release valve and vaults, flush type hydrants, access manholes and cathodic protection. Steel casing pipes range from 30-inch to 90-inch diameter with bore and jack and open-cut installations. The design accounts for multiple highway and creek crossings and more than 100 utility crossings, including gas and oil transmission pipelines, fiber optic, electrical, watermain, storm sewers and sanitary sewers.

Size: 26,000 feet **Responsibilities:** Project Engineer **Time Assigned:** 01/2014-12/2014

47th Street at East Avenue Phase I Study, IDOT, LaGrange, Brookfield & McCook, Illinois – Project Engineer for the preparation of a Phase I study at the intersection of 47th Street and East Avenue. Project included Phase I preliminary engineering and environmental studies at the intersection, including evaluating the elimination of at-grade crossings of both roadways which were located near three tracks of the Indiana Harbor Belt Railroad. The project included analysis of the roadways over or under as well as consideration of profile adjustments to the tracks. The Phase I process included preparation of a combined design report, environmental assessment, intersection design study, location drainage study and traffic management plan. The study was conducted following context sensitive solutions principles. Ms. Voirol was the Project Lead for the public involvement process including the preparation of a stakeholder involvement plan and community context audit report, three public meetings, a public hearing, formation of community advisory and technical advisory groups, a project website and quarterly newsletters. Special environmental studies included consideration of project impacts related to railroad noise and vibration, LaGrange historic district and Sedgewick Park and outfall capacity restoration on McCook Ditch.

Size: 1 intersection **Responsibilities:** Project Engineer **Time Assigned:** 09/2012-09/2014

Arterial Resurfacing ADA Ramp Improvements, CDOT, Chicago, Illinois – Project Manager for the City of Chicago's ADA ramp improvements associated with the 2008 AR Program for the North, South, Far South and Central Areas of the City along approximately 29 miles of Chicago streets. The program included the assessment of approximately 1650 intersection corners and the preparation of four construction contract documents that were bid through the City and coordinated through the IDOT Bureau of Local Roads. Improvements included removal and replacement of sidewalk, curb and gutter, alley and roadway pavement, drainage structures and pavement marking and signage to be compliant with the City's ADA guidelines. V3 assisted with preparing IDOT permit applications and submissions the Office of Underground Coordination (OUC). The project incorporated a detailed tracking and thorough qa/qc program to manage the vast amount of data and tasks.

Size: 29 miles **Responsibilities:** Project Manager **Time Assigned:** 08/2009-07/2011

Arterial Resurfacing ADA Ramp Improvements, CDOT, Chicago, Illinois – Project Manager for the City of Chicago's ADA ramp improvements associated with the 2009 and 2010 AR Program for the North Area and Central Areas of the City along 18+ miles of roadway. Program included the assessment of approximately 980 intersection corners and the preparation of two construction contract documents that were bid through the City in April 2012. Improvements included removal and replacement of sidewalk, curb and gutter, alley and roadway pavement, drainage structures and pavement marking and signage to be compliant with the City's ADA guidelines. V3 coordinated submissions with the OUC and assisted with IDOT permit applications.

Size: 18 miles **Responsibilities:** Project Manager **Time Assigned:** 07/2011-10/2012

West Bartlett Road Streetscape Improvements, Village of Bartlett, Bartlett, Illinois – Project Engineer for the Village of Bartlett's streetscape project improving more than one mile of street from IL Route 59 to Western Avenue. The project consisted of lighting and landscaping enhancements and two new bike nodes along this section of road that served as the gateway to the Village's downtown area. The project was funded with an Illinois Transportation Enhancement Program (ITEP) grant and processed as a CEI through IDOT Bureau of Local Roads. The scope of work included survey, landscaping, photometric analysis, lighting plans using LED decorative street lights, ComEd coordination, specifications and special provisions and coordination with both the Village and IDOT.

Size: 1+mile **Responsibilities:** Project Engineer **Time Assigned:** 03/2010-02/2011



ED BENESH, JR., P.E.

Construction Project Manager/Constructability Review

YEARS OF EXPERIENCE

With V3: 12
Other: 1

EDUCATION

Bachelor of Science
Civil Engineering
University of Illinois at
Chicago

REGISTRATIONS

Professional Engineer:
Illinois, 062-063537, 2011

CONTINUING EDUCATION

APWA TRAINING:
Project Finalization
Procedures

IDOT TRAINING:
Documentation of Contract
Quantities: #15-0036
Small Drainage Structures
HMA Inspection
IDOT Materials
Documentation
Construction Materials
Inspection Documentation
Bridge Construction
Inspection
ICORS 2010

Confined Space Safety Course

OSHA 10 hour Safety Course

PROFESSIONAL ASSOCIATIONS

American Public Works
Association (APWA)

American Society of Civil
Engineers (ASCE)

Mr. Benesh has 13 years of experience in bridge and roadway design and construction. His experience includes watermain, storm sewer, roadway and bridge rehabilitation and construction. Mr. Benesh has experience in construction management, inspection, documentation, survey and construction staking on various IDOT, the Illinois Tollway, CDOT, Chicago Department of Water Management and Metra projects.

NOTEWORTHY PROJECT EXPERIENCE

99th Street/102nd Street Sewer Improvement Project and 100th Street/101st Street Sewer Improvement Project, Chicago Department of Water Management, Chicago, Illinois – Resident Engineer for simultaneous projects involving the replacement of a combined total of 7140 linear feet of 54 to 24-inch diameter main-line sewer pipe. These CDBG funded projects included a cast-in-place connection structure, 2 tumbling basins, installation of drainage structures, and MOT staging. Incidental construction included capping and reconnection of water mains, structural support of water mains, full reconstruction of roadway pavement, removal and replacement of traffic circles, sidewalks, driveways, curb, gutter, asphalt paving and landscape restoration. Project management efficiencies resulted in delivery of these concurrent projects at a discount.

Size: 1.4 Miles **Responsibilities:** Resident Engineer **Time Assigned:** 6 Months

Talcott Avenue Sewer Improvement Project, Chicago Department of Water Management, Chicago, Illinois – Resident Engineer for the replacement of approximately 6040 linear feet of 60-inch diameter sewer pipe. This \$7.5-million project included four cast-in-place connection structures, installation of manholes, catch basins and installation of drain connections and MOT staging on residential and arterial streets. Incidental construction included capping and reconnection of water mains, structural support of water mains, full reconstruction of roadway pavement, removal and replacement of concrete sidewalks, driveways, curb, gutter, asphalt paving and landscape restoration.

Size: 1.2 Miles **Responsibilities:** Resident Engineer **Time Assigned:** 16 Months

Sewer Structure & Ancillary Construction Program, Chicago Department of Water Management, Chicago, Illinois – Resident Engineer for multiple projects which included \$20 million in sewer structure and ancillary work throughout the north and central areas of the city of Chicago. Supervised a team for construction oversight of approximately 60 projects over this 2 year project. Typical projects lasted 6-12 weeks and consisted of construction of cast-in-place sewer connection structures, installation of tumbling basins and manholes, installation of water main support structures, installation of sewers and roadway restoration. Projects also included emergency repair of collapsed sewer mains and sewer structures as needed.

Size: 2/3 Chicago **Responsibilities:** Resident Engineer **Time Assigned:** 2 Years

114th Street Sewer Improvement Project, Chicago Department of Water Management, Chicago, Illinois Resident Engineer for the replacement of 3,000 linear feet of sewermain. This \$2.9-million project included modification of existing connection structures, installation of manholes, catch basins and concrete collar connections and installation of drain connections on residential and arterial streets. Incidental construction included capping and reconnection of watermains, full reconstruction of roadway pavement, removal and replacement of concrete sidewalks, driveways, curb, gutter, pavement patching, asphalt paving and landscape restoration. Project required extensive coordination and oversight of multiple construction activities in various Wards, as well as communication with alderman, business owners, schools,



ED BENESH, JR., P.E.

Construction Project Manager/Constructability Review

various utilities, the CTA and the public which was essential in the successful and early completion of major milestones within the contract.

Size: 2/3 Mile

Responsibilities: Resident Engineer

Time Assigned: 6 Months

Sewer Structure & Ancillary Construction Program, CDWM, Chicago, Illinois – Resident Engineer for two sewer replacement projects consisting of concrete collar connections to century old sewer, installation of combination sewer, tumbling basins, manholes, catch basins and drain connections. Incidental construction included removal and replacement of concrete sidewalks, driveways, curb, gutter, pavement patching, asphalt paving and landscape restoration. Construction staging made it possible to minimize the impact to businesses, public office buildings and residents. V3 also initiated a pilot program to document construction activities electronically via the CDOT database, as well as providing electronic record drawings.

Size: 1/4 Mile

Responsibilities: Resident Engineer

Time Assigned: 4 Months

Arterial Resurfacing, CDOT, Chicago, Illinois – Assistant Resident Engineer providing supervision of field staff for \$14.5-million project funded by the American Recovery and Reinvestment Act (ARRA). This stimulus project rehabilitated more than 15 miles of the City's arterial roadways. The work included pavement patching and resurfacing of 20 streets. Other work performed included curb and gutter replacement, sidewalk replacement, PCC bus pad installation, traffic signal and red-light camera work, tree planting and landscaping. The project streets were located in business and residential areas and several streets were located within "the Loop". In addition to standard resident engineering services, V3 coordinated work with Aldermanic offices and several City departments and prepared all project reporting for the work and funding required by CDOT, IDOT and the FHWA to meet ARRA requirements.

Size: 1.5 Miles

Responsibilities: Assistant Resident Engineer

Time Assigned: 1 Year

2011 Water & Sewer Improvements, Village of Streamwood, Streamwood, Illinois – Resident Engineer for construction engineering services, project documentation and full time inspection for work on various residential streets. Scope of work included installation of watermain, storm and sanitary sewer installation and sanitary sewer point repairs. Incidental construction included removal and replacement of concrete sidewalks, driveways, curb, gutter, pavement patching, asphalt paving and landscape restoration. Some streets and courts had access from only one direction making it important for V3 to coordinate with contractors to keep roadways open for motorists, school buses and pedestrian traffics at all times. V3 served as the Village's liaison to provide daily communication and coordination with residents. Sewer and water work was coordinated with the MWRDGC.

Size: 1/2 Mile

Responsibilities: Resident Engineer

Time Assigned: 3 Months

St. Charles Road LAPP, Village of Lombard, Lombard, Illinois – Assistant Resident Engineer for pavement patching, resurfacing and re-profiling of approximately one mile of four-lane pavement. Additional work performed included curb and gutter replacement, sidewalk replacement, installation of detectable warnings and landscaping. Resident Engineering services included producing documentation per IDOT and Village standards and acting as liaison between the contractors, IDOT and the Village. V3 worked closely with the contractor in planning and coordinating construction staging to minimize impact to businesses and residents. By doing so, the contractor was able to pave tandem in the center two lanes and increase production and eliminate a "cold joint". A significant amount of time was spent attending to the needs of homeowners and local businesses. Resolved conflicts and other construction related issues resulted in the Village having to spend little time on this project.

Size: 1.4 Miles

Responsibilities: Assistant Resident Engineer

Time Assigned: 6 Months

Main Street Surface Transportation Program & Access Improvements, Village of Lombard, Lombard, Illinois – Assistant Resident Engineer for utility improvements, traffic signal improvements, roadway widening and surface improvements. The Main Street Surface Transportation Program and access improvement work was contained between Roosevelt Road to the south and Wilson Avenue to the north. Within the limits of the project, there were residences, businesses, several crossroads, Lombard Pines Shopping Plaza and Glenbard East High School. The scope of construction activities included roadway widening and resurfacing. Associated improvements entailed earth excavation and pavement removal, storm sewer improvements and drainage structures, watermain replacement, sanitary sewer replacement, curb and gutter replacement, sidewalk replacement, driveway reconstruction and pavement marking.

Size: 1 Mile

Responsibilities: Assistant Resident Engineer

Time Assigned: 9 Months



ANDREW McDONALD, P.E.

Resident Engineer

YEARS OF EXPERIENCE

With V3: 6
Other: 0

EDUCATION

Bachelor of Science
Civil Engineering
Marquette University

CONTINUING EDUCATION

Licensed Professional
Engineer: #062.067282

Documentation of Contract
Quantities: #12-0134

Confined Space Safety
Course

OSHA 10 hour Safety
Course

Mr. McDonald's experience includes design and construction management of various aspects of municipal infrastructure. Recent assignments include Resident Engineer for infrastructure improvements for the Chicago Department of Water Management involving the installation of sewers and sewer structures, watermain, and incidental restoration including full and partial roadway reconstruction, resurfacing, and ADA ramp installation. He performs duties as a Resident Engineer that includes coordination with the client and contractor, community outreach, project oversight, preparation of pay estimates, and all associated project documentation to IDOT spec.

NOTEWORTHY PROJECT EXPERIENCE

Ancillary Sewer, Chicago Department of Water Management, Chicago, Illinois – Resident Engineer responsible for the oversight of a team of field engineers within the central business district. Responsibilities include preconstruction evaluation of the proposed work, coordination of utilities and various City agencies, and outreach to stakeholders within the community. The work consists of emergency projects that are design-build and projects performed in conjunction with City forces. Work consists of installation of combination sewers and sewer structures, water main, and cast-in-place structures; modification of existing connection structures, concrete collar connections, drain connections, and MOT staging within residential and arterial streets. Incidental construction includes water main support structures, full and partial reconstruction of roadway pavement, ADA sidewalk, driveways, curb and gutter, pavement patching, HMA paving, and landscape restoration. V3 is responsible for submittal/proposal review, construction inspection and documentation, cost estimates, and public outreach.

Size: 30 Locations Responsibilities: Resident Engineer
Time Assigned: 12/2014 – 8/2015 & 6/2016 – Present

West 60th Street Sewer Improvement, Chicago Department of Water Management, Chicago, Illinois – Resident Engineer for \$2.7M sewer improvement project. The sewer was installed within a residential area requiring extensive community outreach in order to facilitate access and safe travel for both vehicles and pedestrians. This project included the construction of a cast-in-place connection structure to the existing 78-inch brick sewer within an excavated shaft. This project also included installation of up to 78-inch RCP sewer for improvements to the existing line, including the installation of manholes, catch basins, and private drain connections. V3 coordinated all work with Alderman's offices, various city services, businesses and residents regarding street closures and detours.

Size: 3000 Feet Responsibilities: Resident Engineer Time Assigned: 02/2016 – 5/2016

West Diversey Parkway, North Kenmore Avenue, and North Seminary Avenue Sewer Improvements, Chicago Department of Water Management, Chicago, Illinois – Resident Engineer for \$1.2M sewer installation project. The project was a part of the Small Business Initiative with a contractor new to the CDWM. This project had extensive coordination with an inexperienced contractor in terms of proper procedures for CDWM. The sewer was installed on a dense arterial street within close proximity to Wrigley Field. The sewer installation extended to adjacent residential streets requiring extensive community outreach in order to facilitate safe access and travel for both vehicles and pedestrians due to street and sidewalk closures, traffic detours, and variable traffic patterns. This project included installation of 24-inch sewer for improvements to the existing line, including the installation of manholes, catch basins, and private drain connections. V3 coordinated all work with Alderman's offices, various city services, businesses and residents.



ANDREW McDONALD, P.E.

Resident Engineer

Size: 1250 Feet **Responsibilities:** Resident Engineer **Time Assigned:** 9/2015 – 1/2016

Ancillary Sewer Construction Program (North and Central Areas), Chicago Department of Water Management, Chicago, Illinois – Resident Engineer for multiple sewer structure and ancillary projects. The program included more than 30 locations throughout the north and central areas of the City and involved the construction of cast-in-place sewer connection structures, installation of tumbling basins and manholes, installation of watermain support structures, construction of sewers, concrete collar connections, and restoration of roadways on both residential and arterial streets in conjunction with City crews. The program also included emergency repair of sewer pipes and structures as needed in a design-build capacity. V3 provides daily communication and coordinated with contractors to keep roadways open for motorists, school and city buses, and pedestrian traffic during project activities. V3 provided daily communication and coordination with Aldermen, residents, businesses, schools, utility companies, and various City departments and agencies. Additionally, V3 reviews all project cost estimates and proposals.

Size: 20 Locations **Responsibilities:** Field Engineer **Time Assigned:** 2/2014 – 11/2014

North Damen Avenue and West Albion Avenue Sewer Improvements, Chicago Department of Water Management, Chicago, Illinois – Assistant Resident Engineer for \$4.1M sewer installation project. This project included the jacking of 54-inch casing for deep connection as well as the installation of manholes, catch basins, tumbling basin, junction chamber, private drain connections, and over one mile of sewer improvements. Up to 84-inch diameter sewer was installed in a City business district on an arterial street. Additional work performed included pavement restoration, curb & gutter replacement, construction of ADA compliant ramps, sidewalk replacement, driveway reconstruction, and pavement markings. The project's streets are located in both business and residential areas on and adjacent to arterial streets. V3 coordinated all work with Alderman's offices, various city services, businesses and residents.

Size: 2600 Feet **Responsibilities:** Field Engineer **Time Assigned:** 06/2013 – 1/2014

Peterson and Fairfield Avenues' Sewer Installation, Chicago Department of Water Management, Chicago, Illinois – Field Engineer for the \$13-million sewer installation project that included installation of drainage structures, private drain connections, modifications to the Metropolitan Water Reclamation District's junction siphon chambers, and more than one mile of storm sewer improvements. Sewers with diameters as large as 80-inches in diameter were installed in a business district on an arterial street. Additional work included pavement restoration, curb and gutter replacement, construction of ADA compliant ramps, sidewalk replacement, driveway reconstruction and pavement markings. The project area included both business and residential streets on and adjacent to arterial streets. V3 coordinated all work with the offices of Aldermen, various City services, businesses and residents.

