INVITATION TO BID

Requesting:	Bid(s) for Traffic Signal Installation
Issue Date:	March 24, 2022
Pre-Bid Meeting:	N/A
Pre-Bid Meeting Location:	N/A
Last Date for Questions:	March 30, 2022, by 9:00 AM
Addendum Posted:	April 1, 2022, by 12:00 PM
Bids Due:	April 5, 2022, at 10:00 AM
Bid submission Website:	www.demandstar.com
Public Bid Opening:	Bids will be virtually opened and read aloud publicly on the same day and time by going to bids.oswegoil.org or call (312) 626-6799 just prior to the meeting. When prompted, enter passcode 812 5239 0580 from your phone. You will hear the audio of the meeting through our webinar service.
Note:	Project subject to the Illinois Prevailing Wage Act (820 ILCS 130/1-1.01, *et seq.*)

All questions concerning this solicitation shall be submitted via e-mail to the Purchasing Manager before the date stated above. A written response in the form of a public addendum may be published on the Village's website by the stated date above.

Contact with anyone other than via email to the Purchasing Manager for matters relative to the project described in this invitation to bid during the bidding process is prohibited.

Contact for this proposal:
Shanel Gayle, Purchasing Manager in writing at sgayle@oswegoil.org

TABLE OF CONTENTS

LEGAL NOTICE
INVITATION TO BID FOR TRAFFIC SIGNAL INSTALLATION

The Village of Oswego will be accepting sealed bids for Traffic Signal Installation until April5, 2022, at 10:00 AM local time. Bids will be virtually opened and read aloud publicly on the same day and time through bids.oswegoil.org.

Project Title: Invitation to Bid for Traffic Signal Installation.

Proposal No. 22-6070-007

Bids must be submitted electronically. All necessary documents are available through the Village's bid portal www.demandstar.com. Downloading documents and submitting Bids requires registration with "DemandStar." If you are not already a member, you can obtain a FREE AGENCY SUBSCRIPTION to the Village of Oswego's account by through www.demandstar.com/register.rsp. Instructions for DemandStar can be found on the Village's website www.oswegoil.org. Hard copy, emailed or faxed Bidswill not be accepted.

Infrequent or first-time users of electronic bidding are recommended to load their Bids at least twenty- four (24) hours prior to the due date. All technical questions regarding the use of DemandStar, must be emailed at least 48 hours before the due date to sgayle@oswegoil.org. All answers to questions related totechnical issues with DemandStar, will be provided within one business day.

Bidders are advised of the following requirements of this contract:

1. This Project is subject to the Illinois Prevailing Wage Act (820 ILCS 130) , and the Illinois Preference Act (30 ILCS 570);
2. A 5% bid bond must be submitted with the bid submitted on IDOT Local Public Agency Proposal Bid Bond form (BLR 12230);
3. 110% performance, labor and material payment bond on award of contract.

Questions regarding this legal notice or the proposal package must be in writing and emailed directly to sgayle@oswegoil.org on or before March 30, 2022, at 9:00 AM local time. Responses will be posted inDemandStar by April1, 2022, at 12:00 PM local time.

The bidder shall at all times observe and conform to all federal, state, and local laws, ordinances, and regulations, including those which may, in any manner, affect the preparation of bids or the performanceof the contract.

Shanel Gayle
Purchasing Manager

DESCRIPTION OF WORK

Construction of two (2) new traffic signal installations, traffic signal/railroad interconnect, traffic signal modification at three existing traffic signal installations, ADA sidewalk modifications, pavement marking and roadway signing, all on US Route 34 (Washington Street/Madison Street)

The work to be done under this contract includes but is not limited to all labor, materials, supervision, equipment, services, incidentals, and related items necessary to complete the work in accordance with the specifications and scope of work.

Specifications, Plans, and Illinois Department of Transportation forms are located in the appendices.

GENERAL CONDITIONS

1. Contractor Qualifications

The Contractor must be experienced in providing said services to local governments. Submitters that cannot demonstrate successful previous experience in the work in this bid will be considered not responsible and will not be considered for award of the contract.

The Contractor must possess (own or rent) and assure the availability of sufficient equipment and personnel to successfully pursue and professionally complete the work described in this invitation to bid.

The Contractor(s) or firm(s) performing the work shall meet the following qualifications.

1. Regulated Substances Monitoring. Qualification for environmental observation and field screening of regulated substances work and environmental observation of UST removal shall require either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements using BDE 2730.

   Qualification for each individual performing regulated substances monitoring shall require a minimum of one-year of experience in similar activities as those required for the project.

2. Underground Storage Tank Removal. Qualification for underground storage tank (UST) removal work shall require licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

3. The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

4. The Engineer will require up to 21 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 21 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field and documented using BDE 2730A "Regulated Substances Pre-Construction Plan (RSPCP) Addendum" and submitted to the Engineer for approval.

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2. Customer Service & Private Property

- Respect for the property is very important. The Contractor should consider specialized equipmentto minimize property damage.
- The Contractor shall be responsible for defending and satisfying any claims for driveway orsidewalk damage.
    - All driveways or sidewalks in the construction zone should be photographed by the Contractor prior to initiation of work.

- Said photographs will support defense by Contractor against claims for the same.
- Unresolved claims against the Contractor will delay approval of the final payment.

3. Work Schedule

The Contractor shall complete the work required as soon as practicable. The only exception to this requirement will be extenuating circumstances as may be accepted by the Village. Requests for exceptionsdue to extenuating circumstances must be made in writing to the Village within 48hours of the occurrence.The Village's decision to provide exceptions shall be made in its sole discretion, and any such decisions shall be final.

Subsequent to the award of the bid, at the commencement of weather conducive to providing these services, a notice to proceed shall be issued. The Contractor shall commence work as soon as possible thereafter.

Work will not be permitted on Sunday or the following legal holidays:

New Year's Day	Labor Day Martin Luther King's Birthday Veteran's Day
President's Day	Thanksgiving Day
Memorial Day	Day after Thanksgiving
Independence Day	Christmas Eve, ½ Day (afternoon)Christmas

DayAll work shall be prohibited during certain public events in said areas.

1. Safety Officer

- The Contractor shall provide a qualified Safety Officer contact for the Village to ensure work siteand personnel safety compliance.
- The Safety Officer shall address all concerns, and communicate resolution to the Village, within aone (1) hour window.

2. Method of Assignment

The Village may add, delete, or change the work locations or details of the marking layouts at any timeduring the work period, with at least two (2) working days prior notice to the Contractor.

3. Equipment

All equipment required to perform the contract is the sole responsibility of the Contractor and should beincluded in the bid. Multiple mobilizations are expected and will not be treated as extras.

4. Bid Bond

Each bid shall be accompanied by a bid bond in an amount of ten percent (10%) of the full amount of the bid in the form of a certified or bank cashier's check or bid bond. In a reasonable time after the bid opening,bid deposits of all except the three lowest responsible bidders will be released. The remaining deposits willbe released after the successful bidder has entered into the contract and furnished all necessary and requiredbonds and insurance documents. The bid deposit shall become the property of the Village if the successfulbidder within fourteen (14) days from awarding the contract refuses or is unable to comply with the contract requirements, not as a penalty, but as liquidated damages.

The bid bond must be uploaded with the bid documents through the Demandstar bid portal and the originalmust be mailed to: Village of Oswego, Attn. Shanel Gayle, Bid Bond, 100 Parkers Mill, Oswego, Il 60543.

5. Performance, Labor and Material Payment Bonds

The Public Construction Bond Act applies to this project, and all contractors shall fully comply with thisAct. A performance bond satisfactory to the Village, and in compliance with the Act, must be executed by a Surety Company authorized to do business in the State or otherwise secured in a manner satisfactoryto the Village. The Village requires that the performance bond be in an amount equal to 110% of the contract price specified. The surety on the bond shall be through a company licensed by the Illinois Department of Insurance authorizing it to execute surety bonds and the company shall have a financial strength rating of at least A as rated by A.M. Best Company, Inc., Moody's Investors Service, Standard & Poor's Corporation, or a similar rating agency.

The successful bidder shall furnish, at the time of execution of the contract, a performance bond for one hundred and ten percent (110%) of the full amount of the contract to guarantee the completion of any work to be performed by the Contractor under the contract, payment of material used in such work, and for all labor performed in completing the work including by subcontractors.

Proof of all required bonds and sureties must be emailed to sgayle@oswegoil.org and the original must be mailed (or otherwise delivered to: Village of Oswego, Attn. Shanel Gayle, Performance Bond,100 Parkers Mill, Oswego, Il 60543.

In the event the bidder fails to furnish the bonds and execute the contract within fourteen (14) days after notification of the award, then the bid bond shall be retained by the Village as actual liquidated damages and not as a penalty. It is agreed that the sum of the bid bond is a fair estimate of damages that the Village will sustain due to the bidder's failure to furnish the bonds or execute the contract.

6. Delivery of Materials

It shall be the Contractor's responsibility to ensure all materials and equipment are delivered within or adjacent to the area of installation or repair as specified by the Village.

The work described in this specification shall be done with the least inconvenience and the Contractor maybe required to complete the work on each parking lot in stages so access to the public buildings is maintained at an adequate level. The amount of time that normal operations are interrupted must be kept to an absolute minimum and shall be coordinated with the Village.

The Contractor is responsible always to protect all existing and newly installed work, materials, equipment, improvements, utilities, structures, and vegetation during the course of the project contract.

7. Injury to Property

In case any direct or indirect damage is done to public or private property by or because of the work, or inconsequence of any act or omission on the part of the Contractor, its employees or agents, the Contractorshall, at its own cost, restore such property to a condition similar or equal to that existing before such damage was done, by repairing, rebuilding, or otherwise restoring, as may be required by the Village, Failure by the Contractor to promptly restore or make good such damage, the Village may, upon 48 hourswritten notice, proceed to repair, rebuild, or otherwise restore the damaged property as may be necessary,and the cost thereof will be deducted from any monies due or to become due to the Contractor under the Contract; or the Village may deduct from any monies due to the Contractor a sum sufficient, in the judgment of the Village, to reimburse the owners of the property so damaged.

8. Decisions and Explanations by Village

The Village shall decide any and all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the manner of performance and rate of progress of the work and shall decide all questions which may arise as to the interpretations of any or all plans relating tothe work and of the specifications, and all questions, as to the acceptable fulfillment of the Contract on the part of the Contractor; the Village shall determine the amount and quantity of the several kinds of work performed and materials which are to be paid for under the Contract, and such decision and estimate shall be final and conclusive, and such estimate, in case any questions shall arise, shall be a condition precedent to the right of the Contractor to receive any money due under the Contract. Any doubt as to the meaning of any of the provisions of the specifications, contracts, or plans will be interpreted by the Village. The decision of the Village will be final.

INSTRUCTIONS TO BIDDERS

1. **Preparation and Submission of Bids:**
   A. Each bid shall be submitted on the exact form furnished by the Village through DemandStar. All blank spaces for bid prices, unit costs and alternates must be filled in using both words and figures if indicated. In case of any discrepancy in the amount Bid, the prices expressed in written words shall govern.
   B. Each Bidder must submit a complete Bid package, including the following items:
      a) **Signed Bid Sheet**
      b) **Detailed Exception Sheet**
      c) **Subcontractors List**
      d) **References**
      e) **Signed Contractor Bid Agreement**
      f) **Bid Bond (scanned and mailed)**
      g) **Documentation of compliance with**
      h) **Signed Contract or a statement of any exceptions to the contract which are conditions to acceptance. If the contract terms cannot be agreed to within fourteen (14) after bid acceptance, the Village will reject the bid and may proceed to award the contract to the next lowest responsible bidder.**

   C. Bidders may attach separate sheets to the Bid for the purpose of explanation, exception, alternate Bid and to cover unit prices, if needed.
   D. Bidders may withdraw their Bid either personally or by written request at any time before the hour set for the Bid opening and may resubmit a Bid. No Bid may be withdrawn or modified after the Bid opening except where the award of the contract has been delayed for a period of more than thirty (30) days.
   E. In submitting its Bid, the Bidder further declares that the only person or party interested in the bid as principals are those named therein; and that the Bid is made without collusion with any other person, firm or corporation.
   F. The Bidder further declares that it has carefully examined this entire Bid Package, and has familiarized itself with all of the local conditions affecting the contract and the detailed requirements of this work and understands that in making the Bid it waives all rights to plead a misunderstanding regarding same.
   G. The Bidder further agrees that if the Village decides to extend or shorten the work, or otherwise alters it by extras or deductions, including the elimination of one or more of the items, as provided in the specifications, it will perform the work as altered, increased or decreased.
   H. The Bidder further agrees that the Village representative may at any time during the progress of the work covered by this Contract, order other work or materials incidental thereto and that all such work and materials as do not appear in the Bid or contract as a specific item covered by a lump sum price, and which are not included under the Bid price for other items in the Contract, shall be performed as extra work subject to the unit prices, or an agreed upon amount in a lump sum contract.
   I. The Bidder further agrees to execute all documents within this Bid Package which are required to be provided with the Bid, and if its Bid is accepted to obtain a Certificate of Insurance for this work and execute and present all required documents within fifteen (15) day safter the receipt of the Notice of Award and the Contract.
   J. The Bidder further agrees that the Work will be substantially complete and ready for final payment inaccordance with the schedule parameters set forth in the Contract Documents, and to execute the work in such a manner and with sufficient materials, equipment and labor as will ensure its completion within the time limit specified within the Bid. The completion

within the time limit is anessential part of the contract.

K. By submitting a Bid, the Bidder understands and agrees that, if his Bid is accepted, and he fails to enter into a contract forthwith, he shall be liable to the Village for any damages the Village may thereby suffer and forfeits the Bidder's Bid bond as actual damages suffered by the Village.
L. No Bid will be considered unless the party offering it furnishes evidence satisfactory to the Village thatit has necessary facilities, ability, and pecuniary resources to fulfill the conditions of the Contract.

2. **Additional Information Request:** Questions regarding this Bid and specific questions regarding thespecifications in this Bid can be emailed to Shanel Gayle, Purchasing Manager, at sgayle@oswegoil.org. Answers may be provided in writing to all potential Bidders in the form of an Addenda posted on the Bid page; No oral comments will be made to any Bidder as to the meaning of the Bid and Specifications or other contract documents. Bidders will not be relieved of obligations dueto failure to examine or receive documents, visit the site or become familiar with conditions or facts of which the Bidder should have been aware, and the Village will reject all claims related to such failures.

   Information (other than in the form of a written Addendum issued by the Village) from any officer, agent, or employee of the Village or any other person shall not affect the risks or obligations assumedby the Bidder or relieve him from fulfilling any of the conditions and obligations set forth in the bid and other contract documents. Before the bids are opened, all modifications or additions to the bid documents will be made in the form of a written Addendum issued by the Village. Any Addendum issued will be posted on the Village's DemandStar website. In the event of a conflict with the originalcontract documents, addenda shall govern all other bid documents to the extent specified. Subsequentaddenda shall govern over prior addenda only to the extent specified.

   The Bidder shall be required to acknowledge receipt of the formal Addendum by signing the Addendum and including it with the Bid. Failure of a Bidder to include a signed formal Addendum in its Bid shalldeem its Bid non-responsive; provided that the Village may waive this requirement in its sole discretion.

3. **Conditions:** The Bidder is responsible for being familiar with all conditions, instructions, and documents governing this project and Bid. Failure to make such investigation and preparations shall not excuse the Contractor from the performance of the duties and obligations imposed under the termsof the contract. The Bidder acknowledges that local ordinance permits the Village to give preference to local businesses.

   A. The Village is exempt from Federal excise tax and the Illinois Retailer's Occupation Tax. This Bidcannot include any amounts of money for these taxes.

   B. To be valid, the Bids shall be itemized so that selection for purchase may be made, there is includedin the price of each unit the cost of delivery (FOB Destination).
   C. The Village shall reserve the right to add or to deduct from the Alternate Bid any item at the pricesindicated in the itemization of the Bid.
   D. All Bids shall be good, valid, and binding on the Bidder for thirty (30) days from the date of the Bidopening.
   E. Bidders are required to fully comply with the Illinois Prevailing Wage Act.

4. **Award of Bid:** The Village reserves the right to reject any or all bids or packages and to waive any informality or technical error and to accept any bid deemed most favorable to the interests of the Village.
   A. The items of work not specifically mentioned in the Schedule which are necessary and required tocomplete the work intended shall be done incidentally to and as part of the items of work for whicha unit price is given. No additional payment will be made for such incidental work. The Bidder shall be responsible for identifying all costs to complete the project on time in accordance with thePlans and Specifications.
   B. The Village has the sole discretion to award the alternate bid based upon the best interest of the Village.
   C. All awards are final determinations.
   D. The Contract shall be deemed as have been awarded when formal notice of award shall have been dulyserved upon the intended awardee.
   E. In addition to price, the Village will consider:
      - Ability, capacity, and skill to fulfill the contract as specified.
      - Ability to supply the commodities, provide the services or complete the work promptly, or withinthe time specified, without delay or interference.
      - Character, integrity, reputation, judgment, experience, and efficiency.
      - Quality of performance on previous contracts.
      - Previous and existing compliance with laws and ordinances relating to the contract.
      - Sufficiency of financial resources.
      - Quality, availability, and adaptability of the commodities, services or construction, in relation tothe Village's requirements.
      - Ability to provide future maintenance and service under the contract.
      - Number and scope of conditions attached to the Bid.
      - Record of payments for taxes, licenses or other monies due to the Village.
      - Other factors as deemed appropriate by the Village to ascertain the lowest responsible bidder and otherwise award the contract to the Bidder the Village determines to be in the Village's best interests.

5. **Rejection of Bids:**
   A. The Village reserves the right to cancel invitations for Bids or requests for bids without penalty when it is in the best interest of the Village. Notice of cancellation shall be sent to all individuals or entities solicited.
   B. The Village reserves the right to reject any or all Bids, to waive any minor informality or irregularityin any Bid, to negotiate changes and/or modifications with the lowest responsible Bidder and to make an award to the response deemed to be the most advantageous to the Village.
   C. Any Bid not conforming to the specifications or requirements set forth by the Village in the Bid request may be rejected.
   D. Bids may also be rejected if they are made by a Bidder that is deemed non-responsible due to a lackof qualifications, capacity, skill, character, experience, reliability, financial stability or quality of services, supplies, materials, equipment or labor.

6. **Equal Opportunity:** The Bidder will not discriminate against any employee or applicant for employment because of race, color, religion, sex, ancestry, national origin, place of birth, age, handicap or any other protected class pursuant state or federal law unrelated to bona fide occupational qualifications.

7. **Non-Discrimination:** The Bidder, its employees, and subcontractors agree not to commit unlawful discrimination and agree to comply with applicable provisions of the Illinois Human Rights Act, the U.S. Civil Rights Act and Section 504 of the Federal Rehabilitation Act, and rules applicable to each.

8. **Execution of Documents:** The Biddershall conform to the following requirements:
   A. Bids shall be signed by the Bidder. If the Bidder is a corporation, the proposal shall bear the name ofthe corporation, and shall be signed by an officer authorized to bind the corporation and be sealedwith the corporate seal.
   B. Bids that are signed for a partnership shall be signed by all of the partners or by an attorney-in- fact. If signed by an attorney-in-fact, there shall be attached to the Bid a power of attorney evidencingauthority to sign the Bid, executed by the partners.

CONTRACT FOR TRAFFIC SIGNAL INSTALLATION

In consideration of the mutual promises set forth below, the Village of Oswego, Illinois, a municipal corporationand political subdivision of the State of Illinois, (hereinafter "Village"), and _____ (hereinafter, "Contractor") enter into this Contract as of the_ day of _____ 2022, and hereby agree as follows:

The entire Bid Packet, together with all exhibits, specifications, attachments, and the Bidder's Bid, shall become a part of this Contract. The Village assumes that submission of a bid means that the person submitting the bid has familiarized himself with all conditions and intends to comply with them unless noted otherwise. Where the terms of this Contract conflicts with the terms of the Technical Specifications,the Technical Specifications shall control to the extent of the conflict.

1. **Definitions:** The definitions set forth in the Bid Packet are incorporated herein.

2. **Conditions:** The Contractor is responsible for being familiar with all conditions, instructions, warranties, and documents governing this project and Bid. Failure to make such investigation and preparations shall not excuse the Contractor from the performance of the duties and obligations imposed under the terms of this contract.

3. **Retainage During Guarantee Period:** Contractor shall be responsible for providing all reasonable access to Village employees and agents for inspection, re-inspection, and testing of the work. Until Final Payment, Contractor shall, promptly, and without charge, repair, correct, or replace any part ofthe Work that is defective, damaged, flawed, or unsuitable or that fails to strictly conform to the requirements of the Contract or Specifications.

4. **Billing/Invoicing.** All billing and invoicing will be at the completion of the job, or a portion thereof as agreed by the Parties, with detailed itemized billing. Billing will include the date, the work performed, and the total cost. After receipt of a correct invoice, payments shall be due and owing bythe Village in accordance with the terms and provisions of the Local Government Prompt Payment Act, 50 ILCS 505/1 et seq.

   If in the opinion of the Village, the Contractor has not or is not satisfactorily performing the work covered by this Contract, and within forty-eight (48) hours of receipt of a written notice and demand for performance from the Village, has not cured any defect in performance specifically itemized in such demand, the Village may, at its option:

   A. Withhold payment;
   B. Consider all or any part of this contract breached and terminate the Contractor; or
   C. May hire another Contractor to cure any defects in performance or complete all work covered bythis specification for the remaining term of this contract.

Any demand for performance shall be specifically delivered to the Contractor by personal delivery, or by certified or registered US Mail.

5. **Insurance and Bond Requirements.** Contractor shall procure and maintain for the duration of theContract insurance against claims for injuries to persons, damages to property, and other applicable damages that may arise in connection with the performance of work or servicesunder this Contract as follows:
   A. Minimum Scope of Insurance – The insurance coverage to be procured and maintained by Contractors shall be at least as broad as the following:
      i. Commercial General Liability Insurance. Commercial general liability insurance with minimum coverage amounts of $2,000,000 general aggregate; $2,000,000 products-completed operations aggregate; and $1,000,000 each occurrence for bodily injuries, death, and property damage, and personal injury resulting from any one occurrence, including the following endorsements, coverages, and/or conditions:
         1. Shall name the Village as an additional insured in accordance with the obligationsand conditions set forth below.
         2. Blanket contractual liability coverage, to the extent permitted under Illinois law, including, but not limited to, Contractor's contractual indemnity obligations underthe Agreement.
         3. Premises-Operations and Independent Contractors.
         4. Broad form property damage coverage.
         5. Personal injury coverage.
         6. Must be endorsed as Primary and Non-Contributory as to any other insurance ofthe Additional Insureds.
         7. If the Additional Insureds have other insurance that is applicable to the loss, such other insurance shall be on an excess or contingent basis to any Subcontractor's policy.
      ii. Comprehensive Automobile Liability Insurance. Comprehensive automobile liability insurance with minimum coverage amounts of $1,000,000 any one accident for bodily injuries, death, and property damage resulting from any one occurrence, including all owned, hired, and non-owned vehicles.
      iii. Workers' Compensation and Employers Liability Insurance. Statutory Workers' Compensation coverage complying with the law of the State of Illinois and Employers' Liability Insurance with minimum limits at $1,000,000 each accident, including occupational disease coverage with a limit of $1,000,000 per employee, subject to policyminimum limit of $1,000,000 per annum.
      iv. Umbrella / Excess Liability Insurance Umbrella / Excess Liability Insurance. Umbrella or excess liability insurance is written over the underlying employer's liability, commercial general liability, and automobile liability insurance described above with minimum coverage amounts of $2,000,000 per occurrence and $2,000,000 general aggregate, with coverage at least as broad as the underlying policies.

   B. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Village, its officials, employees, agents, and volunteers; or the Contractor shall procure a bond guaranteeingpayment of losses and related investigation, claim administration and defense expenses.

   C. Contractor's Obligations. The Contractor shall have the following obligations with regard to required insurance under the Agreement:

i. The insurance policies required under this Agreement shall be endorsed to contain the following provisions: the Village and its officers, officials, employees, agents, and volunteers are to be covered as additional insureds on each of the policies with respect to liability arising out of ongoing and completed operations performed by or on behalf of theContractor, including materials, parts, or equipment furnished in connection with such work or operations and automobiles, owned, leased, hired or borrowed by or on behalf of the Contractor. General liability coverage shall be provided in the form of an endorsement to Contractor's insurance at least as broad as ISO Form CG 20 10 11 85, or if not available, through both ISO Form CG 20 10, or CG 20 26 and CG 2037; 10 01 Edition date. All additional insured coverage shall be for both ongoing and completed operations.

ii. The Contractor shall provide evidence of the required insurance coverages under this Agreement by providing a copy of the actual policy/policies, endorsement(s)and certificates of insurance evidencing such coverages. All certificates of insurance requiredto be obtained by the Contractor shall provide those coverages under the policies named shall not be canceled, modified, reduced or allowed to expire without at least thirty (30) days prior written notice given to the Village. All certificates evidencing coverage extended beyond the date of final payment shall be provided at the time of the final Pay Request.

iii. The Contractor shall provide immediate notice to the Village upon the cancelation of anyinsurance policy or policies required hereunder.

iv. All insurance required of the Contractor shall state that it is Primary and Non-Contributory Insurance as to all additional insureds with respect to all claims arising out of operations by or on their behalf. If the Village has other applicable insurance coverages,those coverages shall be regarded as excess over the additional insured coverage. Contractor shall, with respect to all insurance required under this Agreement, endorse or require each policy to waive any and all rights of subrogation for losses and or damages arising from the work and/or services provided by the Contractor against the Village or other Additional Insured except where not permissible by law.

v. The Contractor shall require that every Subcontractor of any tier working on the Project associated with this Agreement to obtain insurance of the same types and amounts as thatrequired of Contractor, naming the same as additional insureds subject to the same restrictions and obligations as set forth in the Contractor's insurance required under the Agreement, including waivers of subrogation in favor of the Village.

vi. Under no circumstances shall the Village be deemed to have waived any of the insurancerequirements of this agreement by any act or omission, including, but not limited to:
    1. Allowing work by the Contractor or any Subcontractor of any tier to start before receipt of the required insurance policy, endorsement, and/or certificates of insurance; or
    2. Failure to examine, or to demand the correction of any deficiency, of any insurancepolicy, endorsement, and/or certificate of insurance received.

vii. The Contractor agrees that the obligation to provide insurance is solely the responsibilityof the Contractor and the Subcontractors of any tier and cannot be waived by any act or omission of the Village.

viii. The purchase of insurance by the Contractor under this Agreement shall not be deemed tolimit the liability of the Contractor in any way, for damages suffered by the Village in excess of policy limits or not covered by the policies purchased by the Contractor.

ix. The Contractor shall notify the Village, in writing, of any possible or potential claim forpersonal injury or property damage arising out of the work and/or services of this Agreement promptly whenever the occurrence giving rise to such a potential claim

becomes known to the Contractor.

x. The Contractor further agrees to cause contractual liability endorsements to be issued bythe insurance companies and attached to the above-mentioned policies to include under the coverage therein an extended obligation on the part of the insurers to insure against Contractor's contractual liability hereunder and to indemnify the Village and its agents against loss, liability, costs, expenses, attorneys' fees, and court costs, and further agreesthat said coverage shall be afforded therein against all claims arising out of the operationof any structural work law or law imposing liability arising out of the use of scaffolds, hoists, cranes, stays, ladders, supports, or other mechanical contrivances.

xi. All insurance and performance and payment bonds required hereunder shall be placed with an insurer or insurers authorized to conduct business in the State of Illinois with acurrent A.M. Best's rating of no less than A, unless otherwise deemed, in writing, acceptable to the Village.

6. **Indemnification.** To the fullest extent permitted by Illinois law, Contractor shall indemnify, defend, save and hold the Village, their trustees, officers, and employees harmless from and against all claims, damages, losses, and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from performance of the work and/or services under the Agreement, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, anyone directly or indirectly employed by Contractor, or anyone for whose acts Contractor may be liable, regardless of whether ornot such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnitythat would otherwise exist as to a party or person described in this Section.

7. **Force Majeure.** Whenever a period of time is provided for in this Agreement for the Contractor or the Village to do or perform any act or obligation, neither party shall be liable for any delays or inability to perform if such delay is due to a cause beyond its control and without its fault or negligence including, without limitation: a) Acts of nature; b) Acts or failure to act on the part of anygovernmental authority other than the Village or Contractor, including, but not limited to, enactment of laws, rules, regulations, codes or ordinances subsequent to the date of this Agreement; c) Acts or war; d) Acts of civil or military authority; e) Embargoes; f) Work stoppages, strikes, lockouts, or labor disputes; g) Public disorders, civil violence, or disobedience; h) Riots, blockades, sabotage, insurrection, or rebellion; i) Epidemics or pandemics; j) Terrorist acts; k) Fires or explosions; l) Nuclear accidents; m) Earthquakes, floods, hurricanes, tornadoes, or other similar calamities; n) Major environmental disturbances; or o) Vandalism. If a delay is caused by any of the force majeurecircumstances set forth above, the time period shall be extended for only the actual amount of time said the party is so delayed. Further, either party claiming a delay due to an event of force majeure shall give the other party written notice of such event within three (3)business days of its occurrence,or it shall be deemed to be waived.

8. **Liquidated Damages.** Time is of the essence in the performance of this Contract. Should the Contractor fail to complete the work within the specified time stipulated in the contract or within such extended time as may have been allowed, the Contractor shall be liable and shall pay to the Village the amount of $500.00, not as a penalty but as liquidated damages, for each day of overrun inthe contract time or such extended time as may have been allowed. The liquidated damages for failure to complete the contract on time are approximate, due to the impracticality of calculating and proving actual delay costs. These deductions are for the cost of delay to account for administration, engineering, inspection, supervision, and other costs and expenses during periods of extended and delayed performance. The costs of delay represented by this schedule are understood to be a fair and reasonable estimate of the costs that will be borne by the Village during an extended and delayed performance by the Contractor of the work.

9. **Contract Term.** The Contract shall begin upon contract approval and terminate upon completion ofwork.

10. **Change Orders.** After the contract is awarded, additional purchases or modifications may be madeunder the contract, or the terms of the contract may be extended, without rebidding the materials, supplies, services or equipment involved, provided that the change order:
    A. Is not of such a size or nature as to undermine the integrity of the original Bidding process; and
    B. Is germane to the original contract; and
    C. Does not exceed twenty percent (20%) of the originally contracted amount; and
    D. It is approved by the Board of Trustees, or in the event the change order is for less than twenty-five thousand dollars ($25,000.00), by the Village Administrator.

11. **Compliance with Laws and Regulations.** In addition to the bid and performance bonds set forth above, the Contractor must furnish and pay for satisfactory any other security required by law or bythe specifications for this particular project. Upon receipt of the performance bond, the Village willreturn the Bid bond to the Contractor. In addition:
    A. The Contractor must comply with all applicable laws prerequisite to doing business in the state.
    B. The Contractor must have a valid Federal Employer Tax Identification Number or Tax Identification Number (for individuals).
    C. The Contractor must provide a Statement of Compliance with provisions of the State and FederalEqual Opportunity Employer requirements.
    D. The Contractor must provide evidence of any professional or trade license required by law or local ordinance for any trade or specialty area in which the Contractor is seeking a contract award. Additionally, the Contractor must disclose any suspension or revocation of such license held by the company, or of any director, officer or manager of the company. Any material changes to the Contractor's status, at any time, must be reported in writing to the Village within14 days of its occurrence.
    E. Contractor is solely responsible for procuring all necessary permits, licenses, and other governmental approvals and authorizations necessary in connection with the Project.

12. **Independent Contractor.** There is no employee/employer relationship between the Contractor and the Village. Contractor is an Independent Contractor and not the Village's employee for all purposes,including, but not limited to, the application of the Fair Labors Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the

Federal Unemployment Tax Act, the Prevailing Wage Act, or the Worker's Compensation Act (820 ILCS 305/1, et *seq.*). The Village will not (i) provide any form of insurance coverage, including but not limited to health, worker's compensation, professional liability insurance, or other employee benefits, or (ii) deduct any taxes or related items from the monies paid to Contractor. The performance of the services described herein shall not be construed as creating any joint employmentrelationship between the Contractor and the Village, and the Village is not and will not be liable for any obligations incurred by the Contractor, including but not limited to unpaid minimum wages and/or overtime premiums, nor does there exist an agency relationship or partnership between the Village and the Contractor.

13. **Approval and Use of Subcontractors.** The Contractor shall perform the Services with its own personnel and under the management, supervision, and control of its own organization unless otherwise approved by the Village in writing. All subcontractors and subcontracts used by the Contractor shall be at the discretion of the Village and approval in advance by the Village. The Village's approval of any subcontractor or subcontract shall not relieve the Contractor of full responsibility and liability for the provision, performance, and completion of the Work in full compliance with, and as required by or pursuant to, this Contract. If the Contractor chooses to use subcontractors to perform any of the Work, the Work performed under any subcontract.

    shall be subject to all of the provisions of this Contract in the same manner as if performed by employees of the Contractor. Every reference in this Contract to "Contractor" shall be deemed to alsoapply to all subcontractors of the Contractor. Every subcontract entered into by the Contractor to provide the Work, or any part thereof shall include a provision binding the subcontractor to all provisions of this Contract.

    If any personnel or subcontractor fails to perform the part of the Work undertaken by it in a manner satisfactory to the Village, the Contractor shall immediately upon notice from the Village remove and replace such personnel or subcontractor. The Village shall have no claim for damages, for compensation in excess of the contract price, or for a delay or extension of the contract time as a resultof any such removal or replacement.

14. **Waiver of Lien**. The Contractor shall, from time to time at the Village's request, but in any event priorto Final Payment, provide to the Village such receipts, releases, certifications, and other evidence as necessary to establish that there are no liens against the Work or the public funds held by the Village.This shall not operate to relieve the Contractor's surety or sureties from any of their obligations underthe Bonds, or vest any right, interest, or entitlement fin any subcontractor or supplier.

15. **Assignment.** Neither the Village nor the Contractor shall assign or transfer any rights orobligations under this Agreement without the prior written consent of the other party.

16. **Governing Law.** This Contract and the rights of the Village and Contractor under this Contract shallbe interpreted according to the internal laws of the State of Illinois. The venue for any action related to this Contract will be in the Circuit Court of Kendall County, Illinois.

17. **Changes in Law.** Unless otherwise explicitly provided in this Contract, any reference to lawsshall include such laws as they may be amended or modified from time to time.

18. **Time.** The Contract Time is of the essence in the performance of this Contract. Except where otherwise stated, references in this Contract to days shall be construed to refer to calendar days.

19. **Termination.** The Village shall have the right at any time and for any reason (without any penalty) toterminate, in whole or in part, this Contract, provided that the Village shall provide Contractor at leastthirty (30) days' prior written notice of such termination whereupon this Agreement shall automatically terminate immediately after the 31st day. Upon receipt of the termination notice Contractor shall stop all work.
    A. When this contract, or any portion hereof, is terminated or canceled by the Village, and the Contractor released before all items of work included in this contract has been completed, paymentmay be made be prorated as a percentage of completion of the actual work at contract unit prices, and no claims for loss of anticipated profits or other damages will be made and are hereby waived.
    B. Termination of a contract, as stated above, will not relieve the Contractor or his/her surety of the responsibility of replacing defective work or materials.

20. **Piggybacking Clause.** This contract's unit prices may be used to purchase supplies, equipment or perform any like work on facilities or properties under the jurisdiction of the Village of Oswego. This Contract may also be used as a joint purchase agreement between the Village, Oswego Community School District 308, Oswego land Park District, Oswego Library District, Oswego Township, Oswego Fire Protection District, as well as any other agencies at the discretion of the Village.

21. **Severability**. The provisions of this Contract shall be interpreted when possible, to sustain their legality and enforceability as a whole. In the event any provision of this Contract or the Contract Documents shall be held invalid, illegal, or unenforceable by a court of competent jurisdiction, neitherthe validity of the remaining part of such provision or of any other provisions of this Contract shall beaffected.

22. **Amendments**. No modification, addition, deletion, revision, alternation, or any other change to thisContract shall be effective unless and until such change is reduced to writing and executed by the Village and Contractor.

23. **Additional Items.** The Contractor hereby**:**
    C. Certifies that it is not barred from Bidding or contracting with the Village as a result of a violationof either Paragraph 33E-3 (Bid rigging) or 33E-4 (Bid rotating) of Act 5, Chapter 720 of the Illinois Compiled Statutes regarding criminal interference with public contracting; and
    D. Swears under oath that it is not delinquent in the payment of any tax administered by the IllinoisDepartment of Revenue as required by Chapter 65, Act 5, paragraph 11-42.1 of the Illinois Compiled Statutes; and
    E. States that is has a written sexual harassment policy as required by the Illinois Human Rights Act(775 ILCS 5/2-105(A) (4) a copy of which shall be provided to the Village upon request; and
    F. Agrees to comply with the requirements of the Illinois Human Rights Act regarding Equal Employment Opportunities as required by Section 2-105 of the Illinois Human Rights Act (775 ILCS 5/2-105) and agrees to comply with the Equal Employment Opportunity Clause, Section 750, Part 750, Chapter X, Subtitle B of Title 44 of the Illinois Administrative Code incorporatedherein by reference; and
    G. Agrees to comply with the civil rights standards set forth in Title VII of the Civil Rights Act as mandated in Executive Order No. 11246, U.S.C.A. Section 2000e n.114 (September

24, 1965);and

H. Agrees to comply with the Substance Abuse Prevention on Public Works Projects Act(820 ILCS265/1 et seq.) if this project is a "public work" within the meaning of the Illinois Prevailing Wage Act (820 ILCS 130/.01 et seq.) and prohibit substance abuse while performing such work and has a substance abuse prevention program; and
I. Agrees to provide a drug-free workplace pursuant to the Drug-Free Workplace Act (30ILCS 580/1et seq.) (25 or more employees under a contract of more than $5,000 or for individuals only when greater than $5,000); and
J. Agrees to comply with the Employment of Illinois Workers on Public Works Act (30 ILCS 570/0.01 et seq.) and employ Illinois laborers if at the time of this contract is executed or if during the term of this contract there is excessive unemployment in Illinois as defined in the Act.

[SIGNATURE PAGE FOLLOWS]

CONTRACT SIGNATURES

IN WITNESS WHEREOF the parties hereto have executed or caused to be executed by their duly authorized agents, this contract in DUPLICATE, each of which shall be deemed original, on the day and year first written.

Village of Oswego, Illinois,

By: _____
Village President

Attest:

_____
Village Clerk

CONTRACTOR:

By: _____
Signature

_____
Print Name and Title

Attest:

_____
Witness

BID COST SHEET

The undersigned, having examined the specifications, and all conditions affecting the specified project,offer to furnish all services, labor, and incidentals specified for the price below.

Quantities will be separated per location group and invoiced separately.

I (We) propose to complete the following project as more fully described in the specifications for thefollowing:

Base Bid: All work associated with the ITB for Traffic Signal Installation (Total from Form BLR 12201) for the contract sum of:

$ _____

Company Name	
Printed Name of Authorized Representative	*Title*
Signature of Authorized Representative	*Date*

DETAIL EXCEPTION SHEET

Any exception must be clearly noted on this sheet. Failure to do so may be the reason for rejection of the bid. It is not our intention to prohibit any potential Contractor from bidding by virtue of the specifications, but to describe the material(s) and service(s) actually required.

The Village reserves the right to accept or reject any or all exceptions. Contractor's exceptions are:

EQUIPMENT LIST

Name	Make	Model	Year	Use

SUBCONTRACTOR LISTING

Provide the name, contact information, and value of work for each and every subcontractor which will beemployed on this project.

Subcontractor No. 1

Business Name

Address *City, State, Zip Code*

Contact Person *Telephone Number*

Value of Work *Nature of Work*

Subcontractor No. 2

Business Name

Address *City, State, Zip Code*

Contact Person *Telephone Number*

Value of Work *Nature of Work*

Subcontractor No. 3

Business Name

Address *City, State, Zip Code*

Contact Person *Telephone Number*

Value of Work *Nature of Work*

REFERENCES

Enter below current business references for whom you have performed work similar to that required by this bid.

Reference No. 1

Business Name

Address *City, State, Zip Code*

Contact Person *Telephone Number*

Dates of Service *Nature of Work*

Reference No. 2

Business Name

Address *City, State, Zip Code*

Contact Person *Telephone Number*

Dates of Service *Nature of Work*

Reference No. 3

Business Name

Address *City, State, Zip Code*

Contact Person *Telephone Number*

Dates of Service *Nature of Work*

CONTRACTOR BID AGREEMENT

TO:

Village of Oswego
100 Parkers Mill
Oswego, IL 60543

Project Name: Traffic Signal Installation

The undersigned Bidder, in compliance with your advertisement for Bids for work as specified, and related documents prepared by or at the direction of the Village of Oswego, Owner, and being familiar with all conditions surrounding the work, including availability of labor and material, do hereby propose to furnish materials, labor, equipment, and servicesand pay for same and shall perform all work required for the completion of the Project, in accordance with the Contract documents and at the price provided.

Bidder certifies this Bid to be for the project described in the Instruction to Bidders document and to bein accordance with plans, specifications, and Contract Documents, including the invitation for Bids.

In no event shall any delays or extensions of time be construed as cause or justification for payment ofextra compensation to the Contractor. Any claims for an increase of the Contract time shall be made inwriting to the Village within seven (7) days of the cause.

Company Name	
Address	*City, State, Zip Code*
Phone Number	*Email Address*
Printed Name of Authorized Representative	*Title*
Signature of Authorized Representative	*Date*

APPENDIX B

SPECIFICATIONS

TABLE OF CONTENTS

STATE OF ILLINOIS

_____

SPECIAL PROVISIONS

The following Special Provisions supplement the “Standard Specifications for Road and Bridge Construction, Adopted April 1, 2016”, the latest edition of the “Manual on Uniform Traffic Control Devices for Streets and Highways”, the “American National Standard Practice for Roadway Lighting, IES/IESNA RP-10,” the latest edition of the “National Electrical Code”, the latest edition of the “Standard Specifications for Water and Sewer Main Construction in Illinois”, the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein, which apply to and govern the construction of US Route 34 (Washington Street and Madison Street), in Kendall County, and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

PERMIT NO: _____

LOCATION OF PROJECT

This project is located on US Route 34 (Washington and Madison Streets) between Illinois Route 31 and Illinois Route 25/Jefferson Street at the intersections of Harrison Street, Main Streets and Washington Street/Madison Street within the Village of Oswego, Kendall County, Illinois. US Route 34 (Washington Street and Madison Street) is under the jurisdiction the Illinois Department of Transportation, Region 2, District 3. Harrison and Main Streets are under the jurisdiction of the Village of Oswego. The total length of the project is 3,315 feet (0.63 miles).

DESCRIPTION OF PROJECT

The project consists of the installation of two (2) new traffic signals at the intersections of US Route 34 (Washington Street) at Harrison and Main Streets. The project also includes traffic signal modifications at the intersection of US Route 34 (Washington Street) at US Route 34 (Madison Street), and traffic signal interconnect with the intersections at Illinois Route 31/US Route 34, Washington Street/Madison Street, Illinois Route 25 (Madison Street)/Jefferson Street; railroad interconnect with the existing railroad crossing gates/signals at the Illinois Railway Railroad; traffic signal modifications at US Route 34 (Washington Street)/Washington Street at US Route 34 (Madison Street)/Madison Street to add Flashing Yellow Arrow (FYA) signalization; and sidewalk and sidewalk ramp modification for ADA compliance.

COMPLETION DATE PLUS WORKING DAYS

Revise Article 108.05 (b) of the Standard Specifications as follows:

> "When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by **11:59 PM** on, **November 17, 2022**, except as specified herein.
>
> The Contractor will be allowed to complete all clean-up work and punch list items within 7 working days after the completion date for opening the roadway to traffic. Under extenuating circumstances, the Engineer may direct that certain item of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for cleanup work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

Article 108.09 or the Special Provision for “Failure to Complete the Work on Time”, if included in this contract, shall apply to both the completion date and the number of working days.

INTERIM COMPLETION DATE

Revise Article 108.05 (a) of the Standard Specifications as follows: "When interim completion dates are specified, the Contractor shall substantially complete all contract items deemed necessary by Engineer to safely open the roadway to traffic on or before the specified date. The Special Provision for Failure to Complete the Work on Time shall apply to the interim completion dates. The allowable start dates, and interim completion date(s) are as follows:

- ANTICIPATED START APRIL 1, 2022
- HARDSCAPE AND UNDERGROUND TRAFFIC SIGNAL WORK COMPLETION DATE: AUGUST 31, 2022

This work shall include setting up traffic control, curb and gutter removal and replacement, sidewalk/brick paver removal and replacement, and traffic signal conduit installation, concrete foundation and concrete handhole construction. Not included in this work is installation of traffic signal cabling, installation of traffic signal equipment such as cabinets, posts, mast arms poles and assemblies, signal heads and all other associated equipment, sign installation, pavement marking and landscaping items. Pavement marking must be completed by November 15, 2022.

STATUS OF UTILITIES TO BE ADJUSTED
(Effective January 1, 2007; Revised January 24, 2011)

Name & Address of Utility	Type	Location	Estimated Date Relocation Complete
AT&T 1000 Commerce Drive Oak Brook, Illinois 60523 Attn: Janet Ahern (630) 573-6414	Buried Copper (Conduit)	Within ROW, along north side of US 34 (Washington Street) from IL 31 to Madison Street	No relocations anticipated.
	Buried Copper (Conduit)	Outside ROW, along east side of US 34 (Madison Street) from Washington Street to IL 25 (Madison Street)/Jefferson Street	No relocations anticipated.
	Buried Copper (Conduit)	Within ROW, along west side of Harrison Street from Washington Street to approx. 100 feet north and south of Washington Street.	No relocations anticipated.
	Buried Copper (Conduit)	Outside ROW, from Washington Street to approx. 150 feet north of Washington Street, approx. 100 feet west of Main Street.	No relocations anticipated.
	Buried Copper (Conduit)	Outside ROW, from Washington Street to approx. 150 feet north of Washington Street, approx., alley 150 feet east of Main Street.	No relocations anticipated.
	Aerial Copper	Outside ROW, from Washington Street to Jefferson Street, north of Washington Street, approx., alley	No relocations anticipated.

Name & Address of Utility	Type	Location	Estimated Date Relocation Complete
		150 feet east of Main Street	
	Buried Copper	Outside ROW, from Washington Street to Jefferson Street, north of Washington Street, approx., alley 150 feet east of Main Street	No relocations anticipated.
	Underground Fiber Optic	Within ROW, along north side of US 34 (Washington Street) from approx. 100 feet west of Main Street to approx. 150 feet of Main Street	No relocations anticipated.
ComEd Company 1N423 Swift Road Lombard, Illinois 60148 Attn: Pete Kratzer (630) 424-5704	Aerial	Within ROW, along north side of US 34 (Washington Street) from IL 31 to alley (approx. 100 feet west of Main Street)	No relocations anticipated.
	Aerial	Within ROW, along west side of Harrison Street from northwest corner of Harrison Street and US 34 (Washington Street) extending south.	**Relocation anticipated at southwest corner of Harrison Street and US 34 (Washington Street)**
	Aerial	Within ROW, along north side of US 34 (Washington Street) from alley approx. 150 feet east of Main Street extending east of Madison Street	No relocations anticipated.
		Within ROW, along east side of US 34 (Madison Street) from to approx. 100 feet north of	

		Washington Street to approx. 100 feet south IL 25/Jefferson Street	
Name & Address of Utility	Type	Location	Estimated Date Relocation Complete
	Aerial	Within ROW, along east side of US 34 (Madison Street) from IL 25/Jefferson Street extending north of IL 25/Jefferson Street	No relocations anticipated.
	Aerial	Within ROW, along west side of Harrison Street crossing US 34 (Washington Street)	No relocations anticipated.
	Aerial	Within ROW, along west side of Adams Street crossing US 34 (Washington Street)	No relocations anticipated.
	Aerial	Within ROW, crossing US 34 (Washington Street), approx. 150 feet east of Main Street	No relocations anticipated.
MCI – Verizon 1701 Golf Road, Tower 2, Floor 7 Rolling Meadows, IL 60008 Attn: Bob Vezina (847) 378-9044		Within ROW, along north side of US 34 (Washington Street) from approx. 100 feet west of Main Street to approx. 150 feet of Main Street	No relocations anticipated.
Metro Fibernet 3701 Communications Way Evansville, Indiana 47715 Attn: Korie Nellis (812) 475-9820	Aerial	Within ROW, along north side of US 34 (Washington Street) from approx. IL 31 to Harrison Street	No relocations anticipated.
Midwest Fiber Networks 6070 N. Flint Road Glendale, WI 53209	Underground	Within ROW, along north side of US 34 (Washington Street)	No relocations anticipated.

Attn: Nate Wright (414) 359-3546		from approx. IL 31 to Adams Street Crossing within ROW US 34 (Washington Street) at Adams Street	 No relocations anticipated.
Name & Address of Utility	Type	Location	Estimated Date Relocation Complete
Nicor Gas 1844 Ferry Road Naperville, Illinois 60563-9600 Attn: Bruce Koppang (630) 983-8676	2” Underground	Within ROW, along south side of US 34 (Washington Street) from approx. IL 31 continuing through Madison Street	No relocations anticipated.
	2” Underground	Within ROW, along west side of Harrison Street north, south of and crossing US 34 (Washington Street)	No relocations anticipated.
	2” Underground	Within ROW, along east side of Harrison Street south of US 34 (Washington Street)	No relocations anticipated.
	6” Underground	Within ROW, along west side of Adams Street north of and crossing US 34 (Washington Street)	No relocations anticipated.
	2” Underground	Outside ROW, along alley (approx. 150 feet west of Main Street) north of and crossing US 34 (Washington Street)	No relocations anticipated.
	6” Underground	Within ROW, along west side of US 34 (Madison Street) from Washington Street to Jackson Street	No relocations anticipated.
	2” Underground	Within ROW, along east side of US 34 (Madison Street)	No relocations anticipated.

		from Jackson Street through Jefferson Street	
	6” Underground	Within ROW, along north side of Jackson Street crossing US 34 (Madison Street)	No relocations anticipated.
Village of Oswego 100 Parkers Mill Oswego, Illinois 60543 Attn: Susan Quasney (630) 554-3242	10” Watermain	Within ROW, along east side of Harrison Street north, south of and crossing US 34 (Washington Street)	No relocations anticipated.
	6” Watermain	Within ROW, along south side of US 34 (Washington Street) from approx. Main Street to Madison Street	No relocations anticipated.
	6” Storm Sewer	Within ROW, along center of Main Street north, south and crossing US 34 (Washington Street)	No relocations anticipated.
	8” Storm Sewer	Within ROW, along center of US 34 (Washington Street) from Main Street to Madison Street	No relocations anticipated.
	18” Storm Sewer	Within ROW, along center of Main Street north, south and crossing US 34 (Washington Street)	No relocations anticipated.

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Section 102 and Articles 105.07, 107.20, 107.37, 107.38, 107.39, 107.40, and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply. The estimated utility relocation dates should be part of the progress schedule submitted by the Contractor.

TRAFFIC CONTROL IN THE VICINTY OF A RAILROAD GRADE CROSSING
(Effective August 4, 2017)

In accordance with Chapter 8 of the Manual on Uniform Traffic Control Devices (MUTCD): When a grade crossing exists either within or in the vicinity of a temporary traffic control zone, lane restrictions, flagging (see Chapter 6E of the MUTCD), or other operations shall not be performed in a manner that would cause highway vehicles to stop on the railroad or LRT tracks, unless a flagger or uniformed law enforcement officer is provided at the grade crossing to minimize the possibility of highway vehicles stopping on the tracks, even if automatic warning devices are in place. See figure 6H-46 and associated notes of the MUTCD regarding the temporary traffic control in the vicinity of the railroad grade crossing. Basis of Payment. The cost of the additional flagger and any additional signs, if necessary, will not be paid for separately, but shall be included in the cost of associated traffic control items.

RESTORATION OF WORK AREA (D-3)
(Effective April 1, 2003; Revised July 31, 2020)

The Contractor shall restore the work area as specified in Article 104.06 of the Standard Specifications. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. Restoration of the work area will not be paid for separately but shall be included in the cost of the associated pay items.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

Description. This work shall consist of the removal and disposal of regulated substances according to Section 669 of the Standard Specifications as revised below.

Contract Specific Work Areas. The excavated soil and groundwater within the work areas listed below shall be managed as either "uncontaminated soil", hazardous waste, special waste or non-special waste. For stationing, the lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit, whichever is less.

Soil Disposal Analysis. When the waste material requires sampling for landfill disposal acceptance, the Contractor shall secure a written list of the specific analytical parameters and analytical methods required by the landfill. The Contractor shall collect and analyze the required number of samples for the parameters required by the landfill using the appropriate analytical procedures. A copy of the required parameters and analytical methods (from landfill email or on landfill letterhead) shall be provided as Attachment 4A of the BDE 2733 (Regulated Substances Final Construction Report). The price shall include all sampling materials and effort necessary for collection and management of the samples, including transportation of samples from the job site to the laboratory. The Contractor shall be responsible for determining the specific disposal facilities to be utilized; and collect and analyze any samples required for disposal facility acceptance using a NELAP certified analytical laboratory registered with the State of Illinois.

The following contract specific work areas shall be monitored by the Environmental Firm for soil contamination and workers protection.

PESA 4068-COV
No special provisions issued

PESA 3716

Site 3716-2 – Vacant Lot, 59 S. Adams Street, Oswego, Kendall County

- Station 107+80 to Station 107+90 40 to 50 feet LT. All excavation in the northeast quadrant of US 34 and Harrison Street: The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(1). Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.
- Groundwater is expected to be encountered below a depth of three to five feet below ground surface. Groundwater that cannot be managed within the excavation shall be managed in accordance with Article 669.05(d). Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals

Site 3716-4 – Tap House Grill, 123 W. Washington, Oswego, Kendall County

- Station 107+70 to Station 107+85, 26 to 40 feet RT. All excavation in the southeast quadrant of US 34 and Harrison Street: The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5). Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

- Groundwater is expected to be encountered below a depth of three to five feet below ground surface. Groundwater that cannot be managed within the excavation shall be managed in accordance with Article 669.05(d). Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals

PESA 503B

Site 503B-1 – Commercial Property (Former UST Site), 23 W. Washington, Oswego, Kendall County

- Station 114+65 to Station 170+85, 34 - 46 feet RT. All excavation in the southeast quadrant of US 34 and Main Street: The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5). Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.
- Groundwater is expected to be encountered below a depth of three to five feet below ground surface. Groundwater that cannot be managed within the excavation shall be managed in accordance with Article 669.05(d). Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

Work Zones

Three distinct OSHA HAZWOPER work zones (exclusion, decontamination, and support) shall apply to projects adjacent to or within sites with documented leaking underground storage tank (LUST) incidents, or sites under management in accordance with the requirements of the Site Remediation Program (SRP), Resource Conservation and Recovery Act (RCRA), or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites**:** **Site 3716-4 (Tap House Grill)**

Additional information on the contract specific work areas listed above collected during the regulated substances due-diligence process is available through the District's Environmental Studies Unit (DESU).

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2019
Revised: January 1, 2020

Revise Section 669 of the Standard Specifications to read:

"**SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES**

669.01 Description. This work shall consist of the transportation and proper disposal of regulated substances. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their contents and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.

669.02 Equipment. The Contractor shall notify the Engineer of the delivery of all excavation, storage, and transportation equipment to a work area location. The equipment shall comply with OSHA and American Petroleum Institute (API) guidelines and shall be furnished in a clean condition. Clean condition means the equipment does not contain any residual material classified as a non-special waste, non-hazardous special waste, or hazardous waste. Residual materials include, but are not limited to, petroleum products, chemical products, sludges, or any other material present in or on equipment.

Before beginning any associated soil or groundwater management activity, the Contractor shall provide the Engineer with the opportunity to visually inspect and approve the equipment. If the equipment contains any contaminated residual material, decontamination shall be performed on the equipment as appropriate to the regulated substance and degree of contamination present according to OSHA and API guidelines. All cleaning fluids used shall be treated as the contaminant unless laboratory testing proves otherwise.

669.03 Pre-Construction Submittals and Qualifications. Prior to beginning this work, or working in areas with regulated substances, the Contractor shall submit a "Regulated Substances Pre-Construction Plan (RSPCP)" to the Engineer for review and approval using form BDE 2730. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

As part of the RSPCP, the Contractor(s) or firm(s) performing the work shall meet the following qualifications.

