



Agenda  
Village of Glen Ellyn  
Special Meeting  
Monday, December 18, 2017  
7:00 PM  
Glen Ellyn Civic Center, Room 301

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Village Board Meeting Procedures Statement

*Visitors are most welcome to attend all meetings of the Village Board and can find copies of the Agenda on their chairs or online at [www.glenellyn.org](http://www.glenellyn.org) prior to the meeting. Meetings are taped and also televised on WideOpenWest Channel 6, AT&T Channel 99, and Comcast Cable Services Channel 10. 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. Roll Call**
- C. Pledge of Allegiance**
- D. Motion to allow Trustee Kenwood to participate in the meeting via phone.**
- E. Motion to go into Executive Session to discuss matters pertaining to pending litigation and sale or transfer of property and to reconvene thereafter.**
- F. Audience Participation**
  - 1. Open:

Members of the public are welcome to speak to any item *not* specifically listed on tonight's agenda for up to three minutes. For those items which are on tonight's agenda, the public will have the opportunity to comment at the time the item is discussed. In either case, please complete the Audience Participation form and turn it in to the Village Clerk. It is requested that, if possible, one spokesman for a group be appointed to present the views of the entire group. Speakers who are recognized are requested to step to a microphone and state their name, address and the group they are representing prior to addressing the Village Board.
- G. Consent Agenda - The following items are considered routine business by the Village Board and will be approved in a single vote in the form listed below:**
  - 1. Designate Trustee Craig Pryde as Village President Pro Tem for the four month period from January 1, 2018 through April 30, 2018.
  - 2. Resolution No. 17-17, A Resolution Approving an Amendment to the Rules and Regulations of the Board of Fire and Police Commissioners of the Village of Glen Ellyn to add Section 10- Regarding Lateral Appointments. (Chief of Police Norton)

**H. Taylor Avenue Pedestrian Tunnel Project (Professional Engineer Daubert) (Trustee Kenwood)**

1. Motion to increase the appropriation for Phase II engineering services associated with the Taylor Avenue Pedestrian Tunnel Project provided by Alfred Benesch & Company in the amount of \$34,105 for a revised total appropriation of \$189,565 to be expensed to the Capital Projects Fund.
2. Motion to authorize the Village Manager to execute Change Order No. 2 to the Phase II engineering services agreement with Alfred Benesch & Company for the Taylor Avenue Pedestrian Tunnel Project for additional investigations and analyses in the amount of \$34,105 resulting in a revised total fixed price of \$189,565.

**I. Reminders**

1. A Village Board Meeting is scheduled for Monday, January 8, 2018 at 7:00 PM in the Galligan Board Room of the Glen Ellyn Civic Center.
2. A Village Board Workshop is scheduled for Tuesday, January 16, 2018 at 7:00 PM in Room 301 at the Glen Ellyn Civic Center.

**J. Other Business**

**K. Adjournment**



**Glen Ellyn Village Board**  
535 Duane Street  
Glen Ellyn, IL 60137

Meeting: 12/18/17 07:00 PM  
Department: Glen Ellyn Village Board  
Department Head: Lindsey Kaminsky  
Category: Appointment  
Prepared By: Lindsey Kaminsky

**SCHEDULED**

**AGENDA ITEM (ID # 3010)**

DOC ID: 3010

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**Designate Trustee Craig Pryde as Village President Pro Tem for the four month period from January 1, 2018 through April 30, 2018.**



Glen Ellyn Village Board  
535 Duane Street  
Glen Ellyn, IL 60137

Meeting: 12/18/17 07:00 PM  
Department: Police  
Department Head: Phil Norton  
Category: Resolution  
Prepared By: William Holmer

SCHEDULED

RESOLUTION 17-17

DOC ID: 3011

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**Resolution No. 17-17, A Resolution Approving an Amendment to the Rules and Regulations of the Board of Fire and Police Commissioners of the Village of Glen Ellyn to add Section 10- Regarding Lateral Appointments. (Chief of Police Norton)**

**Background**

The time that it takes to establish a police officer eligibility list is extremely lengthy and it is followed by a longer process to arrive at the actual point of hiring an individual. Once hired, a new officer spends 16 weeks at the basic training academy followed by another 16 weeks of field-training here with experienced officers. This is a very long time for the Department to gain a police officer with the ability to work on their own. We are always looking for ways to make this process more efficient. One way to do so, called a "lateral transfer" process, exists in the hiring of police officers who have already obtained training and have field experience from working in another department. This is not an uncommon process; however, it is the first time we have chosen to explore this option.

The Fire & Police Commission has met, considered and approved an amendment to its Rules and Regulations to provide a process for appointing lateral transfers as police officers. The Commission requests that the Village Board, in the exercise of its home rule authority, approve the recommended changes. The proposed amendment has been vetted by the Village's labor and in-house attorneys. In the event the changes to the rules and Regulations are approved, we can hire a certified police officer without going through the entire hiring process. Instead, we would fast-track the process past the written examination and straight into background investigations, interviews, psychological exams, etc. The benefits are many and include saving time in the hiring process, eliminating 16 weeks at the basic training academy, and recruiting an officer with experience to name a few.

**Issues**

Currently, we are more than half way through our eligibility list and we have been struggling to identify quality candidates as we have processed the individuals who have finished toward the top of the list. At the same time, we have learned that a former non-sworn employee of the Police Department who left to become a police officer in another community is interested in coming back to work in Glen Ellyn. This employee has always had a desire to be a police officer in Glen Ellyn and in fact previously applied for a position but due to timing, the opportunity for employment occurred elsewhere putting him in a position of going where he knew he would have a job.

If we proceed with this program, the intent is to work with the Fire and Police Commission to

advertise the opportunity, interview candidates, and select those that are the best fit to the department. We are not sure how many candidates may apply, but we anticipate a limited number and that we could fill a vacancy more efficiently and effectively.

**Recommendation and Action Requested**

To provide for hiring with the lateral transfer process, it is necessary to amend the Rules and Regulations of the Fire & Police Commission under the Village's home rule authority. We recommend approval of the attached resolution authorizing the amendment of the Fire & Police Commission Rules.

**Resolution No. 17-17****A Resolution Approving an Amendment to the Rules and Regulations of the Board of Fire and Police Commissioners of the Village of Glen Ellyn to add Section 10-Lateral Appointments**

**Whereas**, the Village of Glen Ellyn is an Illinois home rule municipal corporation; and

**Whereas**, the Board of Fire and Police Commissioners of the Village of Glen Ellyn is granted all of the powers and authority as is contained in Section 5/10-2.1 of the Illinois Municipal Code; and

**Whereas**, the President and Board of Trustees of the Village of Glen Ellyn deem it to be in the best interest of the Village to periodically review recommendations of the Board of Fire and Police Commissioners with respect to updates to its Rules and Regulations;

**Whereas**, the Village Board has received a recommendation from the Board of Fire and Police Commissioners to add a section to its Rules and Regulations providing for a process to consider lateral appointments to the police force, and expand the pool of eligible candidates for original appointment to include trained individuals whose skills and level of experience meet specific and definable needs of the Police Department; and

**Whereas**, a copy of the rules and Regulations with the proposed amendment adding Chapter II, Section 10-Lateral Appointments, is attached hereto; and

**Whereas**, the President and Board of Trustees have determined that it is in the best interest of the Village to approve the amendment to the Rules and Regulations of the Board of Fire and Police Commissioners to add Section 10 to Chapter II of the Rules and Regulations.

**Now therefore, be it resolved by the President and Board of Trustees of the Village of**

**Glen Ellyn**, DuPage County, Illinois, in the exercise of its home rule powers as follows:

**Section One:** The findings of fact and conclusions set forth hereinabove are hereby adopted by the President and Board of Trustees as the findings of fact and conclusions of the corporate authorities of the Village of Glen Ellyn.

**Section Two:** Chapter II of The Rules and Regulations of the Board of Fire and Police Commissioners shall be amended to add Section 10-Lateral Appointments, and shall read as follows:

**SECTION 10 - LATERAL APPOINTMENTS**

a) Purpose - The Board recognizes there may be a need to expand the pool of eligible candidates for original appointment to include trained individuals whose skills and level of experience meet specific and definable needs of the Police Department. As an alternate method of original appointment, the Board may consider individuals for lateral appointment to Police Officer who meet the minimum requirements as provided for in Chapter II of the Board's Rules and Regulations. The Board will announce its intentions to use the procedures under this section prior to the start of the lateral entry hiring process.

b) Timing - The Board may use this procedure either before or during the pendency of an existing Final Eligibility List established pursuant to Section 9, and may in its discretion offer an appointment to a candidate from either an existing Final Eligibility List created under Section 9, or a lateral entry candidate from a hiring pool established pursuant to this Section 10. Alternatively, the Board may add to an already existing lateral hiring pool at any time (regardless of an already existing Final Eligibility List) by initiating another round of lateral hiring pursuant to this Section.

c) Application - Applicants for lateral appointment must complete and submit an application to the Board as provided for in Chapter II of the Board's Rules and Regulations.

d) Qualifications and Requirements - Applicants for lateral appointment must meet the

following requirements in addition to the requirements of entry-level police officers as provided for in Chapter II of the Board's Rules and Regulations. Failure to meet all qualifications and requirements for the position may result in rejection of the applicant by the Board before any examination.

1. Valid certification as a full-time police officer from the Illinois Law Enforcement Training and Standards Board (ILETSB) or from another state whose certification criteria substantially meet the minimum requirements established by the ILETSB.
  2. At least twelve full months of law enforcement experience with a law enforcement employer, within the two years immediately prior to the submission of the application.
  3. Prior law enforcement experience must include job duties and responsibilities that the Board deems similar to those of a Glen Ellyn Police Officer.
  4. Applicants shall furnish upon request of the Board a copy of his or her resume, documents confirming work experience, and employee evaluations.
- e) Applicants for lateral appointment will be subject to the other testing processes for initial hires except that they will not be required to submit to the written examination. The Board may, in its discretion, prescribe additional testing components prior to the start of the lateral entry process. A failure to pass any one examination component will disqualify the applicant from further consideration.
- f) Lateral hiring applicants who have met all qualifications and requirements under this Section 10, and who have passed all required examination components, will be added to a lateral hiring pool. When police officer vacancies occur, the Board retains the sole discretion to select applicants from either a final eligibility list established pursuant to Section 9, or from the lateral hiring pool established pursuant to this Section 10. Such lateral hiring applicants will be subject to

Resolution 17-17

Meeting of December 18, 2017

the professional examinations and tests described in Section 11.

g) A lateral hiring candidate's name shall be eliminated from the lateral hiring pool after six months have passed from when the lateral hiring candidate's name was added to the pool.

**Passed** by the President and Board of Trustees of the Village of Glen Ellyn, Illinois, this \_\_\_\_\_ day of \_\_\_\_\_.

**Ayes:**

**Nays:**

**Absent:**

**Approved** by the Village President of the Village of Glen Ellyn, Illinois, this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Village President

**Attest:**

\_\_\_\_\_  
Village Clerk

(Published in pamphlet form and posted on the \_\_\_\_\_ day of \_\_\_\_\_.)



Glen Ellyn Village Board  
535 Duane Street  
Glen Ellyn, IL 60137

Meeting: 12/18/17 07:00 PM  
Department: Public Works  
Department Head: Julius Hansen  
Category: Change Order  
Prepared By: Rich Daubert

SCHEDULED

AGENDA ITEM (ID # 3009)

DOC ID: 3009 A

**1. Motion to increase the appropriation for Phase II engineering services associated with the Taylor Avenue Pedestrian Tunnel Project provided by Alfred Benesch & Company in the amount of \$34,105 for a revised total appropriation of \$189,565 to be expensed to the Capital Projects Fund. 2. Motion to authorize the Village Manager to execute Change Order No. 2 to the Phase II engineering services agreement with Alfred Benesch & Company for the Taylor Avenue Pedestrian Tunnel Project for additional investigations and analyses in the amount of \$34,105 resulting in a revised total fixed price of \$189,565.**

### **Background**

The purpose of this memorandum is to update the Village Board on the current status of the Taylor Avenue Pedestrian Tunnel Project and present a staff recommendation to authorize a Change Order for Phase II Engineering Services, as requested by the project design firm, Alfred Benesch & Company of Chicago, Illinois.

### **Current Project Status**

The project continues to near the completion of Phase II Engineering with approval of the engineering drawings and specifications by all agencies (DuPage County, Illinois Department of Transportation (IDOT), Union Pacific Railroad (UPRR), and Village of Glen Ellyn) imminent. The project team is desperately awaiting final comments from UPRR on Benesch's last submittal which was made to the agency on Friday, November 17, 2017.