Size: 6125 Feet **Responsibilities:** Field Engineer **Time Assigned:** 8/2012 – 5/2013

75th Street Reconstruction, DuPage County DOT, Darien, Illinois – Design Engineer for reconstruction of one mile of 75th Street from west of Adams Street to east of Plainfield Road. Responsibilities included leading a team of engineers and technicians to complete contract plans, specifications and cost estimates. The project consisted of upgrading an existing four-lane urban roadway section to a six-lane urban roadway section along with intersection improvements at Adams Street, Cass Avenue and Plainfield Road. The project included traffic studies, pavement design, stormwater permitting, public involvement, traffic signal modernization and the preparation of plats of highways and legal descriptions. The project also included the evaluation of potential future improvements along 75th Street between Lyman Avenue and Adams Street and at the intersection of Cass Avenue and Plainfield Road.

Size: 1.5 Miles **Responsibilities:** Design Engineer **Time Assigned:** 12/2012 – 3/2013

2010 Chicago Arterial Street Resurfacing, Multiple Areas, CDOT, Chicago, Illinois – Field Engineer for the asphalt pavement resurfacing of more than 18 miles of major arterial streets in the north and central areas of the City. The project included milling of 2.5-2.75 inches of existing asphalt pavement and resurfacing utilizing one inch of polymerized leveling binder and 1.5-1.75 inches of N70 and N90 hot-mix asphalt surface course, respectively. High-early strength concrete pavement was installed at bus stop areas to maximize the life of the roadway against the increased stress from bus traffic. V3 assisted in the installation of nearly three miles of new bike lanes with corresponding pavement markings and symbols, including the first bike lane in the Chicago "Loop" area. V3 coordinated public relations for individual arterial streets with residents and the offices of Alderman and led initiatives to minimize the impact of



ANDREW McDONALD, P.E.

Resident Engineer

construction on arterial streets in the downtown area. At the request of the CDOT, V3 coordinated and assisted in the cost analysis and construction of a one mile section of Michigan Avenue between Illinois and Oak Streets and a quarter mile section of Inner Lake Shore Drive between Oak and Division Streets utilizing a stone-matrix asphalt surface course.

Size: 18 Miles **Responsibilities:** Field Engineer **Time Assigned:** 8/2010 – 12/2010 & 5/2011 – 7/2012

ADA Ramps, CDOT, Chicago, Illinois – Design Engineer and Field Engineer for the City's reconstruction of non-compliant alley and intersection crossings to meet the ADA curb ramp design criteria. V3 provided survey, design, construction document preparation, and construction oversight. Work included removal and replacement of sidewalks, curbs, gutters, pavement, drainage structures and pavement marking.

Size: 10 Miles **Responsibilities:** Design & Field Engineer **Time Assigned:** 1/2010 – 5/2010 & 5/2011 – 7/2012

The bridge reconstruction over the Des Plaines River (a navigable stream that requires a 404 permit from the USACE) presented a unique project challenge. Significant coordination with the USACE was essential as a result of the in-stream work for the construction of a floodwall. The proximity of the project to the Chicago Executive Airport required airport coordination and permits from the Federal Aviation Agency. Significant utility relocation for electric, telephone, cable, natural gas and water were required. The project also included approximately four acres of disturbance, requiring a NPDES permit and weekly inspections of erosion control measures. Project documentation was provided using the ICORS database.

Size: 2 Miles **Responsibilities:** Field Engineer **Time Assigned:** 8/2008 – 12/2008 & 5/2009 – 8/2009



YEARS OF EXPERIENCE

With V3: 9
Other: 13

EDUCATION

Bachelor of Science
Civil Engineering
University of Illinois,
Champaign - Urbana

REGISTRATIONS

Professional Engineer:
Illinois, 62052786, 1999

PROFESSIONAL ASSOCIATIONS

ACEC-Illinois Tollway
Committee

CONTINUING EDUCATION

ACEC – Illinois/Illinois
Tollway Standards and
Manuals Workshop

PSMJ: Project Management
Boot Camp

CDOT: Sustainable Streets
for Chicagoland

IDOT: Fundamentals of
Drainage & Drainage
Studies Design/Utility
Coordination Urban
Drainage Design

Mr. Del Medico has more than 22 years of experience in the planning and design of transportation and infrastructure improvements for a wide range of projects including streets, highways, expressways, grade separations, bicycle/pedestrian facilities and utilities. He has successfully managed numerous multi-discipline teams to complete Phase I and Phase II projects for a variety of state, regional and municipal governments and transportation agencies.

NOTEWORTHY PROJECT EXPERIENCE

Jane Addams Memorial Tollway (I-90) Widening & Reconstruction, Illinois Tollway, Cook and Kane Counties, Illinois – Project Manager responsible for providing Phase II design engineering services for the widening and reconstruction of 6.5 miles of I-90 from the Elgin Toll Plaza to Higgins Road. The proposed improvements include the addition of a fourth travel lane in each direction, a widened inside shoulder (to accommodate future bus on shoulder service), the reconstruction of five bridges (three cross road and two mainline), the full reconstruction of two interchanges (at IL 25 and IL 31) as well as the partial reconstruction of two interchanges (at Beverly Road and IL 59). The project also includes the reconstruction of five ramp toll plazas, the installation of retaining walls and noise abatement walls, the implementation of Intelligent Transportation System (ITS) infrastructure and the relocation/protection of existing utilities. Within the project limits seven individual construction contracts (total construction cost of \$250 million) were prepared in order to allow the improvements to be constructed over a three year period from 2014 to 2016. In addition to providing Phase II design engineering services, V3 was also responsible for providing an update to the original 2008 Master Planning Study as well as Construction Management support services for each of the seven construction contracts. In order to successfully implement the project, V3 also coordinated extensively with IDOT, the City of Elgin, the Village of Hoffman Estates, PACE, the Cook County Department of Transportation and Highways and the Wisconsin Central LTD Railroad.

Size: One-half mile Responsibilities: Project Manager Time Assigned: 4/2013-present

143rd Street Phase I Study Lemont Road to Bell Road, Will County DOT, Homer Glen, Illinois – Project Manager for the preparation of a Phase I study for the widening and reconstruction of a 3.5-mile segment of 143rd Street from Lemont Road to Bell Road. Due to ongoing development in the region and the opening of the new Veterans Memorial Tollway (I-355) and 143rd Street interchange, 143rd Street is to be upgraded from a two lane rural facility to a four lane divided urban facility. The project consists of the preparation of a project development report, environmental coordination, location drainage study, tree survey and a preliminary environmental site assessment. Phase I services also include wetland delineation and mitigation, topographic surveys, intersection design studies, noise analysis, crash analysis, geometric studies, hydraulic studies for various tributaries to Long Run Creek and public involvement.

Size: 3.5 miles Responsibilities: Project Manager Time Assigned: 7/2009-present

US Route 30 at Canadian National Railroad Grade Separation, Phase I, IDOT, Lynwood, Illinois – Project Manager for the preparation of a Phase I study for the grade separation of US Route 30 and the Canadian National Railroad. In December 2008, the Surface Transportation Board ruled to allow the Canadian National to acquire the Elgin, Joliet & Eastern Railroad. One of the results of this acquisition was an increase in the number of trains operating along the corridor. As part of its ruling, the Board stipulated that a grade separation be constructed at US Route 30 to mitigate the impacts of increased train traffic. The project was processed as a Categorical Exclusion II and



consisted of the preparation of a combined design report, a location drainage study and a pump station hydraulic report. An extensive public involvement program was conducted which followed IDOT's Context Sensitive Solutions process. The project included the analysis of several centerline alignment alternatives for US Route 30 as well as various overpass and underpass grade separation alternatives. The preferred alternative proposed a US Route 30 overpass (with track elevations maintained) and the roadway centerline shifted 64 feet to the east to facilitate construction of the new overpass and to accommodate the new frontage road system. Phase I services also included topographic surveys, bridge type studies, railroad engineering, an intersection design study, noise analysis, crash analysis, the preparation of a traffic management plan and environmental coordination.

Size: 131-foot bridge spanning railroad tracks and 3,500 feet of roadway reconstruction
Responsibilities: Project Manager **Time Assigned:** 1/2010-7/2012

US Route 30 at Canadian National Railroad Grade Separation, Phase II, IDOT, Lynwood, Illinois – Project Manager responsible for providing Phase II design engineering services for the construction of a new grade separation structure at US Route 30 and the CN Railroad. The proposed improvements included a new 131-foot bridge spanning over the CN Railroad, 3,500 feet of roadway reconstruction, 2,300 feet of new retaining walls, a 36-foot-wide, three-sided precast culvert for oil pipeline access (and a future bike trail) in the abandoned Norfolk Southern right-of-way, additional turn lanes at the intersection of US Route 30 with Sauk Trail, traffic signal modernization, a multi-use path, new frontage roads on either side of the overpass, landscaping restoration, aesthetic enhancements and utility coordination. Key project challenges included performing design services based on an accelerated schedule to meet funding requirements, coordinating with both the Canadian National and Norfolk Southern Railroads and preparing detailed construction staging and maintenance of traffic plans to minimize disruption to roadway traffic during construction.

Size: same **Responsibilities:** Project Manager **Time Assigned:** 1/2012-6/2013

75th Street, DuPage County DOT, Darien, Illinois – Project Manager for the reconstruction of one mile of 75th Street from west of Adams Street to east of Plainfield Road. Responsibilities included leading a team of engineers and technicians to complete contract plans, specifications and cost estimates. The project consisted of upgrading an existing four-lane urban roadway section to a six-lane urban roadway section along with intersection improvements at Adams Street, Cass Avenue and Plainfield Road. The project included traffic studies, pavement design, stormwater permitting, public involvement, decorative lighting, traffic signal modernization and interconnection and the preparation of plats of highways and legal descriptions. The project also includes the evaluation of potential future improvements along 75th Street between Lyman Avenue and Adams Street and at the Cass Avenue and Plainfield Road intersection.

Size: One mile **Responsibilities:** Project Manager **Time Assigned:** 07/2012-04/2015

Arterial Resurfacing ADA Ramp Improvements, CDOT, Chicago, Illinois – QA/QC Reviewer for the City of Chicago's ADA ramp improvements associated with the 2009 and 2010 AR Program for the North Area and Central Areas of the City. Program included the assessment of approximately 980 intersection corners and the preparation of two construction contract documents that were bid through the City in April 2012. Improvements included removal and replacement of sidewalk, curb and gutter, alley and roadway pavement, drainage structures and pavement marking and signage to be compliant with the City's ADA guidelines.

Size: 28 miles **Responsibilities:** QA/QC **Time Assigned:** 11/2011-06/2012

Stevenson Expressway (I-55) & Airport Road Interchange, Village of Romeoville, Romeoville, Illinois – Project Engineer for the preparation of an access justification report for a new highway interchange at the Stevenson Expressway (I-55) and Airport Road. Due to significant regional growth and traffic congestion at existing interchanges, the Village of Romeoville selected V3 to evaluate this new interchange location. The initial stage of the project was the preparation of an access justification report demonstrating that the proposed interchange meets specific Federal Highway Administration and IDOT guidelines for interstate highway access. After the initial approval by IDOT, the FHWA requested an additional study of six alternative interchange concepts. In addition to a new interchange at Airport Road, various alternatives of a combined interchange with IL Route 126 were evaluated.

Size: 6+ miles **Responsibilities:** Project Engineer **Time Assigned:** 04/2011-present



SHAUNA URLACHER, P.E., CFM, CPESC

Project Engineer

YEARS OF EXPERIENCE

With V3: 2
Other: 12

EDUCATION

Masters of Engineering in Professional Practice
University of Wisconsin
Madison

Bachelor of Science
General Engineering
(Civil Emphasis)
Montana Tech

CERTIFICATIONS

Professional Engineer
Illinois, 062060451

Certified Floodplain
Manager (CFM)
IL-05-00201

Certified Professional in
Erosion and Sediment
Control (CPESC)
8047

PROFESSIONAL ASSOCIATIONS

Illinois Association for
Floodplain and Stormwater
Management (IAFSM)
Stormwater Management
Committee Chair

American Public Works
Association (APWA):
Suburban Branch

Ms. Urlacher is Project Engineer in our Environment and Natural Resources Division. Her extensive experience in all aspects of municipal engineering and her expertise in water engineering makes her a valuable resource for municipalities. Ms. Urlacher has expertise in grant and loan applications to provide funding for multiple projects. She is trained in a variety of software including HEC-RAS, ArcView 10 and XP Software.

NOTEWORTHY PROJECT EXPERIENCE

Bethel Lane Relocation Construction Documents, Village of Schaumburg, Illinois – Project Engineer for development of construction documents for the relocation of Bethel Lane and the parking lots for the Bethel Baptist Church. This project was a continuation of our feasibility study work for this project. V3 was hired to prepare bidding documents for this project, which included stormwater design, stormwater permitting with the MWRD, lighting designs, utility relocations, roadway and parking lot improvements, and extensive coordination with the Village and the Church to insure that the needs of both entities were met by the final designs. This project was funded by the Village of Schaumburg and Bethel Baptist Church.

Size: 4 acres Responsibilities: Project Engineer Time Assigned: 7/2016 – present

Stormwater Master Plan for Roberts Road Drainage Area, Metropolitan Water Reclamation District, Cook County, Illinois – Project Engineer for a stormwater study and master plan for a 12-square-mile area in the Cal-Sag Watershed of southern Cook County, including five separate sub-watersheds. Responsibilities included preparation of design guidelines for a variety of private property flood-reduction alternatives. These alternatives included green infrastructure on residential properties and redevelopment of vacant / underutilized properties to create additional opportunities for flood storage.

Size: 12 sq. mi. Responsibilities: Project Engineer Time Assigned: 6/2015 – 2/2016

Elmhurst Stormwater Peer Review, Elmhurst Park District, Elmhurst, Illinois – Project Engineer providing stormwater peer review services for the Elmhurst Park District and the Elmhurst School District 205. Shauna provided a detailed technical review of the proposed stormwater modeling and methodologies to determine whether the proposed storage improvements on the Park District properties would cause detrimental impacts to the short term and long term core values held by the Park District. V3 performed technical review of the entire plan, with specific attention given to the parks where proposed stormwater improvements and storage was proposed by the City. V3 was also recently engaged by the Elmhurst School District 205 to assist in a similar evaluation and technical review within the School District properties.

Size: N/A Responsibilities: Project Engineer Time Assigned: 2/2016-9/2016

2015&2016 Pre-Disaster Mitigation Grant Applications, City of Des Plaines, Des Plaines, Illinois – Project Manager responsible for preparing a 2015 Pre-Disaster Hazard Mitigation (PDM) grant application for the City of Des Plaines. The mitigation project included acquisition of flood-prone properties, demolition of the existing structures, and restoration of the properties to open space. All of the properties included in the grant application are located in the Des Plaines River floodway, four were severe repetitive loss (SRL) properties, and seven are repetitive losses (RL). V3 prepared a comprehensive scope of work, mitigation project budget, project schedule, and cost benefit analysis using FEMA's BCA Software. V3 worked with the Illinois Emergency Management Agency (IEMA) during the grant application process and



SHAUNA URLACHER, P.E., CFM, CPESC

Project Engineer

determined that, due to the highly competitive nature of FEMA's PDM program, the application would be moved to another funding source where the City has a higher probability of receiving funding. Working with IEMA and MWRD, V3 assisted the City in securing nearly three times the requested amount.

Size: N/A Responsibilities: Project Manager Time Assigned: 8/2015-6/2016

Community Rating System (CRS) Program Evaluation, City of Des Plaines, Des Plaines, Illinois – Project Manager responsible for evaluating the City of Des Plaines' CRS Program and determining the CRS points the City can expect to receive under the new CRS Coordinator's Manual as well as identifying opportunities for the City to increase its CRS classification. V3 identified small enhancement to the current activities that would result in additional CRS credit and performed a benefit/cost analysis for new activities considering initial costs, annual updates, and staff-time to develop an annual cost per CRS credit point for each activity, which was used to select the additional CRS Activities.

Size: N/A Responsibilities: Project Manager Time Assigned:

Crabtree Creek Streambank Stabilization, Village of Woodridge, Woodridge, Illinois – Project Engineer responsible for preparation of final engineering plans, specifications, and permitting for the streambank stabilization of Crabtree Creek. The Village of Woodridge, in partnership with the Woodridge Park District, obtained an IEPA 319 Grant for the stabilization of Crabtree Creek. The project included bank reshaping, gabion baskets, rock cross vanes, rock grade control, stone toe, and native vegetation. Grant administration services were also provided, which included an Operation and Maintenance Plan, BMP forms, pollutant load reduction calculations, and other grant documentation.

Size: 450 feet Responsibilities: Project Engineer Time Assigned: 7/2015-10/2016

Van Vlissingen Prairie, City of Chicago Department of Environment, Chicago, Illinois – Project Engineer responsible for the stormwater management for the proposed restoration of a 138-acre former industrial property. Project objectives included restoration and enhancement of the natural areas in addition to the creation of six acres of wet prairie and the development of a public park and trail system. The site contained numerous planning challenges including a restrictive water budget, limited organic soil, presence of threatened and endangered species and environmental concerns. The stormwater management design required by the City of Chicago included calculations and design of an infiltration system meeting the City's requirement of zero release from the project site.

Size: 138 acres Responsibilities: Project Engineer Time Assigned: 3/2016-5/2016

PREVIOUS PROJECT EXPERIENCE

Cost Share Programs, Village of Franklin Park, Franklin Park, Illinois – Project Engineer responsible for developing and managing the Village's overhead sewer and rear yard drainage cost share programs. As part of the application process meetings were held with each applicant to identify the source and severity of flooding and develop a tailored solution for each applicant. In-home consultations were also provided to understand the problem and help identify a cost effective solution to reduce the occurrence of basement and yard flooding.

Infrastructure Committee, Village of Franklin Park, Franklin Park, Illinois – Project Engineer responsible for developing a methodology to analyze infrastructure needs. This project included working with the Citizen's Advisory Committee on Infrastructure and present potential infrastructure projects for discussion. Using the Village's existing GIS data, a condition was assigned to the existing water, sewer and roadway infrastructure, which was used to develop an infrastructure score for each city block. The results were presented to the Citizen Committee, to allow for a focused discussion and clear identification of needed improvements.

