



**City of Bellbrook**

15 East Franklin Street

Bellbrook, Ohio 45305

T (937) 848-4666

F (937) 848-5190

[www.cityofbellbrook.org](http://www.cityofbellbrook.org)

## **REQUEST FOR PROPOSALS**

**And**

## **INSTRUCTIONS**

**RFP 2023-01**

**City of Bellbrook**

## **Franklin and Main Street Improvements**

The City of Bellbrook, a municipal corporation, is seeking bids from qualified firms for the construction of mid-block crosswalks, repaving, curbing, landscape and all other necessary appurtenances to the Franklin and Main Street area of Downtown Bellbrook.

Attached to this RFP are the listed Instructions for Bidders/Offerors in the first ten (10) pages of this document. All potential bidders must thoroughly review and certify their understanding of the Instructions and this RFP process.


## **GENERAL INSTRUCTIONS TO BIDDERS/OFFERORS**

For the purposes of this Document, the terms “Bid” and Proposal” have the same meaning, and the terms “Bidder, Offeror, Contractor, Vendor” are intended to mean the company or firm who is the respondent Bidder for this RFP.

- 🌿 The following instructions are to be considered an integral part of this proposal. Unless otherwise requested, three (3) complete copies of the written proposal need be submitted. The person signing the bid/proposal form must initial any changes or corrections made to this proposal.
- 🌿 No proposal may be withdrawn or modified in any way after the bid/proposal-opening deadline. **Quotes must remain valid for ninety (90) days after the quote date.** Quotes submitted with a less than ninety (90) day validity will be found non-responsive and will not be considered.
- 🌿 All bids/proposals must be a final cost.
- 🌿 Bids/Proposals will be received no later than **4:00pm September 12, 2023** at the City of Bellbrook 15 E. Franklin Street Bellbrook, Ohio 45305 at which time they will be opened and publicly read aloud. Bids/proposals received after the above date and time, or in any other location other than the City of Bellbrook City Hall as noted above will not be considered.
- 🌿 A Request for Proposal packet may be obtained from the City of Bellbrook 15 E. Franklin Street Bellbrook, Ohio 45305 or from [www.cityofbellbrook.org](http://www.cityofbellbrook.org)
- 🌿 A Pre-Bid/Proposal meeting may be scheduled upon request at City Hall for the City of Bellbrook 15 E. Franklin Street Bellbrook, Ohio 45305, and a site visit will be available on request.
- 🌿 If descriptive literature is attached to the bid/proposal, bidder’s name must appear on all sheets.
- 🌿 A cover letter must be attached in the form of a standard business letter containing the Contractor’s name, address and telephone number and must be signed with an original signature, in ink, by an individual authorized to legally bind the Contractor. The letter must contain the following information:
  - A statement describing the Contractor’s legal structure (e.g. corporation, partnership) and providing federal tax identification number and principle place of business.
  - A statement that the person signing the quote certifies that he or she is the person in the Contractor’s organization who has actual authority to make decisions as to matters relating to this RFP and to bind the Contractor.
  - A statement that the quote meets the minimum qualifications set forth

in this RFP and accepts all requirements and terms and conditions contained in this RFP.


- A statement that the Contractor does not discriminate in its employment practice with regard to race, color, age, religion, sex, veteran status, sexual preference, national origin, or disability
- A statement that no attempt has been made or will be made by the Contractor to induce any other person or firm to submit or not submit a quote.
- A statement that indicates whether the Contractor or any of its agents has a possible conflict of interest with any city employee involved in the RFP and any ensuing Contract(s) or any other conflict of interest and, if so, an explanation of the conflict must be given.


 **Communication:** If there is any question whatsoever regarding any portion of the instructions or specifications, it shall be the bidder's responsibility to seek clarification immediately from the City of Bellbrook **No later than close of business on September 13, 2023** unless otherwise stated in the documents.


All questions shall be submitted in writing or via e-mail to the attention of Rob Schommer at [rob@cityofbellbrook.org](mailto:rob@cityofbellbrook.org) If mailed, the address is as follows: City of Bellbrook ATTN: RFP 2023-01, 15 E. Franklin Street Bellbrook, Ohio 45305. Answer(s) to all questions will be answered after the deadline for questions has expired, and posted to the City's web site, if applicable and feasible.

It shall be the bidder's responsibility to check the City's website ([www.cityofbellbrook.org](http://www.cityofbellbrook.org)) for any and all addendums or modifications.

Under no circumstances should respondents contact City personnel or officials outside of the opportunity provided herein.

 **Proprietary Information:** Any information contained in the RFP response that is proprietary must be clearly designated. Marking of the entire response as proprietary will neither be accepted nor honored. The City cannot guarantee that all such material noted remains proprietary, particularly if it becomes a significant consideration in contract award. Information will be kept confidential only to the extent allowed by Public Records Laws of Ohio.

 Any variation from the specifications must be clearly stated by the bidder in writing and submitted with his/her proposal.

 The apparent silence of any specifications or any supplement specifications to any details or the omission of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail, and that only materials of first quality and correct type, size and design are to be used. All workmanship is to be of first quality. All interpretations of this specification shall be made upon the basis of this statement.

🦉 The following bid shall be awarded to one bidder based on the specifications as provided for in Chapter 240 of the Bellbrook Code of Ordinances so the City can determine the “lowest and/or best bidder”. An award shall be made to one vendor for the total bid. Unit prices and extensions will be verified, and total checked. Unit price extension and net total must be shown. Unit price shall prevail unless otherwise stated in the proposal.