While the project is still technically on track to meet the IDOT March 9, 2018 Letting, completion of the following items is pending with their completion critical to keeping the project on track for the March Letting:

### **Temporary Easement Negotiations**

IDOT has reviewed and approved the Plat of Easement as well as the Appraiser, Review Appraiser, and Negotiator for the Easement. IDOT reviewed and requested a revision to the Easement Appraisal and Review Appraisal Documents on December 5, 2017. The documents were revised and resubmitted to IDOT on December 8<sup>th</sup>. Staff is awaiting approval of the documents by IDOT so the formal easement negotiation process can begin. The easement must be secured by January 15, 2018 to make the March 9, 2018 Letting.

### **Union Pacific Railroad Agreement**

The Village will need to enter into a Construction and Maintenance Agreement with UPRR. This agreement is contingent on the full approval of the project drawings and specifications by UPRR. The UPRR Agreement must be secured by January 15, 2018 to make the March 9, 2018 Letting. Staff has met with IDOT to review the documentation requirements for securing the C&M Agreement given Federal Dollars are involved with the project. This is the most time critical element of the project at this time given that despite staff's repeated requests, UPRR will not prepare the C&M Agreement until it has approved the Project Drawings and Specifications.

### **Benesch Change Order Request**

#### **Phase I and Phase II Agreements**

In March 2015 the Village Board approved a Phase I engineering agreement with Alfred Benesch & Company (Benesch) of Chicago for preliminary design of the tunnel project. Benesch was selected from a group of 11 consultants responding to a Request for Proposal, based on excellent qualifications and appropriate fees. The approved funding for Phase I engineering was \$90,000.

In February 2016, the Village Board authorized a subsequent agreement with Benesch to perform Phase II (detailed design) engineering services at the Fixed Price Contract cost of \$136,560. On July, 24 2017, the Village Board approved a Change Order for additional geotechnical engineering work required for the project in the amount of \$18,900 which increased the Contract Authorization to \$155,460.

An engineering firm has not yet been retained for Phase III Engineering. A firm will be selected near design completion with Benesch a possible firm to be retained for Phase III services.

#### **Current Status of Phase II Hours and Expenses**

Although the Village has only been invoiced a total of approximately \$37,000 of the \$155,460 Phase II Agreement to date, Benesch has indicated that they have expended all of their originally anticipated staff hours and incurred significant additional expenses for Phase II Engineering due to additional utility coordination work, additional civil/pavement/electrical design work, and significant additional efforts required by Union Pacific Railroad.

As part of the original Phase II Agreement with Benesch, the firm anticipated they would incur 1,156 hours of professional service efforts as part of the Total Fixed Price Agreement of \$136,560. Based on its latest projection, the firm now anticipates the total hours incurred over the course of the assignment will be 1,818, thereby resulting in the firm exceeding the original agreement hour allotment by a total of 662 hours.

The firm has requested that 498 of the 662 hours be considered out of the original agreement scope. However, staff including Engineering and Administration contested with the firm that many of the efforts should have been contemplated by the firm in submitting their original Total Fixed Price proposal.

Additionally, staff was not given notice of, nor given the opportunity to review and seek Village Board approval of the out of scope work prior to the firm performing it. Based on a review of the

firm's documentation, staff recommends that 290 of the 498 hours be recognized as out of scope with compensation due to the firm in the amount of \$34,105. This information is summarized in Table 1 below with a more detailed narrative following immediately thereafter. The firm's emailed request is also attached for reference.

**Table 1 - Summary of Changes (Rounded to Nearest Dollar Based on \$117.60/Hour Including IDOT Approved Direct Labor Multiplier of 2.8)**

| Category of Change               | Benesch Request Hours/Cost | Staff Recommendation Hours/Cost | Difference Benesch - Staff |
|----------------------------------|----------------------------|---------------------------------|----------------------------|
| UPRR - Expansion of Headwalls    | 148/\$17,405               | 108/\$12,701                    | 40/\$4,704                 |
| UPRR - Temporary Earth Retention | 66/\$7,762                 | 40/\$4,704                      | 26/\$3,058                 |
| ComEd Utility Coordination       | 26/\$3,058                 | 26/\$3,058                      | 0/\$0                      |
| Sprint Utility Coordination      | 46/\$5,410                 | 46/\$5,410                      | 0/\$0                      |
| Aesthetic Plans                  | 56/\$6,587                 | 10/\$1,176                      | 46/\$5,411                 |
| Changes after Pre-Final          | 56/\$6,587                 | 0/\$0                           | 56/\$6,587                 |
| Pavement/Electrical Work         | 80/\$9,408                 | 40/\$4,704                      | 40/\$4,704                 |
| Easement Layout                  | 20/\$2,352                 | 20/\$2,352                      | 0/\$0                      |
| <b>TOTALS</b>                    | <b>498/\$58,569</b>        | <b>290/\$34,105</b>             | <b>208/\$24,464</b>        |

Staff from Benesch's team would like it noted in this memorandum that the firm anticipates it will be absorbing a total of 372 hours or \$43,747 if no additional compensation is granted beyond Village Staff's recommendation above.

As noted previously, a detailed narrative of the above items is as follows:

UPRR - Expansion of Headwalls - Staff Recommendation: 108 Hours / \$12,701  
(Benesch Request - 148 Hours / \$17,405)

One of UPRR's concerns with the project was whether or not the proposed tunnel headwalls could be expanded in such a manner as to allow for UPRR to add a track immediately north and south of the existing 3 tracks. This effort required that Benesch complete a five page schematic design of expanding the tunnel headwall for UPRR's review and approval. Additional design efforts were then required to design the tunnel headwalls to support railroad loading which was originally not anticipated by the firm due to the proposed tunnel headwall location with respect to the existing tracks.

UPRR - Temporary Earth Retention System - Staff Recommendation: 40 Hours / \$4,704  
(Benesch Request - 66 Hours / \$7,762)

Temporary sheeting, referred to as a Temporary Earth Retention System, will need to be provided by the selected contractor in order to remove the existing sheeting and construct the tunnel and tunnel headwalls. The Engineer indicated that it did not originally anticipate having to provide full design and structural calculations for this system as it is typically provided by the contractor during

construction. However, UPRR insisted given the location of the excavation and shoring that the Engineer provide a proven Temporary Earth Retention System design and supporting calculations as part of Phase II Engineering.

ComEd Utility Coordination - Staff Recommendation: 26 Hours / \$3,058

(Benesch Request - 26 Hours / \$3,058)

Benesch experienced additional efforts in coordinating with ComEd on the burial of overhead utility wires on Taylor Avenue north of the UP-West Line. The additional efforts that were required related to a change in the path alignment to unite with ComEd's utility relocation plans.

Sprint Utility Coordination - Staff Recommendation: 46 Hours / \$5,410

(Benesch Request - 46 Hours / \$5,410)

In terms of additional utility coordination work, a Sprint fiber optic cable was found to be in potential conflict of the proposed improvements. While some level of utility coordination was included within Benesch's original scope, the circumstances of the Sprint cable required greater than typical efforts. More specifically, the Engineer and Staff diligently researched the location of the cable and contested Sprint on the actual location of their line. In summary, the team was able to confirm that Sprint's fiber optic cable was not in the approved location and that it would have to be relocated at no cost to the Village. Because of the semi-complex nature of fiber optic line construction and the utility congested site at the Taylor Underpass, addressing the utility conflict involves replacing approximately 2,640 feet of fiber optic cable at an estimated cost of \$100,000. This cost would have been born by the Village had the firm not taken the time to diligently research and contest Sprint.

Development of Aesthetic Plans and Specifications - Staff Recommendation: 10 Hours / \$1,176

(Benesch Request - 56 Hours / \$6,586)

Staff did recognize some of Benesch's efforts to be out of scope for aesthetic efforts, specifically associated with consideration of the future art installation in the tunnel. The firm did consult with the Chicago Public Art Group to ensure one of the Environmental Commissions interested installation features, specifically tile, would be compatible with the tunnel interior treatment.

Changes by Village after Pre-Final - Staff Recommendation: 0 Hours / \$0

(Benesch Request 56 Hours / \$6,586)

The Engineer indicated that certain items of work were deemed to deviate from the scope of the original assignment and completion of Phase I engineering including some of the additional pavement design work. While staff feels that the consultant is due some compensation for additional pavement design efforts, it does not feel that the Engineer is due additional compensation for changes to the Project Development Report and drawing adjustments. As such, no change is recommended for this item.

Pavement Reconstruction & Electrical Work - Staff Recommendation: 40 Hours / \$4,704

(Benesch Request - 80 Hours / \$9,408)

As the project entered the detailed design phase, certain additional items of pavement reconstruction work were deemed to be necessary to address some pavement issues including excessive slopes near

crosswalk ramps, relocation of traffic signal detector loops, and to address some pavement deterioration. Staff recommends that 40 hours be considered out of scope for this item of work.

Easement Layout - Staff Recommendation: 20 Hours / \$2,352  
(Benesch Request - 20 Hours / \$2,352)

As part of the efforts required for the temporary grading easement at 741 Willis, the Engineer was ultimately directed to layout the easement for the Resident's review. This work is not typically included as the information is portrayed on a plat of survey. Given the site survey work was complete, the Engineer has to remobilize a survey crew to perform the work.

**Recommendation**

Staff recommends approval of proposed scope change and the increase in fee of **\$34,105**. Funding for this expense should be taken from the CY-17 Capital Projects Fund, Account No. 40000 - 580100 (Construction Projects). The Project Number for the work is 15009.

The recommended motions to be considered at the December 18, 2017 Special Village Board Meeting are as follows:

1. Motion to increase the appropriation for Phase II engineering services associated with the Taylor Avenue Pedestrian Tunnel Project provided by Alfred Benesch & Company in the amount of \$34,105 for a revised total appropriation of \$189,565 to be expensed to the Capital Projects Fund.
2. Motion to authorize the Village Manager to execute Change Order No. 2 to the Phase II engineering services agreement with Alfred Benesch & Company for the Taylor Avenue Pedestrian Tunnel Project for additional Phase II Engineering Services in the amount of \$34,105 resulting in a revised total fixed price of \$189,565.

**Attachments**

- q Supplement Request from Alfred Benesch & Company

**ATTACHMENTS:**

- Benesch Supplement Request 12-7-2017 (PDF)

**From:** O'Connor, Michael  
**To:** [Richard Daubert](#)  
**Cc:** [Keaschall, Andrew](#)  
**Subject:** Village of Glen Ellyn Taylor Ave. - Supplement to Address New Conditions  
**Date:** Thursday, December 07, 2017 10:13:06 AM  
**Attachments:** [10507 - Glen Ellyn Scope Change Spreadsheet.pdf](#)  
[Glen Ellyn Scope Change Attachment Exhibits.pdf](#)  
[Glen Ellyn - Supplement Summary of New Conditions.pdf](#)

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Rich,

I have attached our Supplement to address the New Conditions for the Village of Glen Ellyn Taylor Avenue Project. Below is a summary hours for the project:

#### Hours

1,698 Incurred Per 12/3/2017 ( 430.5 hours spent after 11/4/2017)

120 Best Estimate of Hours to complete on March 9, 2018 IDOT Bid Letting

**1,818 End Point**

1,156 Original Contract

498 Out of Scope Request based on New and Changed Conditions

**1,654 Required Total**

#### 164 Benesch Forfeit/ contribution

These hours are based the following:

- Phase Three work is not included
- This project being let on IDOT March 9, 2018

I have attached the following:

- Supplement Summary of New Conditions
- Summary of Hours
- Exhibits

We understand that this is time sensitive and are available to discuss anytime this afternoon or Friday.

Regards,

Michael J. O'Connor, PE | Senior Project Manager

**Alfred Benesch & Company** | 205 North Michigan Avenue, Suite 2400, Chicago, IL 60601

**P** 312-565-0450 | **F** 312-565-2497 | **C** 312-890-9133 | **E** [mocconnor@benesch.com](mailto:mocconnor@benesch.com) | **W** [www.benesch.com](http://www.benesch.com)

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Village of Glen Ellyn  
Taylor Street Underpass

The Phase II contract was scoped in December 2015, while Phase I was ongoing. The scoping was based on the draft Project Development Report (PDR) provided to the Village of Glen Ellyn (Village) on June 12, 2015. The Phase II contract was approved on February 22, 2016. The PDR was approved by IDOT on March 24, 2017. The following documents the items completed by Benesch for the advancement of the project outside the scope of the Phase II contract.