Stormwater Master Plan & Ordinance Revisions, Village of Franklin Park, Franklin Park, Illinois – Project Engineer responsible for preparing a stormwater master plan for the Village. This provided a long-range plan to minimize the extent of flooding throughout the Village. Preparation of the plan included evaluation of previous stormwater management studies, stormwater modeling, development of conceptual solutions to reported flooding and associated cost estimates, review and revise existing ordinances and regulatory requirements, a capital improvement plan and funding options to pay for the proposed improvements.



SHAUNA URLACHER, P.E., CFM, CPESC

Project Engineer

Franklin Park Police Station IGIG Grant, Village of Franklin Park, Franklin Park, Illinois – Project Engineer responsible for preparing a successful Illinois Green Infrastructure Grant (IGIG) for the Franklin Park Police Station. Upfront coordination with IEPA and research resulted in Franklin Park receiving \$985,000 for a water reuse cistern, porous concrete, permeable pavers, bio-swales and two wetland basins. Grant administration services included construction inspections, quarterly reporting, payment request documentation, O&M Plan, design specifications, project cost evaluation and final report.

Woodlands Green Initiatives for Stormwater Management, Village of Hinsdale, Hinsdale, Illinois – Preparation of a conceptual plan and feasibility study to improve the stormwater management within an existing residential neighborhood. The project team worked closely with the Village staff and members of the Environmental and Public Services Committee to incorporate green techniques including rain gardens, permeable pavers and infiltration basins into the existing neighborhood. The project included an overall concept plan for the entire neighborhood and detailed hydrologic/hydraulic modeling for one sub-basin. An XP-SWMM model was developed to size the proposed infrastructure and quantify results. A final report documented the proposed green infrastructure approach and costs.

Meadow Lake Drainage Modifications, Village of Richton Park, Richton Park, Illinois – Project Engineer responsible for a detailed hydrologic and hydraulic analysis of an existing residential neighborhood using TR-20 to address excessive street ponding and structural damage to residential homes. This project included coordination with Village staff, adjacent property owners and public meetings to gather information and present the proposed solution to the residents. Permitting through IDOT and MWRD was also required, which revealed reports of flooding downstream that had to be considered. Final engineering drawings were prepared, which included an expansion of the existing detention basin, conveyance of upstream tributary areas and two overflow structures from the neighborhood.

Public Works Garage Drainage Improvements, Village of Tinley Park, Tinley Park, Illinois – Project Manager and Lead Design Engineer responsible for working with the Public Works staff to reconfigure the public works garage yard without impacting an existing wetland. The project included a grading, paving and utility plan as well as coordination with the Army Corps of Engineers to develop a solution to improve the water quality from the site that discharged to a jurisdictional wetland.

Summit Hill Jr. High School Site Development & Drainage, Architectural Resources Corporation, Frankfort, Illinois – Project Manager and Lead Design Engineer responsible for coordination with the architect, school district, park district, Village of Frankfort, Will County Land Use Department, IDOT and MWRD to develop a site plan design for 25-acre development. The project was a joint venture between the school district and park district, which included a new junior high school, softball fields, soccer field, running track, roadways, parking lots, watermain, sanitary sewer and stormwater detention.

McCarthy Park Site Development and Stormwater Management, Tinley Park Park District, Tinley Park, Illinois – Project Manager and Lead Design Engineer responsible for the final engineering design, which included parking lot replacement, bike path, land grading and stormwater detention. Due to the floodplain impacts to complete the project in accordance with the Park District's original design, an alternative solution was developed that involved relocate existing park facilities. This innovative solution provided more efficient location of the stormwater detention that minimized land disturbance and provided a more expedient permitting process.

Freedom Park Site Design and Stormwater Management, Tinley Park Park District, Tinley Park, Illinois – Project Manager and Lead Design Engineer responsible for the final engineering design and contract documents for a 20-acre development, which included roadways, parking lots, softball fields, watermain, sanitary sewer and stormwater detention. The project included permitting through IEPA, MWRD, and USCOE.



LAUREN MONTERO, P.E., LEED AP BD+C

Utility Design

YEARS OF EXPERIENCE

With V3: 11
Other: 0

EDUCATION

Bachelor of Science
Civil Engineering
Ohio State University

REGISTRATIONS

Professional Engineer:
Illinois, 062-065633, 2013

Leadership in Energy &
Environmental Design –
Building Design &
Construction (LEED), 2007

PROFESSIONAL ASSOCIATIONS

Women's Transportation
Seminar (WTS)

U.S. Green Building Council

Ms. Montero has 11 years of civil engineering experience. Ms. Montero is responsible for design and permitting strategies, preparations of plans, specifications, estimates and project coordination. Project work includes roadway design; site design for commercial, industrial and residential developments; sewer design; construction observation and on-site inspection. She is proficient in Microstation, Geopak and Microsoft Office, in addition to other programs.

NOTEWORTHY PROJECT EXPERIENCE

City of Chicago Department of Water Management, Bureau of Engineering Services - Sewer Section:

In-house, term and private contract for over 17 miles of sewer design from 18-inch to 66-inch sewer with connection structures. Work includes utility coordination, IEPA and MWRD coordination, IDOT permitting, maintenance of traffic, roadway restoration, striping plans, submittals to the Office of Underground Coordination (OUC) and preparation of contract documents. Restoration plans included patching and resurfacing as well as full roadway reconstruction of arterial and collector streets. Projects included:

- TOR 20: PN 6320, PN 6346, PN 6347, PN 6356, PN 6441, consisting of approximately 8,180 feet In-house, 3,055 feet term agreement and 2,000 feet private contract sewer design.
- TOR 14-6: PN 6551, PN 6782, PN 6589, PN 6758A, consisting of approximately 3,450 feet In-house, 900 feet term agreement and 3,650 feet private contract sewer design.
- TOR 15-3: PN 6898A, PN 6899, PN 6878, PN 6900, PN 6875, PN 6883, PN 6778 consisting of approximately 9,810 feet In-house, 450 feet term agreement and 1,640 feet private contract sewer design.
- TOR 16-7: PN 6549, PN 6859, PN 7041, PN 7049, PN 7050, PN 7052, PN 7055 and PN 7058 consisting of approximately 3,410 feet In-house, 2,285 feet term agreement and 3,745 feet private contract sewer design.
- TOR 17-1: PN 6963 and PN 6338 comprised of approximately 11,695 feet of private contract sewer design currently under design.
- TOR 17-10: PN 7021, PN 6823, PN 7114 and PN 7166 with 3,116 feet of In-house, 3,150 feet of term agreement and 2,970 feet of private contract sewer design currently under design.
- TOR 18-3: PN 7027, PN 7169, PN 7002A, PN 7018, PN 6383A, PN 6854, PN 7009A, PN 6941 & PN 7188 with 570 feet of In-house, 8,599 feet of term agreement and 7,540 feet of private contract sewer design.

Size: 17 miles Responsibilities: Field Engineer Time Assigned: 05/2012-present

Arterial Street Resurfacing Central & North Areas, CDOT, Chicago, Illinois

– Field Engineer for this \$14.5-million project funded by the American Recovery and Reinvestment Act. This project rehabilitated more 15 miles of arterial roadways. The work included pavement patching and resurfacing of 20 City streets. Other work performed included curb and gutter replacement, sidewalk replacement, bus pad installation, traffic signal and red-light camera work, tree planting and landscaping. The project streets were located in business and residential areas and several streets. In addition to standard resident engineering services, V3 coordinated work with aldermanic offices and several City departments and prepared all project reporting for funding required by CDOT, IDOT and the FHWA.



LAUREN MONTERO, P.E., LEED AP BD+C

Utility Design

Size: 15 miles **Responsibilities:** Field Engineer **Time Assigned:** 07/2010-07/2011

Arterial Resurfacing ADA Ramp Improvements, CDOT, Chicago, Illinois – Project Engineer for the City of Chicago's ADA ramp improvements associated with the 2008 AR Program for the North, South, Far South and Central Areas of the City along approximately 29 miles of Chicago streets. The program included the assessment of approximately 1650 intersection corners and the preparation of four construction contract documents that were bid through the City and coordinated through the IDOT Bureau of Local Roads. Improvements included removal and replacement of sidewalk, curb and gutter, alley and roadway pavement, drainage structures and pavement marking and signage to be compliant with the City's ADA guidelines. V3 assisted with preparing IDOT permit applications and submissions the Office of Underground Coordination (OUC). The project incorporated a detailed tracking and thorough qa/qc program to manage the vast amount of data and tasks.

Size: 29 miles **Responsibilities:** Project Engineer **Time Assigned:** 08/2009-07/2010

Arterial Resurfacing ADA Ramp Improvements, CDOT, Chicago, Illinois – Project Engineer responsible for QA/QC review for the City of Chicago's ADA ramp improvements associated with the 2009 and 2010 AR Program for the North Area and Central Areas of the City along 18+ miles of roadway. Program included the assessment of approximately 980 intersection corners and the preparation of two construction contract documents that were bid through the City in April 2012. Improvements included removal and replacement of sidewalk, curb and gutter, alley and roadway pavement, drainage structures and pavement marking and signage to be compliant with the City's ADA guidelines. V3 coordinated submissions with the OUC and assisted with IDOT permit applications.

Size: 18 miles **Responsibilities:** Project Engineer **Time Assigned:** 07/2011-10/2012

Brookbank Road Improvements, Village of Downers Grove, Downers Grove, Illinois – Project Engineer responsible for roadway design on this extension of Brookbank Road from 60th Place to 59th Street. This project included transportation, water resources, survey and natural resources services. The existing roadway north and south of the project limits was a two-way divided boulevard street that narrowed to a one-way, single-lane roadway. V3 evaluated and designed the proposed roadway and provided wetland and stormwater management permitting consultation, covering federal and DuPage County Stormwater Management

Size: 1000 feet **Responsibilities:** Project Engineer **Time Assigned:** 09/2012-01/2013

US Route 14 (Northwest Highway) at Broadway Street, IDOT, DesPlaines, Illinois – Design Engineer for preliminary engineering documents for intersection improvements and the addition of traffic signals. The proposed improvements included channelization of Broadway Street and the addition of left and right turn lanes on US Route 14, an improvement necessary to meet level of service requirements for this type of intersection. The improvements extend along US Route 14 from the bridge over IL Route 58 on the northeast to the entrance to Hanbury Drive on the southwest and along Broadway Street from US Route 14 to Yale Street. The work included the preparation of traffic and accident studies, intersection design studies, location drainage study, environmental documentation and topographic survey. The project included watermains, sanitary sewers, electrical, gas, cable, telephone and underground fiber optic cables. This required coordination with the regulatory utility companies as well as the City of Des Plaines.

Size: 1 intersection **Responsibilities:** Design Engineer **Time Assigned:** 08/2010-02/2011

Elmhurst Memorial Hospital Euclid Avenue & Harvard Street Improvements, Hammes Company, Elmhurst, Illinois – Design Engineer for the traffic signal design of the new intersection, created as part of the Elmhurst Memorial Healthcare improvements. Services included traffic signal installation plan, traffic signal cable plan, interconnect plan, interconnect schematic and construction details. The design followed IDOT and local municipality standards for projects located in Illinois.

Size: 1 intersection **Responsibilities:** Design Engineer **Time Assigned:** 08/2011-04/2012



JASON HOLY, P.E.

Roadway Engineer / Utility Coordination

YEARS OF EXPERIENCE

With V3: 15
Other: 1

EDUCATION

Bachelor of Science
Civil Engineering
Valparaiso University,
Valparaiso, Indiana

REGISTRATIONS

Professional Engineer:
Illinois, 062-059941, 2007

PROFESSIONAL ASSOCIATIONS

American Society of Civil
Engineers, (ASCE)

Mr. Holy has 16 years of transportation engineering experience with a focus on the areas of roadway and intersection design, traffic staging, bicycle and pedestrian facilities, utility design/coordination and constructability reviews. His work experience also includes construction observation, aggregate materials inspection, on-site inspection and topographic survey.

NOTEWORTHY PROJECT EXPERIENCE

75th Street Reconstruction, Phase II, DuPage County DOT, Darien, Illinois – Project Engineer responsible for the preparation of contract plans, specifications and estimates for the reconstruction of one mile of 75th Street from west of Adams Street to east of Plainfield Road. The project consisted of upgrading an existing four-lane urban roadway section to a six-lane urban roadway section along with intersection improvements at Adams Street, Cass Avenue and Plainfield Road. The project also included traffic studies, pavement design, stormwater permitting, public involvement, traffic signal modernization/interconnection, roadway lighting and the preparation of plats of highways and legal descriptions. The project also included the evaluation of potential future improvements along 75th Street between Lyman Avenue and Adams Street.

Size: One mile **Responsibilities:** Project Manager **Time Assigned:** 07/2012-04/2015

143rd Street & LaGrange Road Improvements, Village of Orland Park, Orland Park, Illinois – Project and Field Engineer for extensive roadway improvements to 143rd Street and LaGrange Road. The project included pavement widening and reconstruction, a new mainline watermain, streetscape, roadway and pedestrian lighting, landscaping and irrigation, retaining walls and storm sewer improvements. The existing right-of-way contained several existing utilities that had to be moved, adjusted or maintained along with the proposed utilities, lighting and traffic signals.

Size: One mile **Responsibilities:** Project/Field Engineer **Time Assigned:** 02/2009 – 02/2011

US Route 30 at Canadian National Railroad Grade Separation, Phase II, IDOT, Lynwood, Illinois – Project Engineer responsible for the preparation of contract plans, specifications and estimates for the grade separation of US Route 30 and the Canadian National Railroad. Key project challenges included performing design services for the \$35 million project on an accelerated 16-month schedule to meet funding requirements, coordinating with the CN and Norfolk Southern railroads and preparing detailed construction staging and maintenance of traffic plans to minimize disruption to heavy traffic volumes on the roadway during construction. Improvements included a new 131-foot bridge spanning the railroad tracks, 3,500 feet of roadway reconstruction, 2,300 feet of MSE retaining walls, a 36-foot-wide, three-sided precast culvert for a future bike trail in the abandoned Norfolk Southern right-of-way, additional turn lanes at the intersection of US Route 30 with Sauk Trail, traffic signal modernization, a multi-use path, a new frontage road system, landscaping restoration, utility coordination and coordination of aesthetic enhancements with the Village of Lynwood.

Size: 131-foot bridge spanning railroad tracks and 3,500 feet of roadway construction **Responsibilities:** Project/Field Engineer **Time Assigned:** 1/2010-07/2012

Ashland Avenue over Pershing Road Viaduct, Phase II, CDOT, Chicago, Illinois – Project Engineer responsible for the preparation of contract plans, specifications and estimates for the demolition of the existing Ashland Avenue Viaduct over Pershing Road and the reconstruction of the existing at-grade signalized



JASON HOLY, P.E.

Roadway Engineer / Utility Coordination

intersection. Improvements included combined sewer replacement, traffic signal modernization/interconnection, lighting, landscaped medians, landscape restoration, an irrigation system, watermain replacement, pavement marking and signing. A PSI was performed to identify contaminated soil removal and disposal requirements.

Size: 1,162-foot-long and 47-foot-wide structure consisting of 13-spans of prestressed box beams **Responsibilities:** Project/Field Engineer
Time Assigned: 01/2012 – 10/2012

Jane Addams Memorial Tollway (I-90) at IL 25 Interchange Reconstruction, Phase II, Illinois Tollway, Cook and Kane Counties, Illinois – Project Engineer responsible for the preparation of contract plans, specifications and estimates for the reconstruction of the Jane Addams Memorial Tollway (I-90) interchange at IL 25. The proposed improvements included the reconstruction of the interchange ramps (and associated toll plazas) and approximately one mile of mainline I-90 pavement from the Fox River Bridge to east of IL 25. The proposed improvements along I-90 also included the addition of a fourth travel lane in each direction, a widened median shoulder (to accommodate future bus on shoulder service), the reconstruction of two cross road bridges (at IL 25 and IL 25 Ramp AB), the installation of retaining walls and noise abatement walls, the implementation of Intelligent Transportation System infrastructure, the relocation/protection of existing utilities as well as drainage, lighting and signage improvements. The IL 25 bridge over I-90 was reconstructed as a two-span structure with a total length of 270 feet and an out-to-out width of 82 feet. The bridge deck is supported on 54-inch shallow depth PPC Bulb-T beams on a horizontal curve with semi-integral abutments supported on drilled shafts and a grade separation pier supported on piles. The IL 25 Ramp AB bridge over I-90 was reconstructed as a two-span structure with a total length of 267 feet and an out-to-out width of 74 feet. The bridge deck is supported on 51" steel plate girders with semi-integral abutments supported on drilled shafts. A detailed traffic staging plan was prepared to depict the maintenance of three lanes of mainline traffic in each direction during construction (along with the maintenance of all ramp movements). Responsibilities also included the design and preparation of staged erosion control plans in accordance with Tollway design standards to coordinate with the maintenance of traffic staging. The project was phased over a three year period in order to match the staging of the Fox River Bridge reconstruction.

Size: One mile **Responsibilities:** Project Engineer **Time Assigned:** 04/2013 - 2016

Bartlett Road Bridge over Jane Addams Memorial Tollway (I-90), Phase II, Illinois Tollway, Cook County, Illinois – Project Engineer responsible for the preparation of contract plans, specification and estimates for the reconstruction of the Bartlett Road Bridge over the Jane Addams Memorial Tollway (I-90). The project included raising the Bartlett Road profile over I-90 by approximately five feet in order to accommodate the deeper bridge beams, provide adequate vertical clearance and to improve drainage conditions along I-90. Reconstruction included replacing the existing bridge with a two-span structure with a total length of 247 feet and an out-to-out width of 48 feet. The bridge was widened to include a 10-foot bike path along the east side. The bridge deck is supported on 54-inch shallow depth PPC Bulb-T Beams with semi-integral abutments supported on drilled shafts and a grade separation pier supported on piles. Reconstruction of the roadway approaches included 2,000 feet of pavement reconstruction, drainage improvements and MSE retaining walls. Bartlett Road was closed during construction and traffic detoured to other routes. The project was coordinated with the Cook County Department of Transportation and Highways and the developer of the adjacent Sutton Crossing.