🦉 The process and description for opening, tabulating and awarding responses to RFP/bids is as follows:

*(a) In the case of sealed competitive bids, the bids shall be opened and tabulated publicly by the City Manager. An investigation of the responsibility of the bidders and the responsiveness of the bid shall be made as the City Manager deems necessary. The City Manager shall determine the lowest and/or best bidder. The City may reject all bids if it determines that it is in the best interest of the City to do so.*

*(b) In the case of competitive proposals, the responses shall be opened publicly by the City Manager. The City may discuss the responses with the proposers to clarify responses and to obtain information needed by the City to determine the lowest and/or best proposal. An investigation of the responsibility of the proposers and the responsiveness of the proposal shall be made as the City Manager deems necessary. The City Manager shall determine the lowest and/or best proposal. The City may reject all proposals if it determines that it is in the best interest of the City to do so.*

*(c) In the case of two-step competitive proposals (RFQ/RFP), the technical responses shall be opened publicly by the City Manager. The City may discuss the responses with the proposers to clarify responses and to obtain information needed by the City to determine qualified proposers. An investigation of the responsibility of the proposers and the responsiveness of the proposal shall be made as the City Manager deems necessary.*

*The City Manager shall determine the qualified proposers. The qualified proposers shall then be invited to submit price proposals which shall be opened publicly by the City Manager. The City may discuss responses with the proposers to clarify responses and to obtain information needed by the City to determine the lowest and/or best proposal. If appropriate, the City may request best and final offers. The City Manager shall then determine the lowest and best proposal. The City may reject all proposals if it determines that is in the best interest of the City to do so.*

🦉 *The City of Bellbrook reserves the right to accept, reject or waive any irregularities in the proposal and/or any and all bids received for the work contemplated herein and to accept or reject any or all proposals and/or bids. The proposal and/or bids will be compared on the basis of the total cost of the project and the award will be made to the lowest and/or best bidder (or bidders), provided the proposal and/or bid is reasonable and is in the best interest of the City (owner) to accept. In determining the lowest and best bid the City (owner), in its sole discretion, may consider factors, including but not limited to, the bidder’s work history, (including work done under other names), experience,*



*conduct and performance on previous contracts, management skills, ability to execute the contract properly, customer satisfaction, work on comparable projects, ability to timely complete the work in accordance with the contract documents, the Bidder's financial condition and facilities, and the Bidder's compliance with federal, state, and local laws, rules, and regulations, (including but not limited to the Prevailing Wage Laws, Occupational Safety and Health Act, and the State of Ohio's Equal Employment Opportunity Commission requirements, as may be applicable).*

👉 The City desires delivery of the material or services specified at the earliest possible time after the date of award. An unreasonable delivery proposal may be cause for disqualifying a bid. Each bidder shall state a definite time and avoid using terms such as "ASAP" or "approximately so many days".

👉 **Insurance:** The Contractor will maintain the following insurance from insurer(s) rated A- or better by A.M. Best in amounts sufficient to protect the Contractor and Owner from claims under Workers Compensation Acts and any other claims for property damage and/or bodily injury, including death, which may arise from the performance of the Work under this Subcontract, whether the Work is performed by the Subcontractor, its subcontractor, or anyone directly or indirectly employed by either of them.

Limits of coverage to be as follows:

|     |   |  |
|-----|---|--|
| (a) | Workers' Compensation<br>Employers Liability/Ohio Stop Gap  | Statutory<br>\$ 1,000,000                    |
| (b) | Commercial General Liability:<br>Bodily injury/property damage per occurrence<br>General Aggregate<br>Products/Completed Operations Aggregate | \$ 1,000,000<br>\$ 2,000,000<br>\$ 2,000,000 |
| (c) | Commercial Automobile Liability:<br>Combined Single Limit (including Owned,<br>Hired, and Non-Owned Autos)                                    | \$1,000,000                                  |
| (d) | Excess/Umbrella Liability (over Employer's Liability,<br>General Liability, and Auto)   | \$ 1,000,000                                 |


*Liability policy requirements.* The General Liability policy must be written on the current edition of ISO form CG 00 01 or equivalent. The policy shall have no modifications limiting coverage for contractual liability, damage to work performed by subcontractors, residential construction, earth movement, explosion, collapse, or underground damage. The policy shall be endorsed to provide that the General Aggregate Limit applies separately to each of the insured Contractor's projects. The Owner (including its officers, directors and employees) shall be named as Additional Insured on the General Liability policy on ISO form CG 20 10 11 85 or its equivalent, affording coverage to Additional


Insured(s) for claims arising out of both ongoing and completed operations. Owner shall also receive coverage as an additional insured Contractor's Auto Liability policy. Contractor's policies shall be primary insurance as respects Owner, and any other insurance policy that Owner may have in effect shall be deemed excess and not contributory. The General Liability policy affording coverage to Owner as Additional Insured must be maintained for three (3) years after completion of the project. If any of the Work is performed by subcontractors, Contractor shall be responsible for ensuring subcontractors comply with these insurance requirements, and extend coverage to both Contractor and Owner as additionally insured.

*Installation Floater.* Contractor shall purchase and maintain an Installation Floater, covering loss or damage to materials and/or equipment suffered during the course of the Work. This insurance shall include the interests of the Owner, Contractor and any Subcontractors. The policy shall be written on special form and shall cover all materials specified for the job, whether onsite, offsite or in transit.

The Contractor will submit to the Owner certificates of insurance (including a certificate of compliance from the Ohio Bureau of Workers' Compensation for Ohio subcontractors) certifying that the insurance policies required by this agreement are in force and shall be maintained for the duration of the Project. Contractor shall also provide copies of additional insured endorsement(s) as required herein. Full copies of policies shall be provided upon Owner's request. Certificates shall reflect Owner's status as an additional insured and shall provide that Owner is to be provided thirty (30) days advance written notice in the case of cancellation or nonrenewal of the required policies (10 days if cancelled due to nonpayment of premium).

Until said certificate of insurance is properly executed and delivered to the City, the Contractor shall not move its equipment or laborers onto the premises or begin performance of the work specified under an awarded agreement. If the Contractor fails to provide the required insurance, the City of Bellbrook shall have the right to disqualify the Contractor. **Proof of insurance should be included in the submitted bid documents.**

 **References:** Contractor must provide five (5) references of customers with successful implementations of similar size and scope with work performed within the past five (5) years. Please include name, address, contact and phone number. If sub-contractors or business partners will be used in conjunction with the installation or maintenance of this project, please provide references as stipulated above. **References should be included in bid documents**

 **Inspection:** It is understood within this agreement that any problems such as equipment failure, unspecified maintenance, lack of performance and any other conditions outlined in the scope of service not performed by the Contractor will be under immediate review by the City of Bellbrook.