- 1) Development of retaining wall plans to support future track loading for UPRR:
  - a. Scope included design of walls to accommodate three tracks and associated embankment as shown on Exhibit 1.
  - b. UP required design of precast modular walls to accommodate rail loading for future condition with 5 tracks. UPRR Review Response: The design should support a future track on each side of the existing track with 15 ft. track centers. The design shall also support the loading of these future tracks as well as the required grading. See Exhibit 2.<sup>1</sup>
- 2) Full Calculation development for Temporary Earth Retention Systems:
  - a. Scope does not include full calculations for earth retention systems as the Contractor is responsible for that design per IDOT Standard Specifications 522.07: *The temporary soil retention system shall be designed by the Contractor as a minimum, to retain the exposed surface area specified on the plans or the exposed surface area needed by the Contractor to complete the work.*
  - b. UP required full calculations and detailing of plans by tunnel designer in order to get approval of final plans, per 60% Plan Comment Review. See Exhibit 3. UPRR 7/25/2017 Review Response: Calculations for the temporary shoring system will need to be submitted for review. It is acceptable for the final shoring system submittal to come from the Contractor, however, adequate calculations for the proposed system need to be submitted by the designer to prove that the shoring system will work and meet UPRR horizontal and vertical movement criteria.<sup>1</sup>
- 3) Development of exhibits for UPRR future east abutment extension & meeting:
  - a. Scope did not include lay out of UPRR future abutment extension.
  - b. UP requested exhibits to be developed to show future bridge abutment construction. Benesch provided 5 page exhibit along with construction staging shown in Exhibit 4.<sup>1</sup> The UP stated that these exhibits help them understand future construction of their bridge east abutment and we can proceed with our design. They acknowledged that this is above and beyond the typical scope of the tunnel plan set and these drawings do not need to be included in final plans for the tunnel.)
- 4) AT&T Coordination – *Removed from Supplement Request:*  
Coordination with AT&T is ongoing regarding their fiber optic cable located within DuPage County ROW between the Prairie Path and the UPRR.
- 5) Plan Changes based on ComEd coordination:
  - a. Per Agreement Provision I.13 in the Phase II Engineering Services Agreement for Federal Participation, the “plans, specifications and estimates shall be in accordance with the

<sup>1</sup>New condition based on Contract Terms and Conditions 3.d

<sup>2</sup>New condition based on Contract Terms and Conditions 3.a

scope of improvements as identified in the Phase I Project Development Report.” Design Approval was received based on the configuration documented on the Plan and Profile in Appendix B of the Project Development Report (two ComEd poles in the public ROW along 741 Willis property were in direct conflict of the path and were anticipated to be relocated at the expense of ComEd).

- b. The changed condition occurred during a field meeting with representatives of the Village, Benesch and ComEd present on 11/2/2017. The Village requested our presence at this meeting. The Village did not want to relocate the poles closer to the 741 Willis residence or across Taylor Avenue in the proximity of healthy and developed trees. It was decided that ComEd would locate their facilities underground. The Village allowed ComEd to leave the northern pole in place in order to simplify ComEd relocation and incur fewer costs for undergrounding their facilities. The result of this decision required changing the design/alignment of the path. This change occurred after pre-final submittal and affected 5 sheets, 4 quantities and specifications. This change was implemented by the Village to keep the project on schedule.<sup>1,2</sup>
- 6) ROW Investigation and Village Representation regarding Sprint fiber optic:
- a. Scope was based on the Phase I document which did not require ROW involvement or discussion.
  - b. The new condition occurred when Benesch determined Sprint deviated off of the UPRR ROW and onto the DuPage County ROW. Additional topographical survey was completed to verify the horizontal location of fiber optic cable. Benesch fought for the Village with Sprint’s Real Estate department to prove this, resulting in the cost of relocation and avoidance of the tunnel becoming Sprint’s responsibility. The Village requested Benesch represent the Village in all interactions with Sprint. In discussions with Sprint, it is estimated the site restraints will require a directional bore of approximately 2,640’. Material and labor costs are estimated at approximately \$55,000 not including any fees or additional construction requirements demanded by the UPRR (flaggers, retaining walls, railroad liability insurance, etc). This also does not include any outage fees associated with service interruptions to a “backbone” fiber optic cable. The cost of relocating the Sprint fiber optic cable could total over \$100,000.<sup>1,2</sup>
- 7) ADA – *Removed From Supplement Request:*  
While Benesch did not include hours for the 6 ADA ramps, this work should have been included in the scope indicated by the plans approved in the PDR. Therefore, Benesch is not seeking extra funds and this work was done at no cost to the Village.
- 8) Development of plans and specifications for Aesthetic Work for Village of Glen Ellyn:
- a. The scope did not include any aesthetic coordination or development. Typical plain formed concrete finish (governed by the Standard Specifications) was anticipated during scoping as no aesthetic requests were made.
  - b. The Village requested Aesthetic treatment of the tunnel portal walls after the Contract was executed. This work required coordination with the manufacturer, alternative exhibits for the village, an aesthetic sheet in the plan set and associated specifications.<sup>1</sup>
- 9) Directed/Requested changes after Pre-Final Submittal:
- a. Per Agreement Provision I.13 in the Phase II Engineering Services Agreement for Federal Participation, the “plans, specifications and estimates shall be in accordance with the

<sup>1</sup>New condition based on Contract Terms and Conditions 3.d

<sup>2</sup>New condition based on Contract Terms and Conditions 3.a

scope of improvements as identified in the Phase I Project Development Report.” Design Approval was received based on the configuration documented on the Plan and Profile in Appendix B of the Project Development Report (11-ft wide path underneath the Prairie Path Bridge with railing, minimal pavement reconstruction).

- b. After pre-final plan submittal, the Village requested changes to the design that altered the scope of the improvement (additional pavement reconstruction, narrowing of the path under the bridge to 8-ft, removal of the railing). These changes required coordination with IDOT and presentation at an FHWA meeting. An ESR addendum was required based on the change in scope of the job. A PDR addendum is required as well. This work also included revisions to civil and electrical plans and quantities that had already completed the design process.<sup>1</sup>

10) Additional Pavement Reconstruction & Electrical Work

- a. Per Agreement Provision I.13 in the Phase II Engineering Services Agreement for Federal Participation, the “plans, specifications and estimates shall be in accordance with the scope of improvements as identified in the Phase I Project Development Report.” Design Approval was received based on the configuration documented on the Plan and Profile in Appendix B of the Project Development Report (pavement reconstruction only in area surrounding the sidewalk removal within the Taylor Avenue underpass beneath the UPRR, traffic signal & underpass lighting).
- b. The changed condition consisted of the Village requesting additional pavement reconstruction not included in the limits outlined in the PDR. This change affected Civil and Electrical plans and quantities due to the replacement of the detector loops located in the pavement. The Village also requested additional electrical work (inclusion of additional street lighting and foundations). These changes in scope required the addition of a 4 plan sheets and the associated 10 quantities and specifications. The change in scope of the project from Phase I to Phase II final plans is presented in Exhibit 5.<sup>1</sup>

11) Field layout of construction easement:

- a. The Phase I contract included all hours associated with Benesch’s development of the plat of survey for a construction easement. This was clarified by Mike Magnuson in an email to Bob Minix, Rich Daubert, Mark Franz, Julius Hansen and Greg Matthews on 12/7/2015. This email was in response to an email from Bob Minix requesting clarification on the draft Phase II proposal. This carried through to the final Phase II contract. As such, no hours were included in the Phase II contract to include staking or layout of the construction easement.
- b. The Village, on behalf of a resident, requested Benesch surveyors stake a layout of the proposed easement for purposes of discussion and acquisition agreement advancement.<sup>1</sup>

<sup>1</sup>New condition based on Contract Terms and Conditions 3.d

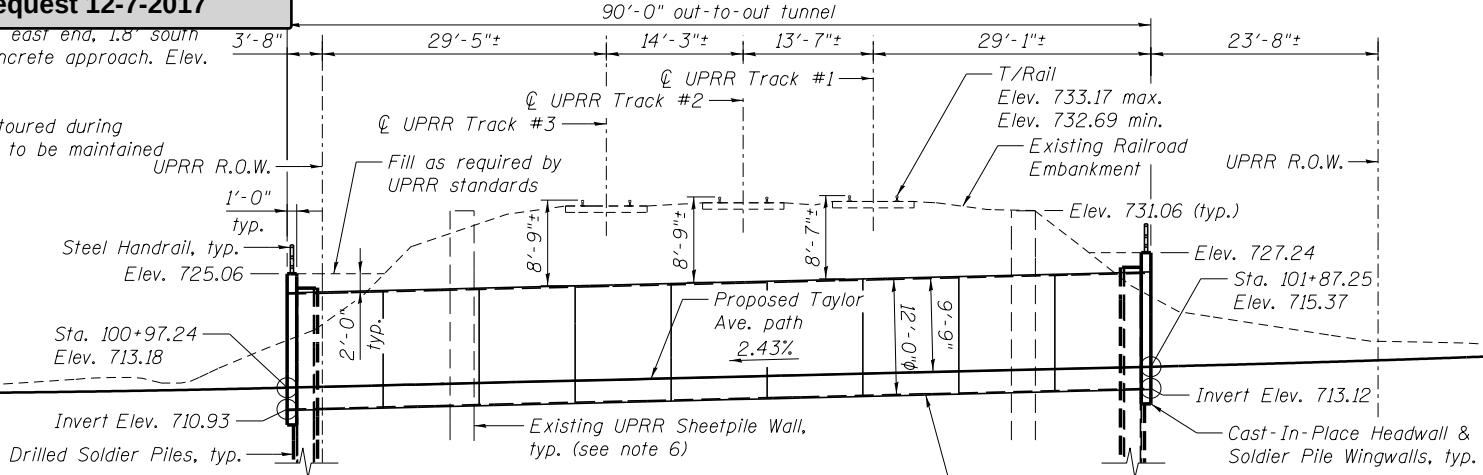
<sup>2</sup>New condition based on Contract Terms and Conditions 3.a

| Glen Ellyn Scope Changes                                               |    | Line Item<br>Hours | Subtotal Scope<br>Hours |   |
|------------------------------------------------------------------------|----|--------------------|-------------------------|---|
| <b>1 Development of Wall Plans to Support Future Track Loading</b>     |    |                    |                         |   |
| T-Wall Plan Layout                                                     | 10 |                    |                         |   |
| Coordination with Geotechnical Engineer                                | 8  |                    |                         |   |
| Coordination with T-Wall                                               | 12 |                    | <b>82</b>               | + |
| Tunnel Head Wall Plan Modification of 2 sheets                         | 30 |                    |                         |   |
| Tunnel Head Wall Design                                                | 16 |                    |                         |   |
| Specifications                                                         | 6  |                    |                         |   |
| <b>2 Design of Temporary Earth Retention System</b>                    |    |                    |                         |   |
| Design & Checking ERS (131 pages)                                      | 40 |                    |                         |   |
| Plan Modification of 2 Sheets                                          | 20 |                    | <b>66</b>               | + |
| Specifications                                                         | 4  |                    |                         |   |
| QA\QC                                                                  | 2  |                    |                         |   |
| <b>3 UPRR Abutment Extension Exhibits &amp; Meeting</b>                |    |                    |                         |   |
| Research existing plans                                                | 6  |                    |                         |   |
| Develop 5 exhibits ( 10 x 5)                                           | 50 |                    | <b>66</b>               |   |
| Develop text describing construction staging                           | 6  |                    |                         |   |
| Meeting - 2 Engineers                                                  | 4  |                    |                         |   |
| <b>4 AT&amp;T Coordination - Removed from Supplement Request</b>       |    |                    | -                       | + |
| <b>5 Plan Changes based on ComEd Coordination</b>                      |    |                    |                         |   |
| Field Meeting & Documentation                                          | 16 |                    |                         |   |
| Sheet adjustments (5)                                                  | 6  |                    | <b>26</b>               | + |
| Quantity and Specification adjustments & QA/QC (4)                     | 4  |                    |                         |   |
| <b>6 ROW Investigation and Village Representation regarding Sprint</b> |    |                    |                         |   |
| ROW Investigations with Sprint's Real Estate department                | 12 |                    |                         |   |
| Topographical Survey                                                   | 12 |                    | <b>46</b>               | + |
| Exhibit production                                                     | 4  |                    |                         |   |
| Project Site Visit (3)                                                 | 18 |                    |                         |   |
| <b>7 ADA - Removed from Supplement Request</b>                         |    |                    | -                       |   |
| <b>8 Development of aesthetic plans and specs</b>                      |    |                    |                         |   |
| Manufacturer Coordination                                              | 8  |                    |                         |   |
| Office Meeting with Manufacturer (2 Engineers )                        | 2  |                    |                         |   |
| Alternative Exhibits                                                   | 8  |                    | <b>56</b>               |   |
| 1 Plan Sheet and Quantities                                            | 24 |                    |                         |   |
| Specifications                                                         | 12 |                    |                         |   |
| QA\QC                                                                  | 2  |                    |                         |   |
| <b>9 Changes by the Village after Pre-final</b>                        |    |                    |                         |   |
| IDOT/FHWA Coordination                                                 | 12 |                    |                         |   |
| ESR & PDR Addenda                                                      | 8  |                    | <b>56</b>               |   |
| Electrical and Civil Sheet adjustments (10)                            | 24 |                    |                         |   |
| Quantity and Specification adjustments & QA/QC (15)                    | 12 |                    |                         |   |
| <b>10 Additional Pavement Reconstruction &amp; Electrical Work</b>     |    |                    |                         |   |
| Civil & Electrical Plan Sheets added (4)                               | 64 |                    | <b>80</b>               |   |
| Quantities, Specifications & QA/QC                                     | 16 |                    |                         |   |
| <b>11 Easement layout by surveyors</b>                                 |    |                    |                         |   |
| 2 surveyors in field for 1 Day                                         | 16 |                    | <b>20</b>               |   |
| Processing topographic survey pickup                                   | 4  |                    |                         |   |
|                                                                        |    |                    | <b>498</b>              |   |