Size: 247-foot Bridge & 2,000 feet of Pavement **Responsibilities:** Project/Field Engineer **Time Assigned:** 12/2013

83rd Street Resurfacing Project, Village of Woodridge, Woodridge, Illinois – Project Manager for the 83rd Street resurfacing project consisted of 1.35 miles of street resurfacing. The first section was from Janes Avenue to Lemont Road. V3 completed design plans to resurface the street, repair curbs and sidewalks. All crosswalks were designed to meet ADA requirements. V3 also designed cost-effective solutions to patch and grind the Portland cement concrete pavement section of 83rd Street without grinding the entire surface and therefore maintaining the existing curb line. V3 performed site visits to determine which areas required patching, which areas could simply be milled and overlaid and which sidewalk and curbs needed complete replacement or could stay with the existing surface. V3 worked with the Village to incorporate maintenance and reconstruction of existing storm sewer system.

Size: 1.35 miles **Responsibilities:** Project/Field Engineer **Time Assigned:** 9/2015-2/2016



MIKE RECHTORIK, P.E., PTOE

Lighting Design

YEARS OF EXPERIENCE

With V3: 11
Other: 12

EDUCATION

Master of Science
Engineering
University of South Florida

Bachelor of Science
Mathematics
University of Tampa

REGISTRATIONS

Professional Engineer:
Illinois, 062-058827, 2006
Indiana, 10607220, 2006

Professional Traffic
Operations Engineer:
Cert. No. 1353, 2004

PROFESSIONAL ASSOCIATIONS

Institute of Transportation
Engineers, (ITE)

CONTINUING EDUCATION

IDOT
Basic Lighting Design Course

ISMA
Certified Traffic Signal
Technician Level I Work Zone
Safety Specialist

CORSIM Simulation Seminar

Strong Concepts
Timing Traffic Signals Using
TEAPAC, TRANSYT, PASSER
& CORSIM

Mr. Rechterik has 23 years of experience specializing in traffic and transportation engineering. His expertise is in the areas of traffic studies, traffic design, traffic operations, intersection and roadway improvements, geometric design, streetscape design, lighting design, and traffic signal construction. This experience includes a wide range of planning and design projects for the Tollway, state and county transportation agencies, local municipalities, and private developers. Mr. Rechterik's responsibilities include management of public improvement and transportation projects and project quality assurance and quality control.

NOTEWORTHY PROJECT EXPERIENCE

Michigan Avenue Reconstruction, Village of Villa Park, Villa Park, Illinois – Project Manager for Phase II engineering services consisting of the reconstruction of Michigan Avenue from Jackson Street to Madison Street. Prepared contract plans, specifications, and estimates for this locally funded project. V3 is also providing preliminary engineering services for the Village's proposed relief sewer project to address drainage issues identified as Sugar Creek Problem Area I. Since a significant section of the proposed relief sewer is located along the Michigan Avenue reconstruction project limits, the Village wants to install the Michigan Avenue portion of the relief sewer under this project, which will result in cost savings and eliminate future disturbance in the project area. The construction documents follow MFT format and specifications. The scope of work includes topographic survey, CCDD evaluation and sample testing, roadway reconstruction, ADA ramps and sidewalks, storm sewer design, private driveway replacement, utility relocation, and sanitary and water line adjustments to residential properties. The project is currently in the pre-final stage.

Size: 1,500 feet **Responsibilities:** Project Manager **Time Assigned:** 10/2016-Project Completion 2017

US Route 30 at Canadian National Railroad Grade Separation, Phase II, IDOT, Lynwood, Illinois – Project Engineer responsible for providing Phase II design engineering services for the construction of a new grade separation structure at US Route 30 and the CN Railroad. The proposed improvements included a new 131-foot bridge spanning over the CN Railroad, 3,500 feet of roadway reconstruction, 2,300 feet of new retaining walls, a 36-foot-wide, three-sided precast culvert for oil pipeline access (and a future bike trail) in the abandoned Norfolk Southern right-of-way, additional turn lanes at the intersection of US Route 30 with Sauk Trail, traffic signal modernization, a multi-use path, new frontage roads on either side of the overpass, landscaping restoration, aesthetic enhancements and utility coordination. Key project challenges included performing design services based on an accelerated schedule to meet funding requirements, coordinating with both the Canadian National and Norfolk Southern Railroads and preparing detailed construction staging and maintenance of traffic plans to minimize disruption to roadway traffic during construction.

Size: 3,500 feet roadway & 131-foot bridge **Responsibilities:** Project Engineer
Time Assigned: 10/2016-3/2017

Jane Addams Memorial Tollway (I-90) Widening & Reconstruction, Illinois Tollway, Rockford, Illinois – Project Engineer on the Design Corridor Management (DCM) Intelligent Transportation Systems (ITS) team for developing immediate and long term deployment strategies for the 25-mile east corridor. Assisted in the preparation of the east corridor ITS design report. The purpose of this document was to provide the recommended plan and staging for ITS to be built within the east corridor. In addition, infrastructure for future expansion of the ITS system was included and discussed in this report. The future expansion elements have been selected so that these items can be easily implemented as it is warranted or as becomes available without significant



MIKE RECHTORIK, P.E., PTOE

Lighting Design

removals or infrastructure rework. The report addressed those items to be constructed within the "Move Illinois" program, to be completed in 2016 and included DMS Type I and II signs, closed circuit television cameras, non-intrusive detection devices, ramp queue detection, ramp counting devices, road weather information system, weigh-in motion, uniducts off shoulder to accommodate ITS communication and power and IT and G4S fiber backbone conduits. Strip maps were prepared that identified the spacing of gantries for active traffic management and overhead sign structures to ensure adequate spacing for decision sight distance. The ITS plan was developed by the DCM in conjunction with the Smart Corridor Operations Team committee.

Size: 25-mile **Responsibilities:** Project Engineer **Time Assigned:** 10/2012 – 3/2017

Corporate Boulevard Realignment, City of Aurora, Aurora, Illinois – Project Manager for providing preliminary engineering services to realign approximately 1,300 feet of Corporate Boulevard to the existing signalized intersection of Farnsworth Avenue and the Chicago Premium Outlets. The existing intersection of Farnsworth Avenue and Corporate Boulevard will be converted to right-in/right-out access. Five alternatives were developed utilizing various combinations of horizontal radii to minimize impacts to the adjacent properties, access control, and traffic flow. Services included topographic survey, preliminary stormwater analysis, wetland determination, future right-of-way needs evaluation, roadway alignment, intersection geometrics, a preliminary engineering report, and construction budgeting.

Size: 1,300 feet **Responsibilities:** Project Manager **Time Assigned:** 5/2015

Church Road, City of Aurora, Aurora, Illinois – Project Manager for improving approximately one mile of road from Regan Memorial Tollway (I-88) to Butterfield Road. The project consisted of upgrading an existing two-lane rural roadway section to a three-lane urban roadway section along with intersection geometric improvements at Bilter Road. Improvements included roadway widening/resurfacing, storm sewer drainage, box culvert extensions, watermain design, roadway lighting, traffic signals and interconnect, maintenance of traffic and staging, and ADA compliant sidewalks and ramps. Other services for the project included survey, plats of highways, right-of-way acquisition, wetland and stormwater analysis and permitting, environmental, and construction engineering.

Size: One-mile **Responsibilities:** Project Manager **Time Assigned:** 6/2012-9/2012

Randall Road Route 529 Bus Service, Kane County DOT, Kane County, Illinois – Project Manager for preparing Phase II engineering plans for improving bus service along Randall Road. The project consisted of new sidewalk, bus pads, pedestrian crossings and traffic signal modifications at approximately 18 locations along Randall Road, including 13 signalized intersections. The locations and design of the bus pads were in accordance to PACE guidelines. The sidewalk and intersection crossings were designed to meet current ADA standards and the traffic signal modifications were designed to meet County standards. Two plan sets were prepared to separate the sidewalk work from the traffic signal work. Other services for the project included survey, drainage modifications, striping modifications, specifications, and coordination with the County, PACE and five local agencies having jurisdiction along Randall Road. The project was reviewed and approved by Kane County and PACE.

Size: 18 Bus Stop Locations **Responsibilities:** Project Manager **Time Assigned:** 3/2011-10/2013



LYNN P. SMITH

Environmental Coordination

YEARS OF EXPERIENCE

With V3: 3
Other: 19

EDUCATION

Bachelors in Geology
Southern Illinois University at
Carbondale

REGISTRATIONS

Professional Geologist:
Texas, #4547

CONTINUING EDUCATION

40-Hour OSHA Hazardous Waste
Certification

Certified Hazardous Materials Manager
(CHMM) candidate

Annual RCRA Training

AIPG - Training Workshop: Vapor
Intrusion in Illinois- The New Pathway

CN e-RAILSAFE System Contractor
Training

Odor Assessment & Measurement
Certifications for Measuring Ambient
Odors- St. Croix Sensory, Inc.

Successful Project Management, Zweig
White & Associates, Inc.

Loss Prevention System Training-
Imperial Oil Limited

AHERA Asbestos Building Inspector
Course

PROFESSIONAL ASSOCIATIONS

Commercial Real Estate Executive
Women [CREW]- Chicago Chapter
-Program Committee

ASTM International Member
-E50 Committee

American Institute of Professional
Geologist – Illinois-Indiana Section
-Board Member

Environmental Bankers Association
-Risk Management Committee

Ms. Smith directs V3's Due Diligence Practice within the Environmental & Geosciences Group. Ms. Smith has over 22 years of experience successfully managing sub-consultants and interdisciplinary teams of scientists, engineers, and support staff in the performance of environmental site assessments, UST removals, geotechnical, geophysical, remediation, and regulatory closure projects for industrial, commercial, institutional, and governmental clients. Ms. Smith's primary focus for the group is Program Management for due diligence Services which consist of managing all aspects of the due diligence services including business development, quality assurance/quality control, technical training, best practice implementation, evaluation of properties through the performance of ASTM Phase I, Phase II and Phase III Environmental Site Assessments, regulatory program investigations, Petroleum UST reimbursement programs, client management, project scoping, budgeting, cost control, technical oversight, development of junior staff, and senior technical review.

PROJECT EXPERIENCE OVERVIEW

Phase I/Phase II/Phase III Environmental Site Assessments – Professional knowledge of the ASTM Standard and is able to provide experienced consulting to a buyer, seller or lender concerning recognized environmental conditions. Awareness of environmental issues associated with property transfers and assists clients with problem solving for challenging sites. Accommodate client's expedited needs associated with property transactions. Manage large portfolio projects with sites located throughout the United States.

Site Characterization and Planning – Involved in the investigation of environmental soil and groundwater issues since 1995. Utilize statistical analysis procedures to develop sampling plans that provide a defensible data set while minimizing investigation costs. Develop and implement small- to large-scale soil boring investigations and plan and supervise groundwater monitoring programs. Manage geophysical survey investigations. Assess sites impacted by various contaminants, including hazardous materials and wastes, petroleum products and wastes, chlorinated solvents, and inorganic substances (metals). Managed upstream site investigations in the oil-fields of Alberta, Canada and working in harsh climates. Prepare preliminary remediation cost estimates based on limited subsurface information and professional experience, to allow the client to make an informed business decision regarding the economics related to the purchase and development of a property.

Site Remediation – Assesses technical and practical merits of using various soil and groundwater remediation methods for site clean-up, selecting the appropriate method based on applicability, cost and likelihood of success, and providing technical oversight during its design and implementation. Resolve logistical issues with remediation during site construction and redevelopment activities. Managed upstream site remediation projects in the oil-fields of Alberta, Canada. Strong background in the use of innovative technologies; researches the applicability of new methods to historical problems in order to cost-effectively reduce future business risks in a timely manner, often in conjunction with site demolition or redevelopment work. Remediation projects include: the use of soil vapor extraction (SVE) in conjunction with catalytic oxidation and in situ bioremediation to mitigate solvents and petroleum hydrocarbons associated with industrial processes and leaking USTs; land farming combined with ex situ bioremediation to mitigate soil impacted with bunker oil; land farming to clean up gasoline-impacted soil; SVE to remove dry cleaning solvents from impacted clayey soils;



LYNN P. SMITH

Environmental Coordination

and various injection methods to chemically or biochemically treat soils impacted with petroleum products and solvents. Assist clients by effectively managing and mitigating the associated environmental concerns concurrently during site demolition, redevelopment and UST removal activities.

NOTEWORTHY PROJECT EXPERIENCE

City of Chicago, Department of Water Management, Special Waste Screening / CCDD Investigations – Manages and performs special waste screening and follow-up subsurface environmental investigations of water and sewer rehabilitation project corridors throughout the City of Chicago. Project services include environmental engineering services required for the rehabilitation and installation of underground utilities in the City, including due diligence screening for potential special waste sites along the project corridors, followed by environmental drilling and sampling programs to obtain the soil testing data needed for waste characterization and *Clean Construction or Demolition Debris* (CCDD) “uncontaminated soil” certification determinations. Investigation results and recommendations are provided in reports that assist the City and the design team in planning soil and waste management requirements for establishing budget estimates for construction.

Size: n/a **Responsibilities:** Project Manager **Time Assigned:** 2013-Present

Public Building Commission (Chicago, Illinois) – Managed, coordinated and performed Phase I ESA and Phase II ESA and regulatory site investigation of former industrial sites on the south side of Chicago.

Size: 1 acre **Responsibilities:** Project Manager **Time Assigned:** 2009 - 2010

Chiquita/Fresh Express (Franklin Park/ Bedford Park, Illinois) – Managed Phase I ESA, Phase II ESA, Phase III ESA, regulatory site investigation, geophysical investigation, UST removal, and asbestos survey for Chiquita/Fresh Express light industrial facility in Franklin Park, Illinois and for prospective property in Bedford Park, IL.

Size: n/a **Responsibilities:** Project Manager **Time Assigned:** 2010

Prudential Real Estate Investors/ Primestor LLC (Chicago, Illinois) – Managed, coordinated and performed Phase I ESA, Phase II ESA, Phase III ESA regulatory site investigation and remediation activities for regulatory closure of former industrial site which has been redeveloped as Marshfield Plaza, a 440,000 square foot regional shopping center located on the south side Chicago. The center is anchored by Target and Jewel/Osco. Regulatory closure letter was issued in 2010.

Size: 440,000 **Responsibilities:** Project Manager **Time Assigned:** 2008-2010



PHIL MALONEY, P.E., S.E.

Structural Design

YEARS OF EXPERIENCE

With V3: 16
Other: 11

EDUCATION

Bachelor of Science
Civil Engineering
University of Illinois,
Urbana - Champaign

REGISTRATIONS

Professional Engineer:
Illinois, 062-048820, 1994
Indiana, PE10001163, 2000
Wisconsin, 40516-6, 2009

Structural Engineer:
Illinois, 081-005712, 2000

PROFESSIONAL ASSOCIATIONS

American Consulting
Engineers Council of Illinois,
(ACEC)

American Public Works
Association, (APWA)

American Railway
Engineering & Maintenance
of Way Association,
(AREMA)

Illinois Road &
Transportation Builders
Association, (IRTBA)

Mr. Maloney has 27 years of structural and civil engineering experience. His project management experience includes both design and construction management and supervision of projects in the roadway, highway, rail, building and private development arenas.

NOTEWORTHY PROJECT EXPERIENCE

2015-2016 IDOT Bridge Inspections, IDOT, Various Locations, Illinois – In 2015 and 2016 Phil assisted with damage and load rating inspections. In 2015 89 bridges were inspected and in 2016 200 bridges were inspected. Structure types included in these inspections were steel truss bridges, wooden truss bridges, precast pre-stressed concrete deck beam bridges, steel plate girder bridges, steel rolled beam bridges, concrete T-beam bridges, reinforced concrete slab bridges and reinforced concrete culverts. Nondestructive testing was used on all of the structures. An ultrasound thickness (UT) gauge was used on all of the steel members. Field data and photographs were also very important for documentation of the structure deterioration and/or damage. Traffic control and special equipment were usually necessary to complete these inspections. After the inspection was complete a load rating inspection report was prepared along with a signed and sealed structure load rating summary (BBS 2795).

Size: 250+ bridges **Responsibilities:** Structural Engineer **Time Assigned:** 2015-present

AT&T Duct Support, AT&T, Various, Illinois – Project Manager responsible for providing standard designs for reinforced concrete encasement of 18 different duct configurations to be used in situations where trenching is required beneath AT&T duct runs for associated utility work. In any instance where a 10' wide or less trench is needed, these standards could be utilized by AT&T to install the encasement in advance of the utility work and be done with their direct involvement on the project as the encasements may remain permanently in place.

Size: Ongoing **Responsibilities:** Project Manager **Time Assigned:** 2013-present

Foundation & Retaining Wall Design, McDonalds Corporation, Various Locations – Structural Project Manager for the design of foundations for signs, light poles and drive thru components, design of retaining walls and design of trash corral foundations for McDonald's restaurants in various locations which were undergoing either complete reconstruction or modifications.

Size: Ongoing **Responsibilities:** Structural Engineer **Time Assigned:** 2006-present

Third Street Parking Garage Expansion, City of Geneva, Geneva, Illinois – Project Manager and Resident Engineer for the expansion of a parking garage adjacent to the shared Metra and Union Pacific West Line. The existing garage structure consisted of two levels and the project added one additional level and 177 additional parking spaces. The structure was a cast-in-place, post-tensioned concrete deck with precast concrete wall panels around the perimeter of the garage. V3's services included construction observation and inspection, material testing, project documentation and coordination of issues with the contractor, the Union Pacific Railroad, Metra and the City of Geneva.

Size: Parking Garage **Responsibilities:** Structural Engineer **Time Assigned:** 2014-2015

83rd Street over Veterans Memorial Tollway (I-355) Repairs, Village of Woodridge, Woodridge, Illinois – Structural Project Manager for this project which included structural design, civil design and construction engineering for this bridge improvement project for the Village of Woodridge. The existing structure had temporary concrete barriers used as a divider between the roadway and the north sidewalk and bike path. The main thrust of the project was to install a new concrete



PHIL MALONEY, P.E., S.E.