(a) Regulated Substances Monitoring. Qualification for environmental observation and field screening of regulated substances work and environmental observation of UST removal shall require either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements using BDE 2730.

Qualification for each individual performing regulated substances monitoring shall require a minimum of one-year of experience in similar activities as those required for the project.

(b) Underground Storage Tank Removal. Qualification for underground storage tank (UST) removal work shall require licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

The Engineer will require up to 21 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 21 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed

conditions in the field and documented using BDE 2730A “Regulated Substances Pre-Construction Plan (RSPCP) Addendum” and submitted to the Engineer for approval.

CONSTRUCTION REQUIREMENTS

669.04 Regulated Substances Monitoring. Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities at the contract specific work areas. As part of the regulated substances monitoring, the monitoring personnel shall perform and document the applicable duties listed on form BDE 2732 “Regulated Substances Monitoring Daily Record (RSMDR)”.

(a) Environmental Observation. Prior to beginning excavation, the Contractor shall mark the limits of the contract specific work areas. Once work begins, the monitoring personnel shall be present on-site continuously during the excavation and loading of material.

(b) Field Screening. Field screening shall be performed during the excavation and loading of material from the contract specific work areas, except for material classified according to Article 669.05(b)(1) or 669.05(c) where field screening is not required.

Field screening shall be performed with either a photoionization detector (PID) (minimum 10.6eV lamp) or a flame ionization detector (FID), and other equipment as appropriate, to monitor for potential contaminants associated with regulated substances. The PID or FID shall be calibrated on-site, and background level readings taken and recorded daily, and as field and weather conditions change. Field screen readings on the PID or FID in excess of background levels indicates the potential presence of regulated substances requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

669.05 Regulated Substances Management and Disposal. The management and disposal of soil and/or groundwater containing regulated substances shall be according to the following:

(a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605, the soil shall be managed as follows:

(1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC, but still considered within area background levels by the Engineer, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable. If the soils cannot be utilized within the right-of-way, they shall be managed and disposed of at a landfill as a non-special waste.

(2) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA)

County identified in 35 Ill. Admin. Code 742 Appendix A. Table G, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

(3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

(4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

(5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above and the materials do not contain special waste or hazardous waste, as determined by the Engineer, the soil shall be managed and disposed of at a landfill as a non-special waste.

(6) When analytical results indicate soil is hazardous by characteristic or listing pursuant to 35 Ill. Admin. Code 721, contains radiological constituents, or the Engineer otherwise determines the soil cannot be managed according to Articles 669.05(a)(1) through (a)(5) above, the soil shall be managed and disposed of off-site as a special waste or hazardous waste as applicable.

(b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.

(1) The pH of the soil is less than 6.25 or greater than 9.0.

(2) The soil exhibited PID or FID readings in excess of background levels.

(c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 Ill. Admin. Code 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to

Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.

(d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Ill. Admin. Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste or hazardous waste as applicable. Special waste groundwater shall be containerized and trucked to an off-site treatment facility, or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sanitary sewer or combined sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sanitary sewer or combined sewer.

Groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench, it may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority, or it shall be containerized and trucked to an off-site treatment facility as a special waste or hazardous waste. The Contractor is prohibited from discharging groundwater within the trench through a storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Contractor shall obtain all documentation including any permits and/or licenses required to transport the material containing regulated substances to the disposal facility. The Contractor shall coordinate with the Engineer on the completion of all documentation.

The Contractor shall coordinate waste disposal approvals with the disposal facility. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall submit a written list from the landfill of the specific analytical parameters and analytical methods required by that facility. The Contractor shall collect and analyze the required number of samples for the parameters required by the landfill using a NELAP certified laboratory registered with the State of Illinois.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation that the Contractor is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.

Transportation and disposal of material classified according to Article 669.05(a)(5) or 669.05(a)(6) shall be completed each day so that none of the material remains on-site by the close of business, except when temporary staging has been approved.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number provided by the Bureau of Design and Environment. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill permitted for disposal of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by their permit and whether the disposal facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The use of a Contractor selected landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

669.06 Non-Special Waste Certification. An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

(a) Definition. A waste is considered a non-special waste as long as it is not:

(1) a potentially infectious medical waste;

(2) a hazardous waste as defined in 35 Ill. Admin. Code 721;

(3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 Ill. Admin. Code 811.107;

(4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61.141;

(5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;

(6) a material subject to the waste analysis and recordkeeping requirements of 35 Ill. Admin. Code 728.107 under land disposal restrictions of 35 Ill. Admin. Code 728;

(7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or

(8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.

(b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:

(1) the means by which the generator has determined the waste is not a hazardous waste;

(2) the means by which the generator has determined the waste is not a liquid;

(3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;

(4) if the waste does not undergo testing, an explanation as to why no testing is needed;

(5) a description of the process generating the waste; and

(6) relevant material safety data sheets.

669.07 Temporary Staging. Soil classified according to Articles 669.05(a)(2), (b)(1), or (c) may be temporarily staged at the Contractor's option. Soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) shall be managed and disposed of without temporary staging to the greatest extent practicable. If circumstances beyond the Contractor's control require temporary staging of these latter materials, the Contractor shall request approval from the Engineer in writing.

Temporary staging shall be accomplished within the right-of-way and the Contractor's means and methods shall be described in the approved or amended RSPCP. Staging areas shall not be located within 200 feet (61 m) of a public or private water supply well; nor within 100 feet (30 m) of sensitive environmental receptor areas, including wetlands, rivers, streams, lakes, or designated habitat zones.

The method of staging shall consist of containerization or stockpiling as applicable for the type, classification, and physical state (i.e., liquid, solid, semisolid) of the material. Materials of different classifications shall be staged separately with no mixing or co-mingling.

When containers are used, the containers and their contents shall remain intact and inaccessible to unauthorized persons until the manner of disposal is determined. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could cause the waste to be reclassified as a hazardous or special waste.

When stockpiles are used, they shall be covered with a minimum 20-mil plastic sheeting or tarps secured using weights or tie-downs. Perimeter berms or diversionary trenches shall be provided to contain and collect for disposal any water that drains from the soil. Stockpiles shall be managed to prevent or reduce potential dust generation.

When staging non-special waste, special waste, or hazardous waste, the following additional requirements shall apply:

(a) Non-Special Waste. When stockpiling soil classified according to Article 669.05(a)(1) or 669.05(a)(5), an impermeable surface barrier between the materials and the ground surface shall be installed. The impermeable barrier shall consist of a minimum 20-mil plastic liner material and the surface of the stockpile area shall be clean and free of debris prior to placement of the liner. Measures shall also be taken to limit or discourage access to the staging area.

(b) Special Waste and Hazardous Waste. Soil classified according to Article 669.05(a)(6) shall not be stockpiled but shall be containerized immediately upon generation in containers, tanks or containment buildings as defined by RCRA, Toxic Substances Control Act (TSCA), and other applicable State or local regulations and requirements, including 35 Ill. Admin. Code Part 722, Standards Applicable to Generators of Hazardous Waste.

The staging area(s) shall be enclosed (by a fence or other structure) to restrict direct access to the area, and all required regulatory identification signs applicable to a staging area containing special waste or hazardous waste shall be deployed.

Storage containers shall be placed on an all-weather gravel-packed, asphalt, or concrete surface. Containers shall be in good condition and free of leaks, large dents, or severe rusting, which may compromise containment integrity. Containers must be constructed of, or lined with, materials that will not react or be otherwise incompatible with the hazardous or special waste contents. Containers used to store liquids shall not be filled more than 80 percent of the rated capacity. Incompatible wastes shall not be placed in the same container or comingled.

All containers shall be legibly labeled and marked using pre-printed labels and permanent marker in accordance with applicable regulations, clearly showing the date of waste

generation, location and/or area of waste generation, and type of waste. The Contractor shall place these identifying markings on an exterior side surface of the container.

Storage containers shall be kept closed, and storage pads covered, except when access is needed by authorized personnel.

Special waste and hazardous waste shall be transported and disposed within 90 days from the date of generation.

669.08 Underground Storage Tank Removal. For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the Department. The Department’s Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the “owner” or “operator” of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Admin. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport, and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Admin. Code Part 734.210(h) after the required backfill has been

removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the District Environmental Studies Unit (DESU). Upon confirmation of a release of contaminants and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the tank is located and the DESU Manager).

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

(a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank;

(b) Identify and mitigate fire, explosion and vapor hazards;

(c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and

(d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the tank excavation zone and entered into subsurface structures (such as sewers or basements).

The tank excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

669.09 Regulated Substances Final Construction Report. Not later than 90 days after completing this work, the Contractor shall submit a "Regulated Substances Final Construction Report (RSFCR)" to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

669.10 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

669.11 Basis of Payment. The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

Regulated substances monitoring, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof to the nearest 0.5 calendar day, for REGULATED SUBSTANCES MONITORING.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of UST removal, soil excavation, soil and content sampling, the management of excavated soil and UST content, and UST disposal, will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

Payment for temporary staging of soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) will be paid for according to Article 109.04. The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

When waste material requires sampling and analysis for landfill disposal acceptance, it will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT."

80407

SERVICE INSTALLATION, GROUND MOUNTED

In addition to the requirements of Section 805 of the Standard Specifications the following shall apply:

Description: This work shall install, modify, or extend the electric service installation. All installations shall meet the requirements of the details included on the plans and applicable portions of these specifications.

Materials.

General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.

a. Enclosures: Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 3R unfinished signal door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125 inch thick, the top 0.250 inch thick and the bottom 0.500 inch thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full-length tamper proof stainless steel .075-inch-thick hinge bolted to the cabinet with stainless steel carriage bolts and nylock nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40 inches high, 16 inches wide, and 15 inches in depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.

b. Surge Protector. Over voltage protection, with LED indicator, shall be provided for the 120-volt load circuit by means of MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40° F to 185° F (-40° C to 85° C). The surge protector shall be UL 1449 Listed.

c. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120-volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes. Unless otherwise noted on the plans, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.

d. Fuses. Fuse holders, and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.

e. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel, shall be provided. Ground and neutral conductors shall be

separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.

f. Utility Services Connections. The Contractor shall contact the utility company, prior to beginning work, to determine the utility company regulations relating to electrical service. The Contractor shall provide the utility company an estimated date that the service connection will be required, the agency which will be responsible for monthly service changes, and the connected load for flat rate billing if required. The customer service agreement with the utility company shall be executed by the agency responsible for monthly service charges.

   All information furnished to the utility company shall be in writing with a copy provided to the Engineer. Prior to contacting the Utility Company for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.

   During the interim between the service activation date and the signal turn on day, all energy charges for the intersection shall be paid by the Contractor according to Article 109.05 of the Standard Specifications. Beginning the day of the traffic signal turn on, all energy charges for the intersection will be paid by the responsible agency listed in the plans. The Contractor is responsible for making arrangements with the responsible agency to transfer billing to the responsible agency.

g. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10’ in length, and 0.75 inch in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary, additional rods shall be installed to meet resistance requirements at no additional cost.

h. Electric Utility Meter Housing. The electric meter housing and meter socket shall be supplied and installed by the contractor. The contractor is to coordinate the work to be performed and the materials required with the utility company to make the final connection at the power source. All electric utility required materials necessary for connection shall also be included in the pay item. Materials shall be in accordance with the electric utility’s requirements. The electric utility meter housing shall be mounted to the enclosure. The meter shall be supplied by the utility company. Metered service shall not be used unless specified in the plans.

Installation.

a. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the Engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.

b. Ground mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless-steel nuts and washers. The space between the bottom of the enclosure and top of the foundation shall be caulked at the base with silicone.

Basis of Payment. The service installation will be paid for at the contract unit price per each for SERVICE INSTALLATION, GROUND MOUNTED of the type - metered or unmetered as specified in the Plans. The Type A foundation which includes the ground rod will be paid for separately.

GROUNDING OF TRAFFIC SIGNAL SYSTEMS

Revise Section 806 of the Standard Specifications to read:

General.
All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. This work shall be in accordance with Traffic Signal Design Details provided in the plans.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations were measured resistance exceeds 25 ohms. Ground rods are included in the applicable concrete foundation or service installation pay item and will not be paid for separately.

Testing shall be according to Article 801.13 (a) (4) and (5).

(a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.

(b) The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications.

1. Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.

2. Equipment grounding conductor*s* shall be bonded, using a UL Listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers, conduits, and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A UL listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points. Conduit grounding bushings shall be installed at all conduit terminations including spare or empty conduits.

3. All metallic and non-metallic raceways shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.

4. Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.

The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, UL listed pressure connectors, and UL listed clamps.

UNDERGROUND RACEWAYS

Revise Article 810.04 of the Standard Specifications to read:

1. “Installation. All underground conduits shall have a minimum depth of 30-inches (700 mm) below the finished grade. No additional compensation will be allowed for placing conduit at a greater than 30-inch depth to avoid obstacles such as underground utilities.”

Add the following to Article 810.04 of the Standard Specifications:

> “All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans.”

Add the following to Article 810.04 of the Standard Specifications:

> “All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum or 300 mm (12”) or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped.
>
> The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap.
>
> The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125”) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring.
>
> A ¼” diameter continuous rodent resistant nylon rope shall be furnished and left in place in all conduits between handholes and foundations or controller.”

HANDHOLES

Description.
Add the following to Section 814 of the Standard Specifications:

All conduits shall enter the handhole at a depth of 30 inches (762 mm) except for the conduits for detector loops when the handhole is less than 5 feet (1.52 m) from the detector loop. All conduit ends should be sealed with a waterproof sealant to prevent the entrance of contaminants into the handhole. The double handhole shall be placed at a lower elevation than the traffic signal controller cabinet.

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 1/2 inch (13 mm) diameter with two 90-degree bends and extend into the handhole at least 6 inches (152 mm). Hooks shall be placed a minimum of 12 inches (305 mm) below the lid or lower if additional space is required and orientated in place so that the end of the hook is pointing downwards.

Precast round handholes shall not be used unless called out on the plans or as directed by the Engineer.

The cover of the handhole frame shall be labeled “Traffic Signals" with legible raised letters. Only handholes serving IDOT traffic signal equipment shall have this label.

Cast-In-Place Handholes.
All cast-in-place handholes shall be concrete, with inside dimensions of 21-1/2 inches (546 mm) minimum. Frames and lid openings shall match this dimension.

For grounding purposes, the handhole frame shall have provisions for a 7/16 inch (11 mm) diameter stainless steel bolt cast into the frame. The covers shall have a stainless-steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole cover.

The minimum wall thickness for heavy duty hand holes shall be 12 inches (305mm).

Materials.
Add the following to Section 1042 of the Standard Specifications:

“1042.17 Precast Concrete Handholes. Precast concrete handholes shall be according to Articles 1042.03(a)(c)(d)(e).”

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

General.

1. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the Contract or any portion thereof. If Contract work is started prior to a traffic signal inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection.

2. The Contractor shall have electricians with IMSA Level II certification on staff to provide signal maintenance. A copy of the certification shall be immediately available upon request of the Engineer.

3. This item shall include maintenance of all traffic signal equipment and other connected and related equipment such as flashing beacons, emergency vehicle pre-emption equipment, master controllers, uninterruptable power supply (UPS and batteries), PTZ cameras, vehicle detection, handholes, lighted signs, telephone service installations, communication cables, conduits to adjacent intersections, and other traffic signal equipment.

4. Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers, radios and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.

5. The energy charges for the operation of the traffic signal installation shall be paid for by the Contractor.

Maintenance.

1. The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. The Contractor shall check signal system communications and phone lines to assure proper operation. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs. Prior to the traffic signal maintenance transfer, the contractor shall supply a detailed maintenance schedule that includes dates, locations, names of electricians providing the required checks and inspections along with any other information requested by the Engineer.

2. The Contractor is advised that the existing and/or span wire traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shut down the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.

3. The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. When the signals operate in flash, the Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

4. The Contractor shall provide the Engineer with 2 (two) 24-hour telephone numbers for the maintenance of the traffic signal installation and for emergency calls by the Engineer.

5. Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of the Standard Specifications and these special provisions.

6. The Contractor shall respond to all emergency calls from the Department or others within one (1) hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work. The Contractor shall be responsible for all of the State’s Electrical Maintenance Contractor’s costs and liquidated damages of $1000 per day per occurrence. The State's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

7. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

8. Equipment included in this item that is damaged or not operating properly from any cause shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed.

9. The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.

10. The Contractor shall maintain the traffic signal in normal operation during short or long term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power to critical locations shall not be paid for separately but shall be included in the contract.

11. Temporary replacement of damaged or knockdown of a mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals will not be permitted.

Basis of Payment.

This work will be paid for at the contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION. Each intersection will be paid for separately.

TRAFFIC SIGNAL PAINTING

Description.
This work shall include surface preparation, powder coated finish application and packaging of new galvanized steel traffic signal mast arm poles, traffic signal and pedestrian posts, and associated components and assemblies. All work associated with applying the painted finish shall be performed at the vendor's facility for the pole assembly or post or at a painting facility approved by the Engineer. Traffic signal mast arm shrouds and post bases shall also be painted the same color as the pole assemblies and posts.

Surface Preparation.
All weld flux and other contaminates shall be mechanically removed. The traffic mast arms, and post assemblies shall be degreased, cleaned, and air dried to assure all moisture is removed.

Painted Finish.
All galvanized exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a dry film thickness of 2.0 mils. Prior to application, the surface shall be mechanically etched by brush blasting (Ref. SSPC-SP7) and the zinc coated substrate preheated to 450 ºF for a minimum one (1) hour. The coating shall be electrostatically applied and cured by elevating the zinc-coated substrate temperature to a minimum of 400 ºF.

The finish paint color shall be one of the vendor's standard colors and shall be as selected by the local agency responsible for paint costs. The Contractor shall confirm, in writing, the color selection with the local responsible agency and provide a copy of the approval to the Engineer and a copy of the approval shall be included in the material catalog submittal.

Painting of traffic signal heads, pedestrian signal heads and controller cabinets is not included in this pay item.

Any damage to the finish after leaving the vendor's facility shall be repaired to the satisfaction of the Engineer using a method recommended by the vendor and approved by the Engineer. If while at the vendor's facility the finish is damaged, the finish shall be re-applied at no cost to the contract.

Warranty.
The Contractor shall furnish in writing to the Engineer, the paint vendor's standard warranty and certification that the paint system has been properly applied.
Packaging.
Prior to shipping, the poles and posts shall be wrapped in ultraviolet-inhibiting plastic foam or rubberized foam.

Basis of Payment.
This work shall be paid for at the contract unit price each for PAINT NEW MAST ARM AND POLE, UNDER 40 FEET (12.19 METER), PAINT NEW MAST ARM AND POLE, 40 FEET (12.19 METER) AND OVER, PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FEET appurtenances. (12.19 METER), PAINT NEW COMBINATION MAST ARM AND POLE, 40 FEET (12.19 METER) AND OVER, or PAINT NEW TRAFFIC SIGNAL POST of the length specified,

which shall be payment in full for painting and packaging the traffic signal mast arm poles and posts described above including all shrouds, bases and appurtenances.

RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET

Description.
This work shall consist of furnishing and installing a traffic actuated solid state digital controller and the controller cabinet of the type specified, capable of operating state of Illinois railroad programming, meeting the requirements of Section 857 of the Standard Specifications as modified herein and including conflict monitor or MMU, load switches and flasher relays, with interlock function to the railroad preemptor and all necessary connections for proper operation.

Controller and cabinet shall be assembled only by an approved IDOT District Three traffic signal equipment supplier. The equipment shall be tested and approved in the equipment supplier's District Three's facility prior to field installation.

Materials.
Add the following to Article 857.02 of the Standard Specifications:

For installation as a stand-alone traffic signal, connected to a closed loop system or integrated into an advance traffic management system (ATMS), controllers shall be Econolite Cobalt (Graphics Edition) or Eagle/Siemens M60 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District Three approved closed loop equipment supplier will be allowed. The controller shall be the most recent model and software version approved by IDOT for use with railroad intersections supplied by the equipment supplier at the time of the traffic signal TURN-ON unless specified otherwise on plans or this specification and include a removable data key. Individual load switches shall be provided for each vehicle, pedestrian, and right turn overlap phase. The controller shall prevent phases from being omitted during program changes and after all preemption events and shall inhibit simultaneous display of circular yellow and yellow arrow indications.

For integration into an ATMS such as Centracs, Tactics, or TransSuite, the controller shall have the latest version of NTCIP software installed. For operation prior to integration into an ATMS, the controller shall maintain existing communications.

Controller shall comply with Article 1073.01 as amended herein.

Controller Cabinet and Peripheral Equipment shall comply with Article 1074.03 as amended in these Traffic Signal Special Provisions.

Add the following to Sections 1073 of the Standard Specifications:

Controllers and cabinets shall be new and NEMA TS2 Type 1 or NEMA TS2 Type 2 design.

a) Railroad interconnected controllers and cabinets shall be assembled only by an approved traffic signal equipment supplier. All railroad interconnected (including temporary railroad interconnect) controllers and cabinets shall be new, built, tested, and approved by the controller equipment vendor, in the vendor's District Three facility, prior to field installation. The vendor shall provide the technical equipment and assistance as required by the Engineer to fully test this equipment.

b) This item requires that a factory representative capable of ensuring that the controller and cabinet are operating to the satisfaction of the Engineer shall be present at the turn on of the controller and shall remain until the intersection is operating to the satisfaction of the Engineer. Should a defect appear in the controller or cabinet operation, the representative shall return as often as necessary until all defects are repaired.

c) At the preconstruction meeting, the Contractor shall provide the names and phone numbers of two technicians who would be able to respond to controller malfunctions that occur within the 30-day acceptance period after the controller is turned on. If neither person can be reached at the time of the malfunction nor be at the location within 2 hours of receiving the call, any available electrician capable of evaluating and correcting the malfunction may be called at the State's discretion. All bills resulting from defective operation of the controller or cabinet shall be the responsibility of the Contractor. The controller shall be capable of uploading and downloading its database to a laptop computer that has been installed with the proper software. All uploaded data shall be able to be changed within the laptop and then downloaded to the controller. The necessary cables for upload/download shall be provided and upload/download software shall be provided and installed onto the District Three laptop computer if the software and cables have not already been supplied to District Three or the software presently being used by District Three requires updating.

d) The controller data entry fields shall have a clear distinction between data fields and information. Data fields shall be in matrix format with a minimum of eight phases wide and four date lines deep.

e) The active status screen shall display the following information for all operating phases in an alpha-numeric display.

f) A clear distinction between the following detections for each phase: vehicle recall, vehicle detection, pedestrian recall, and pedestrian detection.

g) A clear distinction among the phases receiving detection.

h) Status displayed simultaneously whenever one or more of the following is operating: vehicle passage timer, maximum phase timer, added initial timer, time before reduction timer, time to reduce timer, existing gap timer, walk timer, don't walk timer.

i) When a phase ends, the controller shall report whether the exit was a max out, gap out or force out condition. The controller shall show the yellow and red timers timing and any trailing overlap timers timing.

j) When specified in the plans, a spare controller shall be supplied for future use by the maintaining agency to replace the primary controller in the event of its failure. The spare controller shall conform to all requirements set forth above and be labeled for the specific intersection for which it is intended. The spare controller programming shall be identical to the primary controller and be prior tested as described above.

Add the following to Article 1074.03 of the Standard Specifications:

(a) (2) (d) Add “Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32.” and “All external hardware shall be stainless steel.”

(a) (6) Cabinets shall be designed for NEMA TS2 Type 1 or NEMA TS2 Type 2 operation. All cabinets shall be pre-wired for a minimum of eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation.

(a) (7) Police Door – Provide wiring and termination for plug in manual phase advance switch. The police door compartment shall contain a manual control cord from which the signals may be operated manually. The inside door toggle switches shall be protected from accidental contact by vertical metal slats. The slats shall extend beyond the switches, in a manner similar to the terminals on the back panel.

(a) (8) A plastic plans holder shall be installed on the cabinet door. The holder shall be at least 11 inches high and 17 inches wide, shall open from the side, and shall not interfere with the filter. The holder shall have a means of closing the side opening to prevent water from entering.

(b) (1) Revise “conflict monitor” to read “Malfunction Management Unit”

(b) (5) Controller Harness – Provide a TS2 Type 2 A, B, C and D wired harness in addition to the TS2 Type 1 harness. All harness wiring of connectors shall be factory installed so that an additional phase may be added to the existing phasing by the addition of a load switch and the proper conflict monitor card pinning.

(b) (6) Surge Protection – Shall be a 120VAC Single phase Modular filter Plug-in type, supplied from an approved vendor.

(b) (7) BIU – shall be secured by mechanical means.

(b) (8) Transfer Relays – Solid state or mechanical flash relays are acceptable.

(b) (9) Switch Guards – All switches shall be guarded.

(b) (10) Heating – One (1) 200 watt, thermostatically-controlled, electric heater.

(b) (11) Lighting – One (1) LED Panel shall be placed inside the cabinet top panel and one (1) LED Panel shall be placed on each side of the pull-out drawer/shelf assembly located beneath the controller support shelf. The LED Panels shall be controlled by a door switch. The LED Panels shall be provided from an approved vendor.

(b) (12) The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1 ½ inch (38mm) deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one (1) complete set of cabinet prints and manuals. This drawer shall support 50 lbs. (23 kg) in weight when fully extended. The drawer shall open and close smoothly. Drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 18 inches (610mm) wide.

(b) (13) Plan & Wiring Diagrams – 12” x 15” (3.05mm x 4.06mm) moisture sealed container attached to door.

(b) (14) Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channels (16) of vehicular operation.

(b) (15) Field Wiring Labels – All field wiring shall be labeled.

(b) (16) Field Wiring Termination – Approved channel lugs required.

(b) (17) Power Panel – A Plexiglas cover, or other high strength nonconductive cover, shall be installed over, and completely cover, the power panel. The cover shall completely shield the service wires, and circuit breaker wires from accidental contact.

(b) (18) Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.

(b) (19) Railroad Pre-Emption Test Switch – Shall be provided from an approved vendor

(b) (20) A generator factory outlet in an enclosed door shall be provided for the Uninterruptable power supply.

(b) (21) A self-adhering phasing diagram shall be placed on the inside of the cabinet door.

(b) (22) Five (5) copies of the complete cabinet wiring showing all connections shall be furnished to the Engineer.

(b) (23) Train the wire along the inside of the cabinet for length and cleanliness.

(b) (24) Add call push buttons on inside of cabinet.

Basis of Payment.

This work will be paid for at the contract unit price each for RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE IV CABINET or RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE V CABINET as specified in the plans. The spare controller shall be paid for at the contract unit price each for SPARE RAILROAD, FULL ACTUATED CONTROLLER, SPECIAL.

TRAFFIC SIGNAL POST

Description.

(12.19 METER), PAINT NEW COMBINATION MAST ARM AND POLE, 40 FEET (12.19 METER) AND OVER, or PAINT NEW TRAFFIC SIGNAL POST of the length specified, which shall be payment in full for painting and packaging the traffic signal mast arm poles and posts described above including all shrouds, bases and appurtenances.

ELECTRIC CABLE

Delete “or stranded, and No. 12 or” from the last sentence of Article 1076.04 (a) of the Standard Specifications.

Add the following to the Article 1076.04(d) of the Standard Specifications:

Service cable may be single or multiple conductor cable.

RAILROAD INTERCONNECT CABLE

The cable shall meet the requirements of Section 873 of the Standard Specifications, except for the following:

Add to Article 873.02 of the Standard Specifications:

c) The railroad interconnect cable shall be three conductors stranded #14 copper cable in a clear polyester binder, shielded with #36 AWG tinned copper braid with 85% coverage, and insulated with .016" polyethylene (black, blue, red). The jacket shall be black 0.045 PVC or polyethylene.

Add the following to Article 873.06 of the Standard Specifications:

Basis of Payment.
This work shall be paid for at the contract unit price per foot (meter) for ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C, which price shall be payment in full for furnishing, installing, and making all electrical connections in the traffic signal controller cabinet. Connections in the railroad controller cabinet shall be performed by railroad personnel.

FIBER OPTIC TRACER CABLE

The cable shall meet the requirements of Section 817 of the Standard Specifications, except for the following:

Add the following to Article 817.03 of the Standard Specifications:

In order to trace the fiber optic cable after installation, the tracer cable shall be installed in the same conduit as the fiber optic cable in locations shown on the plans. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable will be allowed to be spliced at handholes only. The tracer cable splice shall use a Western Union Splice soldered with resin core flux and shall be soldered using a soldering iron. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. All exposed surfaces of the solder shall be smooth. The splice shall be covered with a black shrink tube meeting UL 224 guidelines, Type V and rated 600V, minimum length 4 inches (100 mm) and with a minimum 1 inch (25 mm) coverage over the XLP insulation, underwater grade.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment.
The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per foot (meter), which price shall include all associated labor and material for installation.

MAST ARM ASSEMBLY AND POLE

Add the following to Article 877.03 of the Standard Specifications:

The Contractor shall furnish and install a dampening device on the mast arm as specified in the plans.

Add the following to Article 877.04 of the Standard Specifications:

Steel combination mast arm assembly and pole(s) that are specified in the Plans to exclude luminaire arms(s) shall be paid for at the contract unit price per each for STEEL COMBINATION MAST ARM ASSEMBY AND POLE (SPECIAL), of the signal arm length specified.

Add the following to second sentence of Article 1077.03 (a) of the Standard Specifications:

“dampening device”

Add the following to Article 1077.03 (a) of the Standard Specifications:

(5) Dampening Device. The dampening device shall consist of a 30 inch x 30 inch type 1 unpainted/unsheeted aluminum sign stock.

Revise the second sentence of Article 1077.03 (a)(3) of the Standard Specifications to read:

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer.

Add the following to Article 1077.03 (a)(3) of the Standard Specifications:

If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with TRAFFIC SIGNAL PAINTING Special Provisions.

CONCRETE FOUNDATIONS

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. at the threaded end.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

Add the following to the first paragraph of Article 878.05 of the Standard Specifications:

The concrete apron in front of the cabinet and UPS shall be included in this pay item.

LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAMMED LED SIGNAL HEAD

Materials.
Add the following to Section 1078 of the Standard Specifications:

1. LED modules proposed for use and not previously approved by IDOT District Three will require independent testing for compliance to current VTCSH-ITE standards for the product and be Intertek ETL Verified. This would include modules from new vendors and new models from IDOT District Three approved vendors.

2. The proposed independent testing facility shall be approved by IDOT District Three. Independent testing must include a minimum of two (2) randomly selected modules of each type of module (i.e. ball, arrow, pedestrian, etc.) used in the District and include as a minimum Luminous Intensity and Chromaticity tests. However, complete module performance verification testing may be required by the Engineer to assure the accuracy of the vendor's published data and previous test results. An IDOT representative will select sample modules from the local warehouse and mark the modules for testing. Independent test results shall meet current ITE standards and vendor's published data. Any module failures shall require retesting of the module type. All costs associated with the selection of sample modules, testing, reporting, and retesting, if applicable, shall be the responsibility of the LED module vendor and not be a cost to this contract.

3. All signal heads shall provide 12" (300 mm) displays with glossy black polycarbonate housings. All head housings shall be the same color (black) at the intersection. For new signalized intersections and existing signalized intersections where all signal heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be steel or aluminum. A corrosion resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints and shall be visible to the inspector at the signal turn-on. Post top mounting collars are required on all posts and shall be constructed of the same material as the brackets.

4. The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects within the first 15 years from the date of traffic signal TURN-ON. LED signal modules which exhibit luminous intensities less than the minimum values specified in Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTSCH], or applicable successor ITE specifications, or show signs of entrance of moisture or contaminants within the first 15 years of the date of traffic signal TURN-ON shall be replaced or repaired. The vendor's written warranty for the LED signal modules shall be dated, signed by a vendor's representative and included in the product submittal to the State.

5. Signal visors for all signal heads as shown in the plans shall include a self-regulating heater to prevent accumulation of snow and ice within the visor and in front of the signal lens. The heater shall include a control module with dual temperature and humidity sensor

capable of activating and deactivating the heater at specific humidity and freezing/thawing temperature levels. Steady state power shall be no greater than 60 watts at 32 Degrees Celsius. A blue indicator LED shall be positioned on the bottom of each signal head to be activated when the heaters are powered. Red and green indicator LEDs shall be positioned inside each signal module to indicate when the heater is activated (green) and when the heater is not activated (red).

(a) Physical and Mechanical Requirements

1. Modules can be manufactured under this specification for the following faces:

   a. 12 inch (300 mm) circular, multi-section
   b. 12 inch (300 mm) arrow, multi-section

2. The maximum weight of a module shall be 4 lbs. (1.8 kg).

3. Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.

5. The lens of the module shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.

6. The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.

7. Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be 1 inch (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 inch (12.7mm) letters next to the symbol.

(b) Photometric Requirements

4. The LEDs utilized in the modules shall be AlInGaP technology for red and InGaN for green and amber indications, and shall be the ultra bright type rated for 100,000 hours of continuous operation from -40 °C to +74 °C.

(c) Electrical

1. Maximum power consumption for LED modules is per Table 2.

2. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.

3. The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).

4. When a current of 20 mA AC (or less) is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.

5. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.

6. LED arrows shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

(d) Retrofit Traffic Signal Module

1. The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.

2. Retrofit modules can be manufactured under this specification for the following faces:

   a. 12 inch (300 mm) circular, multi-section
   b. 12 inch (300 mm) arrow, multi-section

3. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.

4. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).

5. Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.

6. Electrical conductors for modules, including Retrofit modules, shall be 39.4 inches (1m) in length, with quick disconnect terminals attached.

7. The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.

(e) The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.

1. The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) or applicable successor ITE specifications for arrow indications.

2. The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.

(f) The following specification requirement applies to the 12 inch (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.

1. The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.

Basis of Payment.

Add the following to the first paragraph of Article 880.04 of the Standard Specifications:

The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition.

LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD

Add the following to the third paragraph of Article 881.03 of the Standard Specifications:

No mixing of different types of pedestrian traffic signals or displays will be permitted.

Add the following to Article 881.03 of the Standard Specifications:

(a) Pedestrian Countdown Signal Heads.

(1) Pedestrian Countdown Signal Heads shall not be installed at signalized intersections where traffic signals and railroad warning devices are interconnected.

(2) Pedestrian Countdown Signal Heads shall be 16-inch (406mm) x 18 inch (457mm), for single units with glossy black polycarbonate housings. All pedestrian head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be steel or aluminum. A corrosion resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on.

(3) Each pedestrian signal LED module shall be fully MUTCD compliant and shall consist of double overlay message combining full LED symbols of an Upraised Hand and a Walking Person. "Egg Crate" type sun shields are not permitted. Numerals shall measure 9 inches (229mm) in height and easily identified from a distance of 120 feet (36.6m).

Materials.
Add the following to Article 1078.02 of the Standard Specifications:

General.

1. The module shall operate in one mode: Clearance Cycle Countdown Mode Only. The countdown module shall display actual controller programmed clearance cycle and shall start counting when the flashing clearance signal turns on and shall countdown to "0" and turn off when the steady Upraised Hand (symbolizing Don't Walk) signal turns on. Module shall not have user accessible switches or controls for modification of cycle.

2. At power on, the module shall enter a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark.

3. The module shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The counting unit will go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.

4. If the controller preempts during the Walking Person (symbolizing Walk), the countdown will follow the controller's directions and will adjust from Walking Person to flashing Upraised Hand. It will start to count down during the flashing Upraised Hand.

5. If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.

6. The next cycle, following the preemption event, shall use the correct, initially programmed values.

7. If the controller output displays Upraised Hand steady condition and the unit has not arrived to zero or if both the Upraised Hand and Walking Person are dark for some reason, the unit suspends any timing and the digits will go dark.

8. The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.

9. The countdown numerals shall be two (2) “7 segment” digits forming the time display utilizing two rows of LEDs.

10. The LED module shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, “Pedestrian Traffic Control Signal Indications - Part 2: LED Pedestrian Traffic Signal Modules,” or applicable successor ITE specifications, except as modified herein.

11. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.

12. In the event of a power outage, light output from the LED modules shall cease instantaneously.

13. The LEDs utilized in the modules shall be AlInGaP technology for Portland Orange (Countdown Numerals and Upraised Hand) and GaN technology for Lunar White (Walking Person) indications.

14. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

Basis of Payment.

Add the following to the first paragraph of Article 881.04 of the Standard Specifications:

The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition.

Add the following to Article 881.04 of the Standard Specifications:

If the work consists of retrofitting an existing polycarbonate pedestrian signal head and pedestrian countdown signal head with light emitting diodes (LEDs), it will be paid for as a PEDESTRIAN SIGNAL HEAD, LED, RETROFIT, of the type specified, and of the particular kind of material, when specified. Price shall be payment in full for furnishing the equipment described above including LED modules, all mounting hardware, and installing them in satisfactory operating condition.

TRAFFIC SIGNAL BACKPLATE, SPECIAL

Description. This item consists of furnishing and installing a non-retro-reflective TRAFFIC SIGNAL BACKPLATE as specified herein, and all hardware accessories required to install on all proposed signal heads as described in Section 882 and Article 1078.03.

The backplate shall be louvered and provide openings (louvers) to all wind to penetrate and reduce wind loading. The louver openings shall cover a minimum of 20 percent of the surface area of the backplate. The surface of the backplate shall be black with no retro-reflective sheeting.

Basis of Payment. This item shall be paid for at the contract unit price each for TRAFFIC SIGNAL BACKPLATE, SPECIAL.

TRAFFIC SIGNAL BACKPLATE

Description. This item consists of furnishing and installing a louvered, formed plastic traffic signal backplate as specified herein, and all hardware accessories required to install on all proposed signal heads as described in Articles 882 and herein.

Replace the 1st sentence of the 1st paragraph of article 1078.03:

The traffic signal backplate shall be made of ABS plastic (vacuum formed).

Add to article 1078.03:

The backplate shall have a nominal 1/2-inch-deep back flange on all inside and outside edges. The backplate shall be louvered and provide openings (louvers) to all wind to penetrate and reduce wind loading.

Replace the 4th paragraph of article 1078.03:

When specified in the plans, the entire front and side surface of the backplate including louver shall be manufactured so that it is imprinted with fluorescent yellow sheeting. The sheeting shall be Type AZ sheeting according to Article 1091.03 and applied to the preferred orientation for the maximum angularity according to the manufacture's recommendation.

Add to article 1078.03:

When fluorescent yellow sheeting is specified in the plans, this item shall be paid for at the contract unit price each for TRAFFIC SIGNAL BACKPLATE.

EMERGENCY VEHICLE PRIORITY SYSTEM

Revise Section 887 of the Standard Specifications to read:

It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle pre-emption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency.

All new installations shall be equipped with Confirmation Beacons as shown on the "Standard Traffic Signal Design Details." The Confirmation Beacon shall consist of a 6 watt Par 38 LED flood lamp with a 30 degree light spread, or a 7 watt Par 30 LED flood lamp with a 15 degree or greater spread, maximum 7 watt energy consumption at 120V, and a 2,000 hour warranty for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signalized by a flashing indication at the rate specified by Section 4L.01 of the "Manual on Uniform Traffic Control Devices," and other applicable sections of future editions. The stopped pre-empted movements shall be signalized by a continuous indication.

All light operated systems shall include security and transit preemption software and operate at a uniform rate of 14.035 Hz ±0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the EMERGENCY VEHICLE PRIORITY SYSTEM.

Basis of Payment.

The work shall be paid for at the contract unit price each for furnishing and installing LIGHT DETECTOR and LIGHT DETECTOR AMPLIFIER. Furnishing and installing the confirmation beacon shall be included in the cost of the Light Detector. Any required modifications to the traffic signal controller shall be included in the cost of the LIGHT DETECTOR AMPLIFIER. The preemption detector amplifier shall be paid for on a basis of (1) one each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

PEDESTRIAN PUSH-BUTTON EXTENSION HARDWARE

This work shall consist of furnishing and installing additional mounting (extension) hardware at pedestrian push-button location(s) as required to comply with “Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)” and as directed by the Engineer.

The Contractor will be allowed to utilize extension hardware when installing pedestrian push buttons at only those location(s) where physical constraints prohibit a maximum reach distance of 10 inches from the face of the push-button to the projected edge of sidewalk (when the push-button is mounted directly to the traffic signal post, pedestrian traffic signal post or mast arm pole).

The extension hardware shall be mountable to various diameter round signal supports and provide for an adjustable offset length of up to 24 inches. The extension hardware shall be composed of machined aluminum or steel and include a galvanized or powder coated finish.

Basis of Payment

This work shall not be paid for separately but instead included in the cost of the contract pay item for ACCESSIBLE PEDESTRIAN SIGNALS..” Walk Sign is on to cross “Street Name.” No other messages shall be used to denote the WALK interval.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Add the following to Article 895.05 of the Standard Specifications:

The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor’s expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the State's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide one hard copy and one electronic file of a list of equipment that is to remain the property of the State, including model and serial numbers, where applicable. The Contractor shall also provide a copy of the Contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned according to these requirements, it will be rejected by the State's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time Contractor takes maintenance of the signal installation until the acceptance of a receipt drawn by the State's Electrical Maintenance Contractor indicating the items have been returned in good condition.

The Contractor shall safely store and arrange for pick up or delivery of all equipment to be returned to agencies other than the State. The Contractor shall package the equipment and provide all necessary documentation as stated above.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications at no cost to the contract.

FLASHING BEACON INSTALLATION, REMOVAL

This work shall consist of the removal of the existing Reflective Rapid Flashing Beacon (RRFB) installation as shown on the plans and as described herein.

The removal of RRFB installation shall be in accordance to the applicable portions of Sections 800 and 1000 of the Standard Specifications for Road and Bridge Construction except as revised herein.

Removal of an existing RRFB installation shall be as shown on the plans or as directed by the Engineer and shall be accordance to applicable portions of Section 895 of the Standard Specifications. This work shall include a complete removal of an existing flashing beacon installation including post, signs RRFB units and pushbuttons. The flashing beacon installation will be removed only after the permanent signal installation is accepted for maintenance, or as directed by the Engineer. If necessary, in case of conflict with construction activities, the conflicting portion of the existing RRFB shall be temporarily relocated or substituted at a different location to maintain operation of the RRFB system until the traffic signal installation is complete and activated.

All removed equipment shall be returned by the Contractor to the agency as shown in the plans.

Basis of Payment.
This work shall be paid for at the contract unit price each for REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE. The price shall be payment in full for all labor and material necessary to complete the work described above.

ETHERNET MANAGED SWITCH

This specification sets forth the minimum requirements for furnishing and installing a Ethernet managed switch and shall include all materials and work necessary for installation in a traffic signal cabinet. The switch will connect the (field) equipment in the cabinet to the fiber optic communication network and provide as network nodes at certain locations for the gigabyte communication backhaul.

The Ethernet managed switch shall be configured with a minimum of the following ports:

- 4 RJ-45 *10/100* Communication ports; and
  - All ports shall be equipped to provide power over Ethernet (PoE)
  - PoE power shall be sufficient to accommodate remote controlled video and wirelesses interconnect systems.
- 4 1000 base SPF (single mode) fiber optic communication ports.

The Ethernet managed switch shall satisfy the following requirements:

- Maximum dimensions: 8" x 10" x 2"
- Weight: 2 - 4 pounds
- Power:
  - Power Input: 100 to 240 VAC (47-63 Hz)
  - Power Consumption: 45 – 65 watts
- Operating Environment:
  - Temperature range: -40° to 60° C/-40° to +140° F
  - Cooling shall use convection and heat sinking, no fans
- Performance:
  - RJ45 ports:
    - 100 or 10 Mb speed per port
    - Full or half-duplex mode per port
  - 100 base fiber optic communication ports shall be configurable for SC, ST and LC connectors for single mode
  - 1000 base fiber optic communication ports shall be configurable for SC, ST and LC connectors for single mode
- Network Standards:
  - Ethernet:
    - IEEE 802.3
    - IEEE 802.3ab
    - IEEE 802.1p
  - Auto Negotiation and Auto Cross:
    - IEEE802.3u

The Contractor shall locate shelf space or other suitable mounting location in the traffic signal cabinets or as identified on the Plans or as directed by the Engineer. The Contractor shall install all necessary patch cords, optical transceivers, connectors, power supplies, communication transformers, or auxiliary equipment necessary to complete the communication circuits at full functional potential. The Contractor shall connect the switch to the field devices as indicated on

the Plans or as directed by the Engineer. The contractor shall be responsible for all network programming of the network switches and communication elements within the traffic signal cabinet and shall demonstrate that the switches are correctly installed and configured as specified in other special provisions for this project.

Basis of Payment.

This item will be paid for at the contract unit price each for ETHERNET MANAGED SWITCH, which price shall be payment in full for furnishing and installing the switch, and all necessary connectors, cables, fiber optic jumpers, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C

This work shall consist of furnishing and installing lead-in cable for light detectors installed at existing and/or proposed traffic signal installations as part of an emergency vehicle priority system. The work includes installation of the lead-in cables in existing and/or new conduit. The electric cable shall be shielded and have (3) stranded conductors, colored blue, orange, and yellow with a stranded tinned copper drain wire. The cable shall meet the requirements of the vendor of the Emergency Vehicle Priority System Equipment.

Basis of Payment.
This work will be paid for at the contract unit price per foot for EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C, which price shall be payment in full for furnishing, installing and making all electrical connections necessary for proper operations.

ROD AND CLEAN EXISTING CONDUIT

Description.
This work shall consist of inserting a duct rod or electrical fish rod or tape of sufficient length and rigidity into an electrical conduit opening in one electrical handhole, and pushing the said rod through the conduit to emerge at the next or subsequent handhole in the conduit system at the location(s) shown on the plans. The duct rod may be inserted and removed by any standard construction method which causes no damage to the conduit. The size of the conduit may vary, but there shall be no differentiation in cost for the size of the conduit.

The conduit which is to be rodded and cleaned may exist with various amounts of standing water in the handholes to drain the conduit and to afford compatible working conditions for the installation of the duct rods and/or cables. Pumping of handholes shall be included with the work of rodding and cleaning of the conduit.

Any handhole which, in the opinion of the Engineer contains excessive debris, dirt or other materials to the extent that conduit rodding and cleaning is not feasible, shall be cleaned at the Engineer's order and payment approval as a separate pay item.

Prior to removal of the duct rod, a duct cleaning attachment such as a properly sized wire brush or cleaning mandrel shall be attached to the duct rod, which by removal of the duct rod shall be pulled through the conduit to remove sand, grit, or other light obstructions from the duct to provide a clean, clear passage for the installation of cable. Whenever the installation of cables is not performed as an adjunct to or immediately following the cleaning of the duct, a light weight pulling line such as a 1/8" polyethylene line or conduit measuring tape shall be placed and shall remain in the conduit to facilitate future work. When great difficulty of either inserting the duct rod or removal of the cleaning mandrel is encountered, the duct may require further cleaning by use of a compressed air gun, or a low pressure water hose. In the case of a broken conduit, the conduit must be excavated and repaired. The existence and location of breaks in the conduit may be determined by rodding, but the excavation and repair work required will be paid for separately.

This work shall be measured per lineal foot for each conduit cleaned. Measurements shall be made from point to point horizontally. No vertical rises shall count in the measurement.

Basis of Payment.
This work shall be paid for at the contract unit price per lineal foot for ROD AND CLEAN EXISTING CONDUIT for the installation of new electric cables in existing conduits. Such price shall include the furnishing of all necessary tools, equipment, and materials required to prepare a conduit for the installation of cable.

CONCRETE LANDING SLAB

This work shall consist of forming and pouring P.C. concrete base slabs under proposed concrete brick pavers. This work shall be performed in accordance with the plan details and as directed by the Engineer, and as specified herein.

Construction Requirements. This work shall be completed in accordance with applicable portions of Section 424 of the Standard Specifications. The concrete landing slab shall be 4" in thickness. In addition, the Contractor shall drill ½" diameter holes in the landing slab at 2' centers. The holes shall be covered with a 6" x 6" square of filter fabric before it is backfilled.

Method of Measurement. This work will be measured for payment in place and the area computed in square feet.

Basis of Payment. This item will be paid for at the contract unit price per square foot for CONCRETE LANDING SLAB.

BRICK SIDEWALK

Description.
This work shall consist of furnishing and installing unit pavers units on a prepared sand bed and concrete base. This work shall also include all required sand setting bed, and paver joint material. This work shall be done at the locations specified in the Contract plans or as directed by the Engineer. The concrete base will be paid for separately as Concrete Landing Slab.

Qualification.
The Contractor shall provide written evidence that his firm or other entity proposed for the unit paving work has specific experience meeting the following criteria:

Experience installing unit pavers using sand setting beds.
Installed (within past two years) a minimum of 200,000 square feet per year of unit paving using sand setting beds in commercial projects.
The same experienced supervisory personnel will be made available for this project.

If requested, the paving firm shall submit a list of comparable projects setting forth description, square footage, location and knowledgeable references with addresses and phone numbers.

Any material substitutions must be submitted to the Engineer for review. Submittals for consideration shall include full-sized samples and technical specifications. The Engineer will review the substitution proposal and, if approved, will issue written approval. Substitution submittals received after time outlined above will not be considered. Substitutions during construction will not be allowed.

Materials.
Unit pavers shall meet the requirements of Article 1042.15 of the Standard Specifications.

Paver Material shall be IL Campo Bluestone Color with 4' x 6', 6' x 6', 6' x 8' Herringbone pattern infill.

Sand setting bed and joint sand shall be clean, non-plastic, free from deleterious or foreign matter. The sand shall be natural or manufactured from crushed rock. Grading of samples shall be done according to ASTM C136. The particles shall be sharp and conform to the grading requirements of ASTM C33 as shown in Table 1.

Table 1
Grading Requirements for Bedding and Joint Sand

Sieve Size	*Percent Passing*
3/8 in.	100
No. 4	95 to 100
No. 8	80 to 100
No. 16	50 to 85
No. 30	25 to 60
No. 50	10 to 30
No. 100	2 to 10

Submittals.
Submit samples of brick paving units to indicate color and size selections. Color will be selected by Village from manufacturer's available colors.

Submit sieve analysis for grading of bedding sand.

Delivery, Storage and Handling.
Deliver brick pavers to the site in steel banded, plastic banded, or plastic wrapped cubes or on pallets capable of transfer by forklift or clamp lift. Unload pavers at job site in such a manner that no damage occurs to the product.

Sand delivered to the site shall be covered with waterproof covering to prevent exposure to rainfall or removal by wind. The covering shall be secured in place.

There shall be no variation in the depth of each paver. Pavers with extensive breakage of corners shall be rejected. Field pavers shall be laid as indicated on the plan and shall be an equal mixture of the standard colors. Final colors shall be approved by Engineer as coordinated with the Village prior to work.

Do not install sand or pavers during heavy rain or snowfall. Do not install frozen sand.

Field Mockup.
Contractor shall provide a 6 ‘x 6’ field mockup to demonstrate finish, color and pattern of the interlocking paver pavement to be approved by Engineer before installation.

Construction.
Pavers shall be installed per the manufacturer's recommendations. No paver setting work shall be performed when the underlayment has free moisture, ice, or snow, or when the underlayment is frozen. Concrete underlayment shall be sound, clean, and free from debris and materials or substances that will hinder the bond of the setting bed. The top surface of concrete underlayment slab shall not vary more than one half (1/2) inch of its proposed elevation. See detail plans for cross section of typical unit paver system.

To reduce dust during paver installation, unit pavers shall only be cut using wet saws. No dry cutting is permitted. Cut pavers shall be placed in areas shown on the details in the plans. "L" shaped pavers shall be avoided where possible. Pavers shall be cut radially when joints between pavers on curves exceed 1/8 inch. Radial cut pavers shall be created by trimming both sides of paver. Paver edgings shall be installed per manufacturer's recommendations.

Sand Setting Bed.
Sand shall be spread over the concrete base slab to the depth indicated on the plans and filter fabric as a setting bed for pavers. Sand shall be spread 1/2 inch to 3/4-inch-thick and leveled to required slope and grade. Maximum thickness of sand shall be 3/4 inch after leveling. Bed shall not be compacted until pavers are installed. Surface tolerance shall be within 1/4 in. of required grade as measured with a 10 ft. straightedge in both the transverse and longitudinal directions.

Paver Installation.

Setting bed shall be protected from damage prior to setting pavers. Unit pavers shall be set on sand setting bed. Setting shall be done by competent workmen under adequate supervision, and in accordance with manufacturer's recommendations. Pavers with chips, cracks, or other structural or aesthetic defects or those rejected by the Engineer shall not be used. Pavers shall be set true to the required lines and grades in the pattern detailed on the Plans. Pavers shall be tightly butted. Joints between pavers shall be uniform and shall be between 1/16 inch and 1/8 inch (2 to 3 mm) wide. There shall be no raised edges, either pavers or materials adjacent to pavers. The tolerance for such edges shall be 0" - 1/16" maximum in range. Pavers to be installed in the pattern(s) as shown on the drawings. Full pavers are to be laid first. The pavers should be laid hand tight. Maintain straight pattern lines and adjust as necessary.

After a sufficient area of pavers has been installed, the pavers shall be compacted by running a mechanical vibratory compactor over the paved surface until the pavers are uniformly leveled, true to grade, and totally immobilized. Where required, pavers shall be accurately cut with a masonry or concrete saw. Cut pavers shall be placed in such a manner that no segment is smaller than one quarter of a full paver. Cut edges shall be plumb and straight. Scoring and breaking shall not be acceptable.

Prior to application of Joint-Lock Sand, make sure the surface is dry and the paver joints are clean. Pour sand evenly over the area. Sweep the sand repeatedly over the paver stone joints until they are completely filled with sand. When joints are filled, paver surfaces shall be swept clean of sand. Paver edgings shall be installed per manufacturer's recommendations.

Use a low amplitude, high frequency plate vibrator capable of 3000 to 5000 lbs. centrifugal compaction force to vibrate the pavers into the sand. Vibrate the pavers, sweeping dry polymeric sand into the joints and vibrating until they are full. This will require at least two or three passes with the vibrator. Do not vibrate within three feet of the unrestrained edges of the paving units.

All work to within three feet of the installed face must be left fully compacted with sand filled joints at the completion of each day.

After completion of the unit pavers, paver installation areas shall be thoroughly swept clean and surface shall be left unsoiled. Where required by the Engineer, surface shall be cleaned with water or an approved cleaner.

The Contractor shall return to the site one month after installation is complete to inspect polymeric sand in joints. The Contractor is responsible for adding additional polymeric sand to fill joints where necessary.

The final surface elevations shall not deviate more than 3/8 inch under a 10-foot long straightedge. The surface elevation of pavers shall be 1/8 to 1/4 inch above adjacent drainage inlets, concrete curbs or retaining edge.

Method of Measurement.

This work will be measured for payment in place and the area computed in square feet.

Basis of Payment.

This work shall be paid for at the contract unit price per square foot for BRICK SIDEWALK.

REMOVE AND REINSTALL BRICK PAVER

This work shall consist of the removal and replacement of existing brick pavers to accommodate the proposed sidewalk/handicapped ramp modifications.

General. The Contractor will be responsible to store bricks that are removed. Any bricks that are lost, stolen or damaged shall be replaced by the Contractor at his own expense. Removal and disposal of excess bricks will not be paid for separately but shall be included in the cost of the work.

Qualifications:

A. Contractor must provide evidence that his firm or other entity proposed for the unit paving work has specific experience meeting the following criteria:
    1. Experience installing unit pavers using sand.
    2. Installed (within past three years) a minimum of 100,000 square feet per year for the past three years of unit paving using sand setting beds.
    3. The same experienced supervisory personnel will be made available for this project.
B. If requested the paving firm shall submit a list of comparable projects setting forth description, square footage, location and knowledgeable references with addresses and phone numbers.

Preparation of Subgrade. The subgrade shall be prepared according to Section 301 of the Standard Specifications, except Articles 301.05 and 301.06 will not apply.

Fine Aggregate. The fine aggregate used for the bedding course and joint filling shall be sand, silica sand, or slag sand. It shall also be Class A quality and dry. For the bedding course, the gradation shall be FA 1 or FA 2. For joint filling, the gradation shall be FA 9. The bedding course shall be a minimum of two inches in depth.

General.

A. No paver setting work shall be performed when the underlayment has free moisture, ice, or snow, or when the underlayment is frozen.

Paver Installation

A. Place pavers by hand in straight courses with hand tight joints and uniform top surface. Good alignment shall be maintained.
B. Pavers shall be cut only when necessary.
C. When all pavers are installed, apply joint sand to paving and sweep into all joints until joints are completely filled. Sweep clean the entire surface and remove all excess sand. Do not allow traffic on pavers prior to joints being filled.