Part Bridge over Taylor Avenue, east end, 1.8' south of parapet and 5.5' west of concrete approach. Elev. 730.67.

Taylor Avenue traffic will be detoured during construction. UPRR train traffic to be maintained during construction.

Existing Structure: None

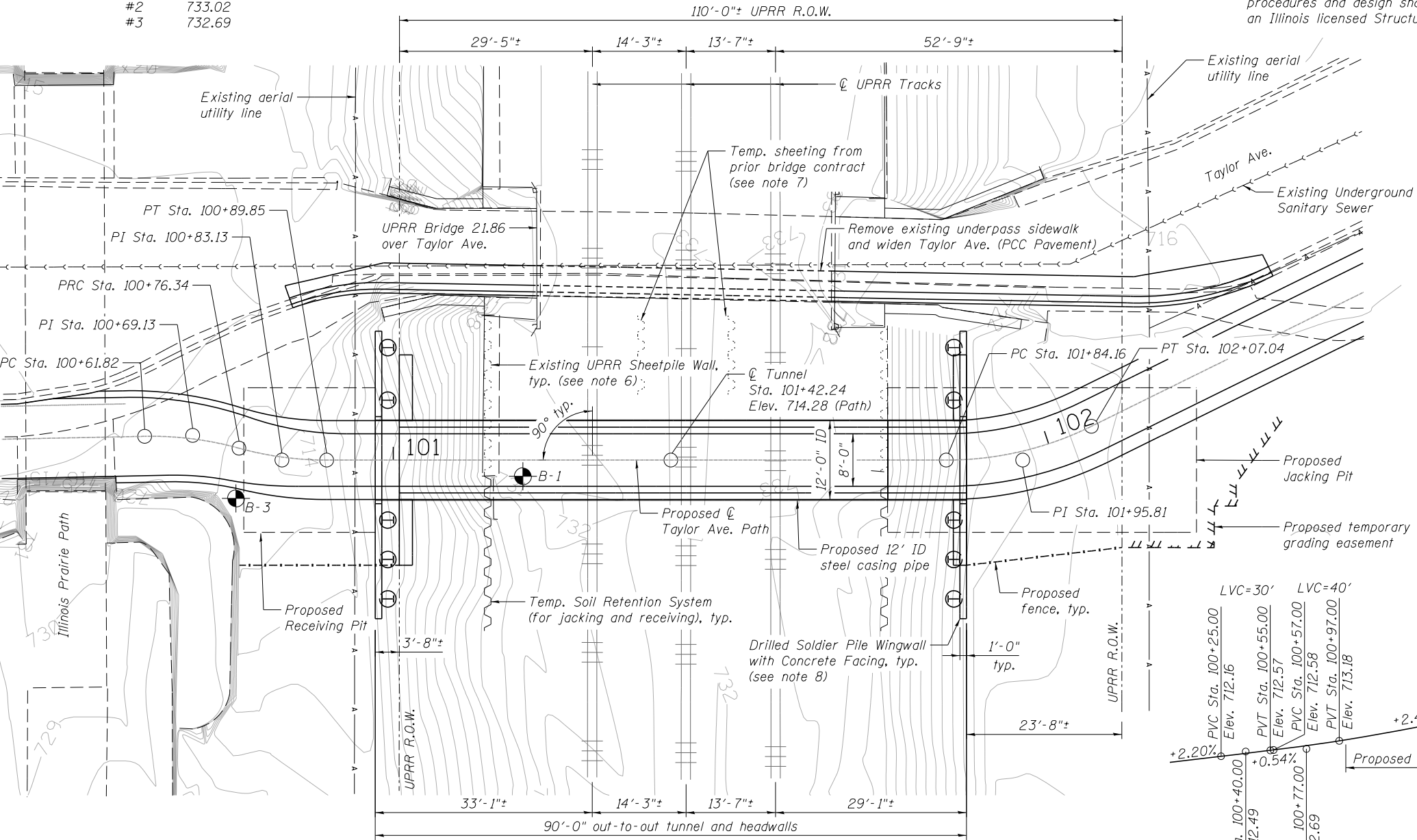


**T/RAIL ELEV. AT C PIPE**

| Track | T/Rail Elev. |
|-------|--------------|
| #1    | 733.17       |
| #2    | 733.02       |
| #3    | 732.69       |

**LONGITUDINAL SECTION**

(Looking West)



**PLAN**

**SCOPE OF WORK**

- A 12-foot ID steel casing pipe will be bored and jacked through the Union Pacific Railroad embankment.
- The steel casing pipe shall conform to the requirements of ASTM A515, Grade 60 or ASTM A572, Grade 42 or pipe approved by the Engineer.
- Monitoring of rail and track systems during jacking operations and for a period after installation shall conform to Union Pacific Railroad standards and guidelines.
- A grouting plan and procedure will be required as part of the tunneling operations and will be completed prior to the start of tunneling activities. See Sheet 2 for additional grouting requirements.
- The tunneling Contractor will be responsible for the submittal of the jacking procedure and associated work, which includes, but is not limited to, the design of the jacking force(s), the reaction wall, tunneling work shaft and the appurtenant systems. The procedures and design shall be signed and sealed by an Illinois licensed Structural Engineer.

**DESIGN SPECIFICATIONS**

2015 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 Interim Revisions  
AREMA 2015 Manual for Railway Engineering  
Union Pacific Railroad Standards and Guidelines

**DESIGN STRESSES**

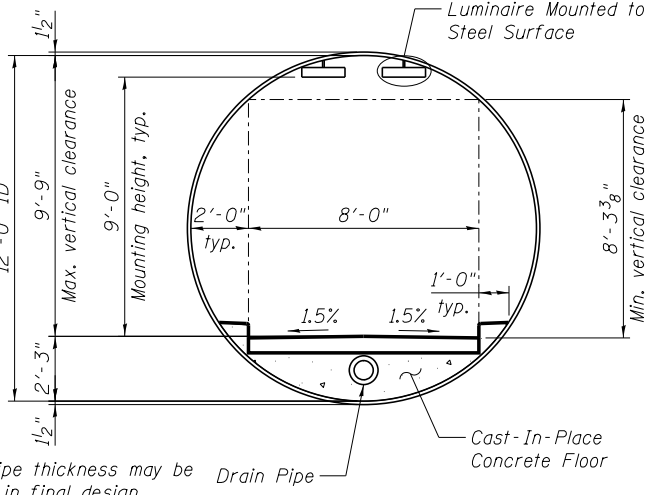
**FIELD UNITS**

f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 60,000 psi - ASTM A515 or  
= 42,000 psi - ASTM A572  
(Steel Casing Pipe - See Note 2)  
fy = 50,000 psi - AASHTO M270 Grade 50  
(Steel H-Piles)

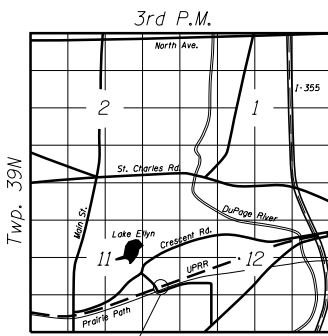
**COOPER E80 RAILROAD LIVE LOAD**

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.087g  
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.156g  
Soil Site Class = D



**TUNNEL CROSS SECTION**



**LOCATION SKETCH**

**GENERAL PLAN**

**BICYCLE/PEDESTRIAN TUNNEL**

**UNDER UNION PACIFIC RAILROAD TRACKS**

**TAYLOR AVE PATH - SEC. 15-00079-00-BT**

**DUPAGE COUNTY**

**STA. 101+42.24**

Exhibit 1

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Chicago, Illinois 60601  
312-565-0450 Job No. 10507

|                   |                       |
|-------------------|-----------------------|
| FILE NAME :       | USER NAME : swajeczko |
| 10507-TSL-001.dgn | PLOT SCALE :          |
|                   | PLOT DATE : 4/5/2016  |

|                |          |
|----------------|----------|
| DESIGNED - SCW | REVISD - |
| CHECKED - MFB  | REVISD - |
| DRAWN - SCW    | REVISD - |
| CHECKED - MFB  | REVISD - |

**VILLAGE OF GLEN ELLYN**

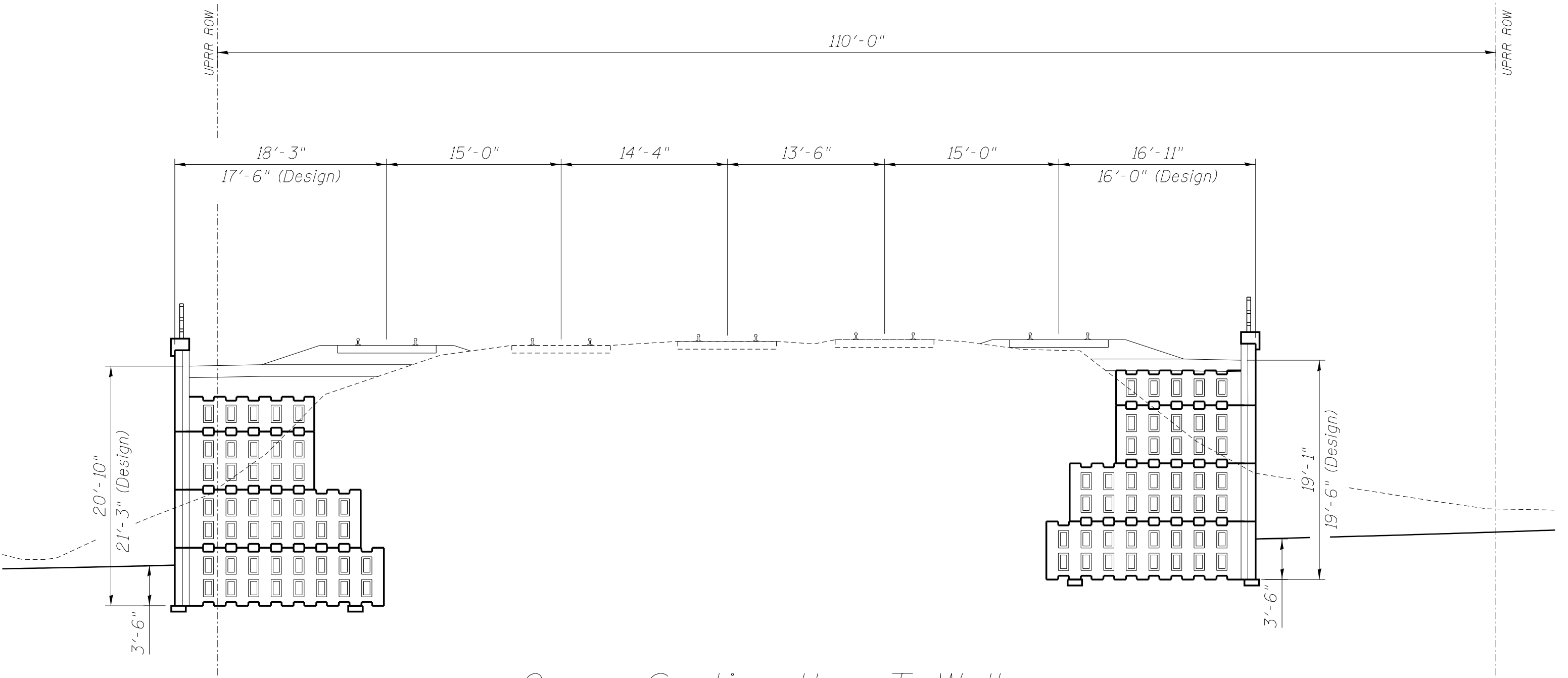
**TAYLOR AVENUE BIKE / PEDESTRIAN TUNNEL**