- 👉 **License and Permits:** It shall be the responsibility of the successful bidder to obtain all licenses and permits required to perform this service at no additional cost to the City of Bellbrook.
- 👉 **Timeline:** Provide an estimated, standard timeline for installation, implementation and creative design services. **Timeline should be included in bid documents.**
- 👉 **Configuration and Pricing:** Bidder must itemize all charges for individually identifiable components of the proposed system, including all associated installation, programming and training if applicable. Bidder must include charges for all components required to connect any applicable applications.

**RFP Checklist:**

Please review and check off these 10 most important items to consider when responding to an RFP for the City of Bellbrook:

|  |  |
|--|--|
|  | <p><b>Read the <u>entire</u> document.</b> Note critical items such as: mandatory requirements; supplies/services required; submittal dates; number of copies required for submittal; contract requirements (i.e., contract performance, insurance requirements, performance and/or reporting requirements, etc.).</p>   |
|  | <p><b>Note the procedures for communication with the City during the RFP process.</b> All communication during the RFP process must be in writing. Offerors should not contact City personnel or officials outside of the opportunity provided in the document.</p>  |
|  | <p><b>Attend the pre-proposal conference</b> if one is offered. These conferences provide an opportunity to ask clarifying questions, obtain a better understanding of the project, or to notify the City of any ambiguities, inconsistencies, or errors in the RFP.</p>   |
|  | <p><b>Take advantage of the “question and answer” period.</b> Submit your questions by the due date listed and view the answers given in the formal “addenda” issued for the RFP. All addenda issued for an RFP are posted on the City’s website and will include all questions asked and answered concerning the RFP.</p>   |
|  | <p><b>Follow the format required in the RFP</b> when preparing your response. Provide point-by-point responses to all sections in a clear and concise manner.</p>  |
|  | <p><b>Provide complete answers/descriptions.</b> Read and answer <b>all</b> questions and requirements. Don’t assume the City or the evaluating staff will know what your company capabilities are or what items/services you can provide, even if you have previously contracted with the City of Bellbrook. The proposals are evaluated based solely on the information and materials provided in your response.</p> |
|  | <p><b>Use the forms provided, if any.</b> e.g., bidders submittal page, reference forms, attachment forms, etc.</p>  |

|  |   |
|--|---|
|  | <p><b>Before submitting your response</b>, check the City’s website at: <a href="http://www.cityofbellbrook.org">www.cityofbellbrook.org</a> to see whether any addenda were issued for the RFP.</p>  |
|  | <p><b>Review and read the RFP document again</b> to make sure that you have addressed all requirements. Your original response and the requested copies must be identical and be complete. The copies are provided to the evaluating staff members and will be used to score your response.</p> |
|  | <p><b>Submit your response on time.</b> Note all the dates and times listed in the RFP and be sure to submit all required items on time. Late proposal responses are <i><b>never</b></i> accepted.</p>  |

Please Note:

All potential contractors are strongly urged to submit supporting documentation as to their qualifications to perform the Scope of Work.

Certificate of Insurance, Reference List and Timeline must be attached.

If additional comments or conditions are desired, please attach a separate sheet providing details.

Include all proposed equipment specifications; showing manufacturer name, model, etc. depicting unit specifications and other pertinent information.

**Certification:**

The undersigned on the Bid Proposal certifies that the Instructions to Bidder has been carefully examined, is thoroughly familiar with the terms and specifications applicable to and made part of this Request for Proposal, and understands and is capable of meeting the provisions within to the quality, type and grade of work requested. The undersigned further certifies the prices shown in the schedule of items contained within the Proposal/Bid are in accordance with the conditions, terms and specifications of the proposal and that any exception taken thereto may disqualify the bid.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Email Address

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Company Name

## **City of Bellbrook Request for Proposals**

**RFP 2023-01**

**Advertised as: Franklin and Main Street Improvements**

**Release Date: August 29, 2023**

**Closing Date: September 15, 2023**

The City of Bellbrook, a municipal corporation, is seeking bids from qualified firms for the construction of mid-block crosswalks, repaving, curbing, landscape and all other necessary appurtenances to the Franklin and Main Street area of Downtown Bellbrook.

### **1. General Information**

- 1.1. The City of Bellbrook invites qualified firms to submit proposals for the construction of mid-block crosswalks, repaving, curbing, landscape and all other necessary appurtenances as designated in the attached project construction documents. Proposals shall be submitted in accordance with the Documents and Requirements as set forth in this formal "Request for Proposals." The Contract that will result from this "Request for Proposals" will include what is indicated in Section 4 "Scope of Work" of this RFP.
- 1.2. A City Review and Selection Committee will evaluate the proposals submitted.
- 1.3. During evaluation, the City Review and Selection Committee reserves the right, where it may serve the City's best interest, to request additional information or clarification from the Offeror, or to allow corrections of errors or omissions. Oral interviews may be conducted by the City Review and Selection Committee for the Contractors who submit a Proposal and were short listed.
- 1.4. Submission of a proposal indicates acceptance by the Offeror of the conditions contained in this Request for Proposals, unless clearly and specifically noted in the proposal submitted and confirmed in the resultant contract between the City of Bellbrook and the Contractor selected.
- 1.5. There is no expressed or implied intent or obligation for the City of Bellbrook to reimburse responding firms for any expenses incurred in preparing proposals, as well as, travel expenses during interviews in response to this Request for Proposals.
- 1.6. The City of Bellbrook shall reserve the right to terminate any agreement resultant from this solicitation and subsequent action for cause but not limited to inadequacy of performance.

### **2. Contact Person/Communication**

2.1. Until the receipt and opening of proposals, the proposers' principal contact with the City of Bellbrook will be as listed below. All questions are to be submitted in writing and potential Bidders will receive copies of all questions and answers except for the questions that are considered proprietary. Questions will only be received through September 13, 2023

Rob Schommer  
City of Bellbrook  
15 E. Franklin St.  
Bellbrook, Ohio 45305  
Email: rob@cityofbellbrook.org

2.2. All contacts and communication regarding the proposal should be with the above named individual only. Bidders contacting other City Staff or Officials may be disqualified for doing so.