Cleaning of Paved Surface. After completion of the unit pavers, paver installation areas shall be thoroughly swept clean, and surface shall be left unsoiled.

Method of Measurement. Brick paver removal and reinstallation will be measured for payment of replaced pavers in place and the area computed in square feet.

Basis of Payment. This item will be paid for at the contract unit price per square foot for REMOVE AND REINSTALL BRICK PAVER.

TEMPORARY SIDEWALK

Description. Where a known pedestrian generator, such as a school, neighborhood shopping center, downtown business district, church, or a known handicapped facility such as a nursing home exists, the ENGINEER may direct the CONTRACTOR to provide Temporary Sidewalk for overnight or weekend access.

Temporary Sidewalk shall be a minimum of 4 feet in width. Wider sidewalks may be needed where high pedestrian exists. If the Temporary Sidewalk is to remain in place for more than four weeks, it shall be constructed with a minimum of 2 inches of Portland Cement Concrete or Hot-Mix Asphalt at the CONTRACTOR'S option.

Basis of Payment

All labor, equipment, and material necessary to complete this work as specified herein shall be paid for at the contract unit price per SQUARE FOOT for TEMPORARY SIDEWALK. This price shall include all labor, material, and equipment necessary for constructing, maintaining, and removing the temporary sidewalk per the ENGINEER.

OUTDOOR RATED NETWORK CABLE

Description.
This work shall consist of furnishing and installing a network cable from the traffic signal cabinet to the associated field device shown on the Plans.

General.
The outdoor rated network cable shall be a black Category 6 POE cable, meeting the TIA/EIA 568-B.2 telecommunication standards. The cable shall be composed of 24 AWG solid bare copper conductors, twisted pairs, polyolefin insulation, inner LLPE jacket, overall shield (100% coverage), industrial grade sunlight and oil-resistant LLPE jacket. The cable shall be capable of performing from -40 ºC to 70 ºC.

Each end of the cable shall be terminated with an RJ-45 connector installed in accordance to the TIA/EIA 568B standard. The drain wire at each end shall be terminated with a ring lug and attached to a suitable ground point.

The work shall be performed in accordance to the applicable portions of Section 873 of the "Standard Specifications", and details as shown on the Plans. Furnishing and installing the RJ-45 connectors, ring terminals and grounding shall be included in the cost of this pay item.

Basis of Payment.
This work will be paid for at the contract unit price per foot for OUTDOOR RATED NETWORK CABLE. The unit price shall include furnishing and installing the cable, and making all connections necessary for proper operation.

ELECTRICAL SERVICE INSTALLATION – TRAFFIC SIGNALS (D-3)
(Effective August 15, 2005; Revised July 31, 2020)

In addition to the requirements of Section 805 of the Standard Specifications the following shall apply:

Description: This work shall install, modify, or extend the electric service installation. All installations shall meet the requirements of the details included on the plans and applicable portions of these specifications.

Materials.

General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.

i. Enclosures: Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 3R unfinished signal door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125 inch thick, the top 0.250 inch thick and the bottom 0.500 inch thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full-length tamper proof stainless steel .075-inch-thick hinge bolted to the cabinet with stainless steel carriage bolts and nylock nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40 inches high, 16 inches wide, and 15 inches in depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.

j. Surge Protector. Over voltage protection, with LED indicator, shall be provided for the 120-volt load circuit by means of MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40° F to 185° F (-40° C to 85° C). The surge protector shall be UL 1449 Listed.

k. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120-volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes. Unless otherwise noted on the plans, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.

l. Fuses. Fuse holders, and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.

m. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel, shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.

n. Utility Services Connections. The Contractor shall contact the utility company, prior to beginning work, to determine the utility company regulations relating to electrical service. The Contractor shall provide the utility company an estimated date that the service connection will be required, the agency which will be responsible for monthly service changes, and the connected load for flat rate billing if required. The customer service agreement with the utility company shall be executed by the agency responsible for monthly service charges.

   All information furnished to the utility company shall be in writing with a copy provided to the Engineer. Prior to contacting the Utility Company for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.

   During the interim between the service activation date and the signal turn on day, all energy charges for the intersection shall be paid by the Contractor according to Article 109.05 of the Standard Specifications. Beginning the day of the traffic signal turn on, all energy charges for the intersection will be paid by the responsible agency listed in the plans. The Contractor is responsible for making arrangements with the responsible agency to transfer billing to the responsible agency.

o. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10’ in length, and 0.75 inch in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary, additional rods shall be installed to meet resistance requirements at no additional cost.

Installation.

c. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the Engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.

d. Ground mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless-steel nuts and washers. The space between the bottom of the enclosure and top of the foundation shall be caulked at the base with silicone.

Basis of Payment. The service installation will be paid for at the contract unit price per each for SERVICE INSTALLATION, GROUND MOUNTED, METERED. The Type A foundation which includes the ground rod will be paid for separately.

PEDESTRIAN SIGNAL POST

Description.
This work shall consist of furnishing and installing a metal pedestrian signal post. All installations shall meet the requirements of the "Standard Traffic Signal Design Details" found in the plans.

Materials.

a. General. The pedestrian signal post shall be designed to support the traffic signal loading shown on the plans. The design and fabrication shall be according to the Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, as published by AASHTO.

b. Post. The post shall be made of steel or aluminum and have an outside diameter of 4 1/2 in. The post shall be threaded for assembly to the base. Aluminum posts shall be according to the specifications for Schedule 80 aluminum pipe. Steel posts shall be according to the specifications for Schedule 40 steel pipe.

c. Base. The base of a steel post shall be cast iron. The base of an aluminum post shall be aluminum. The base shall be threaded for the attachment to the threaded post. The base shall be approximately 10 in. high and 6 3/4 in. square at the bottom. The bottom of the base shall be designed to accept four 5/8 in. diameter anchor rods evenly spaced in a 6 in. diameter circle. The base shall be true to pattern, with sharp clean cutting ornamentation, and equipped with access doors for cable handling. The door shall be fastened to the base with stainless steel screws. A grounding lug shall be provided inside the base.

d. Anchor Rods. The anchor rods shall be 5/8 in. in diameter and 16 in. long and shall be according to Article 1006.09. The anchor rods shall be threaded approximately 6 in. at one end and have a bend at the other end. The first 12 in. at the threaded end shall be galvanized. One each galvanized nut and trapezoidal washer shall be furnished with each anchor rod. The washer shall be properly sized to fully engage and sit flush on all sides of the slot of the base plate.

   The aluminum post and base shall be drilled at the third points around the diameter and 1/4 in. by 2 in. stainless steel bolts shall be inserted to prevent the post from turning and wobbling.

e. Finish. The steel post, steel post cap and the cast iron base shall be hot-dipped galvanized according to AASHTO M 111. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with 851.01TS TRAFFIC SIGNAL PAINTING Special Provisions. If the post and the base are threaded after the galvanization, the bare exposed metal shall be immediately cleaned to remove all cutting solvents and oils, and then spray painted with two coats of an approved galvanized paint.

   The aluminum post shall have a natural finish, 100 grit or finer.

Installation.
The pedestrian signal post shall be erected plumb, securely bolted to a concrete foundation, and grounded to a ground rod according to the details shown on the plans. No more than 3/4 in. of the post threads shall protrude above the base.

A post cap shall be furnished and installed on the top of the post. The post cap shall match the material of the post. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly.

Prior to the assembly, the Contractor shall apply two additional coats of galvanized paint on the threads of the post and the base. The Contractor shall use a fabric post tightener to screw the post to the base.

Basis of Payment.
This work will be paid for at the contract unit price per each for PEDESTRIAN SIGNAL POST, of the length specified.

ILLUMINATED LED STREET NAME SIGN CABLE

This specification sets forth the minimum requirements for providing and installing a power cable for a LED internally illuminated street name sign per the applicable articles of Section 873 of the Standard Specifications and as shown in the plans. The cable shall be insulated and contain three copper conductors, No. 14 gauge, type SOOW.

Basis of Measurement.
The length of measurement shall be the distance horizontally measured between changes in direction, including cable in mast arms and slack cables. All vertical cables will not be measured for payment. Slack cables will be paid for as lead-in cables in conduit.

Basis of Payment
The Illuminated street name sign cable will be paid for at the contract unit price per FOOT for ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW, which price shall be payment in full for furnishing and installing the cable and making all electrical connections.

GROOVING FOR RECESSED PAVEMENT MARKING

This work shall consist of grooving the pavement surface in preparation for the application of recessed pavement markings.

Equipment.
The equipment shall be according to the following:
Preformed Plastic, Type B Pavement Marking:
Equipment: Use grooving equipment with a free-floating, independent cutting head equipped with gang-stacked diamond saw blades. The diamond saw blades shall be of uniform wear and shall produce a smooth textured surface.

General.
The Contractor shall supply the Engineer with a copy of the pavement marking material manufacturer's recommendations for constructing a groove. The work shall be according to Section 780 of the "Standard Specifications" and the following:

Pavement Grooving Methods: Plane the grooved lines according to details shown on the plans and per manufacturer's recommendations. The grooves for recessed pavement markings shall be constructed using the following methods:

a) Wet Cutting Head Operation: When water is required or used to cool the cutting head, the groove shall be flushed with high pressure water immediately following the cut to avoid build up and hardening of slurry in the groove. The pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.

b) Dry Cutting Head Operation: When used on HMA pavements, the groove shall be vacuumed or cleaned by blasting with a high-pressure air blower with at least 185 ft3/min air flow and 120 psi air pressure to remove loose aggregate, debris, and dust generated during the cutting operation. When used on PCC pavements, the groove shall be flushed with high pressure water or shot blasted to remove any PCC particles that may have become destabilized during the grooving process. If high pressure water is used, the pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.

Pavement Grooving: Grooving shall not cause ravels, aggregate fractures, spalling or disturbance of the joints to the underlying surface of the pavement. Grooves shall be cut into the pavement prior to the application of the pavement marking material. Grooves shall be cut such that the width is 1 inch greater than the width of the pavement marking line as specified on the plans. Grooves for letters and symbols shall be cut in the shape of the symbol and such that all dimensions are 1 inch greater than the corresponding dimensions of the symbol.

The position of the edge of the grooves shall be a minimum of 2 inches from the edge of all longitudinal joints. The Contractor shall achieve straight alignment with the grooving equipment.

The depth of the groove shall not be less than the manufacturer's recommendations for the pavement marking material specified but shall be installed to a minimum depth of 120 mils ± 10mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The Engineer may periodically check groove depths. The cutting head shall be operated at the appropriate speed in order to prevent undulation of the cutting head and grooving at an inconsistent depth.

At the start of grooving operations, a 50 ft test section shall be installed, and depth measurements shall be made at 10 ft intervals within the test section. The individual depth measurements shall be within the allowable ranges according to this Special Provision. If it is determined the test section has not been grooved at the appropriate depth or texture, adjustments shall be made to the cutting head and another 50 ft test section shall be installed and checked. This process shall continue until the test section meets the requirements of this Special Provision.

For new HMA pavements, grooves shall not be installed within 5 days of the placement of the final course of pavement.

Final Cleaning: Concrete – If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and pavement marking tape. Immediately prior to the application of the pavement marking material or primer sealer, the groove shall be cleaned with a high-pressure air blower with at least 185 ft3/min air flow and 120 psi air pressure. Use of the air blower does not decrease the amount of time required for the groove to dry.

New HMA - Use a high-pressure air blower with at least 185 ft3/min air flow and 120 psi air pressure to clean the groove. When a vacuum is used for cleaning it shall collect the loose material and dust for disposal outside the limits of the right-of-way according to Article 202.03 of the "Standard Specifications" and/or as directed by the Engineer. The collected material shall not be exhausted into the air.

Method of Measurement.

Grooves for lines will be measured for payment in place in feet. Grooves for double yellow lines will be measured as two separate lines. Grooves for letter, numbers and symbols shall be measured for payment in place and the area computed in square feet. Grooves for markings with contrast will be 1" wider than the minimum contrast width. Contractors electing to include wider contrast with the Engineer's approval, will require a wider groove. No additional payment will be allowed for the wider groove.

Basis of Payment.

This work will be paid for at the contract unit price per foot for GROOVING FOR RECESSED PAVEMENT MARKING of the groove width specified, and per square foot for GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS. *The unit price shall include all equipment, materials and labor required to groove and clean the pavement in preparation for the*

installation of recessed pavement markings. *No additional payment will be allowed for a wider groove to accommodate any extra contrast width.*

CONDUIT SPLICE

Description: This work shall consist of locating and intercepting the existing conduit at locations as shown on the plans or as directed by the Engineer. The contractor shall locate the conduit, cut the conduit, and make any preparations to the existing conduit in order to connect the proposed galvanized steel conduit.

Construction Requirements: This pay item shall include necessary work to splice conduit as shown on the plans. This work shall conform to Section 810 of the IDOT "Standard Specifications for Road and Bridge Construction". The existing conduits shall be exposed and cut at the location shown on the plans, or as directed by the Engineer. The end of the existing conduits shall be threaded, and a threaded coupling used to join the existing conduit to the new conduit. The use of no-thread couplings is unacceptable.

Basis of Payment: This work shall be paid for at the contract unit price each for CONDUIT SPLICE which shall include all connections, materials and labor, necessary to locate the existing conduit, prepare the existing conduit for connection to the new galvanized steel conduit, and the threaded coupling. The galvanized steel conduit shall be paid for separately.

INTERCEPT EXISTING CONDUIT

Description: This work shall consist of locating and intercepting an existing steel conduit for the purpose of constructing a new traffic signal foundation above the existing conduit and making all necessary connections to the conduit. The Contractor shall locate and cut the existing conduit and make any preparations to the existing conduit to connect to the galvanized steel conduit from the proposed traffic signal foundation.

Construction Requirements: This pay item shall include necessary work to intercept conduit as shown on the plans. This work shall conform to Section 810 of the IDOT "Standard Specifications for Road and Bridge Construction". The existing conduit shall be exposed and cut at the location shown on the plans, or as directed by the Engineer. The end of the existing conduits shall be threaded, and a threaded coupling used to join the existing conduit to the new conduit. The use of no-thread couplings is unacceptable.

Basis of Payment: This work shall be paid for at the contract unit price each for INTERCEPT EXISTING CONDUIT which shall include all excavation, cutting, connections, materials, and labor, necessary to locate the existing conduit, prepare the existing conduit for connection to the new galvanized steel conduit, and the threaded coupling. The galvanized steel conduit shall be paid for separately.

FULL-ACTUATED CONTROLLER IN EXISTING CABINET

Description.
This work shall consist of furnishing and installing a traffic actuated solid state digital controller meeting the requirements of the Traffic Signal Special Provisions for Railroad, Full Actuated Controller and Cabinet associated with this contract. This pay item shall include furnishing and installing the controller complete including malfunction management unit, load switches and flasher relays, and all necessary connections for proper operation.

Materials.
Add the following to Article 857.02 of the Standard Specifications:

Controllers shall be NTCIP compliant, Econolite Cobalt (Graphics Edition) or Eagle/Siemens M60 unless specified otherwise on the plans or elsewhere on these specifications. A NTCIP compliant controller may be used at a traffic signal interconnected to railroad warning devices but only upon the approval of the Engineer. Only controllers supplied by one of the District Three approved closed loop equipment supplier will be allowed. The controller shall be the most recent model and software version supplied by the equipment supplier at the time of the traffic signal TURN-ON and include data key. The traffic signal controller shall provide features to inhibit simultaneous display of a circular yellow ball and a yellow arrow display. Individual load switches shall be provided for each vehicle, pedestrian, and right turn overlap phase. The controller shall prevent phases from being omitted during program changes and after all preemption events.

Basis of Payment.
This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER IN EXISTING CABINET.

MASTER CONTROLLER

General.
This work shall consist of furnishing and installing a master controller, meeting the requirements of the Traffic Signal Special Provisions RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET for this contract, including all necessary connections for proper operation.

If the intersection is part of an existing system and/or when specified in the plans, this work shall consist of furnishing and installing a master controller of the same brand/manufacture consistent with that of the existing/new local traffic signal controllers supplied for this project.

Materials and Installation.
Revise Articles 860.02 and 860.03 of the Standard Specifications to read:

Only controllers supplied by one of District Three's approved closed loop equipment supplier will be allowed. Only NEMA TS 2 Type 1 Eagle/Siemens and Econolite closed loop systems shall be supplied. The latest model and software version of master controller shall be supplied. The Master controller shall include an Ethernet port for IP communications between other devices and Ethernet switch(es). The controller shall operate in an Ethernet topology and not through serial communications.

Functional requirements in addition to those in Section 863 of the Standard Specifications include:

The system commands shall consist of, as a minimum, six (6) cycle lengths, five (5) offsets, three (3) splits, and four (4) special functions. The system commands shall also include commands for free or coordinated operation.

Traffic Responsive operation shall consist of the real time acquisition of system detector data, data validation, and the scaling of acquired volumes and occupancies in a deterministic fashion to cause the selection and implementation of the most suitable traffic plan.

The Master controller shall provide for remote access through a cellular modem.

Upon request by the Engineer, each master shall be delivered with up to three (3) complete sets of the latest edition of registered remote monitoring software with full manufacture's support. Each set shall consist of software on CD, DVD, or other suitable media approved by the Engineer, and a bound set of manuals containing loading and operating instruction. One copy of the software and support data shall be delivered to the Agency in charge of system operation, if other than IDOT. One of these two sets will be provided to the Agency Signal Maintenance Contractor for use in monitoring the system.

Basis of Payment.
This work will be paid for at the contract unit price each for MASTER CONTROLLER. The cost for providing and installation of the cellular modem shall be paid separately at the contract unit price each for CELLULAR MODEM.

UNINTERRUPTABLE POWER SUPPLY, SPECIAL

This work shall be in accordance with section 862 of the Standard Specification except as modified herein.

Add the following to Article 862.01 of the Standard Specifications:

The UPS shall have the power capacity to provide normal operation of a signalized intersection that utilizes all LED type signal head optics, for a minimum of 6 (six) hours.

Add the following to Article 862.02 of the Standard Specifications:

Materials shall be according to Article 1074.04 as modified in UNINTERRUPTABLE POWER SUPPLY, SPECIAL.

Add the following to Article 862.03 of the Standard Specifications:

The UPS shall additionally include, but not be limited to, a battery cabinet, where applicable. For Super-P (Type IV) and Super-R (Type V) cabinets, the battery cabinet is integrated to the traffic signal cabinet and shall be included in the cost for the traffic signal cabinet of the size and type indicated on the plans.

The UPS shall provide reliable emergency power to the traffic signals in the event of a power failure or interruption.

Revise Article 862.04 of the Standard Specifications to read:

Installation.
When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four (4) stainless steel bolts. The UPS cabinet shall be completely enclosed with the bottom and back constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

At locations where UPS is installed and an Emergency Vehicle Priority System is in use, any existing incandescent confirmation beacons shall be replaced with LED lamps in accordance with the Emergency Vehicle Priority System specification at no additional cost to the contract. A concrete apron shall be provided and be in accordance with Articles 424 and 202 of the Standard Specifications. The concrete apron shall also, follow the Standard Traffic Signal Design Detail, Type D for Ground Mounted Controller Cabinet and UPS Battery Cabinet.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the UPS including the addition of alarms.

Materials.

Revise Article 1074.04(a)(1) of the Standard Specifications to read:

The UPS shall be line interactive or double conversion and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection(s) normal traffic signal operating load. The UPS must be able to maintain the intersection's normal operating load plus 20 percent (20%) of the intersection's normal operating load. When installed at a railroad-interconnected intersection the UPS must maintain the railroad pre-emption load, plus 20 percent (20%) of the railroad preemption-operating load. The total connected traffic signal load shall not exceed the published ratings for the UPS.
The UPS shall provide a minimum of 6 (six) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 1000 W active output capacity, with 86 percent minimum inverter efficiency).

Revise the first paragraph of Article 1074.04(a)(3) of the Standard Specifications to read:

The UPS shall have a minimum of four (4) sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans.

Revise Article 1074.04(a)(10) of the Standard Specifications to read:

The UPS shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

Revise Article 1074.04(a)(17) of the Standard Specifications to read:

When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, cabinet heaters, service receptacles, luminaires, any lighted street name signs, any automated enforcement equipment and any other devices directed by the Engineer.

Revise Article 1074.04(b)(2)b of the Standard Specifications to read:

Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125-inch thick and have a natural mill finish.

Revise Article 1074.04(b)(2)c of the Standard Specifications to read:

No more than three batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four batteries per shelf for a cabinet housing eight batteries.

Revise Article 1074.04(b)(2)e of the Standard Specifications to read:

The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in. (785 mm), a depth of 16 in. (440 mm), and a height of 41 to 48 in. (1.1 to 1.3 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).

End of paragraph 1074.04(b)(2)e

The door shall be equipped with a two position doorstop, one a 90^{o} and one at 120^{o}.

Revise Article 1074.04(b)(2)g of the Standard Specifications to read:

The door shall open to the entire cabinet, have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three-point locking system. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

Add the following to Article 1074.04(b)(2) of the Standard Specifications:

j. The battery cabinet shall have provisions for an external generator connection.

Add the following to Article 1074.04(c) of the Standard Specifications:

(8) The UPS shall include a tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.

(9) The UPS shall include standard RS-232 and internal Ethernet interface.

(10) The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate. Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

(11) The bypass switch shall include an internal power transfer relay that allows removal of the battery back-up unit, while the traffic signal is connected to utility power, without impacting normal traffic signal operation.

Revise Article 1074.04(d)(3) of the Standard Specifications to read:

All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic lead calcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted.

Revise Article 1074.04(d)(4) of the Standard Specifications to read:

Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F (-25 to + 71 °C) for gel cell batteries and -40 to 140 °F (-40 to + 60 °C) for AGM type batteries.

Add the following to Article 1074.04(d) of the Standard Specifications:

(9) The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the signalized intersection for a minimum of 6 (six) hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

(10) Battery Heater mats shall be provided, when gel cell type batteries are supplied.

Add the following to the Article 1074.04 of the Standard Specifications:

(e) Warranty. The warranty for an uninterruptable power supply (UPS) and batteries (full replacement) shall cover a minimum of 5 years from date the equipment is placed in operation.

(f) Installation. Bypass switch shall completely disconnect the traffic signal cabinet from the utility provider.

(g) The UPS shall be set-up to run the traffic signal continuously, without going to a red flashing condition, when switched to battery power unless otherwise directed by the Engineer. The Contractor shall confirm set-up with the Engineer. The continuous operation mode when switched to battery may require modification to unit connections and these modifications are included in the unit price for this item.

Revise Article 862.05 of the Standard Specifications to read:

Basis of Payment.
This work will be paid for at the contract unit price per each for UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL.

The concrete apron and earth excavation required shall be included in the cost of the UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL item.

FIBER OPTIC CABLE IN CONDUIT

Add the following to Article 871.01 of the Standard Specifications:

The Fiber Optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 871.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be 24 Port Fiber Wall Enclosure, unless otherwise indicated on plans. The fiber optic cable shall provide twelve fibers per tube for the number of fibers called for in the Fiber Optic Cable pay item in the Contract. Fiber Optic cable may be gel filled or have an approved water blocking tape.

Add the following to Article 871.04 of the Standard Specifications:

A minimum of six single mode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled "spare." Fibers not attached to the distribution enclosure shall be capped. A minimum of 13.0 feet (4m) of extra cable length shall be provided for controller cabinets. The controller cabinet extra cable length shall be stored as directed by the Engineer. The fiber optic cable shall be labeled with direction and assignment number/description.

Add the following to Article 871.06 of the Standard Specifications:

The distribution enclosure and all connectors will be included in the cost of the fiber optic cable.

Testing shall be in accordance with Article 801.13(d). Electronic files of OTDR signature traces shall be provided in the Final project documentation with certification from the Contractor that attenuation of each fiber does not exceed 3.5 dB/km nominal at 850nm for multimode fiber and 0.4 bd/km nominal at 1300nm for single mode fiber.

Add the following paragraph to the end of Article 871.04 of the Standard Specifications:

"The trench carrying the fiber optic cable conduit between intersections shall be marked with a one polymer warning stake placed equidistant between handholes. The warning stake shall be a solid orange color with a warning sign at the top of the stake. The stake shall have a sign at the top stating BURIED FIBER OPTIC CABLE ↔ CALL: (630) 554-3033 BEFORE DIGGING. The sign shall have a nominal dimension of 14 inches (350 mm) by 3 inches (75 mm). The stake shall have a nominal dimension of 3 inches (75 mm) wide by 0.25 inch (6 mm) thick by 5.5 feet (1.67 m) long. Fifty percent of the stake length shall be buried leaving approximately 30 inches (760 mm) exposed above ground displaying the sign. The stake shall be of such design as to deflect upon impact by a vehicle and flex back to original position. The stake shall have a factory-attached anchor. The anchor shall catch soil around the stake and prevent unauthorized removal."

This work will not be paid for separately but shall be included in the cost of the fiber optic cable in conduit.

CONCRETE FOUNDATION, TYPE A 12 INCH DIAMETER

This item shall follow Section 878. Traffic Signal Concrete Foundation of the Standard Specifications.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

Basis of Payment.
This work will be paid for at the contract unit price per foot of depth of CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER.

MODIFY EXISTING CONTROLLER AND CABINET

This work shall consist of modifying existing traffic signal controller programming and traffic signal cabinet to implement the proposed sequence of operation as shown on the Plans. This includes adding proposed pedestrian phases, right turn overlaps, Flashing Yellow Arrow (FYA) operation and making all necessary modifications to the controller and cabinet to achieve the proposed sequence.

General. The work shall be in accordance with Sections 857, 863, 873, and 895 of the Standard Specifications and shall include modifications in controller programming, MMU programming, cabinet and all necessary wiring, hardware, and modifications to the existing load switch bay to implement the proposed signal phasing at the intersection as shown on the Plans. All necessary materials, parts, firmware upgrades, and labor required for modifying the controller cabinet and replacement of any components to accommodate proposed signal phasing including load switches, MMU and field wiring, shall be considered included in this pay item.

The Contractor shall obtain an existing cabinet ("box") print for each intersection and forward these prints to the existing cabinet supplier/vendor. The supplier/vendor shall revise the prints for the proposed sequence of operations including FYA and return five copies of the update prints for each intersection. The Contractor shall leave one copy in the controller cabinet and deliver the remaining copies to the Local and the Illinois Department of Transportation. An updated cable log shall also be produced by the Contractor and placed in the controller cabinet. The log shall document a comprehensive listing of existing and newly installed cables.

The controller sequence, emergency pre-emption, pedestrian interval timing, change and clearance intervals and FYA operations shall conform to current MUTCD, IDOT D3 and local agency requirements. Right turn overlap (arrow) indications shall not be displayed during emergency pre-emption. Proposed controller programming shall avoid the presence of "yellow trap" conflicts during normal and emergency pre-emption operations.

Necessary modifications shall include the overhauling of a signal cabinet's back panel, or integration of an additional axillary load switch panel and associated wiring, to accommodate additional load switches as required per proposed signal phasing. Should more than 16 channels be required to deliver the proposed signal phasing, the Contractor and supplier/vendor shall submit plans for local agency approval demonstrating their solution to safely meeting the operational requirements of the contract documents.

Channel mapping for FYA shall follow Mode D (for NEMA TS2 cabinets) unless otherwise approved by the Engineer. If necessary, modifications are needed for proposed signal phasing involving use of an axillary load switch panel, channel mapping shall follow Mode G (for NEMA TS2) cabinets unless otherwise approved by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price EACH for MODIFY EXISTING CONTROLLER AND CABINET, which price shall be payment in full for furnishing all materials, hardware, wiring, controller software upgrades, and labor required to modify the existing traffic signal controller and cabinet, necessary for proper operation of the proposed sequence of operations, to the satisfaction of the Engineer.

EXPLORATORY EXCAVATION

Description: This item shall consist of locating an existing underground commercial or municipal utility that is in close proximity of a proposed traffic signal support foundation using the hydro excavating method.

Requirements: Where directed by the Engineer, the Contractor shall locate the utility cable or pipe through hand excavation. The Contractor shall be responsible for any disposal of the excavated material or for replacing excavated soil in hole if excavation is outside the limits of the augured foundation hole.

Any existing utilities damaged during excavation operations shall be repaired or replaced at the Contractor's expense, no additional compensation shall be allowed.

Measurement and Basis of Payment: This work will be measured per vertical foot excavated, regardless of the soil composition, depth or diameter of hole that is required to verify existing utility location. This work shall be paid for at the contract unit price per Foot for EXPLORATORY EXCAVATION, which shall be payment in full for all work listed herein or as directed by the Engineer.

STEEL CASING

This work shall consist of furnishing and installing steel pipe casings within the railroad right-of-way as shown on the plans, or as directed by the Engineer.

General: The steel pipe casings are used to protect the conduit crossings under the railroad track against live railroad loads. The steel casings shall have a 0.25” wall thickness as shown on the plans. The casings shall have epoxy seals on the end to protect against unintended backfill from entering the steel pipe casings.

Method of Measurement and Basis of Payment: This work shall be paid for at the contract unit per foot for STEEL CASING PIPE, BORED AND JACKED, 8”, which price shall be payment in full for furnishing and installing the steel casings to the satisfaction of the Engineer.

VIDEO VEHICLE DETECTION SYSTEM

This specification sets forth the minimum requirements for a video detection system that shall detect an advance vehicle on a roadway by processing video images, and that provides vehicle presence, traffic flow data, event alarms, and full-motion video for real-time traffic control and management systems.

The Video Vehicle Detection System shall be used at the traffic signal at the intersections of US Route 34 (Washington Street) at Harrison Street and at Main Street.

The Video Vehicle Detection System shall provide remote access to personal computing devices including tablets, laptops, and desktops.

The Video Vehicle Detection System shall be capable of communicating with the Centrac's Advance Traffic Management System and the Tactic's Advance Traffic Management System. The Video Detection System shall work wirelessly to the new controller placed inside the new traffic signal cabinet.

The video camera shall provide real life pictures of the roadway and vehicles.

The manufacturer shall recommend the height and location of the video camera so the proper detection zones will detect and monitor all four (4) legs from ten (10) feet in front of the stop bar until 500 feet in advance of the stop bar. The Video Vehicle Detection System shall use as many cameras as needed to provide and monitor the proper detection for all four (4) legs. The video camera or cameras shall either be mounted on the luminaire arm, the mast arm, or a six (6) foot extension on the mast arm.

The Video Detection System shall include a monitor (minimum size of 12" by 12") with mouse inside the cabinet so the maintainer can monitor the detection zones in each direction.

The video detection system shall also include a 6-foot video detection pipe extension mounted on all mast arms (as shown on the plans) to withstand 80mph wind.

System Hardware. The video detection system shall be comprised of two major hardware components: a video sensor and a communications interface panel. An optional wired input/output card shall be available for certain cabinet types.

Video Sensor. The video detection system shall include a video sensor that integrates a high-definition (HD) camera with an embedded processor for analyzing the video and performing detection.

Camera and Processor.

1. The camera shall be a color CMOS imaging array.
2. The camera shall have HD resolution of at least 720p (1280x720 pixels).
3. The camera shall include a minimum 10X optical zoom.
    a. It shall be possible to zoom the lens as required to satisfy across-the-intersection detection objectives, including stop line and advance detection.
    b. It shall be possible to zoom the lens remotely from the TMC for temporary traffic surveillance operations or to inspect the cleanliness of the faceplate.
4. The camera shall have direct, real-time iris and shutter speed control by the integrated processor.

5. The processor shall support H.264 video compression for streaming output.

Video Sensor Enclosure Assembly.

1. The camera and processor shall be housed in a sealed IP-67 enclosure.
    a. The faceplate of the enclosure shall be glass and shall have hydrophilic coating on the exterior surface to reduce debris accumulation and maintenance.
    b. The faceplate shall have a thermostatically controlled indium tin oxide (ITO) heater applied directly on the interior surface to keep the faceplate clear of condensation, snow, ice, and frost.
    c. An adjustable aluminum visor shall shield the faceplate from the sun and extraneous light sources.
2. An integral aiming sight shall assist in aiming the camera for the detection objectives.
3. A removable rear cap and cable strain relief shall seal the power connection.
4. The rear cap shall be tethered to the enclosure to avoid dropping the cap during installation.
5. The rear cap shall be fastened to the body of the video sensor with a single, captive bolt.
    a. The rear cap and enclosure shall include Gore breathers to equalize internal and external pressure while preventing moisture from entering the camera.
6. The sensor shall be self-supporting on the manufacturer's mounting brackets for easier fastening during installation.
7. It shall be possible to rotate the field-of-view 360o without changing the angle of the visor.

Power and Communications.

1. Power and communications for the video sensor shall be carried over a single three conductor cable.
    a. Termination of the three-conductor cable shall be inside the rear cap of the enclosure on a three-position, removable Phoenix terminal block. Each conductor shall be attached to the Phoenix plug via a screw connection.
2. The video sensor shall operate normally over an input voltage range of 89 to 265 VAC at 50 or 60 Hz.
3. Power consumption shall be no more than 16 watts typical.
4. No supplemental surge suppression shall be required outside the cabinet.
5. All communications to the video sensor shall be broadband-over-power via the same three-conductor cable that powers the unit. Coaxial cable shall not be required.
6. Communications Interface Panel. The video detection system shall include an interface panel in the traffic cabinet that manages communications between the video sensors, the traffic management center, a maintenance technician, and the traffic cabinet itself.

Video Sensor Connection.

1. The communications interface panel shall provide connection points for four video sensors.
    a. Each sensor connection shall be a 3-pole terminal block, which supplies power and broadband-over-power communications to the sensor.
    b. The broadband-over-power communications shall provide a throughput of 70 to 90 Mbps.
    c. The broadband-over-power connection shall support at least 1,000 feet of cabling to the video sensor.

d. Each video sensor connection shall include a power switch.
e. There shall be an LED for each video sensor to indicate the state of the power to the sensor and an LED for each video sensor to indicate the status of communications.
f. Each video sensor connection shall contain a resettable fuse.
g. Each video sensor connection shall provide high-energy transient protection.

Traffic Management Center (TMC) Communications.

1. An Ethernet port shall be provided to connect to a remote Traffic Management Center (TMC).
    a. The TMC connection shall support 10/100/1000 Mbps Ethernet communication.
    b. The communications interface panel shall proxy all network requests that arrive on the TMC connection to avoid unwanted network traffic from reaching the broadband-over-power network between the communications interface panel and the video sensors.
    c. All communications to the video detection system through the TMC connection shall be to a single IP address.
    d. The system shall be able to provide Full HD quality video through its WAN port for use in streaming video back to the TMC or any remote location.

Local User Communications.

1. A wired Ethernet port shall be provided to connect the technician at the cabinet to the video detection system for setup and maintenance purposes.
    a. The maintenance port shall support 10/100/1000 Mbps Ethernet communication.
    b. All communications to the video detection system through the maintenance port shall be to a single IP address.
    c. The maintenance port shall support DHCP to automatically assign an IP address to· the user's computer.
2. An 802.11g Wi-Fi access point shall allow wireless connection to the video detection system at the cabinet for setup and maintenance purposes.
    a. All communications to the video detection system through the Wi-Fi access point. shall be to a single IP Address.
    b. The Wi-Fi access point shall support DHCP to automatically assign an IP Address to the user's computer.
    c. The Wi-Fi access point shall include a dipole, omnidirectional antenna.
    d. A momentary pushbutton shall allow the user to turn the Wi-Fi access point on or off.
    e. The Wi-Fi access point shall turn itself off automatically after a period of inactivity from connected devices.
    f. An LED shall indicate when the Wi-Fi access point is enabled.
    g. The Wi-Fi access point shall operate simultaneously with the wired maintenance port and with the TMC connection.
    h. The WiFi access point shall require a password for connection by a user's computer. The default password shall be changeable.

Traffic Controller Connection.

1. The communications interface panel shall provide one (1) connection to communicate to the traffic controller through the cabinet.
2. The traffic controller connection shall support a TS2 Type 1 compatible SDLC interface.
    a. The traffic controller connector shall be a 15-pin female metal shell D sub-miniature type connector to support a standard NEMA TS2 or TEES SDLC cable.
    b. The traffic controller connection shall support a protocol interface to SDLC-capable traffic controllers (NEMA or TEES).
    c. The traffic controller connection shall support the NEMA TS2 SDLC protocol to include up to 64 detector outputs and 32 inputs.
3. The traffic controller connection shall be able to connect to a wired input/output card, which supports wired 1/0 in cabinets without a SDLC-capable·controller.
    a. The wired J/0 data communications link shall support at least 24 outputs and 16 inputs.
4. It shall be possible to connect and use both SDLC communications and communication to the wired input/output card simultaneously.

USB Ports.

1. The communications interface panel shall include two USB 2.0 ports.
    a. If a communications interface panel fails to start and run due to a software or operating system failure, it shall be possible to reinstall all system and application software from a USB memory stick without necessitating removal of the communications interface panel from the cabinet.
    b. Video recording of up to 2 cameras simultaneously shall commence automatically when an appropriately configured USB memory stick is installed in either USB port.

Power.

1. The communications interface panel shall accept input voltage in the range of 89-265 VAC, 50/60 Hz power from the transient-protected side of the cabinet.
2. The communications interface panel shall be protected by two slow blow fuses. Spares shall be attached to the panel.

Wired Input/Output Card.

The video detection system shall support an optional wired input/output card that communicates with the communications interface panel for real-time detection states and other 1/0 to the traffic controller. The card may reside in a standard detector rack or shelf-mount enclosure with power module.

The optional wired input/output card shall comply with the form factor and electrical characteristics to plug directly into a NEMA type C or D detector rack or Caltrans TEES Input File.

1. The card shall occupy two slots of the detector rack.
2. The card shall provide four detector outputs on its rear-edge connector.
3. A front connector shall provide communication to the communications interface panel.
4. A front connector shall allow 16 inputs and 24 contact-closure detector outputs for wiring into the cabinet.

    a. A front panel LED for each of the 16 inputs and 24 outputs shall indicate the state of the input or output.
5. The wired input/output card shall support optional expansion cards in other slots. Each expansion card shall support 4 outputs to the back edge of the card.
6. The wired input/output card shall support optional harnesses for connection to Input Files or C1, C4, C11, and C12 ports to support Type 170 or Type 2070 controllers.

System Software.

The video detection system shall include management software for configuration, monitoring and data collection purposes.

Management Software.

1. Management software shall be a Windows-based application.
    a. The software shall be compatible with Windows 7 and Windows 10 operating systems (OS).
    b. The software shall communicate with the video detection system via Ethernet.
2. The management software shall automatically determine all video sensors .and communications interface panels available on the local network and populate a list of all devices.
3. The management software shall provide a means to add video sensors and communications interface panels on routed networks by the communications panel's WAN IP address.
4. The management software shall provide the user a means to name individual video sensors and communications interface panels.
5. The management software shall provide a means for the user to zoom the camera optics while viewing a live video stream.
6. The management software shall provide a means for the user to easily calibrate distances in the field of view to create a 3-dimensional mapping of the complete field of view.
7. The management software shall provide the user a means to create 4-sided detection zones in the field of view using either a still snapshot or live video.
    a. The management software will overlay an outline of each detection zone over the background image.
    b. It shall be possible for the user to place detection zones anywhere in the field of view for stop line detection and/or advance detection.
    c. It shall be possible for the user to set the desired color of both the "on" and "off" states of the overlay for individual detection zones.
    d. It shall be possible for the user to alter the size and shape of any previously created zone.
8. It shall be possible for the user to click and drag any of the 4 sides of a zone and the system will automatically scale the length of the side consistent with the 3-dimensional field of view.
9. It shall be possible for the user to move an entire zone without automatic rescaling.
    a. It shall be possible for the user to create a new zone by selecting an existing zone and duplicating it on either the left or right side or specifying a new zone behind (for advance) with a specific length and distance back from selected zone.
    b. It shall be possible for the user to easily rotate a zone by selecting any of its four corners and dragging to rotate it.

c. It shall be possible to easily flip the zone direction 180 degrees from its current orientation.
d. It shall be possible for the user to name each zone uniquely.
e. It shall be possible for the user to assign each zone to detect vehicles, to detect bicycles, or to detect both, and to specify different outputs for each type.
f. It shall be possible for the user to specify the output of a zone as a presence, pulse, or snappy type output (presence during red and pulse during green signal phase state).
g. The pulse output shall be usable for both approaching and receding traffic.
h. The pulse output shall have a user programmable duration from 100 to 400 ms.
i. It shall be possible for a zone to have multiple output types (presence, pulse, snappy) on separate output channels.
j. It shall be possible for the user to tie the presence outputs of multiple zones as well as signal phase state together with AND/OR Boolean logic.
k. It shall be possible for the user to assign the same output to multiple zones such that the output will be on if any of the zones are detecting a vehicle or bicycle.
l. It shall be possible for the user to assign a single zone to more than one output such that if a vehicle or bicycle is detected, all the assigned outputs shall be turned on.
m. The management software shall be capable of creating at least 99 detection zones per video sensor.
n. It shall be possible for the management software to retrieve all configuration parameters from video sensors or communications interface panels.
o. It shall be possible for the user to save all the settings for a video sensor or a communications interface panel to a laptop file.
p. The management software shall provide a means to read or import all the settings from a previously saved configuration file for a video sensor or a communications interface panel.
q. The management software shall be able to download a new version of the application software into a communications interface panel and its attached video sensors.

10. The management software shall provide a screen to monitor operation of a video sensor.
    a. The monitoring screen shall include a live video stream from the video sensor with at least HD 1280x720 pixel resolution.
    b. The monitoring screen shall show indications of detection in real time by changing the color of the detection zone.
    c. It shall be possible for the user to configure different indications for vehicle detections vs. bicycle detections when both are configured for the same zone.
    d. The monitoring screen shall include the following optional, configurable objects. It shall be possible for the user to size and position them anywhere on the screen and to change the color and size of text.
11. An indication of when either a zone or an output is on or off, along with a user- configurable name for that indicator, applicable to any zone or output type.
12. The current time in the video sensor.
13. A user-configurable title or name.
14. The version number of the video sensor software.
15. Configurable text as defined by the user.

a. Undo/Redo functions shall be available for operations during detection zone setup and programming.
b. It shall be possible for the user to turn the overlay graphics on or off with a single setting.
c. The management software shall provide a screen to monitor operation of the intersection with a quad-view video stream from the communications interface panel.
d. The quad-view video stream shall have a resolution of at least HD 1280x720 pixels, where each of the sensor videos comprising the quad-view shall be at least 640x360 pixels.
e. It shall be possible for the user to configure the order that the sensor videos appear in the quad-view.
f. The real-time quad-view video stream shall be capable of displaying the overlay graphics for all four sensors simultaneously.

16. While monitoring the video of a single video sensor or of the quad-view, it shall be possible for the user to request a "snapshot" or single-frame image to save to a named file on a laptop.
17. While monitoring the video of a single video sensor or of the quad-view, it shall be possible for the user to record a period of the video to save to a named file on a laptop.

System Functionality.

The video detection system shall provide the following features and functionality.

Detection Performance.

1. The video detection system shall detect the presence of vehicles in defined zones and turn on the assigned output when the vehicle is present in the zone.
    a. Stop Line Detection
2. For detection zones placed at the stop line, the probability of not detecting the presence of a vehicle shall be 1% or less when aggregated over a 24-hour period when the video sensor is installed and configured properly.
3. For detection zones placed at the stop line, the probability of falsely detecting a vehicle that is not present shall be 3% or less when aggregated over a 24-hour period when the video sensor is installed and configured properly.
    a. Advance Detection
4. It shall be possible to place advance detector zones such that the farthest point of the zone is up to 600 feet from the video sensor. Advance detector zone placement shall include 2-3 car lengths of field-of-view beyond the farthest point of the zone.
    a. Receding Zones
5. The video detection system shall be capable of detecting receding vehicles in day or night conditions when the video sensor is installed and configured properly.
6. To ensure statistical significance for the above detection performance specifications, the data shall be collected over 24-hour time intervals (so as to avoid a single lighting condition) and will contain a minimum of one hundred (100) vehicles per lane. The calculations of detection performance will not include turning movements where vehicles do not pass through the detectors, vehicle lane-change anomalies, or where they stop short or stop beyond the combined detection zones.

Failsafe Mode.

1. The video detection system shall provide three (3) failsafe options during optical contrast loss. The default shall be maximum recall. The end-user may also choose to use minimum recall or fixed recall in which a user-defined number of seconds may be implemented to hold call during green.
2. The video sensor shall continuously monitor the overall contrast in the video. If the overall contrast falls below a preset level (such as caused by dirty faceplate, severe glare, extreme fog, or temporary ice/snow on the faceplate), the sensor shall enable the chosen failsafe mode. When sufficient contrast is restored in the video, the sensor will exit the failsafe mode.
3. The communications interface panel shall continuously monitor the connectivity status of the attached video sensors. If any video sensor goes offline due to either electrical failure or internal software failure, the communications interface panel shall enable the failsafe mode for that video sensor. If the video sensor comes back online, failsafe mode shall end.

Data Collection.

1. The video detection system shall automatically collect and store traffic flow data in non-volatile memory for later retrieval and analysis. No additional hardware or software shall be necessary. Data functionality shall include the following:
    a. Data shall be collected automatically for all zones created by the user once the learn period is complete and normal detection is active. No further setup shall be required.
    b. Vehicle counts per zone.
    c. Vehicle turning movements independent of zone.
    d. Vehicle average speeds.
    e. Vehicle lengths.
    f. Detection statistics with the on/off timestamps when zones were activated.
    g. Detection actuation statistics for whether a zone was triggered by a vehicle or a bicycle.
2. The management software shall be able to retrieve collected data over a specified period or for all currently stored data and save into a standard CSV file.
3. The sensor hardware shall include up to 8GB of memory storage capacity for data collection.
4. Data Download Types
    a. Options shall be provided for downloaded data in the form of a .csv file for Raw data, Binned data, Detections and Zone Status as defined below:
5. Raw Data - Includes time stamped Zone statistics for vehicle or bike actuations and average speed as well as time stamped Exiting Vehicle Statistics which include volume, turning movement direction, speed and length for vehicles exiting each zone.
6. Binned Data - Pre-binned data with bin time set by the user down to as little as 1 minute. Data shall include volume, occupancy, turning movement counts and speed for vehicles for each zone.
7. Detections - Date/time stamped data regarding vehicles exiting zones including type of object (vehicle or bike), speed, length, and direction of movement (through, left, right).

8. Zone Status – Date/Time stamped indications of whether a vehicle or bicycle actuated a zone and the average speed of all objects in the zone.
    a. Remote Data Interface
9. Data including counts, turning movements, speed, and length, as well as zone names, sensor status, and video snapshots shall be available to remote systems via remote communication to the system using an Applications Programming Interface (API). This API shall consist of a set of GET commands embedded in HTTP protocol. The resulting data returned shall be in JSON format.

Operations Log.

1. The communications interface panel and each video sensor shall maintain a time-stamped operation log of routine and special events in non-volatile memory for later retrieval and analysis.

Time Synchronization.

1. The video detection system and management software shall provide three methods to synchronize the time-of-day clocks in the communication interface panel and the video sensors, as follows:
    a. Manual time synchronization operation by the user, which sets the time to the current time on the laptop where the management software is running.
    b. A configuration setting to allow the communications interface panel to automatically obtain time from the NEMA TS2 protocol on the SDLC channel and broadcast it to the video sensors.
    c. A configuration setting to allow the communications interface panel to automatically obtain time from up to five Network Time Protocol (NTP) sources and broadcast it to the video sensors.

Video Streaming.

1. In addition to the ability to view video streams in the management software, it shall be possible to view video from individual sensors or to view the quad-view from the communications interface panel using a third-party video player application on a tablet, smartphone, or laptop computer.
2. Video bitrate is user-definable between 100 Kbps-5000 Kbps. The default shall be 2048 Kbps. All bitrates shall provide 30 fps.

Installation and Setup.

1. The video detection system hardware shall be designed for flexible, fast, and easy installation and setup.
2. It shall be possible to mount the video sensor on an intersection pole, mast arm, or luminaire arm.
3. No special tools or extra equipment, other than a laptop for configuration, will be required.
4. Once all hardware is installed, connected and functional, it shall be possible to configure the video detection system for a typical 4-approach, 8-phase intersection in 15 minutes or less.
5. Warranty, Service, and Support, the video detection system shall be provided with the following warranty, service, and support options.

Warranty.

1. The manufacturer shall warrant the video detection system a minimum of ten (10) years, along with ten (10) years of software maintenance and upgrades.

Service.

2. Ongoing software support by the manufacturer will include software updates of the video sensor, communications interface panel, and management software. These updates will be provided free of charge during the warranty period. The manufacturer will maintain a program for technical support and software updates following expiration of the warranty period. This program will be available to the contracting agency in the form of a separate agreement for continuing support.

Support.

1. A quick-start guide, installation guide, application notes, and other materials shall be available from the manufacturer to assist in product installation and setup for various applications. In addition, training online or in person shall be available.
2. Training shall be available to personnel of the contracting agency in application design, operation, setup, and maintenance of the video detection system.
3. Manufacturer shall provide a tech support website, support email address and a 1-800 number for technical support.

Basis of Payment.

This work will be paid for at the contract unit price EACH (per traffic signal installation) for VIDEO VEHICLE DETECTION SYSTEM, which price shall be payment in full for all labor and materials to provide a video vehicle detection system as specified above.

REMOTE CONTROLLED VIDEO SYSTEM

This work shall consist of furnishing and installing an IP based remote controlled video system at a location(s) specified in the plans. The work shall include a color camera, dome assembly, all mounting hardware, connectors, patch cables, power injectors, and related equipment necessary to complete the installation according to the manufacturer's specifications.

The Remote Controlled Video System shall be installed in the proposed traffic control cabinet at locations as shown on the plans. If required as shown in the Plan, the cellular router shall provide secure internet connectivity for the video cameras, control, MMU (conflict monitor), UPS, and all other devices in the new controller cabinet. The system shall have anonymous FTP capabilities disabled by the vendor/equipment supplier or provide a feature for the user to disable the functionality through the standard internal menu.

The camera shall be installed as shown on the plans, either on the luminaire arm near the luminaire, or on the combination mast arm assembly pole, angled toward the center of the intersection using a mounting bracket compatible with the camera and procured from one of the approved camera manufacturers. When installed on the pole, the camera shall be mounted to provide a minimum of 12 inches clear space between face of the pole and the camera housing. When installed on the luminaire arm, the camera shall be installed with a 30-degree tilt-adjustable bracket. The camera and any external hardware and housing shall be installed with stainless steel straps. All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent the chafing of wires.

The Contractor shall contact the Engineer prior to installing the camera and associated wiring, to receive final approval on the camera location.

If the Remote Controlled Video System will be connected to the Gigabit Ethernet network, then a managed Ethernet switch shall be required. Managed Ethernet switches shall be installed as shown on the plans.

The contractor shall provide a minimum of two (2) hours of training by a factory representative on the software for up to ten (10) people. A ten (10) year software maintenance agreement for software updates shall be provided.

Basis of Payment:

This work shall be paid at the contract unit price per each for REMOTE CONTROLLED VIDEO SYSTEM, which price shall be payment in full for all labor and materials for all items described above.

The cabling from the camera to the traffic signal cabinet shall be paid for separately at the contract unit price foot for OUTDOOR RATED NETWORK CABLE.

The managed Ethernet switch shall be paid for separately at the contract unit price each for ETHERNET MANAGED SWITCH.

OPTIMIZE TRAFFIC SIGNAL SYSTEM

This work shall consist of providing a revised Signal Coordination and Timing (SCAT) Report and implementing optimized timings to a new or existing previously optimized closed loop traffic signal system. This work is required due to the addition of a signalized intersection to an existing system or a modification of an existing signalized intersection, which affects the quality of an existing system's operation. MAINTENANCE OF THE SUBJECT INTERSECTION SHALL NOT BE ACCEPTED BY THE DEPARTMENT UNTIL THE OPTIMIZED TIMINGS ARE IMPLEMENTED AND THE SIGNALS ARE FUNCTIONING TO THE SATISFACTION OF THE ENGINEER.

The traffic signal system to be optimized includes the following intersections:

1. Illinois Route 31/US Route 34 @ US Route 34 (Washington Street)
2. US Route 34 (Washington Street) @ Harrison Street
3. US Route 34 (Washington Street) @ Main Street
4. US Route 34 (Washington Street) @ US Route 34 (Madison Street)
5. US Route 34 (Madison Street/Chicago Road) @ Jefferson Street/Illinois Route 25 (Madison Street)

For the purposes of optimization work, an intersection shall include all traffic movements operated by the subject controller and cabinet.

The traffic signal system shall be optimized by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District 3 of the Illinois Department of Transportation. The Contractor shall contact the Area Traffic Signal Operations Engineer at 815-434-8505 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 3 SCAT Guidelines, if available, except as note herein.

A listing of existing signal equipment, interconnect information and existing phasing/timing patterns may be obtained from the Department if available and as appropriate. The existing SCAT Report is available for review at the District Three office (if one exists) and if the Consultant provides blank rewritable compact disks, copies containing software runs for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall consult with the Area Traffic Signal Operations Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system; in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the re-optimization.

Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system. Proposed signal timing plan for the new or modified intersection(s) shall be forwarded to IDOT for review prior to implementation. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations.

Traffic counts shall be taken at the subject intersection after the traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Seven day/twenty-four-hour automatic traffic recorder counts will be required and manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday, and if necessary, on the weekend. Additional manual turning movement counts may be necessary if heavy traffic flows exist during off peak hours. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, transit buses, and pedestrian/bicyclist movements.

As necessary, the intersections shall be addressed/re-addressed, and all system detectors assigned/reassigned in the master controllers according to the current standard of District Three.

A Capacity Analysis shall be conducted at the subject intersection to determine its level of service and degree of saturation. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system with minor adjustments if necessary. Changes to the cycle lengths and offsets for the entire system may be required due to the addition/modification of the subject intersection. Both volume and occupancy shall be considered when developing a re-optimized timing program. Signal system optimization analyses shall be conducted utilizing PASSER II, TRANSYT 7F, SIGNAL 85, SYNCHRO 6.0 or other appropriate approved computer software.

The following traffic signal timings are required:

a. Confirm that all signals have minimum 4 second yellow and 2 second red and check that the formula meets latest MUTCD edition.

b. “Zero out” all density times.

c. Confirm pedestrian times meet MUTCD latest edition (3.5 seconds).

d. Confirm minimum green times are 6 seconds on left turn, 8 seconds on side streets, and 10 seconds on main street.

e. Confirm all detection is “non-locking”.

All the intersections shall be re-addressed according to the current standard of District Three. The proposed signal timing plan shall be forwarded to IDOT for review and approval seven days prior to the traffic signal turn on at the intersection. The timing plan shall be implemented at least two working days prior to the turn on of the traffic signal. The timing plan shall include a time-of-day program, which may be used as a back-up system. After downloading the system timings, the Consultant shall make fine tuning adjustments to the timing in the field to alleviate observed operating conditions and to enhance operations. The timing plans shall be re-evaluated after the signal has been turned on and traffic has had an opportunity to adjust to the new signal. Any necessary timing changes shall be made at that time with the approval of the Area Signal Engineer.

The following deliverables shall be required:

- Consultant shall furnish to IDOT a cover letter describing the extent of the re-optimization work performed.
- Consultant shall furnish an updated intersection graphic display for the subject intersection to IDOT and to IDOT's Traffic Signal Maintenance Contractor.
- Consultant shall furnish to IDOT one (1) copy of a technical memorandum for the optimized system. The technical memorandum shall include the following elements:
    (1) Brief description of the project.
    (2) Printed copies of the analysis output from Synchro (or other appropriate, approved optimization software file).
    (3) Turning movement and automatic traffic recorder counts, capacity analyses for each count period, computer optimization analyses for each count period, proposed implementation plans and summaries including system description, analysis methodology, method of effectiveness comparison results and special recommendations and/or observations. The new report shall follow the format of the old report and shall incorporate all data from the old report which remains unchanged. Copies of the entire database including intersection displays and any other displays which the system software allows shall be furnished to the Department and to the Department's Traffic Signal Maintenance Contractor.
- Consultant shall furnish to IDOT two (2) CDs for the optimized system. The CDs shall include the following elements:
    (1) Electronic copy of the technical memorandum in PDF format.
    (2) Revised Synchro files (or other appropriate, approved optimization software file) including the new signal and the rest of the signals in the closed loop system.
    (3) Traffic counts conducted at the subject intersection.
    (4) New or updated intersection graphic display file for the subject intersection.
    (5) The CD shall be labeled with the IDOT system number and master locations, as well as the submittal date and the consultant logo. The CD case shall include a clearly readable label displaying the same information securely affixed to the side and front.