**UNDER UPRR**

SHEET NO. 1 OF 2 SHEETS

|             |                |               |              |           |
|-------------|----------------|---------------|--------------|-----------|
| F.A.P. RTE. | SECTION        | COUNTY        | TOTAL SHEETS | SHEET NO. |
|             | 15-00079-00-BT | DUPAGE        |              |           |
|             |                | ILLINOIS FED. |              |           |

Packet Pg. 20



Cross-Section thru T-Wall

UPRR WEST LINE NEAR BRIDGE 21.86  
(0.5 MILES EAST OF GLEN ELLYN, IL)

**GLEN ELLYN, ILLINOIS**



Taylor Avenue Underpass  
Structure: Structural Design  
Calculations

**FINAL CALCULATIONS**

**November 15<sup>th</sup>, 2017**

Prepared by:

 **benesch**  
engineers • scientists • planners  
205 North Michigan Avenue • Suite 2400 • Chicago, IL 60601-5927  
312-565-0450 • Fax: 312-565-2497 • [www.benesch.com](http://www.benesch.com)



Comp.: SCW Date: 11/15/17 Worksheet: 1 of 1  
 Check: \_\_\_\_\_ Date: \_\_\_\_\_ Job No.: 10507.01  
 Project: Taylor Ave Tunnel under UPRR  
 Element: UPRR 100% Submittal - Structural Design Calculations

| <b>Structural - Table of Contents</b>                             | <b>Page</b> | <b>No. Pages</b> |
|-------------------------------------------------------------------|-------------|------------------|
| <b>Elevation Data</b>                                             | <b>3</b>    | <b>1</b>         |
| PGL Elevations and T/Rail Profiles                                | 4           | 3                |
| <b>Steel Pipe</b>                                                 | <b>7</b>    | <b>1</b>         |
| Jacked Pipe                                                       | 8           | 4                |
| Backfilled Pipe @ Ends                                            | 12          | 4                |
| <b>T-Wall Preliminary Evaluation</b>                              | <b>16</b>   | <b>1</b>         |
| South Wall                                                        | 17          | 4                |
| North Wall                                                        | 21          | 4                |
| <b>Cast-in-Place Counterfort Headwall</b>                         | <b>25</b>   | <b>1</b>         |
| Data from SGR                                                     | 26          | 2                |
| LL Surcharge Pressures (per track and total)                      | 28          | 5                |
| Earth Pressures                                                   | 33          | 1                |
| Counterfort Tunnel Headwall Design                                | 34          | 12               |
| <b>Temporary Soil Retention System (and Permanent Extensions)</b> | <b>46</b>   | <b>1</b>         |
| General                                                           | 47          | 1                |
| Design Section Layout                                             | 48          | 2                |
| Wall Design Summary                                               | 50          | 1                |
| Data from SGR                                                     | 51          | 8                |
| Criteria from UPRR Guidelines for Temporary Shoring               | 59          | 5                |
| TSRS Parallel Walls (Main Walls)                                  | 64          | 1                |
| LL Surcharge Pressures                                            | 65          | 8                |
| Cantilever                                                        |             |                  |
| Soil Pressures                                                    | 73          | 2                |
| Shoring Suites Analysis                                           | 75          | 7                |
| Single Anchor                                                     |             |                  |
| Soil Pressures                                                    | 82          | 2                |
| Shoring Suites Analysis                                           | 84          | 6                |
| Double Anchor                                                     |             |                  |
| Soil Pressures                                                    | 90          | 2                |
| Shoring Suites Analysis (typical)                                 | 92          | 8                |
| Shoring Suites Analysis (above pipe)                              | 100         | 3                |
| Shoring Suites Analysis (next to pipe)                            | 103         | 4                |
| Wale & Tie Rod Evaluation                                         |             |                  |
| CONSIST - Top Wale - Before Pipe Installation                     | 107         | 3                |
| CONSIST - Top Wale - After Pipe Installation                      | 110         | 3                |
| CONSIST - Bottom Wale - Before Pipe Installation                  | 113         | 2                |
| CONSIST - Bottom Wale - After Pipe Installation (Segment 1)       | 115         | 1                |
| CONSIST - Bottom Wale - After Pipe Installation (Segment 2)       | 116         | 2                |
| Top Wale & Tie Rod Design                                         | 118         | 3                |
| Bottom Wale & Tie Rod Design                                      | 121         | 3                |

Exhibit 3



Comp.: SCW

Date: 11/15/17

Worksheet: 1 of 1

Check: \_\_\_\_\_

Date: \_\_\_\_\_

Job No.: 10507.01

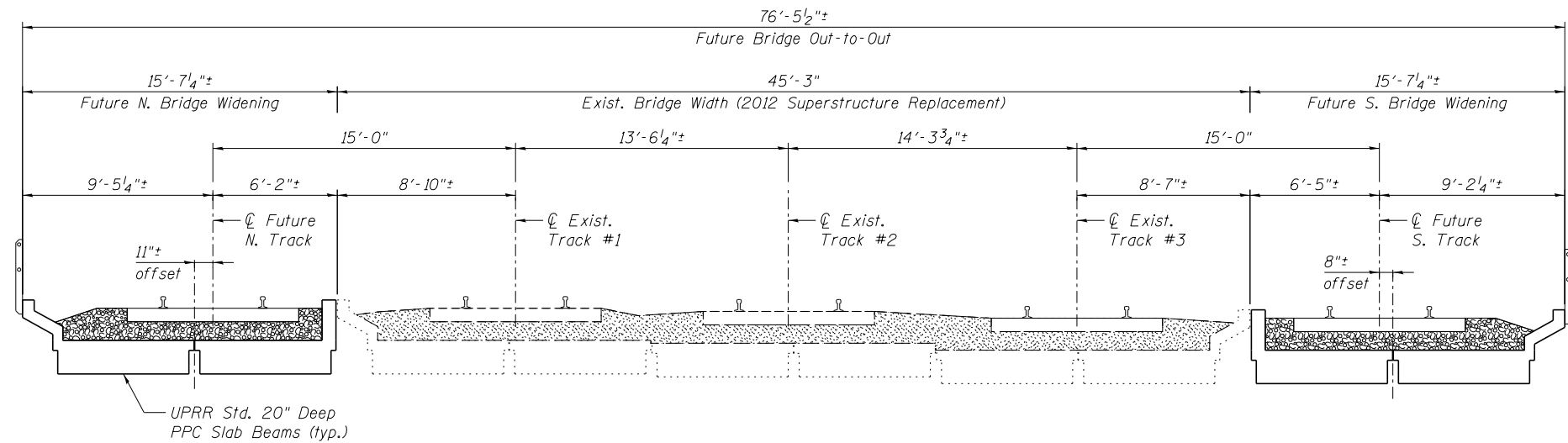
Project: Taylor Ave Tunnel under UPRR

Element: UPRR 100% Submittal - Structural Design Calculations

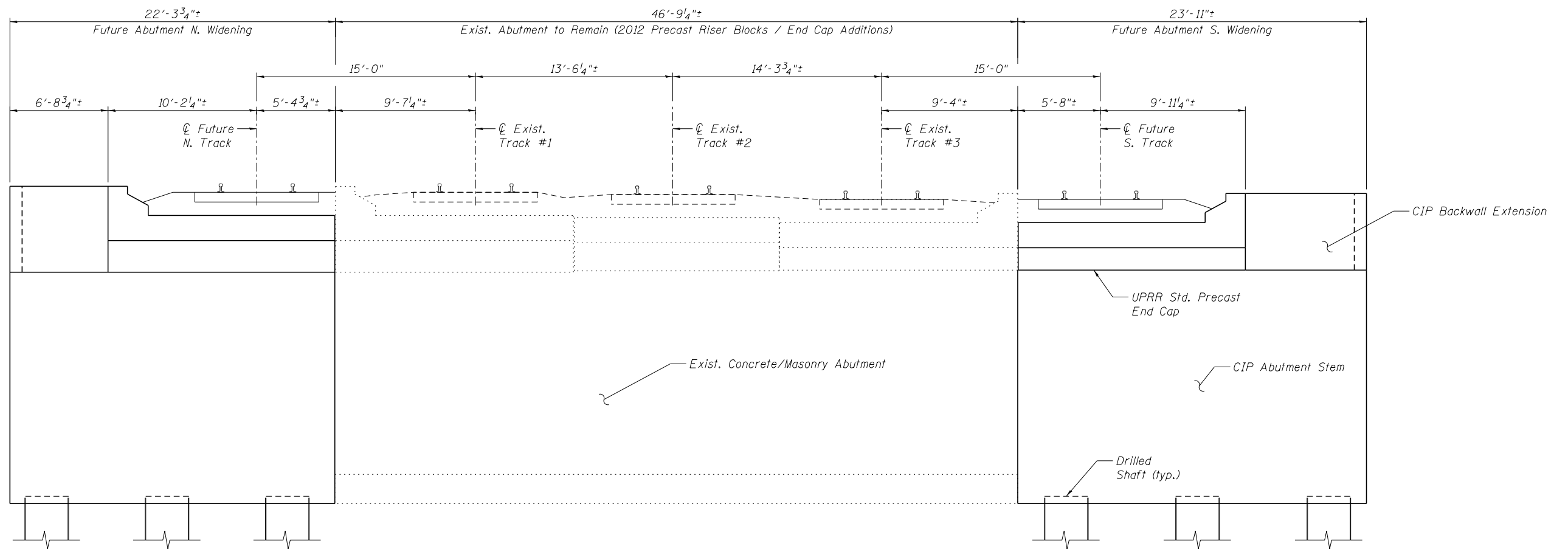
**Structural - Table of Contents**

|                                                      | <b>Page</b> | <b>No. Pages</b> |
|------------------------------------------------------|-------------|------------------|
| Closure Plate Design                                 | 124         | 1                |
| TSRS Parallel Walls (Deadman Walls)                  | 125         | 1                |
| LL Surcharge Pressures                               | 126         | 2                |
| Deadman Design (before pipe installation)            | 128         | 7                |
| Deadman Design (after pipe installation - Segment 1) | 135         | 7                |
| Deadman Design (after pipe installation - Segment 2) | 142         | 7                |
| TSRS Perpendicular Walls                             | 149         | 1                |
| Maximum Cantilever                                   |             |                  |
| LL Surcharge Pressures                               | 150         | 1                |
| Soil Pressures                                       | 151         | 2                |
| Shoring Suites Analysis                              | 153         | 2                |
| Single Strut                                         |             |                  |
| LL Surcharge Pressures                               | 155         | 1                |
| Soil Pressures                                       | 156         | 2                |
| Shoring Suites Analysis                              | 158         | 4                |
| Wale & Strut Design                                  | 162         | 4                |
| Permanent Cantilever Walls                           | 166         | 1                |
| LL Surcharge Pressures                               | 167         | 8                |
| Soil Pressures                                       | 175         | 2                |
| Shoring Suites Analysis                              | 177         | 7                |