### **3. Background Information**

3.1. The City of Bellbrook a municipal corporation, is seeking bids from qualified firms for the construction of mid-block crosswalks, paving, curbing, landscaping and all other necessary appurtenances in the Downtown area of Bellbrook. The City has previously commissioned a study to address the Streetscape of the downtown area including an emphasis on walkability and pedestrian safety. This project is designed to be one phase of several projects to fully implement the design and plans of the Streetscape Study.

### **4. Scope of Work**

4.1. The following is a list of provisions and requirements falling under the expected Scope of Work:

- a) Construction of mid-block crosswalks, repaving, curbing, landscaping, hardscaping, and all other necessary appurtenances in accordance to the Construction Documents contained herein as Attachment A

### **5. RFP Requirements:**

5.1. Submitting RFP Proposal packages:

- a) Offeror will submit a comprehensive and thorough written plan for construction of the crosswalks, repaving, curbing, landscaping, etc as detailed in the Construction Documents as referenced in Attachment A. Pricing must be listed on the proposal, and no sales tax should be included.

### **6. Evaluation of Proposals and Required Information**

6.1. Proposals submitted will be evaluated by the City Review and Selection Committee.

6.2. The Committee may call for oral interviews. The City reserves the right to retain all proposals submitted and use and idea in a proposal regardless of whether or

not said proposal is selected.

6.3. The evaluation factors considered in the selection process will weigh heavily into the City's decision making process. These evaluation requirements are considered to be minimum requirements. More points may be awarded for exceeding the minimum requirements.

## **7. Right to Reject Proposals**

7.1. Submission of proposals indicates acceptance by the Offering Firm of the Conditions contained in this RFP, unless clearly and specifically noted in the proposal submitted and confirmed in the subsequent Agreement between the City of Bellbrook and the selected firm.

7.2. The City of Bellbrook reserves the right to reject any or all proposals and to award to the proposer the City determines to be most qualified and whose award of the contract will be in the best interests of the City.

7.3. Late proposals will not be accepted. Offerors are held responsible that their proposals arrive at the City of Bellbrook on or before the designated date and time.

## **8. Withdrawal of Proposals**

8.1. Requests to withdraw proposals received after the date and time set for bid opening will not be considered. Only requests to withdraw proposals prior to that date and time will be considered.

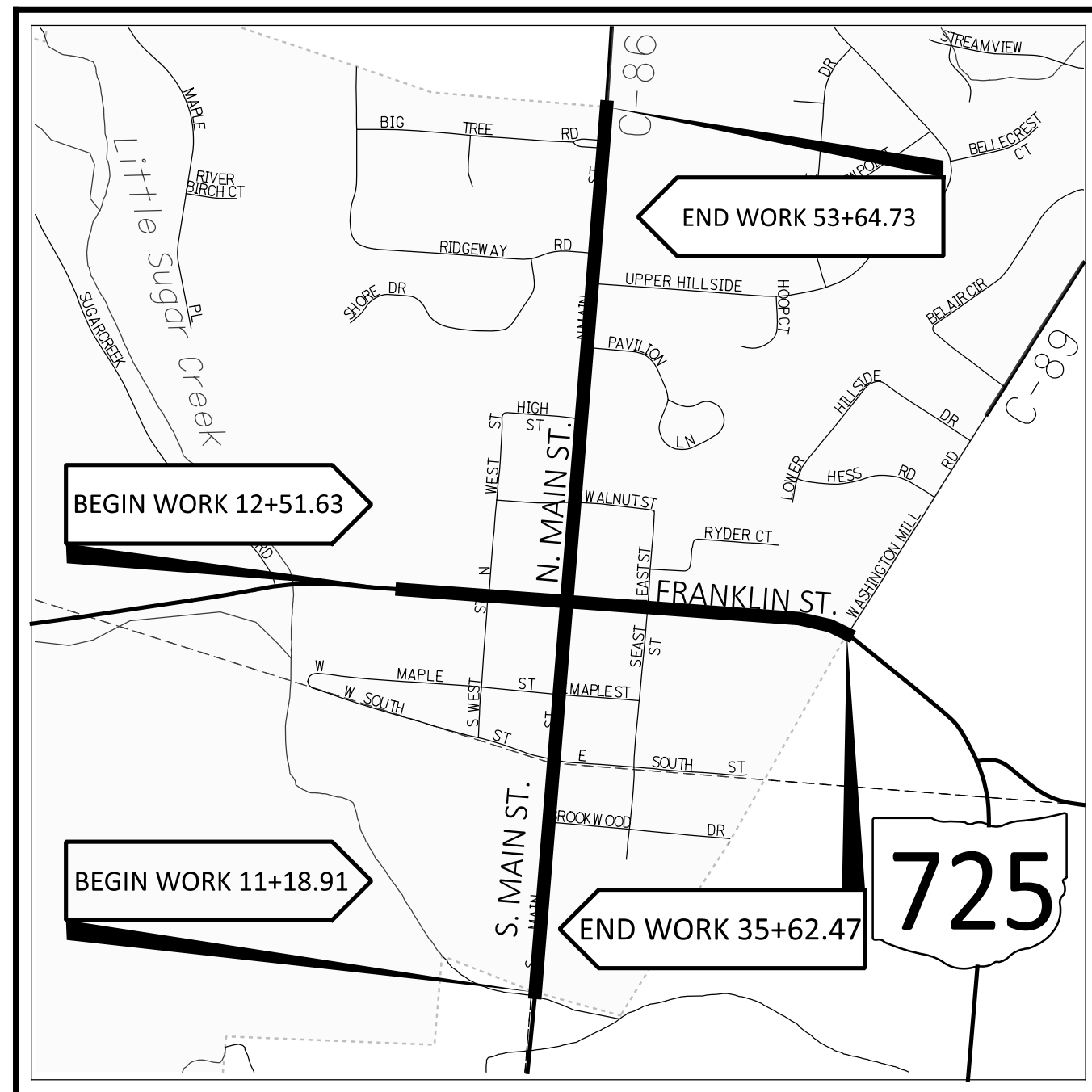
## **9. Contract Termination**

9.1. The City of Bellbrook reserves the right to terminate any subsequent Agreement or Contract as a result of this RFP if the Contractor does not perform as required by the Terms and Conditions therein.

