Agenda
Village of Glen Ellyn
Capital Improvements Commission Special Meeting
Wednesday, February 15, 2023
7:00 PM
Glen Ellyn Civic Center, Room 301

Any individual with a disability requiring a reasonable accommodation in order to participate in a meeting should contact The Village of Glen Ellyn ADA Coordinator, 630-469-5000, at least five (5) business days in advance of the next scheduled meeting. All matters on the Agenda may be discussed, amended, and acted upon.

A. Call to Order

B. Public Comment (Non Agenda Items)

C. Approval of Minutes

1) Motion to approve the December 6, 2022 Capital Improvements Commission Meeting Minutes

D. Current Business

1) Metra Station and Multimodal Access Improvements Project - Project Update and Phase II Engineering Services

2) Central Business District Streetscape and Utility Improvements Project - Project Update and Phase III Engineering Services

E. Trustee's Report

F. Other Business

G. Public Works Report

H. Project Report

1) Engineering Project Activity Report Dated February 10, 2023

I. Adjournment

Glen Ellyn Capital Improvements Commission
535 Duane Street
Glen Ellyn, IL 60137

Meeting 2/15/2023 7:00 PM
Department: Public Works
Department Head:
Category: Minutes
Prepared By: Rich Daubert

AGENDA ITEM (ID # 2023-169) **DOC ID: 2023-169**

Motion to approve the December 6, 2022 Capital Improvements Commission Meeting Minutes

Statement of the Issue:
The draft meeting minutes for the December 6, 2022 Capital Improvements Commission Meeting are attached hereto for review and consideration of approval.

Analysis:

Budget Impact:

Contribution to Strategic Plan (if applicable)

Action Requested:

Attachments:
1. CIC Meeting Minutes December 6 2022 - Draft

Village of Glen Ellyn

DRAFT

Meeting Minutes
Village of Glen Ellyn
Capital Improvements Commission
Special Meeting
December 6, 2022
7:00 PM
Glen Ellyn Civic Center Room 301

Board or Commission: Capital Improvements

Date: December 6, 2022

Meeting: Regular

Called to Order: 7:01 p.m.

Quorum: Yes

Adjourned: 8:50 p.m.

Member Attendance:

Steve Szymanski	Chairman	Present
Joel Baldin	Commissioner	Present (to 7:30)
Joshua Cattero	Commissioner	Absent
Arthur Foerster	Commissioner	Present
Orion Galey	Commissioner	Present
Michael Lindquist	Commissioner	Present
Adil Saeed	Commissioner	Present
Jill Ziegler	Commissioner	Absent
Rocco Zucchero	Commissioner	Present
Bill Payne	Trustee Liaison	Present
Richard Daubert	Staff Liaison/Professional Engineer	Present

Also Present:

Dave Buckley	Public Works Director
Steven Fessenbecker	AECOM

A. CALL TO ORDER

The December 6, 2022 Meeting of the Capital Improvements Commission was called to order by Chairman Szymanski at 7:01 PM at the Glen Ellyn Civic Center.

B. PUBLIC COMMENT – None

C. APPROVAL OF MINUTES

APPROVAL OF OCTOBER 11, 2022 CAPITAL IMPROVEMENTS COMMISSION MEETING MINUTES

MOTION TO APPROVE MINUTES FROM OCTOBER 11, 2022 CAPITAL IMPROVEMENTS COMMISSION MEETING

MOTION BY: Commissioner Zucchero

SECOND BY: Commissioner Lindquist

RESULT: UNANIMOUS APPROVAL

D. CURRENT BUSINESS

1. Consultant Engineering Services for Multi-Year Utility and Roadway Improvements – Engineer Daubert overviews the current business at hand. He notes that the Village has traditionally retained consultants for engineering design services for the Village's utility and roadway improvements projects on a project specific basis. This tends to be on an annual basis with one firm retaining for more limited scope street improvement projects, another firm for more reconstruction projects, and additional firms for federal aid and standalone utility projects.

   Engineer Daubert notes that staff has developed an improved process to procure services more efficiently as well as more effectively manage the Village's roadway assets. He notes that in summary, staff issued an RFP to retain a firm to design up to five years of Village Roadway projects that have overlapping utility improvements. The firm will also help staff maintain and manage the Village's pavement management system. This system will allow the Village to dynamically manage the roadway program and make more informed decisions on the planning of pavement maintenance and rehabilitation work. Engineer Daubert notes that this is especially important in terms of the Capital Plan having many priorities with limited funding.

   Engineer Daubert notes that the RFP process yielded AECOM as the recommended firm for the consultant services. He notes that he has direct experience with the firm on similar assignments including the recent pavement management study that was conducted by CMAP. He notes that Steven Fessenbecker, Project Manager with AECOM, is here tonight to give a presentation on their approach to the assignment. Engineer Daubert turns the presentation over to Steven Fessenbecker.

   Steven Fessenbecker kicks off the presentation in the packet. He overviews the key personnel including himself. He notes his ties to the area having grown up in Glen Ellyn with parents that still live in the Community. Steven notes that the AECOM team includes a pavement management expert Abbas Kachwalla who will lead the pavement management services. He overviews the firm experience in delivering similar assignments for the Village of Schaumburg and City of Des Plaines. He notes that he and the firm have worked with the Village staff on

several recent projects such as the Montclair-East-Davis-Smith Turner project in 2017 as well as other past projects including the Lambert Road rehabilitation project which AECOM was successful in helping the Village secure outside funding for. He overviews the firm's experience with the CMAP Pavement Management Program. Fessenbecker notes that he and the firm have worked closely with staff and understand their expectations with specifications, utility construction, and communication. He notes that the firm has the ability to meet the Village's aggressive schedules for the assignment as it relates to getting the 2023 street program ready for bidding. He notes that the AECOM team is also working with staff to review opportunities to improve the pavement management system and practices such as reviewing alternative pavement cross sections for street resurfacing. Steve closes the presentation and questions are taken from the CIC.

Commissioner Galey inquired about the firm's approach towards the federal aid projects and ability to hit deadlines. Steven Fessenbecker noted that the firm is ready to get going on the assignment and apply for the grants. Engineer Daubert elaborates that the goal is to apply for the 2024 STP call for projects with the federal aid projects far enough along to demonstrate readiness. Daubert notes that full design approval will likely not be in place at that time.

Commissioner Galey inquired about how staff approaches holding Engineers accountable for their proposal fees. Engineer Daubert notes that part of its RFP process involves reviewing not just the fee but also the hours that the firms have allocated towards the project. He notes that staff wants to ensure that appropriate hours are allocated to deliver the design work expected by the Village. He also notes that the proposals are a starting point and that follow up discussions are had with firms to ensure that all needed scope and associated costs are accounted for. Additional services were negotiated with AECOM associated with sidewalk improvements, structure inspections, sewer televising review, the reconstruction of Bemis Road which AECOM originally anticipated as a resurfacing, as well as drainage improvements on Kenilworth Avenue and Cottage Avenue.

Commissioner Zucchero notes that he is supportive of the recommendation. He notes that if you take out the low and high proposals, AECOM's hours are in line with the other proposals.

Chairman Szymanski notes that he understands the philosophy and the need to look at the project from several perspectives. He then asks the Commissioners if they're supportive of the process. Commissioners Zucchero, Foerster, Galey, Lindquist acknowledge their support of the process. Commissioner Saed notes he would like to think about it a little more.

Engineer Daubert notes that staff would like a recommendation from the CIC to present to the Village Board along with its recommendation. Chairman Szymanski asks if there is support for the motion. Commissioner Galey notes he abstains from voting on the motion. Commissioner Lindquist makes the motion with Commissioner Zucchero seconding it. The motion is approved by all present except for Galey who abstains and Baldin who was not present at the time as he left the meeting at 7:30 pm.

MOTION TO RECOMMEND THAT THE VILLAGE RETAIN AECOM TECHNICAL SERVICES, INC. OF LOS ANGELES, CALIFORNIA IN THE NOT-TO-EXCEED AMOUNT OF $1,090,849 FOR ENGINEERING CONSULTING SERVICES FOR THE VILLAGE'S MULTI-YEAR UTILITY AND ROADWAY IMPROVEMENTS PROJECT INCLUDING ALTERNATES 1, 2, AND 3 TO BE EXPENSED TO THE CAPITAL PROJECTS AND WATER & SEWER FUNDS.

MOTION BY: Chairman Lindquist

SECOND BY: Commissioner Zucchero

ABSTAIN: Commissioner Galey

RESULT: APPROVAL

E. TRUSTEE'S REPORT – Trustee Payne reports the Village Board has been focused on working through the 2023 Budget with no other major updates.

F. OTHER BUSINESS – None

G. PUBLIC WORKS REPORT – Public Works Director Buckley provided a brief update on department staffing and operations.

H. PROJECT REPORT – Engineer Daubert provided a brief update on the 2022 Street Improvement and Utility Projects, Central Business District Streetscape and Utility Improvements Project, and Metra Station and Multimodal Access Improvements Projects.

I. ADJOURNMENT – Commissioner Zucchero motions and Commissioner Galey seconds to adjourn the meeting. The motion is unanimously approved, and meeting adjourned at 8:50 p.m.

Submitted and Reviewed by Richard Daubert, Professional Engineer

Glen Ellyn Capital Improvements Commission
535 Duane Street
Glen Ellyn, IL 60137

Meeting 2/15/2023 7:00 PM
Department: Public Works
Department Head:
Category: Commission Recommendation
Prepared By: Rich Daubert

AGENDA ITEM (ID # 2023-170)

DOC ID: 2023-170

Metra Station and Multimodal Access Improvements Project - Project Update and Phase II Engineering Services

Statement of the Issue:
Please see the attached memorandum and its associated attachments pertaining to this agenda item.

Analysis:

Budget Impact:

Contribution to Strategic Plan (if applicable)

Action Requested:

Attachments:
1. February 15 CIC Memo on Metra Station Project Update and Phase II Engineering
2. CDM Smith Phase II Proposal
3. CECS Summary
4. Presentation

MEMORANDUM

TO: Capital Improvements Commission

FROM: Rich Daubert, Professional Engineer

DATE: February 9, 2023

RE: Metra Station and Multimodal Access Improvements
Project Update and Phase II Engineering Services

INTRODUCTION

Phase I Engineering Status

Staff and CDM Smith continue to responsively work through the completion of Phase I Engineering for the Glen Ellyn Metra Station and Multimodal Access Improvements Project. Recent major achievements include the Deputy State Historic Preservation Officer concurring with the Illinois Department of Transportation's Bureau of Design and Environment that the proposed project including the demolition of the existing station house is an adverse effect solely to the depot itself. More specifically, in some cases, the demolition of a property that is eligible for listing in the National Register of Historic Places can be an adverse effect to other eligible or listed properties. In turn, the State was then able to develop a draft Memorandum of Agreement (MOA) which includes measures to mitigate the adverse effect. The measures include:

1. Completing a historic survey of the station depot prior to its demolition
2. Installing interpretative signage and/or plaques that commemorate the history and/or significance of the former depot.
3. Removing the mural located on the north interior wall of the depot and reinstalling it a public space that could include the new depot.

Staff and CDM Smith reviewed the draft MOA and made numerous comments and edits to the document which have been submitted back to the State for their consideration and follow up. The document will ultimately need to be agreed to and executed by IDOT, the Village, and State Historic Preservation Officer. Signoff is also required by Metra Rail and Union Pacific Railroad.

In consort with the above, staff has worked with CDM Smith to refine the proposed site geometrics and grading associated with the preliminary design of the underpass tunnel including its walls, stairs, and ramps. In addition, revised geometrics for the underpass itself are being developed to utilize an alternative construction method based on CDM Smith's recent experience with Union Pacific Railroad on another nearby project involving a similar pedestrian underpass.

CDM Smith is incorporating the Village's latest review comments into revised Type, Size, and Location drawings which are anticipated to be submitted to staff on February 21st.

Cost Estimating Update

CDM Smith and its subconsultant Vistara have developed a revised cost estimate for the overall project including the New Depot, Pedestrian Underpass, Platform and Warming Shelters, Plaza along Crescent Boulevard, as well as the Roadway and Streetscape Improvements along Crescent Boulevard and Forest Avenue. Staff has reviewed the cost estimate and noted specific items that need revision/inclusion in the cost estimate. However, as of most recent the cost estimate is summarized as follows:

Glen Ellyn Metra Station and Multimodal Access Improvements In Progress Construction Cost Estimate				
Item	**2022 Cost**	**Design Contingency**	**Escalation**	**Totals**
Station Depot	$6,445,945	$1,289,175	$1,392,211	$9,127,331
Platform and Warming Shelters	$9,104,923	$1,820,965	$1,966,504	$12,892,392
Plaza	$756,630	$151,324	$163,419	$1,071,373
Underpass Including Ramps and Stairs	$8,658,834	$1,731,748	$1,870,156	$12,260,738
Roadway, Parking, Site Work	$3,873,975	$774,787	$836,711	$5,485,472
Construction Subtotals	$28,840,307	$5,768,000	$6,229,000	**$40,837,000**
Construction Engineering (CE)	-	-	-	**$4,062,500**
Construction Subtotal + CE				**$44,899,500**

Grant Pursuit Update

A tabular summary of the current project grant funding is as follows:

Current Project Grant Funding for Construction and Construction Engineering			
Metra	**State**	**Federal**	**Total**
$4,000,000	$2,000,000	$14,408,806	**$20,408,806**

Staff respectfully notes that these funds remain programmed; i.e. no communication whatsoever has been made to the Village that funds are no longer available due to financial constraints of Metra, the State, or Federal entities.

Staff notes that these grants were secured as part of the initial preliminary engineering work with staff and CDM Smith continually exploring additional grant funding for the project. In this regard, staff stayed apprised of changes in State legislation that increased allowable crossing safety improvement program funding for pedestrian grade separation projects. It accordingly submitted a request for an additional ~$6.2M in State Funding for the underpass component of the project in January. Staff anticipates that the programmed funding will be published sometime in April; i.e. we will learn as to whether or not the Village's request will be fulfilled in whole or in part around that timeframe.

Staff is currently working with CDM Smith on the pursuit of supplemental CMAQ/Shared STP funding with the call for projects open at this time. The exact request for the supplemental funding is being fine-tuned based on a review of the most current eligible construction costs. For illustrative purposes, the draft overall target project funding table including the most current cost for Phase II Engineering is provided below. This table represents what staff is currently targeting for total project funding. It reflects a request for an additional $18,226,818 in funding with $2,000,000 in funding from Metra, $6,226,818 from the State, and $10,000,000 in Federal Funding. However, as indicated above, additional funding opportunities are continually being explored by staff and CDM Smith and the target for outside funding is being refined. Please note that the C&M (Construction & Maintenance)/Lease Agreement is a placeholder with the amount dependent on negotiations with Union Pacific Railroad which will occur during Phase II Engineering.

Draft Overall Targeted Project Funding Table					
Item	**Village**	**Metra**	**State CSIP**	**CMAQ/STP**	**Totals**
Phase I Engineering	$762,754				**$762,754**
Phase II Engineering	$3,971,481				**$3,971,481**
C&M/Lease Agreement	$1,000,000				**$1,000,000**
Construction	$6,199,596	$6,000,000	$7,478,958	$21,158,806	**$40,837,000**
Construction Engineering	$64,640		$747,860	$3,250,000	**$4,062,500**
Totals	**$11,998,471**	**$6,000,000**	**$8,226,818**	**$24,408,806**	**$50,633,735**

SUBJECT

Background

At the support of the Capital Improvements Commission and Village Board, staff has worked with CDM Smith to develop a scope of work and cost estimate of consultant services for the completion of Phase II Engineering which should start in earnest in 2023 to keep the project moving towards construction. The materials have been refined into a proposal and revised cost estimate of consultant services which is attached hereto along with a presentation that will be made to the Capital Improvements Commission at its Special Meeting on February 15th. Staff respectfully requests feedback from the CIC with the goal to refine the proposal and cost estimate of consultant services and present the materials to the Village Board for consideration of approval as soon as the February 27th Village Board Meeting.

Phase II Engineering Summary

In summary, Phase II Engineering involves completing the detailed design of the project including all necessary permissions to bring the project to a state where it can be competitively bid by the Illinois Department of Transportation. More specifically, as part of Phase II engineering, the design team will prepare all required engineering documents according to requirements set forth by the Village of Glen Ellyn, DuPage County, Metra, UPRR and the Illinois Commerce Commission (ICC).

The Phase II Design Scope includes the preparation of final contract plans, specifications, estimates and other associated documents, securing required permits including right-of-way and/or other land use permissions, anticipated value-added Tasks, and QA/QC. The team will coordinate state/federal/ and railroad design approvals to allow subsequent phases of project development. The team will assist the Village of Glen Ellyn with project grant pursuit and management services.

CDM Smith team will follow applicable requirements for preparing plans, specifications and estimates using IDOT District 1 Local Roads and state/federal guidelines and coordinating with the necessary agencies at various levels of design completion.

It is noted that the project includes the design of the new train station, underpass, site improvements, as well as utility and streetscape improvements along Crescent Boulevard and Forest Avenue (both north and south of the tracks).

A specific scope of services has been developed in consultation with staff and is included within the attached proposal.

Personnel Summary

The team that has been assembled by CDM Smith to deliver the assignment includes a highly qualified team of professionals who are well experienced in Civil, Architectural, Structural, Mechanical, Electrical, and Plumbing disciplines. The team has extensive direct experience in the planning, design, and construction of similar federal aid commuter station projects involving the improvements that the Village is pursuing. More specifically, this team is working on the City of Elmhurst's Metra Station project which involves the same major elements as well as involves the same key agencies (IDOT, Union Pacific Railroad, Metra, and Illinois Commerce Commission). The project team organizational chart including the qualifications of key personnel is included in the proposal.

Schedule

A high-level overall schedule for rendered Phase II Engineering is provided in the attached proposal and presentation. In summary, if CDM Smith is given notice to proceed by mid-March, Phase II services will immediately start in earnest with the following major milestones:

Phase II Engineering Milestones	**Deliverable Date**
Notice to Proceed	March 15, 2023
30% Design, Including Agency Review	February, 2024
60% Design, Including Agency Review:	July, 2024
90% Design, Including Agency Review:	December, 2024
IDOT Prefinal Plans Submittal	January 3, 2025
IDOT Final Plans, Specifications, Estimate and Draft Agreements (Funding/CE)	March 3, 2025
IDOT Final CE, RR, Funding Agreement	April 21, 2025
IDOT Letting	June 13, 2025

Contract Fee Model

The assignment is proposed to be delivered through the cost-plus fixed fee model whereby the Village compensates the firm for its Direct Labor, Direct Costs, Overhead, and Fixed Fee. As the goal is to engage appropriately qualified staff to complete the assignment, the main negotiation point is not the direct labor costs or direct costs. Overhead rates and fixed fee are also not traditionally negotiated as they are typically determined by the complexity of the project and the number of subconsultants. For this assignment, CDM Smith originally proposed a Fixed Fee that calculated to 14.2% of the direct labor. Fixed fees are typically around 10-15% of the direct labor with projects of this complexity typically resulting in a fixed fee of 15% which is the maximum allowed by IDOT. Having said that, staff requested that CDM Smith lower its Fixed Fee in good faith given the size of the project and the staff skill sets which will offset the risk that Fixed Fee typically covers. Staff and the firm accordingly agreed upon a 12% Fixed Fee which reflects a noteworthy ~$66K concession by the firm.

Fee Summary

A summary of the fee from the cost estimate of consultant services is as follows:

Item	Estimated Fee
Prime Consultant Engineering	$3,380,568
Subconsultant Track Survey	$23,407
Subconsultant Site Survey	$81,755
Subconsultant Drainage Design	$117,494
Subconsultant Landscaping Design	$87,733
Subconsultant Cost Estimating	$84,941
Travel	$5,000
Building Survey	$60,000
Environmental	$25,000
Printing	$25,000
Renderings	$19,800
Utility Surveying	$35,780
Legal	$25,000
Total	**$3,971,481**

Payroll rates for the assignment vary; based on prime consultant's total hours of 19,016, the average payroll rate for CDM Smith staff works out to ~$61/hour.

BUDGET IMPACT

At the time of preparing the 2023 Budget and updated Capital Improvement Plan, staff had increased the estimated cost of Phase II Engineering for the project to be $3.5M with an anticipated expenditure of approximately $1.3M in 2023. As such, the 2023 Budget Includes $1.3M in funding to commence Phase II Engineering Services with the 5-year Capital Improvement appropriating $1.2M in 2024 and $1M in 2025. Assuming an accelerated schedule can be supported by reviewing agencies, CDM Smith estimates that up to $1.7M could be expended in 2023, $2.1M in 2024, and the balance of ~$200K in 2025. Staff emphasizes that not all of the engineering expense would be incurred in 2023. In addition, if the assignment is approved by the CIC and Village Board, staff will be closely engaging the CIC and Village Board in the design process as well as providing regular updates on engineering expenditures and grant pursuits.

STRATEGIC PLAN INTITIAVE

Strategic Priority	Initiative	Actions	Measure of Success
Development	Improve Commercial District	Complete Streetscape Improvement	Complete all Streetscape Project Phases
Infrastructure	Develop CIP	Prepare for construction of new Train Station	Prepare for Phase II Engineering

ACTION REQUESTED

Staff and CDM Smith will overview this memorandum through a presentation to the Capital Improvements Commission at its February 15 Special Meeting. CIC feedback on the Phase II Engineering proposal is requested as to allow staff to finalize the proposal and present it to the Village Board for consideration of approval at the next Regular Village Board Meeting.

ATTACHMENTS

CDM Smith Phase II Proposal
CECS Summary
Presentation

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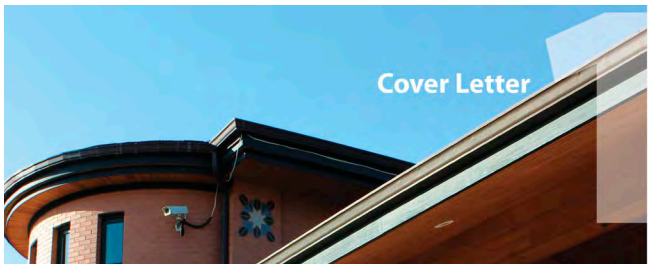

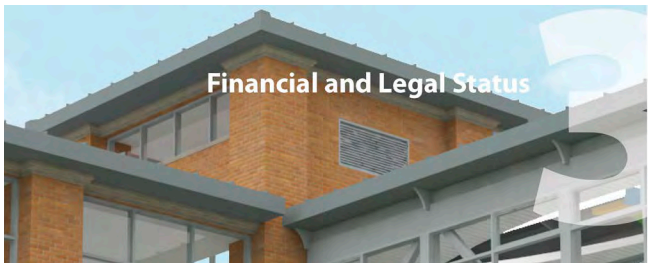

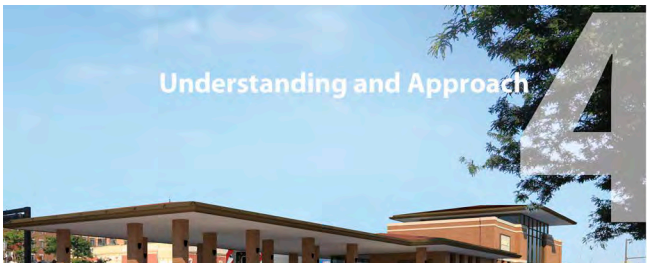

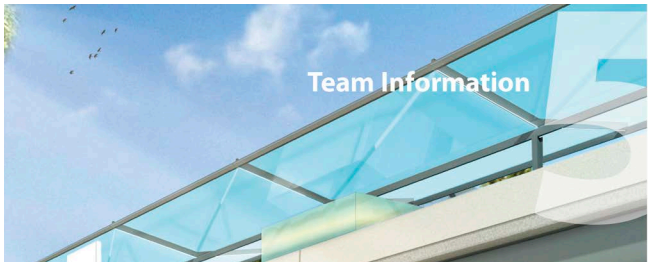

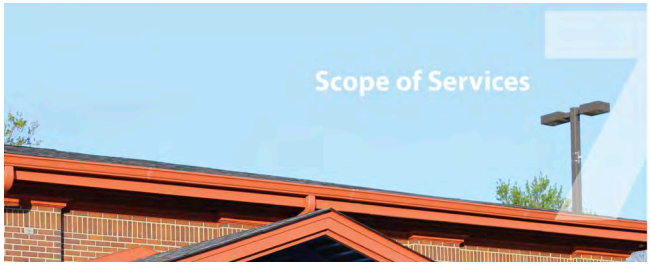

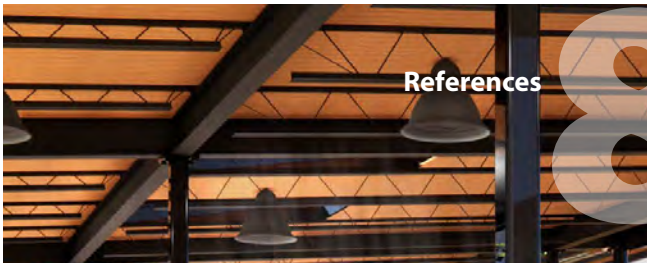

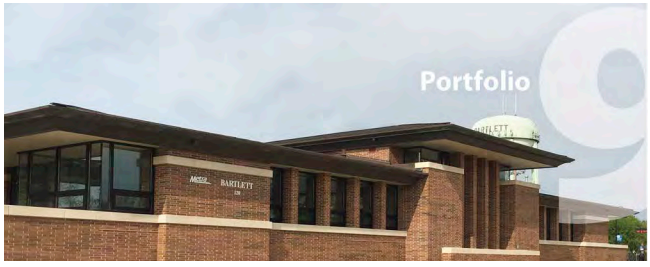

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Section 1

Cover Letter

CDM Smith Inc. | 125 South Wacker, Suite 2510 | Chicago, Illinois 60606 | tel: 312-346-5000
February 2023

Village of Glen Ellyn | Public Works Department
ATTN: Richard Daubert, PE, Village Engineer
30 S Lambert Road, Glen Ellyn, Illinois 60137

Subject: Glen Ellyn Metra Station Phase II Architectural and Engineering Services

listen. think. deliver.®

At CDM Smith, **Listen. Think. Deliver.** is more than a tagline—it's how we work. Our teams stands committed and ready to begin delivering this next project with you. We will listen to you with a solution-driven attitude, tap the best minds to apply ingenuity, and create a lasting solution.

Dear Mr. Daubert:

CDM Smith Inc. (CDM Smith) is pleased to submit our proposal to provide Phase II architectural and engineering design services for the Glen Ellyn Metra Station and Multimodal Improvements Project (MSMIP). Having led the on-going Phase I study and being highly familiar with the project context, local stakeholders, review agencies, and funding opportunities, we are confident that the attached proposal reflects the decision making in Phase I and aligns with Village priorities and goals.

This involvement in Phase I and working closely with Village staff, have given our team a unique understanding of the project challenges to ensure that our approach to this work will considers all of the identified design complexities of this project. We have collaborated with Village staff and local stakeholders to address design needs for station architecture, tunneling beneath the Union Pacific Railroad, multimodal access for all users, and building a comprehensive project that will enhance community spaces and improve mobility and safety within the Village Central Business District.

During Phase I, CDM Smith led the process of evaluating changes to the station location, platforms, parking, underpasses, pedestrian/bicycle connections, and additional site sustainability opportunities, all with our locally-based team and your amazing staff. We then supported grant opportunities by advocating for the project with agencies and elected officials. We are excited this support assisted in bringing in more than $20 million in outside monies to help fund your project. Now we are thrilled to help see you through the next phase of your project and be there when it's time to break ground and to cut ribbons for your new landmark station.

Our team is qualified and prepared to provide outstanding project delivery services that will ensure that the MSMIP project results in the capstone investment in Glen Ellyn's downtown. Our team is comprised of a multidisciplinary architecture/ engineering staff and supported by trusted, expert sub consultants suited for explicit roles identified through thoughtful and thorough collaboration between CDM Smith and Village Staff.

Our Team

As you know, CDM Smith is a global architecture and engineering firm, rated in the top 25 worldwide in a number of engineering categories, including transportation design, by Engineering News Review. We specialize in the transportation, facilities, environmental, and water industries with a local presence of more than 150 staff. For the last 50 years, our Lisle and Chicago offices have supported transportation efforts throughout the Chicago metropolitan area, not only for municipalities like Glen Ellyn, but also directly for service agencies like Metra to improve commuter rail stations, rail lines, and increase service efficiencies. Additionally, we regularly work for Illinois DOT, CTA, and Pace on similar projects.

Our team prides itself on assembling technical teams specific to the needs of clients and projects. For the Glen Ellyn MSMIP, we are proposing a highly experienced architect, **Robert Cheval, AIA, NCARB, LEED AP BD+C, PMP** to serve as the Project Manager and primary contact for the Village. Robert has over 15 years' experience producing technical content and managing complex, multi-disciplinary teams for major facilities projects. Assisting Robert will be a multi-disciplined team with highly experienced discipline leads and key staff:

- **Sarah Sutherlin, AIA, LEED AP (Facility Lead)** – Sarah is a highly skilled architect with outstanding experience in planning and designing transit stations and facilities. Sarah is proposed to serve as the Architect of Record for the project.
- **Anna Ualat, PE (Site Engineering Lead)** – Serving a similar role on a highly similar project for the City of Elmhurst, Anna also offers site and roadway engineering experience on a variety of CTA, Metra, IDOT, CDOT, and ISTHA projects
- Mr. Cheval will also be serving as the discipline lead for Coordination and Permitting Tasks. Supporting Robert will be **Jackie Murdock, AICP**, who regularly collaborates with Village staff on this project having already successfully leveraged an outside funding commitment of $20.4 million (in Phase I) to date. Jackie will work directly with the Village in managing these grants while seeking out new funding sources and increasing the level of commitment from current project partners.

As we did during Phase I, we will augment our team with locally-based experts in their respective fields to ensure a smooth and successful project for Glen Ellyn, including:

- **Kaltsouni Mehdi, Inc.** – John Mehdi and his team have completed planning, architecture, and engineering services at 50+ Metra stations, most recently for Elmhurst and Glen Ellyn along the Union Pacific (UP) West line.
- **The Lakota Group** – The Lakota Group is known for team-based approaches and open community dialogue to produce wonderful, lasting, and context appropriate community spaces for public infrastructure projects.
- **Vistara** – Vistara has unique skillset in estimating projects and projecting infrastructure market indexes to allow clients to budget more effectively.
- **American Surveying and Jorgensen & Associates** – American Surveying is an expert in highly specific track survey, in which the accuracy is critical as many MSMIP design elements are proposed within a compressed working footprint. Jorgensen and Associates is a recognized as a leader in more traditional topographic and boundary surveys and is highly trusted by the Village and CDM Smith for their previous work on Village surveys.
- **Civiltech** – Having completed final design of Glen Ellyn's downtown streetscape project, Civiltech has an excellent understanding of the drainage system and streetscape details thus providing recent experience and knowledge regarding the roadway and civil portions of the MSMIP.

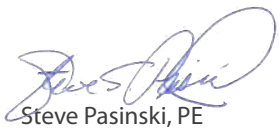
Our Approach

CDM understands the hard work has only begun. The completion of Phase I is focused on obtaining final environmental approvals and finalizing a cost-effective approach for both construction and maintenance of the station, parking lots, and tunnel. Concurrent to completing Phase I, CDM Smith will initiate Phase II Final design of the new station, pedestrian underpass, parking lots and sidewalks, and local street reconstruction. Our initial step will be to collaborate with the Village finalize all of the planning concepts developed in Phase I so that the long-lead coordination and approval processes with IDOT, UPRR, and Metra do not impact the schedule or exceed funding sunset limitations. Be assured that this next phase includes a robust, collaborative process with Village staff, committees, and public representatives prior to embarking on the detailed design. We have an architecture/engineering team excited to sit down and get started working with you on creating a remarkable and timeless station and multi-modal improvements.

Together, the CDM Smith team commits to continuing to bring you the right resources to help the Village of Glen Ellyn to elevate its Metra station as a community asset and notable multimodal transportation hub. We are excited for the opportunity to support the Village of Glen Ellyn in this exciting transportation project. If you have further questions about our qualifications, feel free to contact me at 312-718-0056 or martelcm@cdmsmith.com.

Sincerely,

Christopher Martel, PE, BCEE, LEED AP
Senior Vice President
CDM Smith Inc.



Steve Pasinski, PE
Associate and Client Service Leader
CDM Smith Inc.

Section 2

Firm Information

Comprehensive Transit Design and Engineering Services

CDM Smith Inc. (CDM Smith) is a planning, consulting, engineering, construction, and operations firm specializing in the transportation, facilities, environmental, energy, and water industries. With more than $1.2 billion in annual revenues and 5,000 global staff in 135 offices, we maintain the size, stability, and resources to take on a wide range of projects successfully and tackle any challenge that may arise with in-house resources.

CDM Smith employs a robust staff of transit planners, architects, and engineers to achieve optimum results in terms of cost, function, efficiency, and aesthetics in design. With all disciplines represented by in-house professionals cross-trained in various disciplines, projects benefit from improved communications and overall project efficiency. Our Chicago office is one of our largest design centers in the Midwest. Our Chicago and Lisle offices offer comprehensive planning, design, and construction oversight of local transportation projects.

CDM Smith's professionals will bring our wealth of direct experience working on similar projects for other local clients. Our local transit-focused staff has successfully delivered billions in infrastructure projects for Metra, IDOT, CTA, CDOT, and the Illinois Tollway.

For over 60 years, CDM Smith has supported transportation efforts throughout the region and has closely aligned with related agencies like Metra to improve commuter rail stations, rail lines, and service efficiencies. In addition, we provide Phase II and III engineering services for our municipal clients, and as in-house staff augmentation for IDOT.

firm name

CDM Smith Inc.

address

125 South Wacker Drive, Suite 2510, Chicago, Illinois 60606

phone

312-346-5000

primary contact

Chris Martel, 312-780-7777

years in business

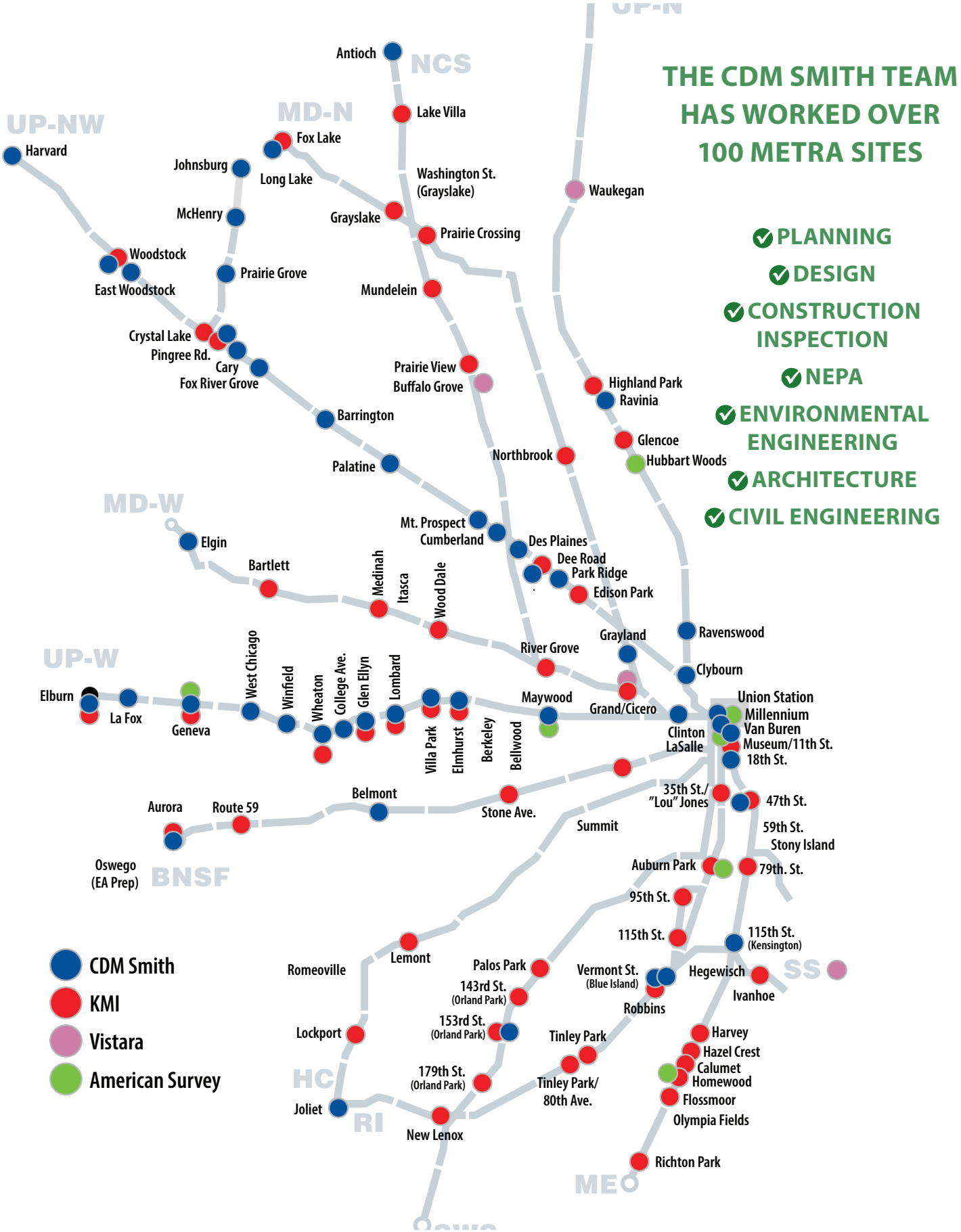
75 Years–Since 1947

principals

Timothy Wall, CEO; Anthony Bouchard, PE, PRES/CEO; Chris Martel, Senior VP

role

Prime Consultant: Project Management, Project Architect, QA/QC, Roadway, Utilities, Stormwater, MOT, Environmental, Structural Engineering, LEED, and Funding Management


THE CDM SMITH TEAM HAS WORKED OVER 100 METRA SITES
PLANNING
DESIGN
CONSTRUCTION INSPECTION
NEPA
ENVIRONMENTAL ENGINEERING
ARCHITECTURE
CIVIL ENGINEERING
UP-NW
MD-N
NCS
UP-W
MD-W
BNSF
HC
RI
SS
MED
Antioch
Lake Villa
Fox Lake
Harvard
Johnsburg
Long Lake
Washington St. (Grayslake)
Waukegan
McHenry
Grayslake
Prairie Crossing
Woodstock
East Woodstock
Prairie Grove
Mundelein
Crystal Lake
Pingree Rd.
Cary
Fox River Grove
Prairie View
Buffalo Grove
Highland Park
Ravinia
Barrington
Glencoe
Hubbart Woods
Palatine
Northbrook
Mt. Prospect
Cumberland
Des Plaines
Dee Road
Park Ridge
Edison Park
Elgin
Bartlett
Medinah
Itasca
Wood Dale
Grayland
Ravenswood
River Grove
Clybourn
Elburn
La Fox
Geneva
West Chicago
Winfield
Wheaton
College Ave.
Glen Ellyn
Lombard
Villa Park
Elmhurst
Berkeley
Bellwood
Maywood
Grand/Cicero
Union Station
Millennium
Van Buren
Museum/11th St.
18th St.
Clinton
LaSalle
35th St./ "Lou" Jones
47th St.
59th St.
Stony Island
Summit
Belmont
Stone Ave.
Aurora
Route 59
Oswego (EA Prep)
Auburn Park
79th. St.
95th St.
115th St.
115th St. (Kensington)
Lemont
Romeoville
Palos Park
Vermont St. (Blue Island)
Hegewisch
Ivanhoe
143rd St. (Orland Park)
Robbins
153rd St. (Orland Park)
Lockport
Tinley Park
Harvey
Hazel Crest
Calumet
Homewood
Flossmoor
Olympia Fields
179th St. (Orland Park)
Tinley Park/ 80th Ave.
Joliet
New Lenox
Richton Park
CDM Smith
KMI
Vistara
American Survey

The CDM Smith Team Has Unparalleled Experience With Metra Station Improvements Across Metra's System

CDM Smith combines its architecture and facility planning and design expertise with local architect KMI, site engineering from Civiltech, and plaza specialists at The Lakota Group to bring the Village of Glen Ellyn unparalleled, proven success. Together, our firms have worked at commuter stations on each of Metra's 10 rail lines at nearly 100 locations for station assessment, planning, design, and construction services.

Metra's Trusted Partner

Since 1999, CDM Smith has worked with Metra in an on-call, multi-task capacity for services at suburban commuter stations, service yards, and major transportation hubs like Union Station, LaSalle Street Station, and Ogilvie Transportation Center. Over the course of our relationship, we have developed an intimate understanding of Metra's stations, rail lines, and overall network goals that will help drive this project to obtain buy-in from Metra and its ridership base.

KMI
Kaltsouni Mehdi, Inc.

KMI is the Leading Architect for Metra Stations

Kaltsouni Mehdi, Inc., (KMI) is a Chicago-based architectural and engineering firm committed to quality, function, and cost-effective design. In the last 15 years, KMI has completed planning and design work at 50+ Metra stations—more than any other firm in the country. Founding partner John Mehdi, AIA, leads KMI's architecture group for transportation clients in the Chicago metropolitan area, keeping Metra's standards at the forefront of the firm's designs. ***With John Mehdi and his expert architects and engineers as key team members, the CDM Smith team leads the competition in our qualifications for Metra commuter station projects.***

KMI has worked at 50+ Metra Stations, solidifying their capabilities to lead architecture design for the Glen Ellyn Metra Station.

Glen Ellyn Station • Elmhurst Metra Station • Lombard Station Ramps and Tunnel • Calumet Station Rehabilitation • Harvey Metra Station • Dee Road Station • Bartlett Station • Elburn Station • Tinley Park 80th Avenue Station • West Bartlett Station • Oak Park Avenue Station • Lemont, Glenco, and Lockport Stations • Medinah Station • Northbrook Metra Station • Flossmoor Station • Hazel Crest Commuter Station • Crystal Lake Shelters • Orland Park 143rd Street Station • 153rd Street and 179th Street Stations • Pingree Road Station • Mundelein Station • Robbins Station • Lake Villa Station • Wood Dale Station • Arlington Park Commuter Station • Palos Park Station • Route 59 Station • Prairie View Station • Prairie Crossing Station • Geneva Station • Gresham, Robbins, Richton Park Stations • Fairview Station Platform Reconstruction • Aurora Station Platform Lighting • New Lenox Platform Extension • River Grove Shelter • 95th Street Station-Beverly • Edison Park Station

firm name
Kaltsouni Mehdi, Inc.

address
223 West Jackson Boulevard, Suite 1010, Chicago, Illinois 60606

phone
312-987-9800

primary contact
John Mehdi, 312-987-9800

years in business
25 Years–Since 1997

principals
Dr. Maria Kaltsouni, Ph.D, PE, SE; John Mehdi, AIA

role
Advisory Facility Design, Metra Standards

Metra Lombard Under Pass, UP-West Line, Lombard, Ill.

Civiltech Brings Apt Municipal Permitting and Drainage Experience

Managing and designing drainage systems for stormwater runoff as well as the impact to rivers, lakes, and wetlands is a critical part of almost every project. Identifying the causes of and providing solutions to urban flooding is a challenge facing many regional agencies and local municipalities. Complying with and meeting requirements for drainage design, floodplains, stormwater detention, water quality, and Best Management Practices are necessary. Civiltech brings extensive experience with hydrologic and hydraulic modeling and analysis as well as expertise in the latest practices for water resource management.

Civiltech brings their knowledge of Glen Ellyn's utilities, standards, and related permitting.

Civiltech is providing design services for streetscape and utility improvements project in Glen Ellyn's historic CBD area, beloved by Village residents and the many shoppers and diners who frequent the area. Access to all businesses will be maintained while the entrances to most businesses are brought up to ADA standards. The utility replacements will be coordinated with the streetscape improvements so that all utility lids and above ground features synchronize with proposed trees and curb extensions. The streetscape and utility construction contract will be let first by the Village and followed by a resurfacing project that utilizes federal funds to be let by IDOT.

firm name
Civiltech Engineering Inc.