Exhibit 3



**FUTURE BRIDGE CROSS SECTION**  
(Looking East)



**FUTURE E. ABUTMENT ELEVATION**  
(Looking East)

CONCEPT SKETCHES FOR INFORMATION ONLY  
NOT TO BE INCLUDED IN CONTRACT DOCUMENTS

**NOTE:**

1. See Sheets 2 thru 4 for plan view of bridge widening stages.



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VILLAGE OF GLEN ELLYN

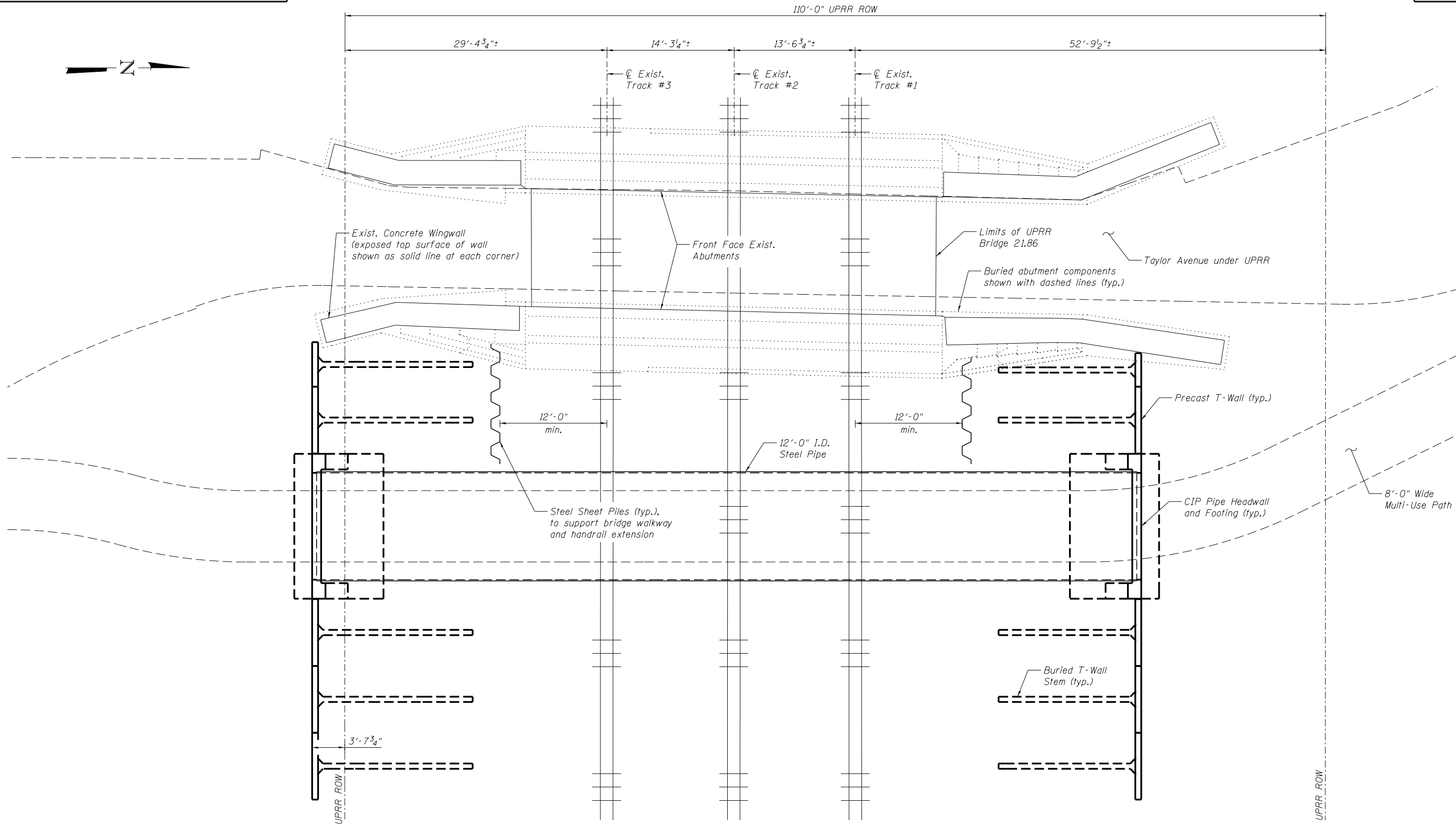
TAYLOR AVENUE BIKE / PEDESTRIAN TUNNEL UNDER UPRR  
FUTURE BRIDGE CROSS SECTION AND ABUTMENT ELEVATION

SHEET NO. 1 OF 5 SHEETS

|             |                |               |              |           |
|-------------|----------------|---------------|--------------|-----------|
| F.A.P. RTE. | SECTION        | COUNTY        | TOTAL SHEETS | SHEET NO. |
|             | 15-00079-00-BT |               |              |           |
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Exhibit 4

Packet Pg. 25



CONCEPT SKETCHES FOR INFORMATION ONLY  
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**PLAN VIEW**  
(After completion of path tunnel project)



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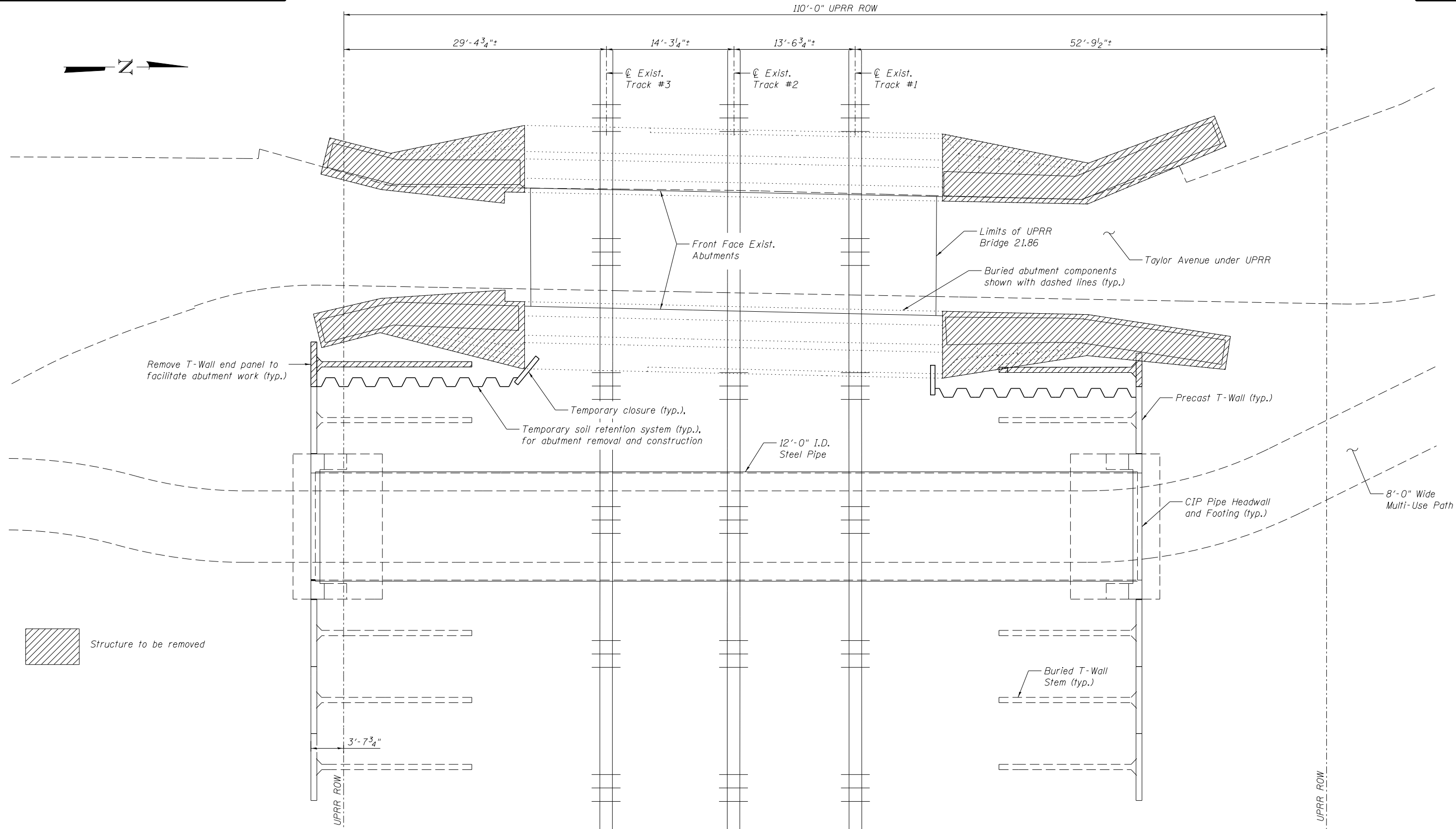
VILLAGE OF GLEN ELLYN

TAYLOR AVENUE BIKE / PEDESTRIAN TUNNEL UNDER UPRR  
EXISTING CONDITION (AFTER COMPLETION OF PATH TUNNEL PROJECT)

SHEET NO. 2 OF 5 SHEETS

|               |                |               |              |           |
|---------------|----------------|---------------|--------------|-----------|
| F.A.P. RTE.   | SECTION        | COUNTY        | TOTAL SHEETS | SHEET NO. |
|               | 15-00079-00-BT |               | DUPAGE       |           |
| ILLINOIS FED. |                | Packet Pg. 26 |              |           |

Exhibit 4



CONCEPT SKETCHES FOR INFORMATION ONLY  
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PLAN VIEW  
(During removal and construction of future widened abutments)

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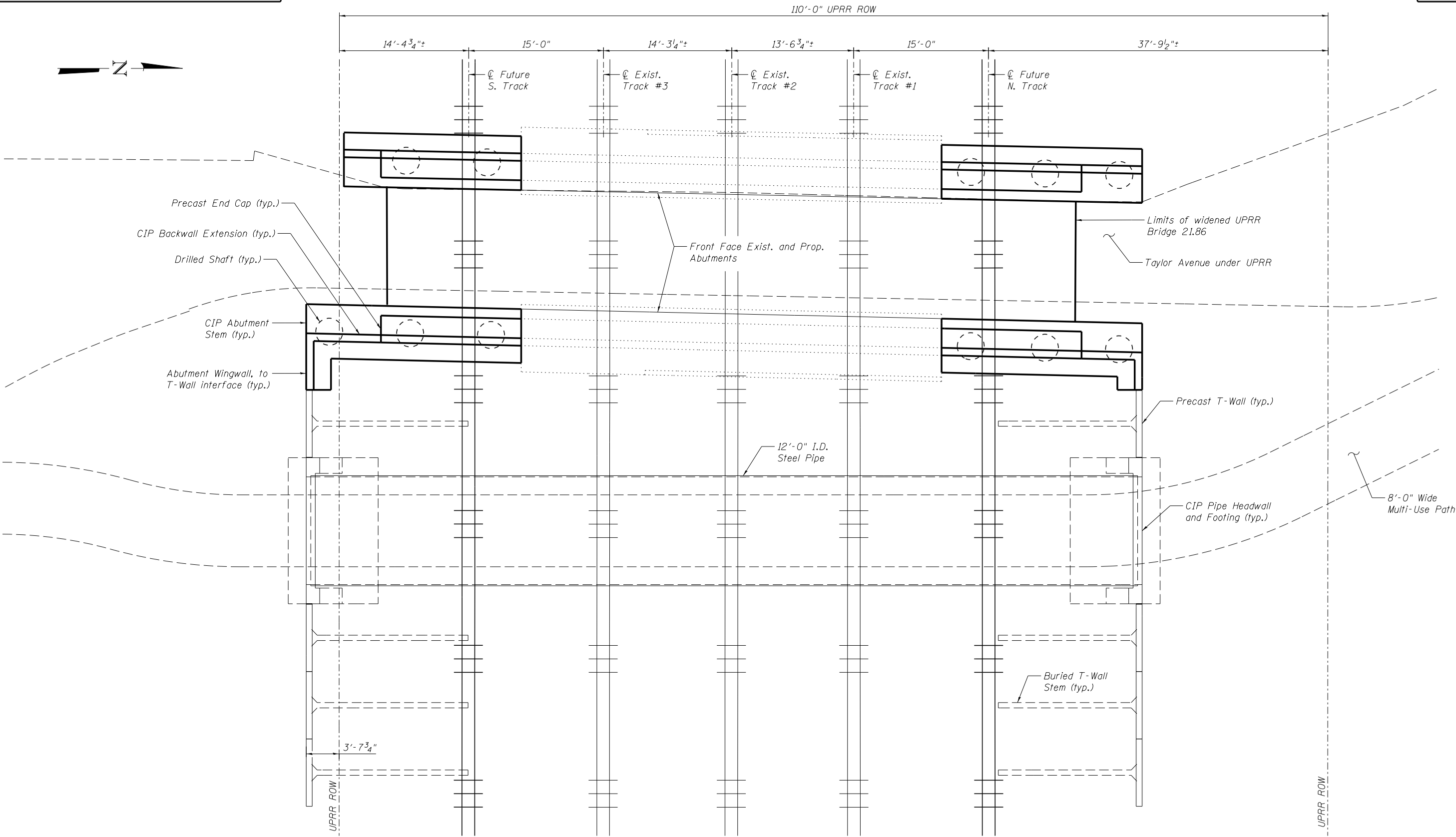
VILLAGE OF GLEN ELLYN