\*\*\* END OF DOCUMENT \*\*\*



**ATTACHMENT A**



**LOCATION MAP**

LATITUDE: 39°38'10" LONGITUDE: -84°04'15"



|                         |       |
|-------------------------|-------|
| PORTION TO BE IMPROVED  | ————— |
| INTERSTATE HIGHWAY      | ————— |
| FEDERAL ROUTES          | ————— |
| STATE ROUTES            | ————— |
| COUNTY & TOWNSHIP ROADS | ————— |
| OTHER ROADS             | ————— |

**INDEX OF SHEETS:**

|                              |         |
|------------------------------|---------|
| TITLE SHEET                  | 1       |
| SCHEMATIC                    | 2       |
| TYPICAL SECTIONS             | 3 - 4   |
| GENERAL NOTES                | 5 - 6   |
| MAINTENANCE OF TRAFFIC       | 7       |
| GENERAL SUMMARY              | 8 - 9   |
| PLAN SHEETS                  | 10 - 23 |
| CURB BUMP OUT DETAILS        | 24 - 25 |
| INTERSECTION DETAILS         | 26 - 27 |
| TRAFFIC CONTROL              | 28 - 42 |
| LANDSCAPE ARCHITECTURE PLANS | 43 - 47 |

# FRANKLIN AND MAIN STREET IMPROVEMENTS

GREENE COUNTY  
CITY OF BELLBROOK

**FEDERAL PROJECT NUMBER**

N/A

**RAILROAD INVOLVEMENT**

N/A

**PROJECT DESCRIPTION**

THIS PROJECT WILL MILL AND OVERLAY APPROXIMATELY 2,400 FT OF FRANKLIN STREET AND 4,500 FT OF MAIN STREET WITHIN THE CITY'S DOWNTOWN CORE. SEVERAL EXISTING CURB RAMPS WITHIN THE LIMITS WILL BE IMPROVED TO MEET ADA REQUIREMENTS. ENHANCED CROSSWALKS WILL ALSO BE CONSTRUCTED AT A CROSSING ON FRANKLIN ST AND THE WALNUT ST AND MAIN ST INTERSECTION.

**EARTH DISTURBED AREAS**

|  |            |
|--|------------|
| PROJECT EARTH DISTURBED AREA:              | 0.25 ACRES |
| ESTIMATED CONTRACTOR EARTH DISTURBED AREA: | ACRES      |
| NOTICE OF INTENT EARTH DISTURBED AREA:     | N/A*       |

\* NOI NOT REQUIRED - PROJECT EDA < 1 ACRE

**2023 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

**UNDERGROUND UTILITIES**  
 Contact Two Working Days  
 Before You Dig

**OHIO811.org**  
 Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
 (Non members must be called directly)

PLAN PREPARED BY:

**LJB Inc.**  
 2500 Newmark Drive  
 Miamisburg, OH 45342  
 (866) 552-3536 | LJBinc.com

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ENGINEER'S SEAL

SHEETS 1-42

STATE OF OHIO  
 BRANT GRESSEL  
 E-87761  
 REGISTERED PROFESSIONAL ENGINEER

| STANDARD CONSTRUCTION DRAWINGS |          |          |         | SUPPLEMENTAL SPECIFICATIONS | SPECIAL PROVISIONS |
|--------------------------------|----------|----------|---------|-----------------------------|--------------------|
| BP-3.1                         | 1/21/22  | TC-71.10 | 4/21/23 | 800-2023 7/21/2023          |                    |
| BP-5.1                         | 7/15/22  | TC-74.10 | 1/20/23 | 832 7/15/22                 |                    |
| BP-7.1                         | 1/20/23  | TC-87.10 | 7/21/23 |                             |                    |
| CB-3                           | 7/16/21  |          |         |                             |                    |
| DM-1.1                         | 7/17/20  |          |         |                             |                    |
| MT-95.61                       | 4/19/19  |          |         |                             |                    |
| MT-97.11                       | 1/20/17  |          |         |                             |                    |
| MT-99.20                       | 4/19/19  |          |         |                             |                    |
| TC-41.20                       | 10/18/13 |          |         |                             |                    |
| TC-42.20                       | 10/18/13 |          |         |                             |                    |
| TC-52.10                       | 10/18/13 |          |         |                             |                    |
| TC-52.20                       | 1/15/21  |          |         |                             |                    |

APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_ ROB SCHOMMER, BELLBROOK CITY MANAGER

DESIGN AGENCY



|            |              |
|------------|--------------|
| DESIGNER   | DEA          |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 1          | 47           |