Method of Measurement: This work will be measured for payment per system as each. A system will consist of all the intersections listed above.

Basis of Payment: This work will be paid for at the contract unit price per each for OPTIMIZE TRAFFIC SIGNAL SYSTEM.

SYSTEM IMPLEMENTATION, EQUIPMENT INTEGRATION AND SUPPORT

This specification sets forth the minimum requirements for installing, configuring, integrating, and provisioning a fully operational traffic management network. Including an Ethernet based Local Area Networks (LAN), which will provide communication between remote traffic control field devices with remote traffic signal management systems of various users through a Virtual Personal Network (VPN) connection. Field devices include traffic signal controllers, CCTV (PTZ) cameras and video detection camera systems as shown on the plans. VPN users shall include the Illinois Department of Transportation (IDOT) - District 3, Village of Oswego traffic signal maintenance contractor and the Illinois Commerce Commission (ICC).

The Contractor shall utilize the services of a qualified system integrator having experience and proficiency with the integration of Ethernet based traffic management networks to perform this work.

This work shall include the configuration of existing traffic signal for closed loops systems monitoring software for the full functionality and integration of the field devices, including development of intersection graphics and traffic signal controller data base conversions to transfer existing traffic signal timing/programming as directed by the Engineer. This work shall also include configuration of all new Ethernet switches and servers; assigning IP addresses to field devices; troubleshooting; and submitting documentation to the Engineer. This work will not include the optimization of the new traffic signal system.

A new, contractor-provided 36-strand single mode fiber optic cable along US 34 (Washington and Madison Streets) shall serve as the Local Area Network (LAN) communication backhaul to commercial internet access provided by the Village of Oswego. The internet access is housed in a network closet located within the network closet in the Village of Oswego's parking garage located between Adams, Harrison, Jackson and Washington streets. This work shall also require coordination with each manufacturer of field end devices, converters, and networking equipment to ensure successful digital video transmissions, serial-over-fiber, and serial-over Ethernet communications between remote traffic management systems and field devices. Separate VLANs should be considered – one each for the traffic signal controllers and video traffic monitoring systems as well as for up to Four (4) additional VLANs for other type field devices to be added to the network in the future. The Contractor shall label the ports of each switch (throughout the network) to identify the associated VLAN/device. The Contractor shall also provide a media converter device necessary to facilitate a connection ("handshake") between the fiber optic cable and access to the Villages ethernet switch.

The contractor shall also coordinate the final connection in the Village's network closet and establishment of the VPN for internet access with the Village's IT staff. The Contractor shall request the Engineer schedule a meeting between themselves, the contractor, the closed loop system monitoring software vendor, Village IT staff to coordinate programming requirements for the final network connections and programming prior to final acceptance by the Engineer.

Village of Oswego IT Contact: Joe Renzetti, Phone #: (630) 551-2331

The Contractor's integrator shall develop written network assignment and test plans and submit them to the Engineer, and Village and IDOT Staff for approval.

1. The network assignment plan shall include the proposed IP addresses, VLAN assignments and port assignments for all traffic field devices associated with the new traffic system network as well as provisioning for future expansion of the network and the inclusion of additional traffic field devices throughout other areas of the Village. The plan shall provision for future expansion and include common and compatible naming/numbering conventions. Also, the plan shall provide for current/future integration of video monitoring cameras for Village of Oswego Police Department monitoring at locations specified by the Village.

2. The testing plan shall include systematic procedures with anticipated results that demonstrate that the traffic management network and all its subsystems are fully operational. Approved testing procedures will be performed in the presence of Village and Contractor representatives. The testing plan shall include forms listing itemized functional checks of the system with signature placeholders for Village, IDOT and Contractor representatives. The test plan will verify the network performance over the extent of this project.

Both plans shall be revised to the satisfaction of the Engineer, and Village and IDOT Staff for approval.

As a final test, the Contractor shall emulate traffic operations over the network to control and exchange data with all field devices prior to the system beginning full operation.

Basis of Payment.

The work shall be paid for at the contract unit price per lump sum for SYSTEM IMPLEMENTATION, EQUIPMENT INTEGRATION AND SUPPORT, which price shall be payment in full for all communication network configuration, cabling, equipment, and coordination necessary to deliver an Ethernet network that provides successful communications between all field devices and the communication backhaul to the internet for remote access through a VPN, by outside traffic signal management systems of other users.

RIGHT OF ENTRY TO ILLINOIS RAILWAY PROPERTY

It is the Contractor's responsibility to become familiar with and to follow all requirements described in Section 107 of the Standard Specifications, titled Legal Regulations and Responsibility to the Public.

The Contractor shall confer with the Railroad Engineer and shall procure and pay all fees for required railroad permits and licenses in accordance with Article 107.04 of the Standard Specifications. These fees will not be reimbursed by the Department or local agency but will instead be included in the cost of other applicable pay items in the contract. The Illinois Railway contact person is Mr. Ruben Camacho, (815) 503-3514 or rcamacho@omnitrax.com.

The Right of Entry Permit Application can be found at http://omnitrax.com/wp-content/uploads/2017/03/APPLICATIONS-OMNITRAX-Right-of-Entry-Non-Environmental-002.pdf. As of April 16, 2020, the cost for the Right of Entry Permit is $3,500.00, but this number is subject to change. The Contractor should confirm the cost with Omnitrax at the time of bid. No compensation will be made for changes to the cost of application fees between time of bid and time of construction.

The Contractor shall confer with the Railroad Engineer relative to railroad requirements for clearances, operation and general safety regulation in accordance with Article 107.12 of the Standards Specifications. For all railroad-highway work as indicated in the contract proposal, the Contractor shall obtain Railroad Protective Liability and Property Damage Liability Insurance in accordance with Article 107.11 of the Standard Specifications and as specified elsewhere in the Specials. The cost for providing insurance, as noted elsewhere, will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

The services of railroad flaggers will be required when the Contractor's operations will encroach on or over the Railroad's right-of-way or come within 25' of the tracks. The Contractor shall pay for the cost of providing railroad flaggers and be reimbursed for applicable charges in accordance with Articles 107.12 and 109.05. The railroad flagger contact person is Mr. Ruben Camacho, (815) 503-3514. A minimum of 72 hours notice is requested.

APPENDIX C

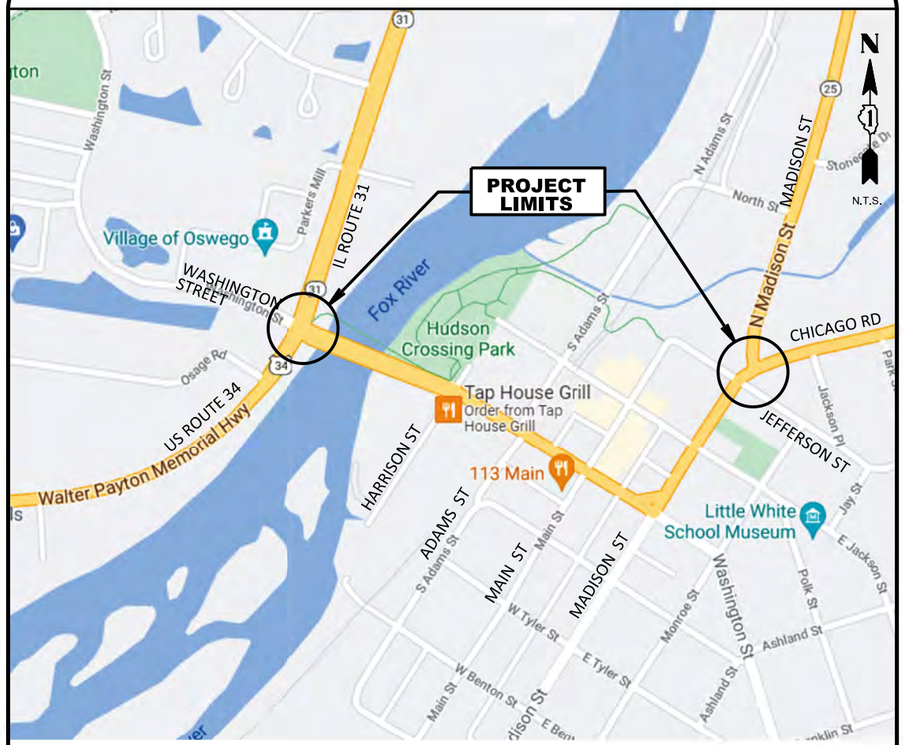
PLANS

TRAFFIC SIGNAL INSTALLATION PLAN

US ROUTE 34 (WASHINGTON STREET) AT HARRISON STREET AND MAIN STREET

INDEX

LOCATION / VICINITY MAP



LENGTH OF PROJECT
GROSS LENGTH = 2,200 FT (0.42 MI)
TOTAL LENGTH = 3,315 FT (0.63 MI)

IDOT STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-11	CORNER PARALLEL CURB RAMPS
424011-04	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
814001-03	HANDHOLES
814006-03	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
857006-01	SUPERVISED RAILROAD INTERCONNECT CIRCUIT
862001-01	UNINTERRUPTIBLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING AND BONDING
878001-11	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS POST AND BRACKET MOUNT
887001-08	STEEL MAST ARM ASSEMBLY & POLE, 16' THRU 55'
887011-10	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 16' THRU 55'

LOCATION

THIS PROJECT IS LOCATED IN THE VILLAGE OF OSWEGO

CALL JULIE 811
WITH THE FOLLOWING:
COUNTY KENDALL
CITY-TOWNSHIP OSWEGO
48 HOURS BEFORE YOU DIG.
EXCLUDING SAT., SUN., & HOLIDAYS

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AS WELL AS SUPERVISION/DIRECTION AND MEANS/METHODS OF CONSTRUCTION

ENGINEER 2-01-2022 DATE

GEORGE M. ZIEGLER
062-045853
REGISTERED PROFESSIONAL ENGINEER
ILLINOIS

GEORGE M. ZIEGLER
ILLINOIS REGISTRATION No. 062-045853
EXPIRATION DATE: 02-28-2022

CLIENT : VILLAGE OF OSWEGO
100 Parkers Mill
Oswego, IL 60543
(630) 554-3618

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500
PROFESSIONAL DESIGN FIRM NO. 184-001175
EXPIRATION DATE: 04/30/23

tharks
2/4/2022
FILE NAME: N:\OSWEGO\200405\Traffic\CVR_200405.dgn

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE IMTH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2022, HEREON KNOWN AS THE "STANDARD SPECIFICATIONS"; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", THE LATEST REVISION: THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", (ILMUTCD), THE "DETAILS" IN THE PLANS ANO THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS.

2. ALL ELEVATIONS REFERRING TO NAVD '88 VERTICAL DATUM.

3. ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS.

4. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PRESENCE OF DEPARTMENT-OWNED UNDERGROUND ELECTRICAL CABLE WITHIN THE LIMITS OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR SHALL REQUEST THE ILLINOIS DEPARTMENT OF TRANSPORTATION IN OTTAWA (815-434-8417) TO LOCATE THE UNDERGROUND FACILITIES, PROVIDING A MINIMUM OF 72 HOURS NOTICE. THE DEPARTMENT IS NOT A MEMBER OF THE JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS (JULIE) SYSTEM.

5. ALL DAMAGE TO DEPARTMENT OWNED UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT NO EXPENSE TO THE DEPARTMENT. THIS SHALL INCLUDE ALL TEMPORARY REPAIRS REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS. SPLICING OF ELECTRIC CABLE WILL NOT BE ALLOWED. ELECTRIC CABLE SHALL BE REPLACED FROM POLE TO POLE OR CONTROLLER.

6. THE ILLINOIS RAILWAY IS NOT A MEMBER OF JULIE. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY/REQUEST THE RAILROAD MARK OUT THEIR UNDERGROUND SIGNAL CABLES PRIOR TO ANY EXCAVATION OR UNDERGROUND WORK. THE CABLE LOCATE WILL BE PERFORMED BY A QUALIFIED RAILROAD EMPLOYEE. THE COST TO HAVE THE RAILROAD MARK THEIR UNDERGROUND FACILITATES SHALL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN APPLICABLE PAY ITEMS.

7. MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

   A. AT&T
   B. COM ED
   C. MCI - VERIZON
   D. METRO FIBERNET
   E. MIDWEST FIBER NETWORKS
   F. NICOR
   G. VILLAGE OF OSWEGO
   H. ILLINOIS RAILWAY (OMNITRAX)

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTJNG UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE PHONE NUMBER TO CONTACT IS (800) 892-0123.

9. SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION LOCATIONS TO BE SEEDED Will BE DETERMINED BY THE ENGINEER.

10. ALL EXCAVATED MATERIAL, WHICH INCLUDES DIGGING OR GRADING OF ANY SOIL OR FILL MATERIAL WITH THE EXCEPTION OF AGGREGATE FILL MUST BE INCORPORATED WITHIN THE IDOT RIGHT OF WAY DUE TO ENVIRONMENTAL DOCUMENTATION REQUREMENTS.

11. ABANDONED UNDERGROUND UTILITY THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS ANO AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

12. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

13. THE CONTRACTQR SHALL CONTACT JULIE AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

14. ALL LANE CLOSURES SHALL ONLY OCCUR DURING NON-PEAK HOUR AND AS APPROVED BY THE ENGINEER.

15. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

16. THE CONTRACTOR SHALL COMPLETE AND SUBMIT FORM BSPE 725 (TRAFFIC CONTROL AUTHORIZATION FORM) TO IDOT DISTRICT 3 PRIOR TO COMMENCEMENT OF WORK AT THE PROJECT LOCATION.

17. ALL SURFACE AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION.

18. SAFETY POLICY 4-15 SHALL BE FOLLOWED REGARDING "DROP OFFS" NEAR US 34 EDGE OF PAVEMENT.

19. FOR LANE CLOSURES GREATER THAN THREE (3) DAYS IN DURATION, A TRANSPORTATION MANAGEMENT PLAN SHALL BE REQUIRED TO BE PROVIDED BY THE CONTRACTOR. LANE CLOSURES LESS THAN THREE (3) IN LENGTH, WILL BE PERMITTED ONLY DURING PEAK HOURS.

20. ALL REMOVAL OR EXCAVATED ITEMS BEING DISPOSED OF AT AN UNCONTAMINATE SOIL FILL OPERATION OR CLEAN CONSTRUCTION AND DEMOLITION DEBRIS (CCDD) FILL SITE SHALL MEET THE REQUIREMENTS OF PUBLIC ACT 96-1416 AND CONTRACT SPECIAL PROVISIONS.

TRAFFIC SIGNAL GENERAL NOTES

1. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 3 SHALL BE NOTIFIED AT (815) 434-8506 AT LEAST 72 HOLJRS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.

2. THE CONTRACTOR SHALL COORDINATE TRAFFIC SIGNAL LAYOUT AT (815) 434-8506 PRIOR TO CONSTRUCTION OF TRAFFIC SIGNAL INSTALLATIONS.

3. TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO THE INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER.

4. ALL THREADS OF BOLTS USED IN THE ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.

5. ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED, CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLE SHALL BE NEATLY BOUND IN THE CONTROLLER CABINET.

6. ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.

7. ONE WEEK PRIOR TO THE SIGNAL TURN-ON, THE CHANGEABLE MESSAGE SIGN(S) SHOULD READ:

   a. FIRST FRAME:

      "NEW"
      "SIGNAL"
      "AHEAD"

   b. SECOND FRAME:

      TURN ON DATE

   FOR THREE WEEKS AFTER THE SIGNAL(S) ARE PLACED INTO OPERATION, THE MESSAGE SIGNS SHOULD READ:

   a. FIRST FRAME:

      "NEW"
      "SIGNAL"
      "AHEAD"

   b. SECOND FRAME:

      "BE"
      "PREPARED"
      "TO STOP"

8. ALL CONDUIT PUSHED OR IN TRENCH SHALL BE P.V.C. CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.

10. ALL GROUNDING MATERIALS FOR CONCRETE FOUNDATIONS SHALL REFER TO SECTION 807 OF THE STANDARD SPECIFICATIONS.

11. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION.ALL TRAFFIC SIGNAL BAKCPLATES ARE TO BE LOUVERED.

12. ALL TRAFFIC SIGNAL BACKPLATES ARE TO BE LOUVERED.

PROJECT CONTACTS

SCHOOLS	DISTRICT 308	TRANSPORTATION CENTER	(630) 636-2999
EMS	OSWEGO FIRE PROTECTION DISTRICT 1	CHIEF JOHN CORNISH	(630) 554-2110
POLICE	OSWEGO POLICE DEPARTMENT	CHIEF JEFFERY BURGNER	(630) 554-7300
STATE	ILLINOIS DEPARTMENT OF TRANSPORTATION – DISTRICT THREE	DAVID BROVIAK	(815) 434-8423
	ILLINOIS COMMERCE COMMISSION	CHRIS MURAUSKI	(630) 947-6283
RAILROAD	ILLINOIS RAILWAY	JOHNNY DECLUE	(815) 431-0940
VILLAGE	OSWEGO DEPARTMENT OF PUBLIC WORKS	JENNIFER HUGHES	(630) 551-2366
	OSWEGO DEPARTMENT OF IT & GIS	JOE RENZETTI	(630) 551-2331
UTILITIES	AT&T	JANET AHERN	(630) 573-6414
	COMED	PETE KRATZER	(630) 424-5704
	COMCAST	MARTHA GIERAS	(224) 229-5862
	MCI-VEZIZON	BOB VEZINA	(847) 378-9044
	MCI-VERIZON	INVESTIGATION TEAM	(708) 458-6410
	METRO FIBERNET	KORIE NELLIS	(812) 475-9820
	MIDWEST FIBER NETWORKS	NATE WRIGHT	(414) 359-3546
	NICOR GAS	BRUCE KOPPANG	((630) 983-8676
	OMNITRAX	JASON SCOTT	(303) 398-4528

CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

FILE NAME = N:\OSWEGO\200405\Traffic\NOT_Gen-200405.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
	PLOT SCALE = 2'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	2

CONTRACT NO.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

SUMMARY OF QUANTITIES

SP	CODE NO.	ITEM	UNIT	TOTAL	US Route 34 (Washington Street) @ Harrison Street	US Route 34 (Washington Street) @ Adams Street	US Route 34 (Washington Street) @ Main Street	US Route 34 (Washington Street) @ US Route 34 (Madison Street)	US Route 34 Interconnect
	20200100	EARTH EXCAVATION	CU YD	5	5				
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	20	10		10		
	25200100	SODDING	SQ YD	20	10		10		
	31101180	SUBBASE GRANULAR MATERIAL, TYPE B 2"	SQ YD	57	34		23		
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	510	302		208		
	42400800	DETECTABLE WARNINGS	SQ FT	165	60		105		
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	194	24		170		
	44000600	SIDEWALK REMOVAL	SQ FT	695	290		405		
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	200	24		176		
	67100100	MOBILIZATION	L SUM	1					
*	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	10					
*	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1					
*	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	4					
*	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1					
*	66900400	SPECIAL WASTE GROUNDWATER DISPOSAL	GALLON	125					
*	66900530	SOIL DISPOSAL ANALYSIS	EACH	2					
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1					
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1					
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	56	28		28		
	72000100	SIGN PANEL - TYPE 1	SQ FT	180	68	16.25	80.5	15	
	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	24		24			
	78003130	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 6"	FOOT	750	400		350		
	78003140	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 8"	FOOT	50		50			
	78003180	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 24"	FOOT	250	100	50	100		
	78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	610		610			
	78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	550	326		224		
	78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1072	674		398		
*	81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	2478	512		694		1272
*	81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	239	106		133		
*	81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	347	25		322		
*	81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	10	4		2		4

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9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

PLAN — NOTE BOOK — NO. — SURVEYED — PLOTTED — ALIGNMENT CHECKED — ALL ANGLES CHECKED — CADD FILE NAME: N:\OSWEGO\200405\Traffic\SUM_200405.dgn — BY — DATE

PROFILE — NOTE BOOK — NO. — SURVEYED — PLOTTED — GRADES CHECKED — BEAM ANGLES — STRUCTURE NOTATNS CHKD — BY — DATE

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	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NOT TO SCALE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	3
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

SP	CODE NO.	ITEM	UNIT	TOTAL	US Route 34 (Washington Street) @ Harrison Street	US Route 34 (Washington Street) @ Adams Street	US Route 34 (Washington Street) @ Main Street	US Route 34 (Washington Street) @ US Route 34 (Madison Street)	US Route 34 Interconnect
*	81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	4	2		2		
*	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3				1	2
*	85100500	PAINT NEW TRAFFIC SIGNAL POST	EACH	10	5		5		
*	85100800	PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	5	2		3		
*	85100901	PAINT NEW COMBINATION MAST ARM AND POLE, 40 FOOT AND OVER	EACH	1			1		
*	86000100	MASTER CONTROLLER	EACH	1					1
*	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2830					2830
*	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2199	1169		1030		
*	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2859	1493		1366		
*	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	3346	1842		1504		
*	87301265	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 9C	FOOT	656	279		377		
*	87301750	ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	971	480		491		
	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	382	70		312		
	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1630	699		931		
*	87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	4	3		1		
*	87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	1			1		
*	87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1			1		
*	87702900	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1			1		
*	87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1	1				
*	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	24	12		12		
*	87800150	CONCRETE FOUNDATION, TYPE C	FOOT	8	4		4		
*	87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	34	13.5		20		
*	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	49	25		24		
	87900200	DRILL EXISTING HANDHOLE	EACH	3					3
*	88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1				1	
*	88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1				1	
*	88102825	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	16	8		8		
*	88200100	TRAFFIC SIGNAL BACKPLATE	EACH	24	12		12		
*	88700200	LIGHT DETECTOR	EACH	4	2		2		
*	88700300	LIGHT DETECTOR AMPLIFIER	EACH	2	1		1		
*	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1				1	

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BY — DATE

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SURVEYED — PLOTTED — GRADES CHECKED — ALL DATA VERIFIED — STRUCTURE NOTATIONS CHKD
BY — DATE

FILE NAME = N:\OSWEGO\200405\Traffic\SUM2_200405.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
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	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NOT TO SCALE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	4
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

SP	CODE NO.	ITEM	UNIT	TOTAL	US Route 34 (Washington Street) @ Harrison Street	US Route 34 (Washington Street) @ Adams Street	US Route 34 (Washington Street) @ Main Street	US Route 34 (Washington Street) @ US Route 34 (Madison Street)	US Route 34 Interconnect
	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	3			3		
*	89502400	REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1			1		
*	X0320024	ETHERNET MANAGE SWITCH	EACH	5					5
*	X0323924	SYSTEM IMPLEMENTATION, EQUIPMENT INTEGRATION AND SUPPORT	L SUM	1					1
*	X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	540	268		272		
*	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	500					500
*	X0325942	CONCRETE LANDING SLAB	SQ FT	340			340		
*	X0326863	BRICK SIDEWALK	SQ FT	340			340		
*	X0327611	REMOVE AND REINSTALL BRICK PAVER	SQ FT	400	55		345		
*	X1400086	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	6	3		3		
*	X1400087	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	14	7		7		
*	X1400102	OUTDOOR RATED NETWORK CABLE	FOOT	680	172		197		311
*	X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	2	1		1		
*	X1400168	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1			1		
*	X1400169	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL)	EACH	1	1				
*	X1400214	SPARE RAILROAD, FULL ACTUATED CONTROLLER , SPECIAL	EACH	2	1		1		
*	X1400215	REMOTE CONTROLLED VIDEO SYSTEM	EACH	2	1		1		
*	X1400367	PEDESTRIAN SIGNAL POST, 10 FT.	EACH	4	2		2		
*	X1400378	PEDESTRIAN SIGNAL POST, 5 FT	EACH	1	1				
*	X1400424	ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C TYPE SOOW	FOOT	1217	629		588		
*	X7830074	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	750	400		350		
*	X7830076	GROOVING FOR RECESSED PAVEMENT MARKING 9"	FOOT	50		50			
*	X7830090	GROOVING FOR RECESSED PAVEMENT MARKING 25"	FOOT	250	100	50	100		
*	X8100105	CONDUIT SPLICE	EACH	7	6				1
*	X8100863	INTERCEPT EXISTING CONDUIT	EACH	7	6				1
*	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	3					3
*	X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	2	1		1		
*	X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	2702					2702
*	X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	16	8		8		
*	X8770125	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)	EACH	2			2		
*	X8770136	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)	EACH	1	1				

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	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NOT TO SCALE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	5
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

SP	CODE NO.	ITEM	UNIT	TOTAL	US Route 34 (Washington Street) @ Harrison Street	US Route 34 (Washington Street) @ Adams Street	US Route 34 (Washington Street) @ Main Street	US Route 34 (Washington Street) @ US Route 34 (Madison Street)	US Route 34 Interconnect
*	X8770140	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. (SPECIAL)	EACH	1			1		
*	X8770250	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 32 FT. AND 46 FT. (SPECIAL)	EACH	1	1				
*	X8780012	CONCRETE FOUNDATION, TYPE A 12 INCH DIAMETER	FOOT	20	12		8		
*	X8820010	TRAFFIC SIGNAL BACKPLATE, SPECIAL	EACH	2				2	
*	X8950114	MODIFY EXISTING CONTROLLER AND CABINET	EACH	1				1	
*	XX005206	EXPLORATORY EXCAVATION	FOOT	40	20		20		
*	XX005723	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	2	1		1		
*	XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	8	4		4		
*	XX006597	WIRELESS INTERCONNECT SYSTEM	L SUM	1					1
*	XX009244	STEEL CASING PIPE, BORED AND JACKED, 8"	FOOT	60	60				
*	Z0007430	TEMPORARY SIDEWALK	SQ FT	400	200		200		
*	Z0013798	CONSTRUCTION LAYOUT	L SUM	1					
*	Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1					1
*	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1					
*		SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	2	1		1		
*		SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	2	1		1		
*		PAINT NEW COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 1-UNDER 40 FEET, 1-OVER 40 FEET	EACH	1	1				

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NOT TO SCALE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	6
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROL POINTS

	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION
14	1827608.14	978309.46	107+03.3	20.4' RT	CP-REBAR
15	1827439.38	978708.01	111+34.1	30.3' LT	CP-XCUT
16	1827203.40	978988.58	114+96.4	25.36' RT	CP-NAIL
214	1827103.51	979260.92	117+81.0	30.9' LT	CP-XCUT

PROP. CURVE WASHINGTON_E1
PI STA. = 107+40.20
Δ = 10° 16' 10" (RT)
D = 2° 33' 53"
R = 2,234.11'
T = 200.75'
L = 400.43'
E = 9.00'
P.C. STA. = 105+39.44
P.T. STA. = 109+39.87

ELEVATION BENCHMARKS
DATUM: NAVD'88 (GPS OBSERVED)

NO.	DESCRIPTION	ELEV.
OSBM	SQUARE CUT ON NORTHERLY SIDE OF CONC.	633.39
20-17	BASE OF CROSSWALK SIGNAL AT THE SOUTHEAST CORNER OF WASHINGTON STREET & MAIN STREET	
OSBM W1	SQUARE CUT ON NORTH SIDE OF CONC. BASE FOR LIGHT POLE AT THE SOUTHWEST CORNER OF WASHINGTON STREET & HARRISON STREET	608.15
OSBM W2	EASTERLY EDGE OF CONCRETE BASE OF CROSSWALK SIGNAL AT THE SOUTHWEST CORNER OF MADISON STREET (ROUTE 34) & JEFFERSON STREET	640.40

50 0 50
SCALE IN FEET

PROP. CURVE WASHINGTON_E2
PI STA. = 119+87.28
Δ = 6° 36' 16" (RT)
D = 2° 08' 27"
R = 2,676.45'
T = 154.43'
L = 308.52'
E = 4.45'
P.C. STA. = 118+32.85
P.T. STA. = 121+41.37

US ROUTE 34 (WASHINGTON STREET)
US ROUTE 34 (MADISON STREET)
JACKSON ST
HARRISON ST
ADAMS ST
MAIN ST
MADISON ST

PC Sta 105+39.44
PI Sta 107+40.20
PT Sta 109+39.87
PC Sta 118+32.85
PI Sta 119+87.28
105+00
110+00
115+00

N1827618.856
E978354.883
N 1827691.00
E 978167.54
N 1827514.47
E 978526.36
N 1826969.84
E 979421.03
N 1827050.14
E 979289.12

CP-14 OSBM W1
CP-15 CP-15
CP-16 OSBM 20-17
CP-214

52.1'
7.7'

90.1'
90.4'
33.6'

21.3'
19.4'
19.9'

35.5'
14.5'
79'

CP-15

CP-14

CP-16

CP-214

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	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1" = 100' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	7
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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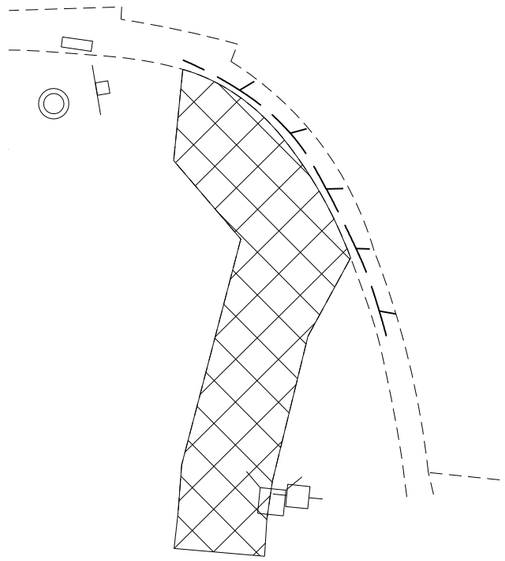
WASHINGTON ST

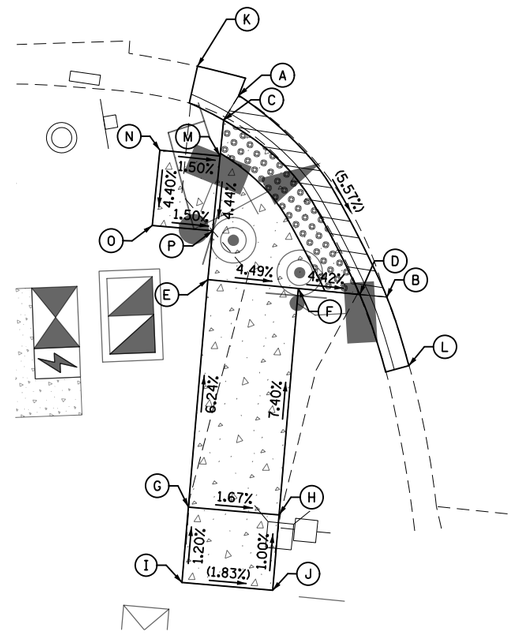


HARRISON ST

0 2.5′ 5′
SCALE: 1″ = 10′

REMOVAL LEGEND
- PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- CURB & GUTTER REMOVAL

SW QUADRANT WASHINGTON ST AT HARRISON ST			
POINT	NORTHING	EASTING	ELEV
A	1827601.92	978323.01	(606.88)
B	1827585.64	978325.83	(605.96)
C	1827600.91	978321.39	606.88
D	1827586.60	978324.31	605.96
E	1827591.95	978315.77	606.41
F	1827588.76	978320.86	606.14
G	1827579.08	978307.93	607.35
H	1827575.95	978313.05	607.25
I	1827574.81	978305.33	(607.41)
J	1827571.68	978310.45	(607.30)
K	1827604.86	978321.43	(607.06)
L	1827580.94	978325.11	(605.76)
M	1827598.89	978320.12	606.77
N	1827601.01	978316.74	606.83
O	1827596.78	978314.08	606.61
P	1827594.69	978317.50	606.55

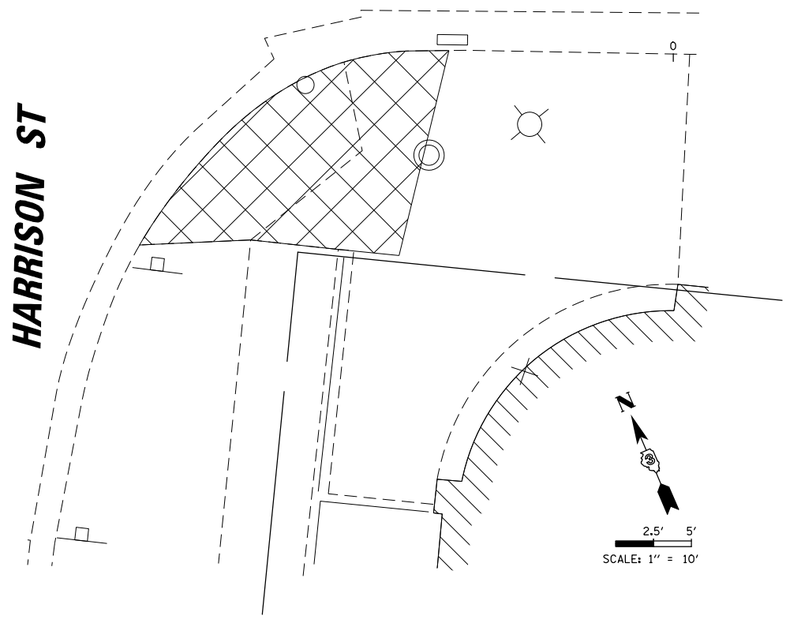


HARRISON ST

0 2.5′ 5′
SCALE: 1″ = 10′

PROPOSED LEGEND
- DETECTABLE WARNING
- PCC SIDEWALK
- REINSTALL BRICK PAVERS
- X.XX PR. SLOPE/ELEV
- (X.XX) EX. SLOPE/ELEV

WASHINGTON ST

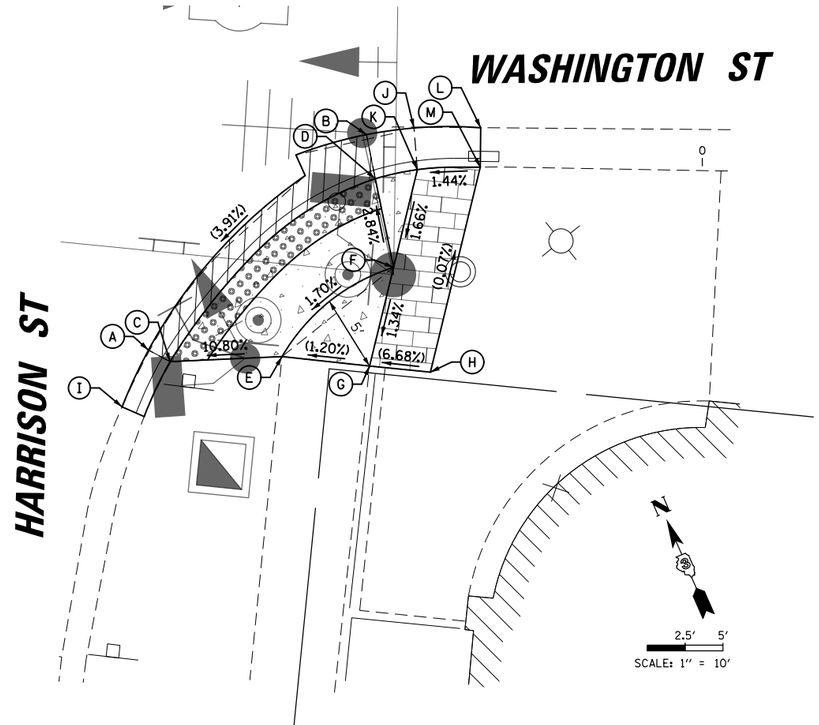


HARRISON ST

0
2.5′ 5′
SCALE: 1″ = 10′

SE QUADRANT WASHINGTON ST AT HARRISON ST			
POINT	NORTHING	EASTING	ELEV
A	1827569.62	978363.49	(606.49)
B	1827575.94	978382.70	(607.28)
C	1827568.30	978364.41	606.53
D	1827573.07	978381.92	607.32
E	1827565.30	978371.18	(607.33)
F	1827567.29	978380.40	607.49
G	1827562.17	978376.08	(607.40)
H	1827560.02	978379.50	(607.67)
I	1827567.04	978360.26	606.32
J	1827574.93	978385.71	607.30
K	1827572.98	978389.66	607.36
L	1827572.37	978384.68	(607.60)
M	1827570.66	978388.48	(607.66)

NOTE: PROPOSED SE QUADRANT SIDEWALK ELEVATIONS TO MATCH EXISTING GRADES



WASHINGTON ST

HARRISON ST

0
2.5′ 5′
SCALE: 1″ = 10′

FILE NAME = N:\OSWEGO\200405\Civil\ADA_1_200405.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
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	PLOT SCALE = 10′	CHECKED - TFS	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK RAMP DETAILS
WASHINGTON STREET AT HARRISON STREET

SCALE: 1″ = 10′ | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	8
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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PROFILE
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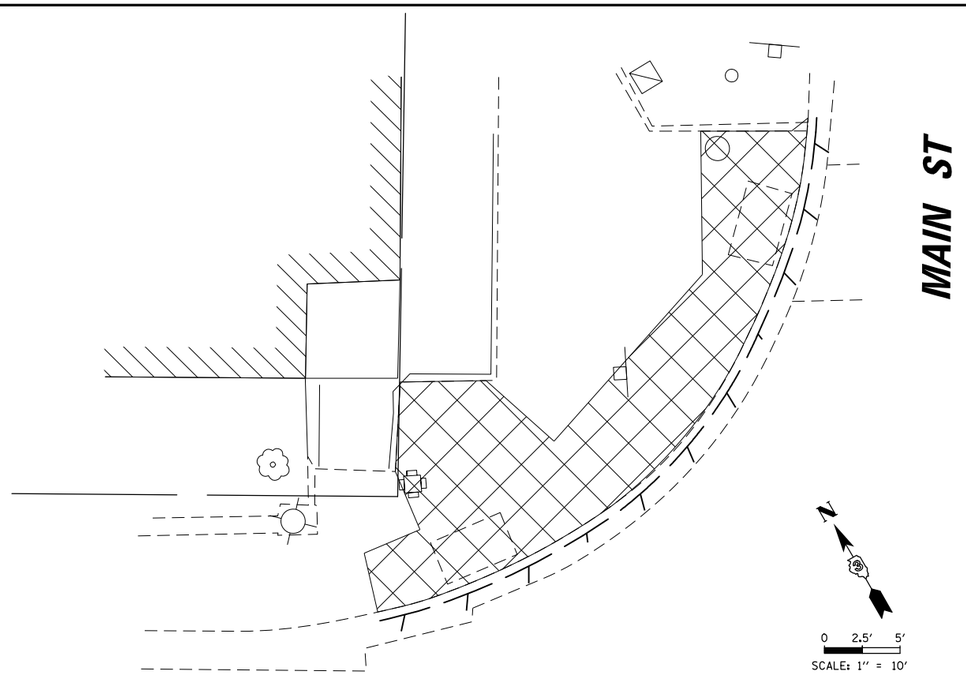
ALL UTILITIES
STRUCTURE NO'S/TYPE'S CHKD

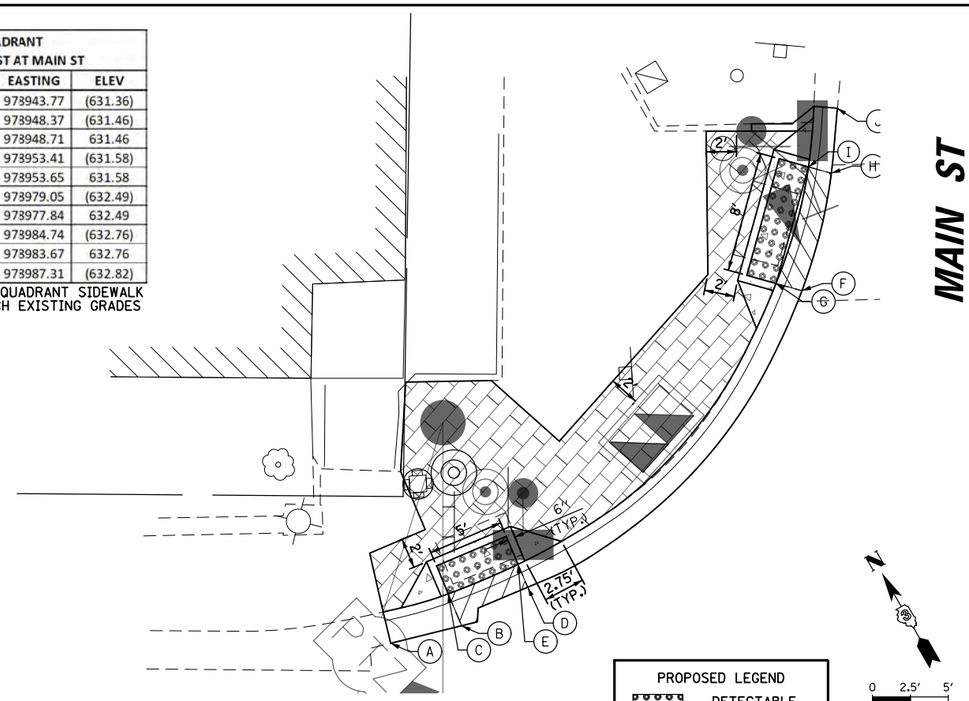
BY | DATE



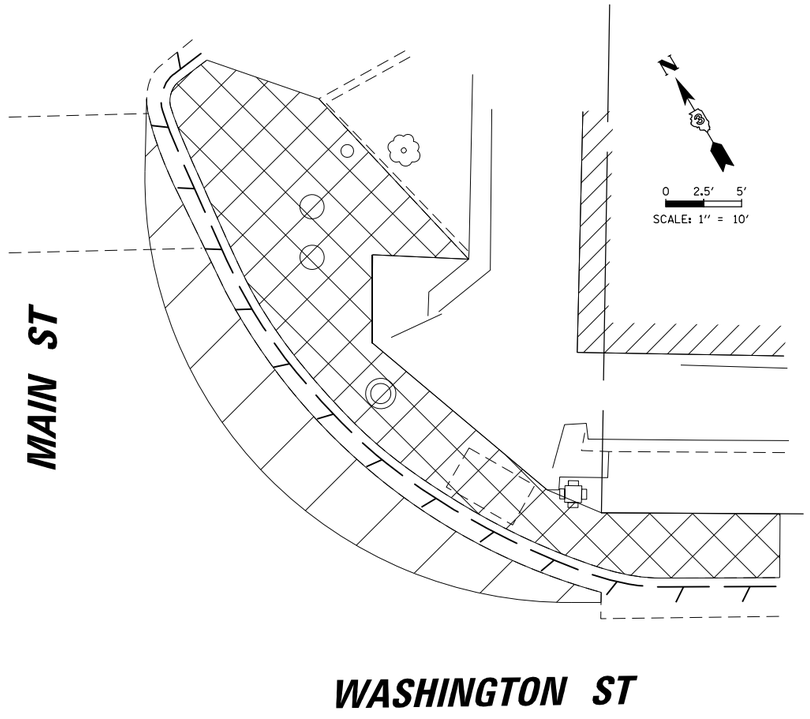
REMOVAL LEGEND
- PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- CURB & GUTTER REMOVAL

NW QUADRANT WASHINGTON ST AT MAIN ST			
POINT	NORTHING	EASTING	ELEV
A	1827290.81	973943.77	(631.36)
B	1827289.36	973948.37	(631.46)
C	1827291.62	973948.71	631.46
D	1827289.27	973953.41	(631.58)
E	1827290.89	973953.65	631.58
F	1827296.57	973979.05	(632.49)
G	1827297.87	973977.84	632.49
H	1827302.19	973984.74	(632.76)
I	1827303.33	973983.67	632.76
J	1827305.64	973987.31	(632.82)

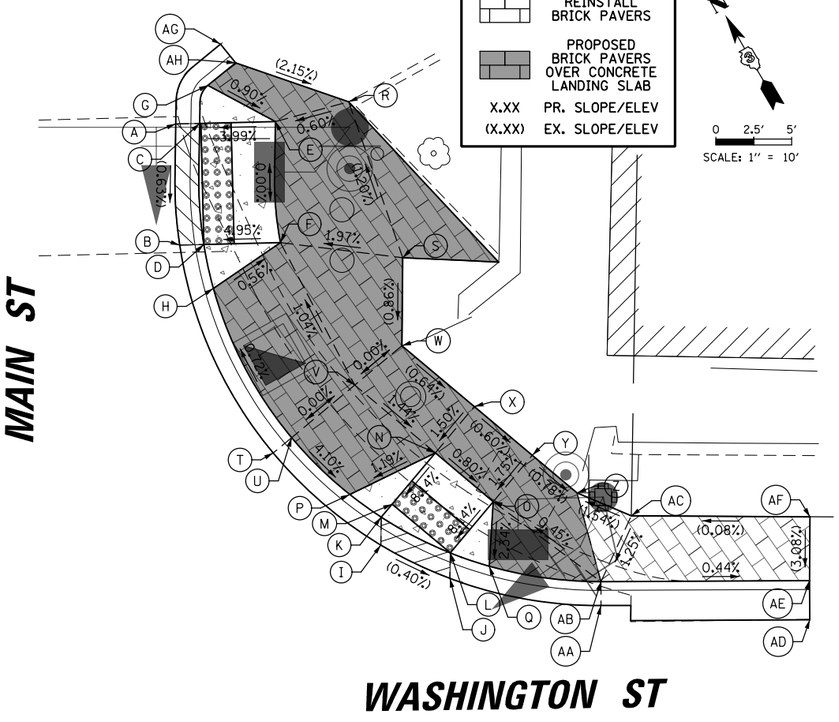
NOTE: PROPOSED NW QUADRANT SIDEWALK ELEVATIONS TO MATCH EXISTING GRADES



PROPOSED LEGEND
- DETECTABLE WARNING
- PCC SIDEWALK
- REINSTALL BRICK PAVERS
- PROPOSED BRICK PAVERS OVER CONCRETE LANDING SLAB
- X.XX PR. SLOPE/ELEV
- (X.XX) EX. SLOPE/ELEV



NE QUADRANT WASHINGTON ST AT MAIN ST			
POINT	NORTHING	EASTING	ELEV
A	1827290.22	979005.67	(632.94)
B	1827283.26	979001.74	(632.89)
C	1827289.44	979007.04	632.94
D	1827282.46	979003.12	632.89
E	1827286.94	979011.38	633.14
F	1827279.94	979007.50	633.14
G	1827291.30	979008.82	633.19
H	1827279.66	979002.15	633.17
I	1827259.44	979002.79	(632.77)
J	1827255.20	979005.53	(632.75)
K	1827261.00	979003.77	632.77
L	1827256.62	979006.43	632.75
M	1827261.36	979004.83	632.79
N	1827262.77	979009.02	633.15
O	1827258.03	979010.62	633.11
P	1827263.36	979002.77	633.03
Q	1827254.53	979008.17	633.01
R	1827285.53	979016.19	(633.17)
S	1827274.90	979013.88	(633.30)
T	1827268.33	978999.88	(632.81)
U	1827268.56	979001.44	633.25
V	1827269.36	979006.80	633.25
W	1827269.96	979010.82	(633.25)
X	1827264.05	979012.81	(633.21)
Y	1827259.31	979014.41	(633.18)
Z	1827255.65	979015.64	(633.15)
AA	1827248.48	979013.13	(632.71)
AB	1827249.83	979013.94	633.15
AC	1827252.49	979017.92	(633.21)
AD	1827240.51	979024.41	(632.76)
AE	1827242.72	979025.74	(633.09)
AF	1827246.31	979027.95	(633.22)
AG	1827293.18	979010.94	(632.91)
AH	1827291.62	979011.16	(633.34)



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	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK RAMP DETAILS
WASHINGTON STREET AT MAIN STREET

SCALE: 1" = 10' | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	9
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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BLM MARKED
CADD FILE NAME N:\OSWEGO\200405\Civil\ADA_3_200405.dgn
BY
DATE

PROFILE
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SURVEYED
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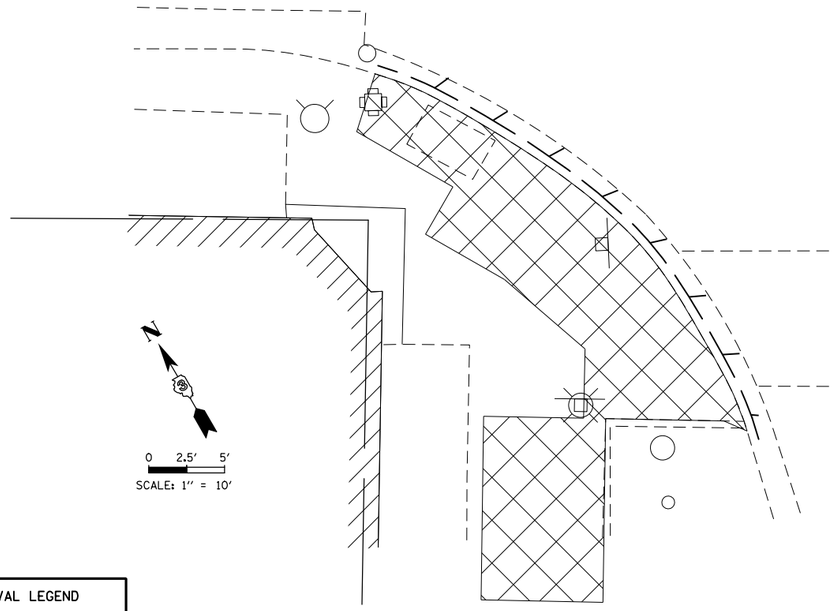
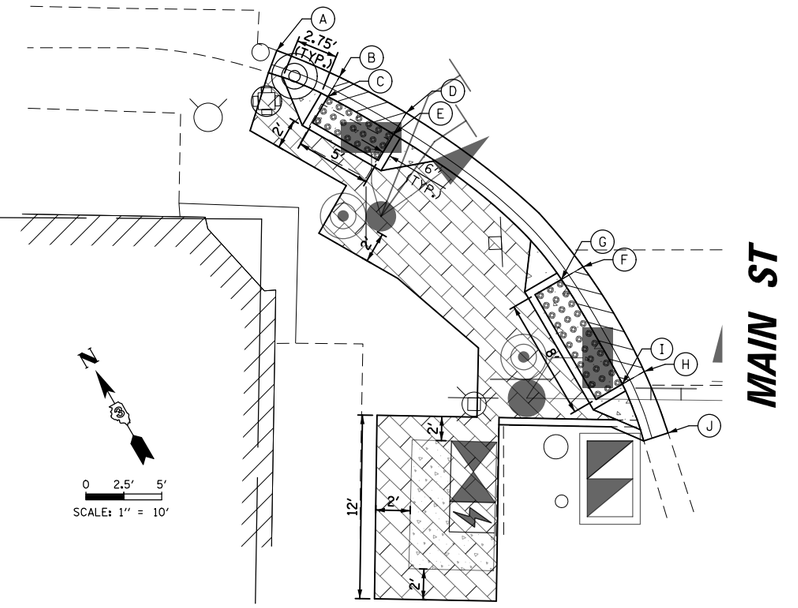
GRADES CHECKED
BLM MARKED
STRUCTURE NOTATNS CH'KD
BY
DATE

WASHINGTON ST



REMOVAL LEGEND
- PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- CURB & GUTTER REMOVAL

WASHINGTON ST

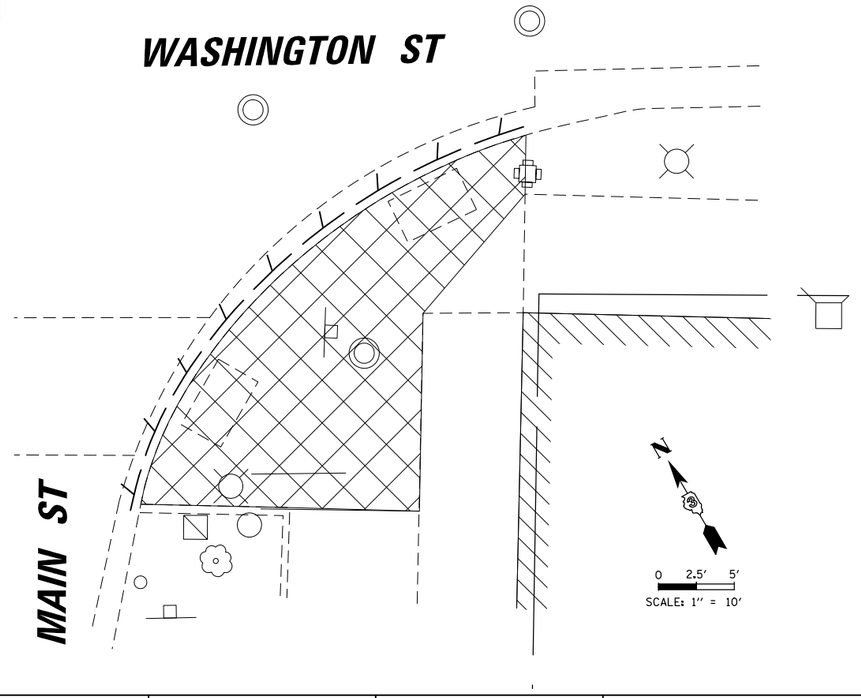


SW QUADRANT WASHINGTON ST AT MAIN ST			
POINT	NORTHING	EASTING	ELEV
A	1827249.33	978918.45	(631.26)
B	1827245.68	978921.07	(631.35)
C	1827244.97	978919.75	631.35
D	1827241.37	978923.60	(631.46)
E	1827240.59	978922.16	631.46
F	1827226.62	978928.30	(631.84)
G	1827226.65	978926.64	631.84
H	1827218.62	978928.15	(631.96)
I	1827218.65	978926.49	631.96
J	1827214.33	978927.39	(632.02)

NOTE: PROPOSED SW QUADRANT SIDEWALK ELEVATIONS TO MATCH EXISTING GRADES

PROPOSED LEGEND
- DETECTABLE WARNING
- PCC SIDEWALK
- REINSTALL BRICK PAVERS
- X.XX PR. SLOPE/ELEV
- (X.XX) EX. SLOPE/ELEV

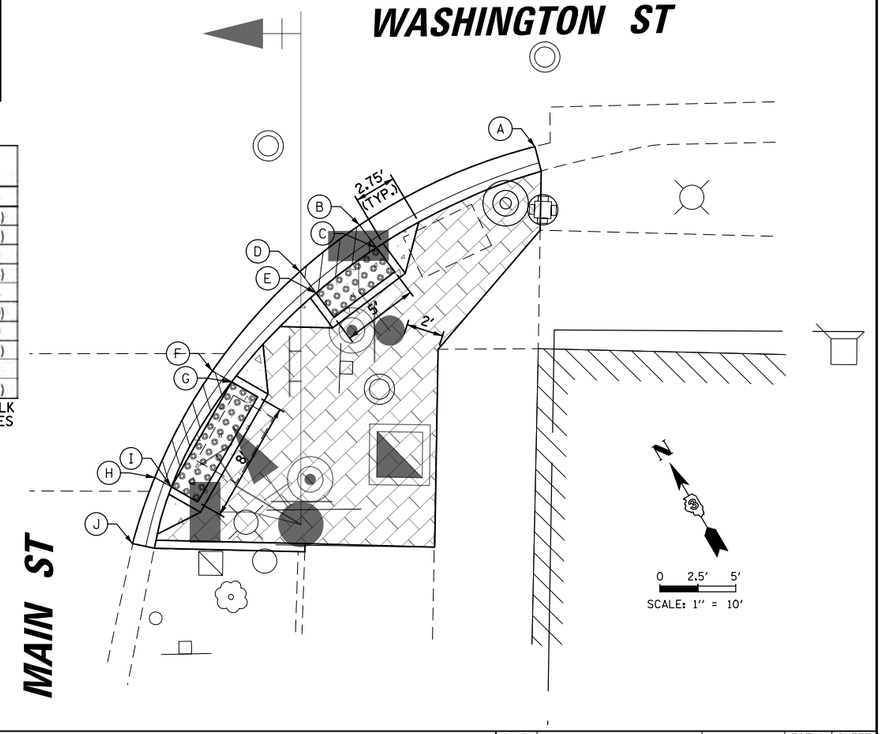
WASHINGTON ST



SE QUADRANT WASHINGTON ST AT MAIN ST			
POINT	NORTHING	EASTING	ELEV
A	1827208.07	978987.26	(632.72)
B	1827209.65	978974.69	(632.89)
C	1827207.81	978974.87	632.89
D	1827209.08	978969.72	(632.94)
E	1827207.32	978969.89	632.94
F	1827206.49	978961.37	(633.00)
G	1827205.21	978962.08	633.00
H	1827202.46	978954.48	(633.03)
I	1827201.36	978955.09	633.03
J	1827199.50	978950.95	(633.03)

NOTE: PROPOSED SE QUADRANT SIDEWALK ELEVATIONS TO MATCH EXISTING GRADES

WASHINGTON ST



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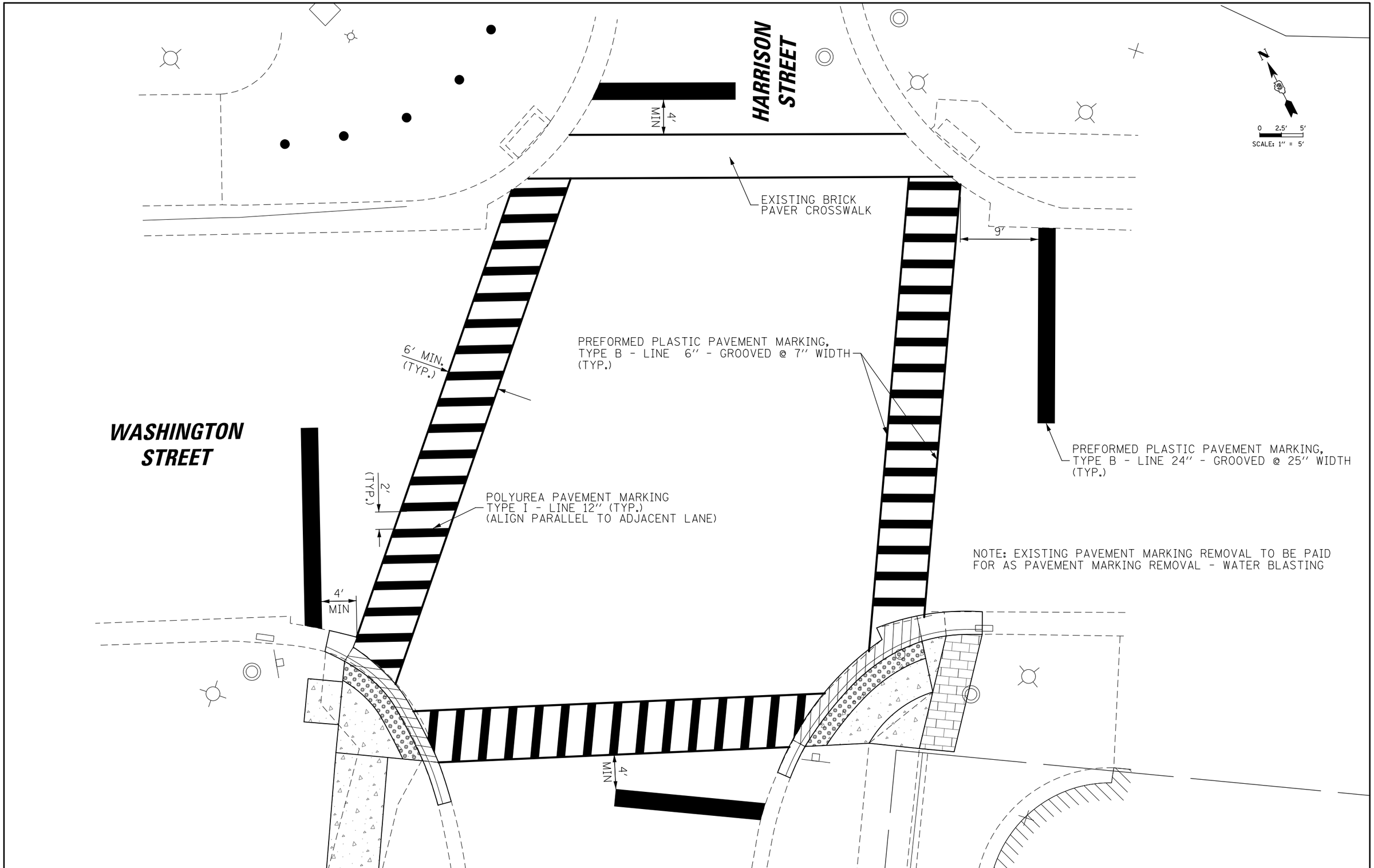
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK RAMP DETAILS
WASHINGTON STREET AT MAIN STREET

SCALE: 1" = 10' | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	10
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTE: EXISTING PAVEMENT MARKING REMOVAL TO BE PAID FOR AS PAVEMENT MARKING REMOVAL - WATER BLASTING

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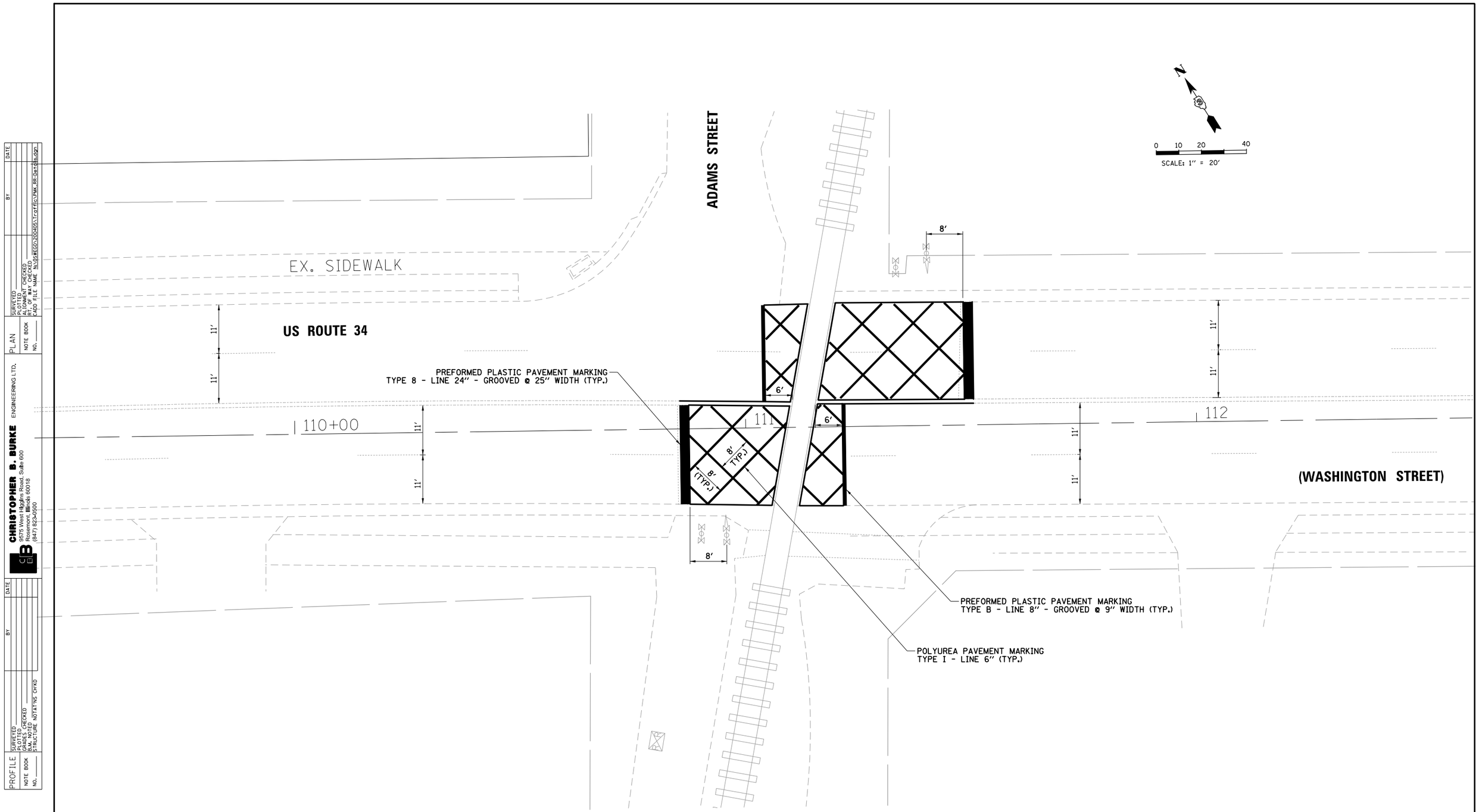
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAILS
WASHINGTON STREET AT HARRISON STREET

SCALE: 1″ = 10′ | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	11
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RAILROAD PAVEMENT MARKING DETAILS
US ROUTE 34 (WASHINGTON STREET) AND ILLINOIS RAILWAY RAILROAD

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	12
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING BRICK
PAVER CROSSWALK

MAIN
STREET

N

0 2.5′ 5′
SCALE: 1″ = 5′

14′

6′ MIN.
(TYP.)