Structural Design

barrier anchored to the bridge deck, as well as new sections of guardrail for safety of the pedestrian and bicycle traffic utilizing the bridge. Other miscellaneous repairs were made to the bridge deck and guardrails as well.

Size: I Bridge **Responsibilities:** Structural Engineer **Time Assigned:** 2014-2015

Metra Union Pacific North Line Bridge over Leland Avenue, Metra, Chicago, Illinois – Structural Project Manager for this bridge redesign due to a project scope change that required passenger platforms to be carried across the structure. For safety, the bridge needed to be a deck-girder design rather than a through-girder design. Additionally, curb piers were required to make the bridge a three-span, rather than a single span, structure due to the limited vertical clearance available. V3 provided a full redesign of the bridge, as well as coordination with Metra and the architect for the redesigned Ravenswood Station, which butted immediately up to each side of the bridge. The work on this project also included other miscellaneous structural tasks such as retaining wall type studies, design of temporary station platforms and staging and cost analysis.

Size: **Responsibilities:** Structural Engineer **Time Assigned:** 04/2014-07/2014

US Route 30 at Canadian National Crossing Improvements, IDOT, Lynwood, Illinois – Structural Engineer for preparation of a Phase I study and Phase II improvements for a grade separation of US Route 30 and the Canadian National Railroad. Higher train volumes, significant increases in traffic congestion and safety concerns led IDOT to request Phase I preliminary engineering and environmental studies and Phase II design and plan preparation for grade separating US Route 30 at the Elgin, Joliet & Eastern Railway and Canadian National Railroad. The project included analysis of several alternative alignments for US Route 30 at the track crossing as well as overpass or underpass grade separation structures. Key project challenges included performing design services for the \$35-million project on an accelerated 16-month schedule for Phase II to meet Canadian National funding requirements, coordinating with the Canadian National and Norfolk Southern Railroads and preparing detailed construction staging and maintenance of traffic plans to minimize disruption to heavy traffic volumes on the roadway during construction. Phase II included preparation of contract plans, specifications and cost estimates for improvements of US Route 30 over the tracks and improvements at the US Route 30 and Sauk Trail intersection. Improvements included a 131-foot bridge spanning the railroad tracks, 3,500 feet of roadway reconstruction, 2,300 feet of MSE retaining walls, a 36-foot-wide, three-sided precast culvert for oil pipeline access and future bike trail in the abandoned Norfolk Southern right-of-way, additional turn lanes at the intersection of US Route 30 with Sauk Trail, traffic signal modernization, a multi-use path, frontage roads on either side of the overpass, landscaping restoration and aesthetic enhancements, utility coordination and coordination of aesthetic enhancements with the Village.

Size: 131-foot bridge spanning railroad tracks and 3,500 feet of roadway reconstruction
Responsibilities: Structural Engineer **Time Assigned:** 1/2010-7/2012

Ardmore Avenue Bridge over the Canadian National Railway, Village of Villa Park, Villa Park, Illinois – Project Manager for Phase I and Phase II engineering for the replacement of this deteriorated bridge structure. The existing bridge carried four traffic lanes and two sidewalks and consisted of three spans of 17-inch deep PPC deck beams with a bituminous overlay. As part of the Phase I engineering services, V3 performed a comprehensive close-up inspection that revealed the advanced level of deterioration of the existing PPC deck beams. This prompted the closing of the bridge to traffic and the acceleration of the design schedule. The bridge was reconstructed using the new IDOT PPC deck beam details with a five-inch concrete overlay.

Size: I Bridge **Responsibilities:** Structural Engineer **Time Assigned:** 07/2007-06/2010

Milwaukee District Northline Bridge over Golf Road, Metra, Golf, Illinois – Design Project Manager for the partial redesign of this bridge in which V3 was performing construction management. Value Engineering indicated that a major revision to the staging plan, along with a change to abutments supported on drilled caissons rather than driven piles, would result in a more economical design that could be built in less time. V3 worked closely with Metra and the general contractor to prepare revised design and staging plans for this 98-foot, single-span, two-track through-girder bridge which replaced an existing three-span structure that was supported on timber foundations. The new superstructure was constructed on temporary alignment and used as a runaround structure for the two existing tracks while the new substructures were constructed. Then, the superstructure was rolled into place in its final alignment during an overnight closure. The redesign ended up saving Metra \$850,000 in cost and 5 months in schedule.

Size: 98 foot bridge **Responsibilities:** Structural Project Manager **Time Assigned:** 2009



THEODORE M. NIEMEYER, P.E.

Railroad Coordinator

YEARS OF EXPERIENCE

With V3: 2
Other: 43

EDUCATION

Bachelor of Science
Civil Engineering
Valparaiso University

REGISTRATIONS

Professional Engineer:
Illinois, 062-034114;
Wyoming, PE 4099

TRAINING & CERTIFICATIONS

Roadway worker safety
(FRA compliant)

PROFESSIONAL ASSOCIATIONS

American Railway
Engineering and
Maintenance of Way
Association (AREMA)

American Society of Civil
Engineers

Maintenance of Way
Association of Chicago

Mr. Niemeyer has 44 years of experience in railroads, including economic viability studies, bridge inspection and bridge/track rehabilitation. His design experience includes route selection, environmental statement preparation, negotiation and execution of permits and agreements for construction and preparation of bid packages. Mr. Niemeyer's leadership history includes serving as project principal, chief engineer and project manager; his experience providing testimony as an expert witness is a testament to his technical capabilities. He has provided due diligence evaluations of railroad and transit systems in the North America, Europe, Asia and Africa for rail-related construction, maintenance, operations and acquisition analysis of a value in excess of \$4 billion.

NOTEWORTHY PROJECT EXPERIENCE

Short Line Inspections, Union Pacific Railroad, System-wide – Project Principal for team that inspected track, bridges, signals, right-of-way and records on short line railroads leasing operating railway properties from Union Pacific. Inspections were to ensure compliance with lease contract provisions and governmental regulations. They also provided recommendations for repair and supplied observations to Union Pacific, then re-inspected to confirm correction and/or compliance.

Size: \$1,300,000 (fee) **Responsibilities:** Project Principal **Time Assigned:** 2008 - ongoing

Various Projects, Union Pacific Railroad Company, System Wide – Project Principal for team that started work with Union Pacific Railroad in 1994 under a master agreement for engineering services on various projects system-wide. Projects included design, inspections and construction observation for the Union Pacific Engineering Department. The team designed bridges, retaining walls and other facilities, including dumping pit and building at Escanaba, Michigan under this master agreement. They also reviewed submittals by other consultants and provided services for various traffic counts. The team reviewed and corrected signal drawings, assuring that they accurately portrayed the field conditions as required by the Federal Railroad Administration.

Mr. Niemeyer and his team watched over thousands of miles of fiber optic installations on UP property. Initially, these projects were covered under the engineering master agreement and in 1998 a separate fiber optic engineering services master agreement (\$20 million) was entered into, covering these projects. The team coordinated and watched over outside parties doing construction on the UP's right-of-way. They also reviewed engineering plans and constructed plans for these systems, making recommendations for or approving them for construction. They provided fiber coordination services in: Arizona, California, Illinois, Iowa, Minnesota, Missouri, Nebraska, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington and Wisconsin. In addition, the team provided system-wide bolt tightening (since 1998), high-speed rail operation analyses, construction observation on fiber projects, construction management of bridge repairs and clean-up of track from mudslides in California.

Size: \$8,000,000 (fee) **Responsibilities:** Project Principal **Time Assigned:** 1997 - 2013

New Track & Bridge over Union Pacific Tracks, Indiana Harbor Belt Railroad, Bellwood, Illinois – Project Principal for team that provided field reconnaissance and design of a new complex single-track, two-span through plate girder bridge, 186 feet in length. The project included repair and modification of concrete abutments and pier, as well as retaining walls to extend wing walls and timber deck. The bridge is adjacent to an existing three-track, two-span, through plate girder bridge and is designed to use adjacent girders as common when existing bridge is replaced. The



THEODORE M. NIEMEYER, P.E.

Railroad Coordinator

bridge is over the Union Pacific commuter main tracks, leads tracks to Proviso Yard and the Global Two intermodal facility.

Size: \$2,900,000 (construction) **Responsibilities:** Project Principal **Time Assigned:** 2008 - 2009

Geneva Subdivision Retaining Wall Repairs, Union Pacific Railroad, Chicago and Oak Park, Illinois – Project Principal for team that inspected and surveyed retaining walls between mileposts 6.2 and 8.7 in the Geneva Subdivision in Chicago and Oak Park, IL for design, repairs and to development of bid documents covering repairs of retaining walls. The Chicago Transit Authority operates on Union Pacific right-of-ways in this area, so the design of this project included coordination with the transit authority to incorporate all safety requirements for the transit agency and Union Pacific.

Size: \$250,000 (construction) **Responsibilities:** Project Principal **Time Assigned:** 1996

Metra Preliminary Design Proposed for New 47th Street Yard and Shop Facility, Teng & Associates, Inc., Chicago, Illinois – Project Principal for team that reviewed the industrial engineering report, inspected the site and reviewed the proposal documents for project re-design. They provided design for rehabilitation and modernization of the yard, tracks and yard facilities. The team interfaced with existing Metra signal systems, interacted with designers of other facilities and reviewed underground work to ensure that there were no conflicts in location and/or schedule. Rehabilitation of the existing diesel house and development of plans for rehabilitation of the coach shop were also considered. The revised preliminary conceptual design was less costly to construct, with an improved operating layout.

Size: \$250,000 (fee) **Responsibilities:** Project Principal **Time Assigned:** 1998 - 2000

NorthWestern Station Train Shed Design for Rehabilitation, Chicago North Western Railway & Metra, Chicago, Illinois – Project Manager for team that developed the design for rehabilitation of this Station Train Shed in Chicago, Illinois including review, comment and revision of plans to renovate the building's exterior walls and framework; replace the electrical, plumbing, HVAC and communication systems; replace all track, signal and control systems and replace the roof and all interior spaces.

Size: \$76,000 (construction) **Responsibilities:** Project Principal **Time Assigned:** 1987 - 1990

Culvert Repairs and Extensions, Flint Siding Extension, Chicago North Western Railway, Clear Lake, Iowa – Project Principal for team that inspected, designed, prepared contract documents and watched over the repair and extension of four culverts in the vicinity of Clear Lake, Iowa. This work was done in conjunction with construction of an additional track on their right-of-way.

Size: \$150,000 (construction) **Responsibilities:** Project Principal **Time Assigned:** 1995

Proviso Hump Yard Grade Revisions, Union Pacific Railroad, Northlake, Illinois – Project Manager for survey, evaluations and design of grade revisions to allow automation of Union Pacific's Proviso Yard hump classification yard to increased efficiency and reduce damage. Project involved developing a plan acceptable to UP for revising grades in hump yard bowl tracks, but also required extensive survey to determine the existing yard track profiles. Project also involves evaluating various alternatives, effects on existing facilities and drainage issues, then developing estimated cost and preliminary staging to complete work, with minimal interference to yard operations.

Size: \$250,000 (fee) **Responsibilities:** Project Principal **Time Assigned:** 2014

Chicago to Dubuque Passenger Rail, IDOT, Illinois – Project Manager that analyzed past studies and developed refined estimates for IDOT analyzing alternate routes to Rockford. Review and analyze files and date considered confidential and develop reports to IDOT. Project Manager for the public grade crossing site visits, meetings, existing and proposed crossing improvements and coordination with interested parties. The work included coordinating with IDOT, ICC, Canadian National Railway, Union Pacific Railroad, Illinois Rail Museum, Rockford, Cherry Valley, Belvidere and other local authorities.

Size: \$250,000 (fee) **Responsibilities:** Project Principal **Time Assigned:** 2013 - 2014



ALEXANDER HUYNH, E.I.T.

Construction Inspection

YEARS OF EXPERIENCE

With V3: 2
Other: 2

EDUCATION

Bachelor of Science Civil Engineering
University of Illinois at Chicago

REGISTRATIONS

Engineer in Training:
Illinois, 061.038217, 2014

CONTINUING EDUCATION

IDOT TRAINING:
Documentation of Contract
Quantities: #15-0493

Mr. Huynh has four years of construction engineering experience with civil and railroad projects. Mr. Huynh's foundation of construction inspection and documentation was built from his work on various types of City of Chicago infrastructure including Department of Water Management, CDOT, Metra, and various CN railway projects. Software skills include AutoCAD, ArcGIS and SAP2000.

PROJECT EXPERIENCE

Ancillary Construction Program, Chicago Department of Water Management, Chicago, Illinois – Construction Inspector for over \$40M Ancillary Program for Chicago's Department of Water Management Sewer Section. The program includes preconstruction evaluation of the proposed work, coordination with residents, businesses, schools, utility companies and various City Departments and Agencies. The work consists of emergency projects that are design-build and projects done in conjunction with City forces and includes; storm and sanitary sewer installation, modification of existing connection structures, installation of manholes, catch basins, concrete collar connections and installation of drain connections on residential and arterial streets. Incidental construction included capping and reconnection of water mains; full reconstruction of roadway pavement, removal and replacement of concrete sidewalks, driveways, curb and gutter, pavement patching, asphalt paving and landscape restoration. V3 reviews all project cost estimates and proposals, provides daily communication and coordinates with contractors to keep roadways open for motorists, school buses, and pedestrian traffic.

Size: 30 Locations Responsibilities: Inspector Time Assigned: May 2015 to Current

Union Station Transit Center, Metra, Chicago, Illinois – Construction Inspector for \$20.1M Chicago Transit Authority facilities building that services Chicago's Bus Rapid Transit system downtown known as the Loop Link for the CTA. Construction of the station included an underground sewer retention system, utility relocation, MOT staging for a new three lane bus system, and a new underground tunnel connection to Chicago Union Station.

Size: \$20 Million Responsibilities: Inspector Time Assigned: May 2015 to Jan 2017

PREVIOUS PROJECT EXPERIENCE

RCMA/CIC Program Management, CDOT, Chicago, Illinois – Construction Inspector for the Community Infrastructure Contract (CIC). Responsibilities included construction engineering services related to improvements to public sidewalks, ADA ramps, curb and gutters, alleys, and other specialized projects in residential and commercial areas. Responsibilities include serving as a coordination liaison between residents, businesses, contractors, city agencies, aldermanic offices, and CDOT Engineering.

Technical Support, American Institute of Steel Construction, Chicago, Illinois – Engineering and Research Intern for structural steel design specifications provisions and design examples. Other responsibilities included drafting figures on AutoCAD for structural steel specifications and design guides.



PROJECT UNDERSTANDING & APPROACH

PROJECT UNDERSTANDING

Oak Park is a thriving community located immediately west of the City of Chicago with a population of 52,000 and known for its architectural heritage. Within its 4.5 square miles is one of the region's most diverse mixes of cultures, races, ethnicities, professions, lifestyles, religions, ages and incomes. Oak Park boasts excellent schools, world class architecture, shopping, dining, and an extensive public transportation network.

The project limits provided by the Village includes the segment of North Boulevard from Forest Avenue to Kenilworth Avenue, immediately adjacent to the railroad. Improvements are also proposed on South Boulevard, on the south side of the railroad, from Marion Street to Home Avenue. Clinton Avenue and Kenilworth Avenue between North and South Boulevard are also included within the project limits as shown in Figure 1.



Figure 1. Proposed Project Limits. Based on the Request for Proposals and 50%+ engineering plans provided by the Village, the primary improvements within the project limits include:

1. North Boulevard (Forest Avenue to Oak Park Avenue) - Sewer and water replacement, concrete bump-outs, curb patching, sidewalk/driveway replacement, ADA improvements, pavement patching, roadway resurfacing, restriping. A bike lane may be included as part of the project between Forest Avenue and Oak Park Avenue.
2. South Boulevard (Marion Street to Home Avenue) – Sewer lining and point repairs, curb patching, sewer abandonment and replacement/installation, vegetation, sidewalk, ADA improvements, drainage improvements, roadway resurfacing, restriping and new planters/benches.
3. Clinton Avenue (North Boulevard to South Boulevard) - Sewer and water replacement, auguring a new combined sewer under the existing viaduct, and roadway resurfacing/reconstruction.
4. Kenilworth Avenue (North Boulevard to South Boulevard) – Drainage improvements, curb, sidewalk, pavement, and ADA improvements.

As shown in Figure 1, the proposed improvements are located adjacent to the railroad right-of-way near train stations, commuter parking, multi-family residential, and commercial development. The 50%+ engineering plans



PROJECT UNDERSTANDING & APPROACH

were created in 2014 by the Village of Oak Park Engineering Department. These plans provide a basis for the final engineering plans. In addition to finalizing the details of the design and obtaining the required permits for construction, there are several additional improvements noted in the RFP that will be added to the plans during final design.

PHASE I & II ENGINEERING APPROACH

The V3 team has extensive experience developing creative solutions in highly urbanized areas throughout the Chicago area. Our team includes:

- ✓ Municipal engineers with expertise in public outreach, permitting, and underground utilities
- ✓ In-house ecologists and geologists with expertise in soils and plantings
- ✓ Environmental staff able to perform PESA's and assist with CCDD disposal requirements
- ✓ Water resources engineers with expertise in developing solutions to urban flooding
- ✓ Professional construction estimators that self-perform earthwork and underground utility installation
- ✓ GIS professionals proficient at preparing exhibits that depict complex engineering issues to the public
- ✓ Construction engineers knowledgeable in infrastructure improvements in urban areas and experienced in communicating with project stakeholders

The V3 team will utilize our experience working on similar projects to finalize the 50%+ plans developed by the Village, assist in obtaining the required permits/approvals, and communicate with the project stakeholders to minimize disruptions to surrounding businesses, commuters and the Village. We will begin with a project kickoff meeting with Village representatives and a review of the 50%+ plans and supporting documentation from the Village. Based on our understanding of the Village and the project, Phase I and II of the project will include the following:

- Public Outreach
- Final Engineering Drawings and Specifications
- Utility Coordination / Permitting
- Identify Environmental Concerns through a PESA
- Estimate of Probable Construction Cost

V3's approach to providing these services to the Village is described in the following paragraphs.