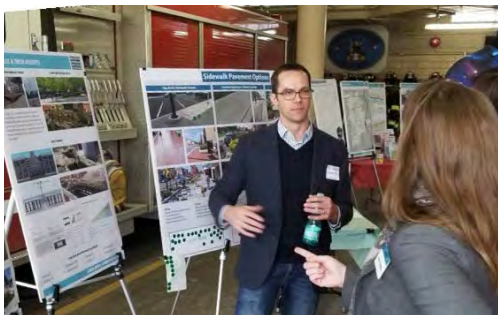
address
Two Pierce Place, Suite 1400
Itasca, Illinois 60143

phone
630-773-3900

primary contact
Thomas Liliensiek, PE, 312.564.2482

years in business
34 Years–Since 1988

role
Permitting, Drainage, Grading



Vistara Knows Rail Infrastructure Cost Estimating and Phasing

Currently working with CDM Smith, Vistara provides construction cost estimates for renovation and exterior site work for various Metra and CTA infrastructure projects. Transportation cost estimating is unique because of the site constraints, phasing, and utility work that plays a more significant role than in traditional construction projects. Vistara utilizes the information they have collected to maintain a database of local transportation projects. Their work has included cost estimates for Metra's Glen Ellyn Station and South Chicago Branch Stations, CTA's 77th Street Bus Garage Fuel System Repairs, cost estimates and schedules for the CTA Des Plaines Rail Shop Roof Replacement, and multiple construction cost estimates with labor and production breakdowns for CTA station renovations like the historic Quincy Loop Station and the three Illinois Medical District Stations.

Vistara works with multiple agencies on transportation infrastructure upgrades.

Metra Buffalo Grove Station • Metra Cicero Station • Various Metra Windbreaks/ Warming Shelters • Metra South Chicago Branch Stations • Metra Glen Ellyn Station • CTA Quincy Loop Station Upgrades • CTA 95th Street Terminal • CTA Bus Garage Fuel System Repair 77th Street • VA E85 Fueling Station • CTA Bus Garage/ West Shops, Maypole • CTA Rail Stop Roof Replacement • CTA Train Yard & Shops • Milwaukee Intermodal • CTA Brown Line Core Capacity Vision Study

firm name

Vistara Construction Services, Inc. (MBE)

address

728 West Jackson Boulevard, Suite 526, Chicago, Illinois 60661

phone

312-986-8660

primary contact

Ramesh Nair, 312-404-9530

years in business

28 Years–Since 1994

principals

Bina V. Nair, PRES; Ramesh Nair, VP

role

Construction Phasing, Constructability, and Cost Estimating

The Lakota Group builds upon the qualities that make a place unique.

For nearing 30 years The Lakota Group, has been helping communities, institutions, businesses and property owners creatively design, manage, promote and foster sustainable change. The Lakota Group is a team of talented designers, planners and communication experts powered by a passion for offering creative solutions to complex problems. Our defining attribute is fostered in a team-based approach to project management centered on positive dialogue that results in meeting our clients' needs and objectives.

Lakota balances idealism with realism to create award-winning places around the country inspired by lateral thinking and implemented through consensus-building.

The Lakota Group has completed award-winning assignments in more than 500 towns, gaining recognition for its work in streetscape design.

Ontarioville Plaza, Hanover Park (pictured) • Marion Street Streetscape, Oak Park • Park Ridge City Commons • Winnetka Public Library Northern Entrance

firm name

The Lakota Group

address

116 West Illinois Street, Floor 7, Chicago, Illinois 60654

phone

312-467-5445

primary contact

Kevin Clark, PLA, AICP, 773-677-2276

years in business

29 Years–Since 1993

principals

Scott Freres, President; Kevin Clark, Principal

role

Plaza and Sustainable Site Design

AMERICAN SURVEYING & ENGINEERING

Accurate, High-Quality Surveying with ASE

American Surveying & Engineering, P.C. (ASE) is a full-service A/E firm that offers a variety of professional services. ASE was established by Coventine Fidis in 1978 as American Surveying Consultants. Its corporate office is in Chicago with branch offices in Naperville and Dixon, Illinois. ASE employs Professional Land Surveyors and Professional Engineers, who are supported by Environmental experts, GISPs, Appraisers, Negotiators, Professional Office Support and experienced Field Crews. Our land surveyors are licensed in Arizona, California, Colorado, Idaho, Indiana, Illinois, Iowa, Michigan, Minnesota, Ohio, South Dakota, Texas, and Wisconsin. ASE engineers are licensed in Illinois, Indiana, Iowa and Michigan.

From their offices in Chicago and Naperville, ASE has performed surveying services for several Metra railroad sites.

Metra Van Buren Station • Metra Millennium Station • Metra Homewood Station • Metra Hubbard Woods Station • Metra Auburn Station • Metra UP-West 3rd Mainline

firm name

American Surveying & Engineering, P.C. (mbe/dbe)

address

200 N. LaSalle St., Suite 2630, Chicago, Illinois 60601

phone

312-277-2000

primary contact

Tom Balser, VP, 312-277-20009100

years in business

44 Years–Since 1978

principals

Coventine Fidis, PLS, President/CEO

role

Track Surveying

JORGENSEN & ASSOCIATES, INC. LAND SURVEYORS Est. 1990

Jorgensen & Associates, Inc. Knows Glen Ellyn

Jorgensen & Associates was founded during August of 1990 to provide surveying services to the general public. Jorgensen & Associates is incorporated in the State of Illinois. The corporate office is located at 120 Park Avenue, Lake Villa, Illinois. The firm is an equal opportunity employer and is prequalified by the Illinois Department of Transportation to perform surveying services.

Experience with Glen Ellyn Central Business District

Jorgensen & Associates performed the final design topographic survey and right of way determination along Pennsylvania Avenue, Main Street, Duane Street, Crescent Boulevard, Prospect Avenue, Forest Avenue, Hillside Street, Anthony Street and Glenwood Ave. Prepared "MicroStation" and "GeoPak" files to serve as a basis for the client's design.

firm name

Jorgensen & Associates, Inc.

address

120 Park Avenue, P.O. Box 306, Lake Village, Illinois 60046

phone

847-356-3488

primary contact

Christian Jorgensen, PLS, 847-356-3371

years in business

32 Years–Since 1990

principals

Christian Jorgensen, PLS

role

Site Survey

CDM Smith is fully committed to creating a station that reflects the heritage of Glen Ellyn.

Committed to the Village of Glen Ellyn

With a long standing Illinois presence, CDM Smith is dedicated to the local communities we serve. Our staff live, work, and play in Glen Ellyn and the surrounding communities. We are fully engaged with the projects we deliver and we care about their impacts on the social and environmental fabric that you are responsible for. In CDM Smith, you will receive the same level of client service we extend to all of our clients with our firm wide code to ***listen. think. deliver.***

Specializing in Local Agency and IDOT Phase II & III Engineering

CDM Smith and our team partners have successfully moved numerous projects through the complete project development and implementation process, from conceptualization, through planning and environmental studies, design, and construction, and on many projects – ongoing operational assistance. With our intimate knowledge of the client, stakeholders, and project goals and objectives, CDM Smith has a unique perspective that will add significant value as the City moves through Phase II and III on this critical project. Partners added for Phases II and III bring specialized expertise in the critical areas of push-tube design and construction, railroad engineering, public engagement, and landscape architecture. This added talent brings a fresh perspective as well, which will add to the quality of the finished project.

IDOT Phase II and III Processes

Since the new Glen Ellyn Station is using state and federal funding sources, the project will go through IDOT's Phase II and III process. Some key components to consider include:

- *Approval of IDOT's Phase II and Phase III agreement between the Village of Glen Ellyn and selected consultant*
- *Kick-off meeting with IDOT's Bureau of Local Roads and Streets*
- *Pre-final and final review cycles for Phase II plans, specifications, and estimates*
- *Letting requirements and deadlines*
- *Updating lease agreement for work within Union Pacific Railroad right of way*
- *Ensuring environmental clearances are kept up to date*
- *Completing preliminary site investigation (PSI) for special waste*

Critical Components of Phase II and Phase III Engineering

There are many keys to success of infrastructure projects in dense urban environments, but CDM Smith has found that critical, but often neglected items include:

- **CONTINUOUS COORDINATION.** A detailed plan for continuous coordination with adjacent property owners, particularly businesses.
- **PUBLIC ENGAGEMENT.** Communication with stakeholders throughout Phase II and Phase III. The need for public engagement doesn't end with approval of NEPA and Phase I documents; in fact, it becomes even more important.
- **MAINTENANCE OF SERVICES.** A detailed plan for maintenance of services, in this case for temporary station facilities including ticketing, rest rooms, vending areas and protection from weather.
- **CONSTRUCTION SEQUENCING.** Advance consideration for construction sequencing to minimize stakeholder impacts such as loss of parking areas during construction.
- **CONSTRUCTABILITY OF THE IMPROVEMENTS.** It needs to be apparent to potential bidders that potential constructability issues have been addressed by the designer so that risks due to construction in a dense urban environment are limited. CDM Smith Constructors, our affiliated general contractor, provides invaluable input on the constructability of facility plans.
- **MAINTENANCE OF TRAFFIC.** While none of the roadways in the station area carry large volumes of traffic, the traffic they do carry – vehicular, pedestrian and bicycle – is critical to the economic well-being of the downtown and residents utilizing the station as a commuter gateway. A carefully conceived and executed MOT plan will preserve access to the station and adjacent businesses, maximize safety and improve constructability by providing room for the contractor to operate and store equipment and materials.

Pedestrian Underpass and Tunnel Design

CDM Smith provides a full spectrum of transportation structural design services to a broad range of clients. Our engineers have designed hundreds of highway, pedestrian, transit rail bridges, and tunnels, and have inspected tens of thousands of the same throughout the world. With collective design expertise covering all tunnel types, clients can trust our experience, expertise, project delivery methods, and communication. Our projects showcase most categories of underpass configuration and contemporary structural materials, from jack-and-bore to cut-and-cover tunnels. This broad expertise enables designers to devise appropriate and efficient solutions to meet client needs.

CDM Smith has provided the design for numerous pedestrian and bicycle/pedestrian bridges, including roadway approaches, approach railing, and any necessary appurtenances. Bridge types are chosen to aesthetically enhance the pedestrian-friendly surroundings and complement the natural environment.

Elmhurst Metra Station Pedestrian Tunnel, Metra, Elmhurst, Ill.

The CDM Smith team is designing the proposed pedestrian tunnel extension with new stairs on both sides. A new pedestrian underpass will be constructed via jack and bore method in order to limit impacts to rail operations during construction. Retaining walls are proposed on either side of the existing and proposed underpasses.

Lombard Metra Station Pedestrian Underpass Tunnel, Lombard, Ill.

KMI led the recently completed station upgrades at the Lombard Station on the UP West Line that included significant structural challenges. In order to provide the most cost effective underpass solution, KMI designed and oversaw construction of a 64-foot-long tunnel installed using jack-and-bore technology. After significant coordination, UP and Metra accepted this innovative use of a well-known technology, especially compared to other options such as open trenching. Construction involved excavating a push pit and receiving pit on either side of the rail line with steel sheetpile support, and then using a combination of auguring/pushing the 12'-foot diameter x 2-inch-thick steel pipe with welded 10'-foot sections.

Initial rendering of ramp to the proposed pedestrain underpass at Glen Ellyn.

CDM Smith designed the tunneling of large diameter pipelines under the Chicago Sanitary Canal and five railroad crossings for our Village of Oaklawn Improvements project.

Subconsultant KMI has extensive pedestrian access design experience, as shown above (Lombard)

The CDM Smith team understands the potential risks associated with tunneling under an active railroad. We bring together our knowledge of structural design, geotechnical investigations, and drainage analysis to aid in the design of these facilities. This, coupled with the relationships we have with the Class I Railroads and the passenger carriers in Illinois, allows us to be effective in coordinating these projects with the approving agencies.

Coordinating with Metra and Class I Railroads

CDM Smith has been working with rail clients since the 1960s, planning and designing improvements to commuter rail stations, rail lines, and operations for 100+ projects in 30+ states across the country. We have a long history of supporting clients with right-of-way acquisition, including assisting in corridor-wide due diligence and planning studies. In addition, we are assisting with navigating permit requirements such as development of a nationwide Environmental Awareness and Education Program to assist field staff in implementing work practices that allow railroad staff to maintain compliance cost-effectively. Locally, we have coordinated with Metra and Class I Railroads in a variety of project types, where we understand the railroad's interests during rehabilitation and reconstruction jobs along its rail lines.

Metra has very clear Design Project Guidelines for the Station & Parking-Design Division projects that our team has worked first-hand with for decades. These guidelines are required tools for all Station & Parking-Design Division consultants to effectively and efficiently design and manage station and parking lot projects. In fact, Metra specifically requires that consultants must have demonstrated a proficiency to work on these projects. No one knows Metra's guidelines better than our design lead John Mehdi, who has built his career designing improvements at Metra stations across Chicagoland.

In addition to the Metra projects highlighted elsewhere in this proposal, we work with Class I Railroads on a number of other projects in the area. Our recent work includes:

- **CTA RED LINE EXTENSION PROGRAM MANAGER, PRELIMINARY ENGINEER AND NEPA FOR $2.4 BILLION RAIL PROJECT:** CDM Smith is helping the CTA implement the CTA's Red Line Extension project, which would extend the existing Red Line heavy rail transit service 5.3 miles south from the existing 95th Street terminal to 130th Street, following adjacent to the UP Railroad for the majority of the extension. Significant coordination has occurred with UP over the last 5 years related to this landmark project. In addition to the UP, CDM Smith coordinated with Norfolk Southern (NS) and Canadian National (CN). Much discussion was held related to the special setback requirement of CTA's proposed elevated structure from the existing UPRR. As NEPA Lead Program Manager, CDM Smith was a primary driver of the Record of Decision (ROD) dated July 28, 2022.
- **UP WEST AND NW EAs:** CDM Smith completed National Environmental Policy Act (NEPA) documentation for two large capital improvement programs proposed by Metra along two UP corridors. These projects included traffic counts, traffic/parking analysis, noise assessments, public outreach, and NEPA documentation for improvements to existing stations, new stations, and new rail line along these corridors.
- **CTA HARLEM RAIL SHOP BUILDING ADDITION:** CDM Smith led the design of a 17,500-square-foot building addition at CTA's Harlem Rail Maintenance Shop. This complex, multi-discipline project is on property leased from UP, requiring approval from and significant coordination with UP. The 2-story building sits on the UP rail embankment and the building abuts the UP West Metra rail line.

CDM Smith has been working with rail clients since the 1960s.

Illinois State Rail Plan

For IDOT, CDM Smith wrote the 2012 Illinois State Rail Plan to provide programming direction for Illinois's rail systems. Our stakeholder outreach efforts included major railroads with UP part of the discussions to maintain the priority of railroads for the states continued prosperity.

Storm Water Risk Management for Dupage County

CDM Smith has more than 60 years of experience in all facets of stormwater management, ranging from master planning to green infrastructure, to flood control design. Local experience covers the full spectrum of stormwater facilities from basic rain gardens and sound drainage design to sophisticated analysis of Metropolitan Water Reclamation District of Greater Chicago MWRDGC's Tunnel and Reservoir Plan (TARP).

Locally we have completed watershed planning for DuPage County Stormwater Management in several different watersheds and provided technical support to the DuPage River Salt Creek Workgroup.

Potential quantity and quality improvements to consider include:

- *Raingarden/Bioswale feature to capture roof runoff or surface drainage*
- *Permeable pavers in walkways and station areas*
- *Sediment capture BMPs (i.e. Stormceptor) for local drainage improvements*
- *Tree pits*
- *Stormwater planters*
- *Infiltration trenches*
- *Educational features*

Our stormwater assistance to communities in the Northeastern Illinois area includes:

- Arlington Heights
- Buffalo Creek
- Chicago DOA
- Chicago DWM
- DuPage County
- DuPage Water Commission
- Evanston
- Hoffman Estates
- Homewood
- IDNR
- IDOT
- IEPA
- Lake County
- Lemont
- McHenry County
- Mt. Prospect
- MWRDGC
- Naperville
- Oak Lawn
- River Forest
- Tinley Park
- USACE
- Vernon Township
- Wilmette
- Winnetka

Salt Creek, DuPage

Case Study: DuPage Water Commission, Elmhurst, Illinois

Working with the DuPage Water Commission (DWC), CDM designed an expansion for the agency that included a generator building with administrative areas and a vehicle maintenance facility. A number of sustainable features were included in the design to support DWC's mission of environmental stewardship. The facility is registered with the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program and expected to garner LEED Gold when certified.

LEED Gold Registered

Photocells – light sensors that detect the amount of natural sunlight in a room

Reflective roofing materials - reduce urban heat island effect

Bike rack, showers, dedicated parking spots for carpool, and low-emitting/fuel-efficient vehicles – promotes employees to use other alternate forms of transportation

Two 13,000 gallon cisterns - **reduce and collect stormwater** from roof and use it to wash vehicles

Materials with **recycled content**

Interior and exterior lighting have been minimized to **reduce light pollution**

Passive solar wall on the new garage will reduce heating costs

Bioswale and detention pond –naturally filters stormwater and reduces runoff

Occupied spaces will be controlled by **zone thermostats** coupled to individual zone variable air volume boxes equipped with reheat coils

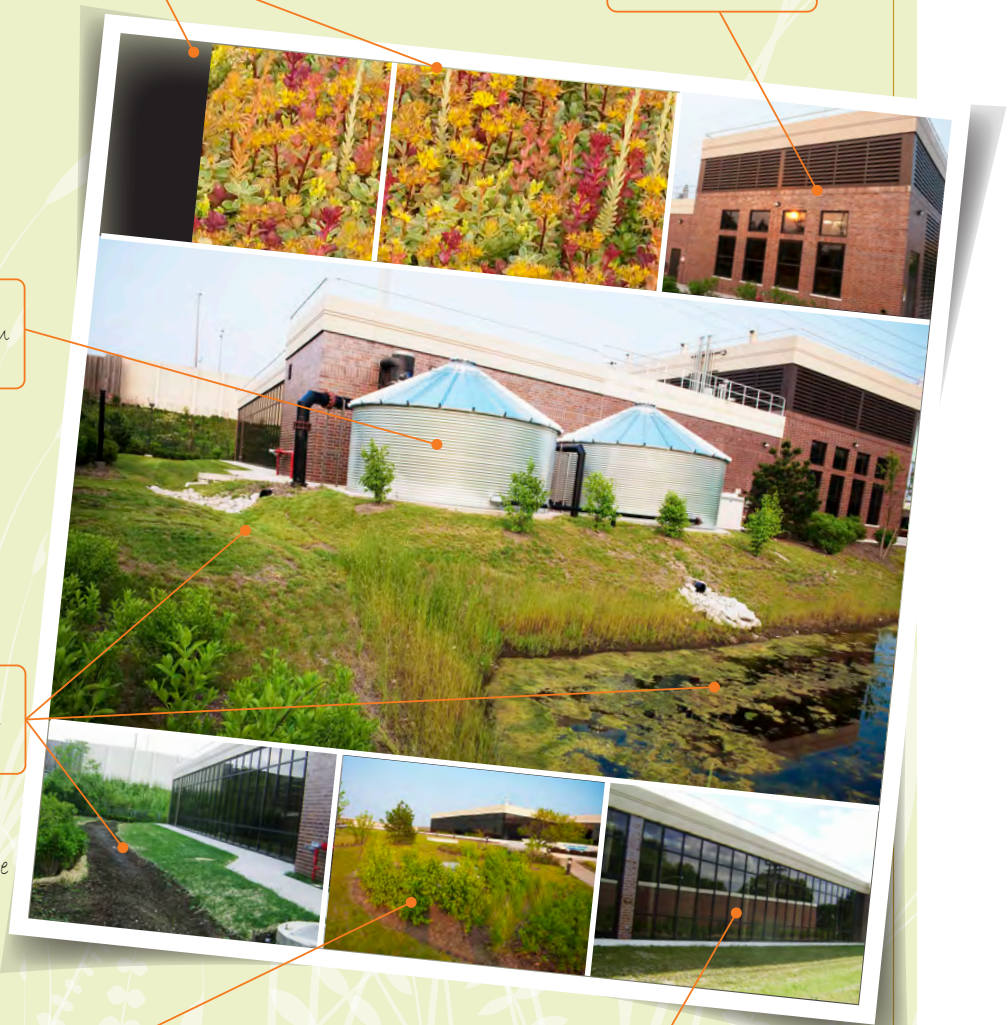
Low-flow plumbing fixtures – water use reduction with a 40 percent water savings

Meets the energy requirements of ASHRAE 90.1-2004

6,200 SF **green roof** - reduces stormwater runoff

Diverted 75 percent of the **construction waste from landfills**

2,000 SF of brick salvaged for new retaining wall, building façades



Native planting – reduces 50 percent of water used for landscaping

Occupancy sensors – detect if someone is occupying a room

Natural daylighting – 100 percent of the occupied spaces have access to natural light and outdoor views

Construction and Cost Estimating

A key component in Phase II and III work design phase, especially on work involving federal funding, is a construction cost estimate that is well-founded and comprehensive. CDM Smith offers a full-service cost estimating department providing budgetary and hard-money bid estimates, provided by experienced estimators within our construction arm, CDM Constructors Inc. All of our cost estimates are developed by trained construction staff with the perspective of a contractor into the development of design-level cost estimates. Our cost estimating staff cover various markets, including all facets of transportation such as facilities, rail, roadways, utilities, environmental, earthwork, and demolition.

We are supported by Vistara Construction Services, a DBE firm who specializes in construction cost estimating, phasing, and constructability reviews. Our firms have worked hand in hand for over a decade on transportation projects throughout Illinois. Vistara's related experience includes:

- Metra Glen Ellyn Station, $41 million
- Metra Elmhurst Station, $36 million
- Metra Cicero Station Platform, $550,000
- Metra Windbreaks/Warming Shelters, $700,000
- Metra South Chicago Branch Stations, $9 million
- Metra Intermodal Station Surveys, $1 million
- CTA Illinois Medical District Stations, $17 million
- CTA West Shops, Electrical Upgrades, $3.8 million
- CTA Forest Park Yard Improvements, $18.6 million
- CTA Quincy Loop Station, $8.4 million

Accurate Cost Estimating for Station Designs

Cost estimating Metra station improvement projects requires more expertise than simply applying the typical earthwork and roadway construction unit rates. Construction improvements near railways requires special safety training for workers and flaggers when conducting certain tasks as do atypical general conditions for railroad protective liability insurance and permitting requirements. Past experience cost estimating and designing similar projects is critical to establishing accurate cost estimates, especially when concept alternatives are being considered that influence one option over another.

Of special concern is the understanding of design standards and construction requirements for Class I Rail. For example, AREMA standards require a vertical clearance of 23 feet between the top of rail and the bottom of the overpass structure; while agencies and railroads prefer 24 feet of clearance. In many cases, a crash wall constructed 6 feet tall and 2.5 feet thick if a bridge structure, such as an overpass, is less than 25 feet horizontally from the center line of the tracks. Our team brings first-hand experience with these standards and a database of recent bids on similar projects, meaning our estimates will be in line with your bids.

Minimizing Change Orders and Maintaining Budget

Proof of our ability to estimate and design projects for the transit industry is best done by example. Our most recent projects include:

CTA 77th Street Bus Garage Fuel System and Site Upgrades

- Engineer's Estimate: $2.237M
- Contractor's Bid: $2.233M

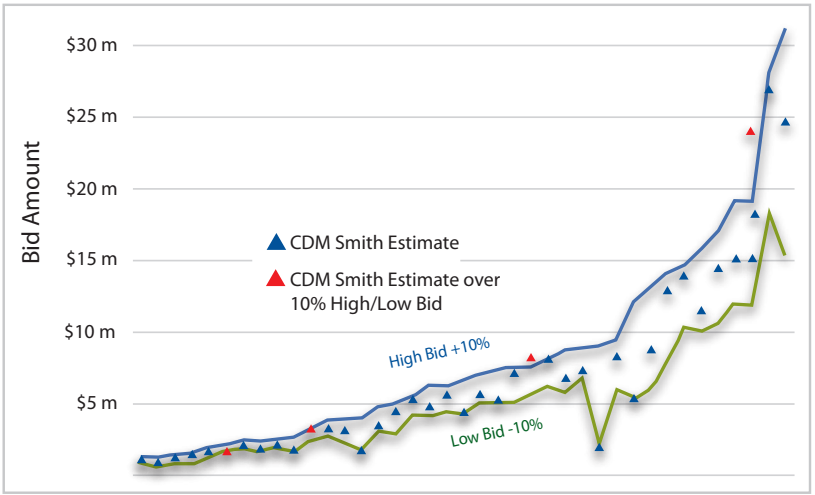
CTA Harlem and Des Plaines Rail Shops Roofing Project

- Engineer's Estimate: $1.592M
- Contractor's Bid: $1.5M

IndyGo BRT Red Line

- Engineer's Estimate: $45.1M
- Contractor's Bid: $42.3M

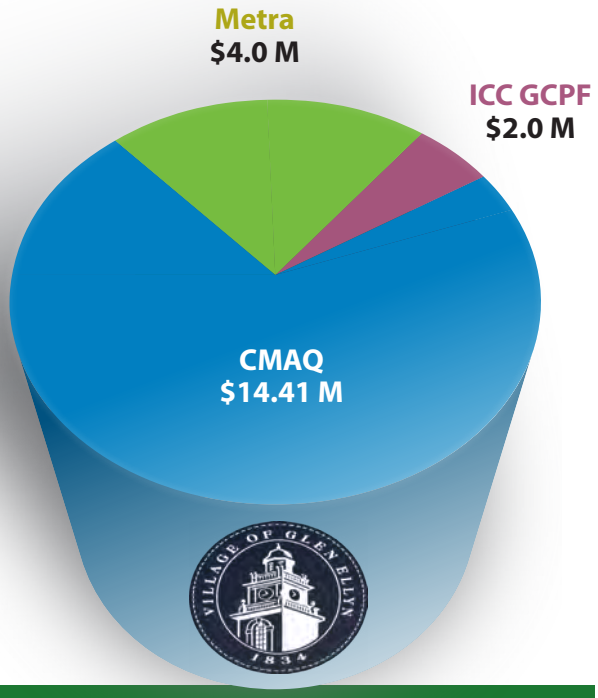
CDM Smith has proven on Phase I that we understand the significance of true cost estimating. We will continue to be heavily involved for Phase II and III, and will bring in Vistara to add another level of expertise.



CDM Smith's cost estimating services are reliably competitive to the construction market, regularly falling within 10 percent of the high and low bids.

Funding Success

The Village of Glen Ellyn contracted CDM Smith for grant identification and application services during the Phase I engineering services. Our teams identified key grant funding opportunities for the project, and successfully completed grant applications resulting in total grant captures of **$20.4 million** for the project. Specifically, our team's grant assistance captured **$14.4 million** in CMAQ funds, **$2 million** in Illinois Commerce Commission Grade Crossing Protection Funds (GCPF), and **$4 million** in promised Metra funds. CDM Smith is currently assisting the Village of Glen Ellyn in pursuing additional funding in the form of cost increase request with the ICC GCPF, will be assisting the Village with seeking additional funding from CMAQ, and will be assisting the Village with strategies to maximize Metra's financial support for this project. This effort will help the Village of Glen Ellyn invest in a multimodal transportation center that will serve as the catalyst to transform downtown Glen Ellyn and will support regional goals of improving transit and providing transit oriented land use.



Our team identified key grant funding opportunities resulting in total grant captures of over $20.4 million, and will be looking to build upon that initial success to maximize the grant funding support for this project.

Offering Funding Leadership

Our experts can guide you through using your funds to their full advantage. Our grant management specialists have broad skill sets to support your needs. They have helped counties and municipalities throughout the region and the U.S. manage comprehensive plans and budgets. They know good policies and procedures for Davis-Bacon, prevailing wage, and Buy America requirements to help you get through the paperwork. The policies and procedures we've created for our current work on FEMA and federal funded contracts helps to create complete compliance for audited record keeping.

Jacki Murdock, CDM Smith Grant Management Specialist

Jacki has supported numerous multi-state, statewide, and regional projects integrating multimodal freight, transportation, and development. She stays involved with major grant pursuits and has developed funding and financing strategies for clients in the Chicago area. Most recently, she provided planning and CMAQ application assistance for Glen Ellyn Phase 1.

Sustainable Site Solutions

Landscape Architecture to Compliment the Downtown Community

Applying sustainable strategies to any project begins with an open dialogue between the owner, design team, stakeholders, and those responsible for the long-term maintenance and upkeep of the project. The next step is to understand and clearly articulate goals and objectives for sustainable strategies, issues to be resolved, cost ramifications, and how to offset up-front costs through synergies that may be achieved and verified through long-term life cycle cost analyses to show a Return on Investment for the Village of Glen Ellyn.

The incorporation of green infrastructure strategies that help reduce stormwater runoff will be a very important aspect of the design.

As the design for the train station and surrounding public spaces are developed, the CDM Smith team, which includes our friends at The Lakota Group, will explore a range of potential sustainable elements related to the site and landscape.

The approach will first focus on achieving the right balance of flexible plaza space(s) with permeable surfaces to manage stormwater. Second, the plant selection will consist of native species as appropriate, providing a resilient landscape for both drought and heavy rain conditions. We will work with the team civil engineer to test and implement options for drainage Best Management Practices, such as bioswales and rainwater capture and reuse. Finally, options for local or regional hardscape materials, lighting, and site furniture will be provided to reduce shipping and transportation impacts.

The following strategies have been employed on similar projects and may be worth pursuing for the new Metra station:

- Maximize capture and diversion of typical average annual rainfall through a combination of bioswales, rain gardens, and permeable pavements.
- Photocatalytic cement, or smog eating concrete, to remove nitrogen oxide (NOx) gases from the surrounding air through a catalytic reaction driven by UV light.
- Recycle as much construction waste as feasible.
- Install concrete sidewalks that utilize recycled content.
- Reduce energy use of a street and use dark-sky friendly light fixtures.
- Install high albedo pavement surfaces to decrease the urban heat island effect.
- Utilize ultra-low sulfur diesel fuel used for construction vehicles.

Pump Station Expansion and Improvements, Design and Construction - Elmhurst, Ill. Reusing the existing service building, still in sound physical condition, was the first step CDM Smith took to meet DWC's sustainable goals. The architecture style of the expansion matches the brick and precast concrete structure of the existing facility, which was built in the 1990s.

This permeable paver parking lot has a solar carport for fleet and staff vehicles.

Two 13,000 gallon cisterns were installed for the DuPage Water Commission – reducing and collecting stormwater from the roof for washing vehicles and other uses.

Section 3

Financial Status

General Financial Capability of the Firm

CDM Smith has provided engineering consulting services to our clients for over 75 years, since our firm was founded in 1947. Our total revenues for 2020 were approximately $1.2 billion. CDM Smith's financial performance from our core markets during the last decade was the strongest it has ever been. As CDM Smith looks to the future, we remain committed to vigorous growth in new work and long-term relationships with clients.

CDM Smith has the financial strength to stand behind our commitments. We have successfully completed programs up to $250 million and have completed hundreds of municipal, private, and agency projects up to $150 million. Our steady growth and consistent financial stability may be attributed to the loyal and satisfied owners whom CDM Smith has served throughout the United States and the world.

Insurance

CDM Smith's certificate of liability insurance is provided on the following page and provides the required limits for Worker's Compensation, Employer's Liability, Commercial (Comprehensive) Liability, Commercial (Comprehensive) Automobile Liability, Professional Errors and Omissions, and Umbrella Liability.

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
12/30/2021

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

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

PRODUCER
Aon Risk Services Northeast, Inc.
Boston MA Office
53 State Street
Suite 2201
Boston MA 02109 USA

CONTACT NAME:
PHONE (A/C. No. Ext): (866) 283-7122 **FAX (A/C. No.):** 800-363-0105
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	LM Insurance Corporation	33600
INSURER B:	Liberty Insurance Corporation	42404
INSURER C:	Liberty Mutual Fire Ins Co	23035
INSURER D:	ACE Property & Casualty Insurance Co.	20699
INSURER E:	Lloyd's Syndicate No. 2623	AA1128623
INSURER F:	Commerce & Industry Ins Co	19410

INSURED
CDM Smith Inc.
75 State Street Suite 701
Boston MA 02109 USA

COVERAGES **CERTIFICATE NUMBER:** 570090948050 **REVISION NUMBER:**

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

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			TB7611B8T8Z6042	01/01/2022	01/01/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$2,000,000 $500,000 $10,000 $2,000,000 $4,000,000 $4,000,000
C	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			AS2-611-B8T8Z6-062	01/01/2022	01/01/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$2,000,000
D	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION			XEUG28194687006	01/01/2022	01/01/2023	EACH OCCURRENCE AGGREGATE	$4,000,000 $4,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WA561DB8T8Z6012 AOS	01/01/2022	01/01/2023	X PER STATUTE OTH-ER	
A				WC5611B8T8Z6022 WI	01/01/2022	01/01/2023	E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	$1,000,000 $1,000,000 $1,000,000
E	Architect&Eng Prof			PSDEF2200033 Professional/Claims Made	01/01/2022	01/01/2023	Each Claim Aggregate	$3,000,000 $3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: Proposal Use Only.

CERTIFICATE HOLDER

CDM Smith Inc.
75 State Street
Suite 701
Boston MA 02109 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Northeast, Inc.

Holder Identifier :

Certificate No : 570090948050

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ACORD 25 (2016/03) The ACORD name and logo are registered marks of ACORD

AGENCY CUSTOMER ID: 10518329
LOC #:

ADDITIONAL REMARKS SCHEDULE

Page _ of _

AGENCY Aon Risk Services Northeast, Inc.	NAMED INSURED CDM Smith Inc.
POLICY NUMBER See Certificate Number: 570090948050	
CARRIER See Certificate Number: 570090948050 / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 **FORM TITLE:** Certificate of Liability Insurance

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER	
INSURER	
INSURER	
INSURER	

ADDITIONAL POLICIES If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
	WORKERS COMPENSATION							
B		N/A		WA761DB8T8Z6032 MA & PR	01/01/2022	01/01/2023		

AGENCY CUSTOMER ID: 10518329
LOC #:

ADDITIONAL REMARKS SCHEDULE

Page _ of _

AGENCY	NAMED INSURED
Aon Risk Services Northeast, Inc.	CDM Smith Inc.
POLICY NUMBER	
See Certificate Number: 570090948050	
CARRIER / NAIC CODE	EFFECTIVE DATE:
See Certificate Number: 570090948050	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 **FORM TITLE:** Certificate of Liability Insurance

Professional Liab Policy # PSDEF2200033

Beazley (Syndicates 2623/0623) - 25%
BRIT (Syndicate 2987) - 25%
Munitus (Syndicate 4242) - 12.5%
Re/Rn (Syndicate 1458) - 10%
Castelmga (Syndicate 2525) - 5%
Convex (Syndicate 1984) - 7.50%
Berkshire - 15%

Section 4

Project Understanding and Approach

The Glen Ellyn Metra Station and Multimodal Improvements Project (MSMIP) proposes significant improvements to the Metra Station and the adjacent parking lots, sidewalks, streets, access for the disabled, as well as a pedestrian/bicycle underpass beneath the Union Pacific Railroad (UPRR). This project will be the last portion of the Glen Ellyn Downtown renovation and result in an infrastructure investment that will create new community spaces, improve access to transit, and enable safer connectivity for all users for generations to come. The intended outcomes are to enhance community spaces and integrate multimodal transportation uses with safe access to Metra passenger rail service, businesses, schools, and many other destinations or land uses that require crossing the UPRR.

With public stakeholder groups, the Glen Ellyn Village Board, the Capital Improvement Commission, local businesses, and Village residents being focused on efficient and effective budgeting and decision-making, it is critical that this project be delivered in a manner that is context appropriate, addresses the purpose and need for the project, and represents an excellent investment for the Village by fully leveraging outside sources of funding.

The project is currently nearing completion of Phase I of a three-phase process (preliminary engineering, plan preparation, and construction). While Phase I or Preliminary Engineering has several remaining tasks and coordination milestones to complete, the critical path is defined by review and a Memorandum of Agreement (MOA) being developed by the Illinois Department of Transportation (IDOT) to document adverse impacts to the current train station that has been found to be eligible for the National Register of Historic Places (NRHP). The Memorandum of Agreement will be signed by the Federal Highway Administration (FHWA), IDOT, and the Village of Glen Ellyn. The primary outcome will be a determination ruling on whether the demolition of the Metra Station is considered to be significant. This coordination has been on-going for approximately two years. Abiding by the terms of the MOA is required to utilize the federal funding that has been secured for construction (Phase III)

The second Glen Ellyn station, seen looking southwest across Main Street on March 28, 1957. (Original photo by P. Stringham, from the collection of William Raia)

Phase II is comprised of assembling construction plans and details, obtaining permits, acquisition of right-of-way, drafting and executing agreements for maintenance and construction, estimating costs of construction, coordination with Village Departments for zoning and architectural. Fairly unique to this project, the construction plans will require a very wide range of disciplines due to the project including building design (architecture, heating and cooling, plumbing, electrical, vertical structures, platforms, warming structures), civil design (tunnel, boring operations, soils engineering, retaining walls, drainage and pumps) and roadway design (parking lots/grading, street and streetscape design, lighting). Construction staging and maintenance of traffic for vehicles, bicycles, and pedestrians must be considered as well as access to business and public spaces. All of this must be designed and staged so it can be efficiently bid out to the largest pool of qualified contractors and achieve optimal bid prices keeping costs low while achieving outstanding construction quality. This requires outstanding design capabilities as well as familiarity with the project type. As the project evolves, the Phase II consultant should also consistently manage the funding strategies established in Phase I to minimize Village financial commitment while leveraging state and federal fund sources.

Phase III is the construction phase where the plans are advertised, and contractors will bid on the project. The lowest, qualified contractor bid will be selected and charged with constructing the MSMIP per the construction documents prepared in Phase II. Phase III construction is now in the hands of the low-bid contractor who will use the plan set as their guide to build the project. Therefore, the preparation of construction plans must be done by expert design firm with experience in this project type.

PROJECT UNDERSTANDING

The current Phase I preliminary engineering work being done by CDM Smith for the Metra Station has given our team an explicit understanding of the project context and clear insight into the integrated nature of the design and coordination necessary in the upcoming Phase II plan preparation, permitting, and right-of-way acquisition. With the Phase I critical path (late 2023 completion) being defined by tasks needed to conclude the Historical Resource Eligibility review by IDOT, the State Historic Preservation Officer (SHPO), and the Federal Highway Administration (FHWA), it is paramount to initiate and complete the Phase II design process as early as possible so as to not risk compromising the already approved Federal and State grant funding commitments which have sunset clauses. We also understand that there is a strong Village interest to minimize any delay between final construction of the streetscape program and kicking off the MSMIP construction.

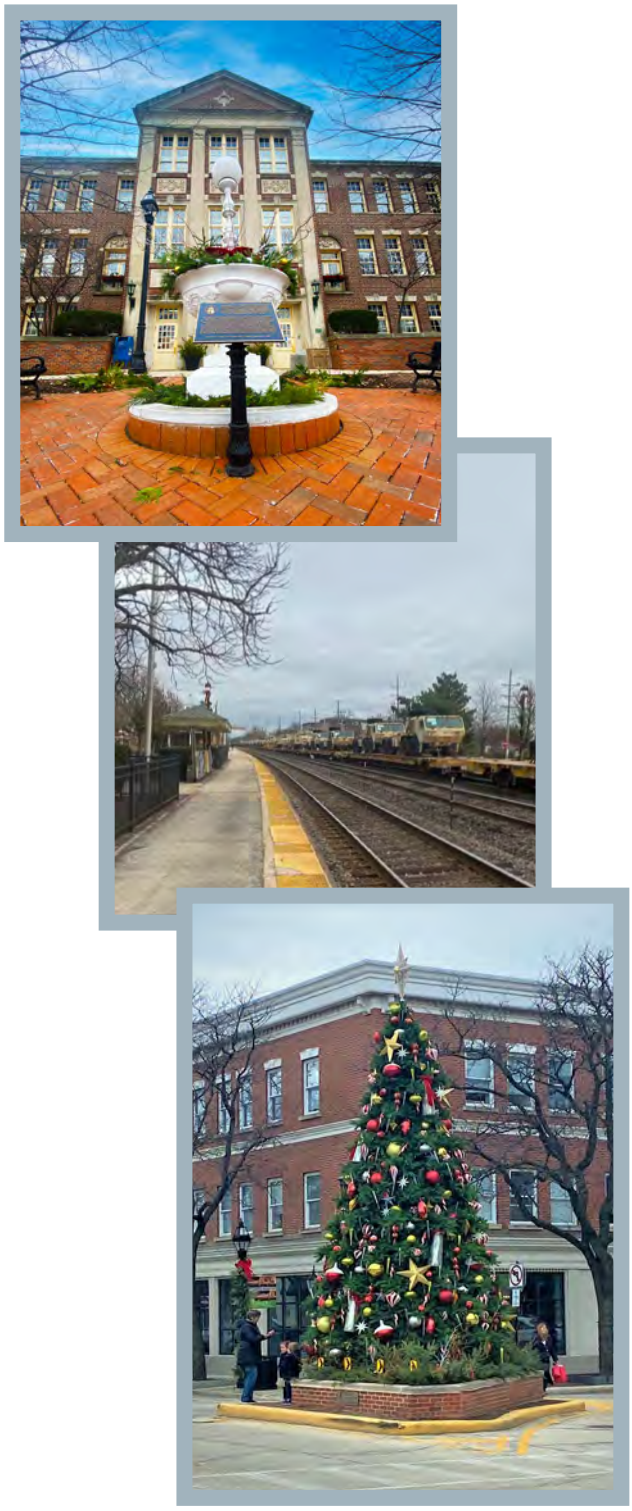
We at CDM Smith recognize that these perspectives are not mutually exclusive and must be fully considered in the planning, designing, constructing, and maintenance of the MSMIP as this work impacts and benefits the quality of life for so many residents, visitors and businesses over such a long period of time. Creating a multimodal downtown space that is representative of the Village's desire to transform the Central Business District into a community focal point is central to our understanding and approach. The Metra station, parking lots, sidewalks and trails, and roadways have many condition deficiencies and do not satisfy many modern design standards. Access for all users and modes continues to degrade as the antiquated and under-capacity station, non-ADA compliant access points, circuitous and conflicting

travel patterns and lack of a grade separated pedestrian/ bicycle crossing cause delay and inhibit the Village's goal to fully capture the potential of this keystone public space.

In addition to the technical aspect of designing the MSMIP, this project requires equal consideration for coordination, negotiation, and risk management strategies in regard to agency agreements, access to right-of-way, funding plans, local development, agency reviews and approvals, and permitting. Each of these aspects must be proactively managed with our team partnering with the Village to leverage agency partner cooperation and support. Most of these coordination and risk management aspects will play varying roles in informing design decisions and defining critical path(s). Conversely, most of the coordination strategies and risk management aspects will require some level of design completion to initiate long-lead items as well as serve as a basis for right-of-way and agreement negotiations and agency coordination.

CDM Smith has gained recent practical experience as well as an understanding for the complexities associated with MSMIP. Our team is currently in the middle of designing (Phase II Final Design) the Elmhurst Metra Station and related multi-modal improvements project which has amazingly similar technical and coordination challenges. Through this work, CDM Smith has gained unequalled, real-time experience in design but especially in navigating the various coordination challenges. Our team has proactively engaged with the Union Pacific Railroad (UPRR), Metra, Illinois Department of Transportation (IDOT), Illinois Commerce Commission (ICC), environmental resource agencies, and DuPage County as well as internal Departments at the City of Elmhurst. This recent experience offers the MSMIP highly unique and extraordinarily helpful lessons learned enabling the CDM Smith-led team to make informed, proactive decisions regarding the management of project costs, project funding, local impact mitigation, and maximizing project value.

CDM Smith offers the following approach to provide comprehensive engineering services for the design of the Glen Ellyn Metra Station and Multimodal Improvements Project. Our understanding of the design and coordination elements will help inform an integrated approach that will accelerate project delivery and allow for construction sooner than any other team. We are proposing a team that has unique and recent project experience that informs our approach to this complex and nuanced project. The following project approach focuses on how we plan to address those key challenges as well as offer specific strategies to seize opportunities for the village to make this project a wonderful success.



PROJECT APPROACH

CDM Smith and the Village staff have collaborated thoroughly consider the remaining tasks in Phase I and the complete Phase II scope of work necessary to prepare plans, specifications and estimates to insure that the intended outcomes of the Village are fully accomplished. CDM Smith has also drawn extensively from our recent work and lessons learned on the equally unique and yet highly similar Elmhurst Metra Station Multimodal Improvements project.

This experience provides extremely useful insight and know-how to manage the many moving pieces and the biggest challenges of the MSMIP.

The approach is separated into design risk management and coordination of the specific challenges and the related impacts to the schedule exhibit as shown towards the end of this section.