2′
(TYP.)

PREFORMED PLASTIC PAVEMENT MARKING,
TYPE B - LINE 6″ - GROOVED @ 7″ WIDTH
(TYP.)

WASHINGTON
STREET

4′
MIN

PREFORMED PLASTIC PAVEMENT
MARKING, TYPE B - LINE 24″ - GROOVED
@ 25″ WIDTH (TYP.)

POLYUREA PAVEMENT MARKING
TYPE I - LINE 12″ (TYP.)
(ALIGN PARALLEL TO ADJACENT LANE)

NOTE: EXISTING PAVEMENT MARKING REMOVAL TO BE PAID
FOR AS PAVEMENT MARKING REMOVAL - WATER BLASTING

EXISTING BRICK
PAVER CROSSWALK

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GRADES CHECKED
R.O.W. MONUMENTED
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DATE

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SURVEYED
PLOTTED
GRADES CHECKED
R.O.W. MONUMENTED
STRUCTURE NO(S).(IF) CHKD
BY
DATE

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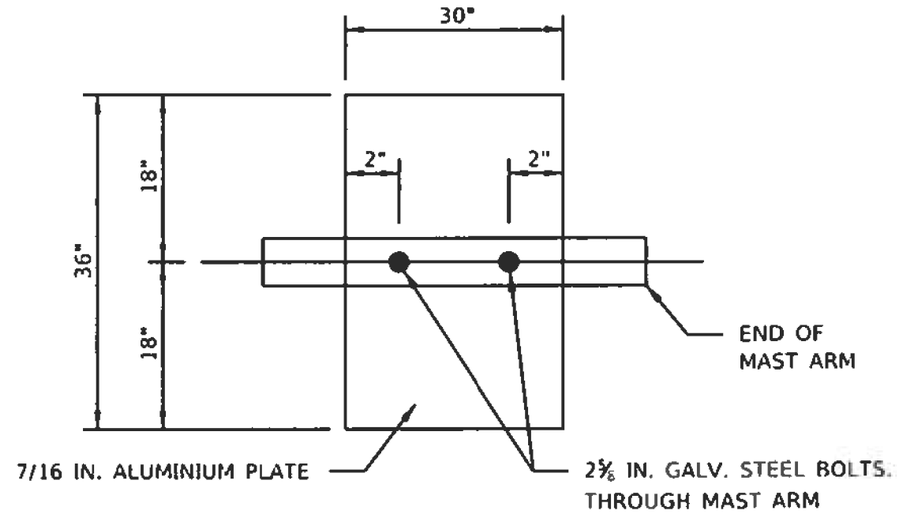
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAILS
WASHINGTON STREET AT MAIN STREET

SCALE: 1″ = 10′ | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	13
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



DAMPENING PLATE DETAIL

(TOP VIEW) INCIDENTAL TO MAST ARM QUANTITY

NOT TO SCALE

NOTE: DAMPENING DEVICE SHALL CONSIST OF A 30" X 36" TYPE 1 UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 30" LENGTH PERPENDICULAR TO THE ARM. THE COST OF THE DAMPENING DEVICE IS INCLUDED IN THE COST OF THE MAST ARM PAY ITEM.

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	PLOT DATE = 2/2/2022	DATE - _____	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DAMPENING PLATE DETAIL

SCALE: 1" = 2' | SHEET NO. __ OF ___ SHEETS | STA. _____ TO STA. _____

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	14
		CONTRACT NO.		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED
CONTROLLER CABINET		
COMMUNICATION CABINET	ECC	CC
MASTER CONTROLLER	EMC	MC
MASTER MASTER CONTROLLER	EMMC	MMC
UNINTERRUPTABLE POWER SUPPLY		
SERVICE INSTALLATION -(P) POLE MOUNTED	P	P
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	G GM	G GM
TELEPHONE CONNECTION	ET	T
STEEL MAST ARM ASSEMBLY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		BM
WOOD POLE		
GUY WIRE		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	P P	P P
FLASHER INSTALLATION -(FS) SOLAR POWERED	F FS F FS	F FS F FS
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	APS	APS
RADAR DETECTION SENSOR	R	R
VIDEO DETECTION CAMERA	V	V
RADAR/VIDEO DETECTION ZONE		
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIMATION BEACON		
WIRELESS INTERCONNECT		
WIRELESS INTERCONNECT RADIO REPEATER	FRR	RR

ITEM	EXISTING	PROPOSED
HANDHOLE -SQUARE -ROUND		
HEAVY DUTY HANDHOLE -SQUARE -ROUND	H	H
DOUBLE HANDHOLE		
JUNCTION BOX		
RAILROAD CANTILEVER MAST ARM		
RAILROAD FLASHING SIGNAL		
RAILROAD CROSSING GATE		
RAILROAD CROSSBUCK		
RAILROAD CONTROLLER CABINET	RXR	RXR
UNDERGROUND CONDUIT (UC), GALVANIZED STEEL		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
SYSTEM ITEM	S	SP
INTERSECTION ITEM	I	IP
REMOVE ITEM		R
RELOCATE ITEM		RL
ABANDON ITEM		A
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF
MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF
SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP	P P	P P
SAMPLING (SYSTEM) DETECTOR	S S	S S
INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS IS	IS IS
QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS CS	QS QS
WIRELESS DETECTOR SENSOR	W	W
WIRELESS ACCESS POINT		

ITEM	EXISTING	PROPOSED
SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD -(H) HEATED SIGNAL HEAD	P	H P
SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE	P RB	H P RB
PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER		
ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED	5	5
GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1*6	1*6
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	1	1
COAXIAL CABLE	C	C
VENDOR CABLE	V	V
COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6*18	6*18
FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F	12 24 36	12F 24F 36F
GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	C M P S	C M P S

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

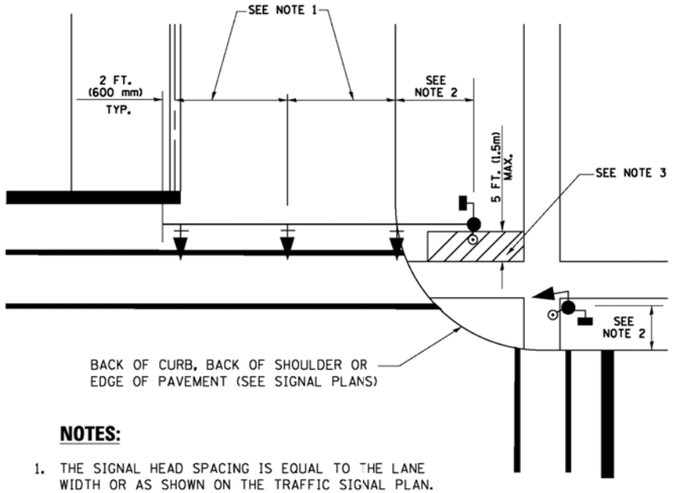
SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			47	15
	TS-05	CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

2/2/2022

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

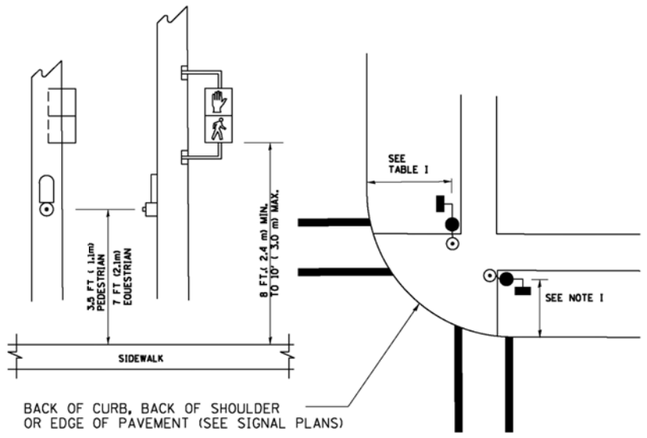
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

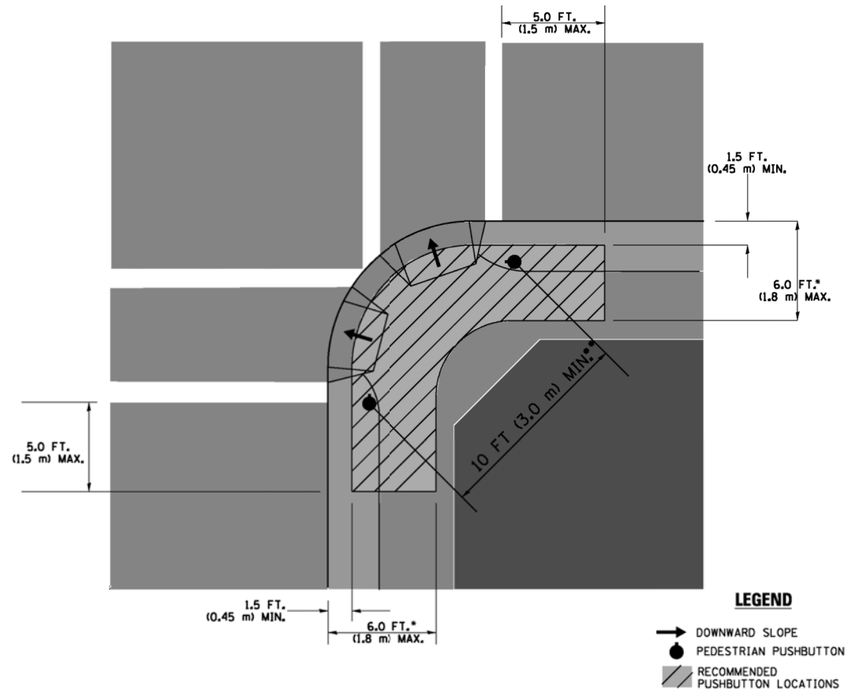
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			47	16
	TS-05	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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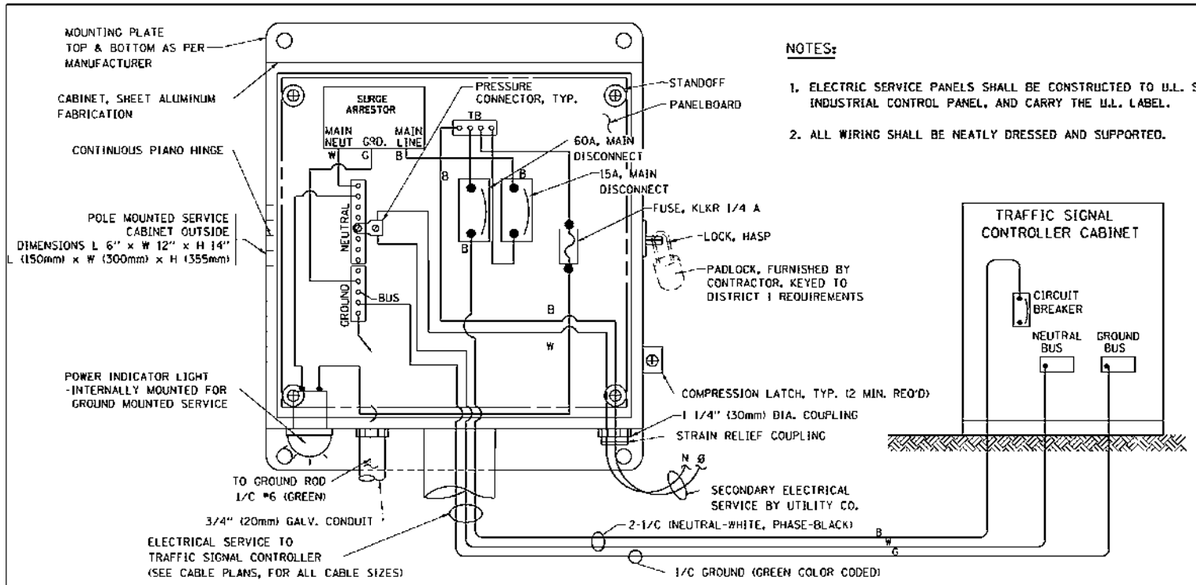


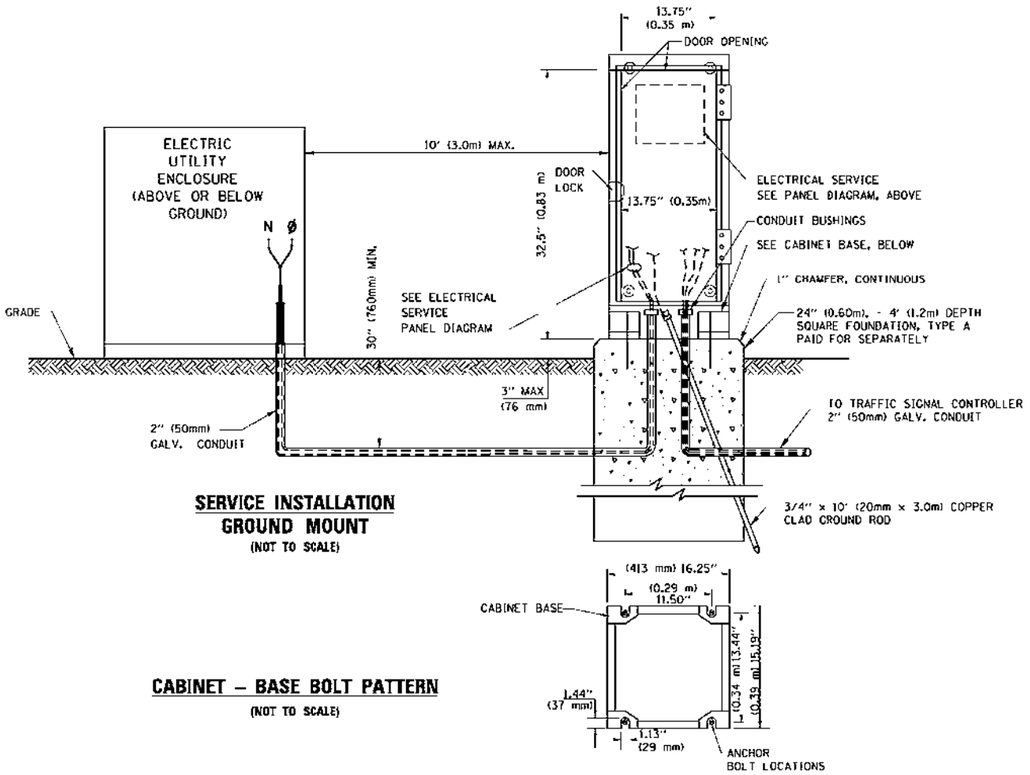
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

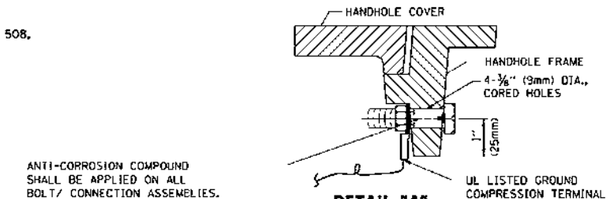


SERVICE INSTALLATION GROUND MOUNT

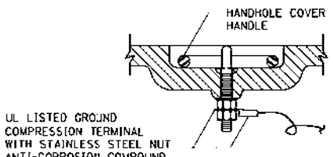
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

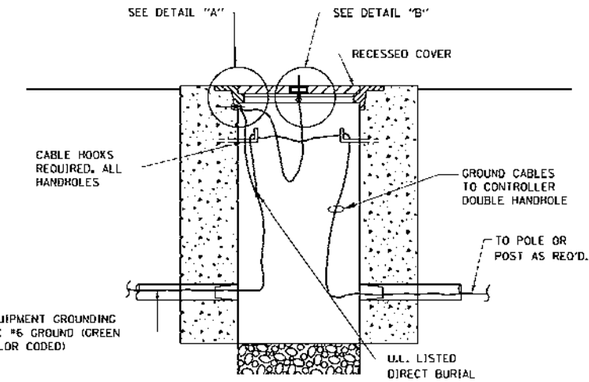
(NOT TO SCALE)



DETAIL "A"

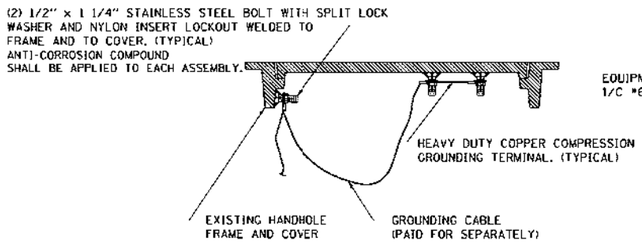


DETAIL "B"



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



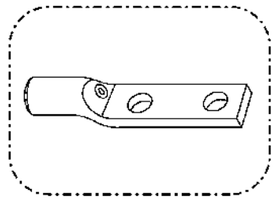
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

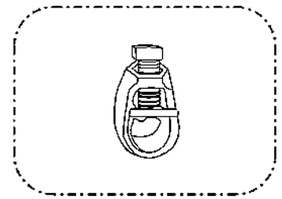
NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



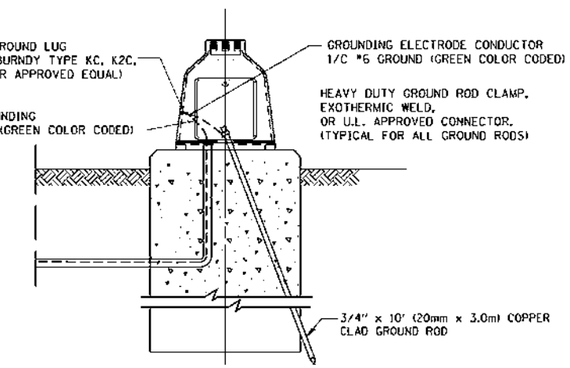
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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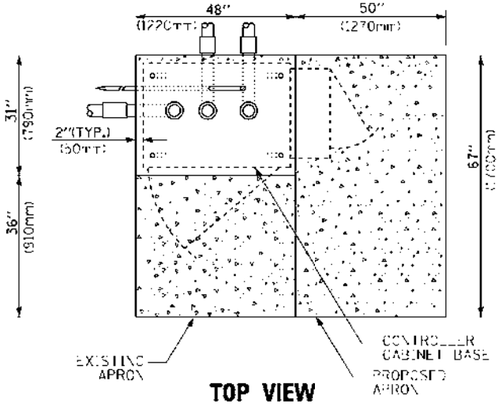
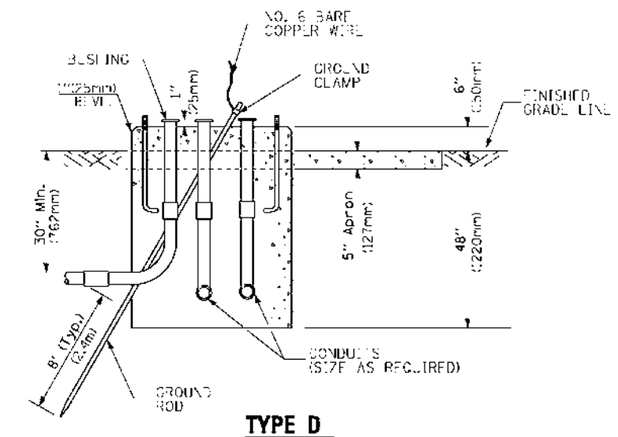
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -				COUNTY
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -		SCALE: NONE SHEET NO. 4 OF 7 SHEETS STA. TO STA.		TOTAL SHEETS: 47 SHEET NO.: 17
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	CONTRACT NO.

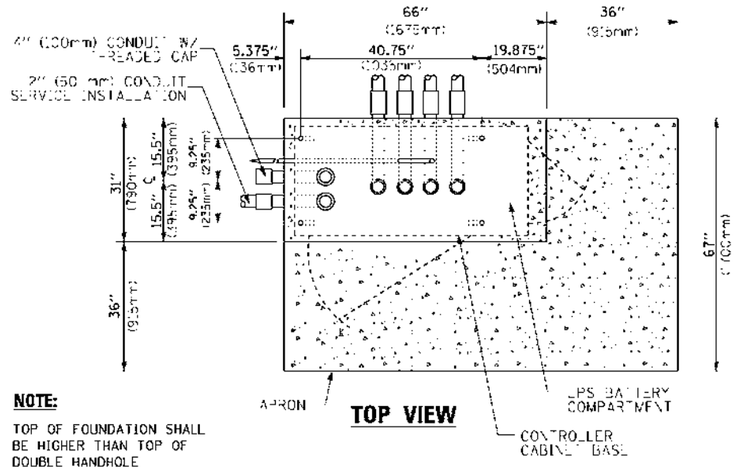
2/2/2022



TOP VIEW



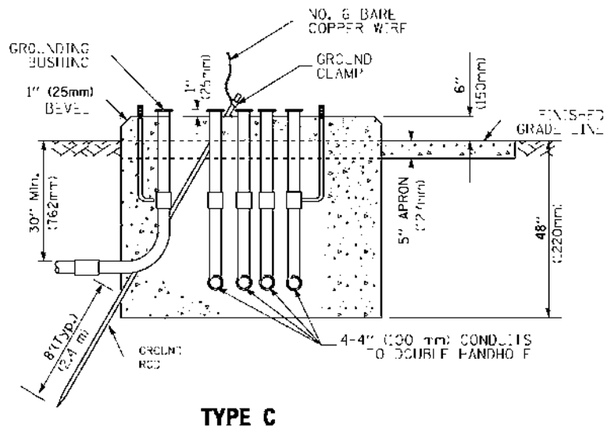
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



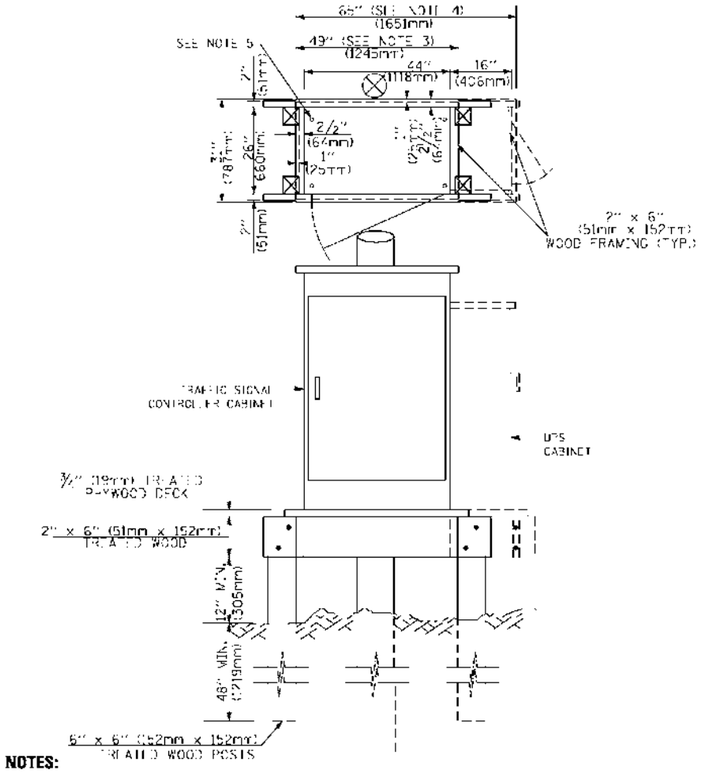
TOP VIEW

NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
4. For mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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		DRAWN - BCK	REVISED -	
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -	
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			47	18
	TS-05	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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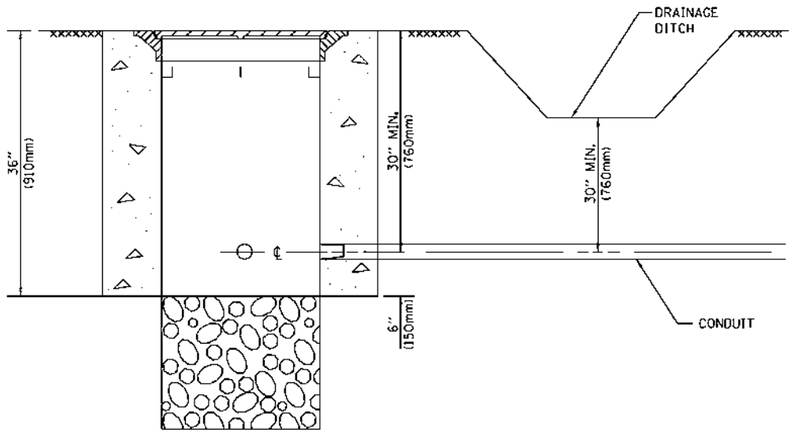
2/2/2022

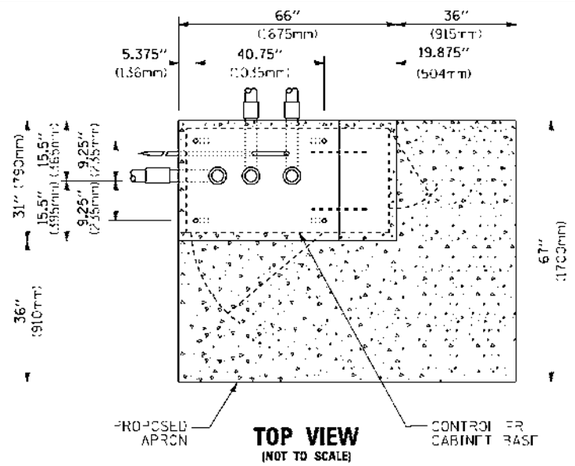


NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

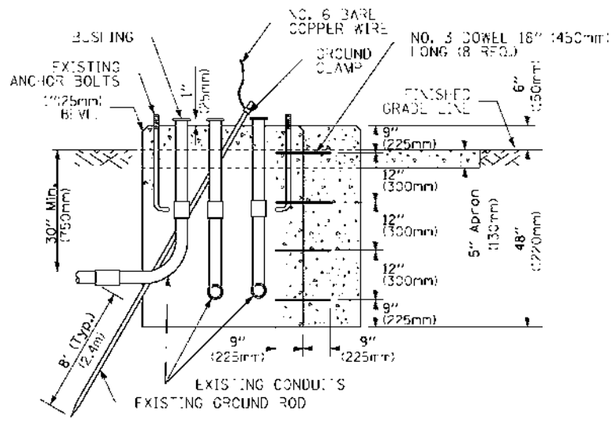
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



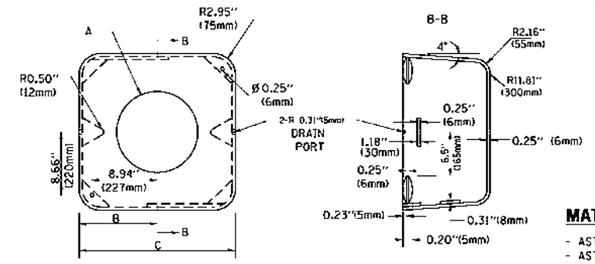
TOP VIEW

(NOT TO SCALE)



MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

(NOT TO SCALE)



MATERIAL:

- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

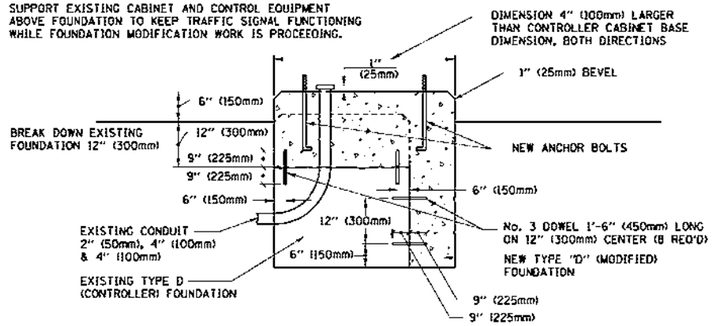
SHROUD

NOTES:

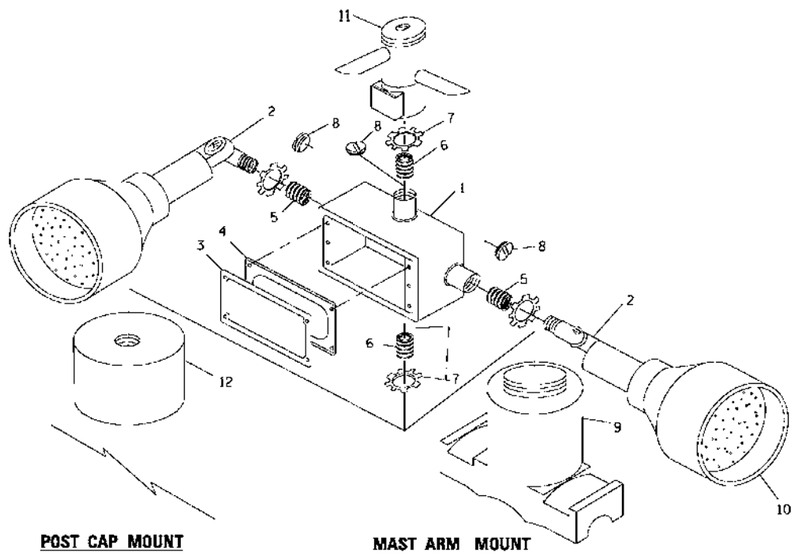
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



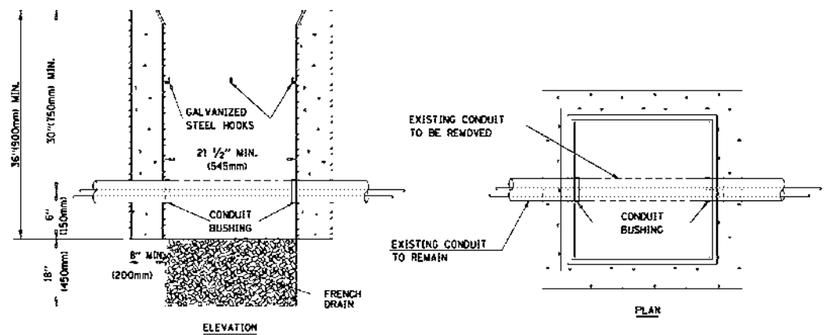
POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

FILE NAME = c:\pw_work\pwidot\footemj\d0108315\ts05.dgn	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14
		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

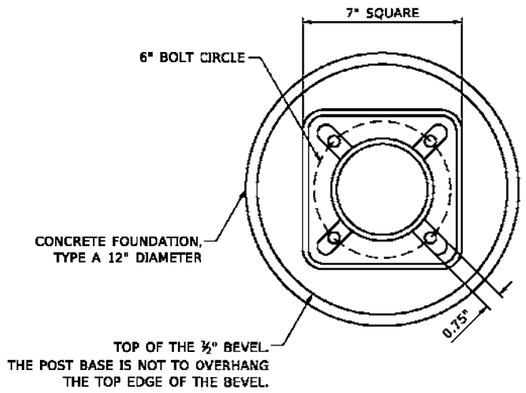
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			47	19
	TS-05	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

fbarlso

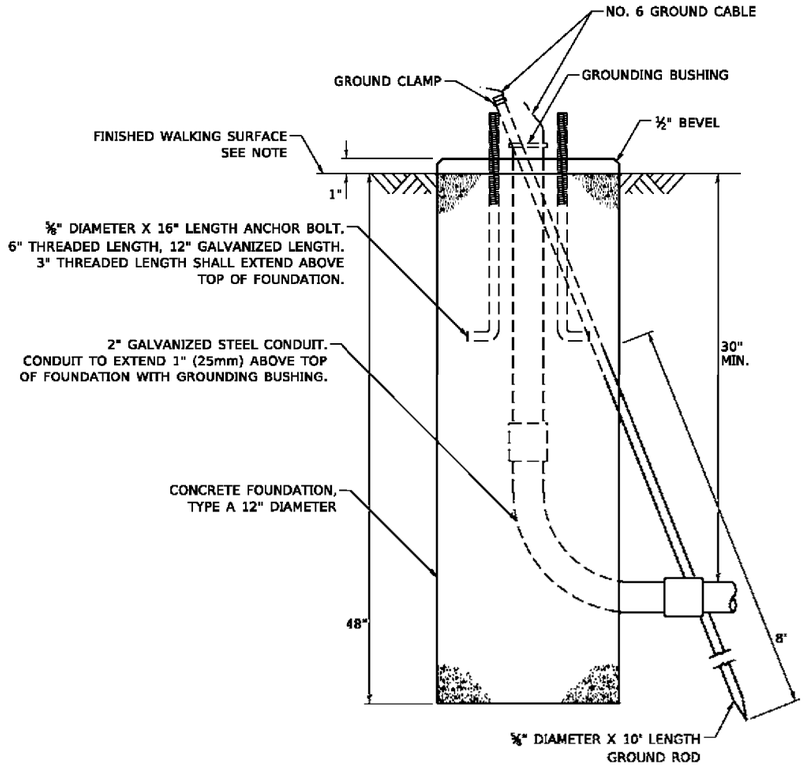
2/2/2022



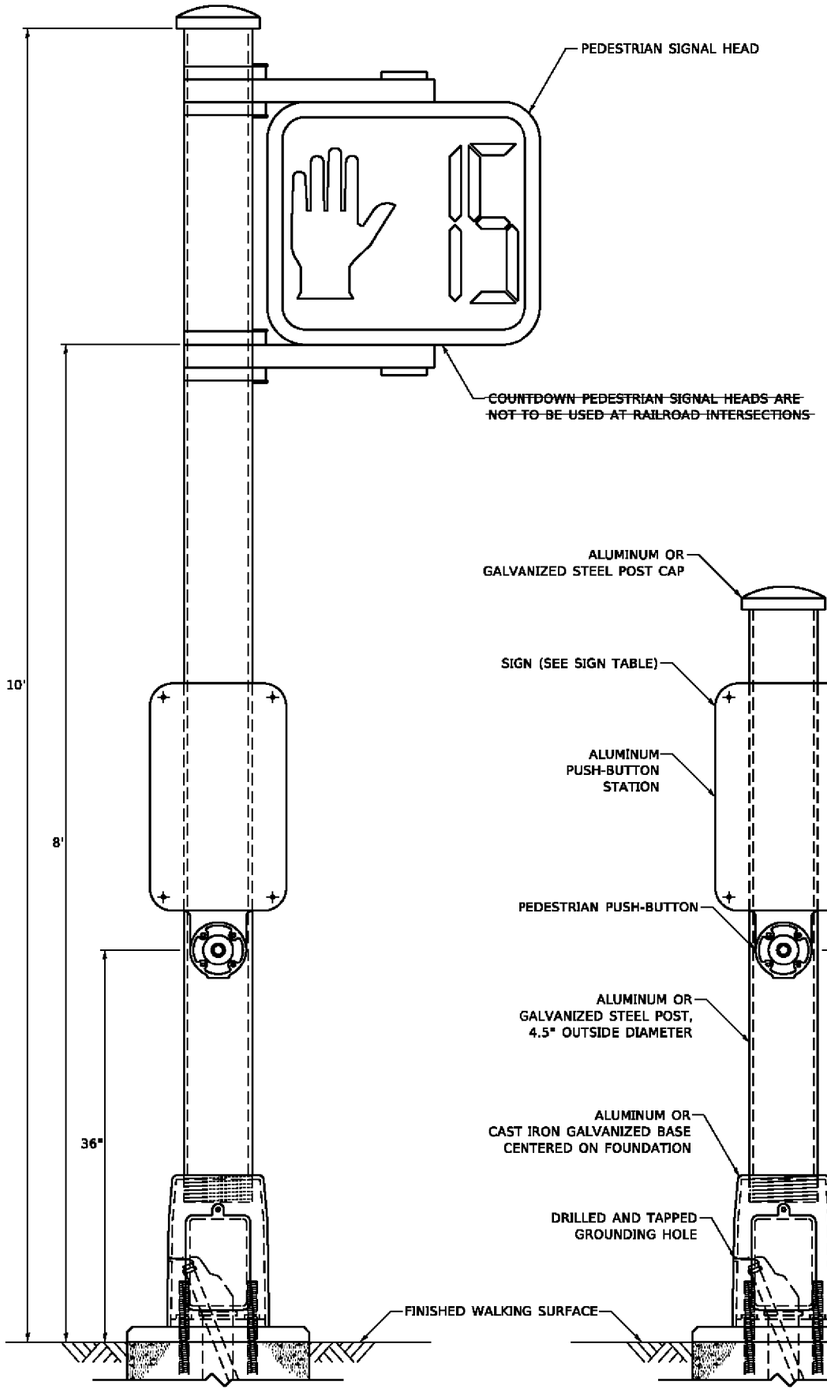
BOLT PATTERN

NOTE:

1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.

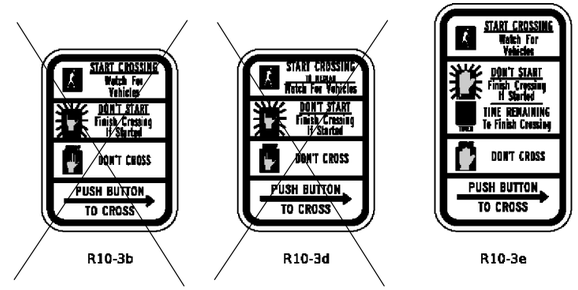


CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER



PEDESTRIAN SIGNAL POST, 10 FT.

PEDESTRIAN SIGNAL POST, 5 FT.



SIGN TABLE

SIGN	DIMENSIONS
~~R10-3b (RAILROAD ONLY)~~	~~9" X 12"~~
~~R10-3d (RAILROAD ONLY)~~	~~9" X 12"~~
R10-3e	9" X 15"

NOTES:

1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.
3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

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	DRAWN - IP	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED - LP	REVISED -	
PLOT DATE = 11/17/2020	DATE - 10/15/2018	REVISED -	

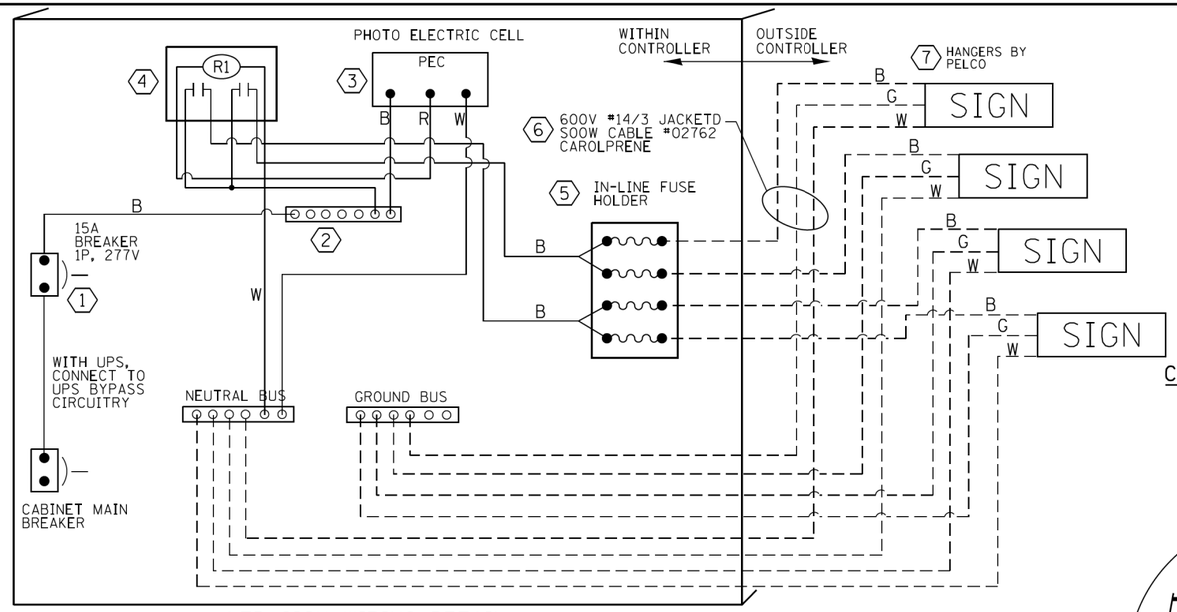
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

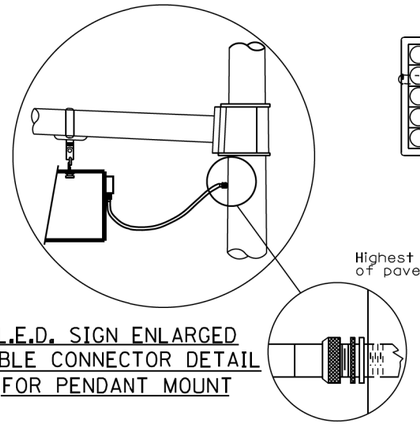
SCALE: NTS | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			47	20
	TS-05	CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

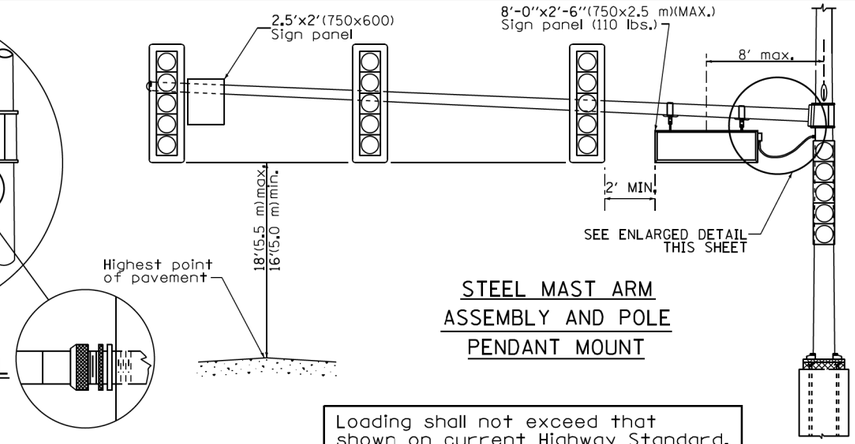
tbarlso
2/2/2022



LED SIGN WIRING DETAIL



L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL FOR PENDANT MOUNT



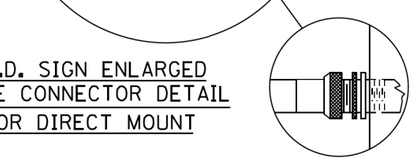
STEEL MAST ARM ASSEMBLY AND POLE PENDANT MOUNT

Loading shall not exceed that shown on current Highway Standard.

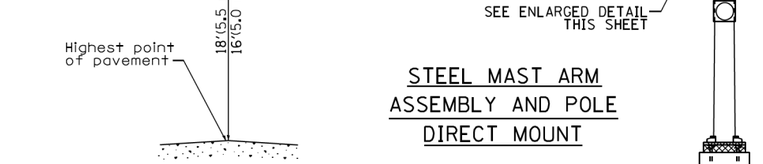
L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL

BILL OF MATERIALS

DESCRIPTION	MANUFACTURER	MODEL	NOTES
(1) CIRCUIT BREAKER		15 AMPERE	Molded case, Thermal Mag. min. R.I. of 14K R.M.S. symmetrical ampere at 277V.
(2) TERMINAL BLOCK	MARATHON	1502 DJSV	
(3) PHOTO ELECTRIC CONTROL	FISHER PIERCE	B124-1.5-07762	
(4) CONTROL RELAY	SQUARE D	8501X020V02	BOLT ON W/SCREW TERMINAL
(5) INLINE FUSE HOLDER WITH 5 AMP FUSE	BUSSMAN	S-8000 BK/S-8-3-4-R	
(6) ELECTRIC CABLE, NO. 14, 3/C (BLACK, WHITE, GREEN)	CAROLPRENE/SOOW	02762	
(7) SIGN MOUNTING HARDWARE	PELCO	Pendant (SE-5015) Direct mount (AB-0104-L-SP) Additional sign stiffeners may be required for direct mounted signs.	S.S. HARDWARE



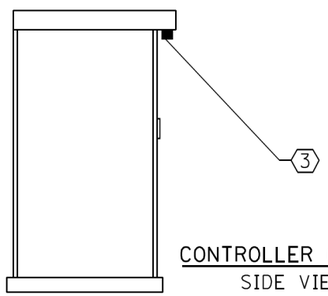
L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL FOR DIRECT MOUNT



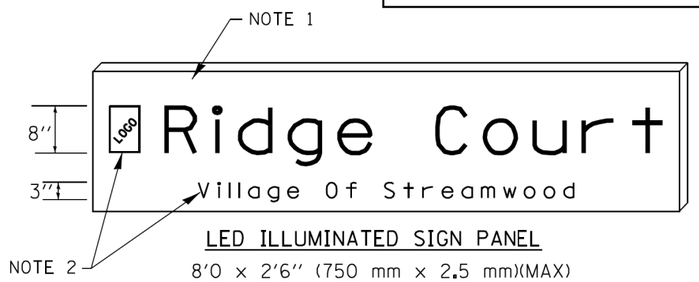
L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL

STEEL MAST ARM ASSEMBLY AND POLE DIRECT MOUNT

Loading shall not exceed that shown on current Highway Standard.



CONTROLLER CABINET
SIDE VIEW



LED ILLUMINATED SIGN PANEL
8'0 x 2'6" (750 mm x 2.5 mm)(MAX)
C or D FONT

NOTES:

1. SIGNS SHALL BE SINGLE SIDED FOR DIRECT MOUNT AND DOUBLE SIDED FOR PENDANT MOUNT.
2. CERTAIN ADDITIONAL INFORMATION MAY BE ALLOWED ON THE SIGN. VERIFY WITH ENGINEER.
3. SIGNS SHALL NOT BE ENERGIZED WHEN TRAFFIC SIGNALS ARE POWERED BY THE UPS. THE SIGNS SHALL BE CONNECTED TO THE UPS BYPASS CIRCUITRY.
4. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
   R = RED BL = BLUE W = WHITE
   B = BLACK Y = YELLOW G = GREEN
5. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
6. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

FILE NAME =	USER NAME = plascencia	DESIGNED - BCK	REVISED -
		DRAWN - BCK	REVISED -
Default	PLOT SCALE = 40.0000 ' / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 3/30/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLUMINATED STREET NAME SIGN DETAIL

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			47	21
		CONTRACT		
		ILLINOIS FED. AID PROJECT		

MATCH LINE STA. 665+75

EX SIGN (A)

LEFT TURN
YIELD
ON GREEN

R10-12
24" X 30"

N

0 10 20 40
SCALE: 1" = 40'

IL ROUTE 31

665+00

WASHINGTON STREET

235'-E-1"

11' 12' 12'

5'-E-2"

EX SIGN (A)

39'-E-2½"

10'-E-2"

15'

28' COMB. MAST ARM WITH LUMINAIRE

31'-E-2½"

105'-E-4"

5'-E-2-4"

(1)

12'-E-2"

EXISTING LIGHTING CONTROLLER

EX. 2" ELEC. CONDUIT

EX SIGN (A)

16'

12'

12'

2

1

42' MA

10'-E-2"

88'-E-3"

0+00

EX SIGN (A)

EX SIGN (A)

13'

11'

12'

12'

100+00

101

102

103

EX SIGN (A)

105'-E-3"

10'-E-2½"

55' MA

EX SIGN (A)

10'-E-2"

10'-E-2"

30'-E-2½"

32' COMB. MAST ARM WITH LUMINAIRE

P

99'

14'

EX SIGN (A)

US ROUTE 34 (WASHINGTON STREET)

PR WIRELESS INTERCONNECT TO US ROUTE 34 (WASHINGTON STREET) AND HARRISON STREET (SEE INTERCONNECT PLAN)

11' 11' 11'

US ROUTE 34

292

MATCH LINE STA. 662+00

CONSTRUCTION NOTE:

(1) THE CONTRACTOR SHALL REPLACE THE EXISTING TRAFFIC SIGNAL CONTROLLER WITH A NEW CONTROLLER.

PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
ALL DIM. VERIFIED
CADD FILE NAME N:\OSWEGO\200405\Traffic\IL 31-US34_MOD.dgn
BY
DATE

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
ALL DIM. VERIFIED
STRUCTURE NOTATNS CHKD
BY
DATE

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9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

FILE NAME = N:\OSWEGO\200405\Traffic\IL 31-US34_MOD1.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
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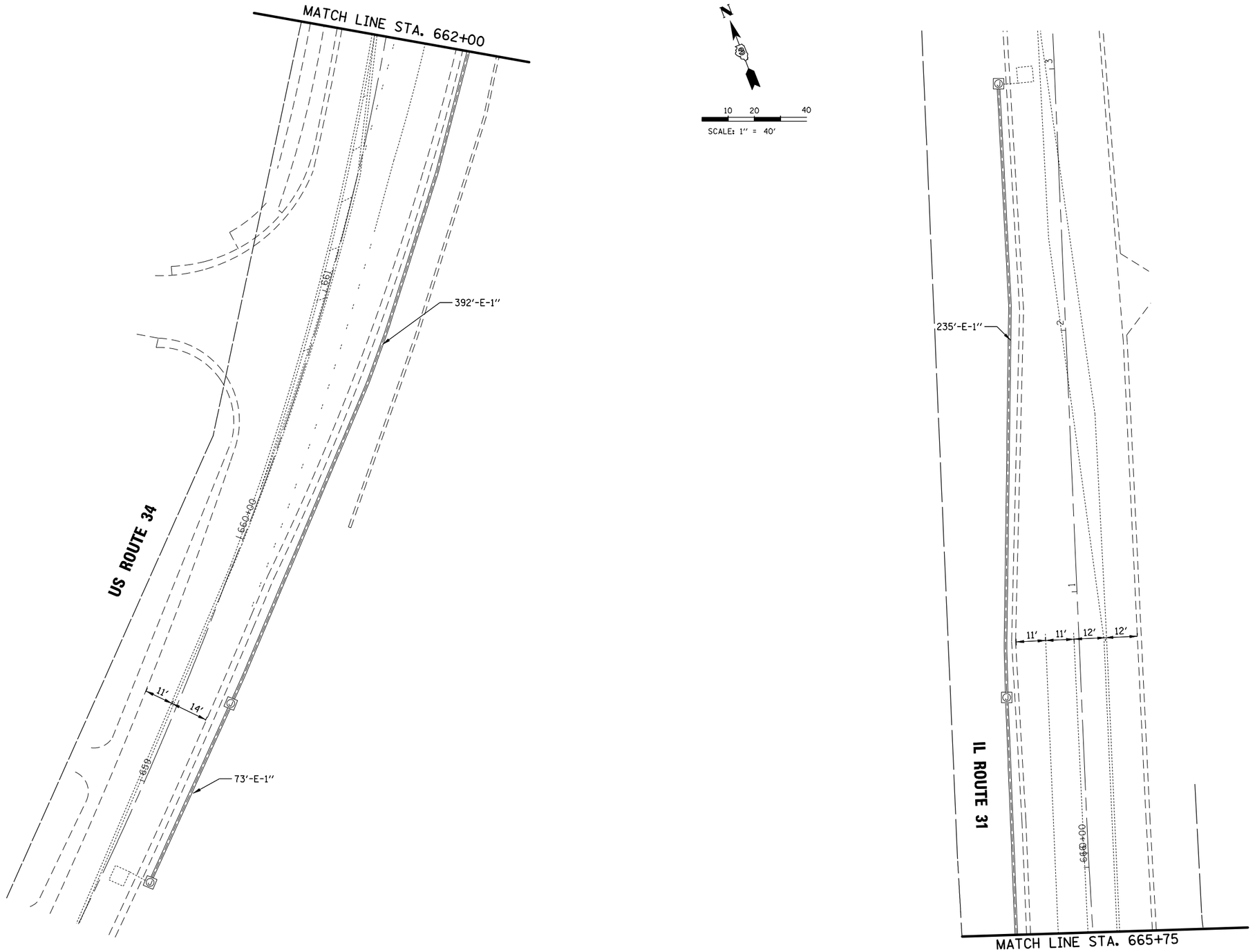
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN (SHEET 1 OF 2)
US ROUTE 34 (WASHINGTON STREET) AT IL ROUTE 31

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	22
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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PLAN
NOTE BOOK
NO. ____
SURVEYED
PLOTTED
ALIGNMENT CHECKED
ALL DATA NECESSARY AS REQUIRED
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BY
DATE

PROFILE
NOTE BOOK
NO. ____
SURVEYED
PLOTTED
GRADES CHECKED
ALL DATA NOTED
STRUCTURE NOTATIONS CHKD
BY
DATE

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		DRAWN - FPB	REVISED -
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	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN (SHEET 2 OF 2)
US ROUTE 34 (WASHINGTON STREET) AT IL ROUTE 31

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	23
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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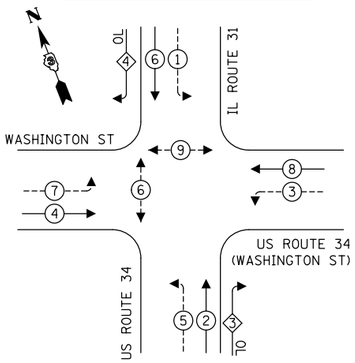
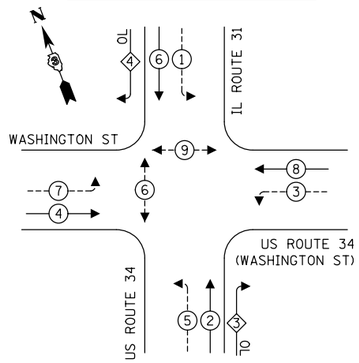
PROFILE | PLAN
SURVEYED
PLOTTED
GRADES CHECKED
ALIGNMENT CHECKED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
DATE | BY

EXISTING CONTROLLER SEQUENCE



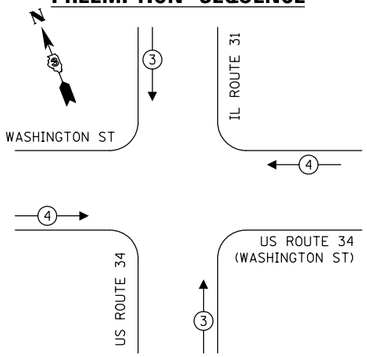
PHASE 9 EXCLUSIVE PEDESTRIAN PHASE
WB "NO RIGHT TURN" BLANK OUT SIGN
ACTIVATED DURING PHASE 9 ONLY

PROPOSED CONTROLLER SEQUENCE

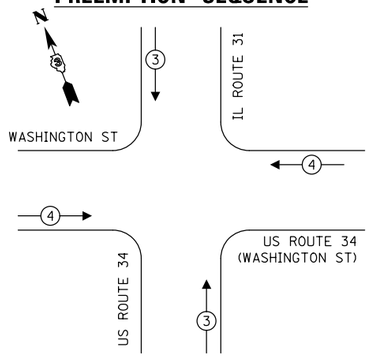


PHASE 9 EXCLUSIVE PEDESTRIAN PHASE
WB "NO RIGHT TURN" BLANK OUT SIGN
ACTIVATED DURING PHASE 9 ONLY

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

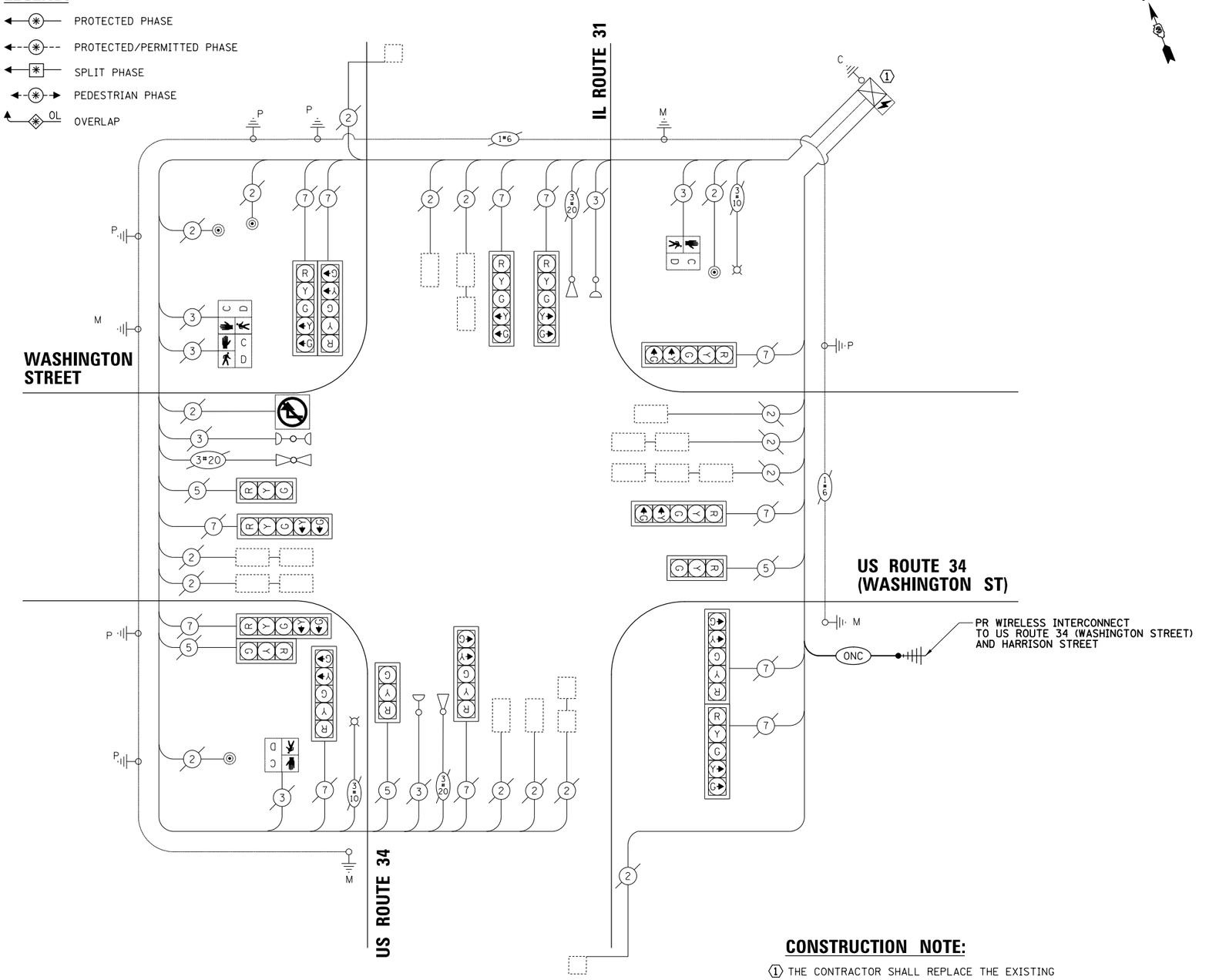
TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	11	50	88.0
(YELLOW)	16	20	5	16.0
(GREEN)	16	12	45	86.4
PERMISSIVE ARROW	24	10	10	24.0
PED. SIGNAL	4	20	100	80.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	-	-	-
BLANK-OUT SIGN	1	25	5	1.25
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	2	250	50	250.0
			TOTAL =	670.65

ENERGY COSTS TO:
VILLAGE OF OSWEGO
100 Parkers Mill
Oswego, Illinois 60543

ENERGY SUPPLY: CONTACT: NEW BUSINESS
PHONE: NEW PHONE
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: ---

LEGEND:

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- SPLIT PHASE
- PEDESTRIAN PHASE
- OL OVERLAP



CABLE PLAN
(NOT TO SCALE)

CONSTRUCTION NOTE:

(1) THE CONTRACTOR SHALL REPLACE THE EXISTING TRAFFIC SIGNAL CONTROLLER WITH A NEW CONTROLLER.

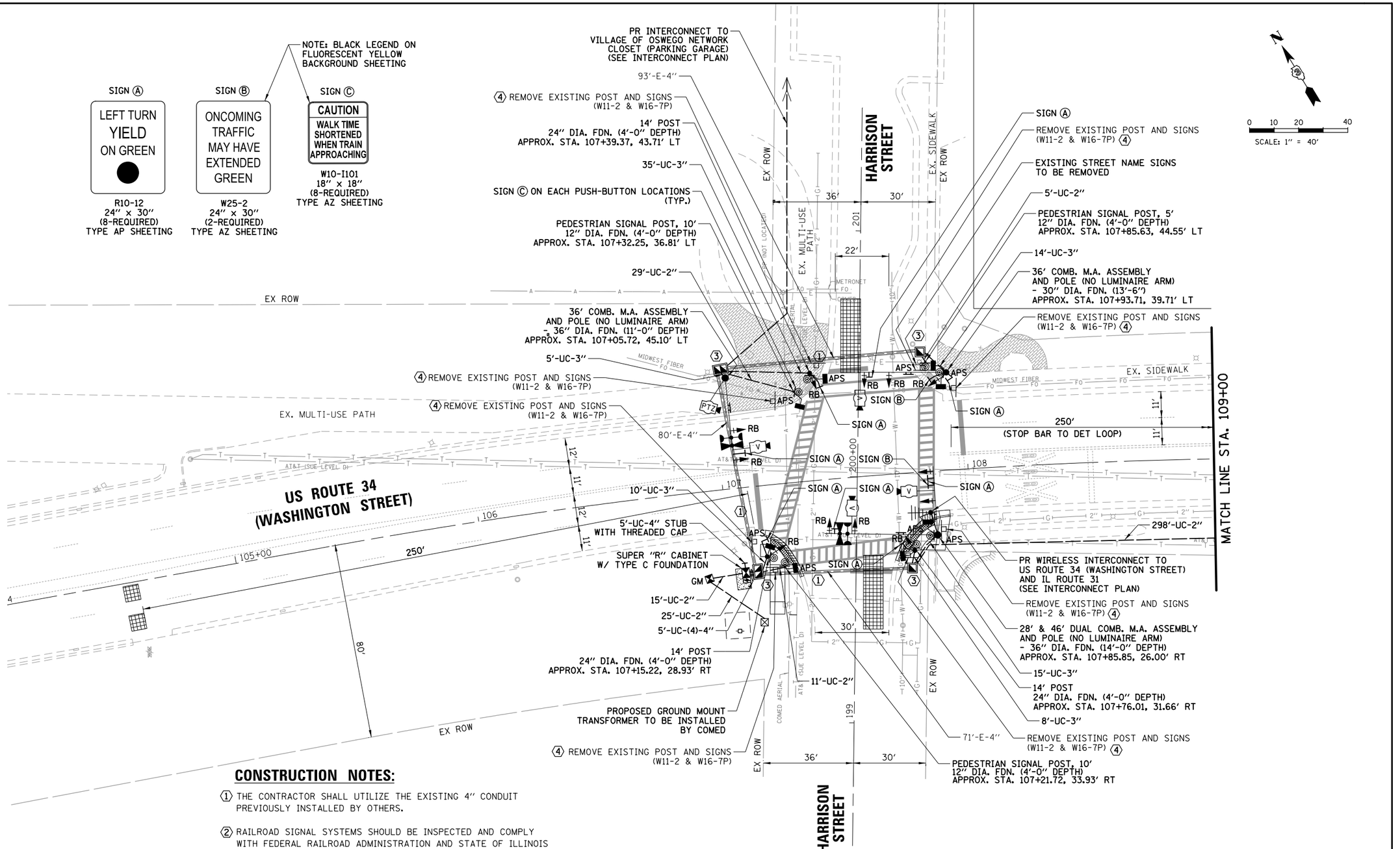
FILE NAME = N:\OSWEGO\200405\Traffic\IL 31-US34_CAB.dgn	USER NAME = fbarriso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US 34 (WASHINGTON ST) AND IL ROUTE 31

SCALE: NOT TO SCALE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	24
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CONSTRUCTION NOTES:

(1) THE CONTRACTOR SHALL UTILIZE THE EXISTING 4" CONDUIT PREVIOUSLY INSTALLED BY OTHERS.

(2) RAILROAD SIGNAL SYSTEMS SHOULD BE INSPECTED AND COMPLY WITH FEDERAL RAILROAD ADMINISTRATION AND STATE OF ILLINOIS SIGNAL SAFETY STANDARDS. THE RAILROAD SIGNAL CONTROL EQUIPMENT AND THE TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL BE INTERCONNECTED PRIOR TO THE ACTIVATION OF THE PROPOSED TRAFFIC SIGNALS.

(3) THE CONTRACTOR SHALL SPLICE/INTERCEPT EXISTING CONDUIT WHEN CONSTRUCTING HANDHOLE.

(4) EXISTING SIGNS AND SUPPORTS SHALL BE RETURNED TO THE VILLAGE OF OSWEGO.

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Rosemont, Illinois 60018
(847) 823-0500

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, ALL MATCHED, CADD FILE NAME N:\OSWEGO\200405\Traffic\HARRISON_TS_D_TSD1.dgn, NOTE BOOK, NO., BY, DATE

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, ALL MATCHED, STRUCTURE NO(S), ALIGNMENTS CHKD, NOTE BOOK, NO., BY, DATE

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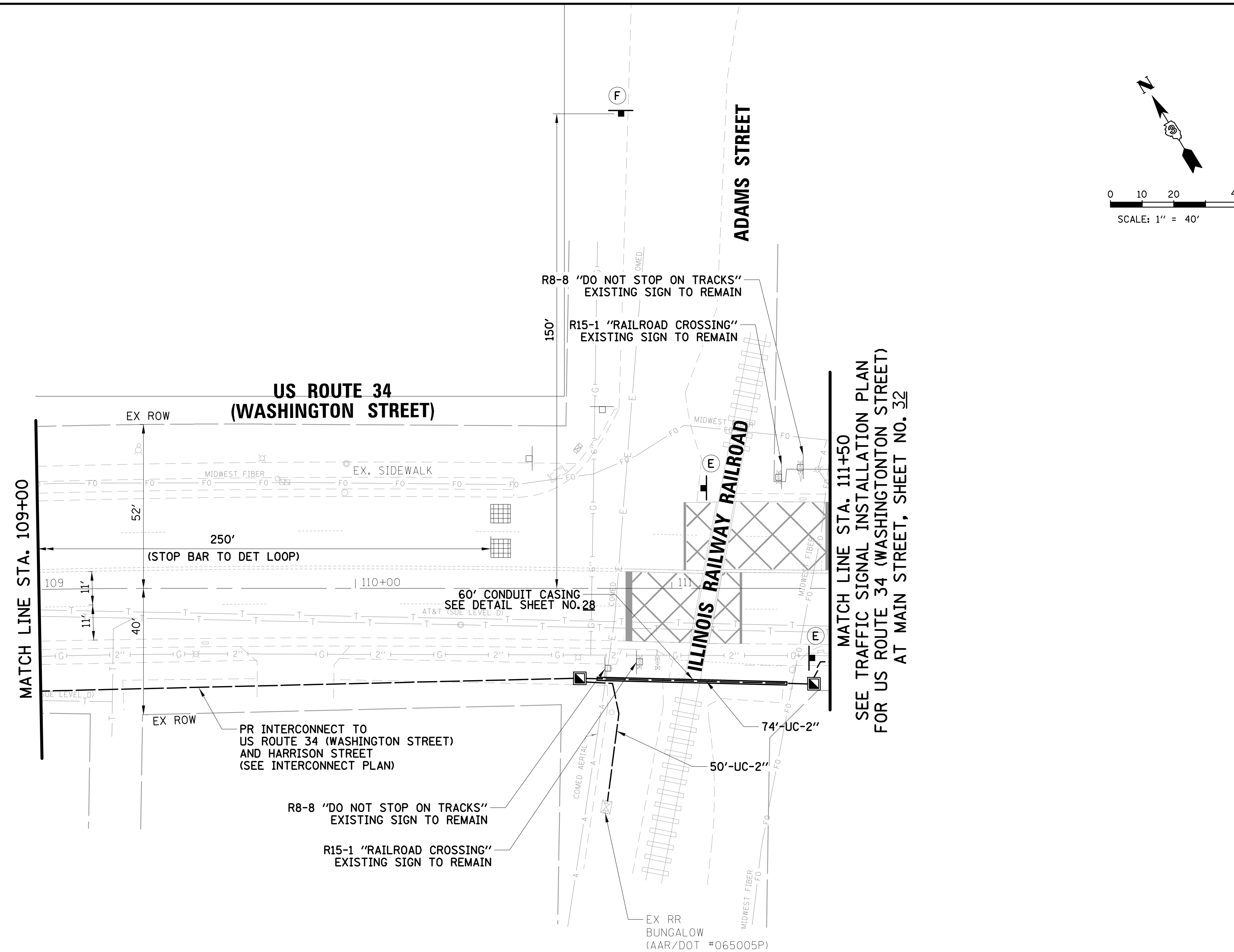
	PLOT DATE = 2/2/2022	DATE -	REVISED -

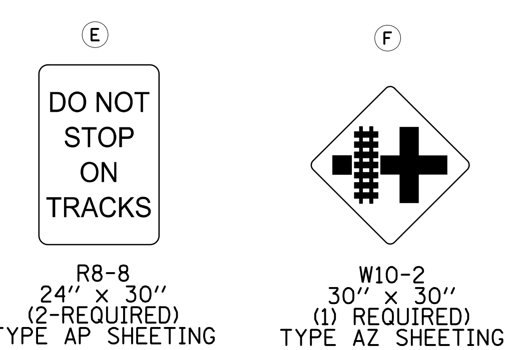
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN (SHEET 1 OF 2)
US ROUTE 34 (WASHINGTON STREET) AND HARRISON STREET

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	25
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





RAILROAD SIGN

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9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

PLAN: NOTE BOOK NO. ___ SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME N:\OSWEGO\200405\Traffic\HARRISON_TS_02_TSD2.dgn | BY | DATE

PROFILE: NOTE BOOK NO. ___ SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATN'S CHK'D | BY | DATE

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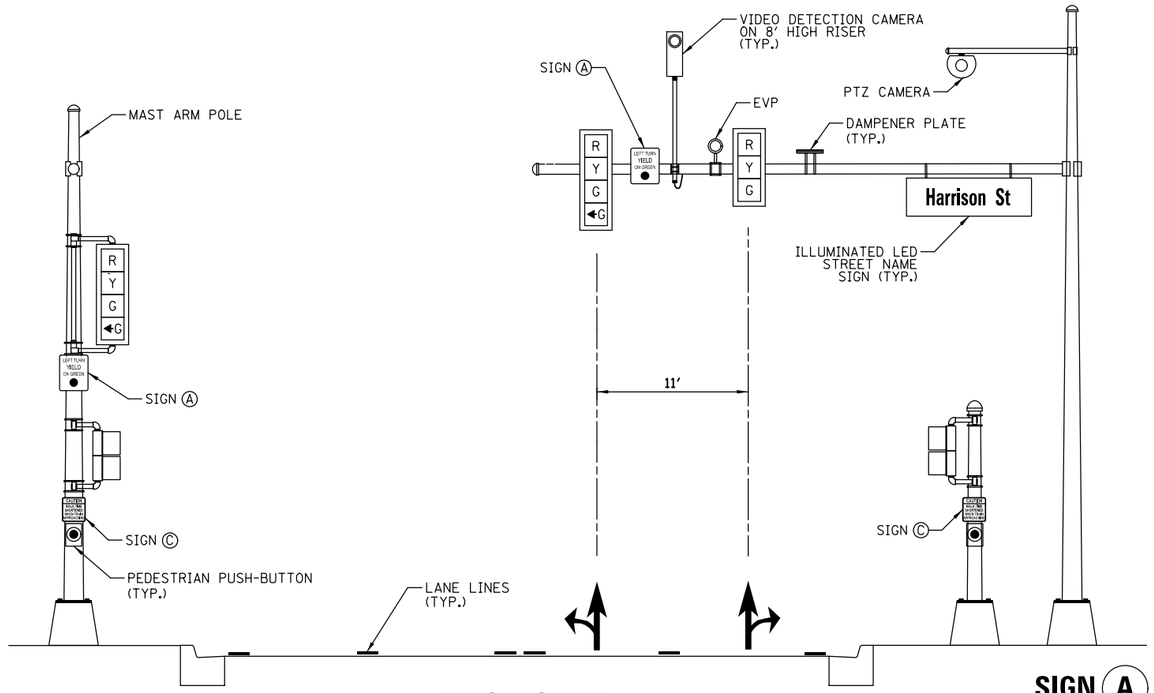
		DRAWN - FPB	REVISED -
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

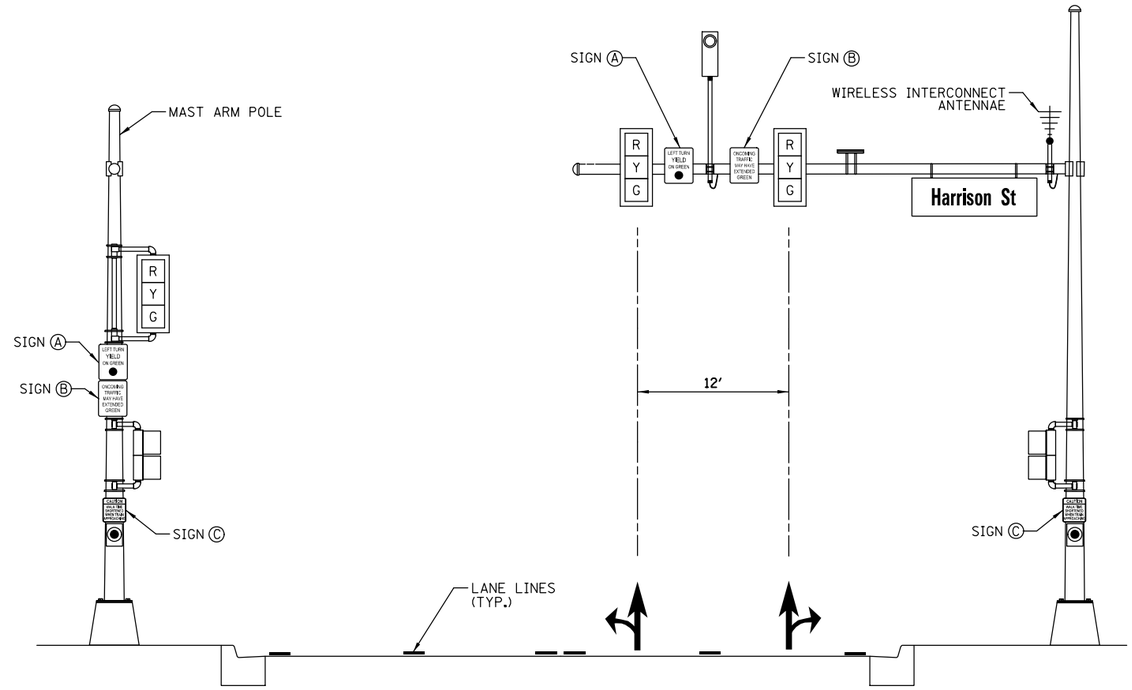
TRAFFIC SIGNAL INSTALLATION PLAN (SHEET 2 OF 2)
US ROUTE 34 (WASHINGTON STREET) AND HARRISON STREET

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. TO STA.

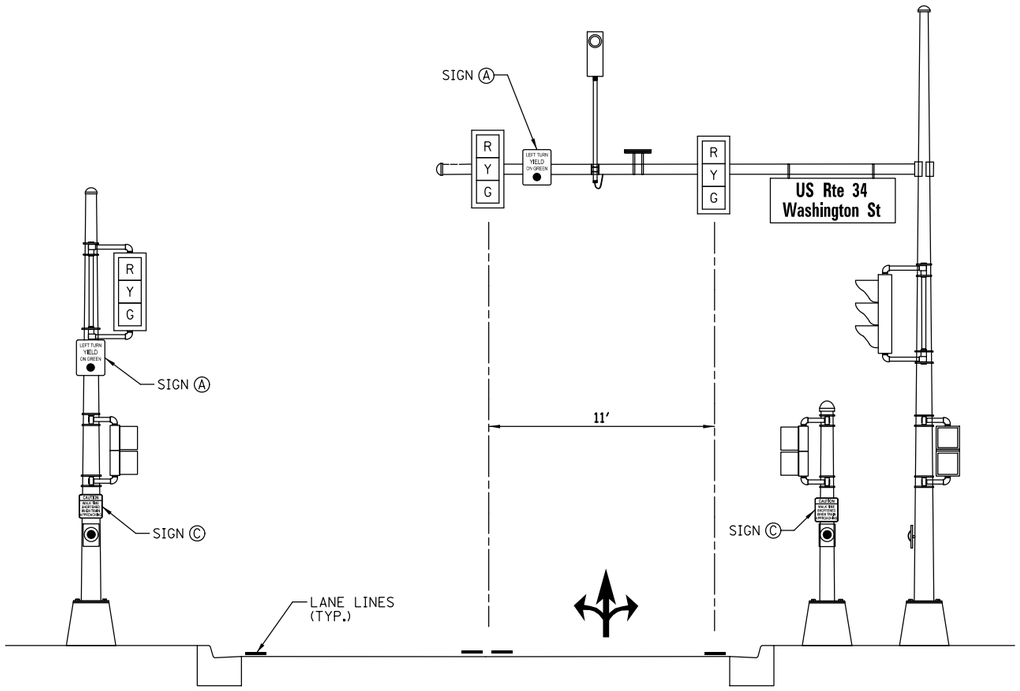
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	26
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



WESTBOUND



EASTBOUND



NORTHBOUND

SIGN (A)

LEFT TURN
YIELD
ON GREEN

R10-12
24" x 30"
(8 REQUIRED)
TYPE AP SHEETING

SIGN (B)

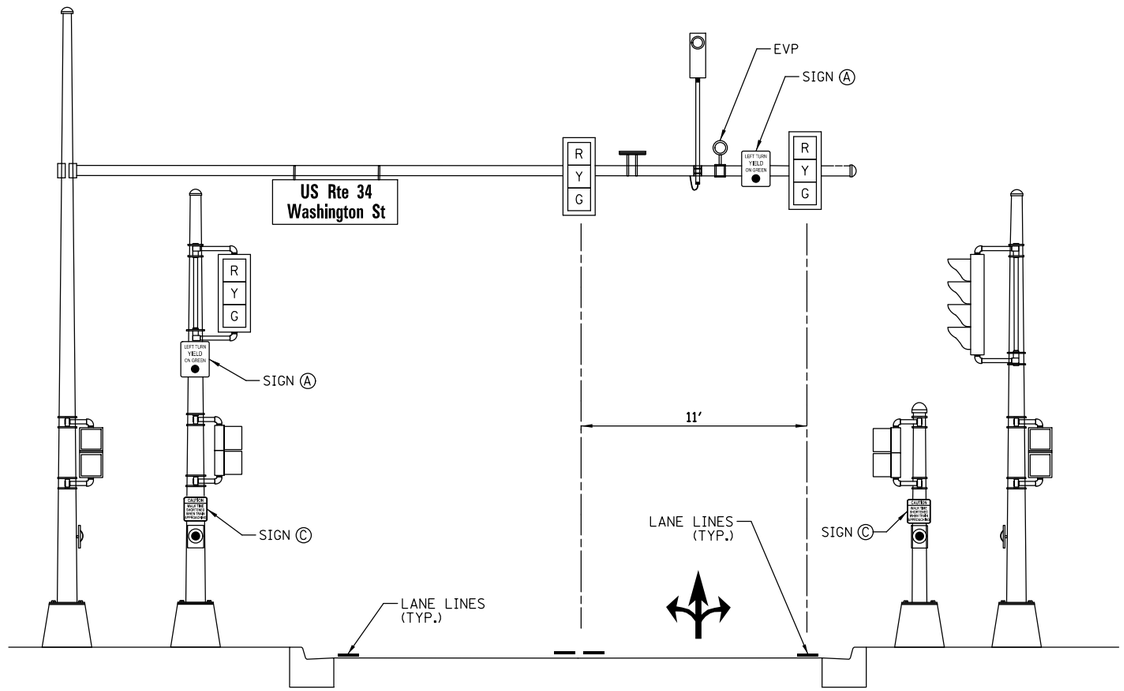
ONCOMING
TRAFFIC
MAY HAVE
EXTENDED
GREEN

W25-2
24" x 30"
(1-REQUIRED)
TYPE AZ SHEETING

SIGN (C)

CAUTION
WALK TIME
SHORTENED
WHEN TRAIN
APPROACHING

W10-1101
18" x 18"
(8-REQUIRED)
TYPE AZ SHEETING



SOUTHBOUND

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PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
GRADES CHECKED
ALL DIMENSIONS NOTATIONS CHKD
STRUCTURE NOTATIONS CHKD
CADD FILE NAME N:\OSWEGO\200405\Traffic\HARRISON_TS 03_Detail.dgn
BY
DATE

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
ALL DIMENSIONS NOTATIONS CHKD
STRUCTURE NOTATIONS CHKD
BY
DATE

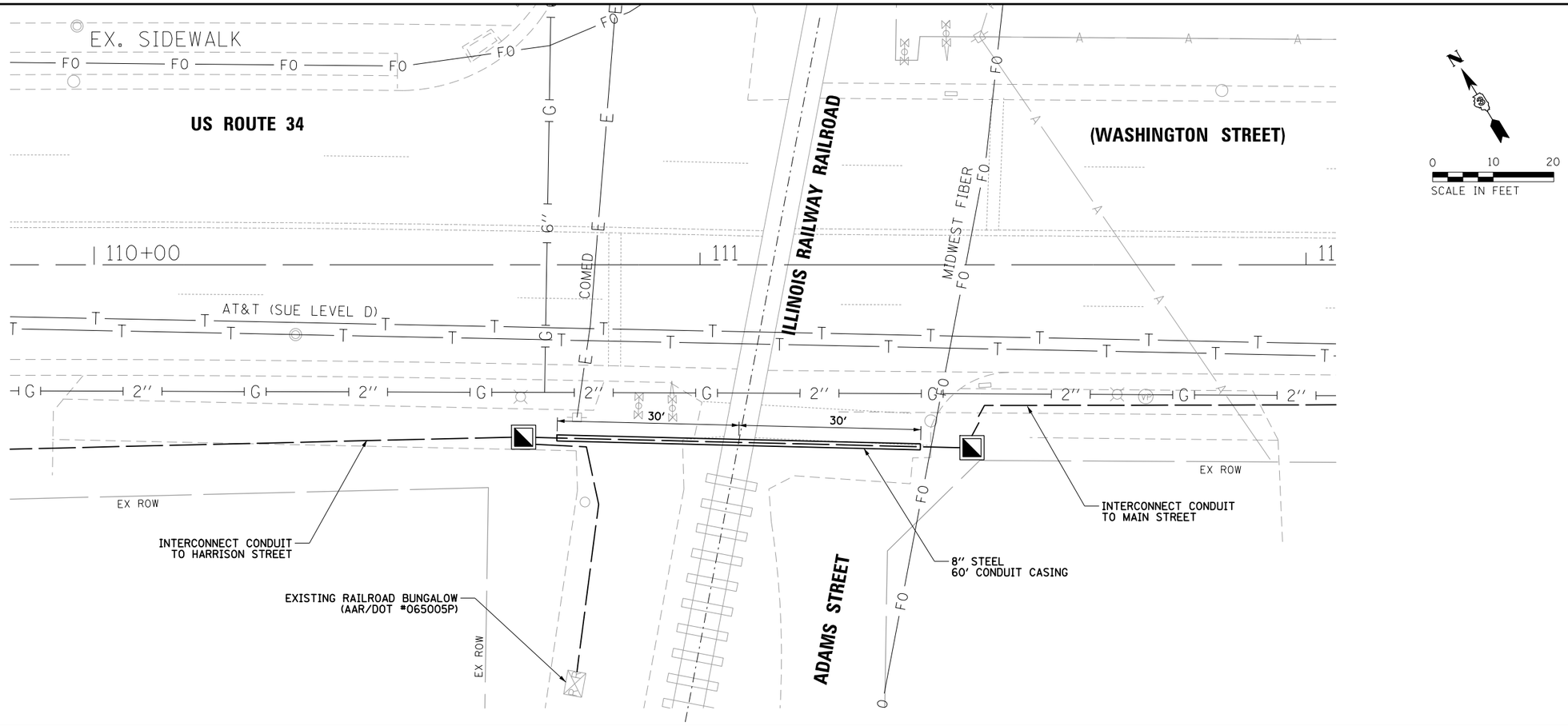
FILE NAME = N:\OSWEGO\200405\Traffic\HARRISON_TS 03_Detail.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
	PLOT SCALE = 2'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

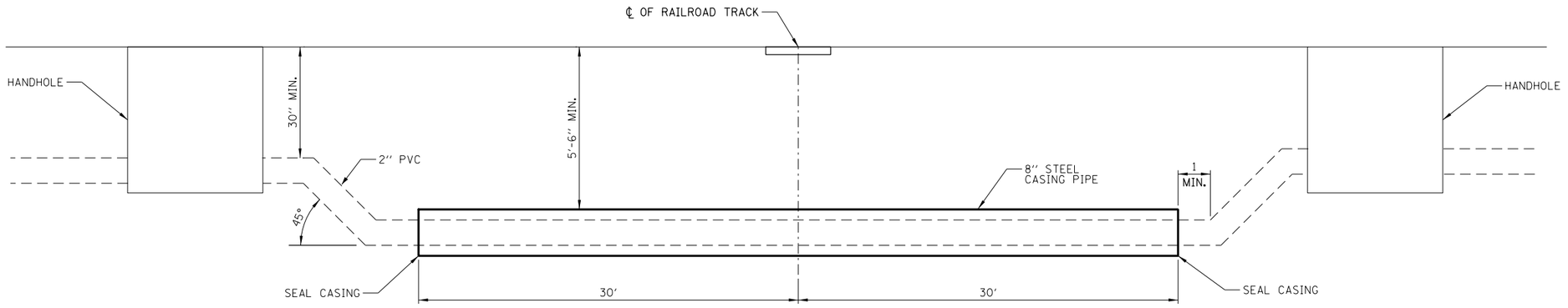
MAST ARM / POST EQUIPMENT MOUNTING DETAIL
US ROUTE 34 (WASHINGTON STREET) AND HARRISON STREET

SCALE: NOT TO SCALE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	27
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CONDUIT		CASING PIPE	
WALL THICKNESS	0.25"	WALL THICKNESS	0.25"
DIAMETER	4"	DIAMETER	8"
MATERIAL	STEEL	MATERIAL	STEEL



DETAIL
NOT TO SCALE

FILE NAME = N:\OSWEGO\200405\Traffic\HARRISON_TS 04_Conduit Casing.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
	PLOT SCALE = 20'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL CONDUIT CROSSING UNDER RAILROAD
US ROUTE 34 (WASHINGTON STREET) AND ADAMS STREET

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	28
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PROFILE | PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
ALIGNMENT CHECKED
STRUCTURE NOTATNS CHKD
BY
DATE

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Rosemont, Illinois 60018
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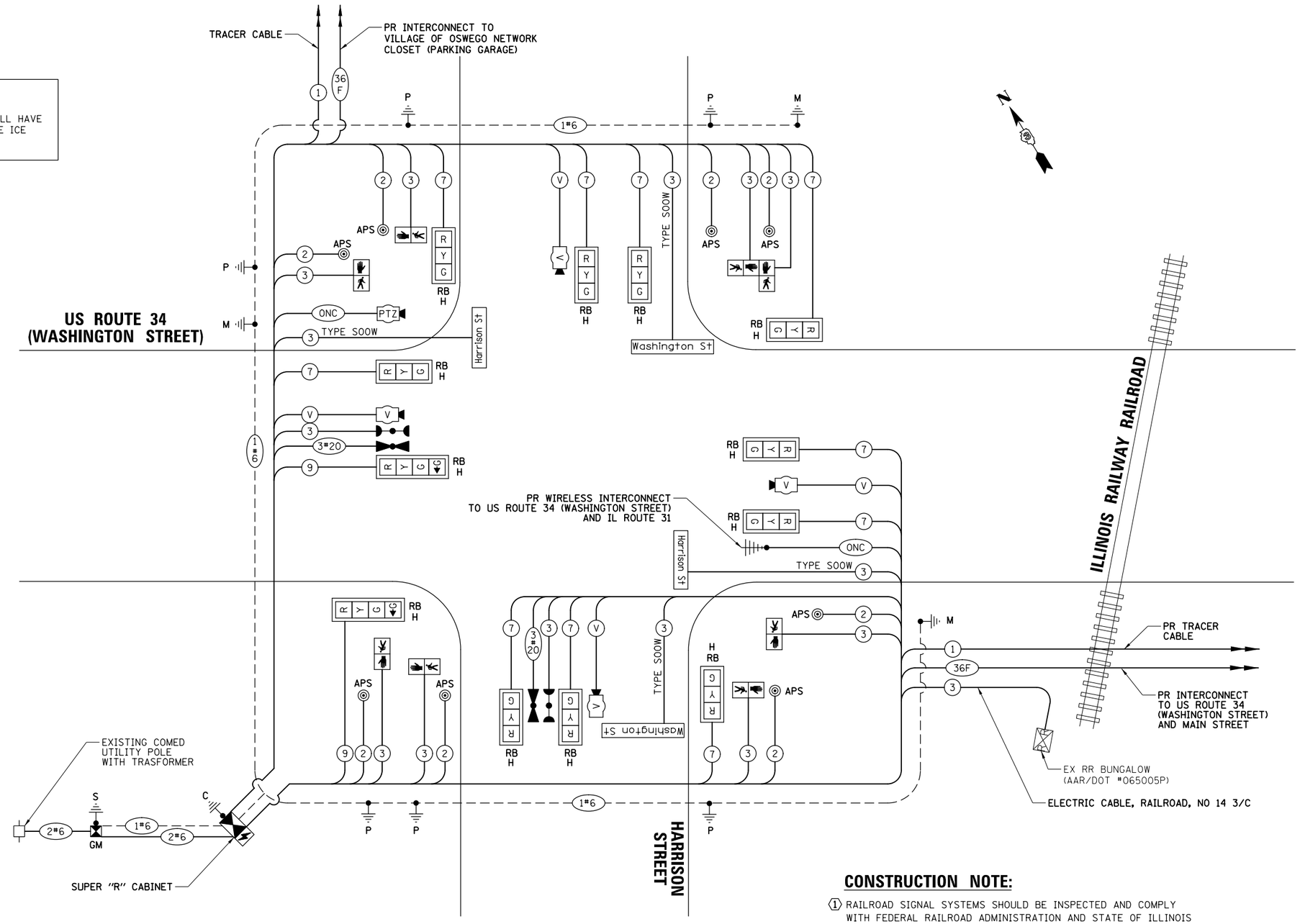
ALIGNMENT CHECKED
CADD FILE NAME N:\OSWEGO\200405\Traffic\HARRISON_TS 04_Conduit Casing.dgn

NOTE:

ALL VEHICULAR TRAFFIC SIGNAL HEADS SHALL HAVE A THERMO-REGULATED HEATER TO ELIMINATE ICE AND SNOW ACCUMULATION.



CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
GREEN ARROW	2	10	10	2.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240.0
LUMINAIRE	-	-	-	-
			TOTAL =	819.8

ENERGY COSTS TO:
VILLAGE OF OSWEGO
100 PARKERS MILL
OSWEGO, ILLINOIS 60543

ENERGY SUPPLY: CONTACT: KELI GONZALES
PHONE: (630) 360-0146
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: 5171089003

CONSTRUCTION NOTE:

(1) RAILROAD SIGNAL SYSTEMS SHOULD BE INSPECTED AND COMPLY WITH FEDERAL RAILROAD ADMINISTRATION AND STATE OF ILLINOIS SIGNAL SAFETY STANDARDS. THE RAILROAD SIGNAL CONTROL EQUIPMENT AND THE TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL BE INTERCONNECTED PRIOR TO THE ACTIVATION OF THE PROPOSED TRAFFIC SIGNALS.

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PLAN — NOTE BOOK — NO. —
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BY — DATE

PROFILE — NOTE BOOK — NO. —
SURVEYED — PLOTTED — GRADES CHECKED — ALL DIM. VERIFIED — STRUCTURE NO
NOTATNS CHKD

FILE NAME =	USER NAME = fbariso	DESIGNED - TFS	REVISED -
N:\OSWEGO\200405\Traffic\HARRISON_TS 05_CAB.dgn	DRAWN - FPB	REVISED -	
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US ROUTE 34 (WASHINGTON STREET) AND HARRISON STREET

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	29
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEQUENCE OF OPERATION

MOVEMENT (N)	2, 6				4, 8				FLASH
PHASE	2 + 6				4 + 8				
INTERVAL	1	2	3A	3B	4	5	6A	6B	
CHANGE TO			4 + 8				2 + 6		
US ROUTE 34 (WASHINGTON STREET) E/B ALL SIGNALS	G	G	Y	R	R	R	R	R	R
US ROUTE 34 (WASHINGTON STREET) W/B END MAST ARM AND FAR LEFT SIGNALS	G	G	Y	R	R	R	R	R	R
US ROUTE 34 (WASHINGTON STREET) W/B FAR RIGHT MAST ARM SIGNAL	G	G	Y	R	R	R	R	R	R
HARRISON STREET N/B ALL SIGNALS	R	R	R	R	G	G	Y	R	R
HARRISON STREET S/B ALL SIGNALS	R	R	R	R	G	G	Y	R	R
PEDESTRIAN SIGNALS CROSSING HARRISON STREET ON NORTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	* P	** FH	H	H	H	H	H	H	DARK
PEDESTRIAN SIGNALS CROSSING HARRISON STREET ON SOUTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	* P	** FH	H	H	H	H	H	H	
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON EAST SIDE OF HARRISON STREET	H	H	H	H	* P	** FH	H	H	
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON WEST SIDE OF HARRISON STREET	H	H	H	H	* P	** FH	H	H	

PHASE 2+6 SHALL BE PLACED ON RECALL

* TO APPEAR ONLY UPON PUSHBUTTON ACTUATION

** FLASHING "[hand symbol]" IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.

P = ILLUMINATED PERSON = WALK
FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
H = ILLUMINATED SOLID HAND = DON'T WALK

RAILROAD PREEMPTION SEQUENCE OF OPERATION

					PREEMPTOR NUMBER 3		PREEMPTOR NUMBER 4		PREEMPTOR NUMBER 2				
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1		4										
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER					2		3						
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	2	3	4	5	CLEAR TO NORMAL SEQUENCE
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	1D	2	1F	2	1H	2	3	4	5		
US ROUTE 34 (WASHINGTON STREET) E/B ALL SIGNALS	Y	R	R	R	Y	R	R	R	R	R	R	R	Δ
US ROUTE 34 (WASHINGTON STREET) W/B END MAST ARM AND FAR LEFT SIGNALS	G	G	R	R	G	G	R	R	G ← G	Y	R	R	Δ
US ROUTE 34 (WASHINGTON STREET) W/B FAR RIGHT MAST ARM SIGNAL	G	G	R	R	G	G	R	R	G	Y	R	R	Δ
HARRISON STREET N/B ALL SIGNALS	R	R	Y	R	R	R	Y	R	R	R	R	G	Δ
HARRISON STREET S/B ALL SIGNALS	R	R	Y	R	R	R	Y	R	R	R	R	G	Δ
PEDESTRIAN SIGNALS CROSSING HARRISON STREET ON NORTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	H	H	H	H	H	H	H	H	H	H	H	Δ
PEDESTRIAN SIGNALS CROSSING HARRISON STREET ON SOUTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	H	H	H	H	H	H	H	H	H	H	H	Δ
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON EAST SIDE OF HARRISON STREET	H	H	FH	H	H	H	H	H	H	H	H	H	Δ
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON WEST SIDE OF HARRISON STREET	H	H	FH	H	H	H	H	H	H	H	H	H	Δ
												HOLD	

Δ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

									PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	1			4			4			
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	2	3	CLEAR TO NORMAL SEQUENCE
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	1D	3	1F	1G	2	3			
US ROUTE 34 (WASHINGTON STREET) E/B ALL SIGNALS	G	G	Y	R	R	R	R	R	G	R	◊
US ROUTE 34 (WASHINGTON STREET) W/B END MAST ARM AND FAR LEFT SIGNALS	G	G	Y	R	R	R	R	R	G	R	◊
US ROUTE 34 (WASHINGTON STREET) W/B FAR RIGHT MAST ARM SIGNAL	G	G	Y	R	R	R	R	R	G	R	◊
HARRISON STREET N/B ALL SIGNALS	R	R	R	R	G	Y	R	G	R	G	◊
HARRISON STREET S/B ALL SIGNALS	R	R	R	R	G	Y	R	G	R	G	◊
PEDESTRIAN SIGNALS CROSSING HARRISON STREET ON NORTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	FH	H	H	H	H	H	H	H	H	◊
PEDESTRIAN SIGNALS CROSSING HARRISON STREET ON SOUTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	FH	H	H	H	H	H	H	H	H	◊
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON EAST SIDE OF HARRISON STREET	H	H	H	H	FH	H	H	FH	H	H	◊
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON WEST SIDE OF HARRISON STREET	H	H	H	H	FH	H	H	FH	H	H	◊

◊ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2 OR 3 IS TERMINATED.

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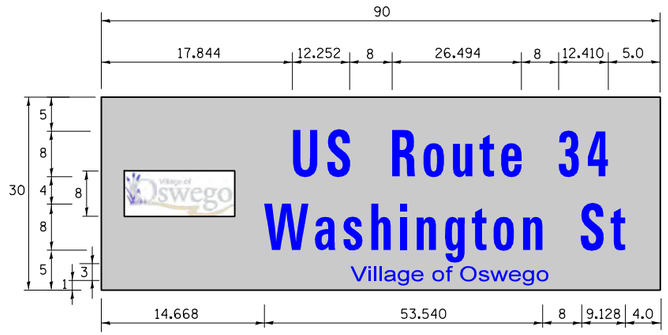
PROFILE — NOTE BOOK NO. — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATNS CHKD — BY — DATE

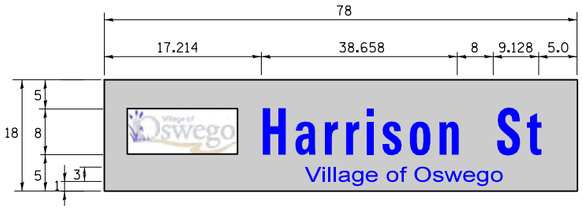
FILE NAME = N:\OSWEGO\200405\Traffic\HARRISON.TS 06_SEQ.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SEQUENCE OF OPERATION, RAILROAD PREEMPTION SEQUENCE OF OPERATION AND EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION US ROUTE 34 (WASHINGTON STREET) AND HARRISON STREET	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40'	DRAWN - FPB	REVISED -					KENDALL	47	30
	PLOT DATE = 2/2/2022	CHECKED - GMZ	REVISED -		SCALE: 1" = 40' SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO.		
		DATE -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

LED ILLUMINATED STREET NAME SIGNS

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	18.75	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	9.75	ZZ	2

SCHEDULE OF QUANTITIES

	ITEM	UNIT	QUANTITY
	CHANGEABLE MESSAGE SIGN	CAL DA	28
	SIGN PANEL - TYPE 1	SQ FT	68
	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	512
	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	106
**	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	25
	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	4
	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	2
	PAINT NEW TRAFFIC SIGNAL POST	EACH	5
	PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	2
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1169
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1493
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1842
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 9C	FOOT	279
	ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	480
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	70
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	699
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1
	CONCRETE FOUNDATION, TYPE A	EACH	12
	CONCRETE FOUNDATION, TYPE C	FOOT	4
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	13.5
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	25
	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	8
	LIGHT DETECTOR	EACH	2
	LIGHT DETECTOR AMPLIFIER	EACH	1
	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	268
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	3
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	7
	OUTDOOR RATED NETWORK CABLE	FOOT	172
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL)	EACH	1
	SPARE RAILROAD, FULL ACTUATED CONTROLLER , SPECIAL	EACH	1
	REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
	PEDESTRIAN SIGNAL POST, 10 FT.	EACH	2
	PEDESTRIAN SIGNAL POST, 5 FT	EACH	1
	ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C TYPE SOOW	FOOT	629
**	CONDUIT SPLICE	EACH	6
**	INTERCEPT EXISTING CONDUIT	EACH	6
	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)	EACH	1
	CONCRETE FOUNDATION, TYPE A 12 INCH DIAMETER	FOOT	12
**	EXPLORATORY EXCAVATION	FOOT	20
	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
	STEEL CASING PIPE, BORED AND JACKED, 8"	FOOT	60
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	1
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	1
	PAINT NEW COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 1-UNDER 40 FEET, 1-OVER 40 FE	EACH	1

**Nominal Quantity to be used as Directed by the Engineer

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PLAN / PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / R.O.W. MONUMENTED / STRUCTURE NOTATIONS CHK'D — NOTE BOOK / NO. — BY / DATE

FILE NAME = N:\OSWEGO\200405\Traffic\HARRISON_TS 07_STN.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES AND LED ILLUMINATED MAST ARM MOUNTED STREET NAME SIGN US ROUTE 34 (WASHINGTON STREET) AND HARRISON STREET

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	31
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTE: BLACK LEGEND ON FLUORESCENT YELLOW BACKGROUND SHEETING

SIGN Ⓐ

LEFT TURN
YIELD
ON GREEN

R10-12
24″ X 30″
(6-REQUIRED)
TYPE AP SHEETING

SIGN Ⓑ

ONCOMING
TRAFFIC
MAY HAVE
EXTENDED
GREEN

W25-2
24″ x 30″
(1-REQUIRED)
TYPE AZ SHEETING

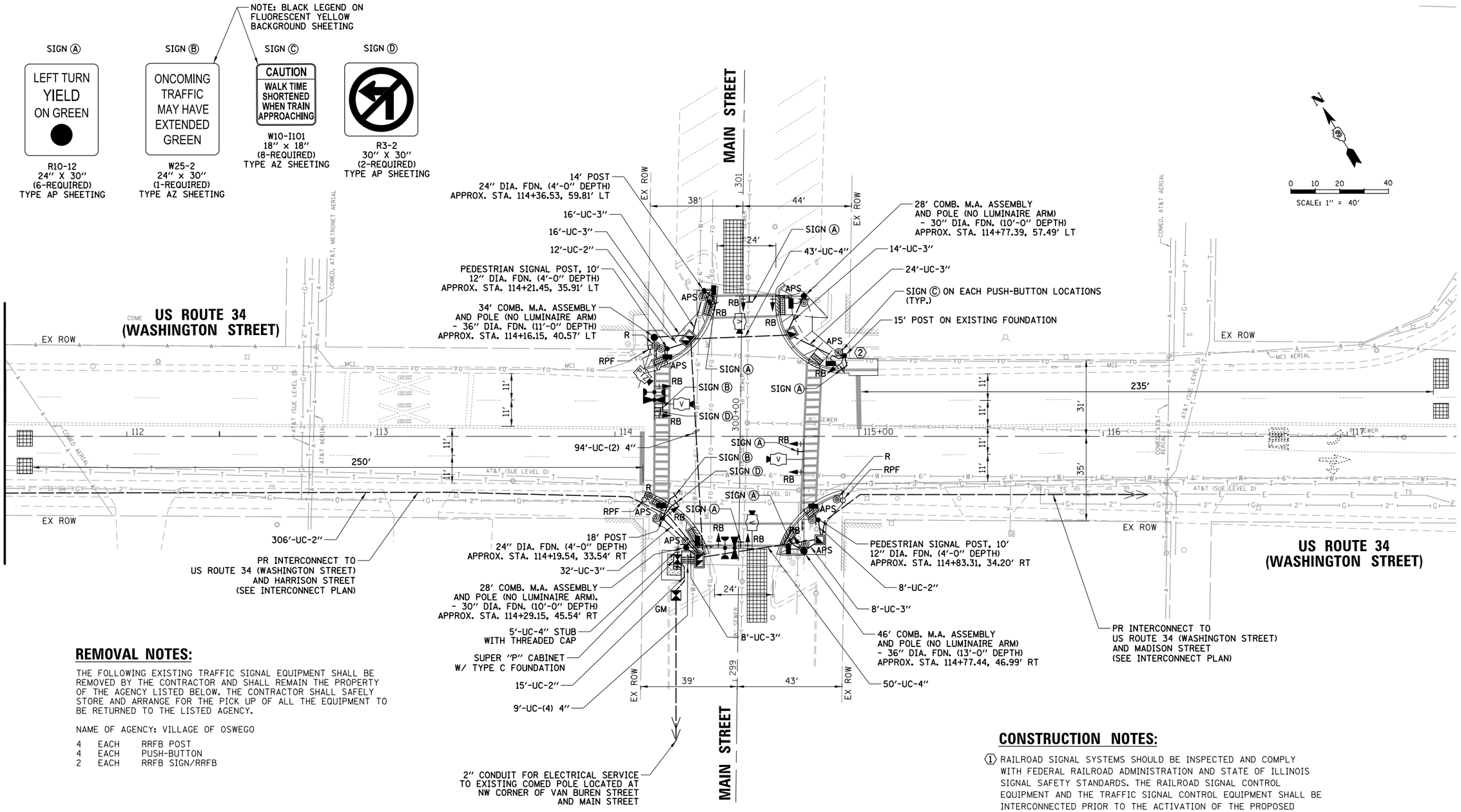
SIGN Ⓒ

CAUTION
WALK TIME
SHORTENED
WHEN TRAIN
APPROACHING

W10-1101
18″ x 18″
(8-REQUIRED)
TYPE AZ SHEETING

SIGN Ⓓ

R3-2
30″ X 30″
(2-REQUIRED)
TYPE AP SHEETING



SEE TRAFFIC SIGNAL INSTALLATION PLAN
FOR US ROUTE 34 (WASHINGTONTON STREET)
AT MAIN STREET, SHEET NO. 26
MATCH LINE STA. 111+50

REMOVAL NOTES:

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR THE PICK UP OF ALL THE EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY.