Public Outreach

When working in high-density urban areas, public outreach becomes a critical element to success. The V3 team brings a wealth of experience working in similar communities, such as the City of Chicago and the Village of LaGrange. Our approach to public outreach is to keep lines of communication open, allow residents and business owners a forum for their questions and concerns to be heard, and provide an on-site representative during construction who can respond to questions. Businesses, residents, and commuters need information up-to-date information regarding street closures, driveway access, parking availability, and utility shut downs. V3 anticipates the following public outreach activities:

- **Public Meetings** – The V3 team will work with the Village staff to schedule two public meetings, inviting the key stakeholders, which will include representatives from the Village's Parking and Mobility Services Department, public utility companies, 3 business districts, Hephzibah School, Frank Lloyd Wright Trust for Unity Temple, and 100 Forest Place. These public meetings will provide these key stakeholders an opportunity meet the project team, discuss the project with respect to their property, and voice any concerns.
- **Project Website** – Creating a website for the project is common for projects in urban areas such as this one. These websites provide another means of communicating with the residents, business owners, and other stakeholders. V3 anticipates creating a website similar to the website we created for the Washington Underpass project in Grayslake, shown in Figure 2.



PROJECT UNDERSTANDING & APPROACH

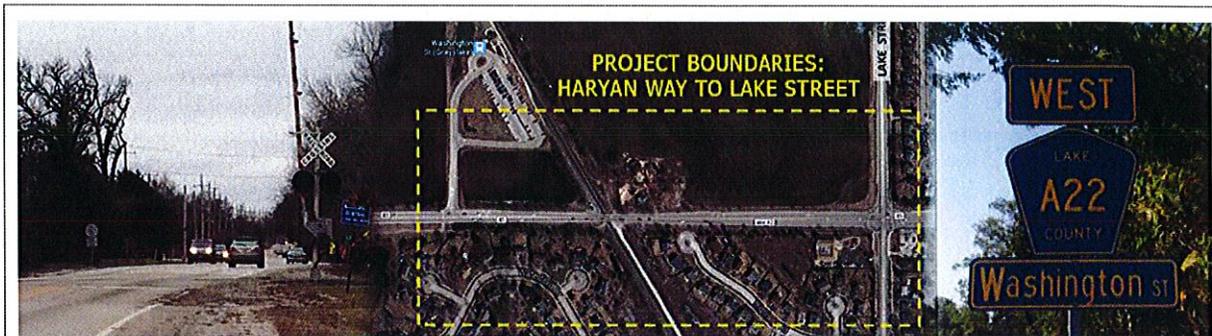


Figure 2. Example Project Website. We recommend preparing a project website for this project to provide a means to share meeting notices, exhibits, the project schedule, photos and contact information with the residents and business owners. The above image is from the homepage of a similar project, which can be found at www.washingtonunderpass.com/. A similar stand-alone website could be created for this project, or a new page on the Village's website could be created.

- On-site Meetings – When residents or business owners have concerns that are more easily discussed on-site, the V3 Team will meet with these stakeholders on-site to discuss the design.

Oak Park has a diverse population, who may be impacted by the proposed construction project. Our public outreach efforts will include graphics and reader friendly text that can be easily understood by the general public.

Final Engineering Drawings and Specifications

V3 will provide efficient, high quality, constructible and complete engineering plans, while striving to keep cost and disruptions to adjacent properties low. The construction documents will include the existing centerline elevations and any proposed grade changes to improve existing problem drainage areas. Our engineering staff will walk and document the sidewalk and curb and gutter conditions within the project area to determine accurate removal quantities. Utility crossings, relocations and installations will be detailed to avoid construction delays. Consideration will be given to maintaining driveway and parking access to the extent practicable. A priority for the V3 team will be to prepare traffic maintenance plans that minimize the impacts to residents and businesses while allowing for construction to progress expediently. V3 will prepare plans for review at 75%, 90% and at the contract document stage. The plans will be developed based on the revised scope, conversations with the Village and on the 50%+ engineering plans prepared by the Village and provide additional detail on the project components described in the following paragraphs. A construction engineer will review the plans for constructability concerns including access and staging.

Roadway Improvements

The RFP indicates that in addition to what was shown on the Village's engineering plans, watermain will be replaced on North Boulevard between Forest Avenue and the east side of Kenilworth Avenue. This watermain replacement will require an additional pavement patch along the north curb line of North Boulevard. Depending upon the distance between the proposed watermain and proposed combined sewer, the pavement between the sewer and water trenches may require full removal and replacement as well.

Based on our experience with similar projects, the pavement between these two trenches will typically not be salvageable. The 50%+ engineering plans indicate the distance between the proposed 18-inch combined sewer and 12-inch watermain is 15 feet between Forest Avenue and Clinton Avenue. Between Clinton Avenue and Kenilworth Avenue there is 5 feet of separation. Due to the condition of the existing pavement and the construction traffic, V3 recommends replacement of the pavement section between the two trenches as shown in Figure 3.



PROJECT UNDERSTANDING & APPROACH

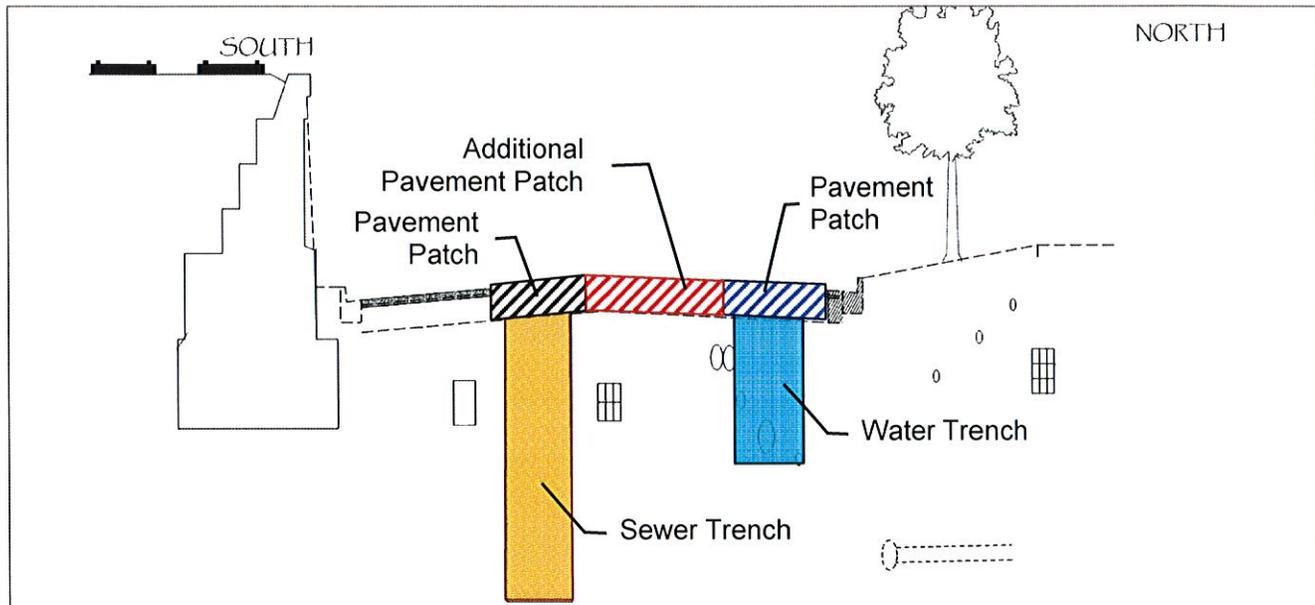


Figure 3. North Boulevard Improvements. With the addition of the watermain replacement the pavement of North Blvd, V3 recommends budgeting for the additional pavement patch between the water and sewer trenches as shown above.

Traffic Control / Access

V3 understands the needs of business owners, residents, and commuters must be considered during the design and construction of the proposed improvements. Access to private property must be maintained for businesses and residential property throughout construction. V3 will meet with these key stakeholders during the design phase of the project to develop a plan with each property owner that will allow access during construction. Detour routes will be carefully planned with the Village staff and other stakeholders. Signage and advanced notifications will be provided to property owners as well.

Maintaining access to commuter parking along North Boulevard and South Boulevard will be coordinated with the Village's Parking and Mobility Services Department. Though the commuter parking areas are not planned for removal, portions of these parking areas may be needed for construction staging. V3 will work with the Village staff to identify construction staging areas that will minimize impact to commuters. During the design phase, V3 will engage our staff of experienced construction engineers to develop alternatives for staging traffic in order to facilitate construction activities while minimizing inconvenience to the traveling public and adjacent property owners. In particular, we will look to coordinate the staging of construction activities with emergency services, commuter traffic and business deliveries/traffic.

ADA Accessibility

Meeting the current requirements for pedestrian accessibility is extremely important. The requirements and guidelines for the development of accessible infrastructure improvements are intricate and challenging. Our staff has extensive experience with the development of pedestrian and bicycle facilities, having designed hundreds of intersections for the City of Chicago in some of the most difficult urban settings. We are one of the Chicago Department of Transportation's preferred consultants for the development of ADA improvement projects. In addition, our staff has been trained on the most recent updates to the state and federal guidelines.

Meeting ADA accessibility requirements for the project may require expansion of the proposed sidewalk removal and replacement areas near intersections. As shown in the 50%+ plans, a switchback ramp may be required on the



PROJECT UNDERSTANDING & APPROACH

north side of North Boulevard, which will provide pedestrian access from the sidewalk on North Boulevard to the sidewalk on the west side of Clinton Avenue. The location of the anticipated switchback ramp is shown in Figure 4.

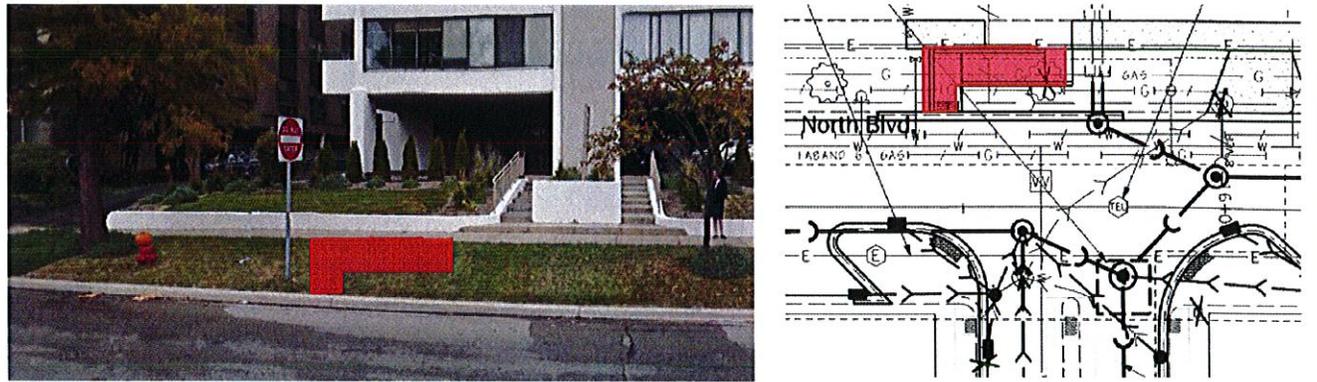


Figure 4. North Boulevard Switchback ADA Ramp. As shown in the above image, the parkway slope at the proposed ADA ramp location is too steep to meet ADA requirements; therefore, the plans are showing a switchback ramp to transition the grades. V3 will build off of the 50%+ plans and provide additional detail for this ADA ramp as well as any other ramps proposed for this project.

Tree Preservation

At the pre-proposal meeting, the Village expressed a desire to protect the existing trees and specifically mentioned improvements along South Boulevard that are intended to improve groundwater recharge near the existing trees along the railroad tracks.

V3's senior ecologists and water resources engineers have taken a cursory look at these trees and see that they have very little tributary area to them and are surrounded by concrete. The existing tree shown in Figure 5 is a Honeylocust. This type of tree is tolerant of a wide range of soil conditions as well as drought and road salt.

Our design team will work with our arborists and ecologists to provide adequate tree protection as part of the proposed improvements, which will consider the maturity, species, and health of the existing trees. V3's design will minimize soil disturbance within the dripline of existing trees and incorporate tree trimming and root pruning where necessary to reduce impacts to existing trees.

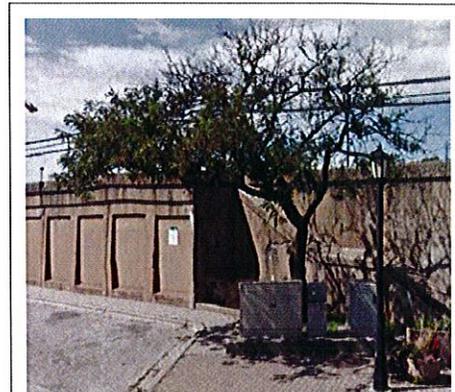


Figure 5. Existing Tree on South Boulevard. V3 will include improvements in the design to increase runoff and/or groundwater recharge near the existing trees.

Structural Design

The structural engineers at V3 will provide designs and details for the ADA switchback ramp as needed as well as for the deep excavation drop connection at South Boulevard and Clinton Avenue.

Underground Utility Design

The proposed underground utility improvements include new combined sewers, lining of existing combined sewers, watermain replacement, and auguring a new 24-inch combined sewer under the viaduct on Clinton Avenue. Based on our review of the 50%+ plans, the proposed improvements have been well defined by the Village. Some potential challenges to be resolved during the final design include:



PROJECT UNDERSTANDING & APPROACH

Combined Sewer Condition – The proposed lining of the combined sewer on South Boulevard was televised in 2011 and the required spot repairs were identified at that time. The Village mentioned during the pre-proposal meeting that the sewer will be televised again during final design. V3 will review the new videos once they are available and confirm that the repairs can be done using trenchless methods.

Combined Sewer Lining – Based on our experience with combined sewer lining, we typically do not recommend cutting into a new liner for point repairs. Depending upon the liner being used, the point repairs may not be necessary (for structural liners) unless there is a large empty cavity behind the existing pipe. In which case, spot liners are often used with grout behind the liner followed by a full liner. This eliminates the need to cut into the liner for the repair. During final design, V3 will review the videos and investigate all potential alternatives with the Village.

Auger Pit Size – The proposed auger pit is shown on the plans as 24'x10'. We note that this smaller auger pit size will be more expensive to the Village. V3 will evaluate the option to increase the auger pit to 35'x10', which will significantly reduce the cost of the auger under the viaduct.

Casing Pipe Diameter – The proposed casing pipe under the viaduct is 36-inches for the 24-inch ductile iron combined sewer. The outside dimension of the bell at the joints of the 24-inch pipe will be 30-inches in diameter, leaving only 3 inches between the combined sewer and casing pipe. We recommend increasing the casing pipe to 42-inches to allow for additional clearance between the two pipes.

Drop Manhole Connection – The proposed drop manhole connection will need to meet MWRD requirements, which include encasing the exterior drop in concrete and providing clear space between manholes that is not less than 3 feet and not more than 10 feet from the MWRD manhole. It appears the Village's design meets these requirements. V3 will confirm the MWRD requirements are being met and the utility conflicts are addressed in this area.

Utility Coordination / Permitting

V3 has reviewed the project scope and determined the permits that will be required from each regulatory agency. Our findings are summarized in Figure 6 and described in the following paragraphs.

North Cook County Soil & Water Conservation District (SWCD) – Since this project does not require a U.S. Army Corps of Engineers (USACE) permit, the soil erosion control aspects of this project can be managed by the Village of Oak Park. **No SWCD permit will be required.**

IEPA NPDES Permitting - This project is likely to exceed 1.0 acre in land disturbance, which is the trigger for a Notice of Intent for construction through IEPA; however, the project should be covered under the Village's ILR-40 Permit. **A separate NOI for this project should not be required by IEPA. The proposed water main will require a construction permit from IEPA.**

Metropolitan Water Reclamation District (MWRD) – Oak Park is not an authorized municipality to administer aspects of MWRD's Watershed Management Ordinance (WMO). We note that the proposed improvements will not result in 1 acre of additional impervious area within the Village right-of-way. Therefore, stormwater detention will not be required by MWRD; however, the combined sewer improvements will require an MWRD permit. **V3 will prepare the permit documentation to assist the Village in obtaining a permit from MWRD.**

-  North Cook County SWCD
-  IEPA NPDES Permit
-  IEPA Water Main Permit
-  MWRD Permit
-  Village of Oak Park
-  CCDD Evaluation
-  Union Pacific Permit
-  State Historic Preservation Office Approval

Figure 6. Permit Analysis Summary.

Based on our understanding of the project, V3 has determined that IEPA, MWRD and Village of Oak Park permits will be required. A CCDD Evaluation and approval from the State Historic Preservation Office are also needed as well as a Union Pacific permit.



PROJECT UNDERSTANDING & APPROACH

Village of Oak Park Approval- The Village will review the final engineering plans to confirm compliance with Village standards. **V3 will prepare the pre-final plans and specifications at 75% and 90%, and contract documents (100%) for review by the Village.**

Other Agency Coordination – In addition to the regulatory agencies requiring permits or approvals prior to construction of the proposed improvements, there are other agencies with existing infrastructure within the project limits. These agencies include:

- Commonwealth Edison (ComEd)
- AT&T
- Chicago Transit Authority (CTA)
- Metra
- Union Pacific Railroad
- Nicor

As a provider of engineering services for ComEd and AT&T, V3 will be able to use this experience to facilitate the utility coordination process with those utility companies. V3 also has relationships with the CTA and Metra, which will help to facilitate those discussions as well. We understand that the CTA has a bus route that utilizes Clinton Avenue in the summer months, which may need to be detoured while construction is taking place on Clinton Avenue. Metra will also need to be notified regarding any impacts to commuters during construction. Augering under the viaduct and work impacting the abandon UP watermain will require a permit from the Union Pacific Railroad.