RISK MANAGEMENT

The initial 7 to 8 months of the Phase II design process will require risk management of several project aspects. The CDM Smith PM has worked with the MSMIP Phase I team to identify those aspects which could impact the overall duration of design and that could impact the construction cost and cost sharing of the project. Drawing also from recent lessons learned on the Elmhurst project, we have identified the following items are requiring either risk management or long-lead critical path considerations.

Section 106 / Section 4(f)

The CDM Smith Phase II team is aware of the recent MOA that was issued as part of the Section 106 / 4(f) process. The CDM Smith Phase II team coordinate with the Phase I team to monitor the Section 106 / 4(f) process being executed during the concurrent phase I process to ensure that any historic issues that are identified and incorporate any historically relevant details, treatments, and or design ideas that may be recommend.

Tunnel Design

Our recommended approach to design of the pedestrian underpass is to develop the design based on the SEM with canopy support around the arch. This allows for maximum flexibility in terms of construction requirements, as well as attracting multiple contractors. The bid documents could be set up to allow for alternatives to be presented by the contractor which could include the box jacking approach; it could be selected based on technical proposal and cost competitiveness to the conforming bid.

During our design process we will aggressively engage UPRR in the design process by providing technical memoranda and supporting calculations to obtain feedback early in the design process. It is anticipated that UPRR may reject the tunnel design following the 10% design submission, this action would be countered by the Village of Glen Ellyn filing an ICC petition which we would support with technical documents and drawings. Being ready to file an ICC petition early allows enough time for the petition process to play out without risking missing the Village's funding sunset dates.

ROW Acquisition and Agreements

CDM Smith will assist the village with UPRR R.O.W. pre-acquisition tasks per the results of qualitative and quantitative evaluation of two options as follows: Option 1 Land Purchase from UPRR and Option 2 Lease and Maintenance Agreement that will be conducted under Phase I Contact. The CDM Smith staff will help provide the Village of Glen Ellyn with R.O.W. drawing exhibits, project plans, sections, or details that may be required to advance the Village's acquisition process. The CDM Smith Team will coordinate the utilization of outside entities for the purposes of special legal guidance as required.

Uncertain Platform Costs and Administrative Requirements

Based on data from similar projects, the current Metra funding commitment will not fully fund the station platform costs as previously planned. Also, due to the nature of Metra funding there is possibility that Metra funding will be provided by way of "Rebuild Illinois" funding which includes several administrative requirements that would significantly increase the overall cost of the project.

To mitigate or hopefully eliminate this risk CDM Smith proposes that the Village require Metra to either fully fund the cost of the platforms or share the costs of the platforms with the Village rather than contribute funding towards the project. In both cases it is recommended that the scope of the platforms be removed from the scope of the project that will be let by IDOT so that any additional administrative requirements imposed by funding that Metra chooses to deploy towards the project do not apply to the larger station project.

FUNDING APPLICATIONS AND COORDINATION

There have been unprecedented inflationary pressures and supply chain challenges on the construction industry that have caused construction costs to significantly increase in the last 24 months. To counter this new reality CDM Smith proposes the following strategies to increase the funding for this project.

- CMAQ Funding Increases - CDM Smith proposes to make a cost increase requests in order to capture as much of expected inflation data and provide as much cost certainty as possible.
- ICC Funding Increases - ICC recently removed the funding cap for the Grade Crossing Projection fund. CDM Smith has prepared a cost increase request that has been submitted to ICC. The cost increase requests that ICC fund 60% of the pedestrian underpass, ramps down to the underpass, the stairs down to the underpass, and the surrounding retaining wall structures.

Funding Management

It is anticipated that 24 monthly updates to the Village of Glen Ellyn and quarterly reporting to the funding agencies will be required including the flowing tasks.

- Quarterly CMAQ Grant updates to CMAP.
- Coordination with ICC on GCPF intermittent updates.
- Quarterly Coordination meetings with Metra on grant funding
- Monthly funding meetings with Glen Ellyn to discuss design progress in relation to the Funding Sun Set Dates
- Cost request increases to existing funding sources

It is also anticipated that additional grants and/or increases to existing grants will be required. CDM Smith will monitor the funding landscape and will notify the Village of Glen Ellyn of any promising opportunities.

DESIGN EXECUTION

CDM Smith is extremely excited for the opportunity to execute this unique design project. What makes this project unique is that the most challenging aspect of this project is the management of the agency stakeholders. This requires responsive and thoughtful management and coordination of multiple agency stake holders including Metra, Union Pacific Railroad (UPRR), Illinois Department of Transportation (IDOT), the Illinois Commerce Commission (ICC), and the Village of Glen Ellyn. All stakeholders he overall project approach stresses the fundamentals of building on a foundation of sound data and following proven Design processes that starts with systematically, yet efficiently defining the project requirements through stake holder engagement.

Village of Glen Ellyn Project Initial Requirements Validation

We would anticipate an initial kickoff meeting with the Village Staff shortly after the Notice to Proceed (NTP), ideally within the first week. This kickoff meeting would confirm the Village of Glen Ellyn's and CDM Smith's communication structure for the project, review an updated draft project schedule, review an initial request for data matrix, review Village of Glen Ellyn and Agency stakeholder working groups, discuss concurrent studies (Pedestrian Tunnel Alternatives Report, Geothermal Feasibility Study, and UPRR Request for Exception), discuss reporting and administrative procedures, review the QA/QC process, and we would also have the CDM Smith Project Manager facilitate relationship building between the Village of Glen Ellyn team and the CDM Smith discipline leads for the project. Following the kickoff meeting the design team will initiate pre-design field work like the site survey, track survey process, and station hazardous material survey.

Agency Kickoff Meetings

Agency Kickoff meetings will ideally be held one week following the initial project kickoff meetings with the Village. Agency kick off meetings would be held with Metra, UPRR, and ICC at this time. Due to the status of the IDOT Phase I process the IDOT Phase II kick off will need to be delayed until after Phase I approval. The purpose of the agency kickoff meetings is to establish a regular meeting schedule for the project, confirm reporting requirements, introduce team members, confirm communication channels, and review expectations and goals for the project.

Project Quality Management Workshop

Following the Initial Project Kick Off and initial follow-up meetings with Metra and UPRR a Project Quality Management Workshop (PQM) will be held with Village Staff and the design team with the goal of confirming the project goals, define the critical success factors; the processes, activities and tasks needed to achieve success; and to assign responsibilities for carrying out the tasks.

Ongoing Project Stake Holder Engagement

As previously stated, effective stakeholder engagement will be critical to the success of this project. As such a robust draft stakeholder engagement plan has been developed for this project and includes:

- Weekly Client Meetings with the Village of Glen Ellyn
- Monthly coordination meetings with Metra UPRR to provide project updates and to coordinate the development of the design with Metra.
- Quarterly meetings and meetings following the 30%, 60%, 90%, and 100% design phases with ICC.
- IDOT Phase II Kickoff meeting to review the IDOT submission standards and current IDOT letting schedule.
- Periodic IDOT coordination to address project specific challenges that may arise.
- Even though stakeholder management is a major contributor to the success of this project an equally robust process is in place to manage the development of the phase II design.

Zoning and 10% Design

The preliminary station design and preliminary site design developed as part of the the Phase I Engineering Phase will be validated against all laws, codes, regulations, and agency requirements applicable to the project. The Phase II team will be working in close coordination with the Phase I team during this process because the Phase I process will ongoing and will not fully resolve until a later design phase.

The zoning process will begin at this point in the design process and will include public presentations and breakout meetings with various Village entities. It is anticipated that the zoning process will continue concurrently with the 30% design phase.

Another important part of the 10% design phase will be validating identified Union Pacific Railroad and Metra Standards have been fully addressed. This will be documented in a 10 PCT Project Design Report. Conflicting standards will be identified so that the process of resolving the conflict can begin.

Concept level drainage plans will be developed for the purpose of ensuring the design approach is acceptable prior to producing the 30% plans. Concept plan production will include establishing the applicable stormwater and other drainage regulations based on the proposed design

A preliminary schematic landscape design will be generated Using current project goals and parameters, test a range of schematic landscape and site options for the train station area, including building foundations/entries, drives/streetscapes, buffers, parking lots, plazas, and connections. This may include, but is not limited to, paving layout options, stormwater management strategies, permeable paver opportunities, landscape character and layout, and site furniture locations.

Schematic Design Phase 30% Design

After review of the 10 % Design Package has been completed by the Village of Glen Ellyn, Metra, UPRR, and ICC the 30% Design phase will begin. This is the step in the design process where all plan, section, and schedule sheets are started, and the full construction set starts to form.

It is anticipated that UPRR may initially reject the tunnel design per their design and engineering standards which state their preference for an overpass structure. If this were to occur the Design team would advise the Village of Glen Ellyn to file a petition with ICC to obtain an order authorizing the installation of a pedestrian underpass crossing under the UPRR tracks. This process could take 6 months or longer and making the decision to file after receipt of the 10% comments will mitigate the risk of a long UPRR approval process by starting that process early on in the design process well before it is needed.

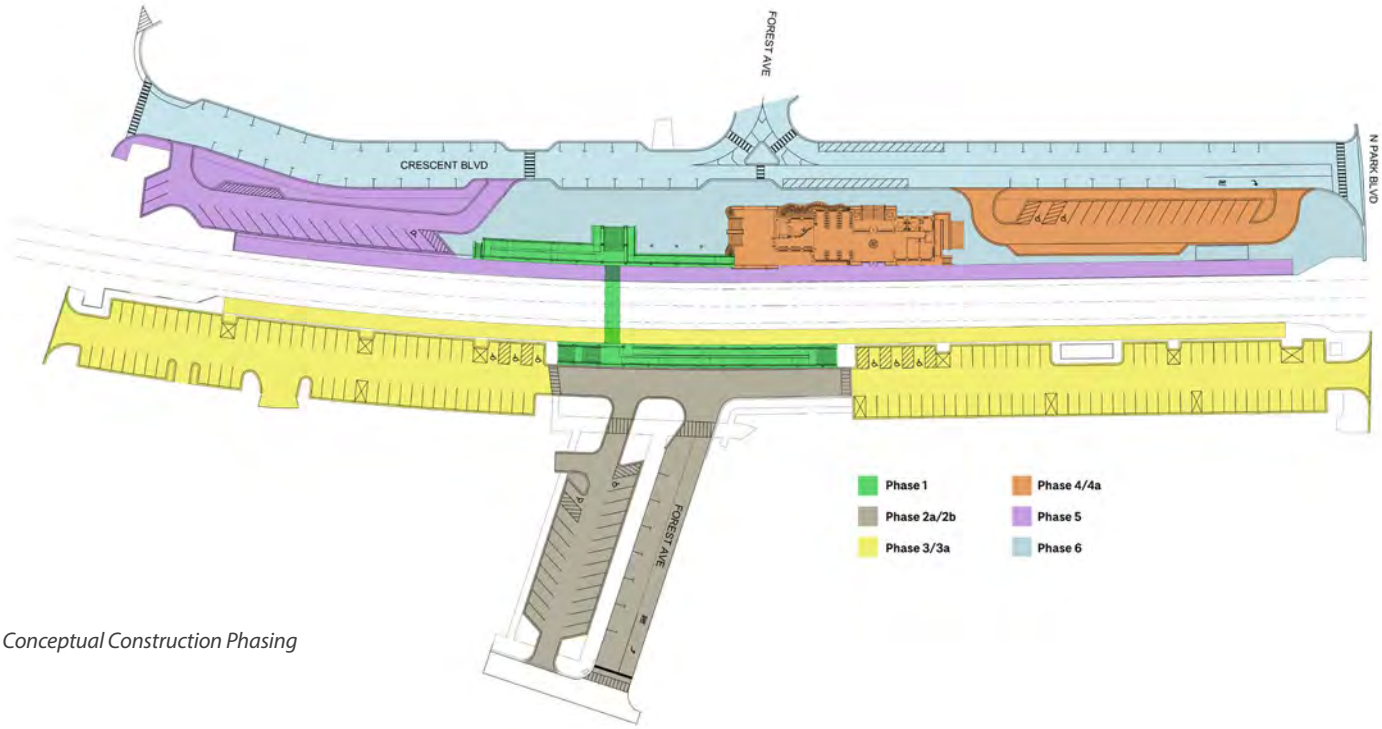
30 PCT Civil Design

Civil engineering during the 30% design phase will focus on the coordination of drainage, utilities, and site equipment with permitting requirements, Metra, UPPR, and Village needs based on the scope of the station. The site geometry of major site elements like the pedestrian underpass, the retaining wall structures, parking lots, and the north curb line of Crescent Boulevard will be refined and nearly finalized.

Construction phasing and staging plans will be developed based upon the narrative from the 10% Design and any suggested adjustments. The phasing and staging plans will be used to inform the Contractors of the maintenance of operations requirements, identify areas for potential construction trailers, and contractor access points. In our experience, it is critical to be very clear on what can and cannot be done within operating facilities to ensure safe operations and construction work.

The 30% site drainage plans will be very similar to the Concept plans but will include more detail and will address input received on the Concept plans. These plans will also account for the overall site design changes that occurred since the last design stage. Specific plan modifications anticipated at this stage. The Stormwater Detention plans will be developed further to provide more design details. Additional BMPs that may be required as part of stormwater regulations will also be added.

The landscaping design will be refined further during the 30% design phase. Drawings will be included to illustrate the landscape/hardscape character of the various study area sub-areas, such as plazas, connections, buffers, parking lots, foundations, and streetscapes.



Conceptual Construction Phasing

30 PCT Station Design

Following the receipt of 10% comments from the Village of Glen Ellyn and all agency stakeholders the station design will be progressed with all floor plans, architectural building sections, and architectural elevations being developed. The 30% design will also be provided for structural, mechanical, electrical, plumbing, equipment, and communications / security. Particular attention will be paid to the relationship of the station to the edge of platform and to the accessible routs to and from the station.

60% Design Phase

Following the receipt of 30% comments from the Village of Glen Ellyn and all agency stakeholders, the 60% Design phase will begin. During the 60% design phase the details of all elements of the project start to be developed. The civil engineering design, drainage design, landscape design, and station design all progress based on input from the Village of Glen Ellyn and the agency stakeholders.

It is the stage of intensive team coordination and collaboration for interdisciplinary reviews and checks. CDM Smith typically holds weekly team meetings during this stage of the design to ensure proper communication and coordination. The civil team will focus on coordination of the major design elements like sidewalks, drainage structures, curb lines, utilities, and landscaping areas.

Like the civil design, the focus for the station design is on coordination of systems and components. This is the start of the on-going coordination process to ensure proper equipment spacing and clearances. By using BIM modeling, the information developed in three-dimensions, showing critical interferences early in the design process, such as clashes with proposed HVAC equipment and existing structure.

90% Design Phase

Following the receipt of 30% comments from the Village of Glen Ellyn and all agency stakeholders, the 90% Design phase will begin. The goal of this phase of the project is to develop the drawings to near completion with the goal of submitting the required building permits, stormwater permits, and to produce an IDOT 95% Pre-final submittal package. The IDOT 95% pre-final submittal package is the first submittal in a succession of submittals that are required in order for the project to be let thought IDOT.

During the 90% detailing of the building, senior technical staff reviews will occur to ensure that all necessary details and specifications are provided to complete the building. Also, all IDOT required supporting documentation like the 90 PCT Construction Cost Estimate with IDOT Pay Items, an Estimate of Time, Lump Sum Breakdowns (Including backup calculations and validation), and a Copy of a draft construction agreement.

100% Design Phase

We anticipate between CDM Smith's internal development, response to the Village of Glen Ellyn and agency stakeholders, that the effort to move from 90% to 100% completion should be limited as the 90% should have defined every major element of the package in detail. The critical component during

AGENCY COORDINATION

Union Pacific

We understand the need to coordinate with UPRR to provide a safe and cost-effective design and maintain reliable and uninterrupted rail service during construction. We understand the importance of timely and proactive execution of work in order to minimize potential impacts to rail operations. The CDM Smith team is uniquely positioned to coordinate with UPRR for this project based on previous work with this railroad on this and other projects. CDM Smith has worked with Union Pacific on many local and national projects, and Patrick has performed design and construction services directly for the UPRR. For the IDOT Chicago to Dubuque Passenger Rail Corridor Project, Sarah Czaplicki worked part-time in the UPRR Omaha headquarters office, which allowed her face-to-face interaction with UPRR design staff and direct familiarity with UPRR's design processes. The team's experience working with the UPRR on other projects enables the team to hit the ground running and minimize railroad coordination delays. UPRR will most likely have a General Engineering Consultant (GEC) complete any plan, design calculation, and construction submittal reviews on behalf of UPRR. The team is familiar with the process having provided similar services and understands what railroads are looking for with design and construction submittals. Additional time will be required for any review as UPRR's acceptance will still be needed on top of the time needed for their consultant review. We recommend providing adequate design review time within the project schedule and provide requested return review dates to the railroad with each review. Minimally, reviews at 30%, 60%, and 90% (we propose 95% IDOT documents) will be required. Requirements as well as policies regarding access and approvals constantly change and require a nimble team working on behalf of the city.

In addition, and equally as important to the technical needs of the project, developing finalized agreements with UPRR for the permanent lease, as well as maintenance agreements are critical path issues. The design team and city staff have worked with Chicago UPRR engineering staff during Phase I for preliminary review and approvals, but during Phase II firm agreements will be required prior to IDOT letting. Additionally, challenges and changes during the negotiations may have impacts on the final design, including sidewalks, parking, fencing, etc. on UPRR property. The team has recommended tasks and deliverables to create exhibits for use in these negotiations. We recommend that even prior to a design team NTP, the city engage legal council regarding this specific topic, and could also initiate preliminary discussions with UPRR. We are committed to partnering and supporting the city during these negotiations.

ICC

The entire ICC petition and hearing process must be completed during Phase II. This will be another critical path item for this project's success. The team fully understands the RR and ICC process for securing approval of the pedestrian underpass crossing of the UPRR tracks.

The process starts with a petition for the desired crossing being submitted to the ICC. The petition can only be submitted by the public agency that owns and maintains the crossing or the railroad. The petition should include a narrative with the necessity or reason and justification for the crossing. The ICC will then schedule a Site Diagnostic Meeting with all of the parties to become familiar with the physical features of the site. Any issues such as sight lines, obstructions, distance to road intersections, and traffic signals etc., that could affect the proposed crossing will be discussed.

The ICC will then schedule a hearing. Any issues or concerns regarding the proposed crossing will be worked out with the UPRR before the hearing, as any objections to the proposed crossing that are presented at the hearing will generally result in the petition not being approved. The ICC will then issue an order authorizing the construction of the proposed crossing. The team's past project experience with the UPRR, as well as the contacts we maintain there and with the ICC, will result in smoother and quicker approvals. The team has routinely worked with the ICC for at-grade crossing projects as well as other public projects similar to this one as a GEC for Public Projects for CSX and G&W.

As an example, Patrick recently successfully navigated this process with the ICC (and the CNRR) for the Washington Street Grade Separation Project for the Lake County Division of Transportation and with the Chicago Terminal Railroad (parent company is the Canadian Pacific RR) for new frontage road and bike path crossings as part of our Elgin-O'Hare Western Access (EOWA) project for the Illinois Tollway.

Metra

While Metra is a significant stakeholder in the successful operation and safety of the completed Metra station, we recommend focused, "strategic" involvement in order to continue to keep project support and limit concerns from appearing late in the final design and construction phases. We recommend involving governmental affairs and operations in addition to the station engineering department to focus priorities and reviews.

Governmental affairs will assist in navigating and communicating within the agency and with partners. Metra's operations department will be significant in coordinating with the city and design team moving forward, especially as it relates to phasing and reviewing options for platform phasing and service. Metra Engineering's Stations and Parking team has played a review and comment role during Phase I and is recommended to continue to play a similar role in Phase II. We would recommend that the city provides a review set at 30%, 60%, and 95% to Metra for courtesy review. If this was a Metra sponsored project the mandatory review milestones would be followed at 30%, 60%, and 90%. We recommend utilizing the same 95% for Metra as is required for IDOT in order to limit schedule impacts.

Pace

During Phase I a revised Pace stop was located in proximity to the station to improve comfort and ease of site access. During Phase II, we recommend a meeting be initiated with Pace operations following the Notice to Proceed to confirm any additional requirements or concerns. CDM Smith has a long relationship with Pace and can assist in facilitating these conversations.

IDOT

While IDOT is a critical agency for the success of the project, the project is "non-traditional" for IDOT due to the Metra facilities components. Like Phase I, Phase II will be coordinated through IDOT District One Bureau of Local Roads and Streets (BLRS). Once the Phase II agreement is approved by IDOT, we will propose a Phase II kick-off meeting with IDOT BLRS at the initiation of Phase II, so that we can come to agreement on the required submittals, plan review process, targeted letting schedule, review entities, etc. We will inquire if they believe IDOT Bureau of Land Acquisition staff should attend the Phase II kick-off meeting to concur with the requirements of the updated lease agreement with UP Railroad. In Phase II, IDOT requires a Pre-Final (95%) Submittal, Initial Final (99%) Submittal and Final (100%) Submittal of the Plans, Specifications, Estimate of Cost and Estimate of Time. We will also ensure the environmental clearances are kept up to date and complete a Preliminary Site Investigation as required by IDOT in Phase II. To avoid any funding issues, we will keep the Project Program Information (PPI) form, which lists the funding types, amounts and fiscal years, updated and current throughout the lifetime of the project.

Village of Glen Ellyn

While the focus of the project involves many outside agency stakeholders and approvals, as the project moves into Phase II, the Village of Glen Ellyn and multiple departments play an increasing role. The station and site will follow federal, state, and local code requirements including the Internal Building Code requirements with local amendments. While the project has may elements, there is a primary building component that will require close coordination with not only the Architectural committee, but also the building department, the fire department, and the county health department (depending on the permitting/design strategy for the café component).

RISK MANAGEMENT & COST CONTROL

The reliability of the project scope, cost estimate, and schedule is important, not only for the successful completion of the project within budget and schedule, but also for the credibility of the project designers and, ultimately, the Village of Glen Ellyn. Risk management provides the basis for improving the reliability of project delivery.

Risk management involves identification of risks, assessment of potential impacts to budget or schedule, and preparing appropriate responses to the risks. Design resources would be directed toward those risks with moderate to high potential for cost or schedule impact.

Identification of risks is typically done with a multi-disciplinary team. Risks may include, but not be limited to: Third-party agreements (UPRR, Metra, Utilities); ADA design requirements; Tunnel appurtenances (railing, lighting, drainage, security); Railroad flagging; Railroad operational requirements (limiting allowable work windows); and Business/ Public responses. Generally, sufficient contingency would be identified to cover probable risk events, although many risks can be addressed through other means such as Subsurface Utility Exploration (SUE), early coordination regarding agreements, and careful attention to design elements.

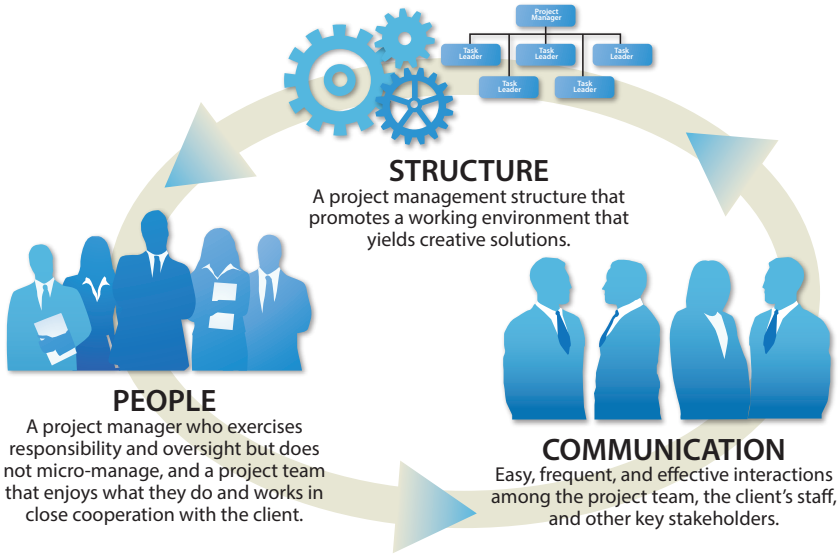
Our approach includes weaving overall project management with risk management soon after notice to proceed. By directing resources and time early in the design toward those items which may have the greatest impact on project schedule (design or construction) and/or project cost, response options will have considerably more flexibility and lower cost compared to addressing risk items after design is 95 percent complete.

As proposed in the scope of services, budgetary cost estimating and cost estimating proposed during the architectural design, schematic design, and at each phase of Phase II deliverables to provide constant review and tracking methods.

VALUE ENGINEERING (VE)

Typically, when value engineering (VE) is mentioned, team members think of cutting cost because a project is overbudget. The discipline of value analysis, however, examines how to deliver the functions desired by the client at the best value. Like risk management, the earlier value engineering is conducted in the design process, the greater the opportunity for incorporating the generated ideas, including ideas that improve the project at a lower cost. We propose in our approach to include an internal multi-disciplinary value engineering workshop prior to the first design submittal in order to identify potential opportunities for value improvement.

CDM Smith implements project controls to keep a project on schedule, on budget, and within realistic construction cost estimates.



CDM Smith's approach to project management focuses on utilizing the right people in an efficient team structure that fosters effective communication. This approach is critical for project success.

PROJECT MANAGEMENT

Managing and coordinating project activities is essential for a long-duration project such as this. If focus is lost on any of the elements of the management element, the overall goal of the project could diverge from the ideal design solution or not meet stakeholder expectations. We are committed to starting out properly so that the team and stakeholders are focused on the objectives and up to date on the project tasks and direction.

CDM Smith strives to meet overall schedules and key milestones to keep projects progressing towards successful completion. For this project, we have developed a baseline schedule which indicates items that we have identified to be of critical path.

Due to unforeseen project conditions or additional scope, project schedules can slip. We understand that project goals can change during the course of a project, and can impact schedule float, and possibly delay project completion.

For these instances during the project, we will discuss all potential impacts on the schedule with the Village of Glen Ellyn, so that you can understand the implications of project changes, explore opportunities to accelerate other portions of the project schedule, and evaluate the project change ramifications to the schedule. This collaborative approach brings teamwork and mutual understanding to the overall project delivery.

We have kept our project team relatively compact to facilitate effective communication. We expect that we will have bi-weekly project team meetings outside of weekly progress meeting "update emails", and specific stakeholder and agency meetings. We will maintain meeting minutes, schedule updates, and action items to communicate throughout schematic design and Phase II.

We will also utilize conference calls with sharing of project materials on our screens for check-ins between these project team meetings. This will allow specific team focus communication to take place on issues such as utility identification, analysis, outreach engagement issues, and so forth.

We will also maintain constant communication with village staff through email and phone. We have worked to be available throughout Phase I of the project and look to only increase the amount of communication during Phase II. We seek to limit surprises, and we will make sure that you are kept informed if there are adjustments to the project activities, especially if these may impact village operations.

Cost control must be maintained on several levels. We will strive to closely manage the study, design, and construction engineering budgets on this project. However, we understand that during the project activities, there may be adjustments to the project scope as the work progresses, and we will work actively with the village to manage our work and budget where possible to maintain the overall project budget. Changes may be in response to village-requested changes, or it may be required because of changes to the regulatory framework, or other issues. We expect and anticipate there will invariably be changes, but also understand that addressing these elements as early as possible as opposed to later is critical. We will review and discuss these scope and budget issues when they take place to most efficiently manage the project work.

This project will generate many study, design, and construction phase documents. At the outset of the project, we will define the document control plan to all project staff based on the CDM Smith Quality Management plan which adheres to ISO 9001 protocols. This will identify required documents, including technical memoranda, design reports, design documents, specifications, communication, etc. These documents will be developed using our standards, unless documents are required in specific formats based on agency requirements, for example IDOT or ICC. This will be outlined in the plan so that all project team members understand the formatting requirements at the outset of the project.

The project team will manage team and village communication of files through a dedicated Sharepoint site, hosted by CDM Smith, and internal files will follow CDM Smith

standard ProjectWise document control program. This system will also maintain all the design document progress records so that changes to the design can be quickly documented if need be. ProjectWise enforces discipline in managing documents in the design phase so that there is proper drawing refer- encing in the different discipline drawings. This helps with the coordination of the different disciplines as the design moves forward and requires that documents are checked out and checked in to the system to maintain strict control of the versions of documents that are generated during the project. The ProjectWise software will also provide a store for future reference so that needed documents can readily be located.

To achieve this overarching goal, we have developed a Quality Management System (QMS) of policies, processes, and procedures to be applied to our business model of pursuing, capturing, executing, and closing out projects or fulfilling other contractual obligations for our clients. This project will be executed in accordance with CDM Smith's firmwide QMS.

CDM Smith has designed our QMS to meet differing client requirements; in essence, to be flexible so it can be responsive to our clients. By evaluating the client's needs and determining the applicable sections of the QMS, we are able to meet each client's requirements. This is how we tailor our QMS to make a Project Quality Assurance Plan (PQAP).

The project quality assurance plan requires that the project manager initiates a project kickoff meeting internally to remind staff of the project's key objectives. Additionally, there will be project reviews for each milestone including mandatory technical review committees. These committees will be held internally with technical staff outside of the project team that will review deliverables, including:

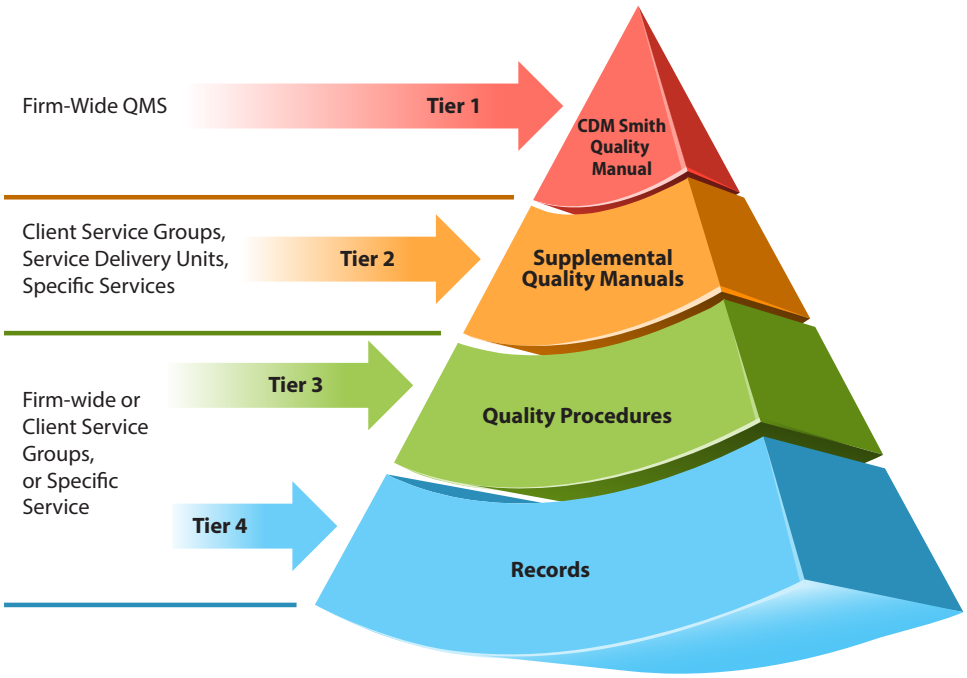
- Materials of Construction
- Calculations
- Interdisciplinary Checking
- Cost Estimate Review
- Technical Memorandum
- Design Reports
- Drawings
- Specifications

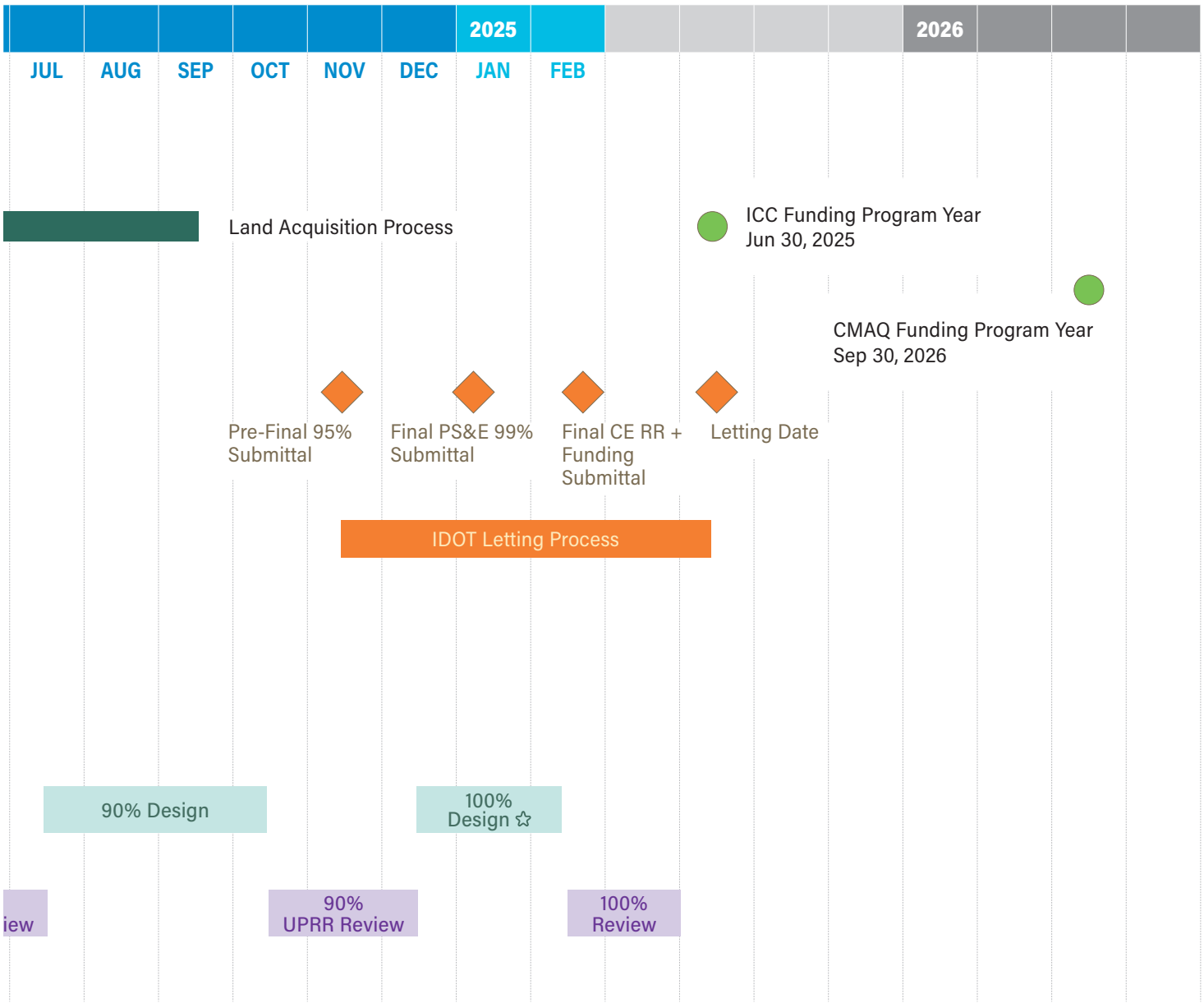
Robert Cheval as the project manager, and the entire project team, is committed to successfully implementing the Glen Ellyn Metra Station project.

GRANT MANAGEMENT

Glen Ellyn has received a nearly unprecedented level of financial support for the project from a variety of funding sources. As previously noted, these funding sources include federal, state, and local funds administered through IDOT, ICC, and by direct grants. The project team's experience with IDOT, ICC, and Metra will allow the team to meet requirements to complete design and construction. Besides meeting standard reporting and deadline requirements (see IDOT coordination and scope of services), the CDM Smith team will plan on frequent points of contact with IDOT, DMMC, and ICC staff specifically related to proactively coordinating and communicating changes or updates to schedule or budget for funding management. As noted in Section 2, the team has exceptional professionals that are part of the project team with a focus on funding management.

Robert Cheval as the project manager, and the entire project team, is committed to successfully implementing the Glen Ellyn Metra Station project.





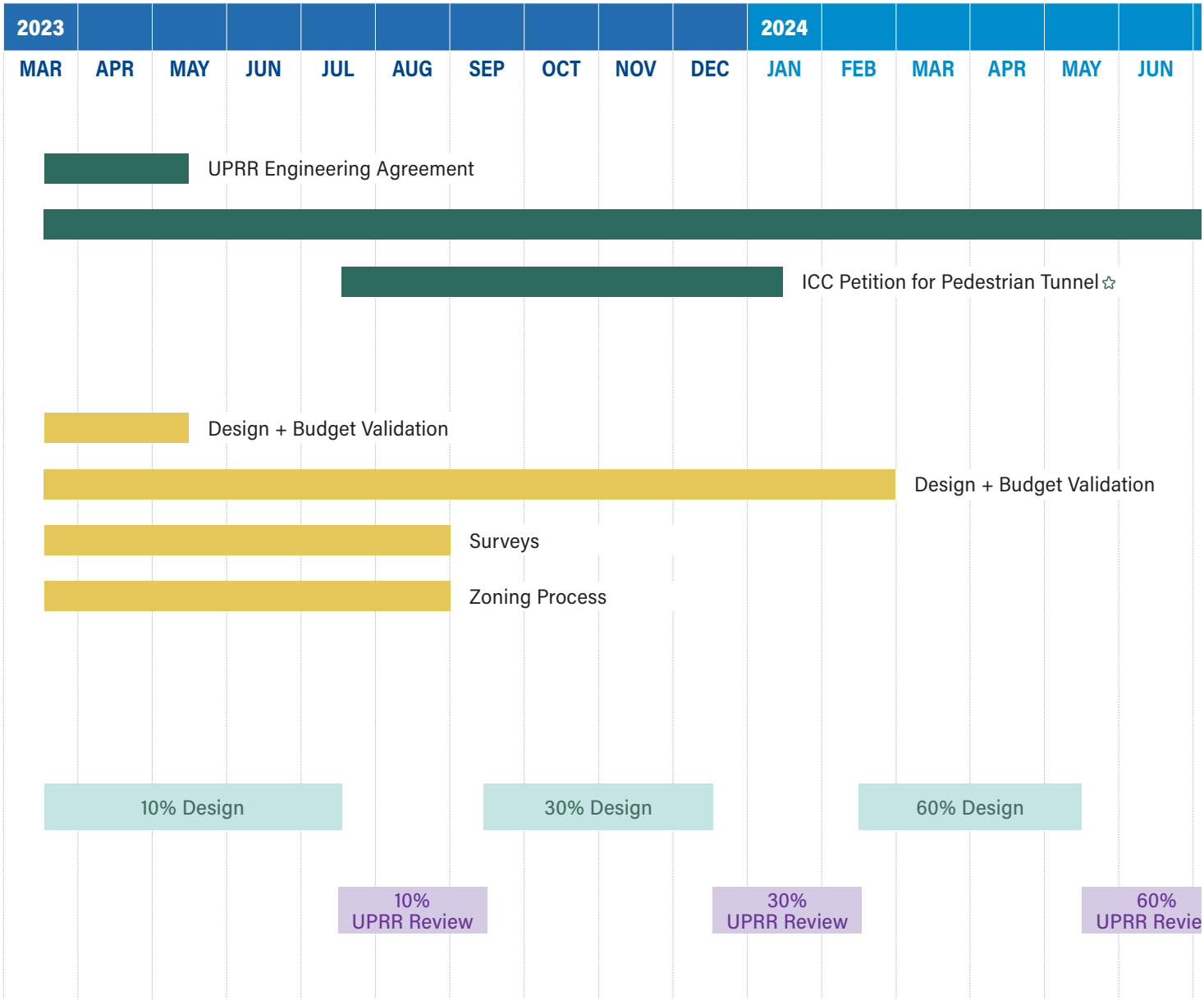
KEY

◆ Potential IDOT Dates

ALL time frames indicated are preliminary and are based on the assumed 2024 IDOT letting schedule.

☆ The 100% UPRR Review is being shown at 1 month. If UPRR comments are received after the documents are forwarded to IDOT then comments will be addressed as an addendum.

Section 4 | Understanding and Approach



SCHEDULE

The proposed project schedule includes limited time from the date of an assumed Notice to Proceed in early 2023 until proposed IDOT Phase II letting in early 2025. Elements that we believe are critical when working to meet the project objectives are continuously emphasizing and tracking critical path items, limiting unforeseen items or durations, and quickly notifying the city and agencies when unforeseen items or durations do arise. Union Pacific approvals including access and lease agreements, utility relocation agreements, and IDOT reviews and approvals are items that are most likely to impact schedule.

CDM Smith believes that based on our team's experience, and specifically our cultivated knowledge and relationships related to Phase I that we are uniquely positioned to meet the city's schedule objectives.

AUGMENTED STAFF (OPTIONAL)

CDM Smith understands that the Village of Glen Ellyn has many commitments throughout all departments that provide services to residents and businesses. We understand that undertaking the final design and construction of a complex multi-modal project with many stakeholders can be both labor and time consuming. CDM Smith may provide both augmented technical and/or administrative staff to the village specific to this project if the village believes there is a desire to pursue this service. We are fully committed to the success of the project, but also to supporting the village in any way possible, and this extends to staff support and augmentation.

PHASE III

CDM Smith understands that the Village of Glen Ellyn intends to have the ability to continue into Phase III with the firm at the completion. We understand that these scopes and services will be negotiated at that time and would look forward to providing these services to the Village.

STAFFING CAPACITY

CDM Smith is committed to assisting the Village of Glen Ellyn in meeting the project objectives for the new Metra Station and site improvements project. That commitment extends to meeting another challenging schedule for Phase II and Phase III Engineering. CDM Smith internally has one of the largest and most diverse architecture and engineering practices in the country with over 4,500 staff. In the most recent 2018 Engineering News-Record rankings, CDM Smith ranked in the top 25 for Top Design Firms across the country. As noted in Section 2: Firm Information, CDM Smith will use our Lisle and Chicago offices for the project. KMI will continue to provide supplemental architectural and engineering support for facility work. In addition to the existing resources, we are adding further capacity with the addition of Patrick Engineering and our other partners. Project staff noted in Section 6: Project Staffing, will be committed to this project based on the final approved scope of services.

Section 5

Team Information

Each firm joins our team with exceptional qualifications related to the Village of Glen Ellyn Metra Station, including long portfolios at Metra sites. With this strategically assembled team, the Village of Glen Ellyn will receive a high level of client service, technical excellence, dedicated professionals, and a commitment to your community and project. All of these firms have deep roots in the Chicago metropolitan area, and are as invested in making the Village of Glen Ellyn Metra Station a gathering centerpiece to serve the community.

A Strategically Assembled Team of Experts

CDM Smith staff have been in place since the beginning of the Phase I study. We're excited to see this project moving forward. We've strategically put this team together pulling the best resources in the Chicago area. Partners who know the locality, have the right experience, and are committed to creating a sustainable, benchmark project that benefits the community on many levels. Our team brings:

- ***Staff who have local experience with station planning, design, and construction***
- ***Hands-on experience handling railroad coordination with IDOT, UP, ICC, and Metra commuter rail stations***
- ***Local knowledge of Glen Ellyn's architecture, landscape, and comprehensive plan***
- ***Experience with federal aid procedures to ensure grant dollars are expended properly***
- ***Creative professionals who are committed to public involvement and community support***
- ***LEED-certified architects and engineers who are dedicated to sustainable design***

Additional information on our project partners is included in Section 2.

Kaltsouni Mehdi (KMI)

KMI
Kaltsouni Mehdi, Inc.
ARCHITECTS ■ ENGINEERS

Established in 1997, KMI has become one of the area's strongest architectural and engineering firms for Metra station design. Focused on quality, function, and cost-effective design, KMI serves rail transportation clients throughout Illinois, including Metra and the Chicago Transit Authority.

KMI's John Mehdi, AIA, brings to our team a wealth of Metra station design work, which spans all 10 Metra commuter lines for 50+ station projects. As our team's lead architect, John will reinforce his knowledge of Metra standards and practical, community-driven architectural components gained over the course of his 33 years practicing client-focused architectural design.

Metra's premier architect on 50+ successful station projects.