PROJECT CONTROL COORDINATES

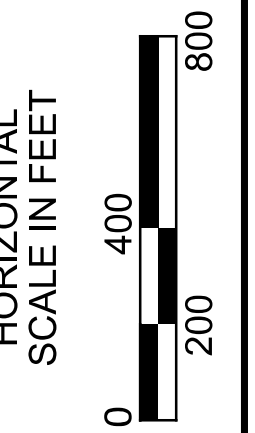
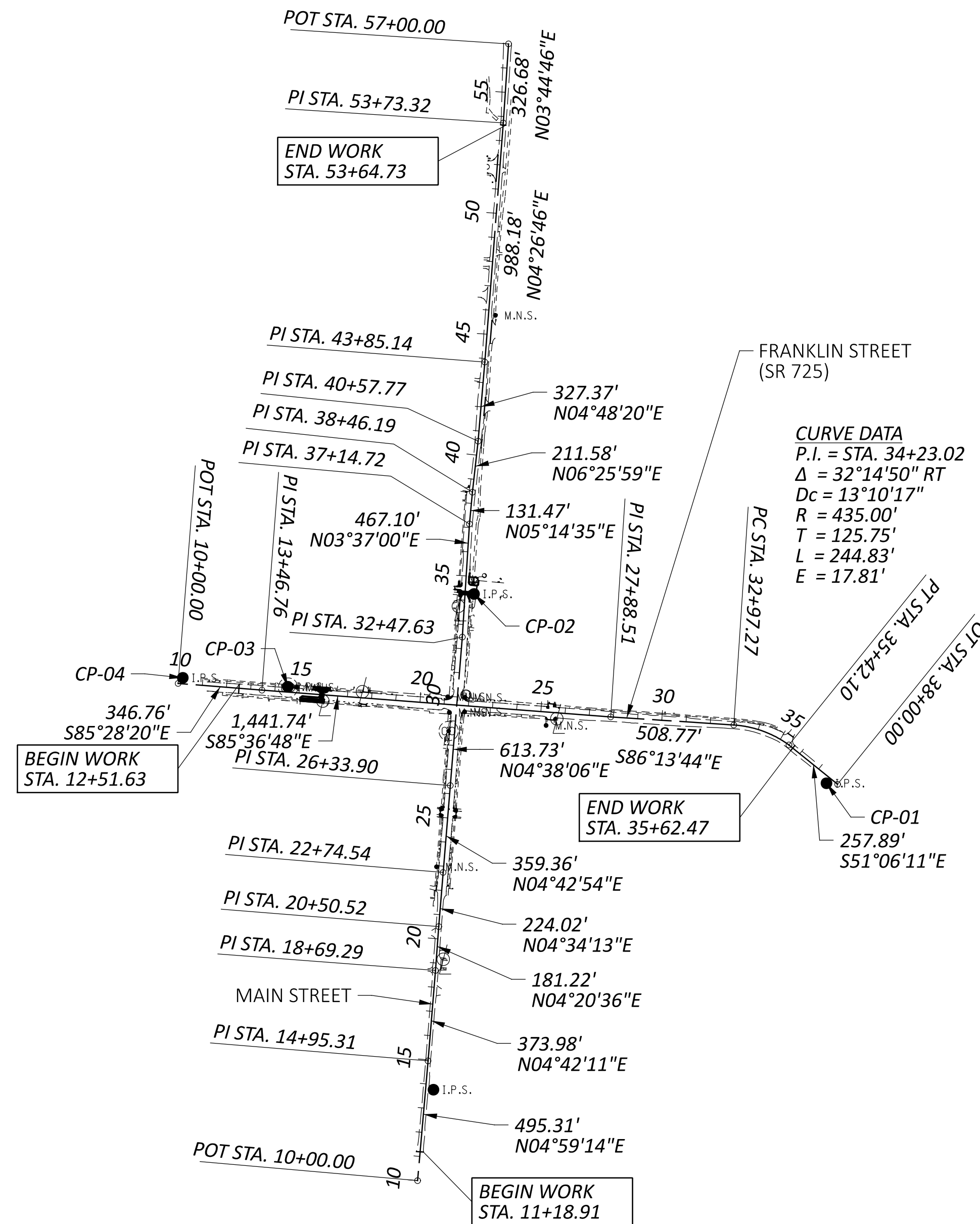
| POINT NO. | GRID      |            | GROUND    |            | ELEVATION | DESCRIPTION     |
|-----------|-----------|------------|-----------|------------|-----------|-----------------|
|           | NORTHING  | EASTING    | NORTHING  | EASTING    |           |                 |
| CP1       | 599391.20 | 1527676.12 | 599391.16 | 1527676.24 | 766.55    | 3"LJB CTRL Disk |
| CP2       | 600171.20 | 1526223.43 | 600171.23 | 1526223.43 | 798.10    | 3"LJB CTRL Disk |
| CP3       | 598128.26 | 1526056.03 | 598128.11 | 1526056.02 | 772.54    | 3"LJB CTRL Disk |
| CP4       | 599825.69 | 1525022.71 | 599825.69 | 125022.61  | 792.92    | 3"LJB CTRL Disk |

PROJECT CENTERLINE COORDINATES - GROUND

| NORTHING   | EASTING     | STATION  | DESCRIPTION |
|------------|-------------|----------|-------------|
| 599802.381 | 1525003.275 | 10+00.00 | POT         |
| 599775.006 | 1525348.958 | 13+46.76 | PI          |
| 599664.732 | 1526786.477 | 27+88.51 | PI          |
| 599631.269 | 1527294.142 | 32+97.27 | PC          |
| 599622.998 | 1527419.620 | 34+23.02 | PI          |
| 599549.051 | 1527521.331 | 35+42.10 | PT          |
| 599387.114 | 1527722.045 | 38+00.00 | POT         |

PROJECT CENTERLINE COORDINATES - GROUND

| NORTHING   | EASTING     | STATION  | DESCRIPTION |
|------------|-------------|----------|-------------|
| 597753.572 | 1525990.491 | 10+00.00 | POT         |
| 598247.006 | 1526033.550 | 14+95.31 | PI          |
| 598619.73  | 1526064.214 | 18+69.29 | PI          |
| 598800.432 | 1526077.938 | 20+50.52 | PI          |
| 599023.743 | 1526095.789 | 22+74.54 | PI          |
| 599381.89  | 1526125.328 | 26+33.90 | PI          |
| 599993.609 | 1526174.922 | 32+47.63 | PI          |
| 600459.775 | 1526204.386 | 37+14.72 | PI          |
| 600590.694 | 1526216.4   | 38+46.19 | PI          |
| 600800.943 | 1526240.106 | 40+57.77 | PI          |
| 601127.16  | 1526267.53  | 43+85.14 | PI          |
| 602112.368 | 1526344.137 | 53+73.32 | PI          |



SCHEMATIC

DESIGN AGENCY



|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 2          | 47           |

**LEGEND**

- |   |   |    |  |
|---|---|----|--|
| 1 | ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 | 8  | ITEM 608 - 4" CONCRETE WALK  |
| 2 | ITEM 407 - NON-TRACKING TACK COAT (APPLIED AT 0.055 GAL/SY)               | 9  | ITEM 609 - CURB, TYPE 6  |
| 3 | ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22, (449)                       | 10 | ITEM 659 - SEEDING AND MULCHING  |
| 4 | ITEM 304 - 8" AGGREGATE BASE (PLACED IN TWO EQUAL COURSES)                | 11 | ITEM 204 - SUBGRADE COMPACTION   |
| 5 | ITEM 441 - 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)     | 12 | ITEM 608 - WALKWAY, MISC: SIDEWALK PAVERS (SEE GENERAL NOTES, SHEET 5) |
| 6 | ITEM 407 - NON-TRACKING TACK COAT (APPLIED AT 0.085 GAL/SY)               | 13 | ITEM 611 - SPECIAL - TRENCH DRAIN (SEE GENERAL NOTES, SHEET 5)         |
| 7 | ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1 1/2")                    |    |  |