Identify Environmental Concerns

V3 will perform an initial screening of the project site utilizing IDOT's Special Waste Screening Process. Based on this screening, potential special wastes or other regulated substance contamination identified will be assessed by performing a PESA. The PESA will be conducted to further identify the environmental condition of the site in consideration of the proposed project improvements. A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects and the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard E 1527) will be used as a guide for preparing the PESA. The objective of the PESA is to identify recognized environmental concerns (RECs) and level of risk associated with man-made and natural hazards that may impact the project location. V3 will prepare recommended scope for a Village administered request for proposals for preliminary site investigation (PSI) for areas of RECs identified in the PESA. V3's environmental staff will provide oversight and review PSI and determine contract pay items and quantities to address any identified contaminated soils.

Estimate of Probable Construction Cost

As part of the final design, V3 will engage our professional cost estimators to develop cost-saving solutions and perform constructability reviews for the project. **Our in-house contractors will review the construction documents for any potential issues that may arise during the bidding/construction phase and identify ways the Village can achieve the most impact for the available construction dollars.** These reviews will challenge the design staff to make certain that all plans and specifications are clear and concise. We will also look for ways to reduce costs such as earthwork haul-off, particularly in areas where contaminated soils are found.

V3's contractor-level estimates go beyond the typical engineering estimates. Understanding the full project scope along with the site logistics and project constraints is critical to producing a quality cost estimate that can be relied upon for decision making. **This professional estimate is a service unique to V3 that utilizes our expertise in contractor bids for earthwork and underground utilities for accurate planning and selection of construction materials based on cost.** V3 utilizes four key components when developing estimates of probable construction costs:



PROJECT UNDERSTANDING & APPROACH

- **In-House Estimating Staff** – V3 employs a staff of estimating professionals. This staff, along with the project team members, will complete a review of each project for scope, logistics and scheduling. In addition, this staff will complete a take-off of all quantities associated with each scope of work and apply unit rates from historical data and adjust for current market conditions.
- **HCSS Heavy Bid Software** – This software provides V3 with the ability to assemble work crews specific to each trade and analyze the production for each scope of work. It maintains historical data for equipment, labor and material costs and can be adjusted to reflect current market conditions.
- **Trade Contractor Pricing** – When and if appropriate for the specific project, V3 will solicit trade contractor pricing for defined scopes of work. A specific bid package would be issued to the trade firm with direction to provide pricing and any comments for improved efficiency and/or value engineering associated with that work. This pricing will be evaluated against the pricing assembled by the estimating staff and revised as necessary to reflect the most accurate conditions.
- **Self-Perform Work** – V3 is also a trade company that self-performs earthwork, select site demolition and utility installations, naturalized planting and ecologic restoration. Actual field data is maintained relating to crew sizes required by task, equipment needed and the production that can be expected. These trade services allow V3 to provide real-world, practical pricing and assessment the project.

The final product is engineering plans, specifications, and contractor-level cost estimates based on actual contracts used on recent bids. V3's design engineers working with our construction estimating staff provide a higher level of confidence in our construction cost estimates and constructability of the design.

V3'S TEAM OF ENGINEERS & CONSTRUCTION PROFESSIONALS PROVIDE COST SAVINGS FOR CLIENTS:

As part of our creative design and Value Engineering analysis, V3 provides cost effective and innovative solutions. Some examples include:

1. **Maple & Carpenter Street Storm Sewer Project; 2009 APWA Project of the Year – V3 Team saved the Village of Downers Grove \$700,000** by identifying an alternative storm sewer alignment for the 11 foot diameter storm sewer which carries the St. Joseph Creek. A specialty concrete structure was re-designed and re-located to avoid costly roadway impacts, improve safety and improve long term maintenance, while accomplishing the goal of the project and providing significant cost savings.
2. **Mayfair Reservoir Expansion – V3 Team saved the Village of Westchester \$550,000** by identifying a local golf course/landfill that was only 1.5 miles from the construction site and willing to accept 57,000 cubic yards of disposal material. V3 also identified significant cost savings by designing the 42 inch relief sewer within the parkway and minimizing trench backfill and haul-off.
3. **West Branch Forest Preserve Restoration – V3 Team saved DuPage County \$400,000** by identifying bypass channel construction alternatives which could be accomplished under the USACE and IDNR-OWR permit criteria, instead of the pumping, which was proposed. V3 designed a membrane lined channel to efficiently convey overflows from the West Branch DuPage River around the construction area without significant costs of running and manning a pumping operation during storm events.

Our Engineers and Professional Cost Estimators bring a history of developing cost-saving solutions to every project.



PROJECT UNDERSTANDING & APPROACH

PHASE III CONSTRUCTION ENGINEERING PROJECT UNDERSTANDING

V3's construction engineering team of more than 60 professionals provides public sector construction management experience to effectively manage and coordinate the construction. Our resident engineers and surveyors take the responsibility as representatives of the Village very seriously, focusing on communication, developing inclusive solutions to achieve acceptable results to all parties involved.

Our Resident Engineer will be included in the project during the design phase, which will provide continuity throughout the project. V3's experience working on similar projects allows problems to be anticipated and develop solutions before the project budget and schedule is impacted. The main challenges to be addressed during construction include:

- Public Outreach
- Access to Private Property
- Vehicular and Pedestrian Traffic Control
- Construction Cost and Schedule Management

V3's approach to each of these challenges during construction is described in the following paragraphs.

Public Outreach

V3 will maintain contact with Village staff throughout construction to advise them of the progress on the project as well as cost or quality related issues that may develop. We will maintain daily contact with the contractor to determine work schedules, paving and concrete placement dates, and adherence to the overall project schedule. V3 provides the skillset to identify construction related concerns, communicate those concerns to the appropriate parties, and help coordinate satisfactory solutions.

During construction, the Resident Engineer will utilize extensive community outreach to keep the public well informed of upcoming work, manage expectations, and alleviate concerns. The scope of the work requires familiarity with storm sewer, combined sewer, sewer lining, water main, and trenchless pipe installation and the ability to recognize the impacts of their construction to pedestrians and vehicle traffic flow in a highly congested area. V3 will continue our approach to public outreach used in the design phase during construction. We anticipate the following public outreach activities during construction:

- **Public Meeting** – Once a contractor has been selected by the Village, a public meeting may be provided to discuss the detailed construction schedule with the stakeholders and discuss the construction sequence of the proposed improvements.
- **Project Website** – V3 will continue to update the project website created during the design phase with updates on the construction schedule, notices to property owners and commuters, construction photos, and other pertinent information.
- **On-site Meetings** – When residents or business owners have concerns that are more easily discussed on-site, our Resident Engineer will be available to meet with them on-site to discuss their concerns.

V3 will be responsible to assist the Village in pre-construction services, including public coordination efforts with local stakeholders. The proximity of the work to Metra and CTA rail lines, local businesses, and high rises will require a coordinated plan of construction that should minimize impacts to commuters and residents alike.



PROJECT UNDERSTANDING & APPROACH

Access to Private Property

Construction staging is essential for the multi-family residential buildings and businesses with driveways along North Boulevard. Our Resident Engineer will work with the Village and stakeholders to maintain access to private properties. During construction, the Resident Engineer will notify businesses and multi-family properties in advance of any temporary driveway closures.

In order to facilitate access, North Boulevard may require two-way traffic for local access only. Through traffic may be restricted due to construction operations within a tight corridor requiring multiple utility installations. High rises containing multiple driveways provide options for construction staging which will enable unrestricted access. Other locations, such as the parking garage for 100 Forest Place, may require alternative parking arrangements for limited time periods, during peak construction activities near their entrances.



Figure 7. Construction Photo of Similar Project. Our Resident Engineers are accustomed to working with private property owners to maintain access during construction taking place within the right-of-way as shown above.

If the point repairs on South Boulevard are no longer able to be lined and require excavation, additional outreach will be required to Service King Collision Repair Service Center to determine best methods of ingress/egress to their two garage doors.

V3 will maintain a list of contact information for all stakeholders within the project limits to improve communication and coordination during construction. Our Resident Engineer will visit each business prior to construction operations that impact access to their property.

Vehicular & Pedestrian Traffic Control

Providing parking capacity, vehicular access and pedestrian access are key challenges that must be addressed during construction. Additionally, the CTA has a summer bus route on Clinton Avenue that may need to be re-routed during construction. V3 will work with the contractor to develop a plan that addresses these issues prior to construction.

A potential option may be to limit working hours for the lining operation along South Boulevard from 9:00 AM to 3:00 PM. This would alleviate the impact to commuters near the rail station during the morning and evening rush hours.

Construction Cost & Schedule Management

Based on plans being let on July 6, 2017, construction is anticipated to begin by August 21, 2017. Time will be of the essence to meet the November 22, 2017 substantial completion date. Punch list and miscellaneous items, such as landscaping, will be completed in the spring of 2018. Our Resident Engineer and Cost Estimators will be included in the design process to evaluate proposed materials based on actual recent bids and product availability. Considering this information during the design process will reduce delays and material costs during construction. During the construction phase, V3 will communicate critical deadlines to the contractor and coordinate early with utility companies. We anticipate the contractor will need to use multiple crews to meet the substantial completion date.

Our Resident Engineer has extensive experience measuring and documenting quantities. Accurate measurement and documentation of quantities, especially underground materials, is critical when reviewing pay requests from the contractor. V3 will work with the contractor throughout construction to come to an agreement on quantities at the end of each day.



PROJECT UNDERSTANDING & APPROACH

Weekly progress meetings will be held with V3, Village staff, and the contractor. V3 will lead these meetings where we will discuss:

- Adherence to the project schedule
- Projected work
- Cost Status
- Change orders
- Pay requests
- Resolution of Potential Issues

V3's COMMITMENT TO SUCCESS

We understand that the needs of a municipality can vary day-to-day. Our approach to providing municipal engineering services to the Village of Oak Park is to provide the Village well-rounded municipal engineers who are supported by experts in each of our service areas. As with all of our clients, we are fully committed to providing the services, products, and value to our clients in accordance with our core values of integrity, commitment to excellence and focus on our client's needs. V3 has adopted a project controls program that centers on the following goals:

- Understanding our clients' requirements and objectives
- Providing a high level of client service
- Delivering projects efficiently and cost effectively
- Striving to perform each task accurately the first time
- Providing services in accordance with the highest standard of care in the industry

This program defines the V3's commitment to success for services provided to our clients. We look forward to providing this commitment to the Village of Oak Park.



SCOPE OF WORK

PHASE I & II ENGINEERING SERVICES

A. Preliminary Environmental Site Assessment (PESA)

The scope of work for the PESA will include the following:

1. Environmental Record Review: Review available State and federal lists and regulatory databases pertaining to identified or potential sites with known or potential contamination, or operations that pose a risk of impact to the project site.
2. Historical Record Review: Investigate past land uses through review of available Sanborn fire insurance maps, city directories, historical aerial photographs and topographic maps.
3. Interviews: To the extent practicable, interview operators and occupants (if identified), current property owners, and local individuals to inquire about potential environmental concerns.
4. Site Visit: Conduct a site reconnaissance and record observations of project site conditions, activities, and operations that could impact the project site.
5. Project Report: Upon completion of the above noted tasks, prepare a report that discusses site observations, site history, and provides findings, opinions, and conclusions and that includes, photos, and exhibits. V3 will provide a separate pdf file of the PESA and 3 bound hard copies to the Village along with hardcopies of an executive summary of the PESA which contains a summary of risk findings. V3 will submit a GIS shapefile and pdf printout showing potentially impacted properties within one block of the project location (Lake Street from Harlem to Austin) with known RECs color coded based on level of risk associated with the REC's. V3 will supply a DVD or flash drive with pdf files of environmental documents obtained through regulatory file review process (i.e. -FOIAs, IEPA, EPA searches) organized in folders by street address.
6. Oversight and review PSI and determine contract pay items and quantities to address any identified contaminated soils.

B. Public Involvement

V3 will assist the Village with conducting two open meetings during Phase I and Phase II. Key stakeholders will be invited to meet with Village staff and V3 to discuss access and their concerns. V3 will prepare the materials and exhibits. It is our understanding that the Village will be responsible for posting the notice and making the arrangements for the meeting room. V3 will also create and maintain a project website updating residents on contract document progress, schedules and parking and traffic closures or detours.

C. Final Engineering Drawings and Specifications

All plans and specifications will be prepared in accordance with IDOT and Village standards and guidelines. V3 will review the plan for conformance to the Complete Streets Checklist. Plan and specification submittals to the Village are anticipated at the 75%, 90% and contract document stages for the project. The following contract documents will be prepared in accordance with Village and MWRD standards:

- Special Provisions/Bid Documents with bid alternates as described
- Engineer's Estimate of Probable Construction Cost
- 75%, 90% and contract document Engineering Plans at 1:20 scale and profiles at 1:10 or 1:5 scale. The engineering plans will consist of the following sheets:
 - Cover Sheet
 - General Notes, Commitments, State Standards and Index of Sheets
 - Summary of Quantities
 - Existing and Proposed Typical Sections
 - Schedules of Quantities
 - Alignment, Ties and Benchmarks
 - Maintenance of Traffic Notes, Typical Sections



SCOPE OF WORK

- Maintenance of Traffic Plan
- Existing Conditions and Removals
- Plan (1"=20' horizontal scale) and Profile (1"=10' or 1":5' vertical scale)
- Drainage and Utilities (1"=20' horizontal scale, 1"=10' vertical scale)
- Drainage Details
- Erosion and Sediment Control
- Pavement Marking and Signing
- ADA Ramp Details
- Structural Details
- Streetscaping and Landscaping Plans and Details - Alternate
- Lighting Plans and Details - Alternate
- Watermain Plans and Details
- Construction Details

Deliverables - All of the tasks described in the RFP scope of services will be performed. The primary deliverables include:

- One pdf of full size, pre-final and final engineering drawings
- One pdf of the special provisions
- Up to two Contract addendums
- Bid tabulations and recommend construction contract award memo
- CAD design files of the proposed improvements in Microstation format

D. Project Administration/Management

The following administrative and management tasks will be required to complete this project:

- Prepare a project work plan which addresses schedule, deliverables, staffing, communication procedures and invoicing/progress reporting procedures
- Project administration set up tasks
- Internal project team meetings
- Contract administration and budget control
- Invoice and billing reviews (including progress reports)

E. Utility Coordination / Permitting

The following utility coordination and permitting are anticipated during the Phase I and II of the project:

- Prepare and submit a water main permit to the IEPA for any water main relocations or extensions that would be necessary for the project.
- Prepare and submit a permit application to MWRD for sewer system improvements.
- Prepare and submit a sanitary sewer permit to the IEPA for any sanitary sewer relocations or extensions that would be necessary for the project.
- Prepare and submit a Union Pacific Railroad permit for the proposed combined sewer under Clinton Avenue
- Prepare and submit an application for approval by the State Historic Preservation Office
- Coordinate with ComEd, AT&T, CTA, Metra, Union Pacific and Nicor

F. Meetings and Field Checks

The following meetings are anticipated during the Phase I and II of the project:

- V3 will review the topographic survey during a site visit. Where possible the V3 team will observe the condition of the storm manholes.
- Phase I and II project kick off meetings with the Village of Oak Park Engineering Division
- Meetings with the Village staff, individual businesses and districts, and major stakeholders (4 meetings assumed)



SCOPE OF WORK

G. QA/QC

A quality assurance/quality control program will be prepared and implemented throughout the duration of the project. Applicable checklists will be utilized for each submittal to the Village during Phase I and II.

Assumptions and Exclusions

The following assumptions and exclusions used in preparing this proposal are presented below. If any of these tasks are required, or the assumptions presented below change during the course of the project, they will be subject to additional services or separate agreements.

1. Survey services are not included.
2. Wetland, archaeological, or environmental consulting services, other than specifically listed in the scope of work is not included.
3. Structural engineering services, other than specifically listed in the scope of work are not included.
4. Design services, modeling, or permitting associated with work within any existing floodplain, floodway, or wetlands are not included.
5. Private utility improvements, extensions or relocations to eliminate conflicts with the proposed improvements are not included. V3 will coordinate this work with the respective utility owner and include it on the plans. Each utility owner will be responsible for the design of their own facility.
6. Items related to right-of-way acquisition, additional coordination, and unforeseen activities are not included.
7. It is assumed that any permit fees will be considered a reimbursable expense.
8. Landscape design services are not included.
9. Geotechnical design or consulting services are not included.
10. V3 will not be responsible for completing a Preliminary Site Investigation (PSI) for this project. V3 will only be responsible for developing the scope of work required.
11. The number of meetings specified in the scope of work is estimated. If additional meetings are required for extra design scope outside of the original intent of the project, then V3 will be entitled to additional fee.
12. Noise analysis, Section 4(f) evaluation or Section 106 statement are not included

PHASE III CONSTRUCTION ENGINEERING SCOPE OF WORK

Task 1 – Pre Construction Phase Services

- Perform a constructability plan review of final documents to identify potential conflicts or issues that may affect the construction schedule or budget.
- Perform a field inspection to ensure current field conditions are reflective of the contract plans.
- Provide digital existing condition photographs to document existing site conditions.
- Establish channels of communications with all stakeholders, including individual schools and emergency responders.
- Schedule, lead and prepare minutes for the pre-construction meeting.
- Coordinate contact information for all responsible parties.
- Lead community meetings with each business district.