TAYLOR AVENUE BIKE / PEDESTRIAN TUNNEL UNDER UPRR  
FUTURE TEMPORARY CONDITION FOR ABUTMENT WIDENING

SHEET NO. 3 OF 5 SHEETS

|               |                |               |              |           |
|---------------|----------------|---------------|--------------|-----------|
| F.A.P. RTE.   | SECTION        | COUNTY        | TOTAL SHEETS | SHEET NO. |
|               | 15-00079-00-BT | DUPAGE        |              |           |
| ILLINOIS FED. |                | Packet Pg. 27 |              |           |

Exhibit 4



CONCEPT SKETCHES FOR INFORMATION ONLY  
NOT TO BE INCLUDED IN CONTRACT DOCUMENTS

**PLAN VIEW**  
(At completion of future track and structure widening)

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312-565-0450 Job No. 10507.01

|                                               |                       |                |           |
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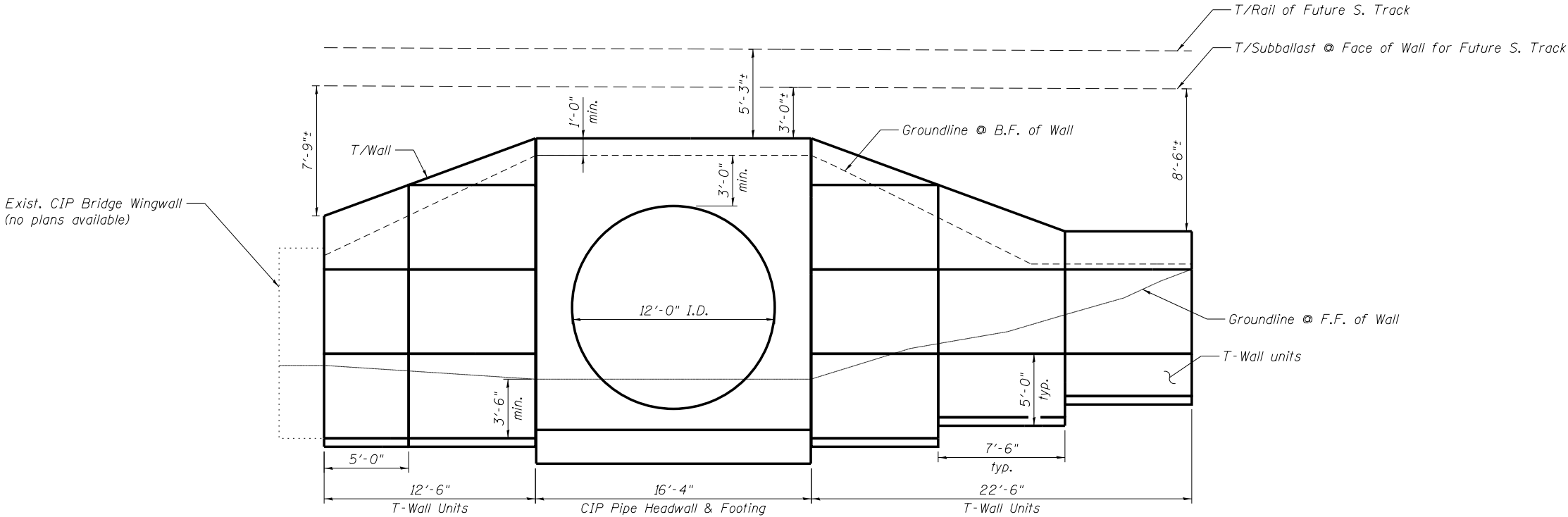
VILLAGE OF GLEN ELLYN

**TAYLOR AVENUE BIKE / PEDESTRIAN TUNNEL UNDER UPRR  
FUTURE PERMANENT CONDITION (AFTER TRACK WIDENING)**

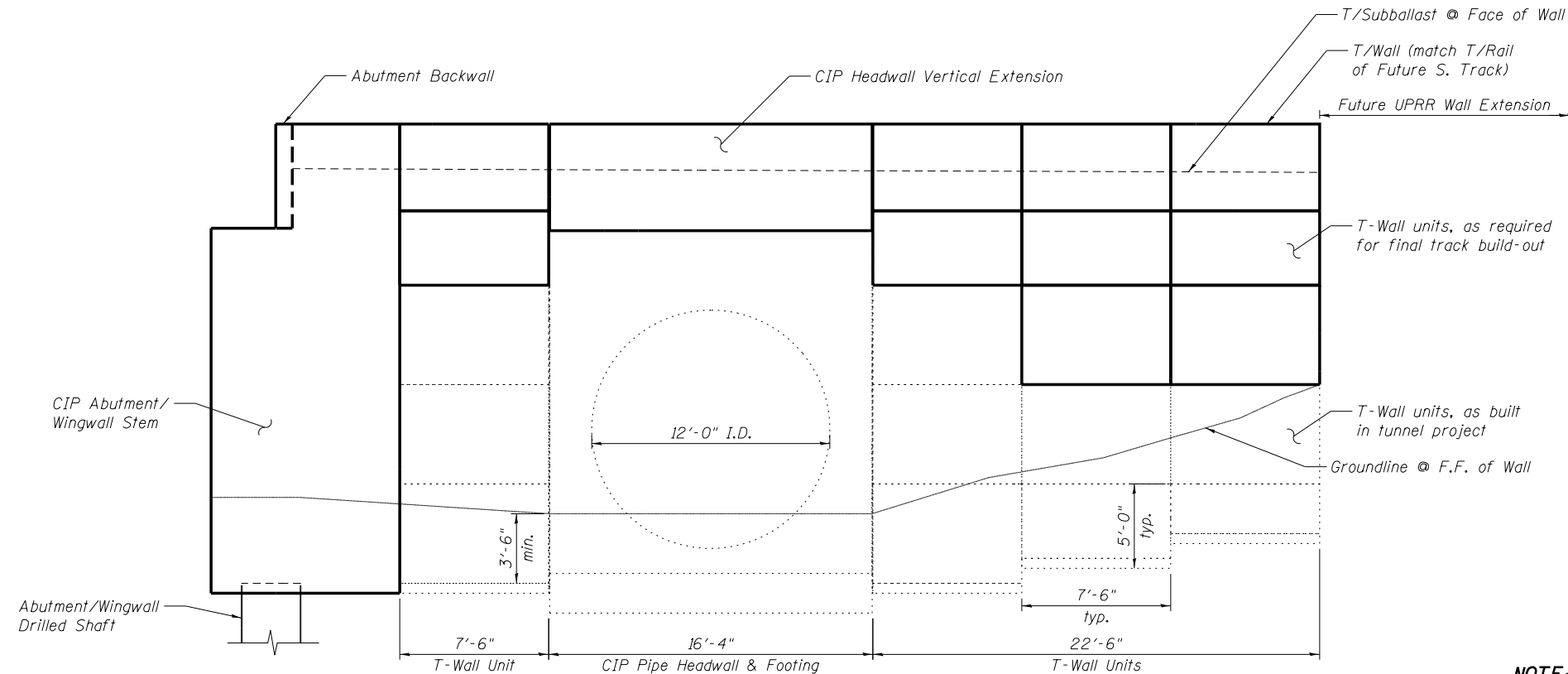
SHEET NO. 4 OF 5 SHEETS

|                |                |        |                 |              |
|----------------|----------------|--------|-----------------|--------------|
| F.A.P.<br>RTE. | SECTION        | COUNTY | TOTAL<br>SHEETS | SHEET<br>NO. |
|                | 15-00079-00-BT | DUPAGE |                 |              |
| ILLINOIS FED.  |                |        |                 |              |

**Exhibit 4**  
**Packet Pg. 28**



**SOUTH T-WALL ELEVATION - AFTER TUNNELING PROJECT (BEFORE BRIDGE WIDENING)**  
(Looking North)



**SOUTH T-WALL ELEVATION - AFTER BRIDGE WIDENING**  
(Looking North)

**NOTE:**  
1. See Sheets 2 thru 4 for plan view of bridge widening stages.

**Exhibit 4**

**benesch**  
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205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10507.01

|                                     |                       |                |           |                       |                                                                                                              |                |                |        |                 |               |  |
|-------------------------------------|-----------------------|----------------|-----------|-----------------------|--------------------------------------------------------------------------------------------------------------|----------------|----------------|--------|-----------------|---------------|--|
| FILE NAME =                         | USER NAME = *USER*    | DESIGNED - SCW | REVISED - | VILLAGE OF GLEN ELLYN | TAYLOR AVENUE BIKE /PEDESTRIAN TUNNEL UNDER UPRR<br>T-WALL ELEVATION AFTER TUNNELING & AFTER BRIDGE WIDENING | F.A.P.<br>RTE. | SECTION        | COUNTY | TOTAL<br>SHEETS | SHEET<br>NO.  |  |
| ...\\Plans\10507_XXX_UPRR_TWall.dgn |                       | CHECKED -      | REVISED - |                       |                                                                                                              |                | 15-00079-00-BT | DUPAGE |                 |               |  |
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|                                     | PLOT DATE = 8/25/2017 | CHECKED -      | REVISED - |                       |                                                                                                              |                |                |        |                 |               |  |
|                                     |                       |                |           |                       | SHEET NO. 5 OF 5 SHEETS                                                                                      |                |                |        |                 |               |  |
|                                     |                       |                |           |                       | ILLINOIS FED.                                                                                                |                |                |        |                 | Packet Pg. 29 |  |

**O'Connor, Michael**

---

**From:** Wojteczko, Scott  
**Sent:** Monday, December 04, 2017 9:24 AM  
**To:** O'Connor, Michael  
**Subject:** FW: RE: Pedestrian Underpass, MP 21.88, Geneva Sub, Glen Ellyn, IL - Monday, 8/28/2017 Conference Call Information  
**Attachments:** Future UPRR Widening\_082517.pdf

Mike,

Here is the email with exhibit we sent to UPRR.

Thanks,

Scott C. Wojteczko, PE, SE | Project Engineer  
Alfred Benesch & Company  
P 312-565-0450

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**From:** O'Connor, Michael  
**Sent:** Friday, August 25, 2017 3:15 PM  
**To:** Rick Friesen (rfriesen@up.com) <rfriesen@up.com>  
**Cc:** 'audra.rodgers@aecom.com' <audra.rodgers@aecom.com>; Richard Daubert (rdaubert@glenellyn.org) <rdaubert@glenellyn.org>; Wojteczko, Scott <swojteczko@benesch.com>; 'Sean D. Collier' <sdcolle@up.com>  
**Subject:** RE: Pedestrian Underpass, MP 21.88, Geneva Sub, Glen Ellyn, IL - Monday, 8/28/2017 Conference Call Information

Rick,

Please see attached PDF for concept plan sheets that depict how a future UPRR track addition / bridge widening project may be executed after completion of the proposed Taylor Avenue pipe tunneling project. Below is a brief summary of what is included on each sheet of the concept plan set:

**Sheet 1: Future Bridge Cross Section and Abutment Elevation**

- This sheet includes concepts for both bridge superstructure widening and bridge abutment widening to support 1 new track on each side at 15'-0" centers.
- The bridge superstructure widening depicts similar UPRR standard 20" deep PPC slabs as were used in the 2012 superstructure replacement project.
- The abutment widening assumes a new drilled shaft supported rectangular CIP concrete stem wall with UPRR standard precast end caps (also used in the 2012 superstructure replacement project).

**Sheet 2: Existing Condition (After Completion of Path Tunnel Project)**

- This sheet shows a plan view of the currently proposed final condition at the site after completion of the path tunneling project.
- Note that on the south side, the proposed front face of the T-Wall is around 3'-8" off the UPRR ROW. This is in line with the existing UPRR bridge wingwall, which extends off the UPRR ROW. To keep the T-Wall entirely on UPRR ROW, the temporary sheeting would need to encroach within the 12'-0" minimum track offset that has been prescribed to provide adequate space for the T-Wall stems (see Sheet 4 for more discussion).