- |   |                          |
|---|--------------------------|
| A | EXISTING PAVEMENT        |
| B | EXISTING CURB            |
| C | EXISTING CURB AND GUTTER |
| D | EXISTING WALK            |

A MATCH EXISTING BACK OF WALK

D THE EXISTING PAVEMENT EDGES SHALL BE SAW CUT EITHER 1 FT INTO THE EXISTING PAVEMENT OR 2 FT FROM THE PROPOSED CURB, WHICHEVER IS GREATER, TO LOCATE A SOUND PAVEMENT EDGE. FOR ESTIMATING PURPOSES, QUANTITIES INCLUDED IN THE PLAN INDICATE AN AVERAGE WIDTH OF 1 FT OF EXISTING PAVEMENT BEING REPLACED.

F ASPHALT CURB

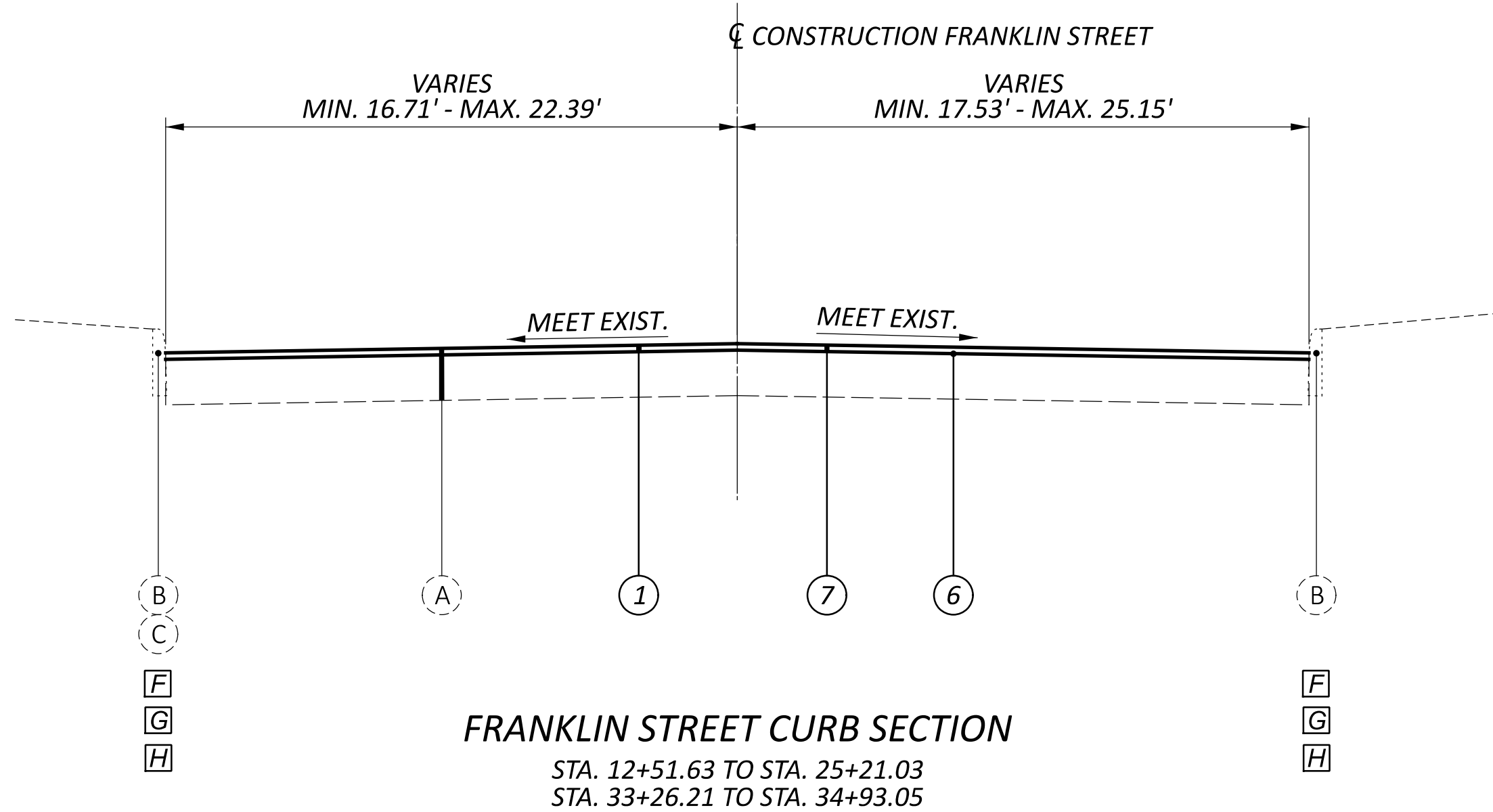
STA. 12+51.63 LT TO 17+85.78 LT  
 STA. 12+51.63 RT TO 14+22.10 RT  
 STA. 16+25.66 RT TO 19+60.35 RT