Task 2 – Construction Phase Services

Once the pre-construction meeting has been held V3 will provide the following:



SCOPE OF WORK

- Review and process submittals for approval.
- Review each location with the Contractor and verify no additional utility coordination will be required to perform the work.
- Coordinate construction with utilities, railroads, and MWRD.
- Coordinate construction with Pace and CTA using Forest Avenue and South Boulevard.
- Review the Contractor's submitted Project Schedule, and provide recommendations to the Village for revisions or approval.
- Work beside Village personnel to draft construction notification letters for distribution to potential impacted parties.
- Utilizing channels of communication established earlier, continue to coordinate project status with schools, Village departments, and emergency responders that may be impacted by construction staging and changes in the MOT.
- Coordinate loss of parking impact with the Village of Oak Park Parking Services Department and prepare parking passes for distribution.
- Maintain a 24-hour emergency contact to be coordinated with the Contractor.
- Prepare CCDD forms for project sites for signature by the Village.
- Provide project oversight by a Resident Engineer.
- Provide full time inspection of Contractor's work with an IDOT documentation certified inspector. The onsite inspector will be capable and available to answer all stakeholder questions and concerns, record regular on-site observations, and ensure completion of the work in accordance with contract documents.
- Oversee proof rolling of subgrade prior to pavement construction to determine the areas of unsuitable soil replacement. Provide estimated contract quantities for removal and replacement of unsuitable soil with recommendations to the Village.
- Measure and document all quantities in accordance with IDOT procedures.
- Maintain the project diary and daily inspection reports throughout construction.
- Provide digital photographs of construction to document progress or damages inflicted by Contractor methods.
- Coordinate and conduct weekly progress status meetings with Contractor and Village of Oak Park. Distribute meeting minutes to those in attendance within 7 days of the meeting.
- Require the Contractor to provide two-week look-ahead schedules, in order to coordinate public notice and plan ahead for the work.
- Provide weekly construction updates to the Village.
- Confirm the approved materials are being utilized on the project prior to any payments.
- Provide material testing services for jointed concrete pavements at viaducts.
- Prepare and submit monthly pay estimates.
- No additional work will be authorized without the written confirmation from the Village of Oak Park.

Task 3 – Final Close-out Services

- Confirm final quantities with the Contractor.
- With Oak Park present, perform a final inspection of completed work, and issue both working and final punch lists to the Contractor, to resolve prior to final payments.
- With Village concurrence, issue acceptance of the work upon satisfactory completion of all noted items.
- Prepare and submit the final pay request.
- Provide as-built drawings in CAD and pdf formats.
- Submit final papers to Village suitable for project closeout; submit job box and copies of electronic files to Village.



SCOPE OF WORK

Assumptions and Exclusions

The following assumptions and qualifications were made by V3 in preparing the scope, fee and schedule for the project. If any of these conditions change throughout the project, V3 may be entitled to additional services. We will notify the Village as soon as possible if we foresee project conditions changing.

- Traffic control will be provided by IDOT standard only.
- The project will be locally let by the Village. It is assumed that the Village has submitted the request and received IDOT approval to locally let the project.
- Post design services outside what is presented here in is not included.
- Meetings in addition to those specified above are not included.
- Structural design engineering services here in are not required for this project.



DELIVERABLE EXPECTATION DOCUMENT

DELIVERABLES

The following deliverables will be provided to the Village.

- A PDF and hard copy of the approved Complete Streets Checklists at each intersection.
- For the 75%, and 90% submittal a PDF copy of the plans and specifications will be submitted to the Village.
- For the final submittal a PDF copy of the plans and specifications will be submitted to the Village.
- One CD containing the electronic files (Microstation) of the plans will be submitted to the Village.

PROJECT GUIDELINES, CRITERIA & STANDARDS

All work for this contract shall be in accordance to the following documents.

- The Standard Specifications for Water and Sewer Main Construction in Illinois
- IDOT Standard Specifications for Road and Bridge Construction
- IDOT Bureau of Local Roads Manual
- Manual on Uniform Traffic Control Devices

SCHEDULE

The tentative schedule for project milestones is as follows:

- Notice to Proceed – May 1, 2017
- Project kickoff meeting with Village & IDOT – week of May 1, 2017
- Final Plan Submittal – July 5, 2017
- Plans & Specifications Available for Pickup – July 6, 2017
- Bidding Period – July 20, 2017 to August 7, 2017
- Begin Construction – August 21, 2017
- Construction Complete – Spring 2018

A detailed schedule will be provided to the Village upon award of the contract and will be updated throughout the course of the project.



RESPONDENT CERTIFICATION

PROPOSAL SIGNATURE: [Signature]
State of Illinois
County of Dupage
Robin L. Petroelje
TYPE NAME OF SIGNEE

being first duly sworn on oath deposes and says that the Respondent on the above proposal is organized as indicated below and that all statements herein made on behalf of such Respondent and that this deponent is authorized to make them, and also deposes and says that he has examined and carefully prepared their bid proposal from the Contract Exhibits and Specifications and has checked the same in detail before submitting this proposal or bid; that the statements contained herein are true and correct.

Signature of Respondent authorizes the Village of Oak Park to verify references of business and credit at its option.

Signature of Respondent shall also be acknowledged before a Notary Public or other person authorized by law to execute such acknowledgments.

Dated 3/30/2017

V3 Companies of Illinois, Ltd.
Organization Name
By Robin L. Petroelje
Authorized Signature
7325 Janes Avenue, Woodridge, IL 60517
Address
630-724-9200
Telephone

(Seal - If Corporation)

Subscribed and sworn to before me this 30th day of March, 2017.

In the state of Illinois
County of DuPage
My Commission Expires: 10/25/2017
(Fill Out Applicable Paragraph Below)

[Signature]
Notary Public



(a) Corporation

The Respondent is a corporation, which operates under the legal name of V3 Companies of Illinois, Ltd. and is organized and existing under the laws of the State of Illinois.

The full names of its Officers are:

President Robin L. Petroelje
Secretary Louis J. Gallucci

Treasurer Patrick R. Kennedy

The corporation does have a corporate seal. (In the event that this bid is executed by a person other than the President, attach hereto a certified copy of that section of Corporate By-Laws or other authorization by the Corporation which permits the person to execute the offer for the corporation.)

(b) Partnership

Name, signature, and addresses of all Partner

The partnership does business under the legal name of _____ which name is registered with the office of _____ in the county of _____ in the state of _____.

(c) Sole Proprietor

The Respondent is a Sole Proprietor whose full name is _____.
If the Respondent is operating under a trade name said trade name is _____ which name is registered with the office of _____ in the county of _____ in the state of _____.

Signed _____
Sole Proprietor

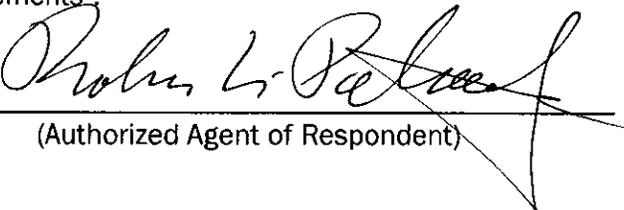


Attachment I.

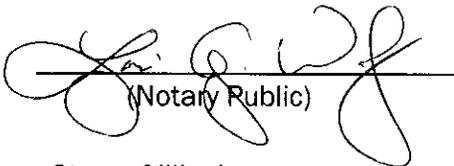
RESPONDENT CERTIFICATION

V3 Companies of Illinois, Ltd., as part of its bid on a contract for
(name of Respondent)

Professional Environmental Services for providing professional environmental services for phase III environmental oversight for 932-46 and 970 Madison Street Demolition to the Village of Oak Park, hereby certifies that said Respondent is not barred from bidding on the aforementioned contract as a result of a violation to either Section 33E-3 or 33E-4 of Article 33E of Chapter 38 of the Illinois Revised Statutes or Section 2-6-12 of the Oak Park Village Code relating to "Bidding Requirements".

By: 
(Authorized Agent of Respondent)

Subscribed and sworn to
before me this 30th day
of March, 2017.


(Notary Public)

State of Illinois
County of DuPage





Robin L. Petroelje _____, being first duly sworn, deposes and says:

that he/she is Chief Executive Officer _____ of (partner, officer, owner, etc.)

V3 Companies of Illinois, Ltd. _____ (bidder selected)

The individual or entity making the foregoing proposal or proposal certifies that he/she is not barred from entering into an agreement with the Village of Oak Park because of any delinquency in the payment of any tax administered by the Department of Revenue unless the individual or entity is contesting, in accordance with the procedures established by the appropriate revenue act, liability for the tax or the amount of the tax. The individual or entity making the proposal or proposal understands that making a false statement regarding delinquency in taxes is a Class A Misdemeanor and, in addition, voids the agreement and allows the municipality to recover all amounts paid to the individual or entity under the agreement in civil action.

Handwritten signature of Robin L. Petroelje

By: Its:

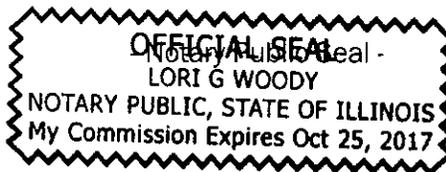
Robin L. Petroelje

(name of bidder if the bidder is an individual) (name of partner if the bidder is a partnership) (name of officer if the bidder is a corporation)

The above statement must be subscribed and sworn to before a notary public.

Subscribed and sworn to before me this 30th day of March, 2017.

Notary Public's Signature State of Illinois County of DuPage



Minority Business and Women Business Enterprises Requirements

The Village of Oak Park in an effort to reaffirm its policy of non-discrimination, encourages and applauds the efforts of bidders and subConsultants in taking affirmative action and providing Equal Employment Opportunity without regard to race, religion, creed, color, sex, national origin, age, handicap unrelated to ability to perform the job or protected veteran's status.

Reporting Requirements

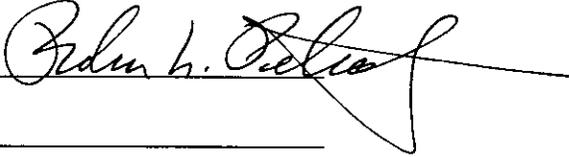
The following forms must be completed in their entirety, notarized and included as part of the proposal document. Failure to respond truthfully to any question on the list or failure to cooperate fully with further inquiry by the Village of Oak Park will result in disqualification of your proposal.



Please fill out the applicable section:

A. Corporation:

The Consultant is a corporation, legally named V3 Companies of Illinois, Ltd. and is organized and existing in good standing under the laws of the State of Illinois. The full names of its Officers are:

President Robin L. Petroelje 

Secretary Louis J. Gallucci

Treasurer Patrick R. Kennedy

Registered Agent Name and Address: John M. Wiora- 7325 Janes Avenue, Woodridge IL 60517

The corporation has a corporate seal. (In the event that this Bid is executed by a person other than the President, attach hereto a certified copy of that section of Corporate By-Laws or other authorization by the Corporation that permits the person to execute the offer for the corporation.)

B. Sole Proprietor:

The Consultant is a Sole Proprietor. If the Consultant does business under an Assumed Name, the

Assumed Name is _____, which is registered with the Cook County Clerk. The Consultant is otherwise in compliance with the Assumed Business Name Act, 805 ILCS 405/0.01, et. seq.

C. Partnership:

The Consultant is a Partnership which operates under the name _____

The following are the names, addresses and signatures of all partners:

_____	_____
_____	_____
Signature	Signature

(Attach additional sheets if necessary.) If so, check here _____.

If the partnership does business under an assumed name, the assumed name must be registered with the Cook County Clerk and the partnership is otherwise in compliance with the Assumed Business Name Act, 805 ILCS 405/0.01, et. seq.

D. Affiliates: The name and address of any affiliated entity of the business, including a description of the affiliation: _____

Signature of Owner



Attachment IV. Compliance Affidavit

I, Robin L. Petroelje being first duly sworn on oath depose and state as follows:
(Print Name)

1. I am the (title) Chief Executive Officer of the Proposing Firm ("Firm") and am authorized to make the statements contained in this affidavit on behalf of the Firm.
2. The Firm is organized as indicated on Exhibit A to this Affidavit, entitled "Organization of Proposing Firm," which Exhibit is incorporated into this Affidavit as if fully set forth herein.
3. I have examined and carefully prepared this proposal based on the Request for Proposals and verified the facts contained in the proposal in detail before submitting it.
4. I authorize the Village of Oak Park to verify the Firm's business references and credit at its option.
5. Neither the Firm nor its affiliates³ are barred from proposing on this project as a result of a violation of 720 ILCS 5/33E-3 or 33E-4 relating to bid rigging and bid rotating, or Section 2-6-12 of the Oak Park Village Code related to "Proposing Requirements".
6. The Proposing Firm has the M/W/DBE status indicated below on the form entitled "EEO Report."
7. Neither the Firm nor its affiliates is barred from agreement with the Village of Oak Park because of any delinquency in the payment of any debt or tax owed to the Village except for those taxes which the Firm is contesting, in accordance with the procedures established by the appropriate revenue act, liability for the tax or the amount of the tax. I understand that making a false statement regarding delinquency in taxes is a Class A Misdemeanor and, in addition, voids the agreement and allows the Village of Oak Park to recover all amounts paid to the Firm under the agreement in a civil action.
8. I am familiar with Section 13-3-2 through 13-3-4 of the Oak Park Village Code relating to Fair Employment Practices and understand the contents thereof; and state that the Proposing Firm is an "Equal Opportunity Employer" as defined by Section 2000(E) of Chapter 21, Title 42 of the United States Code Annotated and Federal Executive Orders #11246 and #11375 which are incorporated herein by reference. **Also complete the attached EEO Report or Submit an EEO-1.**
9. I certify that the Consultant is in compliance with the Drug Free Workplace Act, 41 U.S.C.A, 702.

³ Affiliates means: (i) any subsidiary or parent of the bidding or contracting business entity, (ii) any member of the same unitary business group; (iii) any person with any ownership interest or distributive share of the bidding or contracting business entity in excess of 7.5%; (iv) any entity owned or controlled by an executive employee, his or her spouse or minor children of the bidding or contracting business entity.

Signature: *Robin L. Petroelje*

Printed Name Robin L. Petroelje

Name of Business: V3 Companies of Illinois, Ltd.

Your Title: Chief Executive Officer

Business Address: 7325 Janes Avenue, Woodridge, IL 60517

(Number, Street, Suite #)

(City, State & Zip)

Telephone: 630-724-9200

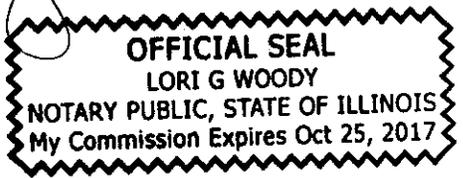
Fax: 630-724-9202

Web Address: v3co.com

Subscribed to and sworn before me this 30th day of March, 2017.

Lori G. Woody
Notary Public

State of Illinois
County of DuPage



M/W/DBE STATUS AND EEO REPORT

1. Consultant Name: V3 Companies of Illinois, Ltd.

2. Check here if your firm is:

- Minority Business Enterprise (MBE) (A firm that is at least 51% owned, managed and controlled by a Minority.)
- Women's Business Enterprise (WBE) (A firm that is at least 51% owned,

Failure to respond truthfully to any questions on this form, failure to complete the form or failure to cooperate fully with further inquiry by the Village of Oak Park will result in disqualification of this Bid. For assistance in completing this form, contact the Department of Public Works at 708-358-5700.

- managed and controlled by a Woman.)
- Owned by a person with a disability (DBE) (A firm that is at least 51% owned by a person with a disability)
- None of the above

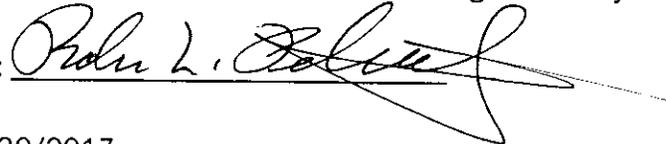
[Submit copies of any W/W/DBE certifications]

3. What is the size of the firm's current stable work force?

173 Number of full-time employees

8 Number of part-time employees

4. Similar information will be requested of all subConsultants working on this agreement. Forms will be furnished to the lowest responsible Consultant with the notice of agreement award, and these forms must be completed and submitted to the Village before the execution of the agreement by the Village.

Signature: 

Date: 3/30/2017



UNITED STATES | HAITI | CANADA

V3CO.COM | 888.707.2779

VISIO, VERTERE, VIRTUTE ... The Vision to Transform with Excellence



April 27, 2017

Mr. Bill McKenna, Village Engineer
Village of Oak Park
201 South Blvd,
Oak Park, IL 60302

**Re: Revised Project Schedule
17-17 Water and Sewer Main Improvement Project**

Dear Mr. McKenna:

Thank you for meeting with us yesterday to discuss the schedule changes on the North and South Boulevard project. Attached is our updated fee schedule reflecting the new construction schedule.

We anticipate that the notice to proceed (NTP) for our design work will be issued on May 16, 2017, the day following the Village Board meeting. V3 will commence the PESA and design services at that time and propose to have a project kickoff meeting that week with a goal of advertising for bid on August 9. We anticipate Board approval of the low bid contractor on September 18 and the construction contract NTP to be issued by September 25. The contractor will have 9 weeks to complete the Phase 1 improvements by the interim completion date of November 22. This work will include the utility repair and installation. On April 2, 2018 the Phase 2 construction work will begin. The contractor will have 8 weeks to bring the work to substantial completion by May 25. The punchlist work will begin on May 29 with an anticipated final completion by June 22.

This schedule assumes that the utility coordination and permit acquisition are achieved within a timely manner. Our fee anticipates that there will be no construction work during the winter period, between December 1, 2017 and April 1, 2018

Please review the attached fee schedule and contact me with questions or comments at (630) 729-6320 or at vdelmedico@v3co.com.

Sincerely,
V3 COMPANIES

A handwritten signature in black ink, appearing to read "Vince Del Medico".

Vince Del Medico P.E.
Director of Transportation and Municipal Engineering



FEE SUMMARY

As requested in the Village's RFP, a detailed cost proposal is attached. Our approved overhead rate is 159.00% per IDOT's review of our Statement of Experience and Financial Condition (SEFC). Based on the proposed scope of work for the 17-17 Water and Sewer Main Improvement Project in Oak Park project, provided below is a summary of V3's proposed "Not-to-Exceed" fees.

Professional Engineering Services for Design (Phase I and II)	\$ 75,711.06
Professional Engineering Services for Construction Engineering (Phase III)	\$ 131,790.84
<i>Streetscape Design Alternate</i>	\$ 1,872.63
<i>Lighting Design Alternate</i>	\$ 3,674.44
TOTAL PROJECT FEE	\$213,048.96