Metra Bartlett Station

Metra Tinley Park Station

KMI
Kaltsouni Mehdi, Inc.
ARCHITECTS ■ ENGINEERS

Metra Stations	Municipal Building Codes	Standards		
		IDOT	Union Pacific	Metra
SUBURBAN PROJECT LIST				
Glen Ellyn Metra Station	✓	✓	✓	✓
Elmhurst Metra Station	✓	✓	✓	✓
Mundelein Metra Station	✓	✓		✓
Lombard Station Ramps and Tunnel	✓	✓	✓	✓
Wheaton Station Overpass	✓		✓	✓
Calumet Station Rehabilitation	✓			✓
Harvey Metra Station	✓	✓		✓
Dee Road	✓	✓	✓	✓
Bartlett Station	✓	✓	✓	✓
Elburn Station	✓	✓	✓	✓
Tinley Park 80th Avenue Station	✓	✓		✓
Oak Park Avenue Station	✓			✓
Naperville/Aurora Station-lighting	✓			✓
Lemont, Glenco, and Lockport Stations	✓			✓
Medinah Station	✓			✓
Northbrook Metra Station	✓			✓
Asset Condition Assessment	✓			✓
Flossmoor Station	✓			✓
Hazel Crest Commuter Station	✓			✓
Crystal Lake Shelters	✓		✓	✓
Orland Park 143rd Street Station	✓	✓		✓
153rd and 179th Street Stations	✓	✓		✓
Pingree Road Station	✓	✓		✓
Robbins Station	✓			✓
Lake Villa Station	✓	✓		✓
Woodale Station	✓			✓
Arlington Park Commuter Station	✓			✓

Metra Stations	Municipal Building Codes	Standards		
		IDOT	Union Pacific	Metra
143rd Parking Study-Southwest Highway	✓	✓		✓
Palos Park	✓	✓		✓
Route 59 Station	✓			✓
Prairie Crossing Station	✓			✓
Geneva Station	✓		✓	✓
Prairie View Station	✓	✓		✓
Gresham, Robbins, Richton Park	✓			✓
Fairview Station-Platform Reconstruction	✓			✓
Aurora Station Platform lighting	✓			✓
New Lenox Platform Extension	✓			✓
River Groove Shelter	✓	✓		✓
47th Street Coach & Diesel Shops Skylight Replacement	✓			✓
CITY OF CHICAGO PROJECT LIST				
95th Street Station-Beverly	✓	✓		✓
Edison Park	✓	✓	✓	✓
Museum Campus Station Platform Extension - Construction Management	✓			✓
115th Street Station	✓			✓
Randolph Station	✓			✓
Burlington Northern-Sante Fe Facility-Office Renovation	✓			✓
79th Street Station – Platform & Railing ADA Rev.	✓			✓
Auburn Park Station	✓	✓		✓
14th Street Yard Landscaping	✓			✓
Cicero Station Rehabilitation	✓	✓		✓
UP Female Locker/Shower Room	✓		✓	✓
Van Buren Station	✓			✓
Substation Design-Electric Line	✓			✓
Standards for Crew Welfare Facility	✓			✓

Civiltech Engineering

Civiltech Engineering, Inc. is an engineering firm with its primary focus on transportation and civil engineering. The firm offers a wide range of services while maintaining a high level of integrity and attention to detail on each and every area of the job.

Civiltech's municipal client list includes over 85 villages and cities in the Chicago and Northern Illinois region, the Illinois Tollway, Illinois Department of Transportation, Chicago Department of Transportation, multiple county and township DOTs, additional public agencies, as well as private sector clients. Civiltech realizes that success lies in the individual service and attention we provide to our clients. They are committed to providing top quality consulting engineering services. Through the years, Civiltech has earned a reputation for professional excellence and integrity.

Civiltech is a local leader in innovative planning, design, and construction solutions.

US Route 14 Grade Separation at CN Railway

Glen Ellyn CBD Streetscape and Utility Improvements, with existing setup inset.

Vistara

Based on our previous experience of working together, we know Vistara will bring added value to the CDM Smith team. We are looking to their experts for input on constructability, cost estimates, and scheduling scenarios. They know the transportation industry, specifically rail, in and around the Chicago area.

Since 2012, CDM Smith has included Vistara as a construction cost and scheduling consultant on numerous local transportation projects and proposals focused on renovating, upgrading, and redeveloping CTA train and bus stations.

Vistara was part of the CDM Smith team and worked on preparing the construction cost estimates for the conceptual engineering and planning schemes developed for the 95th Street Terminal Feasibility Study (broke ground Sept. 2014), the renovation of the 77th Street Bus Garage, rail car washer replacements, electrical upgrades to the West Shops, and Brown Line Core Capacity Vision Study.

Currently, Vistara provides multiple construction cost estimates for the renovation and exterior site work on various CTA infrastructure projects that CDM Smith is managing. This work includes cost estimates for the 77th Street CTA Bus Garage Fuel System Repair, electrical panel upgrades to the West Shops CTA Bus Garage (Maypole), and cost estimates and schedules for the roof replacement at the CTA Des Plaines Rail shop, and building envelope repair at the 98th Street Train Yard and Shops.

Experts on constructability, cost estimates, and scheduling scenarios in the transportation industry.

CTA 95th Street Station

Project	Metra Project	Other Rail Project	Transit
Buffalo Grove Station	✓		
Waukegan Intermodal		✓	
Cicero	✓		
Various Windbreaks/Warming Shelters	✓		
South Chicago Branch Stations	✓		
Milwaukee Intermodal		✓	
Glen Ellyn Station	✓		
CTA Brown Line Core Capacity Vision Study		✓	
CTA Quincy Loop Station		✓	
CTA Illinois Medical District Stations		✓	
CTA West Shops Electrical Upgrades		✓	
CTA 95th Street Terminal		✓	
CTA 74th Street Bus Garage – Envelope Repairs		✓	
CTA 77th St Bus Garage Trash Handling System		✓	
CTA 77th St Bus Garage Fuel System Repair		✓	

Project	Metra Project	Other Rail Project	Transit
CTA Bus Garage/West Shops - Maypole		✓	
CTA Rail Stop Roof Replacement		✓	
CTA Des Plaines Rail Shop		✓	
CTA Harlem Rail Shop		✓	
CTA Train Yard & Shops		✓	
CTA RPM TOD Study		✓	
CTA Fire Alarm/Suppression Projects		✓	
Lafayette Regional Airport, New Terminal			✓
Aircraft Rescue + Fire Fighting Station O'Hare			✓
Airport Maintenance Complex Midway			✓
United Airlines ORD North Airfield Master Plan			✓
United Airlines Lounge Renovations, multiple cities			✓
Airport Maintenance Complex O'Hare			✓
VA E85 Fueling Station			✓

The Lakota Group

The Lakota Group's defining attribute is fostered through a team-based approach to project management centered on positive dialogue. Led by a drive to institute change in a sustainable way, Lakota associates abide by a process that combines critical thinking and community engagement. The result? A practice that seeks to produce the most effectively efficient solutions, carefully balancing the real with the ideal.

Their quest is simple: Lakota wants to improve communities.

By engaging local residents through workshops, discussions and surveys, Lakota strives to pinpoint the opportunities for improvement. They want clients to help place themselves in their frame of context: what would we want if we were the ones living in their town? Working in their building? Raising a family in their neighborhood? Lakota wants to listen, and we want to talk, and then we want to listen some more. Lakota acknowledges the issues, while also recognizing the strengths, shedding light on the qualities that make a place unique, and brainstorming the ways upon which they can be built.

Since the firm's conception in 1993, Lakota has completed award-winning assignments in more than 500 towns and cities across the country, gaining recognition for its work in streetscape design, corridor plans, form-based codes, downtown master plans, and wayfinding & signage programs.

ONTARIOVILLE PLAZA

Lakota developed a master plan for Ontarioville, an historic district in Hanover Park, IL. The first phase of implementation included the development of a new plaza, streetscape, and park open space renovations to create the core of the district. Ontarioville Plaza features an oval event lawn, flexible paver stage and performance space, an interactive water feature, custom linear wood seatwalls, and multiple seating pockets beneath string lights. The landscape design features a rich mix of trees, shrubs, and perennials that add year-round interest. The plaza is now the location for many of the Village's community events.

MARION STREET STREETSCAPE

Lakota developed plans to open Marion Street to two-way traffic in order to revitalize the deteriorated pedestrian mall in the center of Historic Downtown Oak Park. The overall plan links the mall to another new, pedestrian-friendly street that has several local businesses. The streetscape design focused on rejuvenating this well-known commercial center with a rich variety of materials and flexible outdoor gathering spaces. The design included natural stone, brick street/sidewalk paving, custom site furnishings, a central water feature, new plantings, and custom lighting. Sustainable design techniques, such as an under-sidewalk heat mat and a gray water storage system for irrigation, were used. The project has been integral to creating an active and vibrant commercial district, and has spurred additional streetscape enhancements and economic development within the downtown.

The Lakota Group is a team of talented urban designers, landscape architects, and historic preservationists powered by a passion to offer creative solutions.

Ontarioville Plaza

Marion Street Streetscape.

Park Ridge City Commons

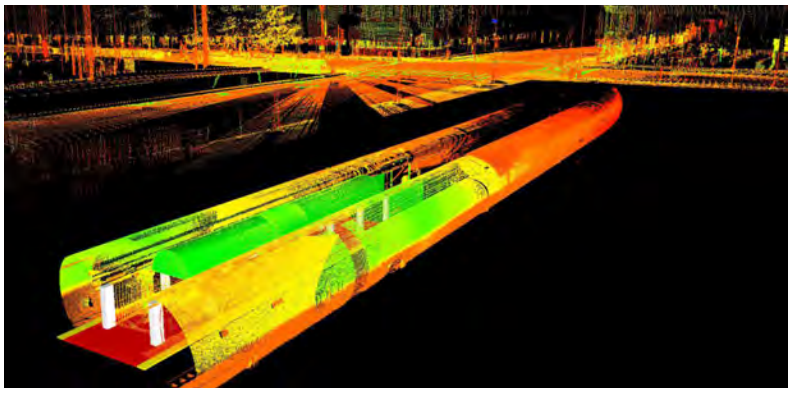
Winnetka Public Library

American Surveying & Engineering

American Surveying & Engineering, P.C. (ASE) is a full-service A/E firm that offers a variety of professional services. ASE was established by Coventine Fidis in 1978 as American Surveying Consultants. Its corporate office is in Chicago with branch offices in Naperville and Dixon, Illinois.

ASE embraces cutting edge technology, allowing them to deliver high-quality data that satisfies the needs of clients working on complex transportation or utility corridors in an efficient and cost-saving manner. ASE owns and operates a Mobile LiDAR unit, which allows them to obtain design-grade survey data at highway speeds in addition to operating sUAV systems that allow them to capture topographic data from the air.

ASE's expertise includes traditional survey techniques, terrestrial and mobile 3D LiDAR, bathymetric surveys, use of UAVs to collect data from the air, and underground utility investigations/location. They have a long history performing topographic, right of way, and land survey services for roadway and utility projects of all sizes from long corridors in rural settings to busy streets in Chicago.



With ASE since 1989, John Dybas, PLS is the Chief of Surveys responsible for field procedures and technical direction of party chiefs, office and field calculations, and acts as Lead Mobile LiDAR Surveyor.

Metra Van Buren and Millennium Stations
Track reconfiguration and platform design

Metra UP-West 3rd Mainline
Survey data included all track appurtenances that go along with the railroad topography

Jorgensen & Associates, Inc.

Jorgensen & Associates was founded during August of 1990 to provide surveying services to the general public. Jorgensen & Associates is incorporated in the State of Illinois. The corporate office is located at 120 Park Avenue, Lake Villa, Illinois. The firm is an equal opportunity employer and is prequalified by the Illinois Department of Transportation to perform surveying services.

Glen Ellyn Central Business
Jorgensen & Associates performed the final design topographic survey and right of way determination along Pennsylvania Avenue, Main Street, Duane Street, Crescent Boulevard, Prospect Avenue, Forest Avenue, Hillside Street, Anthony Street and Glenwood Ave. Prepared "MicroStation" and "GeoPak" files to serve as a basis for the client's design.

Dating to 1990, Christian Jorgensen, PLS, is president in direct responsible charge of all surveying activities.

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Section 6

Project Staffing

CDM Smith's Bench Strength Offers Our Clients a Wide Range of Disciplines

With 100+ staff in the Chicago and Lisle offices, supported by 5,000 staff worldwide, the CDM Smith team maintains the depth of resources to provide the disciplines and expertise required for a new Glen Ellyn Metra station—from civil engineering and stormwater/utilities, to specialists in architecture, bus operations and maintenance, transit oriented development, traffic engineering, and cost estimating services. The depth of our bench is unparalleled and will allow the CDM Smith team to provide the city with responsive and reliable service.

With 100+ multidisciplined staff in the area, CDM Smith's Chicago and Lisle design centers provide the Village of Glen Ellyn with every service needed for your Metra station improvements project—all from under one roof, with one phone call.

The Right People for Streamlined Delivery

CDM Smith's project team is comprised of the region's best experts in the critical disciplines needed for the new Glen Ellyn Metra station project and will provide the highest level of service and efficiencies during project delivery. Senior architect Robert Cheval, AIA, PMP, will lead the team to bring you the right resources to help the Village of Glen Ellyn elevate its Metra station as a community asset and notable transportation hub.

Glen Ellyn Project Manager

Project Principal
Chris Martel, PE, PMP, LEED AP, BCEE

Project Manager
Robert Cheval, AIA, PMP

QA/QC
Steve Pasinski, PE

SITE ENGINEERING
Anna Ualat, PE

IDOT Coordination
Tony Cerda, PE

Maintenance of Traffic Detour Plans
Tony Cerda, PE

Roadway Design
Kim Jarosz, PE

Site Utilities
Anna Ualat, PE

Structural - Canopy
Brandon Diffenderfer, SE

Structural - Retaining Wall
Pete Sarich, PE, SE

Structural - Tunnel
Mahmood Khwaja, PE

Drainage + Stormwater Permits
Tom Liliensiek, PE

Landscape Design
Kevin Clark, PLA, AICP

Site Survey
Chris Jorgensen, PLS

Track Survey
John Dybas, PLS

FACILITY
Sarah Sutherlin, AIA, LEED AP

Project Architect
Sarah Sutherlin, AIA, LEED AP

Mechanical/Plumbing/Fire Protection
April Rickets, PE

Structural
Brandon Diffenderfer, SE

Electrical + Communications
Megan Czach, PE

Sustainable Design Coordinator
Ben Harber, AIA, LEED AP, NCARB, PMP

BIM Coordination
Brian Cunningham, PE

Metra Standards
John Mehdi, AIA

CONSTRUCTABILITY/PROJECT ESTIMATING

Construction Phasing, Constructability
Anas Alkhatib, PE, PMP

Cost Estimating
Ramesh Nair, AIA

COORDINATION + PERMITTING TASKS
Robert Cheval, AIA, PMP

Community Outreach
Steve Pasinski, PE
Kevin Clark, PLA, AICP

Grant Management
Jacquelyn Murdock, AICP

Agency Coordination
IDOT
Tony Cerda, PE
UPRR/Metra/ICC
Bob Cheval, AIA, PMP

Zoning + Building Permits
Bob Cheval, AIA, PMP
Sarah Sutherlin, AIA, LEED AP

NPDES Permitting + Documentation
Tom Liliensiek, PE

IEPA Permit (Water Service)
Anna Ualat, PE

Facility Utility Coordination
ComEd
Megan Czach, PE
Nicor
April Rickets, PE

Section 106/4(F) Advisor
Steve Hands, PMP

Right-of-Way Negotiations
Melody Carvajal
Bradley Smith

SUBCONSULTANTS
American Surveying & Engineering, P.C. · Civiltech Engineering, Inc · Jorgensen & Associates, Inc · Kaltsouni Mehdi, Inc. · The Lakota Group · Vistara Construction Services

ON-CALL VENDOR
Neal & Leroy, LLC

Robert Cheval, AIA, NCARB, LEED® AP BD+C, PMP

Project Manager

Bob is a licensed architect with more than 15 years of experience. He has a successful background producing technical content and managing complex, multidisciplinary teams for major facilities projects. Bob brings strong working relationships with notable transit and transportation agencies to his projects. He has hands-on practical experience with rail and bus facilities operations, maintenance, and equipment that he gained while working in the CTA Facilities Maintenance Engineering Department. As clients look to modernize facilities and comply with new and evolving regulations, Bob's knowledge in today's standards and specifications, as well as his expertise in developing sustainable solutions that work for the long-term, will be critical for a growing transit and urban practice.

Project Manager, Metra Station Architectural Design and Phase II Engineering Services, City of Elmhurst, Elmhurst, Illinois, 2022 - Ongoing.

The City of Elmhurst selected CDM Smith for Architectural Design and Phase II Engineering Services of its Metra Station, which provides commuter rail service between the western suburbs and downtown Chicago. Building on its last three decades of downtown development, Elmhurst looks to renovate its aging station, reduce traffic congestion, and create a landmark that enhances the community fabric and economic development. Mr. Cheval is managing the multifaceted team that will execute the Phase II engineering design for the new Metra train station and related site improvements.

Lead Design, Ellyn Metra Station Preliminary Design, Village of Glen Ellyn, Glen Ellyn, Illinois, 2022 – Ongoing.

CDM Smith has been providing analysis, planning, design, and Phase I Engineering services for the village's Metra station and surrounding down-town district. Mr. Cheval is overseeing architectural design alternatives for rehabilitation and new construction alternatives which are compatible with the existing downtown historic district.

Project Manager, NICTD Main Street Commuter Rail Station, Munster, Indiana, 2021 – Ongoing.

Working with the Town of Munster's internal stakeholders, the CDM Smith team designed architectural and other "betterments" to the baseline on several items ranging from modifications to handrail design and cladding materials, to larger fixes to the platform, underpass, bridge, station depot, and site work. . Mr. Cheval is managing the multi-discipline team that is delivering "betterment" design for the NICTD station to meet the needs of the community for the West Lake Corridor.

Facilities and Integration Subject Matter Expert, MATA Bus Electrification Support, Memphis, Tennessee, 2022 – Ongoing.

The Memphis Area Transit Authority (MATA) was awarded a grant to begin bus electrification. The implementation will take place in two phases. Phase-I is the piolet program and will include the purchase of 3 electric buses, three charging systems, and limited electrical infrastructure and facility upgrades. Phase-II will build off the data collected during the pilot program to facilitate a larger purchase of electric buses, charging equipment, and the require electrical infrastructure and facility upgrades. CDM Smith, working as a consultant to All World Project Management, LLC will develop implementation plans for both phases of the bus electrification program where Mr. Cheval will leverage his experience with the CTA to help with coordinating integration with MATA's existing facilities.

Education

MS – Master of Architecture, University of Illinois at Chicago, 2006

BS – Architectural Studies, University of Illinois at Chicago, 2003

Registration

Licensed Architect: Illinois, Indiana, Colorado

Certifications

Leadership in Energy and Environmental Design Accredited Professional (LEED® AP BD+C), U.S. Green Building Council

National Council of Architectural Registration Boards (NCARB)

Robert Cheval

Design Lead/Design Project Manager, Boiler Replacements – North Park Bus Garage and Beverly Garage Maintenance Shop, CTA, Chicago, Illinois, 2017 – 2020.

The CTA Facilities Maintenance Department identified the heating boilers for the North Park Bus Garage and Beverly Garage Maintenance Shop for replacement. The project consisted of the replacement of two steam heating boilers and ancillary equipment at the North Park Bus Garage and one hot water heating boiler and ancillary equipment at the Beverly Garage Maintenance Shop that had a construction value of $2,763,227.

Mr. Cheval was responsible for management of the design team, coordinating stakeholder reviews and incorporating their requests into the design. Mr. Cheval was also responsible for providing independent cost estimates throughout the design. During construction Mr. Cheval assisted with coordination between the Contractor's forces, CTA Operations, and CTA building trades along with providing submittal reviews, pay application reviews, and RFI reviews. Additionally, this project was executed during the winter which required the deployment of temporary heating plants which required close coordination with CTA operations and CTA Maintenance staff.

Design Lead/Design Project Manager/Assistant Construction Project Manager, Boiler Replacements - Forest Glen Bus Garage Service Building and West Shops Maintenance Shop, CTA, Chicago, Illinois, 2016 – 2018.

The Chicago Transit Authority Facilities Maintenance Department identified the heating boilers for the Forest Glen Bus Garage Service Building and West Shops Maintenance Shop for replacement. The project consisted of the replacement of two hot water heating boilers and ancillary equipment at the Forest Glen Bus Garage Service Building and one steam heating boiler and ancillary equipment at West Shops Maintenance Shop that had a construction value of $1,727,087. The project also included the deployment of temporary heating boilers.

Mr. Cheval was responsible for management of the design team, coordinating stake holder reviews and incorporating their requests into the design. Mr. Cheval was also responsible for providing independent cost estimates throughout the design. During construction Mr. Cheval assisted with coordination between the Contractor's forces, CTA Operations, and CTA building trades along with providing submittal reviews, pay application reviews, and RFI reviews.

Additionally, this project was executed during the winter which required the deployment of temporary heating plants which required close coordination with CTA operations and CTA Maintenance staff.

Design Lead/Design Project Manager/Assistant Construction Project Manager, Boiler Replacements - Forest Glen Bus Garage Transportation Building and 98th St. Rail Shop, CTA, Chicago, Illinois, 2015 – 2017.

The Chicago Transit Authority Facilities Maintenance Department identified the heating boilers for the Forest Glen Bus Garage Transportation Building and 98th St. Rail Shop for replacement. The project consisted of the replacement of one hot water heating boiler and ancillary equipment at the Forest Glen Bus Garage Transportation Building and one hot water heating boiler and ancillary equipment at West Shops Maintenance Shop that had a construction value of $880,693

Mr. Cheval was responsible for management of the design team, coordinating stake holder reviews and incorporating their requests into the design. Mr. Cheval was also responsible for providing independent cost estimates throughout the design. During construction Mr. Cheval assisted with coordination between the Contractor's forces, CTA Operations, and CTA building trades along with providing submittal reviews, pay application reviews, and RFI reviews.

Design Lead/Design Project Manager/Assistant Construction Project Manager, 77th Street Bus Garage - Unit 6 Steam Tunnel Repairs, CTA, Chicago, Illinois, 2016 – 2017.

The Chicago Transit Authority Facilities Maintenance Department identified the existing steam tunnel between the South Shops Unit-6 Bus Inspection Garage and the South Shops Unit-5 Boiler House as a critical piece of infrastructure that was in need of emergency repairs. Recent inspection reports had indicated that the structural integrity of the tunnel was compromised.

The project consisted of repair of the concrete utility tunnel walls while maintaining CTA bus operations at the driving surface above the tunnel while emergency repairs were on going. The project had a contact value of $1,535, 100.

Mr. Cheval was responsible for management of the design team, coordinating stake holder reviews and incorporating their requests into the design. Mr. Cheval was also responsible for providing independent cost estimates throughout the design.

Chris Martel, PE, BCEE, LEED AP

Project Principal

Chris is a civil and environmental engineer with 20 years of experience in the Chicago area. He has overseen 500+ projects, including serving Metra and CTA for the last 17 years on CDM Smith's on-call engineering multi-year contracts. During this time, Chris has led more than 50 engineering task orders and worked at Metra and CTA bus and rail facilities.

Principal-in-Charge/Lead Engineer, Glen Ellyn Metra Station Preliminary Design and Phase I Engineering, Glen Ellyn, Ill.

Chris serves as principal-in-charge and lead engineer for the Phase I Engineering of this new Metra station. CDM Smith was selected by the Village of Glen Ellyn to provide analysis, planning, design, and Phase I Engineering services for the village's Metra station and surrounding downtown district. The village understood that while the existing 1960s facility had fulfilled basic services, the station facility and site was not meeting current and future needs.

Principal-in-Charge/Lead Engineer, Elmhurst Metra Station Preliminary Design and Phase I Engineering, Elmhurst, Ill.

Chris serves as principal-in-charge and lead engineer for the Phase I Engineering of this new Metra station. Elmhurst's goals for this project included design of a landmark station, site planning to improve connectivity and safety within the central business district and improve traffic congestion. After significant coordination and input from Elmhurst staff, elected officials, Union Pacific, Metra, IDOT Local Roads, FHWA and public citizens, CDM Smith developed a preferred alternative design embraced by all parties involved. CDM Smith and the City of Elmhurst received preliminary environmental clearances and are currently finalizing the IDOT Project Development Report. Additionally, CDM Smith prepared funding applications and developed agency support documentation. Applications included CMAQ, STP, and ICC Crossing Safety Improvement Program.

Principal-in-Charge, Environmental Consulting and Inspection Contract, Metra, Chicago, Ill.

Chris serves as principal-in-charge of the current environmental consulting contracts. He has provided oversight for a variety of projects including spill response at Metra's Aurora and Blue Island Emergency Fueling Facilities, environmental inspections at the main facilities and remote fueling locations, AST regulation and permitting review, SARA 313 reporting, regulatory reporting, asbestos and LBP surveys, abatement specifications, SPCC Plans, and oversight for a comprehensive air monitoring program.

Principal-in-Charge, Metra's Union Pacific Northwest Line and Union Pacific West Line Environmental Assessments, Chicago, Ill.

Chris serves as principal-in-charge for the effort to complete EAs for planned upgrades to two Metra commuter rail lines. The EAs are being prepared to FTA standards and in compliance with regulations on historic, cultural, and 4(f) resources, listed species, and environmental justice. Proposed upgrades include expanded parking and transit service requiring noise and traffic analyses included in the EAs.

Education

MS, Environmental Engineering, University of Illinois at Urbana-Champaign, 1996

BS, Civil Engineering, University of Illinois at Urbana-Champaign, 1994

Registration

Professional Engineer: Illinois and Kansas

Leadership in Energy and Environmental Design Accredited Professional, 2006

Certifications

OSHA 40-hour HAZWOPER Training

IDOT Construction Documentation of Contract Quantities Course

SWANA Certified Transfer Station Technical Associate

Honors/Awards

Board Certified Environmental Engineer (BCEE), American Academy of Environmental Engineers and Scientists

Chris Martel

Project Director, General Engineering Consultant–Consolidated Facilities and Life Safety, CTA, Chicago, Ill.

Chris is currently serving as project director overseeing the development of 10 percent design-bid contract documents for facility improvement at 25+ CTA bus and rail facilities. As part of this project, CWC's subconsultant LSSI developed full ALTA/ACSM Land Title Surveys for the Harlem and Des Plaines Rail Shops. In addition to field surveying, this effort required significant review and incorporation of record drawings provided by CTA. The survey consisted of locating building footprints, topography, track, third rail, control box items, stinger items, buried and above-ground utilities (water, sewer, gas, electric, etc.), and other miscellaneous planimetric items.

Project Principal, Western Avenue BRT Alternatives Analysis, CTA, Chicago, Ill.

As part of the concept engineering plan development, Chris coordinated with Steve Goodreau and Jon Meyer of CDM Smith to obtain utility information from CDOT's Office of Underground Coordination (OUC) for the 16 mile project corridor. Due to the length of the corridor, CDM Smith prepared 35 individual online submittals. CDM Smith used OUC's online data portal to download hundreds of maps showing the utility locations for sewer, fiber optic, water, gas, electric, telephone, traffic, and emergency communication lines. CDM Smith developed a utility matrix and visually analyzed the data to identify potential conflicts between the existing utilities and each of the 35 proposed BRT station locations.

Project Manager, 95th Street Terminal Expansion Study and Conceptual Design, CTA, Chicago, Ill.

Chris managed a feasibility study that analyzed a major renovation and expansion to the existing CTA 95th Street bus terminal and commuter rail station, coordinating the efforts of the joint venture multidisciplinary team in the preparation of a technical memorandum to represent proposed new structures and the reuse of existing structural elements. CWC's subconsultant, Dynasty Group, provided horizontal and vertical control network, topographic, cross sections using IL State Plane Coordinates and Chicago City Datum, and base plan view survey. Chris worked with Dynasty staff to use previously collected LIDAR data to support the design effort and bring schedule acceleration and cost savings to the project.

Project Manager, Fisk Bus Garage Master Plan, CTA, Chicago, Ill.

Chris managed planning and design services to determine future development options for a 250-bus fleet maintenance facility on the Fisk Generating Station site in Chicago's Pilsen neighborhood. He was responsible for coordinating all site assessment services and leading the team's evaluation of potential alternatives. This project included an in-depth review of the facility's network of hundreds of utility corridors throughout the site.

Project Manager, 77th Street Bus Garage Daily Servicing Alternatives Analysis, CTA, Chicago, Ill.

Chris managed the analysis and cost estimating of two alternatives considered by the CTA's daily bus servicing tasks at the 77th Street and South Shops Facility. These two options for addressing the bus servicing requirements included rehabilitation/modification of existing facilities and a new full-service building with phased construction. This project required review of CTA's site utilities to understand the impacts of the proposed improvements on site utilities.

Project Manager, 77th Street Bus Garage Civil Engineering Tasks, CTA, Chicago, Ill.

The 77th Street Bus Garage is a 48-acre multi-use facility for the fueling, maintenance and repair of buses. One of the largest such facilities in the city, it houses a scrap yard, offices, chemical storage, hydraulic lifts, and fuel storage tanks and fueling islands. Chris managed CDM Smith's civil and environmental efforts on site, which included a sewer system assessment, fueling system upgrades feasibility study, trash removal system conceptual engineering analysis, design, and implementation of a dual-phase extraction remediation system, and other site investigation work. As part of these projects, CDM Smith obtained ALTA/ACSM Land Title Surveys in 2006 and 2013. In addition to field surveying, this effort required review and incorporation of record drawings provided by CTA.

Steve Pasinski, PE

QA/QC

Mr. Pasinski brings 28 years of experience in transportation planning, program management, design, construction, traffic, public involvement, and NEPA. Steve worked for the Illinois Department of Transportation for 11 years, last serving as the Head Geometrics Engineer for District 1. He also served as the Assistant County Engineer for Kane County responsible for Highway Program Delivery. Mr. Pasinski is an established and recognized leader in the Illinois Transportation market, having designed over 10 system and service interchanges, and performed in significant roles on major projects such as the I-290 Extension Reconstruction, the I-74/I-155/Morton Road Interchange Reconstruction, the I-290 Strangler, the I-190 Reconstruction, and the Stearns Road Fox River Bridge. Steve has served on multiple committees for ACEC and IRTBA, as well as a study panel for NCHRP.

Education

MPA – Public Administration, University of Illinois at Chicago, 2002

BS – Civil Engineering, Bradley University, 1992

Registration

Professional Engineer: Illinois (062-050829)

Client Liaison/QA/QC, Glen Ellyn Metra Station Preliminary Design and Phase I Engineering, Glen Ellyn, Ill.

Steve serves as client liaison and quality assurance/quality control for the Phase I Engineering of this new Metra station. CDM Smith was selected by the Village of Glen Ellyn to provide analysis, planning, design, and Phase I Engineering services for the village's Metra station and surrounding downtown district. The village understood that while the existing 1960s facility had fulfilled basic services, the station facility and site was not meeting current and future needs.

Project Principal and Concepts/Alternative Evaluation Lead, Kane County Division of Transportation, Randall Road and US Route 20 Planning and Environmental Linkages (PEL) Compliant Feasibility Study.

Mr. Pasinski is responsible for a feasibility study to improve the interchange of Randall Road and US Route 20, a facility which currently serves over 91,000 vehicles. The feasibility study is a collaborative study looking at concepts to optimize and re-configure the interchange to improve mobility and safety as well as economic development and access. The study is following PEL requirements and is on schedule to be completed in Summer of 2021.

Project Manager, I-80 Environmental Justice, PTB 176-03 WO-11 through 13 and WO 16, IDOT District 1.

This project is developing a Community Impact Assessment and a Mitigation Plan to address impacts related to the replacement of twin through-truss bridges with new, wider bridges along I-80 over the Des Plaines River. The proposed bridge location, 300 feet north of the existing bridges, will involve the acquisition of property and impact existing residential communities within Joliet. Outreach efforts will allow for full and fair participation by potentially affected environmental justice communities, identification of potential solutions to address adverse community impacts, and development of mitigation measures to address adverse impacts. Findings will inform transportation decision-making for this project.

Project Manager (Phase I) / Principal (Phase II), Phase I/II, Kirk Road and Fabyan Parkway Intersection Reconstruction, Batavia, Illinois, Kane County Division of Transportation.

This intersection improvement included the widening and reconstruction of two KDOT-owned and maintained Strategic Regional Arterials. Phase I followed federal NEPA procedures and included various engineering studies (crash/safety, capacity, location drainage

Steve Pasinski

study, staging and right-of-way), public involvement and environmental surveys. All work was coordinated with IDOT BLR&S and a PDR (Categorical Exclusion Group II) was prepared and approved. Project Development Improvements included channelization with the addition of dual left turn lanes and through/right turn lanes or right turn lanes on both Fabyan Parkway and Kirk Road. Traffic signal modernization and a curb and gutter closed drainage system were additional highlights of the improvement. Phase II included preparation of plans, specifications, and estimates, as well as permitting, plats, and legal description for the right-of-way acquisition. Construction was estimated to cost $10M.

Project Manager, Phase I and II Lake Street Improvements, Village of Oak Park.

Mr. Pasinski led the Phase I study of this project in which the primary challenge was assessing nearly 10 years of planning, public engagement, and various adopted village-wide plans and studies and converting them into buildable projects that were understood and supported by the businesses. This project was locally-led with federal funding and involved extensive public involvement, coordination with business districts and steering committees, and presentations to the Village Board. Phase I work included a network-wide traffic study (25 nodes), a location drainage technical memorandum, and a feasibility study to determine costs and construction duration based on incremental construction staging scenarios.

Project Manager, Phase II, Weber Road Reconstruction (PTB 169/Item 3), Illinois Department of Transportation, Romeoville, Illinois.

This project involved complete Phase II design services for a 1-mile section of Weber Road from just south of Normantown Road to 135th Street/Romeo Road. This project required close coordination with Will County (who will be funding construction) and the Village of Romeoville, along with the adjacent designer responsible for the I-55 Weber interchange (Diverging Diamond) reconstruction. In addition to the widening and reconstruction of Weber Road, the project includes the design of a multi-use path, a retaining wall, and noise walls. Additional coordination with the U.S. Army Corp of Engineers is needed to secure a 404 permit for future work being conducted within the Lily Cache Slough. Mr. Pasinski was responsible for all elements of the project budget and schedule.

Project Principal and QC/QA, Phase I, 87th Street and Woodward Avenue Intersection Improvement, DuPage County Division of Transportation, Woodridge, Illinois.

This project included Phase I engineering studies, an environmental survey, and public involvement to identify capacity and safety improvements for the major arterial intersection. Work included preparation of intersection design studies, alternative analysis, access, crash and capacity analyses, location drainage studies, and preparation of a project development report. The project construction cost was estimated at $3.2 million.

Project Manager, Phase I, Division of Rail, Chicago Region Environmental and Transportation and Efficiency Program (CREATE) P-3 Project; 75th Street Flyover Bridge, Illinois Department of Transportation, Chicago, Illinois.

Mr. Pasinski was responsible for preliminary engineering services, including the preparation of a design report, determination of ROW needs, EA, track alignment, signal layout, bridge closure (feasibility) studies, staging plans, bridge condition reports, structure reports, type, size, and location drawings, and cost estimates. The general scope of work for the P-3 section included a double-tracked flyover structure to carry CSX Railroad over the Metra (2 tracks), Norfolk-Southern (1 track), and Belt Railway Company (3 tracks) to eliminate all of the diamond crossings, improve throughput operations and yard access, and eliminate the transit/freight and freight/freight conflicts. The estimated construction cost was $120 million.

Project Principal, Phase II, Chicago Megabus Clinton Street Terminal Improvements Project, Chicago, Illinois. Sam Schwartz Engineering, D.P.C./Megabus USA, LLC.

TEG provided design of timber permanent protective shield to be installed on a span of the Eisenhower Expressway Bridge over the approximately 13,000 SF proposed bus terminal below. TEG staff performed a field inspection to identify conflicts with the permanent protective shield including drainage features, electrical conduit and existing substandard plywood protective shield. These conflicts were addressed during the design and detailing of the permanent protective shield, which was performed per IDOT specifications. The design of the permanent protective shield also included accommodation for temporary lighting fixtures. The overall project includes the conversion of an existing parking lot beneath a single span of the Eisenhower Expressway Bridge to a Megabus terminal.

Anna Ualat, PE

Site Engineering Lead/Utilities

Ms. Ualat is a PE-licensed civil engineer with over twenty years of experience in the design and management of complex transit and roadway projects in Illinois. She possesses an excellent command of engineering and contract practices for multi-discipline projects with major clients including CTA, Metra, IDOT, CDOT, and ISTHA, and is experienced in planning, design, and construction support for large-scale projects in Illinois.

Civil Engineer, Elmhurst Metra Station, City of Elmhurst, Chicago, IL, September 2022-Present.

Anna serves as a Civil Engineer on the Phase II Engineering design team for reconstruction of the Metra commuter rail station in Elmhurst, IL. The project consists of reconstruction of the passenger platform and station in addition to construction of a pedestrian crossing tunnel and parking lot improvements.

Lead Civil Engineer, Red Line Extension (RLE) Design-Build Project, Chicago Transit Authority (CTA), Chicago, IL, September 2022-Present.

Anna serves as the Lead Civil Engineer on the Project Management Consultant (PMC) team. As a key member of the PMC team, Anna works directly with CTA and Preliminary Engineering Consultant (PEC) stakeholders to advance project requirements and resolve issues. Anna provides guidance on writing of bridging documents, including technical specifications, performance specifications, design criteria, and construction criteria, In addition, Anna is one of the leaders in the effort to write the Draft Request for Proposal for the RLE Mainline Design-Build Project. The project consists of a 5.6 mile extension of the Red Line, south of the existing 95th Street terminal station, including four new stations, six substations, and a new yard and shop.

Quality Assurance Manager, Des Plaines Rail Yard – Lead Track Improvements, Chicago Transit Authority (CTA), Chicago, IL, September 2022-Present.

Anna is responsible for Quality Assurance on the project, which consists of lead track and special trackwork upgrades, full roadbed reconstruction, including drainage, and complete rehabilitation of a portion of the Des Plaines Rail Yard used by CTA for maintenance and storage of rail cars.

Resident Engineer, Red and Purple Modernization Phase One Design-Build Project, Chicago Transit Authority (CTA), Chicago, IL, 2020-2022.

Anna was responsible for oversight and management of design and construction of four temporary stations and four permanent stations in the RPM corridor. She was also responsible for oversight and management of the Walsh-Fluor Design-Build Team permitting process for all construction and public way permits, including coordination with the Chicago Department of Transportation (CDOT) and Chicago Department of Buildings (DOB). She provided guidance to the RPM Government and Community Relations (GCR) team with coordinating construction activities with government official and community members and organizations. Anna was on the Resident Engineer team of the Lawrence to Bryn Mawr Modernization (LBMM) providing oversight and management of demolition of the existing track structure and construction of a new segmental box girder track structure from Leland Avenue to the south and Ardmore Avenue on the north limits of the project.

Education

MS, Master of Project Management, Northwestern University, 2012

BS, Civil Engineering, University of Illinois at Urbana-Champaign, 2002

BA, Economics, University of Illinois at Urbana-Champaign, 2002

Registration

Professional Engineer: Illinois (062.060062)

Anna Ualat

Design Oversight Manager, Red and Purple Modernization Phase One Design-Build Project, Chicago Transit Authority (CTA), Chicago, IL, 2016-2020.

Responsibilities included oversight and management of Advance Utility Relocation work, oversight of design development by the Walsh-Fluor Design-Build Team, and Project Website (e-Builder) implementation. Additional responsibilities included oversight of complete contract documents, including technical specifications, performance specifications, design criteria, construction criteria, cost estimates, and design and construction schedules. Responsible for oversight of Program Management deliverables including RPM Phase One monthly FTA report, Flash Report, and CTA Board Report. Anna led the effort to write the Draft Request for Proposal for RPM Phase One including several revisions to the Draft RFP, three addenda to the Final RFP, coordination of the Issued for Execution Contract, and coordination of Advance Utility Relocation work with the RFP Requirements.

Technical Team Leader, Preliminary Engineering of the Red and Purple Modernization Phase One Project, Chicago Transit Authority (CTA), Chicago, IL, 2014-2016.

Technical Team Leader for Program Controls for the T.Y. Lin team selected by CTA to provide Preliminary Engineering services for Phase I of the Red and Purple Modernization Project (RPM). Responsibilities included oversight and development of detailed cost estimates and cost and resource-loaded construction schedules for both Red-Purple Bypass (RPB) and Lawrence to Bryn Mawr Modernization (LBMM) design segments of the project. Additional responsibilities included oversight of multiple disciplines and subconsultants to provide complete contract deliverables, including technical specifications and special provisions in addition to analysis of proposed plans and design to identify cost, schedule, or constructability issues.

Utility Coordinator and Technical Lead, Surveyor of Record, Red Purple Modernization Phase I, Chicago Transit Authority (CTA), Chicago, IL., 2014.

Anna served as Utility Coordinator and Technical Lead for the first contract for the Red and Purple Modernization Phase One to provide Surveyor of Record services for the Red-Purple Bypass and Leland to Hollywood corridor work. Project work included surveying services to gather topographic, Lidar and utility surveys as well as preparation of Plats of Survey for intended property acquisitions. Technical responsibilities included gathering existing utility information from OUC (Office of Underground Coordination), oversight of staff engineers and surveyor subconsultants to record the information and prepare contract deliverables, and analysis of geographic and survey information and databases to ensure accuracy for planning and design.

Project Engineer, Technical Lead, Station Improvements for the Dan Ryan Red Line Track Renewal Project, Chicago Transit Authority (CTA), Chicago, IL., 2011-2013.

Anna served as Project Engineer and Technical Lead for the design and construction phases of the project. Project work included final design of nine station improvements between 22nd/Cermak and 95th Street serving the Dan Ryan Branch of the Red Line including construction of two new elevators at 55th Street and 87th Street stations. Additional work included field surveys, design, and permitting services. Responsibilities during design phase included design of civil engineering drawings, deliverable oversight, development, and review of specifications for all major disciplines involved in the project (architectural, civil, structural, MEP, environmental) and development of comprehensive design reports. Responsibilities during construction phase included coordination with the General Contractor, CTA, CTP (Chicago Transit Partners - Program Manager for CTA) and design consultants (architectural, structural, civil, mechanical, electrical, and environmental) for progress meetings, submittal and shop drawing review, RFIs and bulletins/change orders. Construction phase work included extensive use of e-Builder (Web Based Project Management System).

Project Design Oversight Lead, Designer of Record, and Senior Civil Engineer, Segment A (16th/Clark to approximately 37th Street) for the Dan Ryan Track Renewal Project, Chicago Transit Authority (CTA), Chicago, IL, 2011-2013.

Anna was Project Design Oversight Lead, Designer of Record, and Senior Civil Engineer for the T.Y. Lin team, which was responsible for the technical oversight and coordination of professional services for the survey, preliminary design, and final design improvements between the South Subway Portal near 16th/Clark to the north to approximately 98th Street to the south, approximately 10.5-mile corridor. Responsibilities included drainage design oversight, CAD, and project standards oversight, permitting review, design report development and review, specification development and review and coordination of deliverables.

Antonio A. Cerda, PE

IDOT Coordination/MOT Plans

Education

BS – General Engineering, University of Illinois at Urbana-Champaign, 1989

Registration

Professional Engineer: Illinois (062-050802)

Cerda brings over 30 years of experience in transportation design and managing complex highway transportation projects. Mr. Cerda also has experience in transportation planning and project studies. Prior to his consulting experience, Mr. Cerda worked at the Illinois Department of Transportation (IDOT) for over 8 years primarily in design. His recent Illinois design experience includes projects ranging from the construction of a new system interchange of IL 390 at the new Western Access to a major arterial add lanes reconstruction of US 45 from IL 60 to IL 22. His experience in Phase I studies includes the preparation of a combined design report for the rehabilitation of the I-94 interchange at Stony Island.

Technical Lead, Metra Station Architectural Design and Phase II Engineering Services, Elmhurst, Illinois.

CDM Smith is providing Architectural Design & Phase II Engineering Services of its Metra Station, which provides commuter rail service between the western suburbs and downtown Chicago. The proposed scope of work includes the removal of the existing station and construction of a new station building, removal and replace platforms, construction of a new pedestrian underpass just west of York Street, parking reconfigurations, rehabilitation of First Street and Park Avenue from Prospect Avenue to east of York Street, traffic signal improvements and relocation of existing railroad gates. The project includes CMAQ, STP and GCPF funding. Mr. Cerda's responsibilities including oversight of the development of the deliverables for the project and coordination between the civil and facilities as well as providing technical reviews of the civil, drainage and structural plans.