**Sheet 3: Future Temporary Condition for Abutment Widening**

- This sheet shows one concept for construction staging to support widening of the existing bridge substructure. It assumes the bridge will be widened via full removal of the existing concrete/masonry abutments or wingwalls.
- A line of temporary sheeting may be installed perpendicular to the track between T-Wall stems to allow for excavation and removal of the existing bridge abutment or wingwall.
- The stack of T-Wall units directly adjacent to the existing bridge wingwalls will be removed to make room for the new bridge abutment/wingwall.

**Sheet 4: Future Permanent Condition (After Track Widening)**

- This sheet shows the final condition after the UPRR bridge substructure and superstructure has been widened to support an additional south and north track.
- A wingwall extension behind the proposed widened abutment can be used to close any gap between the T-Wall and the new bridge substructure.
- Note that on the south tunnel side of Taylor Avenue, the UPRR bridge substructure is shown to extend off the UPRR ROW to line up with the front face of the T Wall. If it is required for any future UPRR construction to stay within the UPRR ROW, the entire T-Wall may need to be shifted inside the UPRR ROW (via method discussed in Sheet 2 comments).

**Sheet 5: T-Wall Elevation After Tunneling & After Bridge Widening**

- This sheet shows an elevation view of the south wall after completion of the current proposed tunneling project along with an elevation view for one concept to complete the abutment and wall during a future bridge widening project.
- Note that the proposed condition after completion of this tunneling project will place a minimum of 3'-0" of fill over the steel pipe and be graded to meet the existing bridge wingwall elevations as well as the UPRR track slopes away from the bridge.
- The elevation view for a future bridge widening project depicts how additional precast wall units can be stacked on top of the wall units built in the tunneling project to support a future track addition. The bottom wall units will be designed and constructed to support the final built-out elevations and track loading.

We look forward to discussing all of this during the conference call on Monday at 1:00.

**Conference Dial-In Number: (712) 775-7035**

**Host Access Code: 755145#**

**Participant Access Code: 377572#**

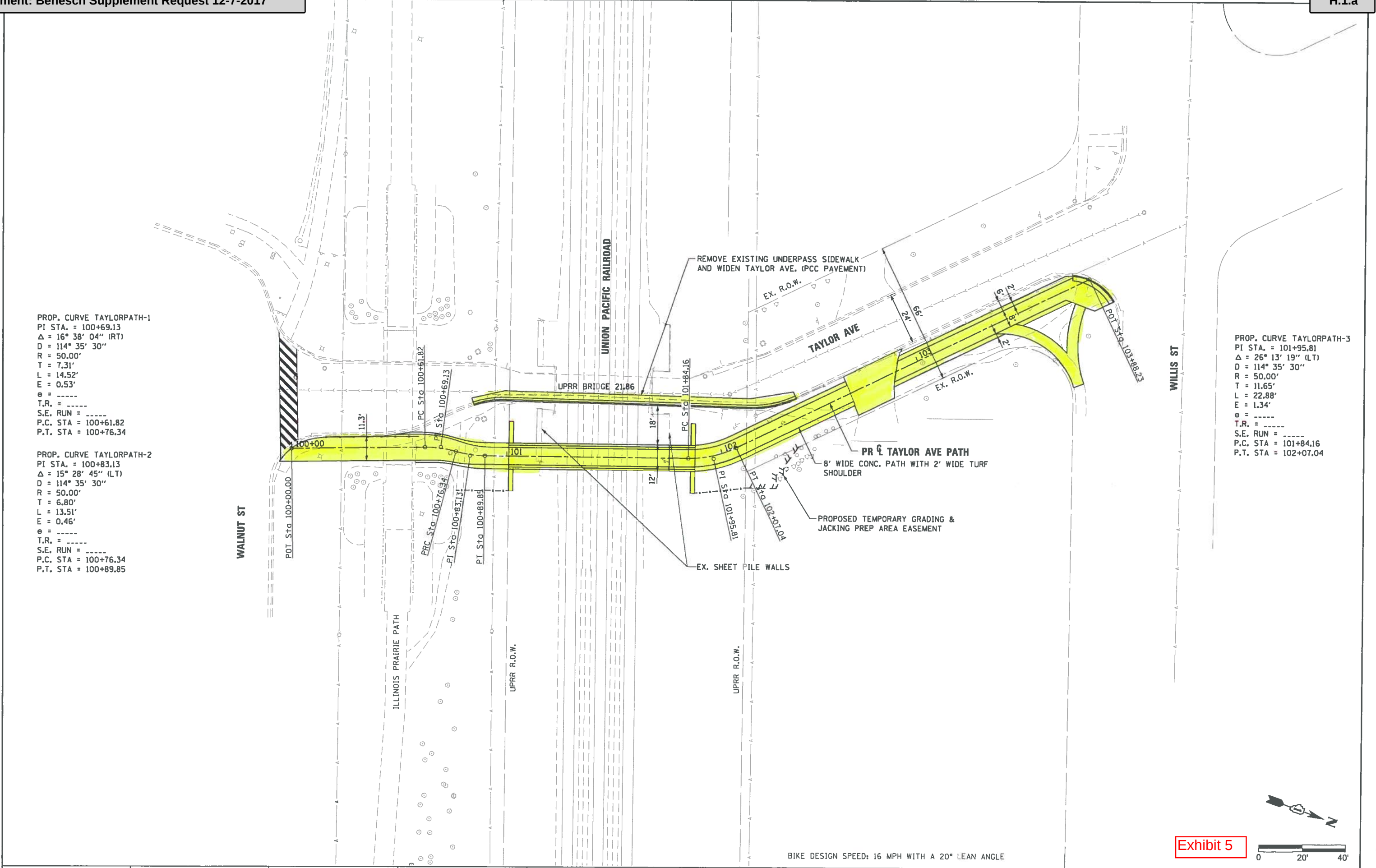
Thanks,

Michael J. O'Connor, PE | Senior Project Manager

**Alfred Benesch & Company** | 205 North Michigan Avenue, Suite 2400, Chicago, IL 60601

**P** 312-565-0450 | **F** 312-565-2497 | **C** 312-890-9133 | **E** [moconnor@benesch.com](mailto:moconnor@benesch.com) | **W** [www.benesch.com](http://www.benesch.com)

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PROP. CURVE TAYLORPATH-1  
PI STA. = 100+69.13  
Δ = 16° 38' 04" (RT)  
D = 114° 35' 30"  
R = 50.00'  
T = 7.31'  
L = 14.52'  
E = 0.53'  
e = -----  
T.R. = -----  
S.E. RUN = -----  
P.C. STA = 100+61.82  
P.T. STA = 100+76.34

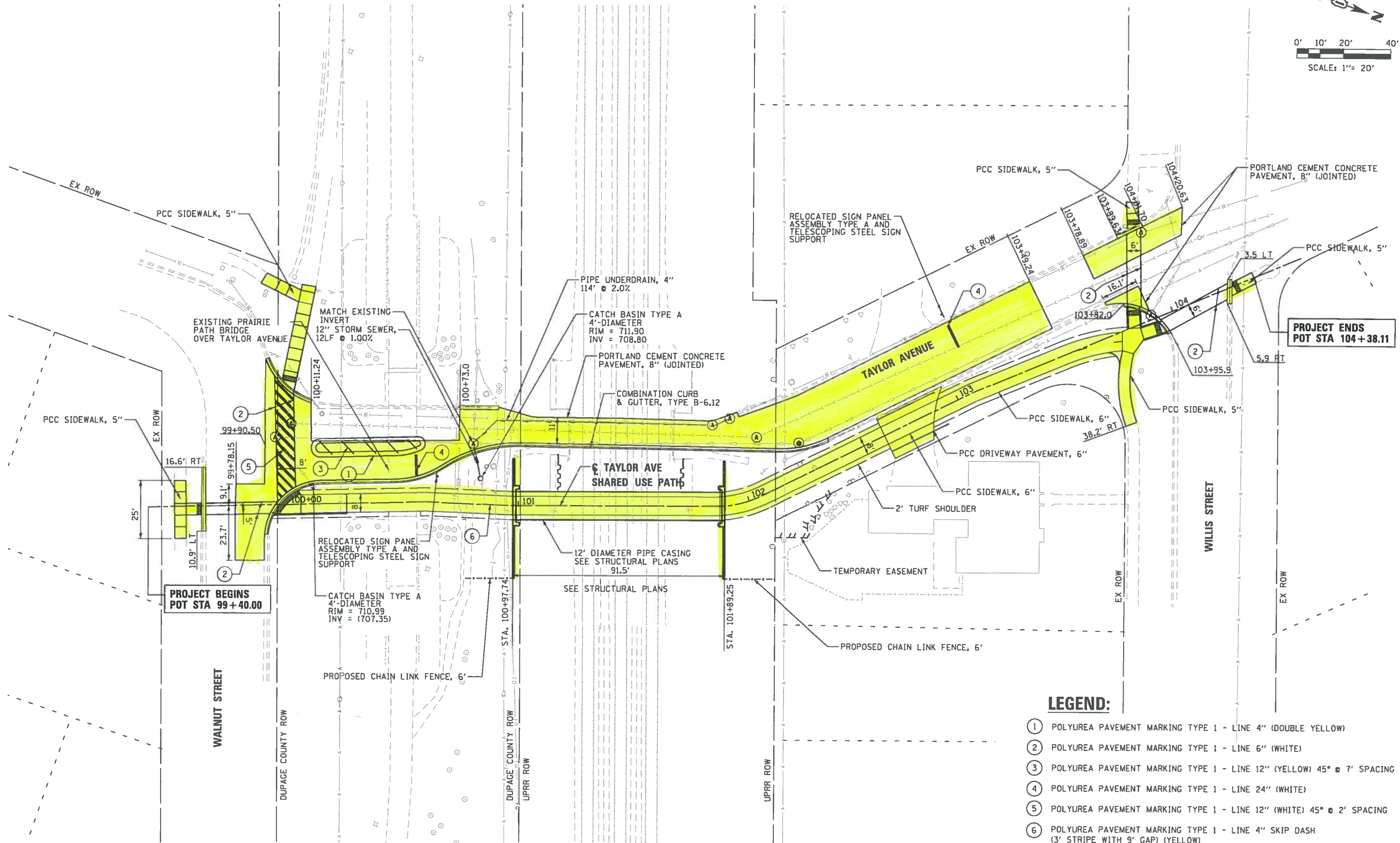
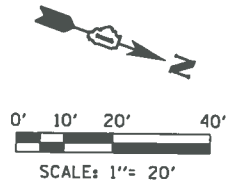
PROP. CURVE TAYLORPATH-2  
PI STA. = 100+83.13  
Δ = 15° 28' 45" (LT)  
D = 114° 35' 30"  
R = 50.00'  
T = 6.80'  
L = 13.51'  
E = 0.46'  
e = -----  
T.R. = -----  
S.E. RUN = -----  
P.C. STA = 100+76.34  
P.T. STA = 100+89.85

PROP. CURVE TAYLORPATH-3  
PI STA. = 101+95.81  
Δ = 26° 13' 19" (LT)  
D = 114° 35' 30"  
R = 50.00'  
T = 11.65'  
L = 22.88'  
E = 1.34'  
e = -----  
T.R. = -----  
S.E. RUN = -----  
P.C. STA = 101+84.16  
P.T. STA = 102+07.04

BIKE DESIGN SPEED: 16 MPH WITH A 20° LEAN ANGLE

Exhibit 5





**LEGEND:**

- ① POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (DOUBLE YELLOW)
- ② POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE)
- ③ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (YELLOW) 45° @ 7' SPACING
- ④ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 24" (WHITE)
- ⑤ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (WHITE) 45° @ 2' SPACING
- ⑥ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" SKIP DASH (3' STRIPE WITH 9' GAP) (YELLOW)
- Ⓐ FRAMES AND LIDS TO BE ADJUSTED (60300305)

Exhibit 5



Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-685-0450 Job No. 10507.01



|            |            |           |  |
|------------|------------|-----------|--|
| DESIGNED - | D. LEVIN   | REVISED - |  |
| DRAWN -    | D. LEVIN   | REVISED - |  |
| CHECKED -  | R. PARKS   | REVISED - |  |
| DATE -     | 11/27/2017 | REVISED - |  |

|           |  |
|-----------|--|
| REVISED - |  |
| REVISED - |  |
| REVISED - |  |
| REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN  
TAYLOR AVENUE

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. 99+40.00 TO STA. 104+38.11

| MUN  | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|------|----------------|--------|--------------|-----------|
| 2030 | 15-00079-00-BT |        |              |           |

ILLINOIS FED. AID PROJECT

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