NAME OF AGENCY: VILLAGE OF OSWEGO

4	EACH	RRFB POST
4	EACH	PUSH-BUTTON
2	EACH	RRFB SIGN/RRFB

CONSTRUCTION NOTES:

① RAILROAD SIGNAL SYSTEMS SHOULD BE INSPECTED AND COMPLY WITH FEDERAL RAILROAD ADMINISTRATION AND STATE OF ILLINOIS SIGNAL SAFETY STANDARDS. THE RAILROAD SIGNAL CONTROL EQUIPMENT AND THE TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL BE INTERCONNECTED PRIOR TO THE ACTIVATION OF THE PROPOSED TRAFFIC SIGNALS.

② REMOVE EXISTING RRFB POST AND PUSH-BUTTON. THE EXISTING FOUNDATION SHALL REMAIN TO BE USED FOR THE PROPOSED TRAFFIC SIGNAL POST.

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(847) 823-0500

PLAN / PROFILE
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ALIGNMENT CHECKED
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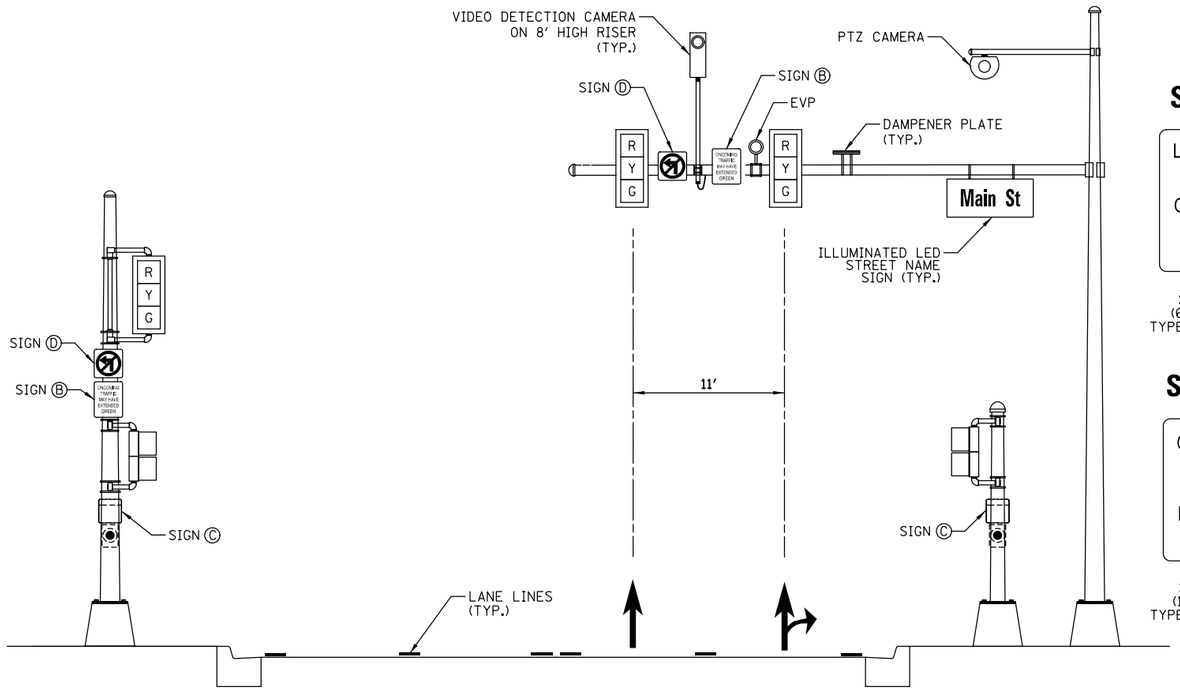
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
US ROUTE 34 (WASHINGTON STREET) AND MAIN STREET

SCALE: 1″ = 40′ | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	32
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



WESTBOUND

SIGN A

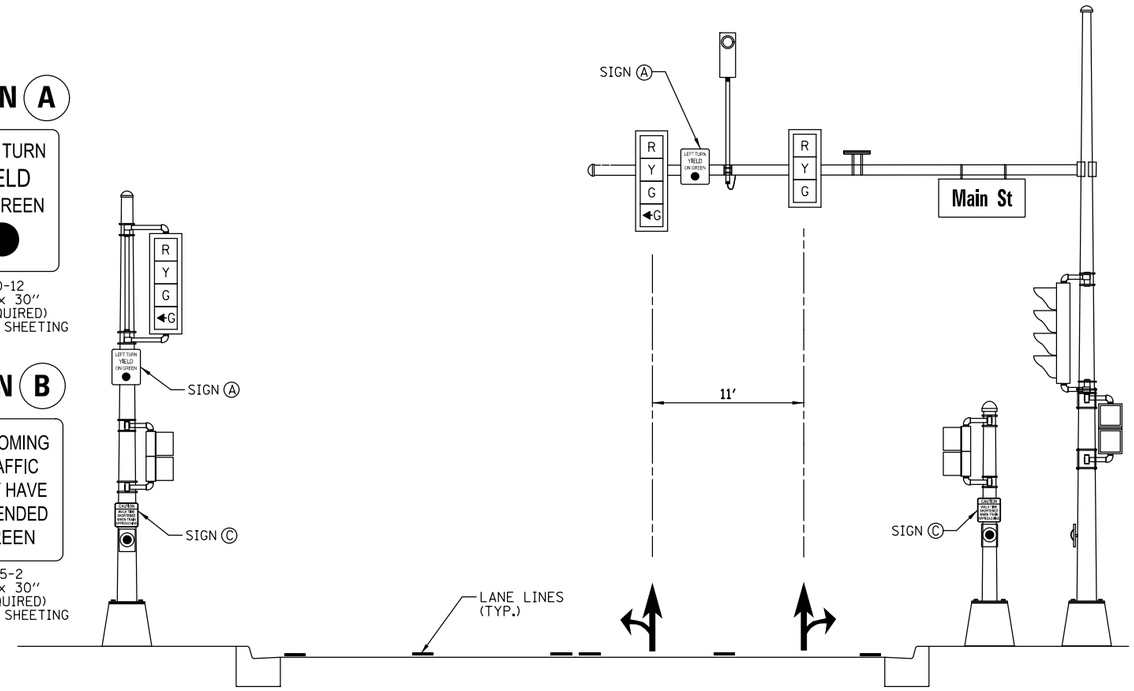
LEFT TURN
YIELD
ON GREEN

R10-12
24" x 30"
(6-REQUIRED)
TYPE AP SHEETING

SIGN B

ONCOMING
TRAFFIC
MAY HAVE
EXTENDED
GREEN

W25-2
24" x 30"
(1-REQUIRED)
TYPE AZ SHEETING



EASTBOUND

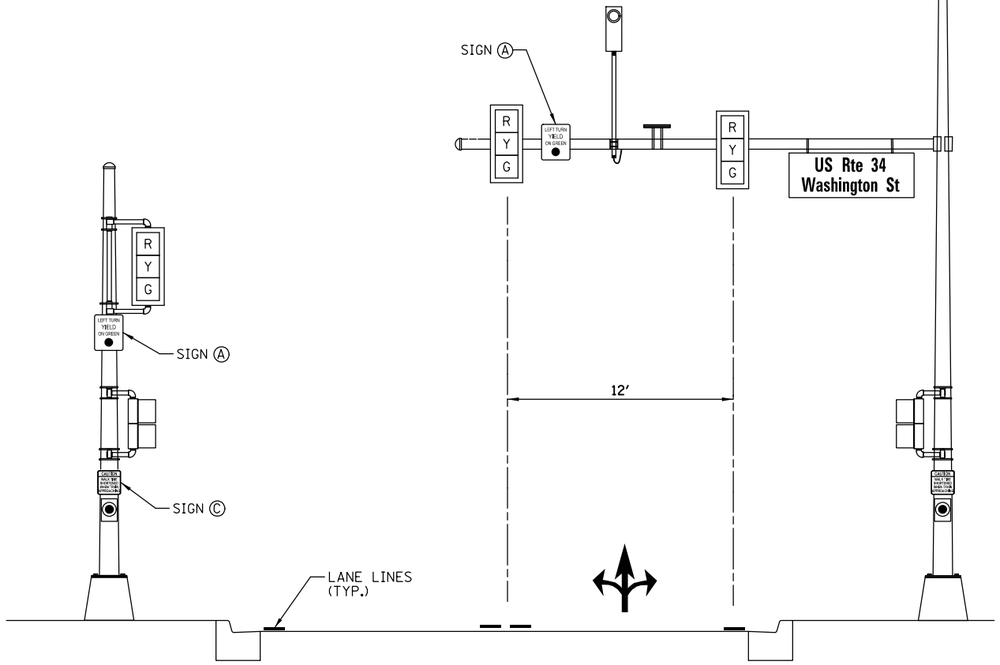
SIGN C

CAUTION
WALK TIME
SHORTENED
WHEN TRAIN
APPROACHING

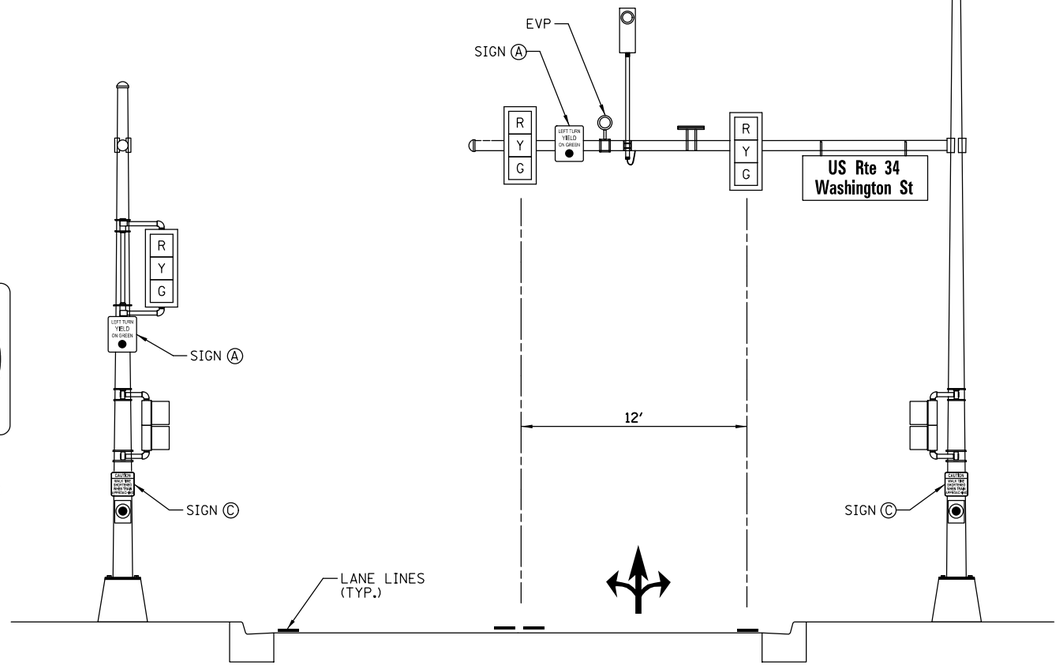
W10-I101
18" x 18"
(8-REQUIRED)
TYPE AZ SHEETING

SIGN D

R3-2
30" x 30"
(2-REQUIRED)
TYPE AP SHEETING



NORTHBOUND



SOUTHBOUND

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PROFILE — NOTE BOOK — NO. —
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	PLOT SCALE = 2'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

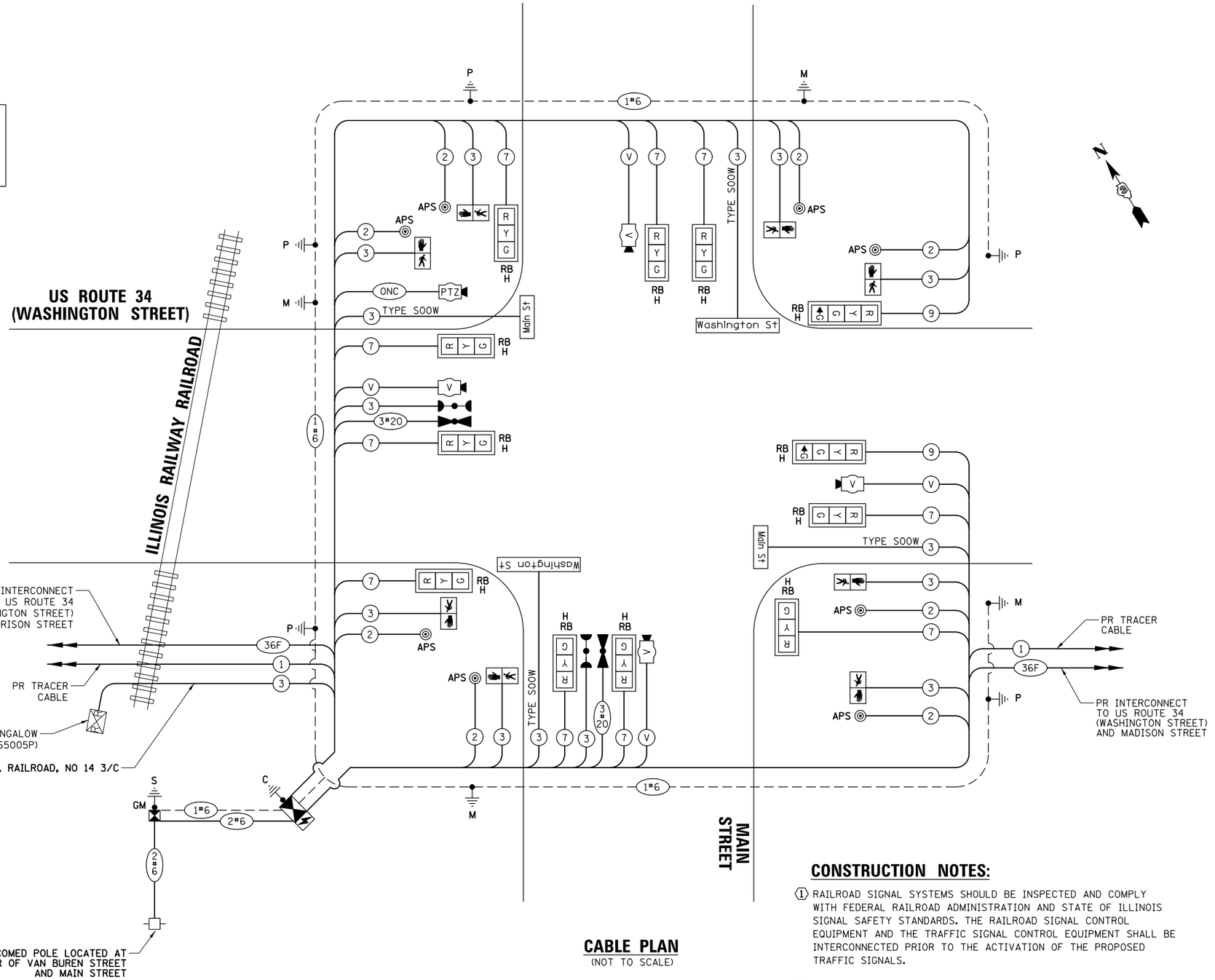
MAST ARM / POST EQUIPMENT MOUNTING DETAIL
US ROUTE 34 (WASHINGTON STREET) AND MAIN STREET

SCALE: NOT TO SCALE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	33
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTE:

ALL VEHICULAR TRAFFIC SIGNAL HEADS SHALL HAVE A THERMO-REGULATED HEATER TO ELIMINATE ICE AND SNOW ACCUMULATION.



CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
GREEN ARROW	2	10	10	2.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240.0
LUMINAIRE	-	-	-	-
			TOTAL =	819.8

ENERGY COSTS TO:
VILLAGE OF OSWEGO
100 PARKERS MILL
OSWEGO, ILLINOIS 60543

ENERGY SUPPLY: CONTACT: KELI GONZALES
PHONE: (630) 360-0146
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: 5171089003

CONSTRUCTION NOTES:

1. RAILROAD SIGNAL SYSTEMS SHOULD BE INSPECTED AND COMPLY WITH FEDERAL RAILROAD ADMINISTRATION AND STATE OF ILLINOIS SIGNAL SAFETY STANDARDS. THE RAILROAD SIGNAL CONTROL EQUIPMENT AND THE TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL BE INTERCONNECTED PRIOR TO THE ACTIVATION OF THE PROPOSED TRAFFIC SIGNALS.

2. REMOVE EXISTING RRFB POST AND PUSH-BUTTON. THE EXISTING FOUNDATION SHALL REMAIN TO BE USED FOR THE PROPOSED TRAFFIC SIGNAL POST.

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BY — DATE — CHK'D

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	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US ROUTE 34 (WASHINGTON STREET) AND MAIN STREET

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	34
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEQUENCE OF OPERATION

MOVEMENT (N ↖)		2 → 6 ←				4 ↓ 8 ↑				FLASH
PHASE		2 + 6				4 + 8				
INTERVAL		1	2	3A	3B	4	5	6A	6B	
CHANGE TO				4 + 8				2 + 6		
US ROUTE 34 (WASHINGTON STREET) END MAST ARM AND FAR LEFT SIGNALS	E/B	G	G	Y	R	R	R	R	R	R
US ROUTE 34 (WASHINGTON STREET) FAR RIGHT MAST ARM SIGNAL	E/B	G	G	Y	R	R	R	R	R	R
US ROUTE 34 (WASHINGTON STREET) ALL SIGNALS	W/B	G	G	Y	R	R	R	R	R	R
MAIN STREET ALL SIGNALS	N/B	R	R	R	R	G	G	Y	R	R
MAIN STREET ALL SIGNALS	S/B	R	R	R	R	G	G	Y	R	R
PEDESTRIAN SIGNALS CROSSING MAIN STREET ON NORTH SIDE OF US ROUTE 34 (WASHINGTON STREET)		* P	** FH	H	H	H	H	H	H	DAR
PEDESTRIAN SIGNALS CROSSING MAIN STREET ON SOUTH SIDE OF US ROUTE 34 (WASHINGTON STREET)		* P	** FH	H	H	H	H	H	H	
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON EAST SIDE OF MAIN STREET		H	H	H	H	* P	** FH	H	H	
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON WEST SIDE OF MAIN STREET		H	H	H	H	* P	** FH	H	H	

PHASE 2+6 SHALL BE PLACED ON RECALL

* TO APPEAR ONLY UPON PUSHBUTTON ACTUATION

** FLASHING "✋" IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.

P = ILLUMINATED PERSON = WALK
FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
H = ILLUMINATED SOLID HAND = DON'T WALK

RAILROAD PREEMPTION SEQUENCE OF OPERATION

								PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 2				
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1		4											
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER					2		3							
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	2	3	4	5	CLEAR TO NORMAL SEQUENCE	
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	1D	2	1F	2	1H	2	3	4	5			
US ROUTE 34 (WASHINGTON STREET) END MAST ARM AND FAR LEFT SIGNALS E/B	G	G	R	R	G	G	R	R	G ← G	Y	R	R		Δ
US ROUTE 34 (WASHINGTON STREET) FAR RIGHT MAST ARM SIGNAL E/B	G	G	R	R	G	G	R	R	G	Y	R	R		Δ
US ROUTE 34 (WASHINGTON STREET) ALL SIGNALS W/B	Y	R	R	R	Y	R	R	R	R	R	R	R		Δ
MAIN STREET ALL SIGNALS N/B	R	R	Y	R	R	R	Y	R	R	R	R	G		Δ
MAIN STREET ALL SIGNALS S/B	R	R	Y	R	R	R	Y	R	R	R	R	G		Δ
PEDESTRIAN SIGNALS CROSSING MAIN STREET ON NORTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	H	H	H	H	H	H	H	H	H	H	H		Δ
PEDESTRIAN SIGNALS CROSSING MAIN STREET ON SOUTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	H	H	H	H	H	H	H	H	H	H	H		Δ
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON EAST SIDE OF MAIN STREET	H	H	FH	H	H	H	H	H	H	H	H	H		Δ
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON WEST SIDE OF MAIN STREET	H	H	FH	H	H	H	H	H	H	H	H	H		Δ
												HOLD		

Δ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

									PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	1			4			4			
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	2	3	CLEAR TO NORMAL SEQUENCE
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	1D	3	1F	1G	2	3			
US ROUTE 34 (WASHINGTON STREET) END MAST ARM AND FAR LEFT SIGNALS E/B	G	G	Y	R	R	R	R	R	G	R	◊
US ROUTE 34 (WASHINGTON STREET) FAR RIGHT MAST ARM SIGNAL E/B	G	G	Y	R	R	R	R	R	G	R	◊
US ROUTE 34 (WASHINGTON STREET) ALL SIGNALS W/B	G	G	Y	R	R	R	R	R	G	R	◊
MAIN STREET ALL SIGNALS N/B	R	R	R	R	G	Y	R	G	R	G	◊
MAIN STREET ALL SIGNALS S/B	R	R	R	R	G	Y	R	G	R	G	◊
PEDESTRIAN SIGNALS CROSSING MAIN STREET ON NORTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	FH	H	H	H	H	H	H	H	H	◊
PEDESTRIAN SIGNALS CROSSING MAIN STREET ON SOUTH SIDE OF US ROUTE 34 (WASHINGTON STREET)	FH	FH	H	H	H	H	H	H	H	H	◊
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON EAST SIDE OF MAIN STREET	H	H	H	H	FH	H	H	FH	H	H	◊
PEDESTRIAN SIGNALS CROSSING US 34 (WASHINGTON STREET) ON WEST SIDE OF MAIN STREET	H	H	H	H	FH	H	H	FH	H	H	◊

◊ **EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2 OR 3 IS TERMINATED.**

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	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

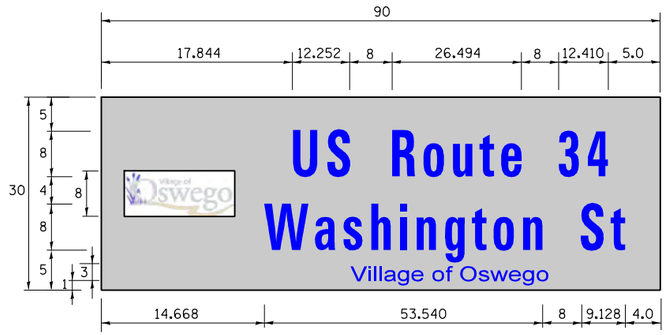
SEQUENCE OF OPERATION, RAILROAD PREEMPTION SEQUENCE OF OPERATION AND EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION US ROUTE 34 (WASHINGTON STREET) AND MAIN STREET

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. TO STA.

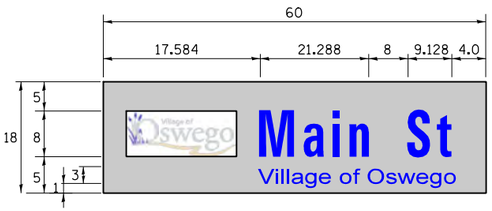
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	35
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LED ILLUMINATED STREET NAME SIGNS

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	18.75	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SHEETING TYPE	QTY. REQUIRED
D	7.50	ZZ	2

SCHEDULE OF QUANTITIES

	ITEM	UNIT	QUANTITY
	CHANGEABLE MESSAGE SIGN	CAL DA	28
	SIGN PANEL - TYPE 1	SQ FT	80.5
	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	694
	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	133
	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	322
	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	2
	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	2
	PAINT NEW TRAFFIC SIGNAL POST	EACH	5
	PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	3
	PAINT NEW COMBINATION MAST ARM AND POLE, 40 FOOT AND OVER	EACH	1
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1030
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1366
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1504
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 9C	FOOT	377
	ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	491
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	312
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	931
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	1
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	0
	CONCRETE FOUNDATION, TYPE A	FOOT	12
	CONCRETE FOUNDATION, TYPE C	FOOT	4
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	20
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	24
	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIME	EACH	8
	TRAFFIC SIGNAL BACKPLATE	EACH	12
	LIGHT DETECTOR	EACH	2
	LIGHT DETECTOR AMPLIFIER	EACH	1
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	3
	REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1
	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	272
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	3
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	7
	OUTDOOR RATED NETWORK CABLE	FOOT	197
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
	SPARE RAILROAD, FULL ACTUATED CONTROLLER , SPECIAL	EACH	1
	REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
	PEDESTRIAN SIGNAL POST, 10 FT.	EACH	2
	ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C TYPE SOOW	FOOT	588
	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)	EACH	0
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. (SPECIAL)	EACH	2
	CONCRETE FOUNDATION, TYPE A 12 INCH DIAMETER	FOOT	1
**	EXPLORATORY EXCAVATION	FOOT	20
	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	1
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	1

**Nominal Quantity to be used as Directed by the Engineer

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		DRAWN - FPB	REVISED -
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES AND
LED ILLUMINATED MAST ARM MOUNTED STREET NAME SIGN
US ROUTE 34 (WASHINGTON STREET) AND MAIN STREET

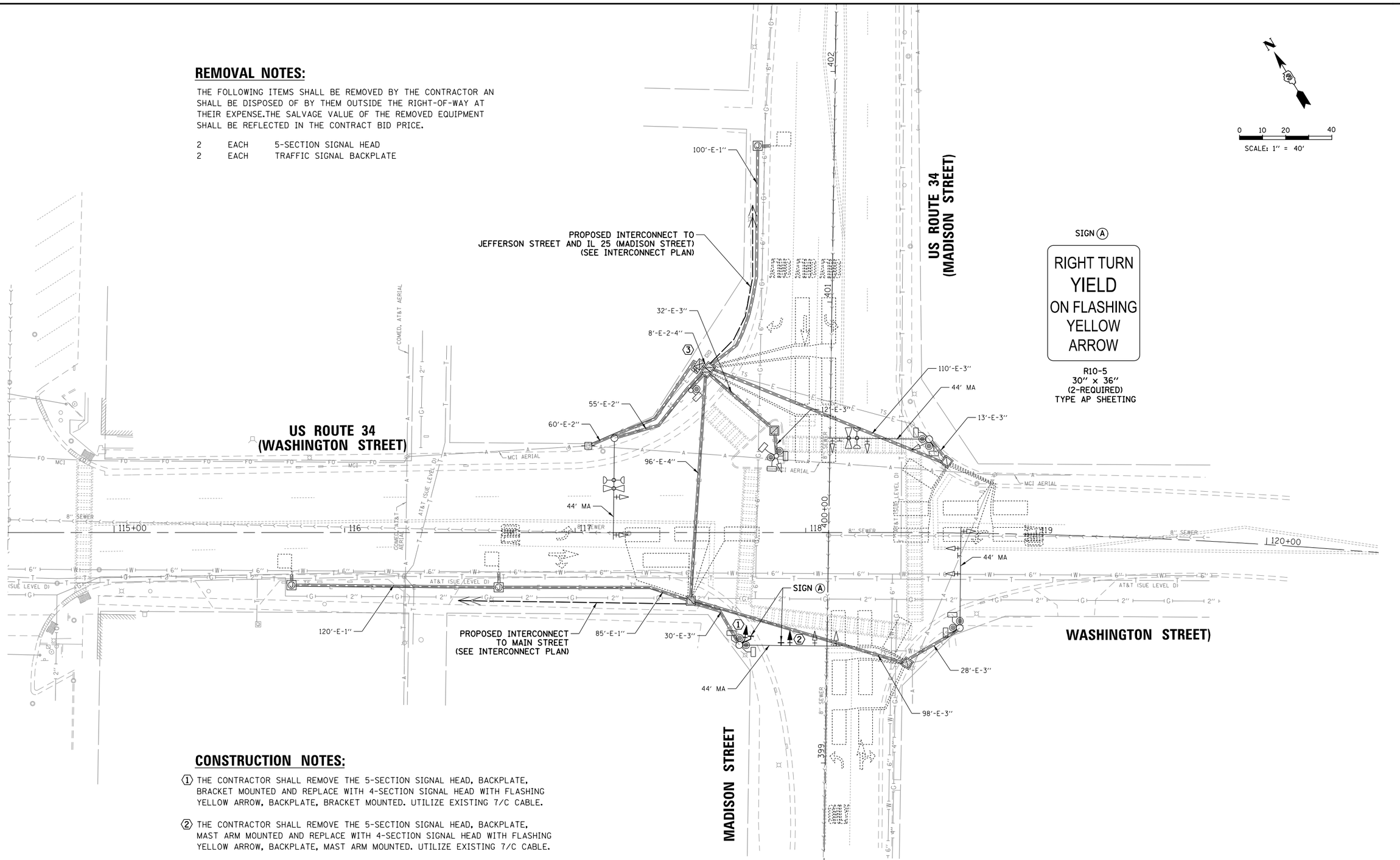
SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	36
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

REMOVAL NOTES:

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AN SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE.THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

2	EACH	5-SECTION SIGNAL HEAD
2	EACH	TRAFFIC SIGNAL BACKPLATE



CONSTRUCTION NOTES:

① THE CONTRACTOR SHALL REMOVE THE 5-SECTION SIGNAL HEAD, BACKPLATE, BRACKET MOUNTED AND REPLACE WITH 4-SECTION SIGNAL HEAD WITH FLASHING YELLOW ARROW, BACKPLATE, BRACKET MOUNTED. UTILIZE EXISTING 7/C CABLE.

② THE CONTRACTOR SHALL REMOVE THE 5-SECTION SIGNAL HEAD, BACKPLATE, MAST ARM MOUNTED AND REPLACE WITH 4-SECTION SIGNAL HEAD WITH FLASHING YELLOW ARROW, BACKPLATE, MAST ARM MOUNTED. UTILIZE EXISTING 7/C CABLE.

③ THE CONTRACTOR SHALL MODIFY THE EXISTING TRAFFIC SIGNAL CONTROLLER CABINET AND TRAFFIC SIGNAL CONTROLLER FOR FLASHING YELLOW ARROW OPERATION.

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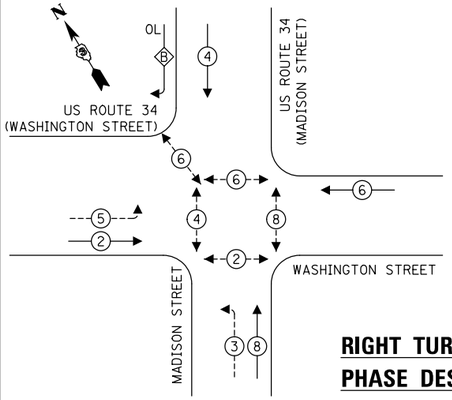
PLAN — SURVEYED — PLOTTED — ALIGNMENT CHECKED — GRADES CHECKED — R.O.W. MONUMENTED — NOTE BOOK — NO. — CADD FILE NAME: N:\OSWEGO\200405\Traffic\MADISON_TS_01_MOD.dgn — BY — DATE

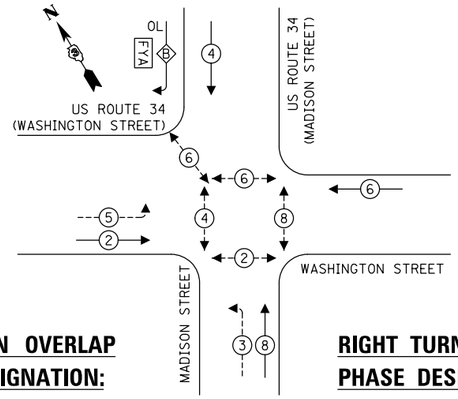
PROFILE — SURVEYED — PLOTTED — GRADES CHECKED — R.O.W. MONUMENTED — NOTE BOOK — NO. — STRUCTURE NO(TA'NS CH'KD — BY — DATE

FILE NAME = N:\OSWEGO\200405\Traffic\MADISON_TS_01_MOD.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODIFICATION PLAN US ROUTE 34 (WASHINGTON STREET) AND MADISON STREET	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40'	DRAWN - FPB	REVISED -					KENDALL	47	37
	PLOT DATE = 2/2/2022	CHECKED - GMZ	REVISED -					CONTRACT NO.		
		DATE -	REVISED -		SCALE: 1" = 40' SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE



PROPOSED CONTROLLER SEQUENCE



LEGEND:

PROTECTED PHASE

PROTECTED/PERMITTED PHASE

PEDESTRIAN PHASE

OL OVERLAP

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL REMOVE THE 5-SECTION SIGNAL HEAD, BACKPLATE, BRACKET MOUNTED AND REPLACE WITH 4-SECTION SIGNAL HEAD WITH FLASHING YELLOW ARROW, BACKPLATE, BRACKET MOUNTED. UTILIZE EXISTING 7/C CABLE.
2. THE CONTRACTOR SHALL REMOVE THE 5-SECTION SIGNAL HEAD, BACKPLATE, MAST ARM MOUNTED AND REPLACE WITH 4-SECTION SIGNAL HEAD WITH FLASHING YELLOW ARROW, BACKPLATE, MAST ARM MOUNTED. UTILIZE EXISTING 7/C CABLE.
3. THE CONTRACTOR SHALL MODIFY THE EXISTING TRAFFIC SIGNAL CONTROLLER CABINET AND TRAFFIC SIGNAL CONTROLLER FOR FLASHING YELLOW ARROW OPERATION.

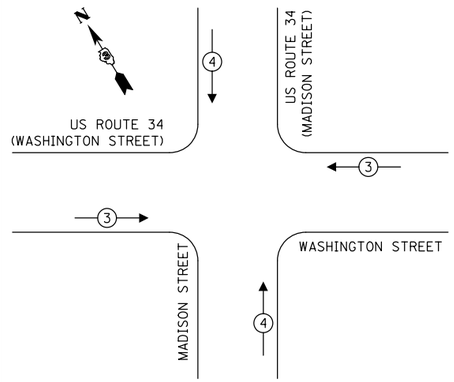
RIGHT TURN OVERLAP PHASE DESIGNATION:

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
B	=	4	+	5

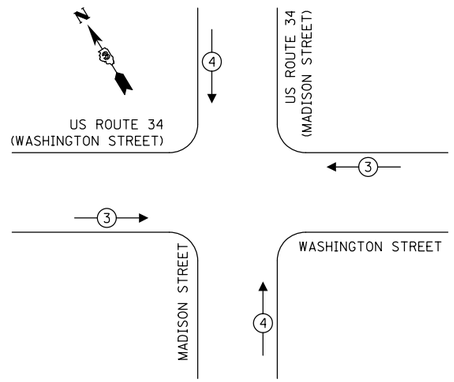
RIGHT TURN OVERLAP PHASE DESIGNATION:

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
B	=	4	+	5

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



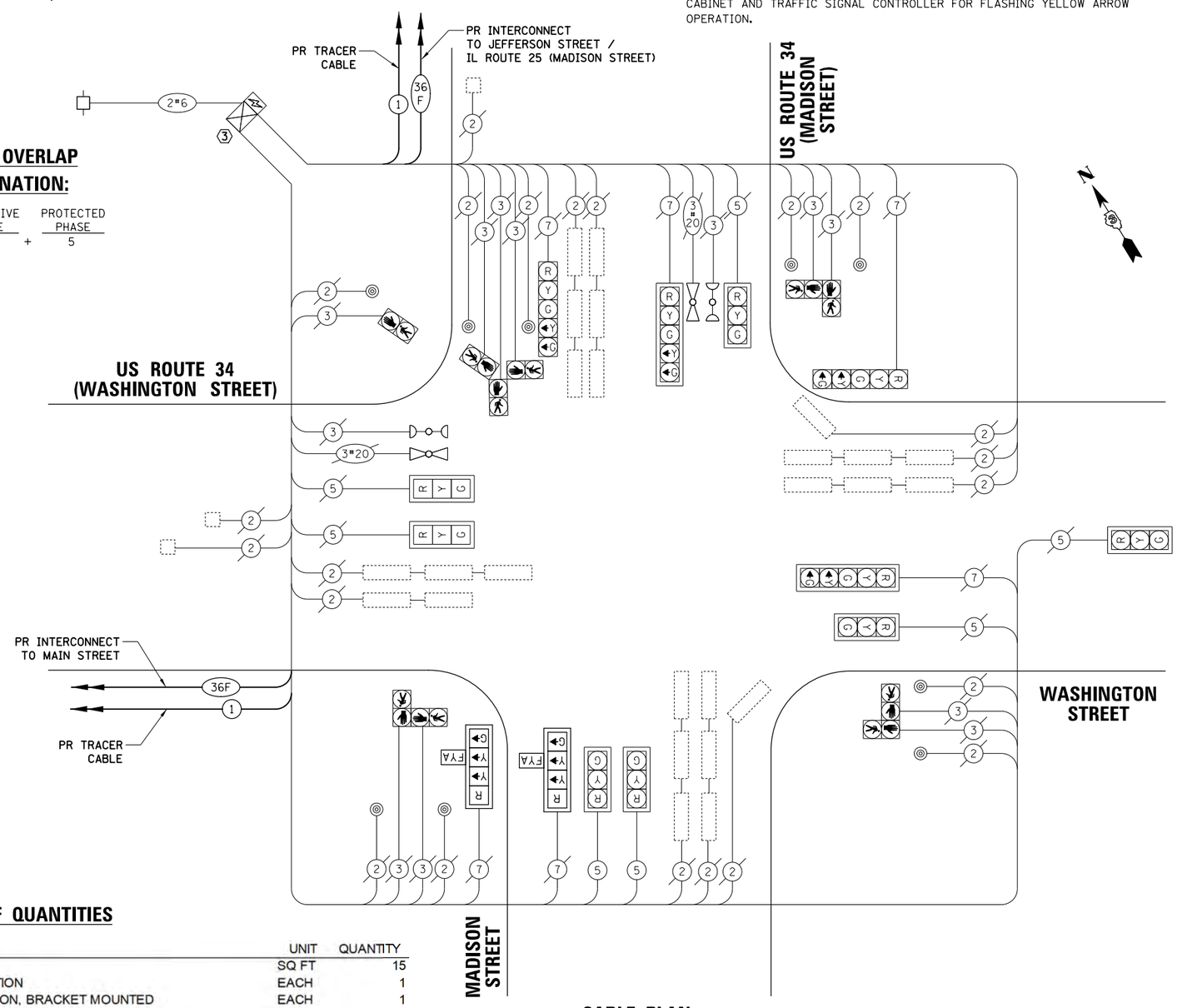
TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	11	20	5	11.0
(GREEN)	11	12	45	59.4
SOLID ARROW (RED)	2	10	50	10.0
(GREEN &YELLOW)	10	10	10	10.0
FLASHING ARROW	2	10	5	1.0
PED. SIGNAL	10	20	100	200.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	190	50	-
			TOTAL =	477.9

ENERGY COSTS TO:

VILLAGE OF OSWEGO
100 PARKERS MILL
OSWEGO, ILLINOIS 60543

ENERGY SUPPLY: CONTACT: KELI GONZALES
PHONE: (630) 360-0146
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: 5171089003



CABLE PLAN

(NOT TO SCALE)

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	15
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, SPECIAL	EACH	2
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
MODIFY EXISTING CONTROLLER AND CABINET	EACH	1

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Rosemont, Illinois 60018
(847) 823-0500

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, BLM MARKED, CADD FILE NAME N:\OSWEGO\200405\Traffic\MADISON_TS_02.CAB.dgn; NOTE BOOK, NO.; DATE, BY

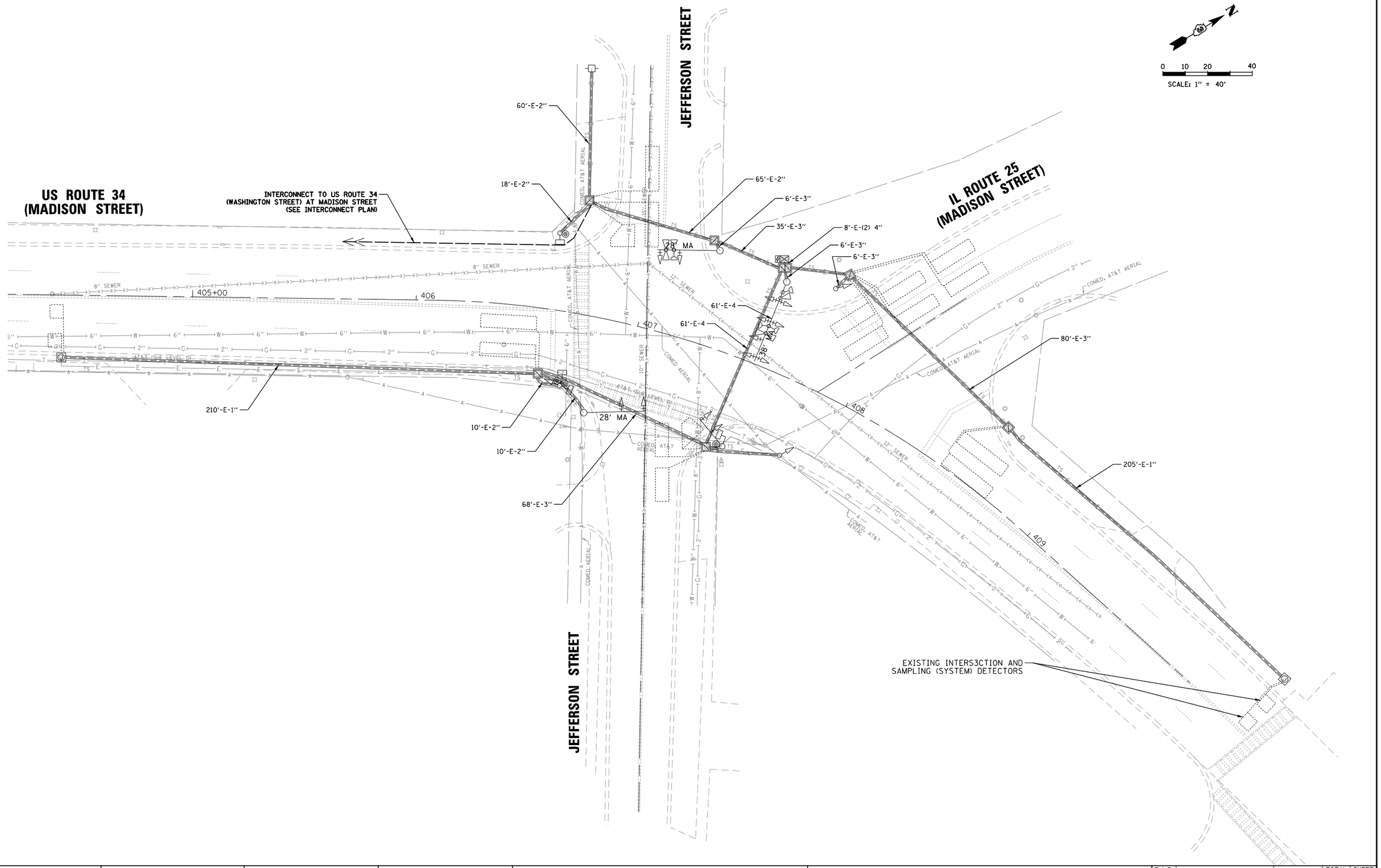
PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, BLM MARKED, STRUCTURE NO(S); DATE, BY, NOTATNS, CHKD

FILE NAME = N:\OSWEGO\200405\Traffic\MADISON_TS_02	USER NAME = fbariso	DESIGNED - TFS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CAB.dgn	DRAWN - FPB	REVISED -	
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -	
	PLOT DATE = 2/2/2022	DATE -	REVISED -	

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US ROUTE 34 (WASHINGTON STREET) AND MADISON STREET

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	38
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PROFILE

SURVEYED		BY	DATE
PLOTTED			
GRADES CHECKED			
ALIGNMENT CHECKED			
NOTE BOOK			
NO.			
STRUCTURE NOTATNS CHKD			

PLAN

SURVEYED		BY	DATE
PLOTTED			
ALIGNMENT CHECKED			
ALL NOTES CHECKED			
CADD FILE NAME	N:\OSWEGO\200405\Traffic\JEFFERSON_TS_01_MOD.dgn		
NOTE BOOK			
NO.			

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(847) 823-0500

FILE NAME = N:\OSWEGO\200405\Traffic\JEFFERSON_TS 01_MOD.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

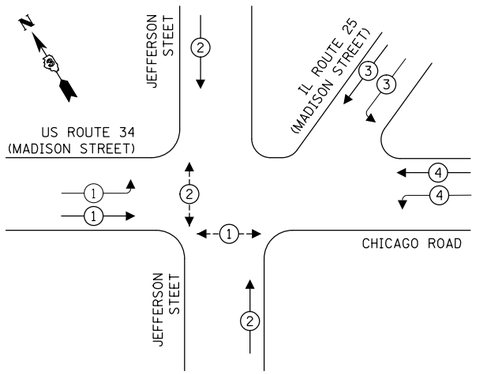
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
US ROUTE 34 (MADISON STREET) AT JEFFERSON STREET
AND IL ROUTE 25 (MADISON STREET)

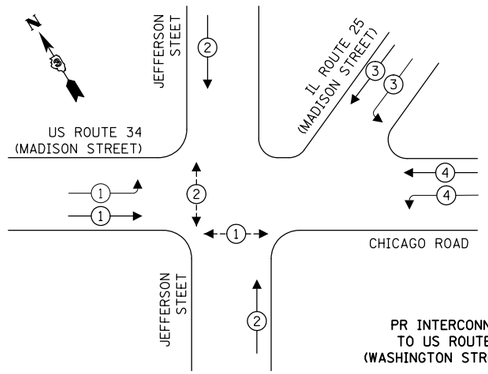
SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	39
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

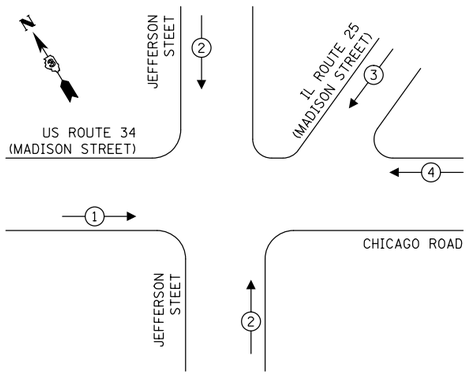
EXISTING CONTROLLER SEQUENCE



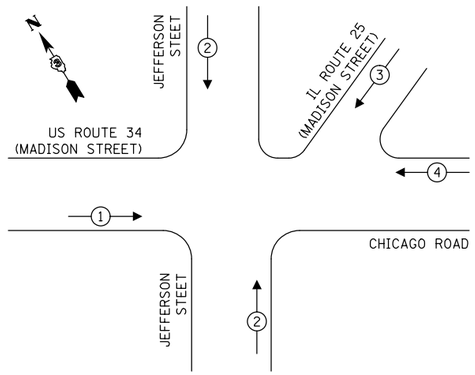
PROPOSED CONTROLLER SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

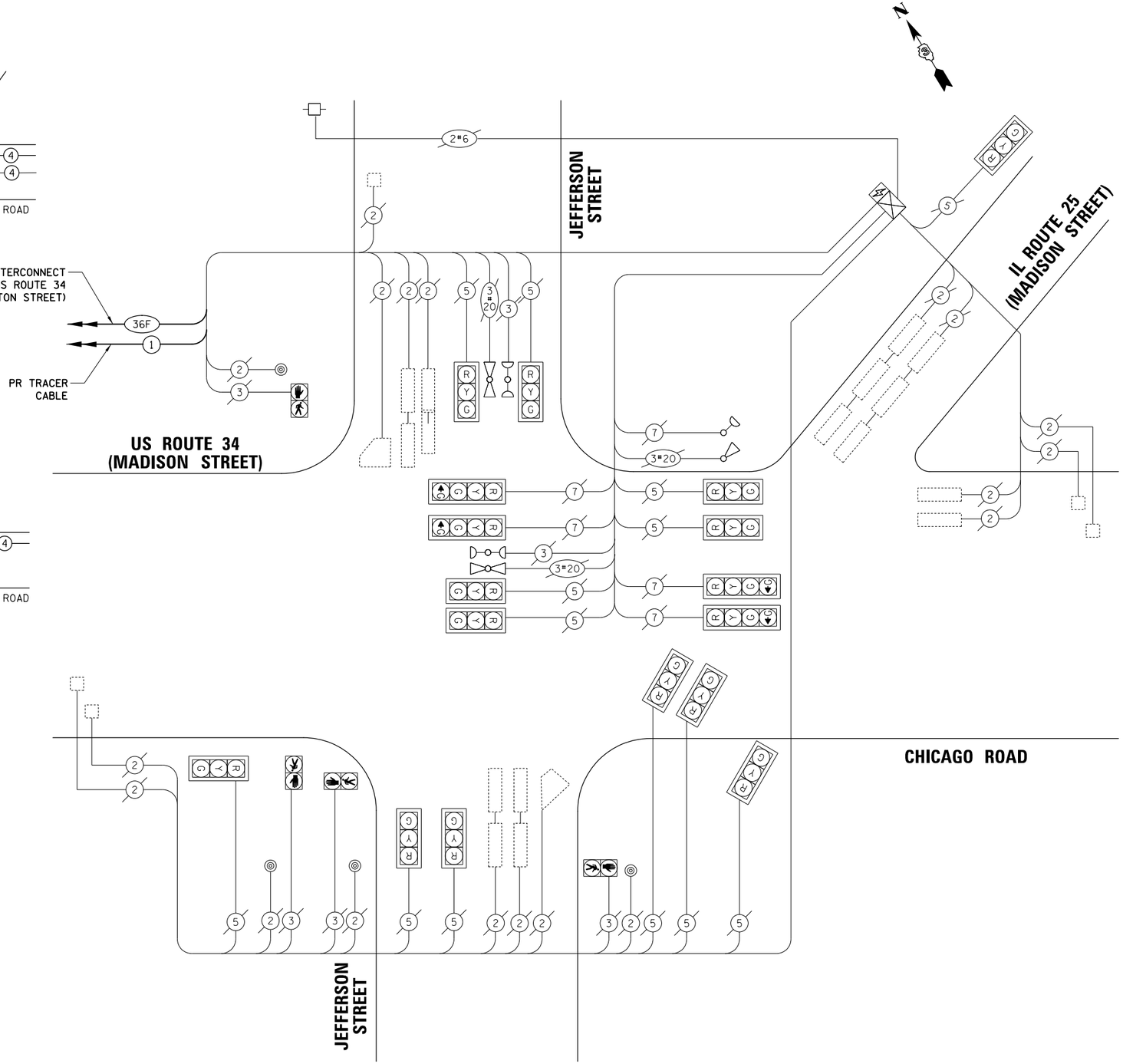


TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	11	20	5	11.0
(GREEN)	11	12	45	59.4
SOLID ARROW (RED)	2	10	50	10.0
(GREEN &YELLOW)	10	10	10	10.0
FLASHING ARROW	2	10	5	1.0
PED. SIGNAL	10	20	100	200.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	190	50	-
			TOTAL =	477.9

ENERGY COSTS TO:
VILLAGE OF OSWEGO
100 PARKERS MILL
OSWEGO, ILLINOIS 60543

ENERGY SUPPLY: CONTACT: KELI GONZALES
PHONE: (630) 360-0146
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: 5171089003



CABLE PLAN
(NOT TO SCALE)

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Rosemont, Illinois 60018
(847) 823-0500

PLAN — SURVEYED — PLOTTED — ALIGNMENT CHECKED — PLOT SCALE WAS ACCEPTED — CADD FILE NAME N:\OSWEGO\200405\Traffic\JEFFERSON_TS_02_CAB.dgn — NOTE BOOK — NO. — BY — DATE

PROFILE — SURVEYED — PLOTTED — GRADES CHECKED — BLACK WAS ADDED — STRUCTURE NOTATNS CHKD — NOTE BOOK — NO. — BY — DATE

FILE NAME = N:\OSWEGO\200405\Traffic\JEFFERSON_TS_02_CAB.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
	02_CAB.dgn	DRAWN - FPB	REVISED -
	PLOT SCALE = 40'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US ROUTE 34 (MADISON STREET)/CHICAGO ROAD AT JEFFERSON STREET AND IL ROUTE 25 (MADISON STREET)

SCALE: 1" = 40' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	40
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTE:

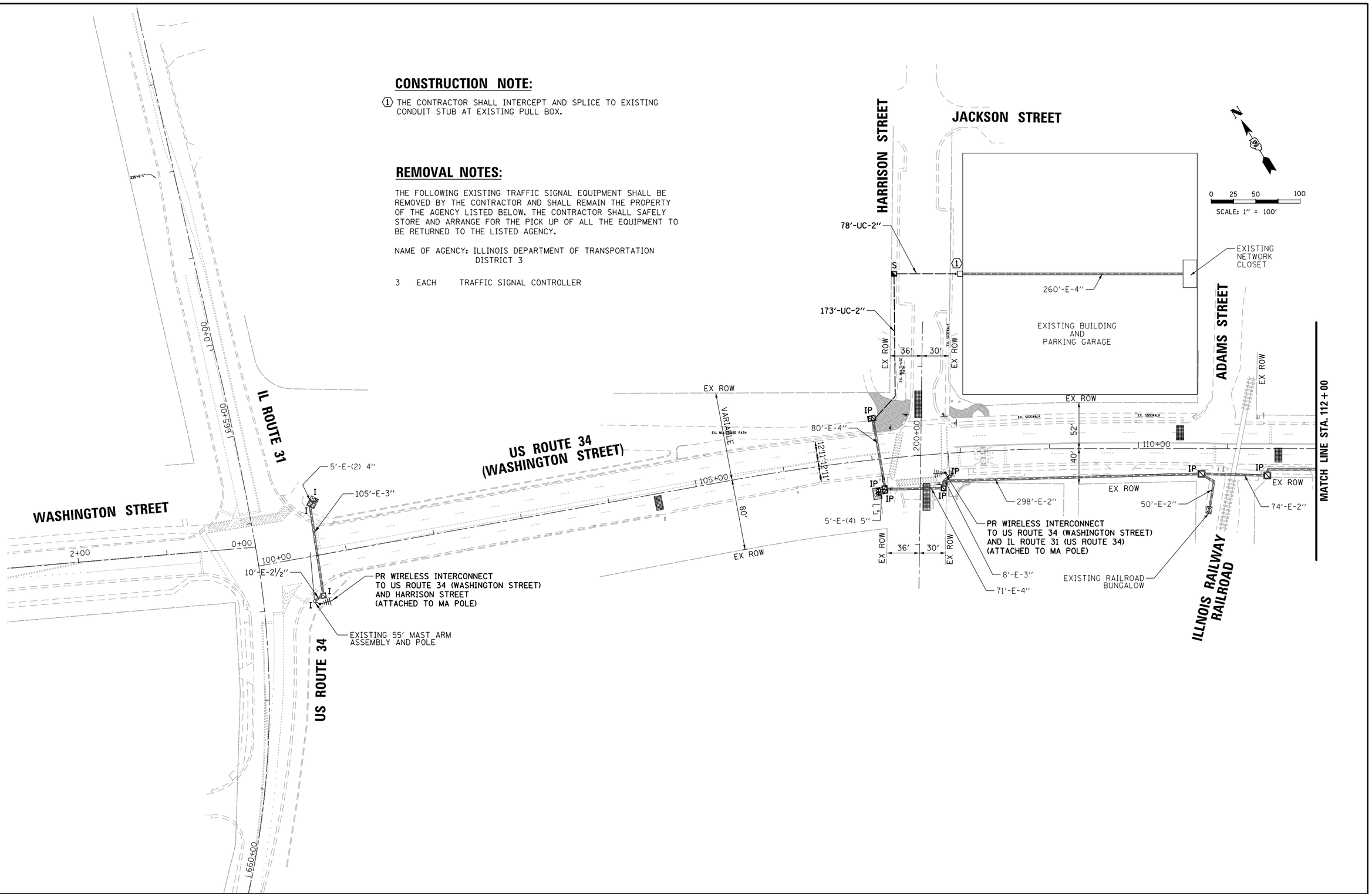
(1) THE CONTRACTOR SHALL INTERCEPT AND SPLICE TO EXISTING CONDUIT STUB AT EXISTING PULL BOX.

REMOVAL NOTES:

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR THE PICK UP OF ALL THE EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY.