Lead Technical Engineer, Metra Station and Downtown Planning - Architectural Design and Phase I Engineering Services, Glen Ellyn, Illinois, 2020-Present.

CDM Smith is providing Architectural Design & Phase I Engineering Services for the Village of Glen Ellyn for the Metra Station and multimodal elements of the Downtown. Mr. Cerda is the lead Technical Engineer overseeing the evaluation of the reconstruction and rehabilitation of the existing Metra Station. Alternatives include development of a pedestrian underpass or overpass, realignment of downtown parking, pedestrian and bicycle safety/access, and planning for increased capacity of the station, while respecting the historic downtown. Phase I Engineering is being coordinated with the Illinois Department of Transportation and state and federal grants are being pursued.

Lead Civil Engineer, Metra Station Architectural Design and Phase I Engineering Services, Elmhurst, Illinois.

CDM Smith is providing Architectural Design & Phase I Engineering Services of its Metra Station, which provides commuter rail service between the western suburbs and downtown Chicago. Building on its last three decades of downtown development, Elmhurst looks to renovate its aging station, reduce traffic congestion, and create a landmark that enhances the community fabric and economic development. Mr. Cerda's responsibilities including oversight of the preparation of the final Project Development Repot and the Intersection Design Study.

Technical Lead, I-80 Environmental Justice, PTB 176-03 WO-11 & WO -12, IDOT District 1, Illinois, 2020.

This project is developing a Community Impact Assessment and a Mitigation Plan to address identified concerns related to I-80 over the Des Plaines River from the

Antonio Cerda

replacement of the twin through-truss bridges with new, wider bridges. The proposed bridge location, 300 feet north of the existing bridges, will involve acquiring property and impact existing residential communities within Joliet. The additional outreach efforts will allow for full and fair participation by potentially affected environmental justice communities, identification of potential solutions to address adverse community impacts, and development of mitigation measures to address adverse impacts. Findings will inform transportation decision-making for this project. Mr. Cerda is the internal project manager. He performs project management duties and oversees the day-to-day activities, including client coordination of deliverables. Deliverables include the newsletter, questionnaire, project website updates, the Community Outreach Plan, and a database to track responses to the community questionnaire.

Lead Roadway Engineer, 60-Inch Diameter Water Transmission Main, Bid Package 4B, Oak Lawn, IL.

CDM Smith is responsible for construction oversight of the replacement of a 60-inch diameter water transmission main in Oak Lawn, IL. Antonio oversaw the development of maintenance of traffic plans and detour plans for submittal to the Illinois Department of Transportation and Cook County Highway Department for permits where the proposed water main crossed under roadways under the jurisdiction of these agencies. Intersections included Southwest Highway at 95th Street (US 12/20), Central Avenue and Cicero Avenue (IL Route 50)

Lead Roadway Engineer, 60-Inch Diameter Water Transmission Main, Bid Package 5, Oak Lawn, I.

CDM Smith is responsible for construction oversight of the replacement of a 60-inch diameter water transmission main in Oak Lawn, IL. Antonio oversaw the development of maintenance of traffic plans and detour plans for submittal to the Illinois Department of Transportation and Cook County Highway Department for permits where the proposed water main crossed under roadways under the jurisdiction of these agencies. Intersections included Southwest Highway at Illinois Route 43, 103td Street, 111th Street, 114th Place and Ridgeland Avenue at 102nd Place.

Lead Roadway Engineer, Central Tri-State Capacity Improvement Project, Illinois State Toll Highway Authority, Illinois, 2019.

Mr. Cerda prepared a concept design verification and contract plans for southbound I-294 from Illinois Route 38 to St. Charles Road. He documented design deviations of roadway geometrics.

Project Manager, U.S. 45, IL 60 to IL 22 Design, IDOT, District 1, Illinois, 2012-2019.

Mr. Cerda managed the preparation of contract plans, specifications and estimates for the proposed widening and reconstruction of 5.9 miles of US 45 from IL 60 to IL 22. His work included managing budget, schedule and various disciplines, including traffic signals, structures, drainage and roadway plans. The scope of work includes replacing four structures, six retaining walls, and modernizing the 15 traffic signals, including railroad interconnect at one location (Deerpath Drive). Permits were required including the US ACOE Section 404, Floodway and NPDES. The estimated construction cost is $88 million.

Project Engineer, Elgin-O'Hare/Western Access Interchange (West Terminal Interchange), Illinois State Toll Highway Authority, Illinois, 2012-2019.

Mr. Cerda prepared contract plan documents for six contract packages and QA/QC engineered for a new four-level system interchange connecting Illinois Route 390 with I-490 with future connections to the west side of O'Hare International Airport. The scope of work consists of multiple flyover ramps over two railroads, new roadway construction, new retaining walls and culverts, extensive earthwork and soils treatment, traffic signals, signing, lighting, intelligent transportation systems and tolling, utility relocation, and traffic control. The estimated construction cost is $200 million.

Project Manager, I-94 at Stony Island Interchange, IDOT, District 1, Chicago, Illinois, 2012-2015.

Mr. Cerda managed the preliminary engineering studies of the I-94 at Stony Island Interchange project. His team prepared a combined design report and the project was processed as a categorical exclusion. The scope of work included preparing bridge condition reports and drainage studies. He coordinated with the structural, drainage, and roadway disciplines and the survey subconsultant. Mr. Cerda managed the budget, schedule and scope of work and coordinated with task leads to complete the assigned work.

Mahmood Khwaja, PE

Tunnel Design

Mr. Khwaja is CDM Smith's National Discipline Leader for Tunnels. He is an accomplished tunnel/geotechnical/structural engineer, project manager and technical leader with more than 28 years of experience designing above and below ground structures. He has experience managing projects and project teams involving complex domestic and international projects. His experience includes work on cut-and-cover, mined, bored and jacked tunnels; analysis of complex soil-structure interaction behavior using numerical methods; analysis and design of above and below ground transit stations, tunnels, deep shafts, de-aeration chambers, large scale water structures, staged excavation, support of excavation systems, underpinning and soil improvement, trenchless methods. Mr. Khwaja has experience in the design of above ground structures including bridges, bridge abutments, ventilation buildings and mass transit stations. Mr. Khwaja is experienced in alternate delivery methods, including design-build and PPP; has experience working on a program management team. Mr. Khwaja has taught courses at Boston Architectural College and University of Massachusetts, Lowell.

Lead Tunnel Engineer, Glen Ellyn Metra Station Reconstruction and Site Improvements, Glen Ellyn, Illinois.

Mr. Khwaja is the Lead Tunnel Engineer for the project overseeing CDM Smith's sub-consultant for soil investigation and tunneling. The Village of Glen Ellyn is proposing to replace the existing Union Pacific West (UP-W) Metra commuter station, located in downtown Glen Ellyn. The existing station depot, built in the 1960s, is nearing the end of its lifespan and does not meet the fundamental needs of the community in terms of ADA Accessibility, Pedestrian Safety, and Ridership Capacity. The proposed project includes preliminary design for a number of building and other site improvements, such as improved traffic flow, pedestrian tunnel, etc. to address concerns of the Village of Glen Ellyn, the public, and various project stakeholders.survey, soil borings, and geotechnical recommendations. Responsibilities included coordination with the Union Pacific, the Village of Glen Ellyn, and DuPage County.

Principal Tunnel Specialist and Task Manager, Heroes Tunnel, New Haven, Connecticut.

Mr. Khwaja served as the tunnel design lead for rehabilitation and upgrade of the existing twin bore tunnel. Tunnels are dual lane each way, with a 29-foot pillar, constructed through igneous trap (diabase) type rock. The tunnels do not meet current standards for travel way and for Fire and Life Safety requirements. Developed ground investigation program, negotiated scope and budget for the tunnel/geotechnical scope of work, led ground characterization and rock mapping effort, developed alternatives analysis. Mr. Khwaja has helped lead the effort for alternative analysis and provided support for the NEPA process. Under the main contract, the CT DOT issued two extra work orders: EW6 – Fire Protection and Life Safety Upgrades; EW7 – Tunnel Liner Evaluation. Mr. Khwaja served as the Technical Review Committee chair for the EW6 effort and continues to support the effort. For EW7, Mr. Khwaja is the project technical leader and under this role, he delivered a comprehensive assessment of the existing liner based on field visits and non-destructive testing; he also coordinated with CDM Smith's specialist sub-consultant for material testing.

Education

MSc – Civil Engineering
University of Massachusetts, Lowell, 1996

BSc – Civil Engineering
University of Massachusetts, Amherst, 1989

Registration

Professional Engineer: California, Connecticut, Florida, Michigan, Minnesota, Nebraska, New Hampshire, New York, Virginia, Iowa

Structural Engineer: Massachusetts (1998)

Mahmood Khwaja

Principal Tunnel Specialist, Parallel Interceptor Tunnel Study, Newark New Jersey.

Mr. Khwaja served the lead tunnel engineer for this study to construct a nearly 6-mile long 13-ft internal diameter tunnel for the Passaic Valley Sewerage Commission. The tunnel is estimated to be approximately 30 feet below existing grade and will traverse through densely populated urban environment with potentially impacted soil conditions. Mr. Khwaja provided technical expertise to help develop plan alignment and vertical profile, identify risks, establish the appropriate construction methodology, and help develop program level cost estimate. The purpose of the project is to mitigate the risk of CSO discharge into the Passaic River during wet weather events.

Lead Tunnel Engineer, Sewer Needs Assessment Study, Revere, Massachusetts.

Mr. Khwaja is the lead tunnel engineer for this Sewer Needs Assessment Study that potentially involves nearly 17,000 ft long rock tunnel at a depth of approximately 220 feet below existing grade. The tunnel size is estimated to be 10-ft internal diameter and is being evaluated for conveyance and storage purposes. Mr. Khwaja is providing tunnel related expertise in evaluating the alignment, profile of the tunnel and the construction and connection feasibility of the proposed tunnel to the existing MWRA deep rock sewer tunnel.

Lead Tunnel Engineer, Northwest Interceptor Relief Sewer Tunnel Project, Detroit, Michigan.

Mr. Khwaja is the lead tunnel engineer for this 3000 ft long, 10-ft internal diameter soft ground (soft clays) tunnel which will serve as an interceptor to the Northwest Interceptor. GLWA's Northwest Interceptor (NWI) is subject to significant surcharging downstream of the Warren-Pierson control gate during wet weather events of significant size. This surcharging is due to both high wet well levels at GLWA's Water Resource Reclamation Facility, as well as overloading the NWI. The tunnel invert is estimated to be approximately 40 feet below grade.

Lead Tunnel Engineer, South AWWTF Reclaimed Water Transmission Main Project, Fort Myers, Florida.

Mr. Khwaja was the lead tunnel engineer and engineer-of-record for the two microtunnel (MacGregor Highway and Summerlin Road) crossings within the transmission main alignment. The first crossing is 172 feet long, and the second crossing is 595 feet long. Mr. Khwaja led the development the soil investigation and testing program, design for the microtunnel crossings, and the development of the Geotechnical Data Report, the Geotechnical Baseline Report, and drawings and specifications related to microtunneling.

Senior Tunnel Engineer, Bergen Point WWTP Outfall Tunnel, Suffolk County, New York.

Mr. Khwaja provided engineering services during construction; detailed review of contractor submittals for a 14,000-ft long, 10-ft ID soft ground tunnel and deep shafts using ground freezing application for excavation support. Contractor elected to use fiber reinforced segments. In response, Mr. Khwaja developed project specifications and design requirements for fiber reinforced concrete segments that were amended to the contract.

Principal Tunnel Engineer, Rand Park Stormwater Diversion Tunnel Project, Keokuk, Iowa.

Mr. Khwaja served as the tunnel discipline lead engineer and overal project technical lead for this 3000-ft long, 10-ft ID stormwater diversion tunnel primarily through shale/limestone rock, at a depth of approximately 100-ft. Mr. Khwaja developed the geotechnical exploration and testing program and evaluated project alignment/profile, and construction approach alternatives. Responsible for GDR, Basis of Design Report and analysis and design of the tunnels and shafts.

Tom Liliensiek, PE, CFM

Drainage + Stormwater Permits/NPDES

CIVILTECH

Tom joined Civiltech in 2013 and has over 25 years of experience in the planning and design of water, sewer, and stormwater utilities, stormwater and sewer analysis, modeling, and design of hydraulic and hydrologic systems. He is responsible for hydrologic analyses and modeling of watersheds; modeling and analyses of channel and closed conduit flow; hydraulic design of sewers, channels, erosion protection, detention basins and hydraulic control structures. He provides leadership, direction, and guidance to other engineers working on water resource projects.

Municipal, Roadway and Highway Drainage Design

- York/Harger Intersection and Underpass Improvement; Village of Oak Brook; $7.4 million
- Jackson Park Improvements/Obama Presidential Center; Chicago Department of Transportation
- Rockland Road Phase II and III; Village of Libertyville | Libertyville Township Highway Department; Village - $6.2 million; Township - $2.0 million
- Berkeley Flood Control Project; Village of Berkeley; $5.0 million
- Stormwater Master Plan Update; City of Highland Park
- Oak Park Avenue, Irving Park Road to Forest Preserve Drive; Chicago Department of Transportation, Division of Engineering; $3.6 million
- Burnham Park: 31st Auxiliary Parking Lot Expansion; Chicago Park District; $1.6 million
- Storm Sewer Improvements; Vernon Township, $390,000
- Weiland Road Improvement; Lake County Division of Transportation; $30.0 million
- Lake Cook Road; Village of Buffalo Grove; $48.0 million
- North DuSable Lake Shore Drive, Phase I Study; Chicago Department of Transportation, Illinois Department of Transportation
- Business Park Drainage Improvements; Village of Elk Grove Village; $12.0 million

Roadway and Highway Drainage Design

- Reagan Memorial Tollway (I-88) Roadway and Bridge Reconstruction and Add-Lane - Aurora Plaza 61 to Orchard Road; Illinois Tollway; $65.0 million
- IL - 173, Phase I Study; Illinois Department of Transportation
- I-190; Chicago Department of Aviation; $250.0 million
- 35th Street Pedestrian Bridge; City of Chicago; $16.0 million
- Peterson Road at IL Route 60; Lake County Department of Transportation; $10.0 million
- 88th Avenue over Forked Creek; Will County Department Highways

Education

M.S. Civil Engineering, 1993
Michigan State University

B.S. Civil Engineering, 1992
Michigan State University

Registration

Professional Engineer - Illinois; 062-053291

Certified Floodplain Manager - Illinois; IL-20-00898

Professional Organizations

Illinois Association for Floodplain and Stormwater Management

American Council of Engineering Companies

Kevin Clark, PLA, AICP

Landscape Design

THE LAKOTA GROUP.

Kevin brings over 20 years of experience in urban planning and landscape architecture to The Lakota Group, where he oversees the firm's urban design projects. His award-winning portfolio spans downtown, transit-oriented and neighborhood revitalization plans, physical and economic development strategies, and innovative design of open spaces and public places. He is passionate about dynamic and interactive public processes and works to integrate innovative technology throughout all of Lakota's projects.

Streetscape & Urban Design

- Lockport Street Streetscape - Plainfield, IL
- Marion Street Streetscape - Oak Park, IL
- Pleasant District Streetscape - Oak Park, IL
- Uptown Park Ridge Streetscape - Park Ridge, IL
- Algonquin Downtown Streetscape - Algonquin, IL
- Lake Street Streetscape - Oak Park, IL
- Homewood Downtown Streetscape - Homewood, IL

Open Space and Park Design

- Howard Park - South Bend, IN
- Hubbard Woods Park - Winnetka, IL
- Skokie Playfields - Winnetka, IL
- Hesburgh Library Plaza - Notre Dame, IN
- Swedish Heritage Park - Loves Park, IL
- City Commons - Park Ridge, IL

Landscape Architecture & Site Design

- Irish Green – Notre Dame, IN
- Delnor Hospital Landscape Master Plan – Geneva, IL
- Northwestern Medicine Central DuPage Hospital Landscape Improvements - Winfield, IL
- Lake Forest Place Landscape Design – Presbyterian Homes - Lake Forest, IL

Urban & Regional Planning

- East Point Form-Based Code - East Point, GA
- Downtown Master Plan - Evanston, IL
- Riverfront Neighborhoods Comprehensive Plan Update – Moline, IL
- MedQuarter Master Plan – Cedar Rapids, IA
- Downtown Strategic Development Plan – Kenosha, WI
- Illinois Medical District Master Plan – Chicago, IL
- Willow Road Corridor Plan – Northfield/Winnetka, IL
- State of Oregon Main Street Revitalization Services – OR
- Village Center Master Plan – Wilmette, IL

Education

Master of Urban Planning and Policy, University of Illinois at Chicago, 2006

Bachelor of Science in Landscape Architecture, University of Kentucky, 2000

Professional Organizations

American Planning Association

American Society of Landscape Architects, Awards Jury (2014)

Congress for New Urbanism

American Institute of Architects, Associate Member

American Planning Association Mentorship Program

Lambda Alpha, ELY Chapter

Uptown Development Partners

Greentown Advisory Committee (2014)

UIC Professional Development Panel (2010)

Sarah Sutherlin, AIA, LEED AP

Facility Lead, Project Architect

Sarah brings 14 years of architecture and design experience. Integral to CDM Smith's Chicago-based transit team, her work includes planning and design for transit stations and facilities. She also leads architectural components of other industrial facilities and has an extensive background in commercial interiors. Sarah is skilled in several advanced design programs including Revit, AutoCAD, Rhinoceros, 3Dsmax, and Adobe CC. She utilizes these design programs along with digital fabrication methods to inform and communicate designs.

Design Architect, Elmhurst Metra Rail Station Alternative Analysis and Phase II Engineering, Elmhurst, Ill.

The project includes the design of a landmark station and site planning to improve connectivity and safety within the central business district. In coordination with City staff, Union Pacific, Metra, IDOT, FHWA (Federal Highway Administration), ICC (Illinois Commerce Commission) and public citizens, CDM Smith is developing a design embraced by all parties involved. Sarah's role includes architectural visioning, and design and technical development of the station. She designed multiple alternatives in distinct architectural styles informed by the existing context of downtown Elmhurst. She works to build consensus amongst all involved parties, using renderings and 3D models to visualize the designs on site for review and consensus by all parties.

Design Architect, Glen Ellyn Metra Rail Station Preliminary Design and Phase I Engineering, Glen Ellyn, Ill.

CDM Smith was selected by the Village of Glen Ellyn to provide analysis, planning, design, and Phase I Engineering services for the village's Metra station and surrounding down-town district. Sarah's work includes developing architectural design alternatives for rehabilitation and new construction alternatives which are compatible with the existing downtown historic district.

Design Architect, Main Street Station Design, Munster, Indiana.

The Northern Indiana Commuter Transportation District (NICTD) electric passenger line runs between Millennium Station in downtown Chicago, sharing track with Metra's south electric line that currently terminates in Hammond. The West Lake Corridor expansion project will extend this line an additional 8 miles and terminate in the Town of Munster at the Main Street Station. CDM Smith was selected by Munster to provide architectural design and engineering to improve the design of the NICTD proposed stations at Main and Ridge to reflect the community character. Ms. Sutherlin has acted in the role of project architect overseeing the design of the architectural character, cost assessments and visualizations. The efforts include approximately $4 million of improvements to the inbound and outbound station, inbound and outbound platforms, and site signage and landscaping/amenities.

Education

BA, Architecture, Washington University in St. Louis, 2008

Registration

Licensed Architect: Illinois and Wisconsin

Registered Energy Professional: City of Chicago

Certification

LEED AP (Building Design + Construction), USGBC

Sarah Sutherlin

QAQC Architect , BCDCOG On-Call Planning and Engineering: Park and Ride, Shelter Design and LCRT Project Oversight and Design Reviews, Berkeley, Charleston and Dorchester Counties, South Carolina.

Through an On-Call Master Services Agreement, CDM Smith supported regional transit operations and improvement of services through the engineering of the HOP Park and Ride Lot and the Melnick Park and Ride lot in North Charleston, engineering of bus shelters throughout the system, and served as extension of staff for design reviews and project oversight on the Lowcountry Rapid Transit (LCRT) project. On engineering projects, CDM Smith conducted the full project lifecycle from surveying, preparing final designs, and construction phase services. In support of the LCRT project, CDM Smith reviewed environmental and engineering submittals for quality control and compliance with SCDOT and FTA design guidelines. This also included a review of traffic studies and modeling products. Sarah contributed to the success of this project by completing 3rd party estimates and reviews of documents.

Architectural Designer, IndyGo Red, Indianapolis, Indiana.

CDM Smith led the planning and design for this first all-electric BRT service in the United States, including the preparation of the FTA Small Starts Application, environmental document, final design plans, and engineering services during construction. Sarah contributed to the success of this project by specifying materials compliant with Buy America provisions and ensuring quality during construction.

Architect, Main Pump Station Backup Power Generation, Chicago, Illinois. Ms. Sutherlin served as architect for the design of a new backup power generation facility for the Northwest Suburban Municipal Joint Action Water Agency's (NSMJAWA's) Main Pump Station.

Project Designer, Office Renovation, Massachusetts Water Resources Authority (MWRA), Boston, Massachusetts.

Ms. Sutherlin was responsible for the design and technical development of a130,000-SF interior office consolidation. She designed flexible office space, including open offices, private areas, and collaboration areas with a focus on flexible modern work styles. The project included space planning, material selection, lighting design, furniture selection, and technical design, including phased implementation at three facilities.

Project Architect, PSTA SunRunner BRT, St. Petersburg, Fla.

Sarah was responsible for the architectural development of custom shelter and totems for this Bus Rapid Transit project. The design process included detailed coordination with owner's branding consultant and art-integrated station elements produced by a local artist. Technical considerations included specifying materials durable within the coastal environment as well as mitigating impacts of the project on habitats specific to that area.

Project Coordinator, Harlem Yard Modernization, CTA, Chicago, Ill.

Sarah managed a team of subject matter experts during the yard survey and concept validation phases. She supervised field investigations including boundary, topographic and utility survey, LIDAR scans, Ground Penetrating Radar, and structural analysis. Her responsibilities included scheduling and coordinating field work with CTA operations and other agencies, managing quality on site, and preparing reports containing findings and recommendations.

Project Architect, Brown Line Core Capacity Vision Study, CTA, Chicago, Ill.

Sarah developed transit-oriented design guidelines for the neighborhood surrounding the terminal station of the Brown Line. She also facilitated public outreach to gain community input and support. The guidelines included technical recommendations with illustrative graphics that were based on the extensive community input process as well as land-use and zoning analysis.

Project Architect, Facility Assessment, Joliet, Ill.

Sarah led a high-level assessment of all (55) city-owned buildings, analyzing existing conditions and prioritizing required/recommended repair and maintenance work over the next 20 years. The project involved field observations, preparation of reports with cost estimate recommendations, and development of a facility management database.

Benjamin Harber, AIA, LEED AP

Sustainable Design Coordinator

Benjamin brings more than 15 years of success in project management, architecture, and planning working on a diverse range of projects for both public and private clients in the United States and abroad. His depth of knowledge extends through all project phases—from working with stakeholders in early conceptual design all the way through construction. He understands the complexity of managing community, interagency, and financial objectives to create successful outcomes. Benjamin firmly believes that well designed transit provides a cornerstone for community development.

Project Manager/Lead Architect, Elmhurst Metra Station Preliminary Design and Phase I Engineering, Elmhurst, Ill.

Benjamin is the primary project contact and is leading and overseeing all aspects of the design and engineering. Elmhurst's goals for this project included design of a landmark station, site planning to improve connectivity and safety within the central business district and improve traffic congestion. After significant coordination and input from Elmhurst staff, elected officials, Union Pacific, Metra, IDOT Local Roads, FHWA and public citizens, CDM Smith developed a preferred alternative design embraced by all parties involved. CDM Smith and the City of Elmhurst received preliminary environmental clearances and are currently finalizing the IDOT Project Development Report. Additionally, CDM Smith prepared funding applications and developed agency support documentation. Applications included Congestion Mitigation and Air Quality Improvement (CMAQ), Surface Transportation Program (STP), and Illinois Commerce Commission (ICC) Crossing Safety Improvement Program. The project successfully secured funding.

Project Manager/Lead Architect, Glen Ellyn Metra Station Preliminary Design and Phase I Engineering, Elmhurst, Ill.

CDM Smith was selected by the Village of Glen Ellyn to provide analysis, planning, design, and Phase I Engineering services for the village's Metra station and surrounding downtown district. The village understood that while the existing 1960s facility had fulfilled basic services, the station facility and site was not meeting current and future needs. Benjamin is the primary contact and is leading and overseeing all aspects of the design and engineering.

Lead Architect, 95th Street Terminal Expansion Phase I Engineering and Planning, CTA, Chicago, Ill.

Benjamin led the design team for the 95th Street terminal planning study and public involvement. He led the analysis of site constraints, station planning, vendor and retail spaces, platforms, rail structure components, and the subsequent development of design recommendations. Through design charrettes with CTA staff, as well as interviewing users on site and in the community, multiple design scenarios were developed. Options included park-and-ride facilities, transit oriented development (TOD), and expanded rail/bus service. The Phase I Engineering of the effort developed design recommendations for improving the terminal. Phase I Engineering required close coordination and meetings with IDOT District I, CDOT, and Pace. Benjamin supported CTA's FTA Tiger Grant process, including graphic presentations, phasing, and cost estimation data. In 2012, CTA received $20 million.

Education

Master of Architecture, University of Toronto, 2003

BS, Architectural Studies, University of Illinois at Urbana Champaign, 2001

Registration

Licensed Architect: Illinois, Oregon, Pennsylvania, Washington, and North Carolina

American Institute of Architects

Certifications

Leadership in Energy and Environmental Design Accredited Professional

National Council of Architectural Registration Boards

Benjamin Harber

Architect, West Chicago ADA Improvements and Rehabilitation, Metra, Chicago, Ill.

Benjamin provided design oversight and quality assurance for this project which included interior station ADA upgrades, lintel installations, a new concrete platform, retaining wall replacement, detectable warning installation, lighting replacement, removal of pavers, signage, and landscaping.

Project Manager, 77th Street Bus Wash Facility, CTA, Chicago, Ill.

Benjamin led the design team in the renovation of an existing bus maintenance bay, and the design of two drive-through bus washers. The system was designed to wash more than 250 standard bus equivalents each evening. Key elements included coordination of sequence of operations, the client's desire to limit equipment damage from operator error, and to achieve an 80 percent water reclaim goal to reduce potable water inputs.

Project Manager, Harlem Rail Washer Facility, CTA, Chicago, Ill.

Working through the General Engineering Task Order, the team designed a new rail washer for the existing Harlem Rail Yard facility. The existing exterior facility was in need of reconstruction and was limited due to exposure to weather. The site was very restrictive and close collaboration between rail operation, rail maintenance, and design team members was required to find the best solution that could be accommodated and readily maintained. Benjamin organized and led all project efforts, including multi-agency and municipality coordination. Close management of cost estimating was critical to project success.

Project Manager, 98th Street Façade Improvements, CTA, Chicago, Ill.

The 98th Railway Shop, located at the southern boundary of the Red Line, was built in the late 1960s. The building, a steel frame with masonry infill, suffered from significant deferred maintenance issues, including rusting structural members, spalling masonry, exposed foundation rebar, rusting doors and openings, as well as water infiltration issues. Benjamin led the design and cost estimation team in evaluating and developing solutions for restoring the facility. Construction was completed in the fall of 2015.

Project Manager, 74th Bus and Midway Rail Yard Façade Improvements, CTA, Chicago, Ill.

The existing 74th Bus Facility and Midway Rail Yard were in need of upgrades to maintain a state of good repair. Projects included cost estimation, façade repairs, and environmental remediation. Coordination of contractor staging and phasing were critical due to the proximity of the work to rail operations.

Lead Architect, Red/Purple Line Modernization Environmental Impact Statement (EIS), CTA, Chicago, Ill.

The CTA's goals with the improvements are to bring the existing transit assets into a state of good repair, reduce travel times, improve access to job markets, respond to shifts in travel demand, better use existing infrastructure, and support economic development and transit-supportive development patterns throughout the local neighborhoods. There are six options for the program, ranging from no action to basic rehabilitation to modernization with a two-track underground system and consolidation of stations. The team is responsible for coordination with CTA, FTA, UP, and other agencies and quality control for the joint venture team assisting CTA with preparing EISs and New Starts applications for CTA commuter rail lines for future improvements and line consolidation. Benjamin is responsible for architectural tasks for station planning, concepts, renderings, and public involvement.

Lead Architect, Red Line Extension EIS, CTA, Chicago, Ill.

The CTA proposes a 5.3-mile extension from 95th to 130th Street with three new intermediate stops in between 103rd, 111th, and 115th streets, a new station at 130th, and improvements to the 95th Street station. These additions would better serve local residents with upgraded stations, park-and-ride and bus facilities, and new transit opportunities for those on the Far South Side. Benjamin led design tasks for the station planning, concepts, maintenance facility concepts, renderings, and public involvement.

Lead Architect, Cermak/Chinatown Red Line Station Design, CTA, Chicago, Ill.

Working under a job order contract agreement, Benjamin led architectural services for new improvements at the Chinatown station. This included site, landscape, mechanical, electrical, communication, and signage work. Additionally, fare collection equipment upgrades, design of elevators/escalators, and structural modifications to platform support systems were included.

John Mehdi, AIA

Facility Design Lead

KMI
Kaltsouni Mehdi, Inc.

Founder, partner, and executive vice president of KMI, John brings more than 25 years of experience in the area of railway facility design and construction. John leads his projects with hands-on involvement during design and construction management. These projects have included numerous mass transit facilities, roadways, bridges, public and private buildings in Illinois and other states. John has been instrumental in leading KMI to award winning design and construction projects. The following projects reflect John's roles in architecture for transportation rehabilitation and new construction programs.

Facility Design Lead, Elmhurst Metra Station Preliminary Design and Phase I Engineering, Elmhurst, Ill.

John provided input on facility planning and design. Elmhurst's goals for this project included design of a landmark station, site planning to improve connectivity and safety within the central business district, and improve traffic congestion. After significant coordination and input from Elmhurst staff, elected officials, Union Pacific, Metra, IDOT Local Roads, FHWA and public citizens, the team (KMI is a subconsultant to CDM Smith) developed a preferred alternative design embraced by all parties involved. The CDM Smith team and the City of Elmhurst received preliminary environmental clearances and are currently finalizing the IDOT Project Development Report.

Facility Design Lead, Glen Ellyn Metra Station Preliminary Design and Phase I Engineering, Glen Ellyn, Ill.

John provided input on facility planning and design. CDM Smith was selected by the village of Glen Ellyn to provide analysis, planning, design, and Phase I Engineering services for the village's Metra station and surrounding downtown district. The village understood that while the existing 1960s facility had fulfilled basic services, the station facility and site was not meeting current and future needs.

Project Architect, Maintainer Facility, CTA, Ill.

The goal of the project was to upgrade the signaling systems and supporting facilities with new and expandable technologies. For this purpose, the Chicago Transit Authority commissioned the design of a new control tower located at elevated track level (T18) to replace the existing tower responsible for maintaining all of the rail traffic entering and exiting the northwest corner of the Loop in downtown Chicago. A facility for the traffic and signal maintainers as well as signal equipment (MFW) at the elevated track level was also designed. The building was fabricated off site in modular sections, lifted onto the elevated track level over a weekend, transported on rails and joined to form a 220-foot long building.

Project Architect, Blue Line Subway, CTA, Ill.

KMI provided architectural and engineering design and construction services for the renovation and rehabilitation of the Chicago Transit Authority's "Blue Line" signal and communication project.

Education

Master of Architecture, Illinois Institute of Technology, 1982

Bachelor of Architecture, Illinois Institute of Technology, 1979

Registration

Registered Architect: Illinois and Wisconsin

John Mehdi

Project Architect, Edison Park Station, Metra, Ill.

The client sought a replacement train station and parking west of the existing station. The new station was intended to be a focal point of the community, enhancing the existing business district and character of the area. The station offers the community a spacious outdoor plaza area leading to a covered loggia. The building program consists of the offices of the Edison Park Chamber of Commerce, a conference room which opens to the general waiting room/community room, and 24 hour waiting room.

Project Architect, Dee Road Station, Metra, Ill.

John led the design of a commuter drop-off area leading to a loggia with direct access to the train platform as well as the station building. A small two-story waiting room was designed to accommodate future 24 hour waiting.

Additional METRA projects:

- A-2 Relocation Crossing Bridges, Chicago, Ill.
- 47th Street Diesel Shop, Chicago, Ill.
- New Lenox Platform, New Lenox, Ill.
- Wheaton Station Overpass, Wheaton, Ill.
- Lombard Station Underpass, Lombard, Ill.
- Harvey Station, Harvey, Ill.
- Dee Road Station, Park Ridge, Ill.
- 95th Street/Beverly District Station, Chicago, Ill.
- Tinley Park Oak Avenue Station, Tinley Park, Ill.
- Tinley Park 80th Avenue Station, Tinley Park, Ill.
- Lemont, Lockport, and Glencoe Stations, Ill.
- Edison Park Passenger Station and Parking Facilities, Chicago, Ill.
- Naperville and Aurora Stations Lighting, Ill.
- Route 59 Station, Naperville, Ill.
- 143rd, 153rd, and 179th Street Stations, Orland Park, Ill.
- Bartlett Station, Bartlett, Ill.
- Lake Villa Station Parking Lot Expansion, Lake Villa, Ill.
- Geneva Station Shelter and Parking, Geneva, Ill.
- Elburn Station Commuter Parking, Warming House, and Access Road, Elburn, Ill.
- Auburn Park Station, Chicago, Ill.
- Calumet Station Rehabilitation, Calumet, Ill.
- Van Buren Station Drip Pan System, Chicago, Ill.
- Hazel Crest Commuter Station, Hazel Crest, Ill.
- 31st Street Substation, Chicago, Ill.
- Mundelein Station Overpass, Mundelein, Ill.
- Substation Building Upgrades, Chicago, Ill.

Additional CTA projects:

- Wilson Transfer Station, Chicago, Ill.
- Dearborn Subway/Congress Branch Train Control System, Chicago, Ill.
- Upgrade Loop Elevated Signal System, Chicago, Ill.
- Dan Ryan Initiative, Chicago, Ill.
- Dan Ryan Red Line Station Improvements, Chicago, Ill.
- 103rd Bus Garage Heating Upgrades, Chicago, Ill.
- South Shops and 77th Street Bus Garage Roof Replacement, Chicago, Ill.
- Block 37 Airport Express Tunnel Connection, Chicago, Ill.
- Ravenswood Branch/Kimball Tower, Chicago, Ill.
- Traction Power Capacity Expansion, Ill.
- RPM Signal System Design, Chicago, Ill.
- YNB Signal System Design, Chicago, Ill.

Jacki Murdock, ,AICP

Funding Management

Education

MA, Urban Planning (Transportation Policy and Planning), University of California-Los Angeles, 2013

BA, Environmental Policy and Latin American Studies, University of Kansas, 2011

Certifications

American Institute of Certified Planners

Jacki has transportation planning experience including transportation funding and grant writing, federal and state transportation funding policy, transit planning and operations, performance-based programming, freight planning, land use policy, long-range transportation planning, transportation project prioritization, and stakeholder engagement. Her project work includes developing funding strategies for transportation and freight projects, writing transportation grants to secure project funding, transportation master plans, providing performance and transportation system data analysis, land use and sociodemographic analysis, developing applications for project prioritization tools, and providing transportation policy guidance.

Lead Transportation Planner, Elmhurst Metra Station Phase I Planning and Engineering Services, Elmhurst, Ill; 2017-Current.

The City of Elmhurst selected CDM Smith for Phase I and Phase II planning and engineering services of its Metra Station, building on its last three decades of downtown development, Elmhurst looks to renovate its aging station, reduce traffic congestion, provide multimodal access, and create a landmark that enhances the community fabric and economic development. Ms. Murdock is serving as lead transportation planner for the project, leading the development of the funding and grant strategy and development that secured over $18 Million in grant assistance for the project from CMAQ, STP, and the ICC Grade Crossing Fund.

Lead Transportation Planner, Glen Ellyn Metra Station Phase I Planning and Engineering Services, Glen Ellyn, Ill; 2018-Current.

The Village of Glen Ellyn selected CDM Smith for Phase I planning and engineering services of its Metra Station. Glen Ellyn is looking to renovate its aging station, and to create opportunities for multimodal connectivity. Ms. Murdock is serving as lead transportation planner for the project, leading the development of the funding and grant strategy and development that secured over $16 million in grant assistance for the project, including from CMAQ and the ICC Grade Crossing Fund.

Deputy Project Manager, Will County Joliet Intermodal Master Plan (2019-Current).

CDM Smith is completing a transportation master plan to identify transportation improvements in the Elwood/Joliet cluster area that can accommodate the current level of commerce and for future forecasted development. The team will perform outreach and engagement, develop land use scenario analysis, perform travel demand modeling and traffic impact analysis, identify project improvements and sequencing, and identify funding opportunities. Ms. Murdock is serving as Deputy Project Manager for the Master Plan.

Lead Planner, Strategic & Financial Planning Assistance for Alternative Contracting Methods, Illinois Department of Transportation (2017-Present).

CDM Smith is assisting IDOT in investigating the feasibility of transportation projects to be delivered as P3s and potentially develop projects and procure projects utilizing the P3 delivery method. CDM Smith is working with IDOT to determine the financial, legislative, and engineering feasibility of implementing specific projects and to procure projects utilizing P3s and to develop, implement and procure projects through other alternative contracting methods. Ms. Murdock is assisting in the development and implementation of policies, procedures, specifications, and operating, manuals related to alternative contracting methods.

Jacki Murdock

Lead Transportation Planner, Will County Community Friendly Freight Mobility Plan, Will County, Ill.

Jacki is leading key portions of the public-private partnership in Will County to improve freight mobility and workforce. Will County has experienced unprecedented growth in the freight industry. The county is now the largest inland port in North America, connecting west coast ports by rail to the Midwest, and serves a key role in the Chicago regional freight economy. While this has resulted in more jobs and a stronger economy, it has strained local infrastructure and resources. Jacki is developing a plan to prioritize projects, identify funding solutions, develop performance measures, develop actions to support workforce and transit solutions to improve mobility, and to develop a grant application to secure federal funding.

Lead Transportation Planner, DuPage County Long Range Transportation Plan, DuPage County, Ill.

CDM Smith is preparing the first comprehensive long range transportation plan for DuPage County. This includes completion of a capital plan, identify key projects, policies, and initiatives for the next 25 years: a financial plan and an operations and maintenance plan and strategy. Jacki is developing the analysis of existing conditions, future needs, and potential projects.

Transportation Planner, Pittsburgh Bus Rapid Transit, Port Authority of Allegheny County, Pittsburgh, Pa.

The Pittsburgh Urban Redevelopment Authority (URA), in cooperation with the Port Authority of Allegheny County, the City of Pittsburgh, and Allegheny County, is proposing to develop a new Bus Rapid Transit (BRT) project between Downtown Pittsburgh and Oakland. Jacki is helping complete the Small Starts application grant to obtain funding for the project. She directed the writing and analysis of qualitative and quantitative information that described the benefits that the project would have on land use and economic development. The project, known as the Downtown – Uptown – Oakland – East End BRT Project, would provide higher quality, reliable transit service between the region's two major employment centers (Downtown Pittsburgh and Oakland) and the residential communities to the east.

Planner, NEPA Services for the Red Line Extension, Chicago Transit Authority, Chicago, Ill.

CTA and FTA have initiated the environmental review process to extend the Red Line south 5.3 miles from the existing 95th Street Terminal to 130th Street. CDM Smith prepared a NEPA Draft EIS to summarize the environmental impacts associated with this project and outline appropriate mitigation measures to avoid or reduce identified adverse impacts. Once environmental processes are complete and FTA issues a Record of Decision on this project, a New Starts application is expected to be completed. Jacquelyn assisted the environmental and planning project team with the alternatives analysis for this phase.

Associate Policy Analyst, Chicago Metropolitan Agency for Planning, Ill.

Jacki developed the regional freight plan for northeastern Illinois and led key components of the analysis of freight movement, freight supportive land uses, outreach to freight stakeholder, and freight policy to improve the efficiency and reliability of freight work. She also provided technical assistance and policy guidance to the Illinois Department of Transportation in developing the state freight plan in addition to local freight planning activities in the region. Jacquelyn led the development of several data driven documents assessing trends in freight data, supply chain, demographics, industrial land use, tax policy, and creating a more robust and inclusive economy.

Graduate Researcher, California Center for Sustainable Communities, Calif.

Jacki worked with utilities, the Governor's Office, and the regional transportation agency to quantitatively analyze transportation and utility data in Los Angeles County and provide real-time information on the effects of transportation and land use policies. She quantified the effect land use has on transportation systems and updated existing modeling tools to improve the integration of energy and transportation considerations into future planning and development efforts.

Ramesh Nair, AIA, LEED AP

Construction Phasing and Constructability

Ramesh is a senior project manager and chief cost estimator in all aspects of architectural and construction services for Vistara Construction Services. He is responsible for the coordination, quality, and cost control aspects for large institutional and commercial developments.

Cost Estimator, Various Metra Stations

- Glen Ellyn renovation/replacement options, 2018, Budget $18M
- New platform at Cicero Station, Budget $550k
- Windbreaks/Warming Shelters, Budget $700k
- South Chicago Branch Stations, Budget $9M
- Intermodal Station Surveys, Budget $1M.

Cost Consultant, CTA, Illinois Medical District, Chicago, Ill.

Rebuild, renovation of three Blue Line stations at Damen, Paulina, and Ogden including major power upgrades across the Eisenhower Expressway. Budget $17M

Cost Consultant, CTA 95th Street Terminal, Chicago, Ill.

Feasibility study to construct a new transit terminal at 95th Street including multiple overpasses over the Dan Ryan Expressway. Preliminary Budget $200M

Cost Estimator, CTA Quincy Station, Chicago, Ill.

Renovation of the historic loop station. Budget $12M

Cost Estimator/Construction Scheduler, Des Plaines Rail Shop, Rail Car Washer Replacement, CTA, Chicago, Ill.

Replacement of the existing rail car washer at the Des Plaines Rail Shop. Budget $2.5M

Cost Estimator/Construction Scheduler, CTA Harlem Rail Shop, Rail Car Washer Replacement, Chicago, Ill.

Replacement of the existing rail car washer at the Harlem Rail Shop. Budget $19M

Cost Estimator, CTA West Shops, Electrical Upgrades, Chicago, Ill.

Repairs and upgrades to the West Shops electrical infrastructure. Budget $3.8 M

Cost Consultant, CTA Brown Line Core Capacity Vision Study, Chicago, Ill.

Construction cost estimates to study numerous upgrades to the Brown line transit system including upgrades to the Western Turnback/ Leavitt Curves, Substation Replacement, Realignment of the track at numerous locations, Signal/Communication upgrades, and the Kimball yard modernization. Budget – Varies.

Cost Estimator, CTA 74th Street Bus Garage – Envelope Repairs, Chicago, Ill.

Building envelope repair including resealing all joints, replacement of exterior doors and windows. Budget >$1M

Cost Estimator, CTA Fire Alarm/Suppression Projects, Chicago, Ill.

Construction cost estimates to replace the Fire Alarm systems at the West Shops, Racine Rail Shop, South Shops, Linden Rail Yard. Budget >$3M

Education

MS, Building Performance/ Diagnostics, Carnegie Mellon University Pittsburgh

Bachelor of Architecture, Mangalore University, India

Registration

Licensed Architect: Illinois

Certifications

LEED AP (BD+C)

Honors/Awards

American Planning Association 2008 Gold Award, Uptown Redevelopment Program Park Ridge, Illinois

Construction Excellence General Services Administration, 2005

Construction Waste Management Award General Services Administration, 2006

GSA Design Awards 2006 Citation U.S. Custom House Renovation

Steve Hands

Section 106 Advisor

Steve has 10+ years of experience working on National Environmental Policy Act (NEPA) projects and has contributed to or managed NEPA documentation for Transit Projects valued over $4.5 billion.

- Project Manager, Metra Station and Downtown Planning, Glen Ellyn, Illinois, 2020-Present. Mr. Hands executing a project approach to gather community input, evaluate multiple alternatives, and selecting and developing a preferred alternative. Alternatives include development of a pedestrian underpass or overpass, realignment of downtown parking, pedestrian and bicycle safety/access, and planning for increased capacity of the station, while respecting the historic downtown.
- Senior Project Manager, NEPA, Engineering, and Funding for RPM, CTA, Chicago, Illinois, 2014- 2016. Mr. Hands served as the Project Manager of the RPM Phase One Project through the NEPA compliance phase and Federal Funding application process. Additional responsibilities included: managing the development of two Environmental Assessments and supporting documents, managing $10+ million planning, design, and environmental analysis contract.

Education

Urban Planning and Policy, University of Illinois at Chicago, 2007-2008

BA – Political Science and Economics, Kenyon College, 2006

Urban Planning and Design, Career Discovery Program at Harvard Graduate School of Design, 2006

Brandon Diffenderfer, SE

Structural Engineer - Station and Canopy

Brandon brings 11 years of experience in structural analysis, design, investigation, repair, and rehabilitation. His work entails analyzing and designing facilities, structures, and managing construction engineering services including shop drawing and submittal review. His recent transportation experience has focused on work with CTA and IndyGo BRT.

- Project Engineer, Harlem Rail Car Washer Replacements Harlem Rail Shop, Chicago Transit Authority, Forest Park, Ill. Brandon developed the details and specifications to replace the rail car washer with an enclosed addition to the existing rail shop at the Harlem Rail Shop.
- Project Engineer, Structural Inspection Crib Wall Harlem Rail Shop, Chicago Transit Authority, Chicago, Ill. Brandon was responsible for the condition assessment for the existing crib wall to observe visible signs of deterioration, identify structural issues, and determine the extent of necessary repairs

Education

MS, Civil Engineering, Bradley University, 2007

BS, Civil Engineering, Bradley University, 2005

Registration

Professional Engineer: Illinois

John Dybas III, PLS

Track Survey

With ASE since 1989, Mr. Dybas is the Survey Manager for all projects in the greater Chicago Metropolitan Area. He is responsible for field procedures and technical direction of party chiefs, office and field calculations, and acts as GPS Technician.

- Metra UP-West 3rd Mainline Engineering Services Project
- Pre-design Survey for Renovation of Homewood Station TOSR TO 3, Metra
- Survey for Metra Auburn Station Park Station Renovations
- Professional Design and Construction Services for the Renewal of Track Along the Milwaukee Avenue Portion of the O'Hare Blue Line CTA

AMERICAN SURVEYING & ENGINEERING, P.C.

Education

Southern Illinois University, B.S. Civil Engineering with a minor in Geology University of Missouri (Rolla), Land Surveyors Review Course

Chicago Transit Authority, Rail Safety Tour

Registrations

Professional Land Surveyor -- IL

Section 7

Scope of Services

The Village is pursuing a project, known as the Glen Ellyn Metra Station and Multimodal Access Improvements Project to construct a larger station building and a pedestrian tunnel under the Union Pacific Railroad (UPRR) West Line, reconstruct parking lots, provide ADA access throughout the project area, and reconstruct affected roadways including utility and streetscape improvements. The Village has advanced Phase I Engineering for the project with said services being rendered by CDM Smith of Chicago, Illinois.

As of December 23, 2022, a draft Project Development Report is in place with the project continuing to work through cultural resource clearances as well as design revisions encircling the commuter parking lots, pedestrian tunnel (and associated ramps/stairs), and other project appurtenances.

In addition, a revised project cost estimate has been recently developed for the project with the most current project cost estimate standing at approximately $50 million for all phases of engineering and construction. The project currently has approximately $20.4 million in outside funding sources including from the Congestion Mitigation and Air Quality Improvement (CMAQ) Program ($14.4 million Federal), Metra ($4 million Federal), and State of Illinois Commerce Commission Grade Crossing Protection Fund (ICC GCPF) ($2 million State). In 2023, the Village will pursue additional project funding through the CMAQ Program, ICC GCPF, Metra, and others as identified to be applicable and viable sources.

Concurrent with the completion of Phase I Engineering and the pursuit of additional outside project funding sources, the Village's goal is to complete Phase II Engineering for the project. Through the procurement of Phase I Engineering for the project, the Village has identified CDM Smith as the most qualified firm to complete the project design and has accordingly worked with the firm to develop this document which commemorates the scope of services, deliverables, schedule, and cost estimate of consultant services to ultimately complete Phase II Engineering for the Project.

In summary, Phase II Engineering involves completing the detailed design of the project including all necessary permissions to bring the project to a state where it can be competitively bid by the Illinois Department of Transportation. More specifically, as part of Phase II engineering, the design team will prepare all required engineering documents according to requirements set forth by the Village of Glen Ellyn, DuPage County, Metra, UPRR and the Illinois Commerce Commission (ICC).

The Phase II Design Scope includes the preparation of final contract plans, specifications, estimates and other associated documents, securing required permits including right-of-way and/or other land use permissions, anticipated value-added Tasks, and QA/QC. The team will coordinate state/federal/ and railroad design approvals to allow subsequent phases. The team will assist the Village of Glen Ellyn with project grant pursuit and management services.

The CDM Smith team will follow applicable requirements for preparing plans, specifications and estimates using IDOT District 1 Local Roads and state/federal guidelines and coordinating with the necessary agencies at various levels of design completion.

Exhibits, included at the end of this section:

Exhibit A: Glen Ellyn Metra Station Site Survey Limits

Exhibit B: Glen Ellyn Metra Station Track Survey and Sue Level-A Limits

A complete scope of services including deliverables, schedules, and cost estimate of consultant services is as follows.

Scope of Services

The scope of work is based upon the project understanding and is as follows.

Task 1– Zoning and 10 Percent (PCT) Design

During the Zoning and 10 PCT Design Phase, CDM Smith and its subconsultants will reconfirm project goals, objectives, resources, existing conditions, stakeholder interests, and best practices that will be used for the design. The main goal of the 10 PCT design phase is to validate the current Site and Station Designs as presented in Phase I.

This will include participation in Glen Ellyn's Zoning process. It is anticipated that the property will require a special use permit because the property is in the "CR-Conservation Recreation" Zoning District.

1.1 Phase I Engineering Design Validation

Phase I Design Validation – Conduct a meeting with Village Staff to review the status of the project and documents related to the Phase I Engineering process. The design validation will incorporate the review of the extent of the site improvements, site program, site geometries, station program, station design, and limited value engineering to build consensus and set expectations for the project.

Based on this feedback from Glen Ellyn, CDM Smith will develop the design from the Phase 1 study to a 10 PCT schematic design level.

1.2 Glen Ellyn Zoning Process

CDM Smith and our consultants will perform analysis of Glen Ellyn's zoning code as it relates to the project, complete required zoning applications and supporting documentation, and attend the following meetings:

- Preapplication Meeting
- Plan Commission / Zoning Meeting - Pre-Meeting with Director of Planning and Development
- Plan Commission / Zoning Workshop - Attend Village Board Workshop
- Zoning Presentation - Presentation to Village Board
- Zoning Presentation - Public Hearing before Zoning Board of Appeals / Plan Commission

1.3 Architectural Appearance Commission (ARC)

CDM Smith and our consultants will provide design information as required for approval from Glen Ellyn's Architectural Appearance Commission and attend the following meetings:

- Preapplication Meeting with the ARC
- Appearance Review Meeting - Pre-Meeting with Director of Planning and Development
- Appearance Review Presentation - Present at commission meeting
- Appearance Review Presentation - Presentation to Village Board

1.4 10PCT Schematic Design

CDM Smith shall verify the preliminary station design and preliminary site design developed in the Phase I Engineering Phase against laws, codes, and regulations applicable to the project. CDM Smith will review the preliminary station design and preliminary site design produced in Phase I and validate that all identified Union Pacific Railroad and Metra Standards have been fully addressed. This will be documented in a 10 PCT Project Design Report. Conflicting standards will be identified so that the process of resolving the conflict can begin.

- Schematic Site Plans Developed in Phase I
- Schematic Architectural Floor Plans
- Schematic Architectural Roof Plans
- Schematic Architectural Exterior Elevations
- Schematic Architectural Building Sections
- Preliminary Parking Lot Photometric Plans
- Schematic Landscaping Plans
- 10 PCT Project Design Report
- Up to (4) Four Digital Renderings of the Exterior, Printable on up to a 11"x17" size.
- Up to (2) Two Large Format Digital Renderings, Printable on up to a 30"x42" size.
- LEED v4 for building design and Construction
  - While we have included the completion and tracking of a LEED v4 scorecard and tracking spreadsheet through 10% design (included in the phase scope of work), a decision should be considered as early as possible to pursue LEED registration in order to allow for both design and construction phase reviews which limit risk, versus waiting until final project design is completed, and construction is initiated to submit for LEED certification. The CDM Smith team will provide a detailed LEED scope of services for both design and construction phases, if requested by the city.

Task 2 Surveying

2.1 Union Pacific Railroad (UPRR) Track Survey

The Phase II Engineering Track Survey will support the design of improvements at and around the Glen Ellyn Metra Station. A LIDAR and Photogrammetry survey will be completed within the Project Area as shown in Exhibit B. The area of the survey will extend on the UPRR tracks from 100 feet west of Main Street to 100 Feet east of N Park Boulevard. The surveyor will coordinate with UPRR to obtain right of entry permits to perform survey within the UPRR ROW.

The tracks to be surveyed are to include rail gauge face, top of rail, type of rail, switch points on each rail, frog points, curves, and any other locations necessary to provide sufficient baseline geometry, including horizontal curve data and profile of the track. Locations/points of the survey are to be taken at sufficient intervals to achieve appropriate baseline geometry of the existing track and terrain grade, but in no case are to be more than fifty (50) feet apart.

2.2 Subsurface Utility Exploration (SUE) Level A (Potholing)

Utilities located directly adjacent to the tracks will be presumed to conflict with the proposed pedestrian underpass, and therefore will be required to be relocated. Refer

to Exhibit B for potential locations. To verify the precise horizontal and vertical location of utilities the utilities will be required to be exposed and measured. This is accomplished by excavating small pits until the utilities are exposed.

2.3 Site Survey (Excluding the UPRR Track)

A topographic and utility survey will be completed within the Project Area. The utility survey will be a C-Level and B-Level SUE. The Project Area will extend along the UPRR ROW and shall be continuous as shown in Exhibit A and as described below:

- **Survey Along Main Street –** Project Area on either side of the UPRR tracks, West of Main Street – The project area shall extend along the UPRR tracks, to the West of Main Street. The survey should end 20 feet West of Main Street.
- **Project Area Along Crescent Blvd. –** The survey shall extend along Crescent Blvd. to 50 feet west of main street and 50 feet east of N. Park Blvd. The northern boundary of the survey along Crescent Blvd. shall be 50 feet north of Crescent Blvd.
- **Project Area Along the Illinois Prairie Path –** The survey along Illinois Prairie Path shall have a southern boundary that is 50 feet south of the Illinois Prairie Path. The Project Area shall also include the Metra parking lot up to the face of the 546-548 building. This part of the survey shall extend to 50 feet south of Duane St. and 50 feet to the east of Forest Ave.
- **Project Area Along Forest Avenue North of Crescent Blvd. –** The project area shall extend along Forest Avenue North to Pennsylvania Avenue.
- **Project Area on either side of the UPRR tracks, East of North Park Blvd. –** The project area shall extend along the UPRR tracks to the East of North Park Blvd.

Task 3 Site Design - Civil Engineering

The scope of work for the civil engineering discipline related to the site design consists of utility, survey coordination, and the preparation of contract documents for the design of the proposed site including plans, specifications, and estimates. The proposed site work consists of the reconstruction of Crescent Boulevard between Main Street and Park Boulevard, reconstruction of Forest Avenue from the parking lot located on the south side of the railroad tracks to Duane Street, reconstruction of the parking lot located on the south side of the railroad tracks between Main Street and Park Boulevard, reconstruction of the parking lots on the north side of the railroad tracks and reconstruction of the parking lot on the west side of Forest Avenue north of Duane Street. The design will be performed in MicroStation PowerGEOPAK and will utilize IDOT CADD guidelines.

Design guidelines that will be utilized include IDOT's Bureau of Local Roads and Streets Manual and Bureau of Design and Environment Manual, Metra's design manual, Union Pacific Railroad guidelines, DuPage County Stormwater Ordinance and Village of Glen Ellyn ordinances. Services to perform this work are described herein.

Topographic/Utility Survey – This work will be performed by a subconsultant and is described separately.

Railroad Track Survey – This work is separate from the topographic/utility survey and will be performed by a subconsultant and is described separately.

10% (Schematic Design Phase) – The scope of work related to this phase is limited to coordination with the facility team as the proposed site improvements have been outlined in the Project Development Report. Refinement of design criteria based on coordination with the facility team may occur in this phase.

3.1 Utility Coordination

The team will continue utility coordination and will contact utilities to verify location of their utilities. Additionally, the team will work with utilities whose facilities are impacted by the proposed improvement to resolve potential conflicts. Documentation between the Village on their letterhead and the utilities will be required and submitted to IDOT at the 95% submittal.

3.2 Survey Coordination

The team will coordinate the execution of the surveys with the village and UPRR. CDM Smith will review the deliverables from the surveyors to ensure that it meets IDOT CADD Deliverables and includes all items in their scope of work.

3.3 Site Design Contract Documents

- **Summary of Quantities –** The summary of quantities will be prepared according to the IDOT BDE Manual – Chapter 63. As Federal funding is involved, separate columns will be provided to indicate items eligible for federal funding.
- **Schedule of Quantities –** Schedules to be included are earthwork, roadway related removal items and proposed roadway related pay items that are not included in the roadway typical sections that may not be easily found in the plans. Drainage schedules will be prepared by a subconsultant.
- **Typical Sections –** Existing and proposed typical sections are anticipated for Crescent Boulevard between Main Street and Park Boulevard, Forest Avenue between Crescent and Pennsylvania Avenue and Forest Avenue between the parking lot south of the railroad tracks and Duane Street. Typical sections will also be provided for the parking lot located on the south side of the UPRR railroad tracks between Main Street and Park Boulevard.

- **Alignment, Ties and Benchmarks –** These sheets will be provided for the alignments for Crescent Boulevard, Forest Avenue and the parking lot south of the railroad tracks between Main Street and Park Boulevard.
- **Removal Plans –** Separate removal plans will be provided to show removal of existing roadway and roadside elements as well as removals related to drainage items. The removal plans will not include structure demolition notes. These may be shown on the structure plans for the building. Additionally, a pay item and callout will be added for removals related to the building.
- **Existing Utility Site Plans –** These sheets will show the existing utilities for the project. Any removals of Village owned utilities such as water main and sanitary sewer would be shown on these sheets. Storm sewer removals will be shown on the removal plans. Existing utilities will also be shown on the proposed drainage plans and other plans were underground items are featured.
- **Construction Phasing Concept –** A concept plan of how the project will be constructed will be prepared while maintaining pedestrian and vehicular traffic and minimizing parking impacts to the extent possible. An exhibit depicting the phasing concept will be shared with the Village prior to continuing with the development of the phasing plan and maintenance of traffic plans.
- **Phasing Plan –** An overall phasing plan will be prepared for use by the contractor to depict the work to be performed in each phase.
- **Maintenance of Traffic Plans –** Generally it is anticipated that vehicular and pedestrian access to both Crescent Boulevard and Forest Avenue will be maintained when under construction. Special attention will be paid to maintaining access to local businesses and government offices. Additionally, it is anticipated that traffic on Crescent Boulevard will be maintained when the pedestrian tunnel is to be constructed. Maintenance of traffic plans will be provided for Crescent Boulevard and Forest Avenue only as well as for accommodating pedestrian traffic during construction. Pedestrian access to the station will be provided at all times. The south parking lot phasing will be shown on the phasing plan.
- **Detour Plans –** Detour plans for both vehicular and pedestrian traffic may be required to construct the proposed improvements on Crescent Boulevard. Crescent Boulevard is one way eastbound between Main Street and Forest Avenue and two-way between Forest Avenue and Park Boulevard. Additionally, pedestrian traffic to the station as well as local businesses along Crescent Boulevard will be maintained.
- **Proposed Plan and Profile –** Proposed plan and profile sheets will be prepared for Crescent Boulevard between Main Street and Park Boulevard, Forest Avenue between Crescent Boulevard and Pennsylvania Avenue and Forest Avenue between the between the parking lot south of the railroad tracks and Duane Street will be shown at a 1:20 scale. These plans will only show the roadway improvements including the adjacent sidewalk. Separate site grading plans will be provided for the parking lots north and south of the railroad tracks, platforms and station area.
- **Proposed Site Plans –** Proposed site grading plans will be provided for the parking lots north and south of the railroad tracks, and station area. These plans will be provided at a 1:20 scale. Platforms will be shown on these plans but details will be provided on the separate platform plans. These plans will show the parking lot details that will comply with IDOT Bureau of Local Roads and Streets, Metra and the Village of Glen Ellyn zoning and code requirements.
- **Fencing Plan –** The fencing plan will be shown on 1:20 scale plans. These plans are being provided separately so that it is fencing installations can be clearly shown adjacent to the railroad.
- **Drainage Plan and Profile –** The scope of work for the drainage is to remove the existing 54" storm sewer located on Crescent from West of Forest to as shown on the exhibit from Hydraulic Report prepared by ERA. The existing storm sewer located under the railroad tracks north of Forest Avenue will be removed and the existing storm sewer crossing under the railroad tracks along Park Boulevard will be removed and replaced with a 36" storm sewer. A new storm sewer is proposed in the south parking lot between Main Street and Park Boulevards that ranges in size from 24" West of Forest to 36" east of Forest. In addition, a storm sewer connection will be provided from the station building canopy roof leaders and site area drains to the storm sewer. Below are the sheets that will be provided.
  - Crescent Blvd. – Main Street to Park Blvd.
  - Forest Avenue - Crescent Blvd. to South of Pennsylvania Ave.
  - Forest Avenue – Duane Street to the south parking lot.
  - Site Drainage Plan for south parking lot, north parking lots, and plaza area south of Crescent. The proposed storm sewer along the south parking lot will cross under the UPRR tracks along Park Boulevard and connect to the existing system at the first manhole north of the railroad tracks.
- **Utilities Plans, Profile and Details –** Utility Plans will be provided for the following streets and for the station as follows:
  - Station Utilities:

- A station sanitary sewer connection will be designed from the building to the sanitary sewer main.
- Storm sewer connections will be designed from the station canopy roof leaders and site area drains to the storm sewer main(s).
- A combined domestic water and fire suppression service connection will be designed from the building to the water main.
- A natural gas service and gas meter will be indicated. This information will be shared with the local utility throughout the design. The final design of the electrical service will be by the local utility.
- An electrical service will be indicated, and a utility transformer located. This information will be shared with the local utility through out the design. The final design of the electrical service will be by the local utility.

- Village of Glen Ellyn Utility Mains
  - Crescent Blvd. Utility Replacement Scope (Between N Park Ave. and Main St.)
    - "In kind" Water Main Replacement
    - "In kind" Sewer Main Replacement and Lateral Replacement
  - Forest Ave. Utility Replacement Scope (North of Crescent Blvd. and South of Pennsylvania Ave.)
    - "In kind" Sewer Main and Lateral Replacement from Pennsylvania Ave. 330-350 Feet South towards Crescent Blvd. and laterals.
    - "In kind" Water Main Replacement
  - Forest Ave. South of the Tracks
    - "In kind" Water Main Replacement
- Utility Main Assumptions
  - It is assumed that the water and sanitary sewer systems in the area are generally in good working order and are being replaced due to age and opportunity. This design does not include improvements or upgrades, only removal and replacement.
  - Village will provide local permits and submit for IEPA and any other permits required.
  - No wetlands exist in the area and no wetland survey will be completed.
  - Water and Sewer Main Replacements are "In Kind". No pipeline design is included. Pipe materials, pressure rating, joint types (restraint or non-restrained), cathodic/corrosion protection, tracer wire, backfill/ trench, bury depth, construction methods, etc. To be provided by the Village.
  - Existing manholes and hydrants will be removed and replaced with new manholes in the same general vicinity. Details and models for the manholes and hydrants to be provided by the Village.
  - Isolations valves and air release/air vacuum valves will be removed and replaced with new manholes in the same general vicinity. Details and models be provided by the Village.
  - No corrosion design or sampling is included.
  - Hydraulic Modeling will not be included.
  - Will provide plan, profiles, and utilize standard details provided by the Village.
  - The existing water main and service lines are not lead lines.
  - Soil borings will be required every 500 ft along the path of the water and sewer lines to determine both geotechnical design requirements and complete environmental sampling for soil disposal.
  - Public outreach to the businesses, residents, and other stakeholders effected by the work will be completed by the Village, with assistance from CDM Smith. CDM Smith has included 40 hours for this effort.
  - The Village of Glen Ellyn will perform field inspections and provide direction on which properties require lead service line replacement and provide required information to complete the design.
  - The Village of Glen Ellyn will provide the IDOT special provisions to utilize for the project.

- **Erosion and Sediment Control Plans –** A stormwater Pollution Prevention Plan will be prepared for inclusion in the contract documents for final execution by the successful bidder. All erosion control design will be in accordance with the latest IEPA and Village requirements.
- **Platform Plans –** The proposed platform plans will be shown on 1:20 scale plans. These plans are not shown on the proposed plan and profile plans so that I can be it clearly shown and will ease in the reviews by both Metra and the Union Pacific Railroad. Metra and Union Pacific Railroad (UPRR) guidelines will be used for the platform design. A heated platform is not included.
- **Intersection Details –** Intersection details will be provided at the following intersections: 1) Crescent and Forest. 2) south parking lot and Forest, 3) Duane and Forest and 4) West leg of Crescent and Park.

- **At-Grade Railroad Crossing Details –** These details will be provided at the intersection with Main Street and Park Boulevard. Pedestrian Diversions may be reconstructed due to the improvements on the east side of Main Street and the west side of Park Boulevard. Guidance from ICC and UPRR guidelines for the design of the pedestrian diversion. ICC, Metra and UPRR will be consulted as part of diagnostic review to determine preferred layout. These details will be utilized for coordination with the Union Pacific Railroad.
- **Pavement marking and signing plans –** These plans will include the signing needed for the station as well as any roadway signs and pavement markings. The Village of Glen Ellyn's downtown Streetscape Design Standards may be used as well as IDOT and Metra guidelines.
- **American Disabilities Act (ADA) Details –** ADA detail plan sheets will be provided for the following corners: 1) Crescent at Main Street, 2) Crescent at Forest, 3) Crescent at Park, 4) Crescent at Pedestrian Tunnel crossing, 5) South Parking lot at Main Street, Pedestrian Tunnel, Driveway (west of Forest), Forest and Park and 6) Forest at Duane and 7) the Illinois Prairie Path crossings at Park and Forest .
- **Cross Sections –** Cross sections will be provided at 50' intervals along Crescent and Forest and at driveways, crosswalks, critical geometric locations additional cross sections along Crescent between Main and Forest due to a significant change in grade and select locations as required.
- **Crescent Blvd Lighting –** Street lighting plans and details will be provided for Crescent Blvd between North Park Blvd and Main Street. The street lighting plans and details will included the following
  - Street Lighting Plans
  - Street Lighting Photometric Plans
  - Typical Details
- **IDOT and Local Agency Details –** IDOT District 1 Details, Metra and Village of Glen Ellyn details will be provided as required.
- The approximate boundary of the site design is as follows and as represented in Exhibit A.
  - **Along Forest Ave. –** The civil engineering plans shall extend to 50 feet north of Pennsylvania Ave. and 50 feet on either side of Forest Ave or to building faces, whichever is shorter.
  - **Along Crescent Blvd. –** The civil engineering plans shall extend along Crescent Blvd. to the pavement butt joint of Main Street and the pavement butt joint of Park Blvd. The northern boundary of the site along Crescent Blvd. shall be 50 feet north of Crescent Blvd.
  - **Along the Illinois Prairie Path –** The civil engineering plans along Illinois Prairie Path shall have a southern boundary that is 50 feet south of the Illinois Prairie Path. The civil engineering plans shall also include the Metra parking lot, the property of the 546-548 building and the parking lot directly to the east of the 542 building. This part of the civil engineering plans shall extend to the butt joint of Duane St. and 50 feet to the east of Forest Ave.
  - **Along Forest Ave. North of Crescent Blvd. –** The civil engineering plans shall extend 50 feet to the North of the butt joint of Forest Ave. and Crescent Blvd.

Task 4 Site Design – Structural Engineering

The structural engineering for the site will consist of the design of a pedestrian tunnel and retaining walls adjacent to the pedestrian tunnel and the railroad at the locations described herein. The design of the pedestrian tunnel will be based on the PBDHR approval from Phase I. The design of the pedestrian tunnel is assumed to be of a tunnel utilizing the sequential excavation method (SEM). The design of the pedestrian tunnel is a multi-disciplinary effort that may include lighting, dewatering, and finishes. IDOT's Bridge Manual and UPRR's guidelines will be utilized for the design of these structures. The following tasks are included in this effort.

4.1. Tunnel Engineering and Analysis

The tunnel analysis will consist of the review of the geotechnical data report to develop the geotechnical interpretive memorandum which will define the design parameters of the tunnel and the geotechnical baseline design report which will document the geotechnical baseline for the construction of the tunnel.

Two-dimensional models will be created to perform basic settlement analysis and waterproofing requirements will be evaluated during this phase. A report of the analysis will be created documenting the findings.

4.2. Tunnel Support Design

Using the geotechnical design parameters and preliminary tunnel envelope preliminary, a 2-dimensional numerical analysis will be performed using computer software to analyze potential settlement to refine the required preliminary and final support needed to carry the loads of the soil and railroad above the tunnel.

Following the preliminary 2-dimensional numerical analysis, the design of the shape of the tunnel, preliminary support, and final support will be refined, and a final 2-dimensional numerical analysis will be performed to confirm that

potential settlements are within ranges acceptable by Union Pacific Railroad's written standards.

4.3. Tunnel Drawings, Specifications, and Calculations

The final Pedestrian Underpass design will include plans, sections, details, calculations, specifications, and technical memoranda. Refer to Phase to Engineering Deliverables Summary for description of the deliverables at the 30PCT, 60PCT, 90PCT, and 100PCT Phases.

4.4. Retaining walls (adjacent to the Pedestrian Tunnel)

The retaining wall plans adjacent to the proposed pedestrian tunnel will be designed based on IDOT's Bridge Manual and UPRR guidelines and will be based on the PBDHR plans approved in Phase I by IDOT's Bridge Office.

4.5. Retaining walls (adjacent to the railroad tracks and/or platform)

The retaining wall plans adjacent to the proposed pedestrian tunnel will be designed based on IDOT's Bridge Manual and UPRR guidelines. Retaining walls are anticipated at the following locations:

- North side of the railroad tracks form east of Main Street to west of the proposed station
- North side of the railroad tracks from east of the proposed station to Park Boulevard.

Task 5 Landscaping Design

5.1. 10PCT Design

Using current project goals and parameters, test a range of schematic landscape and site options for the train station area, including building foundations/entries, drives/streetscapes, buffers, parking lots, plazas, and connections. This may include, but is not limited to, paving layout options, stormwater management strategies, permeable paver opportunities, landscape character and layout, and site furniture locations.

5.2. 30PCT Design

The landscaping design will be refined further following the 10PCT design Phase. This package may include one or more drawings to illustrate the landscape/hardscape character of the various study area sub-areas, such as plazas, connections, buffers, parking lots, foundations, and streetscapes. A detailed planting plan will be provided in the 60PCT through 100PCT design submittals. This phase task will provide an overall planting layout with a palette of suggested species and size ranges to discuss with the Village of Glen Ellyn.

5.3. 60PCT Design, 90PCT Design, and 100PCT Design

Based upon the inputs provided in the previous phases a final site landscape design will be developed. The final site landscape design will include the following:

- Detailed Final Landscape Plan(s).
- Landscape and Hardscape Layout and Dimension Plan(s).
- Enlarged Planting Area Details.
- Related Planting Details, Plant Schedules, and General Notes.
- Site Landscape Detail Sheets - Layout/Dimensioning of all Related Special Landscape Elements such as: Plaza/Entrance Hardscape, specific planting areas, etc.
- Related IDOT Technical Landscape Specification sections. (As required by Owner)
- Landscape Lighting Plan (For reference by landscapers, light fixture locations and specifications to be performed by the CDM Smith Electrical Engineers)
- Irrigation system drawings, standard details, and a performance specification.

The following items will not be included in the final landscape design:

- Signage Design and Graphics.

Task 6 Station Engineering

During station engineering the project the team will perform all required calculation and produce detailed drawings that include all plans, schedules, sequence of operations, and details required to obtain a building permit, gain IDOT approval, and to be used for bidding. Written specifications will also be developed that can be used for bidding and conform to IDOT requirements. The deliverables of this phase will be based on the direction determined in the 10PCT schematic design phase.

The 10PCT schematic design phase will validate the current Phase I Station Design as shown in Exhibit D. The station engineering tasks includes the architectural drawings and specifications, structural drawings and specifications, mechanical drawings and specifications, plumbing drawings and specifications, fire protection drawings and specifications, and electrical drawings and specifications required to properly communicate the design to both agency reviewers and to contractors for bidding and construction.

- **Applicable Building Codes –** It is assumed that the design must comply with the following building codes per Title 1, Chapter 1 of the Code of Ordinances Village of Glen Ellyn,

IL, (410 ILCS 25/) Environmental Barriers Act, and (20 ILCS 3125) Subpart B of the Illinois Energy Conservation Code.

- **Applicable Building Codes –** It is assumed that the design must comply with the following building codes per Title 1, Chapter 1 of the Code of Ordinances Village of Glen Ellyn, IL, (410 ILCS 25/) Environmental Barriers Act, and (20 ILCS 3125) Subpart B of the Illinois Energy Conservation Code.
  - 2021 ICC International Building Code with Village of Glen Ellyn Amendments
  - 2021 ICC International Mechanical Code with Village of Glen Ellyn Amendments
  - 2021 ICC International Fuel Gas Code with Village of Glen Ellyn Amendments
  - 2020 National Electrical Code - NFPA 70 with Village of Glen Ellyn Amendments
  - 2018 Illinois Accessibility Code
  - Illinois State Plumbing Code
  - 2009 ANSI 117.1 with village of Glen Ellyn Amendments
  - 2021 International Energy Conservation Code
- **Applicable Agency Standards –** In addition to the above referenced codes, it is assumed that the station design must allow comply with the following Agency Standards
  - Metra Station Design Standards
  - Applicable Union Pacific Railroad Standards
  - Applicable Illinois Commerce Commission ICC standards
  - Applicable Illinois Department of Transportation (IDOT) Standards

6.1. Architectural Design

The architectural design will include the design of a 4,300-GSF inbound station that includes a heated and cooled waiting area, a separable 24-hr waiting area, a covered outdoor loggia, single occupant unisex restrooms, vendor area, janitor's closet, electrical closet, fire sprinkler closet, and a mechanical equipment space for HVAC equipment.

Two open-air warming shelters are included and will match the architectural style and finish of the inbound station.

The architectural design will also include the design of ramps, stairs, and canopies over the tunnel access from inbound and outbound platforms as shown in the 10% design documents.

The architectural drawings will include all plans, elevations, building sections, wall sections, schedules and details required to obtain a building permit from Glen Ellyn and to communicate the design to bidding contractors.

The architectural design will also include life safety plans that documents all required fire separations, egress requirements, Compliance with the IL Accessibility Code, compliance with the IL Plumbing Code minimum fixture counts, and other applicable codes.

6.2 Structural Design

The structural design will include the station depot constructed of masonry bearing walls or steel framing and steel roof framing elements and canopy constructed from steel tube sections. The foundation system is assumed to be a shallow foundation system.

The structural design will include all plans, elevations, building sections, wall sections, schedules, details, and calculations required to obtain a building permit from Glen Ellyn and to communicate the design to bidding contractors.

6.3 Mechanical, Plumbing, and Fire Protection (FP) Design

The mechanical design will include the design of heating and cooling systems required to maintain the interior temperature of the inbound station and outdoor heaters for warming shelters in compliance with Metra standards.

The plumbing design will include the design of water distribution system, building sewer system, and roof and floor drainage system for the inbound station and platform canopies.

The fire protection design will be a performance specification and will include the design criteria of a wet sprinkler system, and RPZ. The fire protection design will conform to NFPA 13. The fire protection design does not include the design of a fire pump system.

6.4 Electrical Design

The electrical design assumes that the existing electrical service will be required to be upgraded in size to accommodate the electrical demand of the new station and platforms. The station electrical design will include power and lighting plans, an electrical one-line diagram for the entire project, a fire alarm design, and a security camera layout and specification.

A lighting plan will be provided at the parking lots, plaza, pedestrian underpass, and at warming shelters. It is assumed that relocated street lighting will need to occur on Crescent Blvd. only. Photometric plans will be provided for the parking lots, platforms, pedestrian underpass and on Crescent Blvd.

Audio-visual and security camera plans will be provided for the platforms and a suggested security camera layout will be provided for the platforms, pedestrian underpass, and at warming shelters.

It is assumed that the locations of audio-visual devices will be shown at the station, platform, and warming stations. It is assumed that Metra will be furnishing and installing all AV equipment. CDM Smith's drawing will indicate the locations

of all equipment and will direct the contractor to provide pull-strings and conduits.

6.5 Building Information Modelling (BIM) Coordination

The development of the drawings requires the use of multiple drawing programs that requires management and coordination of cohesive standards, processes, and metrics to facilitate a set of coordinated base plans to be utilized by all design disciplines. Station models and site structures will be developed in 3D to a 300 Level of Development in accordance with BIM Forum's Level of Development Specification 2021. Items smaller than two inches will not be modeled in general. However, items below this size threshold may be modeled where required for design work.

Task 7 Permitting

The team anticipates that several permits will be required to be approved prior to Phase III construction and recommends the following tasks and services for permitting. Assume permit fees are paid by others. Permits are as follows (any others would be procured separately):

7.1.1 Stormwater Permit

Develop application and submittal documents for the DuPage County storm water permit application. Assume one in-person meeting with DuPage County staff to discuss the project.

7.1.2 Notice of Intent for NPDES Permit

Develop application and submittal documents for the Notice of Intent in reference to the NPDES permit application. Assume one in-person meeting or one teleconference with County staff to discuss the project.

7.1.3 Stormwater Pollution Prevention Plan (SWPPP)

Develop a SWPPP that complies with the DuPage County Stormwater Ordinances to be included with the NPDES Permit.

7.1.4 Sanitary Sewer Permit – (IEPA)

Develop application and submittal documents for the Sanitary Sewer Permit – IEPA permit for the Station and the sanitary sewer main replacement in Crescent and Forest.

7.1.5 Building Department

Develop application and submittal documents for the Village of Glen Ellyn building permit applications. Assume a total of up to three in-person meetings with the building department in total, (1) one prior to submittal during Phase II and (2) two at submittal at the completion of Phase II.

7.1.6 DuPage County Highway Permit

Develop application and submittal documents for the DuPage County Highway Permit.

Permit Deliverables:

- Meeting minutes for up to seven permit coordination meetings.
- Drawings, specifications, and applications as required by DuPage County.
- Drawings, specifications, and applications for the Village of Glen Ellyn building permit.
- Drawings, specifications, and applications for the NPDES permit.
- Drawings, specifications, and applications for the IEPA Water Main Construction and Water Pollution Control Permits.

Task 8 Construction Cost Estimating

Construction cost estimates will be performed at the 30PCT, 60PCT, 90PCT and 100PCT phases. The 30PCT estimate will be performed using the CSI Division Format. The 60PCT, 90PCT and 100PCT estimates will be performed using IDOT pay items for all applicable items.

Task 9 Value Added Tasks

Due to the complexity of this project a few tasks have been identified as providing added value to the Village of Glen Ellyn by enhancing design decision making, proactively managing the project funding reporting requirements, and advocating for the Village's prefer grade crossing separation solution, an underpass, with UPRR.

9.1. Funding Management

It is anticipated that 24 monthly updates to the Village of Glen Ellyn and quarterly reporting to the funding agencies will be required. It is also anticipated that additional grants and/or increases to existing grants will be required. The following tasks are included in the Funding Management Scope:

- Quarterly CMAQ Grant updates to CMAP.
- Coordination with ICC on GCPF intermittent updates.
- Quarterly Coordination meetings with Metra on grant funding
- Monthly funding meetings with Glen Ellyn to discuss design progress in relation to the Funding Sun Set Dates
- Cost request increases to existing funding sources
- Draft a memorandum requesting additional ICC funding for the pedestrian tunnel under the UPRR tracks.

9.2. Pedestrian Tunnel Alternatives Report

A limited evaluation will be completed to consider alternatives for the new pedestrian underpasses. This evaluation will utilize structural and geotechnical information gathered during Phase I (i.e., no additional testing or investigation of the existing tunnel is proposed). The evaluation will include construction techniques for the new pedestrian underpass, alternative aesthetic options, and related order of magnitude construction costs.

9.3 Geothermal Feasibility Study

The team will perform a feasibility study that evaluates the viability of a geothermal heating system to be used to heat or cool the station and or the warming shelters. The feasibility study will include a cost / benefit analysis, conceptual sizing, conceptual installation costs, conceptual long term maintenance costs, and a list of pros and cons. The feasibility study must also include the costs of adding a geothermal heating system to the design scope.

9.4 UPRR Request for Exception to The Overpass - Structure Type Selection Report

Per UPRR guidelines UPRR discourages underpass structures and prefers over pass structures. The request of exception includes a written engineering justification for the underpass structure and geometric, structural, and other constraints which justify the request. The request also includes a cost-benefit ration that includes all costs associated with interruption to railroad operations during construction of the underpass.

9.5 R.O.W. Acquisition Support

CDM Smith will assist the village with pre-acquisition tasks per the results of qualitative and quantitative evaluation of two options as follows: Option 1 Land Purchase from UPRR and Option 2 Lease and Maintenance Agreement that will be conducted under a separate contract. Once a decision has been made by the Village CDM Smith will perform the following tasks:

- Provide required Right of Way drawing exhibits.
- Provide required technical project plans, sections, or details.
- Coordinate the utilization of outside entities for the purposes of special legal guidance.

All tasks performed in 9.5 will be performed for a not-to-exceed value and will be invoiced monthly based upon the work that has been completed.

9.6 Section 106 MOA - Historic Illinois Building Survey (HIBS)

CDM Smith will perform a Historic Illinois Building Survey (HIBS) Level III recordation of the existing Metra Station. The recordation will be detailed in special provisions of the construction contract and must follow HIBS guidelines established by the SHPO.

Task 10 Project Management

Coordination with the Village of Glen Ellyn, stakeholders, agencies, utilities, and other team members will be a constant priority. The project manager will communicate regularly as noted in the following descriptions. The team will prepare and regularly update progress on any design work via a weekly email. All tasks assume a 24-month schedule after notice to proceed is given to the CDM Smith team.

10.1. Weekly Client Meetings with the Village of Glen Ellyn

- CDM Smith will hold weekly meetings with the Village of Glen Ellyn to provide project updates and to coordinate the development of the design with the Village of Glen Ellyn. Meeting minutes will be issued after each meeting.
- Each meeting will last (1) hour and will be for a duration of twenty-four (24) months or ninety – six (96) weeks.
- The CDM Smith Project Manager, CDM Smith Project Technical Leader, CDM Smith Site Discipline Lead, and CDM Smith Station Discipline Lead will be the main CDM Smith participants.

10.2. Metra Coordination

- CDM Smith will hold monthly coordination meetings with Metra to provide project updates and to coordinate the development of the design with Metra. Meeting minutes will be issued after each meeting.
- Each meeting will last (1) hour and will be for a duration of twenty-four (24) months.
- The CDM Smith Project Manager, CDM Smith Project Technical Leader, CDM Smith Site Discipline Lead, and CDM Smith Station Discipline Lead will be the main CDM Smith participants.

10.3. Union Pacific Railroad (UPRR) Coordination

- Union Pacific will require formal submittals and reviews at each milestone. In addition to these submissions, the following tasks and deliverables are assumed.
  - Coordination to submit milestone submittals, and resolution of comments is included in this effort.
  - A design kickoff meeting with Union Pacific (Chicago engineering staff and Governmental Affairs - Meeting to review the status of the project and documents from Phase I completion and review "validation" documents to incorporate any critical success factors and final design considerations in schematic design and Phase II engineering.

- In addition to submitting UPRR review packages and incorporating review comments made at each design phase, the final bid documents will be submitted to UPRR.
- Assume attendance at up to four in-person meetings with UPRR local staff (Chicago) and attend up to twenty-four (24) 1-hour long conference calls as needed with UPRR engineering staff throughout Phase II.
- Schedule and attend a diagnostic field review. This will be a field meeting at the at-grade crossings to discuss the scope of the proposed work, review the proposed design and finalize location of railroad gates and ped gates and any other identified crossing improvements.

10.4. Illinois Commerce Commission (ICC) Coordination

- Provide nine (9) 1-hour meetings at the end of the 30%, 60%, 90%, and 100% phases and quarterly, 5 quarters in total, to provide project updates to ICC. Two (2) additional 1-hour meetings will be included in the scope-of-services. It is assumed that the meetings held after the 30%, 60%, 90%, and 100% phases will be held virtually. It is assumed that the quarterly meetings will be held virtually. Up to two (2) meetings will be held on site.
- Submit 30%, 60%, 90% and 100% plans. Ensure ICC comments have been addressed.
- Assist Village of Glen Ellyn in the ICC petition development and review with UPRR staff by providing already developed technical deliverables and technical deliverables defined in the Supplemental Tasks.

10.5. IDOT Coordination

IDOT coordination includes a required IDOT Phase II Kickoff meeting to review the IDOT submission standards and current IDOT letting schedule. The following IDOT submittals are anticipated:

- Pre-final (95 PCT) IDOT Submittal
- Final (99 PCT) IDOT Submittal
- Final (100 PCT) IDOT submittal for letting

Periodic IDOT coordination will be required to address project specific challenges though out the project.

10.6. Project Administration

The administrative, project management, and administration resources needed to coordinate services and deliverables of the design team.

Task 11 Quality Assurance

Execution of a Quality Management Plan which documents the necessary information required to effectively manage quality from the project planning phase through closeout. This plan defines the project's policies, procedures, and processes to ensure that project deliverables meet client and CDM Smith quality management system requirements. The Project Quality Management Plan includes the following:

11.1. Project Quality Kick Off

The project quality kick off includes a Project Quality Management Workshop (PQM) is a facilitated session by a facilitator where key stakeholders participate in a consensus-building exercise to confirm the project goals and define the critical success factors; the processes, activities and tasks needed to achieve success; and to assign responsibilities for carrying out the tasks.

11.2. Technical Review Committee

Technical reviews will be completed by several senior team members independent of the project who have expertise in the design concepts and work to be reviewed and provide guidance to the design team to ensure the project meets the stakeholder and technical requirements. This review occurs at the 10PCT, 30 PCT, and 60 PCT phases.

11.3. Deliverable Quality Assurance

Checking of design drawings and specifications have specific requirements known as the red-yellow-green check. Revisions and/or additions will be indicated in red and reviewed with the original designer. This check will occur at the 60 PCT, 90 PCT, and 100 PCT phases.

Task 12 - CDM Smith Other Direct Costs (ODC)

The following are anticipated other direct costs related to the project. All direct costs will be billed at cost until the upper limits are reached.

12.1. Travel – This includes costs associated with travel to and from the project site including milage, fuel, and meals.

12.2 Printing – This includes the costs associated with printing and or mailing hard copies of deliverables and supporting documentation.

12.3 Renderings – This includes all costs associated with producing renderings to support the zoning and 10PCT design efforts, and as required throughout the project as approved by the Village

12.4 Public Outreach – This includes costs associated with public outreach and engagement that may be required by Zoning and the Architectural Appearance Commission.

12.5 SUE Level A (Pot Holing) – This includes costs associated with performing "pot holing" to locate utilities on an as needed basis.

12.6 R.O.W. Acquisition Legal Support – This includes costs associated with utilizing outside entities for the purposes of special legal guidance as part of the R.O.W. Acquisition Support Task.

12.7 Model – Cost associated with producing a 1:20 monochromatic site model and (1) preliminary monochromatic station architectural model.

Summary of Project Deliverables (30 PCT thru 100 PCT Design)

30 PCT Document Submittal:

While not required by IDOT Bureau of Local Roads and Street, it is assumed that a 30 PCT document submittal will be developed for Village of Glen Ellyn, Union Pacific (required), ICC, and a courtesy review set for Metra to track project development and confirm design decisions. All other agencies (Union Pacific Railroad and Metra) will receive digital deliverables in PDF format.

Additionally, we would propose a meeting following submission to describe materials included and to highlight items of special consideration.