NAME OF AGENCY: ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 3

3 EACH TRAFFIC SIGNAL CONTROLLER



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Rosemont, Illinois 60018
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PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / ALL DIM. CHECKED / CADD FILE NAME: N:\OSWEGO\200405\Traffic\INT_US34-Madison_01.dgn
NOTE BOOK ____ NO. ____
BY ____ DATE ____

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / BEAM ORD'S / STRUCTURE NOTATIONS CHK'D
NOTE BOOK ____ NO. ____
BY ____ DATE ____

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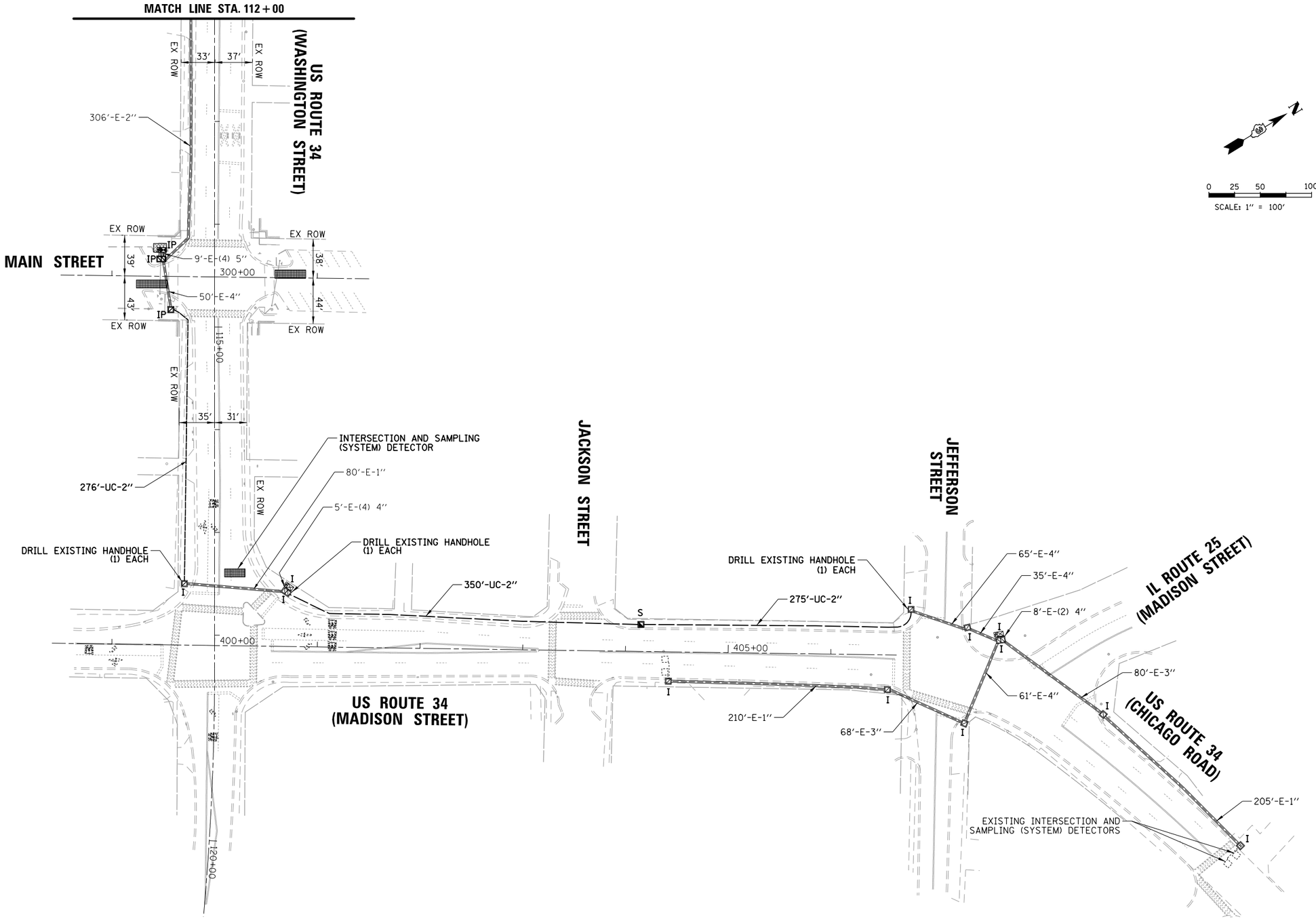
		DRAWN - FPB	REVISED -
	PLOT SCALE = 100'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN – SHEET 1 OF 2
US 34 (WASHINGTON STREET) FROM IL 31 TO MADISON STREET AND JEFFERSON STREET / IL 25 (MADISON STREET)

SCALE: 1" = 100' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	41
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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Rosemont, Illinois 60018
(847) 823-0500

PLAN
NOTE BOOK
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SURVEYED
PLOTTED
ALIGNMENT CHECKED
ALL DIM. VERIFIED
CADD FILE NAME N:\OSWEGO\200405\Traffic\INT_US34-Madison_02.dgn
BY DATE

PROFILE
NOTE BOOK
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SURVEYED
PLOTTED
GRADES CHECKED
ALL DIM. VERIFIED
STRUCTURE NO(S)/NS CHKD
BY DATE

FILE NAME = N:\OSWEGO\200405\Traffic\INT_US34-Madison_02.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED -
		DRAWN - FPB	REVISED -
	PLOT SCALE = 100′	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN – SHEET 2 OF 2
US 34 (WASHINGTON STREET) FROM IL 31 TO MADISON STREET AND JEFFERSON STREET / IL 25 (MADISON STREET)
SCALE: 1″ = 100′ | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	42
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTES:

(1) THE EXISTING TRAFFIC SIGNAL CONTROLLER AT THE FOLLOWING LOCATIONS SHALL BE REPLACED WITH NEW TRAFFIC SIGNAL CONTROLLERS.

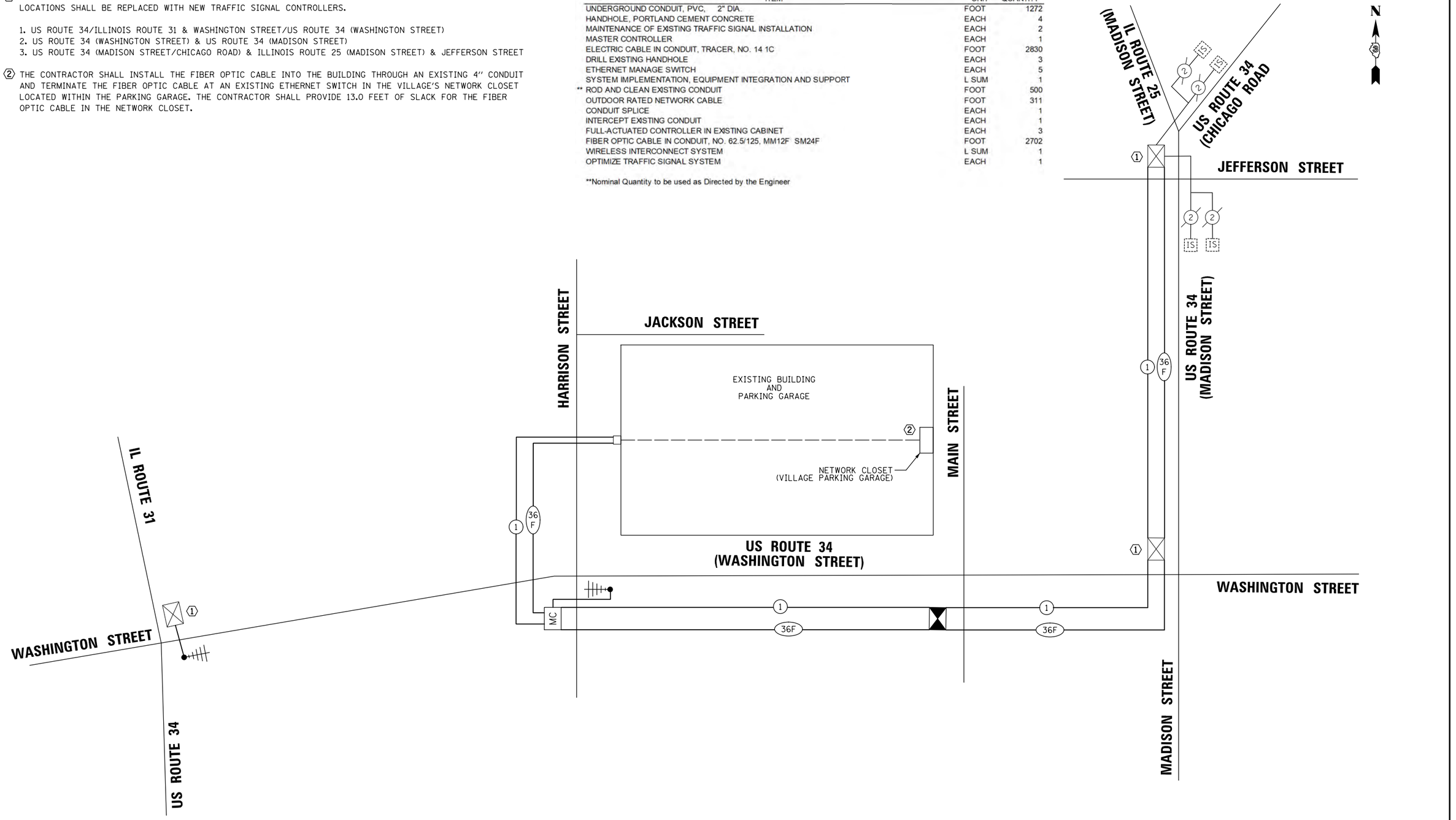
1. US ROUTE 34/ILLINOIS ROUTE 31 & WASHINGTON STREET/US ROUTE 34 (WASHINGTON STREET)
2. US ROUTE 34 (WASHINGTON STREET) & US ROUTE 34 (MADISON STREET)
3. US ROUTE 34 (MADISON STREET/CHICAGO ROAD) & ILLINOIS ROUTE 25 (MADISON STREET) & JEFFERSON STREET

(2) THE CONTRACTOR SHALL INSTALL THE FIBER OPTIC CABLE INTO THE BUILDING THROUGH AN EXISTING 4" CONDUIT AND TERMINATE THE FIBER OPTIC CABLE AT AN EXISTING ETHERNET SWITCH IN THE VILLAGE'S NETWORK CLOSET LOCATED WITHIN THE PARKING GARAGE. THE CONTRACTOR SHALL PROVIDE 13.0 FEET OF SLACK FOR THE FIBER OPTIC CABLE IN THE NETWORK CLOSET.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	1272
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	4
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
MASTER CONTROLLER	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2830
DRILL EXISTING HANDHOLE	EACH	3
ETHERNET MANAGE SWITCH	EACH	5
SYSTEM IMPLEMENTATION, EQUIPMENT INTEGRATION AND SUPPORT	L SUM	1
** ROD AND CLEAN EXISTING CONDUIT	FOOT	500
OUTDOOR RATED NETWORK CABLE	FOOT	311
CONDUIT SPLICE	EACH	1
INTERCEPT EXISTING CONDUIT	EACH	1
FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	3
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	2702
WIRELESS INTERCONNECT SYSTEM	L SUM	1
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

**Nominal Quantity to be used as Directed by the Engineer



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PLAN — NOTE BOOK — NO. — SURVEYED — PLOTTED — ALIGNMENT CHECKED — BLA VERIFIED — CADD FILE NAME N:\OSWEGO\200405\Traffic\INT_SCH_US34.dgn — BY — DATE

PROFILE — NOTE BOOK — NO. — SURVEYED — PLOTTED — GRADES CHECKED — BLA VERIFIED — STRUCTURE NO(S).FNS CHKD — BY — DATE

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		DRAWN - FPB	REVISED -
	PLOT SCALE = 100'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC DIAGRAM
US 34 (WASHINGTON STREET) FROM IL 31 TO MADISON STREET AND JEFFERSON STREET / IL 25 (MADISON STREET)

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	43
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

MEDIA CONVERTER
(FIBER OPTIC TO CAT 5)

NETWORK CLOSET

CAT 5

LAYER 2 SWITCH

VILLAGE OF OSWEGO
PARKING GARAGE

GIGABYTE
FIBER

650'

RADIO
ANTENNA

RADIO
ANTENNA

CAT 5

CAT 5

GIGABYTE
FIBER

GIGABYTE
FIBER

GIGABYTE
FIBER

US ROUTE 34 / IL ROUTE 31
US ROUTE 34 (WASHINGTON STREET)

LAYER 2 SWITCH

CAT 5

SIGNAL
CONTROLLER

US ROUTE 34 (WASHINGTON STREET)
/ HARRISON STREET

LAYER 2 SWITCH

CAT 5

CAT 5 CAT 5 CAT 5

MASTER
CONTROLLER

SIGNAL
CONTROLLER

VIDEO DET.
CONTROLLER

V

PTZ

VIDEO DET.
CAMERA

VIDEO DET.
CAMERA

VIDEO DET.
CAMERA

VIDEO DET.
CAMERA

US ROUTE 34 (WASHINGTON STREET)
/ MAIN STREET

LAYER 2 SWITCH

CAT 5 CAT 5 CAT 5

VIDEO DET.
CONTROLLER

V

SIGNAL
CONTROLLER

PTZ

VIDEO DET.
CAMERA

VIDEO DET.
CAMERA

VIDEO DET.
CAMERA

VIDEO DET.
CAMERA

US ROUTE 34 (WASHINGTON STREET / WASHINGTON STREET
/ US ROUTE 34 (MADISON STREET) / MADISON STREET

LAYER 2 SWITCH

CAT 5

SIGNAL
CONTROLLER

US ROUTE 34 (MADISON STREET / CHICAGO ROAD)
/ IL ROUTE 25 / JEFFERSON STREET

LAYER 2 SWITCH

CAT 5

SIGNAL
CONTROLLER

PLAN
NOTE BOOK
NO. ____
SURVEYED
PLOTTED
ALIGNMENT CHECKED
ALL DIM. VERIFIED
CADD FILE NAME N:\OSWEGO\200405\Traffic\SCH-Ethernet.dgn
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PROFILE
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Rosemont, Illinois 60018
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FILE NAME = N:\OSWEGO\200405\Traffic\SCH-Ethernet.dgn	USER NAME = fbariso	DESIGNED - TFS	REVISED - ___
		DRAWN - FPB	REVISED - ___
	PLOT SCALE = 2'	CHECKED - GMZ	REVISED - ___
	PLOT DATE = 2/2/2022	DATE - _____	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ETHERNET COMMUNICATIONS SCHEMATIC

SCALE: 1'' = 2' | SHEET NO. __ OF ___ SHEETS | STA. _____ TO STA. _____

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	44
		CONTRACT NO.		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 591	650 BR	KENDALL	107	57
FED. RD. DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

B.M. #9: P.K. Nail in S.W. Side of light pole at N.E. Corner of Ill. Rte. 31 & U.S. Rte 34 Intersection. 34' Lt. Sta. 100+56.00, Elev. 618.78.

Existing Structure: Sta. 102+70.00 F.A.P. Rte. 29, Sec. 650 BR, Built in 1937, Structure 047-0025
Structure: 3 Continuous Deck Plate Girder Spans 95'-8 13/16" c/c Bearings.
Substructure: Masonry Piers, Closed Concrete And Masonry Abutments.
Existing Structure To Remain In Place And Be Utilized As A Pedestrian Bridge.

FOR INFORMATION ONLY

DESIGN LOADING HS20-44

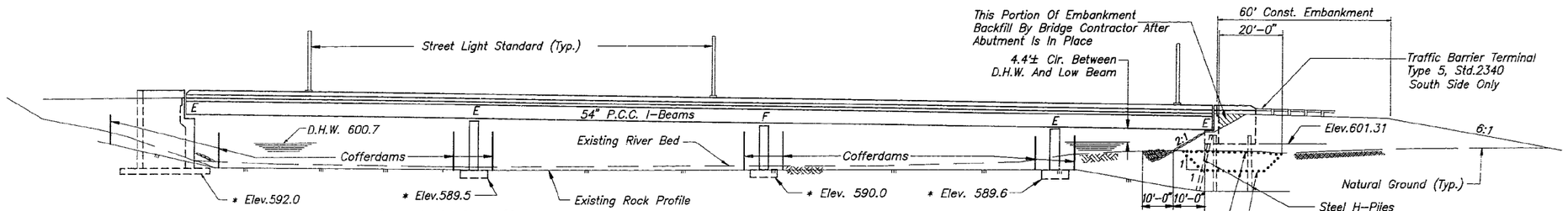
ALLOW 25#/SQ.FT. For Future Wearing Surface

DESIGN SPECIFICATIONS

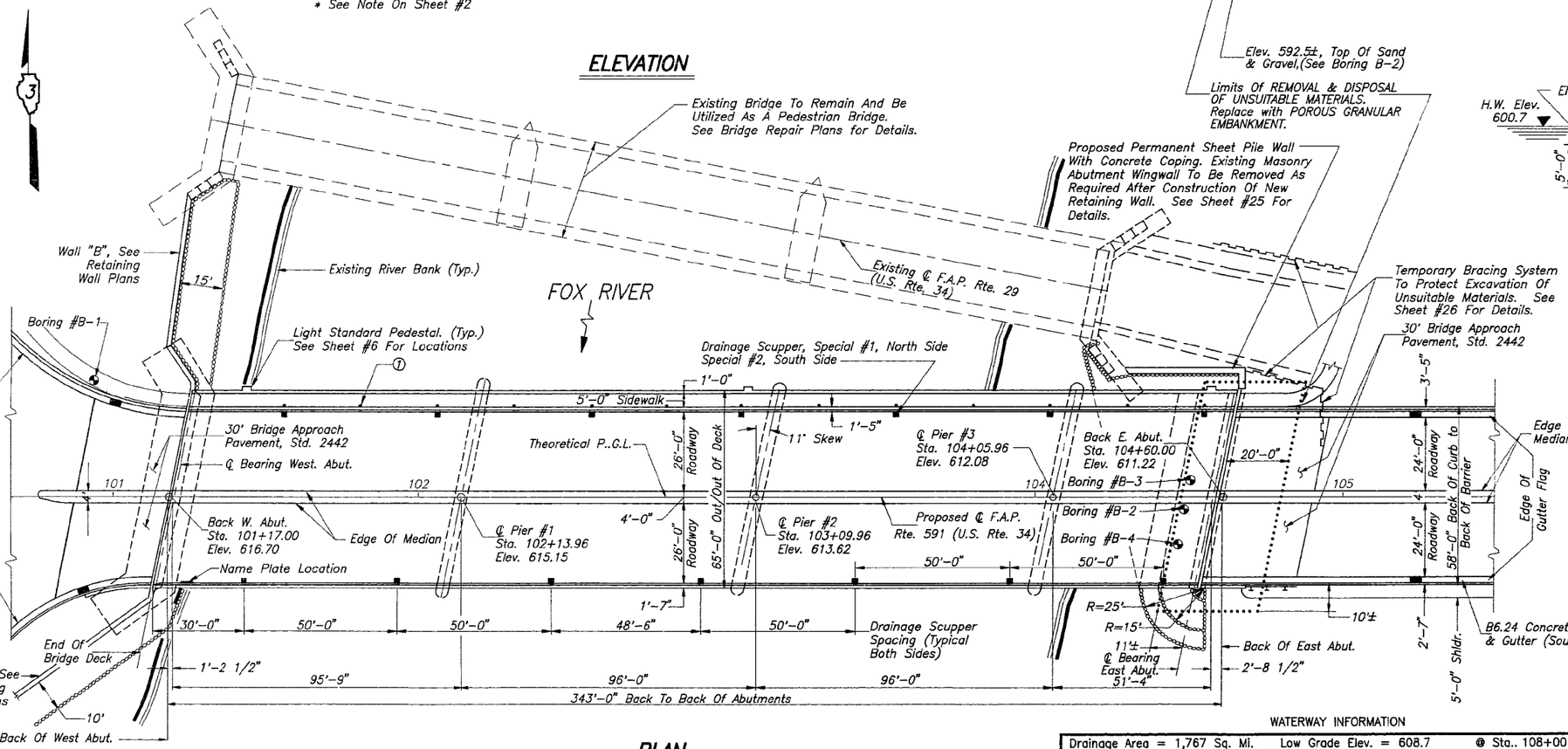
1989 AASHTO Specifications with 1990-1991 Interim Specifications
AASHTO Seismic Acceleration Coefficient = .05

DESIGN STRESSES

FIELD UNITS	PRECAST UNITS
f'c = 3,500 psi	f'c = 6,000 psi
fy = 60,000 psi (Reinf.)	f'ci = 4,900 psi
fy = 36,000 psi (M270 GR.36)	f's = 270,000 psi (1/2"ø)
	f'si = 202,000 psi (1/2"ø)



ELEVATION

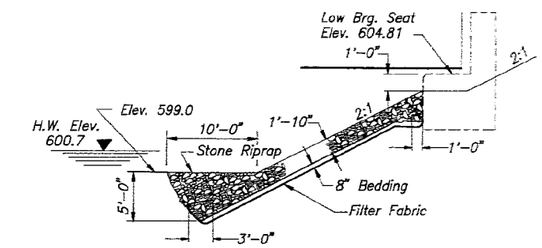


PLAN

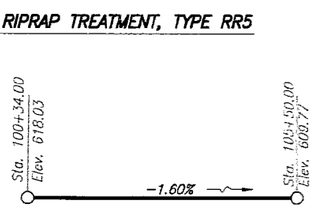
① 13 Sidewalk Floor Drains
Place Sidewalk Drains At All Scupper Locations And At 1/2 Spacing Between Scuppers.
See Sheets #7 & #8 For Details.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY.
Engineer of Bridges and Structures
9-8-92

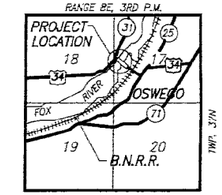
Exp 11-30-92
DONALD L. LUEBKE
061-002931
LICENSED STRUCTURAL ENGINEER
ILLINOIS



STONE RIPRAP TREATMENT, TYPE RR5



PROFILE GRADE
F.A. Rte. 591
@ Edge Of Median



LOCATION MAP

WATERWAY INFORMATION

Drainage Area = 1,767 Sq. Mi. Low Grade Elev. = 608.7 @ Sta.. 108+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design	50	14,345	2090	2310	600.7	0.5	0.3	601.2	601.0
Base	100	16190	2210	2460	601.2	0.6	0.4	601.8	601.6
Overtopping	–	–	–	–	–	–	–	–	–
Max. Calc.	500	21320	2485	2775	602.2	1.0	0.6	603.2	602.8

PREPARED BY
MISSMAN, STANLEY & ASSOCIATES, P.C.
CIVIL ENGINEERS • SURVEYORS
ROCK ISLAND, ILLINOIS

GENERAL PLAN

U.S. ROUTE 34 OVER FOX RIVER
F.A. RTE. 591 SECTION 650BR
KENDALL COUNTY
STA. 102+88.50
STRUCTURE NUMBER 047-0050

CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

PLAN — NOTE BOOK — NO. — SURVEYED — PLOTTED — GRADES CHECKED — ALIGNMENT CHECKED — R.O.W. MONUMENTED — CADD FILE NAME: N:\OSWEGO\200405\Traffic\SOIL BORING LOGS.dgn

PROFILE — NOTE BOOK — NO. — SURVEYED — PLOTTED — GRADES CHECKED — ALIGNMENT CHECKED — STRUCTURE NO.&TYPE'NS CHK'D

BY	DATE

FILE NAME =	USER NAME = fbarriso	DESIGNED - TFS	REVISED -
N:\OSWEGO\200405\Traffic\SOIL BORING LOGS.dgn		DRAWN - FPB	REVISED -
	PLOT SCALE = 2'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
(SHEET 1 OF 3)

SCALE: 1" = 2' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	45
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

PROFILE | SURVEYED | PLOTTED | GRADES CHECKED | BALANCED | STRUCTURE NOTATNS CHKD | NOTE BOOK | NO. | BY | DATE

PLAN | SURVEYED | PLOTTED | ALIGNMENT CHECKED | PLAN APPROVED | CADD FILE NAME N:\OSWEGO\200405\Traffic\SOIL BORING LOG2.dgn | NOTE BOOK | NO. | BY | DATE

USGS DATUM
5th GA. 1929

PAVEMENT REMOVAL
HANDICAPPED RAMPS
STONE RIPRAP

FREDERICK L. & MADELINE CAIN
ALEXANDER LUMBER CO.
S.W. 1/4 SEC. 17
T.37N., R.8E., 3RD P.M.
LUMBER YARD
GRAVEL
ROBERT J. & CAROL PROSEK
WILLIAM K. MILLER
REAL ESTATE
AUTO SPORT USED CARS
HAROLD T. JOHNSON SR. AND JUNE L. JOHNSON
DAN AND CHARLOTTE SCHRAMER
R.J. KUHN PLUMBING

HARRISON ST. (BIT.)
ADAMS ST.
U.S. 34 (WASHINGTON ST.)
EXIST. 4' CONC. S.W.
EXIST. ROW
PROPOSED ROW
CONSTRUCTION LIMITS
PROPOSED ℄ U.S. 34 (RELOC.)
TEMPORARY CONST. EASEMENT
BUILDING REMOVAL NO. 2 W/ASBESTOS

CURVE NO.7
P.I. STA. 107+67.90
Δ = 11°00'00"
D = 2°30'00"
R = 2291.83'
T = 220.68'
L = 440.00'
SUPER – REMOVE CROWN
TRANS. 104+67.22 – 105+87.22
109+40.55 – 110+81.91

CURVE NO. 8
CURVE NO. 9
P.I. 107+67.90
P.T. 109+87.22(BK) = 109+88.58(AHD)
STA. 107+66.97 (US 34)= STA. 5+39.35 (HARRISON ST.)
STA. 111+05.95(U.S. 34) STA. 30+00 (ADAMS ST.)
STA. 111+44.80 (U.S. 34) STA. 28+50 (ADAMS ST.)
END CONST. 6+15.61
END CONST. 4+62.17
END CONSTRUCTION 30+72.0
END SECTION 650 BR, R STA. 111+22.25

CONCRETE BARRIER, SINGLE FACE (SPECIAL) LT. STA. 104+67.50–107+29.50 (SEE MISC. DETAILS)
CLASS X CONCRETE (OUTLET) (STD. 2212)
CURB & GUTTER REMOVAL
SIDEWALK REMOVAL
B–6.24 CURB & GUTTER (TYP.)
REMOVE BIT. MAT'L.
P.C.C. SIDEWALK 5"
P.C.C. PAVEMENT ADJACENT TO RAILROAD CROSSING STD. 1636
REMOVE SIDEWALK REM.
STONE RIP RAP REMOVE
NOTE :
REMOVE EX. BIT. MATERIAL AND REPLACE WITH INCIDENTAL BITUMINOUS SURFACING, 2" FROM CONSTRUCTION LIMITS TO PROPOSED BACK OF CURB.

BM	ELEV.	DESCRIPTION
1	609.28	PK IN NORTH SIDE OF P.P., NW CORNER OF WASHINGTON ST. & HARRISON ST.

P.O.T. 107+68.09 P.K. NAIL & WASHER
P.I. 111+05.95 = 30+00 P.K. NAIL & WASHER

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 591	650 BR, R	KENDALL	107	19
FED. RD. DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

P.I. 108+20
EL. 606.75
V.C. = 300'
X = 1.51'

P.I. 110+70
EL. 613.97
V.C. = 100'
X = 0.36'

PROPOSED CENTERLINE GRADE
EXISTING GROUND ELEV. ALONG CENTERLINE
P.C. 106+70
P.T. 109+70
P.C. 110+20
P.T. 111+20
-1.12%
+2.90%
0.00%
104+60.00
111+22.25
SEE SCHEDULE SHEET FOR EARTHWORK QUANTITIES

	106	+25	+50	+75	107	+25	+50	+75	108	+25	+50	+75	109	+25	+50	+70	110	+20	+50	+70	111	+45	112
	601.5	608.93	609.53	608.38	608.88	608.02	608.72	607.99	608.64	608.31	608.73	608.95	609.02	609.93	609.53	609.53	610.34	612.52	611.73	613.61	613.43	613.97	617.00
	609.21		608.65		608.15		607.96		608.11		608.59		609.40		610.55	611.11	611.94		613.26		613.91	613.78	

PLAN & PROFILE STA. 106+00 TO 112+00

FILE NAME =	USER NAME = fbariso	DESIGNED - TFS	REVISED -
N:\OSWEGO\200405\Traffic\SOIL BORING LOG2.dgn	DRAWN - FPB	REVISED -	
	PLOT SCALE = 2'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (SHEET 2 OF 3)

SCALE: 1" = 2' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	46
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION
BRIDGE FOUNDATION BORING LOG

Project _____ Bridge US Route 34 over Fox River Date 04/07/89
Route FA 29 Bored By K. Whittington
Sec 650BR STA. 102+70 Checked By W. Beck
County Kendall Boring No. 1 (W. Abut.) Station 100+90 Offset 40' Lt.

Surface Water El. _____ Groundwater El. at Completion CORED After _____ Hours _____

	EL	N	Qu	W%
Ground Surface 616.3	0			
FILL - (MIXTURE BL., BR. SIL, SICL, SAL, GRAVEL)		3	-	16
	-5	9	-	8
		16	-	5
	-10	12	-	6
604.3 WEATHERED GR. SHALE 603.8		100/9"	-	11
BROKEN SHALEY LIMESTONE 602.8				
GR. SHALE 601.8				
CORE #1 MAQUOKETA GROUP LIMEY SHALE (65% RECOVERY) 596.8	-15			
	-20			

	EL
	-25
588.8	
CORE #2 MAQUOKETA GROUP LIMEY SHALE (100% RECOVERY)	-30
583.8	
CORE #3 MAQUOKETA GROUP LIMEY SHALE WITH 1.5" LIMESTONE STRINGER @ 582.8 (100% RECOVERY)	-35
578.8	
	-40
	-45

Type failure: B-Bulge Failure, S-Shear Failure, E-Estimated Value, P-Penetrometer

ILLINOIS DEPARTMENT OF TRANSPORTATION
BRIDGE FOUNDATION BORING LOG

Project _____ Bridge US Route 34 over Fox River Date 01/23/89
Route FA 29 Bored By K. Whittington
Sec 650BR STA. 102+70 Checked By W. Beck
County Kendall Boring No. 2 (E. Abut.) Station 104+44 Offset 6' Rt.

Surface Water El. _____ Groundwater El. at Completion _____ After _____ Hours _____

	EL	N	Qu	W%
Ground Surface 599.0	0			
BL. LOAM				
	-5			
VERY SOFT BL. LOAM 592.5		10	-	-
MEDIUM GR. SA. & GR.		24	-	-
	-10	26	-	-
585.5 LIMESTONE 585.0		100/7"	-	-
CORE #4 VERY LITTLE RECOVERY SHALE PLUGGED CORE BARREL	-15			
	-20			

	EL
	-25
	-30
	-35
	-40
	-45

ILLINOIS DEPARTMENT OF TRANSPORTATION
BRIDGE FOUNDATION BORING LOG

Project _____ Bridge US Route 34 over Fox River Date 04/04/89
Route FA 29 Bored By K. Whittington
Sec 650BR STA. 102+70 Checked By W. Beck
County Kendall Boring No. 3 (E. Abut.) Station 104+47 Offset 8' Lt.

Surface Water El. _____ Groundwater El. at Completion _____ After _____ Hours _____

	EL	N	Qu	W%
Ground Surface 599.0	0			
596.5 SOFT DK. GR. LOAM (ROCK PIECES)	-5	5	0.5 P	35
592.0 MEDIUM GR. SA. & GR.		6	0.5 P	37
590.5 DENSE GR. SA. & GR. (LS PIECES AFTER 10.0')	-10	14	-	13
		31	-	11
585.0 GRAY SHALE	-15	56	-	10
		100/8"	-	9
	-20			

	EL
	-25
	-30
	-35
	-40
	-45

Type failure: B-Bulge Failure, S-Shear Failure, E-Estimated Value, P-Penetrometer

ILLINOIS DEPARTMENT OF TRANSPORTATION
BRIDGE FOUNDATION BORING LOG

Project _____ Bridge US Route 34 over Fox River Date 04/04/89
Route FA 29 Bored By K. Whittington
Sec 650BR STA. 102+70 Checked By W. Beck
County Kendall Boring No. 4 (E. Abut.) Station 104+42 Offset 15' Rt.

Surface Water El. _____ Groundwater El. at Completion _____ After _____ Hours _____

	EL	N	Qu	W%
Ground Surface 599.0	0			
BL. TOPSOIL & SOFT GR. LOAM				
594.0	-5			
SOFT DK. GR. LOAM 593.0		12	0.5 P	44
MEDIUM GR. SA. & GR. (LS PIECES, GRAVEL PIECES)	-10			
584.0 GR. SHALE	-15			
	-20	100/6"	-	13

	EL
	-25
	-30
	-35
	-40
	-45

FOR INFORMATION ONLY

BORING LOGS
F.A. RTE. 591 OVER THE FOX RIVER
SECTION 650 BR
KENDALL COUNTY
STATION 102+88.50

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RTE. 591	650 BR	KENDALL	107	87

SHEET 31 OF 31

CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

PLAN / PROFILE
SURVEYED / PLOTTED / GRADES CHECKED / ALIGNMENT CHECKED / R.O.W. MONUMENTED / STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE
CADD FILE NAME N:\OSWEGO\200405\Traffic\SOIL BORING LOG3.dgn

FILE NAME =	USER NAME = fbariso	DESIGNED - TFS	REVISED -
N:\OSWEGO\200405\Traffic\SOIL BORING LOG3.dgn		DRAWN - FPB	REVISED -
	PLOT SCALE = 2'	CHECKED - GMZ	REVISED -
	PLOT DATE = 2/2/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
(SHEET 3 OF 3)

SCALE: 1" = 2' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KENDALL	47	47
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

APPENDIX C

FORMS

Illinois Department of Transportation

Local Public Agency
Formal Contract Proposal

COVER SHEET

Proposal Submitted By:

Contractor's Name

Contractor's Address | City | State | Zip Code

STATE OF ILLINOIS

Local Public Agency: Village of Oswego | County: Kendall | Section Number:

Route(s) (Street/Road Name): US Route 34 (Washington Street) | Type of Funds: Local

☐ Proposal Only ☒ Proposal and Plans ☐ Proposal only, plans are separate

Submitted/Approved
For Local Public Agency:

For a County and Road District Project

Submitted/Approved

Highway Commissioner Signature | Date

Submitted/Approved

County Engineer/Superintendent of Highways | Date

For a Municipal Project

Submitted/Approved/Passed

Signature | Date

Official Title: Mayor

Department of Transportation

Released for bid based on limited review

Regional Engineer Signature | Date

Note: All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed.

Local Public Agency	County	Section Number	Route(s) (Street/Road Name)
Village of Oswego	Kendall		US Route 34 (Washington Stre

NOTICE TO BIDDERS

Sealed proposals for the project described below will be received at the office of _____ (Name of Office)

100 Parkers Mill, Oswego, IL 60543 (Address) until _____ (Time) on _____ (Date).

Sealed proposals will be opened and read publicly at the office of _____ (Name of Office)

100 Parkers Mill, Oswego, IL 60543 (Address) at _____ (Time) on _____ (Date).

DESCRIPTION OF WORK

Location	Project Length
US Route 34 (Washington Street/Madison Street)	3,315 FT/0.63 MI

Proposed Improvement

Construction of two (2) new traffic signal installations, traffic signal/railroad interconnect, traffic signal modification at three existing traffic signal installations, ADA sidewalk modifications, pavement marking and roadway signing.

1. Plans and proposal forms will be available in the office of

Oswego Village Hall, 100 Parkers Mill, Oswego, IL 60543

2. ☐ Prequalification

   If checked, the 2 apparent as read low bidders must file within 24 hours after the letting an "Affidavit of Availability" (Form BC 57) in triplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work. One original shall be filed with the Awarding Authority and two originals with the IDOT District Office.

3. The Awarding Authority reserves the right to waive technicalities and to reject any or all proposals as provided in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals.

4. The following BLR Forms shall be returned by the bidder to the Awarding Authority:
   a. Local Public Agency Formal Contract Proposal (BLR 12200)
   b. Schedule of Prices (BLR 12201)
   c. Proposal Bid Bond (BLR 12230) (if applicable)
   d. Apprenticeship or Training Program Certification (BLR 12325) (do not use for project with Federal funds.)
   e. Affidavit of Illinois Business Office (BLR 12326) (do not use for project with Federal funds)

5. The quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided.

6. Submission of a bid shall be conclusive assurance and warranty the bidder has examined the plans and understands all requirements for the performance of work. The bidder will be responsible for all errors in the proposal resulting from failure or neglect to conduct an in depth examination. The Awarding Authority will, in no case, be responsible for any costs, expenses, losses or changes in anticipated profits resulting from such failure or neglect of the bidder.

7. The bidder shall take no advantage of any error or omission in the proposal and advertised contract.

8. If a special envelope is supplied by the Awarding Authority, each proposal should be submitted in that envelope furnished by the Awarding Agency and the blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Awarding Authority is used, it shall be marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Awarding Authority at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the Notice to Bidders. Proposals received after the time specified will be returned to the bidder unopened.

9. Permission will be given to a bidder to withdraw a proposal if the bidder makes the request in writing or in person before the time for opening proposals.

Local Public Agency	County	Section Number	Route(s) (Street/Road Name)
Village of Oswego	Kendall		US Route 34 (Washington Stre

PROPOSAL

1. Proposal of _____
Contractor's Name

_____.
Contractor's Address

2. The plans for the proposed work are those prepared by Christopher B. Burke Engineering, Ltd.
and approved by the Department of Transportation on _____.

3. The specifications referred to herein are those prepared by the Department of Transportation and designated as "Standard Specifications for Road and Bridge Construction" and the " Supplemental Specifications and Recurring Special Provisions" thereto, adopted and in effect on the date of invitation for bids.

4. The undersigned agrees to accept, as part of the contract, the applicable Special Provisions indicated on the "Check Sheet for Recurring Special Provisions" contained in this proposal.

5. The undersigned agrees to complete the work within _____ working days or by 11/17/22 unless additional time is granted in accordance with the specifications.

6. The successful bidder at the time of execution of the contract will be required to deposit a contract bond for the full amount of the award. When a contract bond is not required, the proposal guaranty check will be held in lieu thereof. If this proposal is accepted and the undersigned fails to execute a contract and contract bond as required, it is hereby agreed that the Bid Bond of check shall be forfeited to the Awarding Authority.

7. Each pay item should have a unit price and a total price. If no total price is shown or if there is a discrepancy between the products of the unit price multiplied by the quantity, the unit price shall govern. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price. A bid may be declared unacceptable if neither a unit price nor a total price is shown.

8. The undersigned submits herewith the schedule of prices on BLR 12201 covering the work to be performed under this contract.

9. The undersigned further agrees that if awarded the contract for the sections contained in the combinations on BLR 12201, the work shall be in accordance with the requirements of each individual proposal for the multiple bid specified in the Schedule for Multiple Bids below.

10. A proposal guaranty in the proper amount, as specified in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals, will be required. Bid Bonds will be allowed as a proposal guaranty. Accompanying this proposal is either a bid bond, if allowed, on Department form BLR 12230 or a proposal guaranty check, complying with the specifications, made payable to: Village Treasurer Treasurer of Oswego .
The amount of the check is _____ (_____).

Attach Cashier's Check or Certified Check Here

In the event that one proposal guaranty check is intended to cover two or more bid proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual bid proposal. If the proposal guaranty check is placed in another bid proposal, state below where it may be found.

The proposal guaranty check will be found in the bid proposal for: Section Number _____ .

Local Public Agency	County	Section Number	Route(s) (Street/Road Name)
Village of Oswego	Kendall		US Route 34 (Washington Stre

CONTRACTOR CERTIFICATIONS

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder.

1. **Debt Delinquency.** The bidder or contractor or subcontractor, respectively, certifies that it is not delinquent in the payment of any tax administered by the Department of Revenue unless the individual or other entity is contesting, in accordance with the procedure established by the appropriate Revenue Act, its liability for the tax or the amount of the tax. Making a false statement voids the contract and allows the Department to recover all amounts paid to the individual or entity under the contract in a civil action.

2. **Bid-Rigging or Bid Rotating**. The bidder or contractor or subcontractor, respectively, certifies that it is not barred from contracting with the Department by reason of a violation of either 720 ILCS 5/33E-3 or 720 ILCS 5/33E-4.

   A violation of section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense, or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent on behalf of the corporation.

   A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State of Local government. No corporation shall be barred from contracting with any unit of State or Local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent on behalf of the corporation.

3. **Bribery.** The bidder or contractor or subcontractor, respectively, certifies that, it has not been convicted of bribery or attempting to bribe an officer or employee of the State of Illinois or any unit of local government, nor has the firm made an admission of guilt of such conduct which is a matter or record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm.

4. **Interim Suspension or Suspension.** The bidder or contractor or subcontractor, respectively, certifies that it is not currently under a suspension as defined in Subpart I of Title 44 Subtitle A Chapter III Part 6 of the Illinois Administrative code. Furthermore, if suspended prior to completion of this work, the contract or contracts executed for the completion of this work may be canceled.

Local Public Agency	County	Section Number	Route(s) (Street/Road Name)
Village of Oswego	Kendall		US Route 34 (Washington Stre

SIGNATURES

(If an individual)

Signature of Bidder | Date

Business Address

City | State | Zip Code

(If a partnership)

Firm Name

Signature | Date

Title

Business Address

City | State | Zip Code

Insert the Names and Addresses of all Partners

(If a corporation)

Corporate Name

Signature | Date

Title

Business Address

City | State | Zip Code

Insert Names of Officers

President

Secretary

Attest:

Secretary

Treasurer

Illinois Department of Transportation

Contractor's Name

Contractor's Address | City | IL | Zip Code

Local Public Agency | County | Section Number

Route(s) (Street/Road Name)

Schedule for Multiple Bids

	Section Included In Combinations	

Schedule for Single Bid

(For complete information covering these items, see plans and specifications)

CODE NUMBER	Item	Unit	Quantity	Unit Price	Total Price
20200100	EARTH EXCAVATION	CU YD	5		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	20		
25200100	SODDING	SQ YD	20		
31101180	SUBBASE GRANULAR MATERIAL, TYPE B 2"	SQ YD	57		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	510		
42400800	DETECTABLE WARNINGS	SQ FT	165		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	194		
44000600	SIDEWALK REMOVAL	SQ FT	695		
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	200		
67100100	MOBILIZATION	L SUM	1		
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	10		
66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1		
66901006	REGULATED SUBSTANCES MONITORING	CAL DA	4		
66901001	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1		
66900400	SPECIAL WASTE GROUNDWATER DISPOSAL	GALLON	125		
66900530	SOIL DISPOSAL ANALYSIS	EACH	2		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1		
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	56		
72000100	SIGN PANEL - TYPE 1	SQ FT	180		
72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	24		

CODE NUMBER	Item	Unit	Quantity	Unit Price	Total Price
78003130	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 6"	FOOT	750		
78003140	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 8"	FOOT	50		
78003180	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 24"	FOOT	250		
78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	610		
78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	550		
78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1072		
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	2478		
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	239		
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	347		
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	10		
81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	4		
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3		
85100500	PAINT NEW TRAFFIC SIGNAL POST	EACH	10		
85100800	PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FOOT	EACH	5		
85100901	PAINT NEW COMBINATION MAST ARM AND POLE, 40 FOOT AND OVER	EACH	1		
86000100	MASTER CONTROLLER	EACH	1		
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2830		
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2199		
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2859		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	3346		
87301265	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 9C	FOOT	656		
87301750	ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	971		
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	382		
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1630		
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	4		
87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.	EACH	1		
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1		
87702900	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1		
87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	24		
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	8		
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	34		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	49		

CODE NUMBER	Item	Unit	Quantity	Unit Price	Total Price
87900200	DRILL EXISTING HANDHOLE	EACH	3		
88040110	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1		
88040120	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1		
88102825	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	16		
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	24		
88700200	LIGHT DETECTOR	EACH	4		
88700300	LIGHT DETECTOR AMPLIFIER	EACH	2		
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	3		
89502400	REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1		
X0320024	ETHERNET MANAGE SWITCH	EACH	5		
X0323924	SYSTEM IMPLEMENTATION, EQUIPMENT INTEGRATION AND SUPPORT	L SUM	1		
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	540		
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	500		
X0325942	CONCRETE LANDING SLAB	SQ FT	340		
X0326863	BRICK SIDEWALK	SQ FT	340		
X0327611	REMOVE AND REINSTALL BRICK PAVER	SQ FT	400		
X1400086	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	6		
X1400087	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	14		
X1400102	OUTDOOR RATED NETWORK CABLE	FOOT	680		
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	2		
X1400168	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1		
X1400169	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL)	EACH	1		
X1400214	SPARE RAILROAD, FULL ACTUATED CONTROLLER , SPECIAL	EACH	2		
X1400215	REMOTE CONTROLLED VIDEO SYSTEM	EACH	2		
X1400367	PEDESTRIAN SIGNAL POST, 10 FT	EACH	4		
X1400378	PEDESTRIAN SIGNAL POST, 5 FT	EACH	1		
X1400424	ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C TYPE SOOW	FOOT	1217		
X7830074	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	750		
X7830076	GROOVING FOR RECESSED PAVEMENT MARKING 9"	FOOT	50		
X7830090	GROOVING FOR RECESSED PAVEMENT MARKING 25"	FOOT	250		
X8100105	CONDUIT SPLICE	EACH	7		
X8100863	INTERCEPT EXISTING CONDUIT	EACH	7		

CODE NUMBER	Item	Unit	Quantity	Unit Price	Total Price
X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	3		
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	2		
X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	2702		
X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	16		
X8770125	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)	EACH	2		
X8770136	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)	EACH	1		
X8770140	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. (SPECIAL)	EACH	1		
X8770250	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 32 FT. AND 46 FT. (SPECIAL)	EACH	1		
X8780012	CONCRETE FOUNDATION, TYPE A 12 INCH DIAMETER	FOOT	20		
X8820010	TRAFFIC SIGNAL BACKPLATE, SPECIAL	EACH	2		
X8950114	MODIFY EXISTING CONTROLLER AND CABINET	EACH	1		
XX005206	EXPLORATORY EXCAVATION	FOOT	40		
XX005723	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	2		
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	8		
XX006597	WIRELESS INTERCONNECT SYSTEM	L SUM	1		
XX009244	STEEL CASING PIPE, BORED AND JACKED, 8"	FOOT	60		
Z0007430	TEMPORARY SIDEWALK	SQ FT	400		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1		
Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1		
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED (SPECIAL)	EACH	2		
	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED (SPECIAL)	EACH	2		
	PAINT NEW COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 1-UNDER 40 FEET, 1-OVER 40 FEET	EACH	1		
			TOTAL		**$**

Illinois Department of Transportation

Local Public Agency
Proposal Bid Bond

Local Public Agency	County	Section Number
Village of Oswego	Kendall	

WE, _____ as PRINCIPAL, and

_____ as SURETY, are held jointly, severally and firmly bound unto the above Local Public Agency (hereafter referred to as "LPA") in the penal sum of 5% of the total bid price, or for the amount specified in the proposal documents in effect on the date of invitation for bids, whichever is the lesser sum. We bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly pay to the LPA this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the said PRINCIPAL is submitting a written proposal to the LPA acting through its awarding authority for the construction of the work designated as the above section.

THEREFORE if the proposal is accepted and a contract awarded to the PRINCIPAL by the LPA for the above designated section and the PRINCIPAL shall within fifteen (15) days after award enter into a formal contract, furnish surety guaranteeing the faithful performance of the work, and furnish evidence of the required insurance coverage, all as provided in the "Standard Specifications for Road and Bridge Construction" and applicable Supplemental Specifications, then this obligation shall become void; otherwise it shall remain in full force and effect.

IN THE EVENT the LPA determines the PRINCIPAL has failed to enter into a formal contract in compliance with any requirements set forth in the preceding paragraph, then the LPA acting through its awarding authority shall immediately be entitled to recover the full penal sum set out above, together with all court costs, all attorney fees, and any other expense of recovery.

IN TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this _____ (Day) of _____ (Month and Year)

Principal

Company Name		Company Name	
Signature	Date	Signature	Date
By:		By:	
Title		Title	

(If Principal is a joint venture of two or more contractors, the company names, and authorized signatures of each contractor must be affixed.)

Surety

Name of Surety		Signature of Attorney-in-Fact	Date
		By:	

STATE OF IL

COUNTY OF

I _____ , a Notary Public in and for said county do hereby certify that

_____

(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instruments as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ (Day) day of _____ (Month and Year) .

Notary Public Signature

(SEAL)

Date commission expires _____

Local Public Agency	County	Section Number
Village of Oswego	Kendall	

ELECTRONIC BID BOND

☐ **Electronic bid bond is allowed (box must be checked by LPA if electronic bid bond is allowed)**

The Principal may submit an electronic bid bond, in lieu of completing the above section of the Proposal Bid Bond Form. By providing an electronic bid bond ID code and signing below, the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the LPA under the conditions of the bid bond as shown above. (If PRINCIPAL is a joint venture of two or more contractors, an electronic bid bond ID code, company/Bidder name title and date must be affixed for each contractor in the venture.)

Electronic Bid Bond ID Code

Company/Bidder Name

Signature

Date

Title

Illinois Department of Transportation

Affidavit of Illinois Business Office

Local Public Agency	County	Street Name/Road Name	Section Number
Village of Oswego	Kendall	US Rte 34/Washington St.	

I, _____ of _____ , _____ ,
Name of Affiant City of Affiant State of Affiant
being first duly sworn upon oath, state as follows:

1. That I am the _____ of _____ .
Officer or Position Bidder

2. That I have personal knowledge of the facts herein stated.

3. That, if selected under the proposal described above, _____ , will maintain a business office in the
Bidder
State of Illinois, which will be located in _____ County, Illinois.
County

4. That this business office will serve as the primary place of employment for any persons employed in the construction contemplated by this proposal.

5. That this Affidavit is given as a requirement of state law as provided in Section 30-22(8) of the Illinois Procurement Code.

Signature Date

Print Name of Affiant

Notary Public

State of IL

County _____

Signed (or subscribed or attested) before me on _____ by
(date)

_____ , authorized agent(s) of
(name/s of person/s)

_____ .
Bidder

Signature of Notary Public

(SEAL)

My commission expires _____

Illinois Department of Transportation

Affidavit of Availability

For the Letting of

Bureau of Construction
2300 South Dirksen Parkway/Room 322
Springfield, IL 62764

Instructions: Complete this form by either typing or using black ink. "Authorization to Bid" will not be issued unless both sides of this form are completed in detail. Use additional forms as needed to list all work.

Part I. Work Under Contract

List below all work you have under contract as either a prime contractor or a subcontractor. It is required to include all pending low bids not yet awarded or rejected. In a joint venture, list only that portion of the work which is the responsibility of your company. The uncompleted dollar value is to be based upon the most recent engineer's or owners estimate, and must include work subcontracted to others. If no work is contracted, show NONE.

	1	2	3	4	Awards Pending	Accumulated Totals
Contract Number						
Contract With						
Estimated Completion Date						
Total Contract Price						
Uncompleted Dollar Value if Firm is the Prime Contractor						
Uncompleted Dollar Value if Firm is the Subcontractor						
					Total Value of All Work	

Part II. Awards Pending and Uncompleted Work to be done with your own forces.

List below the uncompleted dollar value of work for each contract and awards pending to be completed with your own forces. All work subcontracted to others will be listed on the reverse of this form. In a joint venture, list only that portion of the work to be done by your company. If no work is contracted, show NONE.

Earthwork						
Portland Cement Concrete Paving						
HMA Plant Mix						
HMA Paving						
Clean & Seal Cracks/Joints						
Aggregate Bases, Surfaces						
Highway, R.R., Waterway Struc.						
Drainage						
Electrical						
Cover and Seal Coats						
Concrete Construction						
Landscaping						
Fencing						
Guardrail						
Painting						
Signing						
Cold Milling, Planning, Rotomilling						
Demolition						
Pavement Markings (Paint)						
Other Construction (List)						
Totals						

Disclosure of this information is REQUIRED to accomplish the statutory purpose as outlined in the “Illinois Procurement Code." Failure to comply will result in non-issuance of an "Authorization To Bid." This form has been approved by the State Forms Management Center.

Part III. Work Subcontracted to Others.

For each contract described in Part I, list all the work you have subcontracted to others.

	1	2	3	4	Awards Pending
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted					

Notary

I, being duly sworn, do hereby declare this affidavit is a true and correct statement relating to ALL uncompleted contracts of the undersigned for Federal, State, County, City and private work, including ALL subcontract work, ALL pending low bids not yet awarded or rejected and ALL estimated completion dates.

Officer or Director

Title

Signature

Date

Company

Address

City

State

Zip Code

Subscribed and sworn to before me

this _____ day of _____ , _____

_____

(Signature of Notary Public)

My commission expires _____

(Notary Seal)

☐ Add pages for additional contracts

Illinois Department of Transportation

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Drainage						
Electrical						
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	2	3	4	Awards Pending	1
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
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Officer or Director

Title

Signature

Date

Company

Address

City

State

Zip Code

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this _____ day of _____ , _____

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this _____ day of _____ , _____

_____

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(Notary Seal)

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Portland Cement Concrete Paving						
HMA Plant Mix						
HMA Paving						
Clean & Seal Cracks/Joints						
Aggregate Bases, Surfaces						
Highway, R.R., Waterway Struc.						
Drainage						
Electrical						
Cover and Seal Coats						
Concrete Construction						
Landscaping						
Fencing						
Guardrail						
Painting						
Signing						
Cold Milling, Planning, Rotomilling						
Demolition						
Pavement Markings (Paint)						
Other Construction (List)						
Totals						

Disclosure of this information is REQUIRED to accomplish the statutory purpose as outlined in the “Illinois Procurement Code." Failure to comply will result in non-issuance of an "Authorization To Bid." This form has been approved by the State Forms Management Center.

Part III. Work Subcontracted to Others.

For each contract described in Part I, list all the work you have subcontracted to others.

	1	2	3	4	Awards Pending
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted					

Notary

I, being duly sworn, do hereby declare this affidavit is a true and correct statement relating to ALL uncompleted contracts of the undersigned for Federal, State, County, City and private work, including ALL subcontract work, ALL pending low bids not yet awarded or rejected and ALL estimated completion dates.

Officer or Director

Title

Signature

Date

Company

Address

City

State

Zip Code

Subscribed and sworn to before me

this _____ day of _____ , _____

_____

(Signature of Notary Public)

My commission expires _____

(Notary Seal)

☐ Add pages for additional contracts

Illinois Department of Transportation

Affidavit of Availability

For the Letting of

Bureau of Construction
2300 South Dirksen Parkway/Room 322
Springfield, IL 62764

Instructions: Complete this form by either typing or using black ink. "Authorization to Bid" will not be issued unless both sides of this form are completed in detail. Use additional forms as needed to list all work.

Part I. Work Under Contract

List below all work you have under contract as either a prime contractor or a subcontractor. It is required to include all pending low bids not yet awarded or rejected. In a joint venture, list only that portion of the work which is the responsibility of your company. The uncompleted dollar value is to be based upon the most recent engineer's or owners estimate, and must include work subcontracted to others. If no work is contracted, show NONE.

	1	2	3	4	Awards Pending	Accumulated Totals
Contract Number						
Contract With						
Estimated Completion Date						
Total Contract Price						
Uncompleted Dollar Value if Firm is the Prime Contractor						
Uncompleted Dollar Value if Firm is the Subcontractor						
					Total Value of All Work	

Part II. Awards Pending and Uncompleted Work to be done with your own forces.

List below the uncompleted dollar value of work for each contract and awards pending to be completed with your own forces. All work subcontracted to others will be listed on the reverse of this form. In a joint venture, list only that portion of the work to be done by your company. If no work is contracted, show NONE.

Earthwork						
Portland Cement Concrete Paving						
HMA Plant Mix						
HMA Paving						
Clean & Seal Cracks/Joints						
Aggregate Bases, Surfaces						
Highway, R.R., Waterway Struc.						
Drainage						
Electrical						
Cover and Seal Coats						
Concrete Construction						
Landscaping						
Fencing						
Guardrail						
Painting						
Signing						
Cold Milling, Planning, Rotomilling						
Demolition						
Pavement Markings (Paint)						
Other Construction (List)						
Totals						

Disclosure of this information is REQUIRED to accomplish the statutory purpose as outlined in the “Illinois Procurement Code." Failure to comply will result in non-issuance of an "Authorization To Bid." This form has been approved by the State Forms Management Center.

Part III. Work Subcontracted to Others.

For each contract described in Part I, list all the work you have subcontracted to others.

	1	2	3	4	Awards Pending
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted					

Notary

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Officer or Director

Title

Signature

Date

Company

Address

City

State

Zip Code

Subscribed and sworn to before me

this _____ day of _____ , _____

_____

(Signature of Notary Public)

My commission expires _____

(Notary Seal)