The deliverables are proposed to include one (1) PDF set and two (2) printed and bound sets of 30% development drawings including the following:

- Preliminary construction staging and phasing plans
- New and existing site plans
- New and existing utility plans
- Preliminary drainage and grading plans
- Preliminary drainage calculations
- Preliminary landscape plans
- Site structural plans and sections of the pedestrian tunnel and retaining walls (From Phase I)
- Station plan and elevations
- Line diagrams of proposed mechanical, electrical, and plumbing systems.
- Also included is a Basis of Design Report which will describe the design rational for site, architectural, structural, mechanical, plumbing, and fire protection designs.
  - Including the following calculation:
    - Preliminary Structural Calculations
      - IBC Based, AREMA and AASHTO calculation are not provided.
    - Preliminary Heating and Cooling Demand Calculations
    - Preliminary HVAC Equipment Selections
    - Preliminary Domestic Water Demand Calculations
    - Preliminary Fire Suppression Demand Calculations
    - Preliminary Electrical Demand Calculations
- Union Pacific Railroad required supplemental documents, including structural TS&L for tunnels, and retaining walls.
- 30PCT Construction Cost Estimate

60 PCT Document Submittal:

While not required by IDOT Bureau of Local Roads and Streets, it is assumed that a 60 PCT document submittal will be developed for Village of Glen Ellyn, Union Pacific Railroad (required), ICC, and a courtesy review set for Metra to track project development and design decisions. All other agencies (Union Pacific Railroad and Metra) will receive digital deliverables in PDF format.

As noted in the 30% submittal, we would propose a meeting to review submitted documents and note critical items for discussion.

The deliverables are proposed to include one (1) PDF set and two (2) printed and bound sets of 30% development drawings including the following:

The 60 PCT deliverable is proposed to include the following:

- Construction staging and phasing plans
- New and existing site plans
- New and existing utility plans
- Drainage and grading plans
- Drainage calculations
- Landscape plans and details
- Site structural plans and sections of the pedestrian tunnel and retaining walls
- Civil Accessories, and Details
- Civil Erosion Control Plans
- Civil Traffic Plans
- Civil Platform Details
- Civil Fencing
- Architectural Site Plan
- Station plan and elevations
- Station Building Sections
- Station Sections
- Enraged Floor Plans
- Finish Schedules
- Door Schedules
- Mechanical Plans, One Lines, Details, and Schedules
- Plumbing Plans, One Lines, Details, and Schedules

- Fire Protection Plans, One Lines, Details, and Schedules
- Electrical Plans, Plans, One Lines, Details, and Schedules
- Fire Alarm Plans, One Lines, Details, and Schedules
- Fire Protection Plans, One Lines, Details, and Schedules
- Audio Visual Plans, One Lines, Details, and Schedules
- Also included is a Project Development Report (PDR) which will describe the design rational for site, architectural, structural, mechanical, plumbing, and fire protection designs.

  Including the following calculation:

  - Structural Calculations
    - IBC Based, AREMA and ASHTO calculation are not provided.
  - Heating and Cooling Demand Calculations
  - HVAC Equipment Selections
  - Domestic Water Demand Calculations
  - Fire Suppression Demand Calculations
  - Electrical Demand Calculations
- Union Pacific required supplemental documents, including structural TSL for tunnels, and retaining walls.
- 60PCT Construction Cost Estimate with IDOT Pay Items

90 PCT Submittal / Pre-final (95 PCT) IDOT Submittal:
While required by IDOT, this would also serve the role of a typical (90 PCT) review for the Village of Glen Ellyn, Union Pacific Railroad, and one courtesy review set for Metra to track project development and design decisions. All other agencies (Union Pacific Railroad and Metra) will receive digital deliverables in PDF format.

As noted in previous submittals, we would propose a meeting to review submitted documents and note critical items for discussion.

The deliverables are proposed to include one (1) PDF set and two (2) printed and bound sets of 30 PCT development drawings including the following:

- Construction staging and phasing plans
- New Civil Site Plans and existing site plans
- New and existing utility plans
- Drainage and grading plans
- Drainage calculations
- Landscape plans and details
- Site structural plans, sections, and details of the pedestrian tunnel and retaining walls
- Civil Accessories, and Details
- Civil Erosion Control Plans
- Civil Traffic Plans
- Civil Platform Details
- Civil Fencing
- Architectural Site Plans and Details
- Station plan and elevations
- Station Building Sections
- Station Sections
- Enraged Floor Plans
- Finish Schedules
- Door Schedules
- Mechanical Plans, Details Schedules
- Plumbing Plans, Details Schedules
- Fire Protection Plans, Details Schedules
- Electrical Plans, Details Schedules
- Fire Alarm Plans, Details Schedules
- Fire Protection Plans, Details Schedules
- Audio Visual Plans, Details Schedules
- Security Camera systems.
- Special Provisions
- Specifications
- 90PCT Construction Cost Estimate with IDOT Pay Items
- Estimate of Time
- Lump Sum Breakdowns (Including backup calculations and validation)
- Copy of Draft CA
- Proprietary item request letter if required
- Copy of Phase II IDOT kickoff meeting minutes
- Copy of Phase I approval page with design approval signatures and date
- Completed PSI for special waste

Initial Final (99 PCT) IDOT Submittal:
CDM Smith will submit to IDOT the initial final submittal following the IDOT provided comments being addressed. All hard copies will be submitted to IDOT. The village will be given one (1) PDF set and one (1) hardcopy of the drawing sets. IDOT will also be given one (1) PDF set of all deliverables. All other agencies (Union Pacific and Metra) will receive digital deliverables in PDF format.

The IDOT deliverables are anticipated to include the following hard copies in addition a PDF set of the deliverables:

One coversheet (cover signed and stamped by CDM Smith team and Village or Glen Ellyn)

- Two reduced size drawing sets with binder clips
  - Refer to the deliverables list described for the 90 PCT Submittal / Pre-final (95%) IDOT Submittal for content
- Two sets of special provisions
- Three copies of the estimates of cost with prices
- Three copies of the estimates of cost without prices
- Two copies of the cost breakdowns for lump sum items
- Two copies of estimates of time
- One copy of utility correspondence
- One copy of Phase I approval with signatures
- One disposition of prefinal PS&E comments
- One PDF set and two printed sets of calculations

Final IDOT Submittal for Letting:

Final (100 PCT) IDOT submittal (also, for UPRR, ICC, and Metra) – CDM Smith will submit to IDOT the final submittal following the IDOT provided comments being addressed from the initial final submission. All hard copies will be submitted to IDOT. The village will be given one (1) PDF set and one (1) hardcopy of the drawing sets. IDOT will also be given one (1) PDF set of all deliverables. All other agencies (Union Pacific and Metra) will receive digital deliverables in PDF format.

The IDOT deliverables are anticipated to include the following hard copies in addition a PDF set of the deliverables:

- One CD containing electronic files including coversheet with all signatures
- One final completed comment disposition (from initial final IDOT review and CDM Smith responses)
- One set of special provisions, unbound, single sided
- Three copies of the estimates of cost with prices
- Two copies of the estimates of cost without prices
- Two copies of the cost breakdowns with lump sum items
- Two copies of the estimates of time

Assumptions:

1. Contract duration assumed to be 24 months.
2. LEED Certification is not included.
3. The Phase II design is assumed to be a reconstruction of the existing station to a larger size based on Metra capacity calculation and rebuilding of the platforms to new lengths as specified by Metra requirements.
4. Design of utility relocations beyond the requirements of the requirements of the facilities are not included. Potential fiber relocation design is not included.
5. CDM Smith may be contracted to provide Phase III engineering services either in full or in support. We anticipate that the detailed scope of services and deliverables will be reviewed and negotiated at a future time. No Phase III effort is included in this scope of work and fee estimate.
6. It has been assumed that accessories and details for the station and facilities will be off the shelf with limited custom detailing. If owner-initiated decisions during schematic design or final design phases increase design effort assumptions, additional compensation may be required.
7. The vendor area will be indicated as a vanilla shell or warm shell / "white box" in the final drawings and will include the following:
   - One tenant electrical plan will be shown based on the electrical loads shown in 7.1
   - An electrical submeter will be shown
   - Domestic cold water rough ins will be shown. No domestic hot water will be provided.
   - A domestic water submeter will be shown
   - One floor drain will be provided.
   - One Mop Basin will be provided
   - One Hand Sink will be provided
   - One water heater will be provided
   - The vender area will be developed to schematic level architecturally and a design development level (50%-60%) mechanically, electrically, and plumbing to demonstrate to a potential tenant that a business is feasible in the tenant space. The following will be included
     - Schematic floor plan
     - Schematic reflected ceiling plan
     - Lighting Plan
     - Electrical Power Plan
     - Plumbing Plan
     - H.V.A.C. Plan
     - It is assumed that a Type 1 Hood, Grease Exhaust System will not be used in this space.
     - Conceptual Kitchen Equipment Plan Based on a Potential Coffee Shop
8. Drawings sheets are assumed to be three hundred, thirty (330) in total.

Exhibit A: Glen Ellyn Metra Station Site Survey Limits

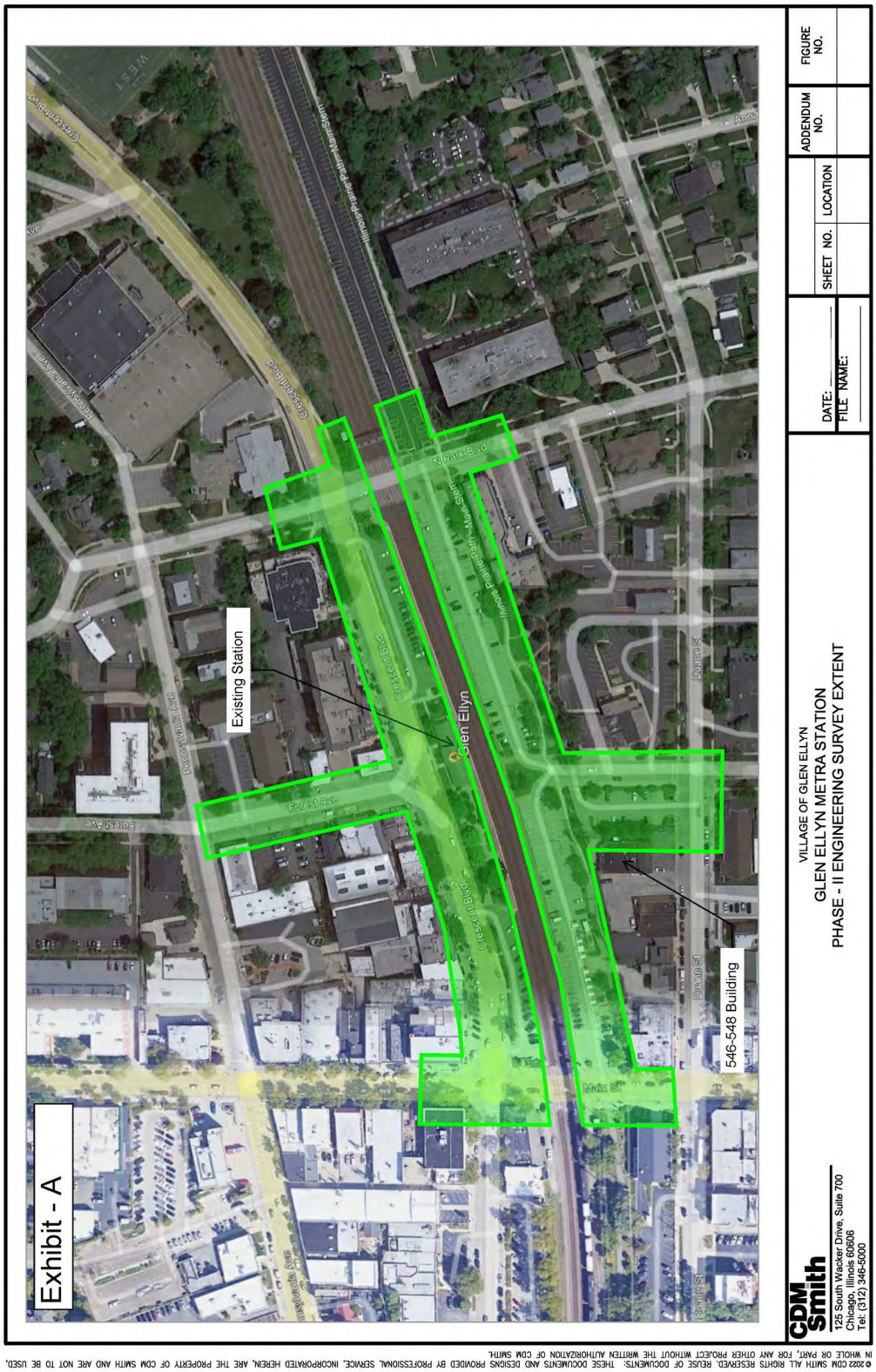

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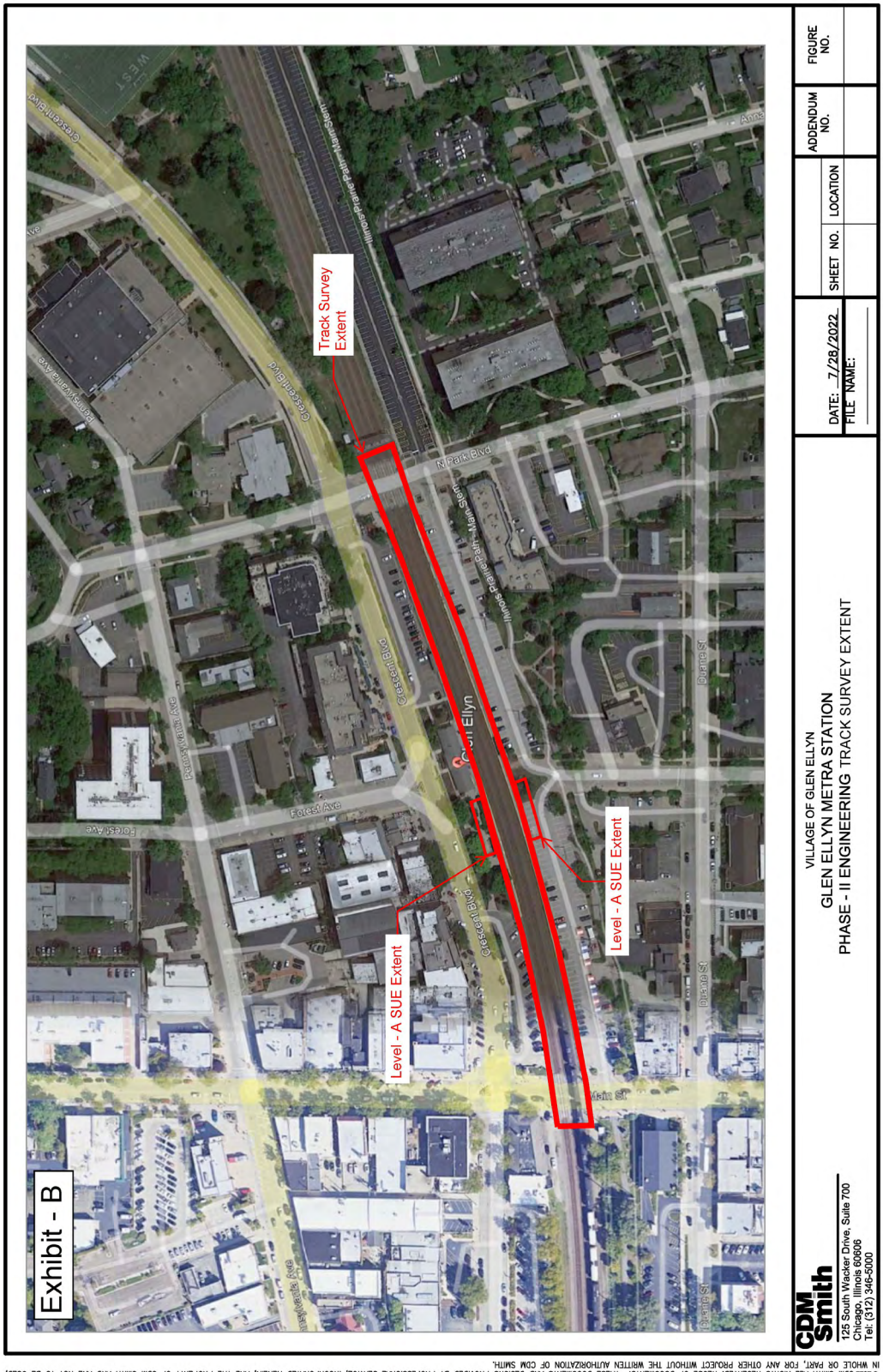
Exhibit B: Glen Ellyn Metra Station Track Survey and Sue Level-A Limits



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Section 8

References

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Major Projects Section Chief, Bureau of Programming
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Project Manager
312-322-6618

Chicago Transit Authority
James Harper
Chief Engineer
312-681-3960

Metra
Glen Peters
Senior Director, Capital Projects
312-322-6631

Chicago Transit Authority
James Harper
Chief Engineer
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Section 9

Portfolio

The CDM Smith team presents unparalleled qualifications in the areas of architectural design and engineering services. Additionally, the team brings a depth of relevant experience in Metra and Illinois Department of Transportation (IDOT) Phase II and III projects. With our firm's combined experience, the Village of Glen Ellyn will benefit from the exceptional transportation expertise and station facility planning.

Our team brings:

- *Staff with experience in municipal and railroad clients specifically in the design of passenger train facilities of similar scope and scale*
- *Experience with IDOT Phase II and III engineering*
- *Expertise with Federal grant funding administration*
- *Experience with Federal aid procedures to ensure grant dollars are expended properly*

Chicago's Proven Transportation Experts

For nearing 30 years, we continue to expand in the Chicagoland area with focused client service for each of the major transportation agencies—Metra, Pace, Chicago Department of Transportation (CDOT), Chicago Transit Authority (CTA), and IDOT. The depth of our work throughout the region grants us a hands-on understanding of the area's transportation networks, including many of Chicago's Class I railroads.

In these types of projects, we are highly attuned to the regional transportation network's abilities to get people where they need to be with fast, high-quality service, whether commuters are using trains, buses, or cars for work, play, or social needs. The new Glen Ellyn Metra station will be part of the transportation infrastructure and a key part of the first- and last-mile for its community. A firm with steadfast transportation resources can best help study and make the case for a Glen Ellyn station that would be a vital part of the community and Metra's network.

CDM Smith's Chicago Transportation Clients & Services

CLIENT	SERVICES					
	Architecture	Engineering	Funding Management	Public Outreach	Rail/Bus Coordination	Class 1 Rail
Metra	X	X	X	X	X	X
Pace	X	X		X		
CTA	X	X	X	X	X	X
CDOT		X			X	
IDOT		X		X	X	X
Illinois Tollway		X	X	X		
Municipal	X	X	X	X	X	X

CDM Smith's transportation capabilities and proven excellence with local transportation clients are directly aligned with Glen Ellyn's priorities for the Metra station, as exhibited above.

Metra Station Design, UP-West Line

Elmhurst, Ill.

1 Architectural Design

The City of Elmhurst contracted CDM Smith for Phase II engineering services and architectural design for improvements to the Metra station located in downtown Elmhurst. The station was originally constructed in the 1960s. While several renovations have taken place since then, the condition of station and surrounding site require improvements, particularly to encourage downtown development. Additionally, with projected ridership growth, the station and amenities need to be expanded to meet those needs. The existing tracks and limited crossings also separate the downtown into north and south regions.

The proposed facility improvements include a new Metra station depot and platforms, a new outbound shelter and two new warming shelters. The existing building facilities are proposed to be demolished. The existing pedestrian tunnel is proposed to be extended with new stairs on both sides. A new pedestrian underpass is proposed and will be constructed via jack and bore method in order to limit impacts to rail operations during construction. Retaining walls are proposed on either side of the existing and proposed underpasses.

The scope of work includes agency and public visioning sessions and outreach to stakeholders to obtain their input on the visual concept of the proposed Metra station including a new Metra Station building, parking lot improvements as well as consideration for the maintenance of traffic during construction. Three station design alternatives will be developed with the preferred alternative being determined for use in preparing the contract documents. Site improvements include on-street and off-street parking configurations of the parking lots north and south of the UPRR tracks, resurfacing of Crescent Boulevard and reconstruction of Forest Avenue and new drop-off and pick-up areas.

In order to limit impacts to parking and pedestrian access, the construction of the parking lots will be phased for the phasing of work at each of the parking lots that will be coordinated closely with the Village and Metra.

Name/Title
Cori Tiberi,

Phone
630-530-3777

Client
City of Elmhurst

Completion Year
2022

- Pedestrian tunnel
- Phase II design
- Federal funding
- ADA-compliant
- Constrained site with vehicular/pedestrian traffic
- On and off-street parking

NICTD Main Street Commuter Rail Station

2 Architectural Design

Town of Munster, Ind.

CDM Smith assisted the Town of Munster in developing concepts, working with internal and external stakeholders, and coordinating the implementation of architectural and other "betterments" to the baseline Northern Indiana Commuter Transportation District (NICTD) station to meet the needs of the community for the West Lake Corridor.

Working with the Town of Munster's internal stakeholders, the CDM Smith multi-discipline team designed architectural and other "betterments" to the baseline on several items ranging from modifications to handrail design and cladding materials, to larger fixes to the platform, underpass, bridge, station depot, and site work.

As the process and agreements are further defined by the Town and NICTD, the CDM Smith team provided support in the form of reviewing change orders related to the Town requested betterments and reviewing design packages to provide comments on behalf of the Town of Munster.

Name/Title
Thomas Vander Woude, AICP, Planning Director

Phone
219-836-6995

Client
Town of Munster, Community Development Dept.

Completion Year
2022

- Architectural and Phase II engineering services
- Federal funding
- ADA-compliant
- Landscaping, site signage, platforms, and amenities

Metra Lombard Under Pass, UP-West Line

3 Architectural Design

Lombard, Ill.

To eliminate pedestrian crossing at track level, an underpass and associated ramps and stairs were designed at the UP-W Metra Lombard station. KMI provided architectural, structural engineering for the canopy design, and MEP engineering design. The architectural design featured curved metal roof canopies to protect approximately 250-lineal-feet of platform on either side of the tracks. The system is designed in repetitive modular sections to reduce cost, while the modular bays can easily facilitate a future curtain wall system to further protect the stairs and ramps.

The underpass entrances and interior were architecturally enhanced to eliminate the appearance of a simple steel pipe tube. The platform under the canopy, stairs, and ramps are lit using LED lighting to reduce energy consumption and help reduce operating costs. In addition, new visual messaging system, touch screen kiosks, a public-address system, and digital surveillance system were incorporated into the project. KMI designed a glycol snowmelt system covering approximately 5,200-square-feet of walking surface utilizing condensing type boilers. The boiler room utilizes the excavated area used to install the underpass steel liner.

Name/Title
Andy Roth, Manager: Design, Stations, and Parking

Phone
312-322-6611

Client
Metra

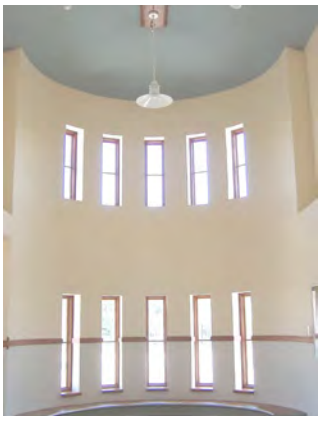
Completion Year
2015

- 12-foot-diameter push tube underpass
- Phase II design
- Federal funding
- ADA-compliant
- Constrained site with vehicular/pedestrian traffic
- Snow melt system

Dee Road Station

Park Ridge, Ill.

4 **Architectural Design**



To better serve the community of Park Ridge, KMI designed a commuter rail station that offers commuters a drop-off area leading to a loggia with direct access to the train platform. The interior space includes a mechanical room and a two-story high waiting area.

An under-floor radiant heating system was provided within the station. This system also provides heat for the snowmelt system at the ADA ramp and a portion of the outdoor waiting area. The scope of our services included architectural and engineering design, shop drawing review, responses to RFIs and issues for the depot building, platform, parking lot lighting, and Voice of Metra communication system.

Though the station footprint is less than 1000-square-foot, the architectural treatment of the waiting area, outdoor spaces and circulation were designed around passenger usage.

Name/Title
Glen Peters, Senior Director

Phone
312-322-6631

Client
Metra

Completion Year
2008

- Architectural and Phase II and III engineering services
- Federal funding
- ADA-compliant
- Landscaping and snow melt system

Tinley Park Station - 80th Avenue

Tinley Park, Ill.

5 Architectural Design

KMI, as a member of a team, was commissioned by the Village of Tinley Park to design a new passenger station. KMI provided structural, mechanical HVAC, electrical, plumbing and fire protection engineering design services as well as construction phase tasks such as review of shop drawings, responding to RFI's and occasional site visits. The 5,400-square-foot depot includes a basement, café with full service kitchen, ticket office, exterior and interior waiting areas, bathroom facilities and clock tower. The depot's clock tower rises 50 feet high and consists of reinforced cast in place concrete with brick and stone veneer.

Due to the exposed timber structure framing, special attention was paid to the design of the connections details and coordination with electrical, mechanical, and plumbing systems to attain a clean and organized design. The building features geothermal heating system, LED lighting, and other sustainable features.

The station has a full kitchen and bar which posed challenges and unique design in MEP/FP due to the exposed timber structure and HVAC requirements. The HVAC system consisted of under-floor air system distribution, geothermal wells, and heat recovery units. The station is fully equipped with a dry type sprinkler system.

Name/Title
Glen Peters, Senior Director

Phone
312-322-6631

Client
Metra

Completion Year
2016

- Federal funding
- Phase II and III services
- Exposed structural framing
- Geothermal heating and cooling
- Dry type sprinkler system
- Full kitchen with exhaust hood

Glen Ellyn Station

Glen Ellyn, Ill.

6 Architectural Design

CDM Smith was selected by the Village of Glen Ellyn to provide analysis, planning, design, and Phase I Engineering services for the Village's Metra Station and surrounding downtown district. The Village understood that while the existing 1960s facility had fulfilled basic services, the station facility and site was not meeting current and future needs.

CDM Smith conducted initial evaluations of the existing station location, existing at grade crossings, parking, and traffic. Additionally, the team created and managed a robust public outreach program that included rider surveys, online surveys, and workshops. Following these investigations, the team presented preliminary findings. These conclusions showed that parking in the downtown area is currently inadequate, that the current parking is located on the least convenient side of the tracks (outbound), that pedestrians and drivers must walk more than a block to cross a non-ADA compliant crossing and that the existing station is near the end of its useful life.

The preferred alternative includes a pedestrian underpass tunnel, ADA accessible ramps, new parking and drop offs, as well as new $25 million station design. Funding applications were developed by the team and submitted under multiple federal, state, and local programs. The Village has been awarded $16.4 million to data including CMAQ and ICC programs. Close coordination with Metra long range planning was critical in the review of ridership assumptions and with the station engineering department for both funding applications and station planning.

The team initiated and facilitated multiple coordination meetings with Metra, Union Pacific Rail Road, IDOT. Agency staff coordination has included long range planning, community relations, facility design and engineering.

Name/Title
Richard Daubert, PE, Project Manager

Phone
630-547-5507

Client
Village of Glen Ellyn, Ill.

Completion Year
2022

- Coordination with Metra, UP, and IDOT
- Public outreach program
- Alternative analysis for station and site improvements
- Developed cost estimates and phasing concepts for board approval

Edison Park

Edison Park, Ill.

7 Architectural Design

This new station and parking at Edison Park was built northwest of the existing station. The new station was designed to be a focal point for the community while serving the existing business district and defining the character of the area. The station offers commuters a spacious outdoor plaza leading to a covered loggia.

KMI's role on the project include architectural design, structural engineering, MEP engineering, fire protection, and landscape design. The building program consists of an office for the Edison Park Chamber of Commerce, a conference room, which opens to the general waiting room/community room, and 24-hour waiting room.

Other improvements include resurfacing of the existing parking lots, expansion of existing parking along North Olmstead Avenue, and installation of new platforms and parking lot lighting. Additional features of the building and site designed by KMI included bulletin boards, fare collection boxes, news stands, benches, and a bike rack. KMI worked closely with key agencies including Metra and the City of Chicago Department of Revenue.

Name/Title
Manny Quilatan

Phone
312-322-6625

Client
Metra

Completion Year
2008

- Edison Park Chamber of Commerce office in Station
- Community multi-purpose room in station
- Metra parking along roadway
- UP coordination

Mundelein Metra Station

Mundelein, Ill.

1 IDOT Phase II Engineering

In conjunction with ongoing downtown redevelopment efforts, KMI was commissioned in 2012 to design a concept for new pedestrian access to the village's Metra station. This project involved numerous architectural studies and preliminary designs were created to compliment the surrounding area, and provide safer and easier pedestrian access. State funding was secured in 2017 and the preliminary designs were completed in 2019.

The 128-foot overpass bridge was designed to span the tracks and avoid impact with underground utilities. However, it will still require extensive coordination with IDOT, Metra, CN, and utility companies including an underground jet fuel line and burial of high voltage power lines within the vicinity of the new structure. Detailed staging plans were developed for over the track construction which will minimize the impact to rail traffic and ease construction cost.

During the design phase, vertical circulation options included stairs, ramps, escalators, and elevators. To reduce facility maintenance, the towers and overpass bridge are completely enclosed except at the ground floor entry. The facility will be equipped with a snow melt system, dry pipe sprinkler, and designed to be tempered, if desired in future.

Name/Title
John Lobaito, Village Administrator

Phone
847-949-3225

Client
City of Mundelein, Ill.

Completion Year
2019

- Extensive coordination with IDOT, Metra, CN, and utility companies
- Detailed phasing plans to minimize impact
- Project will be thru IDOT local roads and includes Phase II services

CBD Streetscape and Utility Improvements

2 IDOT Phase II Engineering

Village of Glen Ellyn, Ill.

Civiltech provided design services for streetscape and utility improvements project in Glen Ellyn's historic CBD area, beloved by Village residents and the many shoppers and diners who frequent the area. All of the streets within the Central Business District (CBD) will be reconstructed or resurfaced, and all of the pedestrian walkways will be brought up to current ADA standards. Utilities will be replaced or rehabilitated throughout the CBD. Through modifications of curb lines and parking areas, more area outside the roadway will become usable for pedestrians, green space, and streetscape elements such as bicycle racks and outdoor cafes.

The project began with reviewing the Village's past studies of the area and is moving ahead with extensive coordination with a newly formed project steering committee. This committee is comprised of Village staff, key business leaders, students, and other community leaders. They are being led through walking tours, conditions reviews, and design charrettes by our staff so that their beneficial input can be used to narrow down alternate treatments. A final open house will present the recommended alternate to the public for comment.

Access to all businesses will be maintained while the entrances to most businesses are brought up to ADA standards. The utility replacements will be coordinated with the streetscape improvements so that all utility lids and above ground features synchronize with proposed trees and curb extensions. The streetscape and utility construction contract will be let first by the Village and followed by a resurfacing project that utilizes federal funds to be let by IDOT.

Name
Tom Topor, PE

Phone
630.547.5520

Client
Village of Glen Ellyn

Completion Year
2020

- Streetscape
- Bicycle and Pedestrian Facility
- Planning and Design
- Reconstruction
- Utility Replacement
- Sesurfacing (LAFO)

Oak Lawn, Phase II and Phase III

Cook County, Ill.

4 IDOT Phase II Engineering

As part of a regional water transmission main project, CDM Smith identified the most economical and efficient corridors for construction of over 20 miles of large diameter water transmission pipelines. Several of these sections in this densely developed area of the south suburbs involved burying the 60-inch diameter pipe under existing pavement. The project impacts roads under the jurisdiction of IDOT, Cook County, and several municipalities. All roadway related work was designed in accordance with IDOT standards – either Bureau of Local Roads and Streets, or Bureau of Design and Environment as applicable. CDM Smith's worked with local jurisdictions to develop a plan that would minimize cost while being responsive to concerns regarding lane closures, detours, and impacts to congested intersections. CDM Smith identified impacted businesses and included provisions in the plans and specifications to minimize business impacts.

One segment of the project required installation of the pipe under the eastbound lanes of Southwest Highway. This involved closing the two eastbound lanes and putting eastbound traffic on one of the westbound lanes, providing one lane in each direction. Extensive traffic control was required, including traffic barrier section, signing, pavement markings, and special protection in areas with active excavations. A detailed traffic control plan was developed and is being monitored throughout construction to minimize impacts. While the pipeline drove the need for the project, roadway work is just as extensive, and includes pavement removal and replacement, utility relocations, installation of temporary traffic signals and new installations, storm sewer work, pavement design, extensive maintenance of traffic planning, and utility permitting.

The project is now under construction with CDM Smith leading Phase III construction inspection with a team of subconsultants.

Name/Title
Steve Barrett, Director of Public Works

Phone
708-499-7749

Client
Village of Oak Lawn

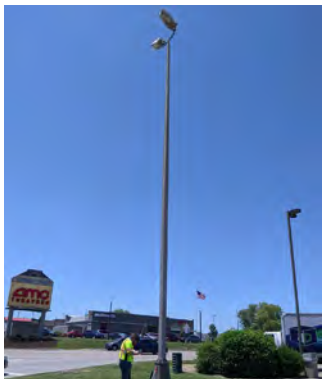
Completion Year
2010 - Present (Additional construction phases continue through 2022)

- Jack-and-bore tunneling
- Utility impact and coordination
- Roadway design
- Coordination with local businesses
- Co-located staff
- Extensive traffic control plans
- Right of way acquisition
- Environmental engineering
- IDOT Phase II/III engineering

Various Phase II Engineering

IDO T Districts 3 and 9, Ill.

3 IDOT Phase II Engineering



CDM Smith is the Phase II design engineer at various locations throughout District 9. The first project consisted of the design of new sidewalk including ADA ramps and a pedestrian crossing across the east leg of the intersection of the Illinois Route 13 and Giant City Road in the City of Carbondale. The project was designed in 3D utilizing PowerGEOPAK SS4 Corridor Modeler.

Separately for District 3, work orders have included the preparation of TS&L plans for structure replacement of I-180 over Bureau Creekand and structural repair plans for I-80 over Fox River. The I-180 over Bureau Creek location consists of dual structures to be replaced and is a six-span structure with a back-to-back abutment length of 371'-6". The I-80 over Fox River location also consists of dual structures and is a five-span structure with a back-to-back abutment length of 677'. The scope of work for the I-80 bridges includes a 2.5" latex overlay and deck scarification as well as other structure repairs including expansion joint removal and replacement, full-depth bridge deck patching, and fiber wrap repair of beam ends.

Client
Illinois Department of Transportation

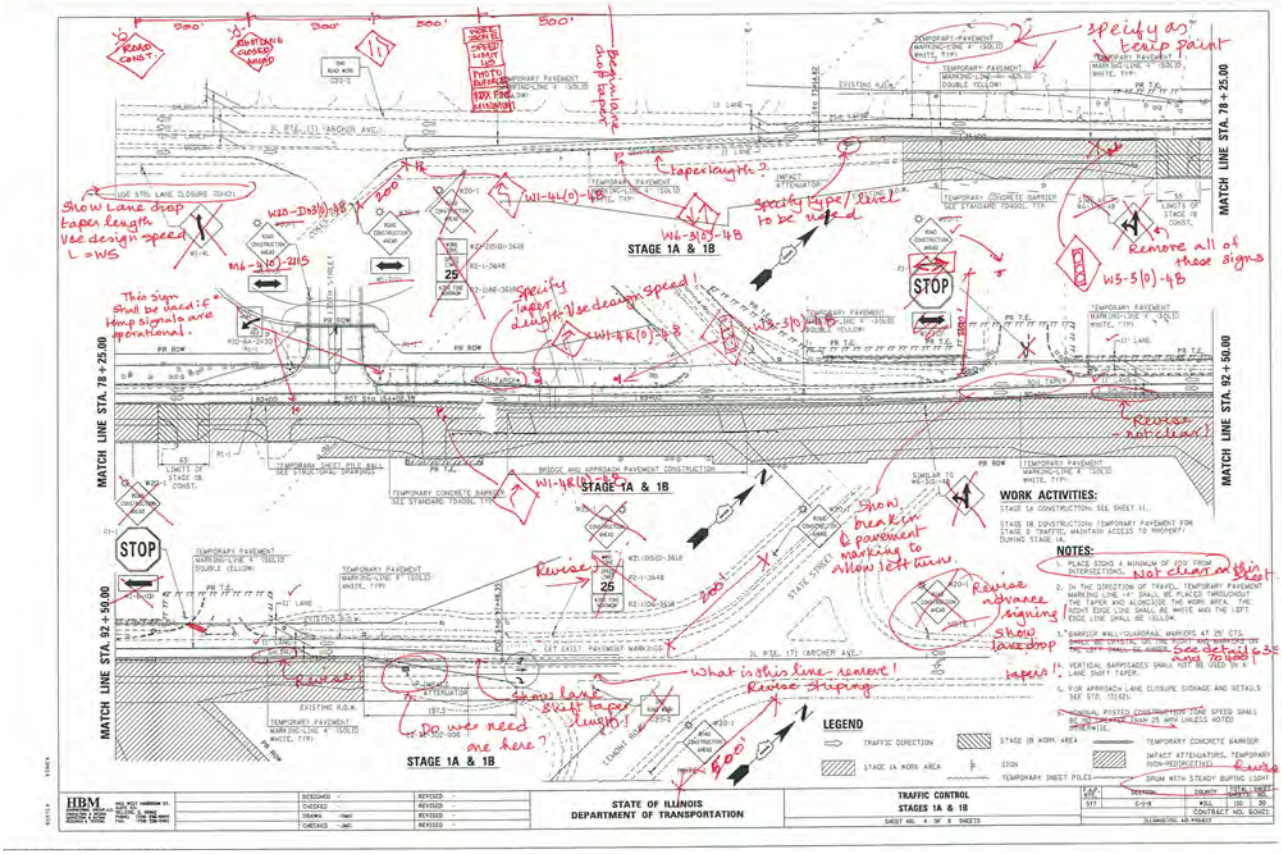
Completion Year
Ongoing

- Structural engineering
- Roadway engineering
- Geotechnical engineering
- Intersection crossing
- Utility relocation
- Drainage design
- Geometrics
- Traffic engineering

IDOT Phase II Arterial Support

Will and Cook Counties, Ill.

5 IDOT Phase II Engineering



CDM Smith completed a 4-year effort supporting IDOT District 1 Bureau of Traffic Operations in the development of elements of Phase II plans for IDOT arterial projects. As part of this contract, CDM Smith developed and reviewed maintenance of traffic and traffic control plans for all IDOT arterial improvements. The reviewed projects were designed by both IDOT and other consulting firms. Additional tasks included developing forms and procedures to comply with the then new Workzone Safety and Mobility policy, developing expressway signing plans for the reconstruction of the Jane Byrne Interchange, and assistance with development of efficient detour plans for both expressway and urban arterial projects.

For the duration of the project, CDM Smith provided a co-located staff person who was located at the District One office in Schaumburg. We developed procedures for work sharing between that person, other technical staff in Lisle and Lansing, Michigan, and our subconsultants. This effort included setting up web-based file sharing and monitoring status of the hundreds of contracts covered by the contract. We also developed reporting and tracking procedures to monitor the status of each assigned task and review, so that IDOT letting schedules would not be adversely impacted. All of these tools and other project records were made electronically accessible to anyone on the project team, whether internal to CDM Smith, subconsultant staff, or IDOT.

Name/Title
Mr. Andrew Schuetze, PE, Arterial Traffic Control Supervisor

Phone
847-705-4470

Client
Illinois Department of Transportation

Completion Year
2016

- Phase II engineering
- Developed and reviewed MOT policies and plans
- Co-located staff

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

FIRM	CDM Smith Inc		**DATE** 02/10/23
PTB-ITEM #	1	**OVERHEAD RATE**	161.98%
PRIME/SUPPLEMENT	Prime	**COMPLEXITY FACTOR**	0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	DIRECT COSTS (D)	FIXED FEE (E)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	SE.Surveys	86	5,985	9,695		1,882		-	17,562	0.44%
	SE.Utility	280	16,757	27,143		5,268		-	49,168	1.24%
	SE.Civil (30/60/90/100)	4642	273,937	443,723		86,119		-	803,779	20.24%
	SE.Underpass	1688	125,969	204,044		39,602		-	369,615	9.31%
	PE.Base	188	11,333	18,358		3,563		-	33,254	0.84%
	PE.10%	783	48,391	78,384		15,213		-	141,988	3.58%
	PE.Station	7189	384,568	622,923		120,899		-	1,128,390	28.41%
	PM.Stakeholder Coordination	664	48,506	78,571		15,249		-	142,326	3.58%
	PM.Studies/Support	1168	80,287	130,050		25,240		-	235,577	5.93%
	PE.Permit	167	11,653	18,876		3,664		-	34,193	0.86%
	Project Management	1527	99,871	161,771		31,397		-	293,039	7.38%
	QA/QC	442	36,358	58,892		11,430		-	106,680	2.69%
	Virtual Public Meeting	168	8,087	13,100	821	2,992		-	25,000	0.63%
	American Survey - Track Surve		-	-		1,115	22,292	-	23,407	0.59%
	Jorgenson - Site Survey		-	-		3,893	77,862	-	81,755	2.06%
	Civil Tech - Drainage and Grad		-	-		5,595	111,899	-	117,494	2.96%
	Lakota - Landscape Design		-	-		4,178	83,555	-	87,733	2.21%
	Vistara - Estimating		-	-		4,045	80,896	-	84,941	2.14%
			-	-		-		-	-	
	ODC.Travel		-	-	5,000	-		-	5,000	0.13%
	ODC.HBIS		-	-	60,000	-		-	60,000	1.51%
	ODC.Environment		-	-	25,000	-		-	25,000	0.63%
	ODC.Printing		-	-	25,000	-		-	25,000	0.63%
			-	-		-		-	-	
	ODC.Visual Renderings		-	-	19,800	-		-	19,800	0.50%
	ODC.SUE Level A		-	-	35,780	-		-	35,780	0.90%
	ODC.Legal		-	-	25,000	-		-	25,000	0.63%
			-	-		-		-	-	
			-	-		-		-	-	
	Subconsultant DL					0			-	
	TOTALS	18992	1,151,702	1,865,530	196,401	381,344	376,504	-	3,971,481	100.00%
			3,017,232							

DBE 0.00%

Glen Ellyn Metra Station + Multimodal Access Improvements Program (MSMIP)

Phase II Procurement

February 9, 2023

CDM Smith

Why is the Project Needed?

- Station Functionality
- Ongoing Maintenance and Repair
- Safety
- Accessibility
- Condition
- Downtown Improvement Plan

Project Benefits + Goals

- Coordinated Plan / Single Phase
- Downtown Character
- Adequate Station Space
- Pedestrian Safety and Access
- Fully Accessible Site and Station
- Public Plaza / Community Space
- Drop Off and Pick Up
- Multimodal Hub
- Reduced Maintenance

Dedicated Team

SUBCONSULTANTS

- American Surveying & Engineering, P.C.
- Civiltech Engineering, Inc
- Jorgensen & Associates, Inc
- Kaltsouni Mehdi, Inc.
- The Lakota Group
- Vistara Construction Services

Glen Ellyn Project Manager

Project Principal
Chris Martel, PE, PMP, LEED AP, BCEE

Project Manager
Robert Cheval, AIA, PMP

QA/QC
Steve Pasinski, PE

SITE ENGINEERING
Anna Ualat, PE

IDOT Coordination
Tony Cerda, PE

Maintenance of Traffic Detour Plans
Tony Cerda, PE

Roadway Design
Kim Jarosz, PE

Site Utilities
Anna Ualat, PE

Structural - Canopy
Brandon Diffenderfer, SE

Structural - Retaining Wall
Pete Sarich, PE, SE

Structural - Tunnel
Mahmood Khwaja, PE

Drainage + Stormwater Permits
Tom Liliensiek, PE

Landscape Design
Kevin Clark, PLA, AICP

Site Survey
Chris Jorgensen, PLS

Track Survey
John Dybas, PLS

FACILITY
Sarah Sutherlin, AIA, LEED AP

Project Architect
Sarah Sutherlin, AIA, LEED AP

Mechanical/Plumbing/Fire Protection
April Rickets, PE

Structural
Brandon Diffenderfer, SE

Electrical + Communications
Megan Czach, PE

Sustainable Design Coordinator
Ben Harber, AIA, LEED AP, NCARB, PMP

BIM Coordination
Brian Cunningham, PE

Metra Standards
John Mehdi, AIA

CONSTRUCTABILITY/PROJECT ESTIMATING

Construction Phasing, Constructability
Anas Alkhatib, PE, PMP

Cost Estimating
Ramesh Nair, AIA

COORDINATION + PERMITTING TASKS
Robert Cheval, AIA, PMP

Community Outreach
Steve Pasinski, PE
Kevin Clark, PLA, AICP

Grant Management
Jacquelyn Murdock, AICP

Agency Coordination
IDOT
Tony Cerda, PE
UPRR/Metra/ICC
Bob Cheval, AIA, PMP

Zoning + Building Permits
Bob Cheval, AIA, PMP
Sarah Sutherlin, AIA, LEED AP

NPDES Permitting + Documentation
Tom Liliensiek, PE

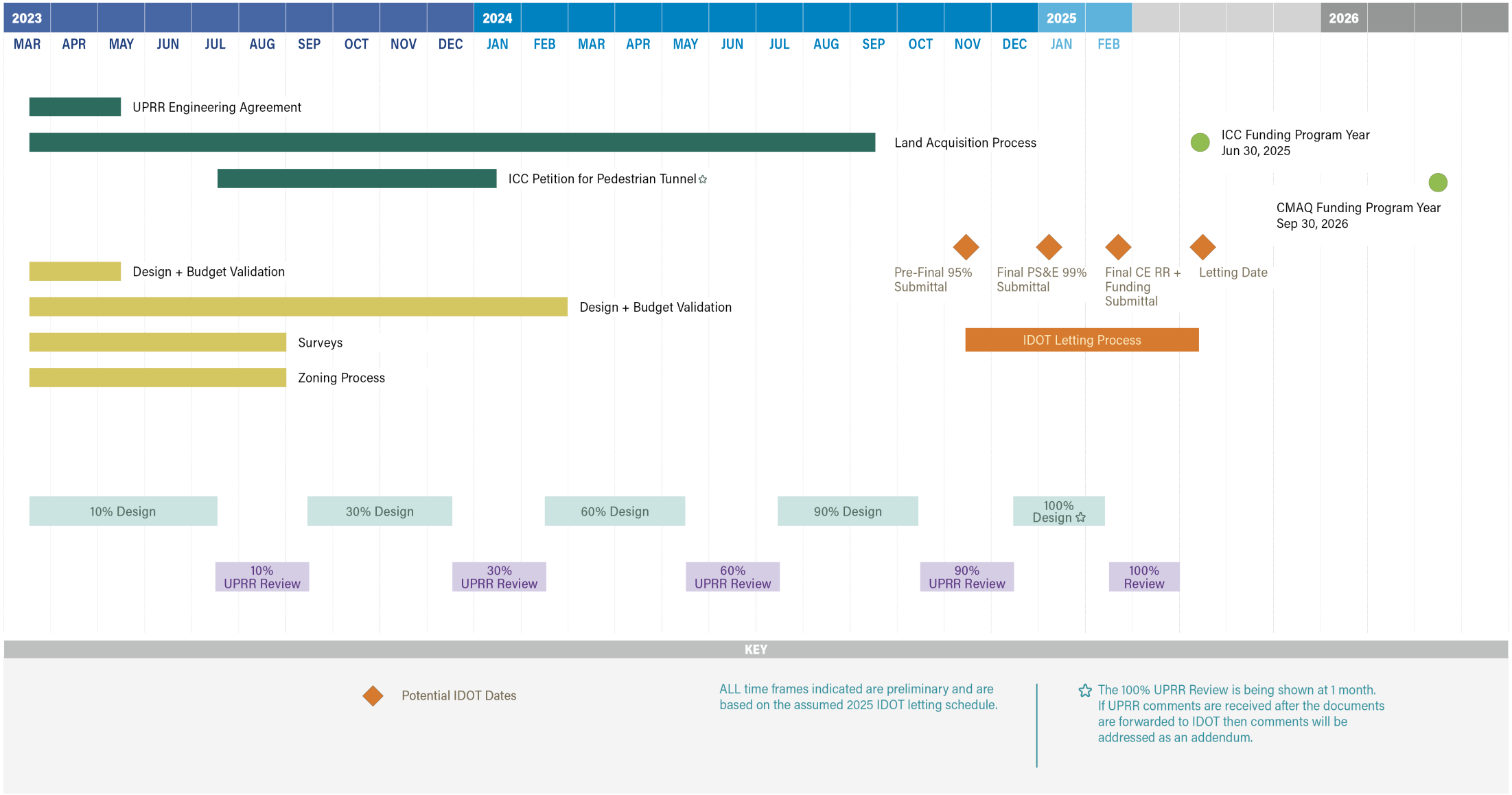
IEPA Permit (Water Service)
Anna Ualat, PE

Facility Utility Coordination
ComEd
Megan Czach, PE
Nicor
April Rickets, PE

Section 106/4(F) Advisor
Steve Hands, PMP

Right-of-Way Negotiations
Melody Carvajal
Bradley Smith

Meeting your schedule



Project Overview

Surveying

SOW Highlights

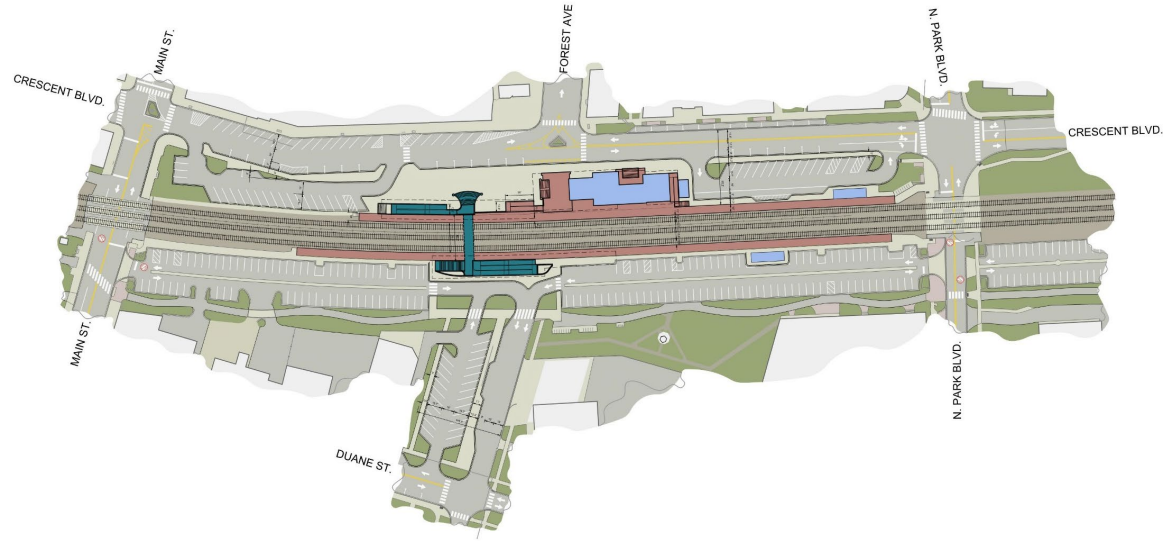
- UPRR Track Survey
- Topographic Site Survey
- ROW Boundaries
- Utility Survey with SUE – Level A

Key Challenges

- Timely UPRR Right of Entry
- Obtaining UPRR Historical Documents

Technical Lead – Chris Jorgensen, PLS

Site Design / Civil Engineering



SOW Highlights

- Roadway / Parking Lots / Plaza Design
- Maintenance of Traffic / Detour
- Accessibility
- Platform Plans
- Erosion and Sediment Control Plans
- Fencing / Removal
- Sewer / Watermain

Key Challenges

- Fiber Relocation
- Phasing / Staging
- Maintaining Access

Technical Lead – Anna Ualat, P.E.

Site Design / Structural Engineering

SOW Highlights

- Tunnel Engineering and Analysis
- Tunnel Support Design
- Retaining Walls
  - Pedestrian Underpass
  - Platforms

Key Challenges

- UPRR Calculations / Approval

Technical Lead – Pete Sarich, P.E., S.E.

Landscaping Design

SOW Highlights

- Plaza Design
- Landscaping Plans
- Landscape Lighting
- Irrigation

Key Challenges

- Community Consensus Building
- Maintaining Capital Budget

Technical Lead – Kevin Clark, PLA, AICP

Station Engineering

SOW Highlights

- Compliance with Metra & Bldg Codes
- Main Station
- Warming Shelters (2)
- Platform Canopies
- Arch, Structural, MEP / FP, Comms

Key Challenges

- Community Acceptance of Materials
- Concessionaire Coordination
- Section 106 / Section 4(f)

Technical Lead – Sarah Sutherlin, AIA, Leed AP

Value Added Tasks

SOW Highlights

- Funding Management
- Ped Tunnel Alternatives Report
- Geothermal Feasibility Study
- UPRR Request for Exception
- R.O.W. Acquisition Support

Key Challenges

- Optimize Village Commitment
- UPRR Approvals

Technical Lead – Steve Hands, PMP

Risks and Best Practices

- UPRR Coordination
- Right-of-way
- IDOT and Section 106 / 4(f)
- Funding
- Public Support

- Pre-Planned UPRR Response
- URA Expertise
- Staff Continuity / Knowledge
- Active Grant Management
- Leverage Phase I Activities

Scope Area	Hours
SE.Surveys	86
SE.Utility	280
SE.Civil (30/60/90/100)	4642
SE.Underpass	1688
PE.Base	188
PE.10%	783
PE.Station	7189
PM.Stakeholder Coordination	664
PM.Studies/Support	1168
PE.Permit	167
Project Management	1527
QA/QC	442
Virtual Public Meeting	168
TOTALS	**18,992**

Sub Consultants	Fee
American Survey - Track Survey	$ 22,292.00
Jorgenson - Site Survey	$ 77,862.00
Civil Tech - Drainage and Grading Design	$ 111,899.00
Lakota - Landscape Design	$ 83,555.00
Vistara - Estimating	$ 80,896.00
TOTALS	**$ 376,504.00**

ODC's	Cost
ODC.Travel	$ 5,000.00
ODC.HBIS	$ 60,000.00
ODC.Environment	$ 25,000.00
ODC.Printing	$ 25,821.00
ODC.Legal	$ 25,000.00
ODC.Visual Renderings	$ 19,800.00
ODC.SUE Level A	$ 35,780.00
TOTALS	**$ 196,401.00**

Grand Totals

Phase II Fee = $3,971,481

Construction = $40,800,000

% of Construction = 9.7%

Glen Ellyn Capital Improvements Commission
535 Duane Street
Glen Ellyn, IL 60137

Meeting 2/15/2023 7:00 PM
Department: Public Works
Department Head:
Category: Discussion Item
Prepared By:

AGENDA ITEM (ID # 2023-171) **DOC ID: 2023-171**

Central Business District Streetscape and Utility Improvements Project - Project Update and Phase III Engineering Services

Statement of the Issue:
Please see the attached memorandum and its associated attachment pertaining to this agenda item.

Analysis:

Budget Impact:

Contribution to Strategic Plan (if applicable)

Action Requested:

Attachments:
1. 02.15.2023.CIC CBD Streetscape Memo
2. BLA CECS

MEMORANDUM

TO: Capital Improvements Commission

FROM: Rich Daubert, Professional Engineer

DATE: February 10, 2023

RE: CBD Streetscape and Utility Improvements – Phase 2 and 3
Project Update and Construction Engineering Services

INTRODUCTION

This memorandum serves to provide an update on the design and competitive bidding process for Phases 2 and 3 of the Central Business District Streetscape and Utility Improvements Project. It also serves to communicate staff's approach towards Construction Engineering Services for the project.

Design and Competitive Bidding Process Update

Civiltech Engineering submitted the 99% Plans, Specifications (Bidding and Contract Documents), and Cost Estimate to staff on February 3, 2023. Staff has gone through the 99% plans to review the level of revisions in response to its comments on the prefinal submittals. The plans are deemed to be in acceptable order for bidding purposes however some edits will be required prior to construction. Staff is currently going through the bidding and contract documents to incorporate edits and ready them for competitive bidding. Staff's goal is to assemble the complete bid package by Tuesday, February 14 and release the project for competitive bidding on Wednesday, February 15. Contractors will then be afforded ~two weeks to assemble bid proposals which will be publicly opened and read aloud on Thursday, March 2 at 10:00 am local time. Staff will conduct a virtual non-mandatory pre-bid conference on February 21. The pre-bid conference serves to inform contractors of critical project matters as well as to discuss any questions or concerns the contractors may have.

Project Overview

The second and third phases of the project involves the rehabilitation of the following streets in the Central Business District.

- Main Street: Anthony Street to the Union Pacific West Railroad
- Anthony Street just west of Main Street
- Pennsylvania Avenue: Western Avenue to Park Boulevard
- Crescent Boulevard: Prospect Avenue to Main Street
- Prospect Avenue: Duane Street to Pennsylvania Avenue
- Glenwood Avenue: Crescent Boulevard to Pennsylvania Avenue

The scope of improvements to be made along these streets is as follows:

- Sanitary Sewer Main and Services Replacement
- Water Main and Services Replacement
- Storm Sewer Replacement
- Water and Sanitary Service Line Replacement
- Roadway Rehabilitation Including New Curb & Gutter and Asphalt Roadway Pavement
- Full Sidewalk Removal and Replacement Including Bringing All Sidewalk Ramps up to ADA Standards
- Brick Pavers Installation on Concrete Base
- New Streetlights, Irrigation, Soil Cells Installation
- Granite planters, seat walls, and street furniture
- Replacement of all trees within the core of CBD and addition of understory plants

Construction Engineering Services

Due to the size and scope of the project, Engineering oversight for the project is proposed to be performed by a consultant engineering firm with significant involvement from Village staff. Responsibilities of the engineer will include conducting the preconstruction conference, general consultations/meetings, review of the project schedule, shop drawing review, direct project communications and notification, spot grade checking, full time construction observation and documentation, material testing (using a sub-consultant), pay estimate and change order processing, final inspection and project close-out, record drawing preparation, and rectification of issues that arise during the warranty period.

For construction of the first phase of the project on the south side of the Central Business District, the Village utilized an RFP Process to procure the construction engineering services. The RFP was issued to sixteen firms with seven proposals received. Taking staff's initial evaluation and the follow up interviews into consideration, the interview panel reached a consensus that the BLA, Inc. team submitted the highest quality and most favorable proposal and is the best firm for the assignment.

The BLA team was evaluated as superior in terms of detailed project approach, experience on similar projects, as well as its strong and proven business/resident communication approach. The project team proposed by BLA has recently successfully completed a similar streetscape project for the Village of Wilmette on their Central Avenue and Wilmette Avenue CBD, which has recently received the 2022 APWA Suburban Branch Award for Project of the Year-Transportation ($5 million to $25 million). The Village Board accordingly agreed with Staff's recommendation and approved the utilization of BLA, Inc. in the not to exceed amount of $445,302.

Akin to all capital projects, staff was closely involved in overseeing the construction of the first phase of the project. Staff spent considerable time in the field on a daily basis with the Resident Engineer to ensure that all facets of construction engineering including traffic control and protection, construction practices, inspections, documentation, and communication were being rendered in order. In staff's eyes, the success of these types of projects comes down to the strengths of the contractor, resident engineer, and supporting staff. In this regard, the A Lamp, BLA, and Village team were perceived to do a good job in delivering the first phase of the project. The team received positive feedback for its communication, coordination with businesses and residents, and for the end product.

Based on the initial procurement process as well as the success in construction of the first phase of the project, staff is recommending that BLA be retained to complete Construction Engineering Services for Phases 2 and 3 of the project. The same team that worked on Phase I is proposed including Clay Keller who served as Resident Engineer. The team has learned the intricacies of supporting the successful construction of the project inclusive of a clear understanding of the expectations of staff, residents, and businesses.

As such, staff provided BLA, Inc. with the prefinal plans as to utilize in developing a cost estimate of consultant services (CECS) from for construction engineering services. The draft CECS is attached. This reflects a cost-plus fixed fee contract model whereby the Village compensates the firm for Direct Labor, Direct Costs, Overhead, and Fixed Fee. This is the same model utilized for Construction Engineering Services for Phase I of the project. In summary, the payroll rates have been increased by 2% over last year with a 2% payroll escalation to occur within the proposed two-year assignment. All other parameters including the firm's overhead rate (~102.02%), fixed fee (15%), and direct costs for vehicle usage remain constant. The firm's sole subconsultant for material testing has a 2% escalation which remains within reason. The total cost of the two-year assignment is proposed to be $931,850 with 8,772 hours for the prime consultant. For comparison sake, Construction Engineering Services for the first phase of the project was contracted at $445,302 with 4,258 hours for the prime consultant. Staff notes that additional hours were allocated for Phases 2 and 3 due to the volume of work. More specifically, further extended working hours are anticipated during the regular work week and on Saturdays. Staff notes that the proposal amount of $931,850 is subject to revision. Elaborating on this, staff and BLA will talk to the low bid contractor once they are identified to ensure all parties are on the same page concerning working days and hours. The proposal may then be modified prior to bringing it back to the CIC and Village Board.

In consort with the above, staff requested separate letter proposal from BLA for advanced utility relocation construction engineering services to support Nicor's forthcoming advanced gas main replacement work. Staff recommended 125 hours of services be allowed under the proposal which equates to a not to exceed cost of ~$15,662.50. The Village Manager is supportive of this approach but staff is respectfully engaging the CIC on the overall concept prior to approving the services.

Project Communication Approach

As with the construction of the first phase of the project, the streetscape project will require the utmost level of communication with all stakeholders to ensure the project is a success. Due to the project's location, visibility and significance, staff recognizes the need for excellent communication both on a direct, face to face level with affected businesses and residents, as well as a much broader communication intended to keep the commuters, shoppers, all stakeholders, elected officials, and the general public informed. Generally, the project communication will be handled as follows. BLA's Resident Engineer along with their Public Information Representative will handle the direct communication using construction notices, frequent check-in with affected businesses, open weekly construction meetings, and weekly project updates distributed to all affected businesses and residents. One of the roles of the Village's Engineers with help from the Village's Communication Coordinator will be to use this information and make sure that it is appropriately distributed to a broad audience via Village's social media, website, and email groups. Example of this will be communicating on any changes to the construction traffic patterns or construction staging. In addition, the Village will retain the consultants form MUSE Community + Design who is engaged as communication and outreach firm for the design of the project. MUSE will be tasked will maintaining and updating the project website, creating any project graphics, providing assistance in crafting online messages, creating video updates, and making the community aware of various project initiatives and benefits. In summary, this approach is identical to the one that successfully

delivered Phase 1 of the project. Staff also reminds the CIC that the project website includes pertinent project updates. It is located at www.downtownge.com.

ACTION REQUESTED

Staff requests any feedback that the CIC may have on the approach towards retaining Construction Engineering Services for Phases 2 and 3 of the Central Business District Streetscape and Utility Improvements Project. More explicitly stated, staff would like to make sure there is support for continuing to utilize BLA for construction engineering services for the project. Subject to the receipt of favorable bids, staff would like to hold a special meeting with the Capital Improvements Commission on March 7th to review the bids and solicit a recommendation from the CIC to the Village Board as to whether or not to award the construction contract and associated items including construction engineering services.

Attachments

- BLA CECS

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ANNIVERSARY RAISE

Local Public Agency	County	Section Number
Village of Glen Ellyn	DuPage	

Prime Consultant (Firm) Name	Prepared By	Date
BLA, Inc.	Kerry Field	1/25/2023

Consultant / Subconsultant Name	Job Number

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS
START DATE	3/1/2023	
RAISE DATE	ANNIVERSARY	

OVERHEAD RATE	102.02%
COMPLEXITY FACTOR	0
% OF RAISE	2.00%

ESCALATION PER YEAR

DETERMINE THE MID POINT OF THE AGREEMENT

12

CALCULATE THE ESCALATION FACTOR TO THE MIDPOINT OF THE CONTRACT

2.00%

The total escalation for this project would be: 2.00%

Local Public Agency	County	Section Number
Village of Glen Ellyn	DuPage	

Consultant / Subconsultant Name	Job Number

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

MAXIMUM PAYROLL RATE	**78.00**
ESCALATION FACTOR	**2.00%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Director of Construction Engineering	$78.00	$78.00
Resident Engineer 1	$47.00	$47.94
Construction Engineer 1	$31.00	$31.62
Public Information Director	$37.26	$38.01

Local Public Agency	County	Section Number
Village of Glen Ellyn	DuPage	

Consultant / Subconsultant Name	Job Number

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

Name	Direct Labor Total	Contribution to Prime Consultant
Chicago Testing Laboratory (CTL)	29,512.00	2,951.20

Total	0.00	2,951.20

NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency
Village of Glen Ellyn

County
DuPage

Section Number

Consultant / Subconsultant Name

Job Number

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			$0.00
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day	877	$65.00	$57,005.00
Vehicle Rental	Actual Cost (Up to $55/day)			$0.00
Tolls	Actual Cost			$0.00
Parking	Actual Cost			$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00
Shift Differential	Actual Cost (Based on firm's policy)			$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			$0.00
Project Specific Insurance	Actual Cost			$0.00
Monuments (Permanent)	Actual Cost			$0.00
Photo Processing	Actual Cost			$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			$0.00
CADD	Actual Cost (Max $15/hour)			$0.00
Web Site	Actual Cost (Submit supporting documentation)			$0.00
Advertisements	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			$0.00
Recording Fees	Actual Cost			$0.00
Transcriptions (specific to project)	Actual Cost			$0.00
Courthouse Fees	Actual Cost			$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Utliity Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Testing of Soil Samples	Actual Cost			$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			TOTAL DIRECT COSTS:	**$57,005.00**

Local Public Agency
Village of Glen Ellyn

County
DuPage

Section Number

Consultant / Subconsultant Name

Job Number

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

OVERHEAD RATE 102.02%

COMPLEXITY FACTOR 0.00%

TASK	DIRECT COSTS	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
Director of Construction Engnrg		188	14,664	14,960	4,444		34,068	3.66%
Resident Engineer 1		4684	224,551	229,087	68,046		521,684	55.98%
Construction Engineer 1		3692	116,741	119,099	35,376		271,216	29.11%
Public Information Director		208	7,905	8,065	2,395		18,365	1.97%
			-	-	-		-	
QA Materials (CTL)			-	-	-	29,512	29,512	3.17%
			-	-	-		-	
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Subconsultant DL							-$0.02	0.00%
Direct Costs Total ===>	$0.00						$57,005.00	6.12%
TOTALS		8772	363,861	371,211	110,261	29,512	931,850	93.88%
			735,072					

BLR 05513 (Rev. 11/04/22)

The subconsultant fee has been adjusted due to 15% fixed

Local Public Agency
Village of Glen Ellyn

County
DuPage

Section Number

Consultant / Subconsultant Name

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Director of Construction Engnrg			Resident Engineer 1			Construction Engineer 1			Public Information Director					
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Director of Construction Engineering	78.00	188.0	2.14%	1.67	188	100.00%	78.00												
Resident Engineer 1	47.94	4,684.0	53.40%	25.60				4684	100.00%	47.94									
Construction Engineer 1	31.62	3,692.0	42.09%	13.31							3692	100.00%	31.62						
Public Information Director	38.01	208.0	2.37%	0.90										208	100.00%	38.01			
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TOTALS		8772.0	100%	$41.48	188.0	100.00%	$78.00	#####	100%	#####	#####	100%	$31.62	208.0	100%	$38.01	0.0	0%	$0.00

BLR 05513 (Rev. 11/04/22)

Glen Ellyn - CBD Street Scape Rehabilitation Phases II & III

Village of Glen Ellyn
Request for Proposal
BLA, Inc.
Projected Monthly Manpower Schedule

Month Number		3	4	5	6	7	8	9	10	11	12	13	14	Total Hours
							2023							
BLA, Inc.	Month of	03/01/23	04/01/23	05/01/23	06/01/23	07/01/23	08/01/23	09/01/23	10/01/23	11/01/23	12/1/2023 - Comp. Date	01/01/24	02/01/24	
Principal														0
Director of Const Eng (PM)		8	10	10	10	10	10	10	10	8	8			94
Resident Engineer (RE)		174	174	212	212	250	250	250	212	196	156	120	160	2366
Construction Engineer		120	174	212	212	212	212	212	212	196	120			1882
Public Info Officer		24	16	8	8	8	8	8	8	8	8			104
														0
														0
Totals		326	374	442	442	480	480	480	442	408	292	120	160	4446
Cummulative Manhours		326	700	1142	1584	2064	2544	3024	3466	3874	4166	4286	4446	
Multiplier														
Vehicle Days		37	44	48	48	50	50	50	48	44	29			448
														Vehicle Days

DIRECT COSTS

		Rate	Total	Days	
Vehicle Costs		$65/day	448	Days	$29,120.00
Open House	Printing (Brochures)	$1.15	0		$ -
	Web Site Establishment	$1,000			N/A
					$29,120.00

Normal Work Week: Days/Month	22
8 hrs/day	174
9 hrs/day	196
9 hrs/day + 2 Saturdays.	212
10 hrs /day	218
10 hrs/day + 4 Saturdays.	250

Glen Ellyn - CBD Street Scape Rehabilitation Phases II & III

Village of Glen Ellyn
Request for Proposal
BLA, Inc.
Projected Monthly Manpower Schedule

Month Number	3	4	5	6	7	8	9	10	11	12	13	14	Total Hours
						2024							
BLA, Inc. Month of	03/01/24	04/01/24	05/01/24	06/01/24	07/01/24	08/01/24	09/01/24	10/01/24	11/01/24	12/1/2024 - Comp. Date	01/01/25	02/01/25	
Principal													0
Director of Const Eng (PM)	8	10	10	10	10	10	10	10	8	8			94
Resident Engineer (RE)	174	174	212	212	234	250	234	212	196	140	120	160	2318
Construction Engineer	120	174	196	196	212	212	212	212	196	80			1810
Public Info Officer	24	16	8	8	8	8	8	8	8	8			104
													0
													0
Totals	326	374	426	426	464	480	464	442	408	236	120	160	4326
Cummulative Manhours	326	700	1126	1552	2016	2496	2960	3402	3810	4046	4166	4326	
Multiplier													
Vehicle Days	37	44	46	46	48	50	48	48	44	18			429
													Vehicle Days

DIRECT COSTS

		Rate	Total	Days	
Vehicle Costs		$65/day	429	Days	$27,885.00
Open House	Printing (Brochures)	$1.15	0		$ -
	Web Site Establishment	$1,000			N/A
					$27,885.00

Normal Work Week: Days/Month	22
8 hrs/day	174
9 hrs/day	196
9 hrs/day + 2 Saturdays.	212
10 hrs /day	218
10 hrs/day + 4 Saturdays.	250

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ANNIVERSARY RAISE

Local Public Agency	County	Section Number
City of Glen Ellyn	DuPage	

Prime Consultant (Firm) Name	Prepared By	Date
BLA Inc.	Eric Brown	1/30/2023

Consultant / Subconsultant Name	Job Number
Chicago Testing Laboratory	

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS
START DATE	4/1/2023	
RAISE DATE	ANNIVERSARY	

OVERHEAD RATE	159.52%
COMPLEXITY FACTOR	0
% OF RAISE	2.00%

ESCALATION PER YEAR

DETERMINE THE MID POINT OF THE AGREEMENT

12

CALCULATE THE ESCALATION FACTOR TO THE MIDPOINT OF THE CONTRACT

2.00%

The total escalation for this project would be: 2.00%

Local Public Agency	County	Section Number
City of Glen Ellyn	DuPage	

Consultant / Subconsultant Name	Job Number
Chicago Testing Laboratory	

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

MAXIMUM PAYROLL RATE	**78.00**
ESCALATION FACTOR	**2.00%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Principal	$75.00	$76.50
Project Manager	$48.92	$49.90
Materials Technician	$44.07	$44.95

Local Public Agency	County	Section Number
City of Glen Ellyn	DuPage	

Consultant / Subconsultant Name	Job Number
Chicago Testing Laboratory	

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

Name	Direct Labor Total	Contribution to Prime Consultant

Total	**0.00**	**0.00**

NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency
City of Glen Ellyn

County
DuPage

Section Number

Consultant / Subconsultant Name
Chicago Testing Laboratory

Job Number

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVERSARY RAISE

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			$0.00
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day	19	$32.50	$617.50
Vehicle Rental	Actual Cost (Up to $55/day)			$0.00
Tolls	Actual Cost			$0.00
Parking	Actual Cost			$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00
Shift Differential	Actual Cost (Based on firm's policy)			$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			$0.00
Project Specific Insurance	Actual Cost			$0.00
Monuments (Permanent)	Actual Cost			$0.00
Photo Processing	Actual Cost			$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			$0.00
CADD	Actual Cost (Max $15/hour)			$0.00
Web Site	Actual Cost (Submit supporting documentation)			$0.00
Advertisements	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			$0.00
Recording Fees	Actual Cost			$0.00
Transcriptions (specific to project)	Actual Cost			$0.00
Courthouse Fees	Actual Cost			$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Utliity Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Testing of Soil Samples	Actual Cost			$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)	1	$5,995.00	$5,995.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			TOTAL DIRECT COSTS:	**$6,612.50**

Chicago Testing Laboratory

Task #	Description	Unit Rate	Quantity	Total
1	Prime/Tack Coat Application Rate	110	1	$ 110.00
2	HMA Gyratory Analysis (Gmm/Gmb/VMA)	470	5	$ 2,350.00
3	HMA Auto Extraction (AB Content/Gradation)	295	5	$ 1,475.00
4	PCC Compressive Strength	22	50	$ 1,100.00
5	Core Specific Gravity/Pavement Thickness	55	10	$ 550.00
7	PGE Gradation	410	1	$ 410.00
	Total			$ 5,995.00

Local Public Agency
City of Glen Ellyn

County
DuPage

Consultant / Subconsultant Name
Chicago Testing Laboratory

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIV

OVERHEAD RATE 159.52%

COMPLEXITY FACTOR

TASK	DIRECT COSTS	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERV OT
Administration		24	1,836	2,929	606	
Project Management		30	1,497	2,388	494	
Field Testing		100	4,495	7,171	1,483	
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Subconsultant DL						
Direct Costs Total ===>	$0.00					
TOTALS		154	7,828	12,488	2,583	
			20,316			

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onsultant / Subconsultant Name
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AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET ANNIVE

SHEE

PAYROLL LASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES Hours	% Part.	Wgtd Avg	Administration Hours	% Part.	Wgtd Avg	Project Management Hours	% Part.	Wgtd Avg	Field Testing Hours	% Part.	Wgtd Avg	Hou
ncipal	76.50	24.0	15.58%	11.92	24	100.00%	76.50							
ject Manager	49.90	30.0	19.48%	9.72				30	100.00%	49.90				
terials Technician	44.95	100.0	64.94%	29.19							100	100.00%	44.95	
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TOTALS		154.0	100%	$50.83	24.0	100.00%	$76.50	30.0	100%	$49.90	100.0	100%	$44.95	0.(

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Glen Ellyn Capital Improvements Commission
535 Duane Street
Glen Ellyn, IL 60137

Meeting 2/15/2023 7:00 PM
Department: Public Works
Department Head:
Category: Report
Prepared By: Rich Daubert

AGENDA ITEM (ID # 2023-168) **DOC ID: 2023-168**

Engineering Project Activity Report Dated February 10, 2023

Statement of the Issue:
The Engineering Project Activity Report dated February 10, 2023 is attached hereto for the Capital Improvements Commission's review.

Analysis:

Budget Impact:

Contribution to Strategic Plan (if applicable)

Action Requested:

Attachments:
1. Engineering Project Report 2-10-23

February 10, 2023

ENGINEERING DIVISION PROJECT ACTIVITY REPORT

CONSTRUCTION PROJECTS IN PROGRESS

CBD STREETSCAPE AND UTILITY IMPROVEMENTS – Phase 1 – *Contractor:* ***A Lamp Concrete Contractors***
(Project No. 15006; Value of Construction Contract = $5,704,293)

The first phase of the project is substantially complete except for roadway reconstruction and widening work on Hillside Avenue. The Hillside Avenue roadway work will be advanced in spring upon the return of more favorable weather. In the meantime, ComEd, AT&T, Comcast, and Astound (Wide Open West) continue to work on the undergrounding of the overhead electric and communication facilities on Hillside Avenue and Main Street. ComEd has completed the installation and livening of the new underground electrical facilities and will soon start removing the overhead cable/equipment. AT&T is on site this week pulling their communication cable. Comcast has installed their communication cable and is in the process of scheduling service transfers. Astound/WOW has indicated they will begin their communication cable installation work this coming week. Due to the favorable weather, the Streetscape electrical subcontractor will begin installing the new street light foundations and electrical conduits on Hillside Avenue next week.

2022 STREET IMPROVEMENTS PROJECT – *Contractor:* ***R.W. Dunteman***
(Project No. 22002; Value of Construction Contract = $2,880,474)

This project involved the rehabilitation of approximately 3.4 centerline miles of various streets throughout the Village of Glen Ellyn including Baker Hill Drive, Carleton Avenue, Colcord Place, Crescent Drive, DuPage Boulevard, Phillips Avenue, and the Raintree Subdivision. All work was substantially completed December 16th except for select punch list items which cannot be completed until more favorable weather returns in the spring. As punch list items are still open, this project will remain under the in progress heading.

UTILITY AND ROADWAY IMPROVEMENTS PROJECT 20001 – PHASE II – *Contractor:* ***R.W. Dunteman***
(Project No. 20001; Value of Construction Contract = $4,508,341)

This phase of the project involved the rehabilitation of roadways in the central-west portion of the Village including: Windsor Avenue (Sawyer to Hillside), Sawyer Avenue (Lorraine to west Village Limit), Chesterfield Avenue (Lorraine to west Village Limit), Dawn Avenue (Hillside to Duane), Kenilworth Avenue (Hillside to Duane), Duane Street (Kenilworth to Lorraine) and one street located in the east area of the Village, Carleton Avenue (DuPage to south end). The scope of the work included sanitary sewer main line repairs and service line replacement, water main and service line replacement, storm sewer/drainage improvements, and varying levels of roadway rehabilitation.

The Contractor has substantially completed all roadway reconstruction work, including paving of the roadway surface course and restoration of disturbed parkway areas. However, the project team made an executive decision to defer the resurfacing of Duane Street to the spring of 2023 due to the limited availability of concrete at the end of the 2022 construction season. The Contractor has agreed to return to Glen Ellyn in late April of 2023 to complete said work on Duane Street. Concrete repairs will be completed followed by milling, base patching, and surface paving. Based on projected final quantities, the project is tracking approximately $300,000 under the contract award amount. Due to the remaining work, this project will remain under the in progress heading.

TAFT AVENUE LIGHTING INSTALLATION PROJECT *– Contractor:* ***Utility Dynamics Corporation***

(Value of Construction Contract = $135,056)

This project will provide lighting improvements on Taft Avenue between Park Boulevard and Nicoll Way. The project scope includes the installation of approximately 1,740 linear feet of directionally drilled conduit, eight light poles and luminaires, two handholes, a new street controller, the installation of a new electric service, tree protection, soil and erosion control, parkway restoration, and final wiring and testing. The bid opening took place on September 8th; the contract was awarded to Utility Dynamics Corporation on October 24th in the amount of $135,056. A 10' permanent easement for access and utilities and a 10' temporary construction easement was granted by the Kingsbrook H.O.A. and recorded by the County on Nov. 9th. This will allow Utility Dynamics to route an electric power connection between an existing ComEd transformer on the north side of the subdivision and the proposed street lighting controller in the adjacent south parkway of Taft Avenue.

In December, Utility Dynamics installed tree protection on the job site and dug test holes at each of the eight proposed light pole locations to order to identify any conflicts between the planned pole locations and in-ground utilities. As a result of the investigative digging, the proposed locations of some of the light poles were shifted between 5 and 20 feet. The light pole foundations were installed in mid-January. The light poles and luminaires, which were ordered directly by the Village, are delayed and expected to arrive in mid-May due to supply chain constraints. Contract completion is targeted for May 31, 2023.

Street Light Foundation Installation on Taft Avenue

CONSTRUCTION PROJECTS IN CLOSEOUT

GLEN ELLYN/IL AMERICAN WATER INTERCONNECT *– Contractor:* ***Archon Construction***
(Value of Construction Contract = $219,068)

This project involved the construction of an emergency use interconnection between the Village and Illinois American Water Company (ILAWC) distribution systems, near Glenbard South High School. The interconnection will improve reliability and reduce the water outage areas for the respective utilities in the event of water main breaks. The water main installation work is substantially complete with Village now working with a SCADA integrator on the installation of the telemetry cabinet, panel, and radio equipment. Payment has been made to the Contractor for the water main installation work minus retainage for the parkway restoration which will be inspected in the spring. Project closeout including record drawing submittals to DuPage County will then be completed.

PARK BOULEVARD WATER MAIN REPLACEMENT *– Contractor:* ***J. Congdon Sewer Service***
(Project No. 22003; Value of Construction Contract = $2,136,367)

This project involved the replacement of approximately 3,600 feet of water main along Park Boulevard (between Marston Avenue and Taft Avenue). This locally funded project included water main and water service line replacement and restoration of pavement, curbs, sidewalk and parkways disturbed by the work.

All work including the project punch list is complete with the project now in the closeout stage. The Village and Contractor are in agreement on all pay item quantities associated with the roadway patching and resurfacing work. The project is anticipated to be approximately $141,000 under the contract award amount. Final payment and closeout will be completed in the spring.

NORTH PARK BLVD. / MAIN STREET IMPROVEMENTS *– Contractor:* ***R.W. Dunteman***
(Project No. 13001; Value of Construction Contract = $2,945,000)

Staff and the Resident Engineer have addressed all of IDOT's requests with project closeout in the court of IDOT District 1 Materials.

TAYLOR AVENUE PEDESTRIAN TUNNEL *– Contractor:* ***"D" Construction***
(Project No. 15009; Value of Construction Contract = $3,052,793)

The revised final pay estimate has been transmitted to the State for processing.

ENGINEERING PROJECTS

CRESECENT BOULEVARD RESURFACING PROJECT *– Engineer:* ***Primera Engineers***

This project involves the rehabilitation of Crescent Boulevard between Lake Road and approximately the east Village Limit (approximately 1.2 centerline miles). Rehabilitation will be in the form of a mill and overlay (resurfacing) of the roadway as well as sidewalk removal and replacement including bringing the sidewalk ramps up to ADA standards. Also included with the project is the construction of new sidewalk on the south side of Crescent Boulevard from Lee to Riford and on the north side of Crescent Boulevard from Crescent Drive to 950 Crescent which is approximately 385' east of Cumnor Avenue.

As this project is being substantially funded through the Federal Highway Administration's Surface Transportation Program, the project is under the purview of the State of Illinois. The project was scheduled to be included on the State's April letting, however the State has yet to provide design approval for the project. In this regard, the project was subject to losing its $921K in Federal STP funding due to time restrictions with the funding which is CRSSA (Coronavirus Response and Relief Supplemental Appropriations). However, staff reached out to the powers that be and explained that the project letting was delayed due to factors outside of the Village's control. The Chicago Metropolitan Agency for Planning accordingly stepped in and supported the Village's position and directed the State to move the project to the June letting and preserve the project funding for an additional 3 months. Staff will continue to prod the State for Design Approval to do its best to maintain the project for letting in June. In the meantime, staff is working through the qualification based selection process for procuring construction engineering services for the project.

HILL AVENUE UTILITY IMPROVEMENTS *– Engineer:* ***Walter E. Deuchler Associates***
(Project No. 00511)

This project involves the construction of sanitary sewer and water distribution system improvements on Hill Avenue between Golf Avenue and the East Branch of the DuPage River. The improvements will ultimately result in the Village's water main being continuous and looped along both Hill Avenue and Crescent Boulevard. Also, this will allow the Village to serve the fronting properties on Hill Avenue with potable water service.

The Engineer completed their submittal of a comment disposition letter and revised plans to DuPage County in response to their latest review comments. In addition, the Engineer is finalizing the plat of easement documents and will then submit them to the Village for review. The IEPA Sanitary Sewer Construction/Operating Permit and Water Main Construction Permit Applications are under preparation.

CENTRAL BUSINESS DISTRICT PROJECTS

TRAIN STATION / PEDESTRIAN TUNNEL *– Engineer:* ***CDM Smith/KMI Architects***
(Project No. 16016)

IDOT and FHWA has approved the Village's Section 106 and 4(f) documents with the State Historic Preservation Officer providing an official response of concurrence that the proposed demolition of the depot is officially deemed an adverse effect (this was anticipated and a step in the right direction). In response, the IDOT Cultural Resources Unit drafted a memorandum of agreement (MOA) for the demolition of the depot and mitigation measures to commemorate the depot via HIBS documentation of the depot as well as preservation of the mural that is currently located in the existing depot. Staff and the Engineer have completed their review of the Draft MOA with comments and edits to the MOA provided to the State on February 7. Staff recently met with CDM Smith to review staff's comments on the draft Phase II Engineering Agreement Scope of Services. CDM Smith is revising the Scope of Work and Cost Estimate of Consulting Services accordingly. These documents are anticipated to be finalized in the coming weeks and then presented to the Capital Improvements Commission and Village Board for consideration of advancing Phase II Engineering. On Friday, January 13th, staff submitted a funding request to the State of Illinois Commerce Commission for the underpass component of the project. The request specifically asked for the current Crossing Safety Improvement Program (CSIP) funding for the underpass to be increased from $2M to $8.2M given that the State has recently lifted the $2M cap on funding for pedestrian grade separations. Based on experience, the State typically posts the CSIP program by early April. Staff will report back on the application results accordingly.

CBD STREETSCAPE AND UTILITY IMPROVEMENTS – DESIGN ENGINEERING OF PROJECT PHASES 2 AND 3 *Engineer:* ***Civiltech Engineering, Inc.***
(Project No. 15006)

Civiltech Engineering submitted the initial final (99%) plans, specifications, and estimates to staff on February 3 with staff currently reviewing the documents to confirm staff's prior review comments have been satisfactorily addressed. Once the documents are in order, the project will be released for competitive bidding. Staff's goal is to release the project for competitive bidding by February 15th with bids due in early March (March 2nd is the current target date for the bid opening). Concurrently, staff has been working with Nicor to finalize their plans for replacement of the gas mains and service lines in the Phase 2 and Phase 3 project areas.

CONSTRUCTION MAINTENANCE PROGRAMS

Public Works seeks the best vendor prices for various annual municipal and utility maintenance and operations activities. This effort includes local bidding of projects or joint purchasing initiatives, including the Municipal Partnering Initiative (MPI), a consortium of DuPage County communities.

Project	2023 Draft Budget Amount	Status
2023 Sidewalk and Concrete Street Repairs	$325,000	This annual program includes repairs to deteriorated or damaged sidewalk and concrete roadway infrastructure and the installation of new sidewalk throughout the Village. The proposed location for new sidewalk is Park Row (Crescent to Willis). Staff is concentrating inspection on Hill Ave., Western, and Kenilworth, and school zones to develop a preliminary list of locations for sidewalk removal and replacement. The project is scheduled to go out to bid in February with a target date of March 13, 2023, for award of this contract. Budget breakdown: $150,000 Sidewalk Replacement, $125,000 New Sidewalk Installation, and $50,000 Concrete Patching.
2023 Asphalt Roadway Patching	$200,000	Project scope includes roadway patching throughout the Village. Locations will be determined by staff utilizing both the Village's Pavement Management System Data and Field Inspections.
2023 Pavement Markings	$54,750	This annual contract is intended to be awarded to the low bidder of either the DuPage County contract or the Suburban Purchasing Cooperative. Target areas for new pavement markings are school zones, the CBD, Lambert, Park (south of Roosevelt), and the Village's concrete streets (Hill Ave, Hawthorne, Fawell, Western, Kenilworth, et al.).
2023 Crack Sealing	$40,000	This year's program is anticipated to be procured once staff has compiled candidate locations using Pavement Condition Index (PCI) Study data and visual inspections.
2023 Asphalt Surface Rejuvenation	$100,000	Candidate locations include streets that have been resurfaced in the previous one to three years and those that will be paved in Phase 2 of the CBD Streetscape project. Staff has finalized target locations and quantities and requested pricing from single source vendor Corrective Asphalt Materials. Prices received thus far have increased significantly over last year's prices. Hence, staff is awaiting pricing from a municipal partnering initiative, which McHenry County is organizing, in the hopes that the pricing will be more advantageous for the Village.
2023 Sanitary Sewer Lining and Repairs	$500,000	This year's program will provide for sanitary sewer lining and repairs throughout the Village including withing the Street Improvements Project Areas. Proposed locations are currently being identified by staff.