G BARRIER CURB

STA. 14+22.10 RT TO 16+25.66 RT  
 STA. 17+85.78 LT TO 25+21.03 LT  
 STA. 19+60.35 RT TO 25+21.03 RT

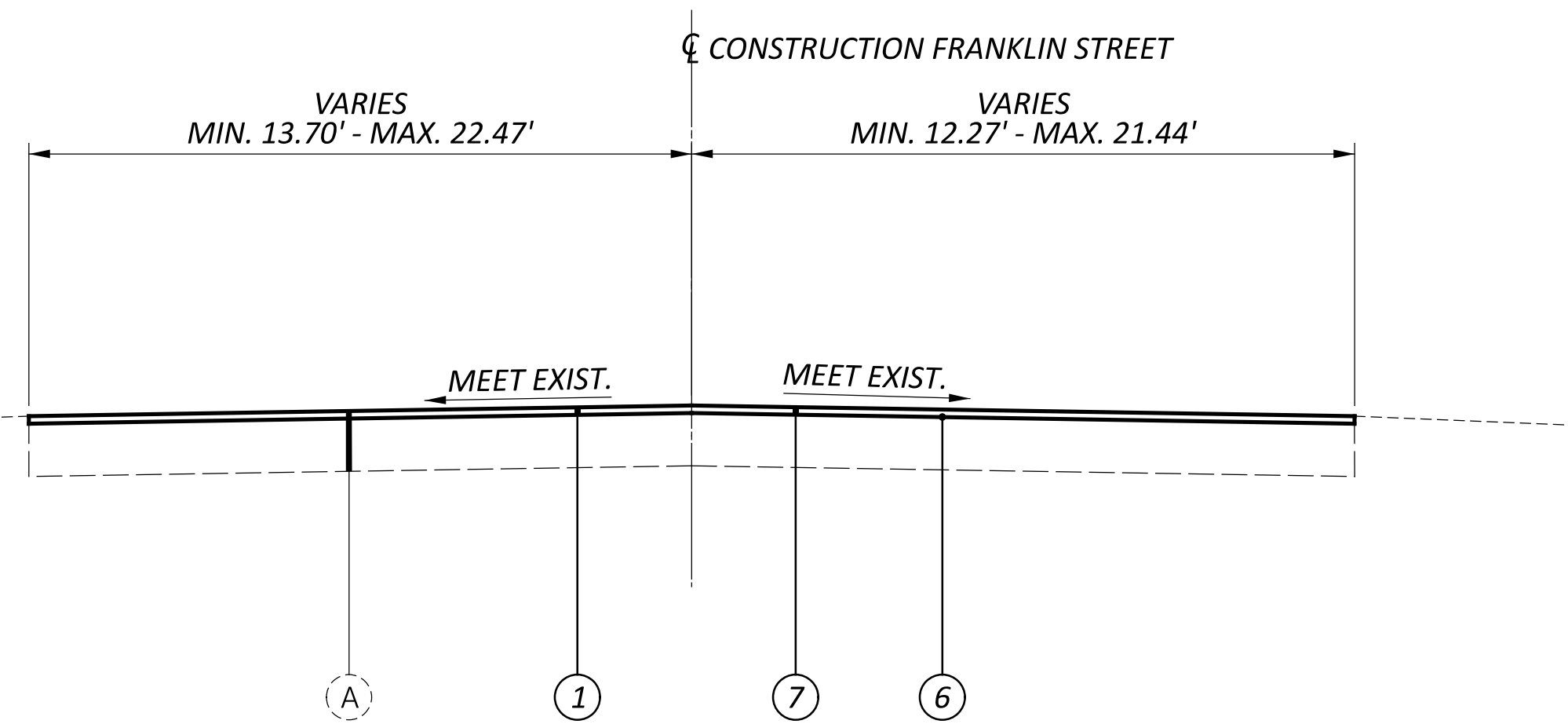
H CURB AND GUTTER

STA. 33+26.21 LT TO STA. 34+93.05 LT



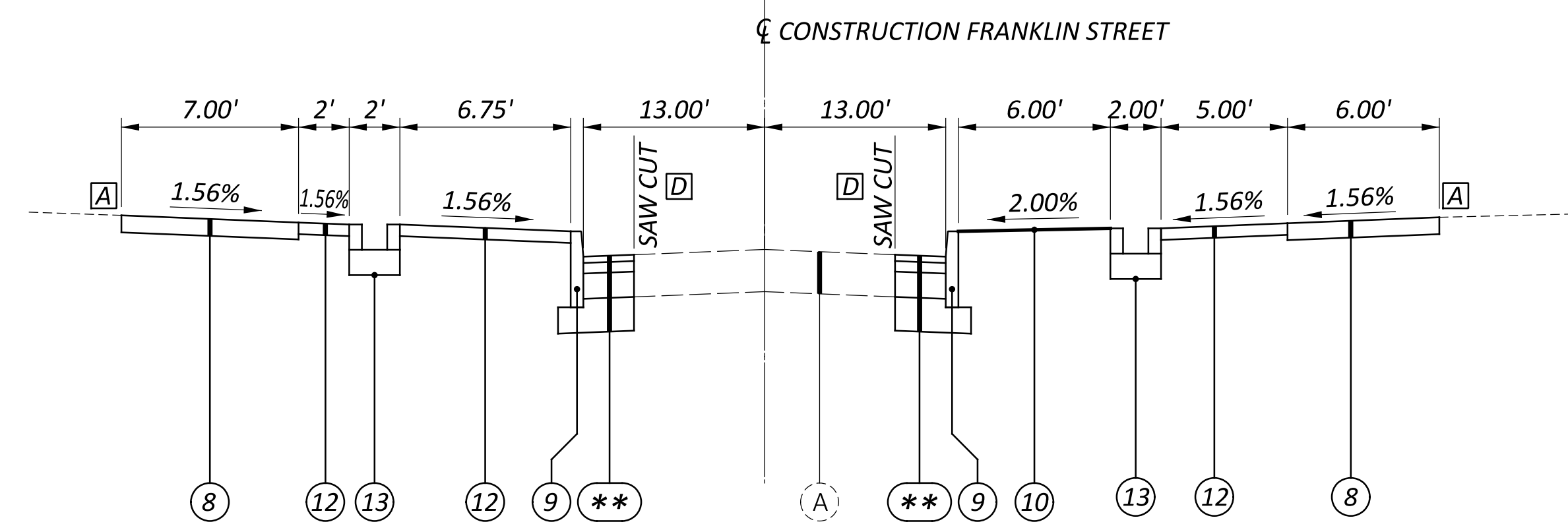
**FRANKLIN STREET CURB SECTION**

STA. 12+51.63 TO STA. 25+21.03  
 STA. 33+26.21 TO STA. 34+93.05



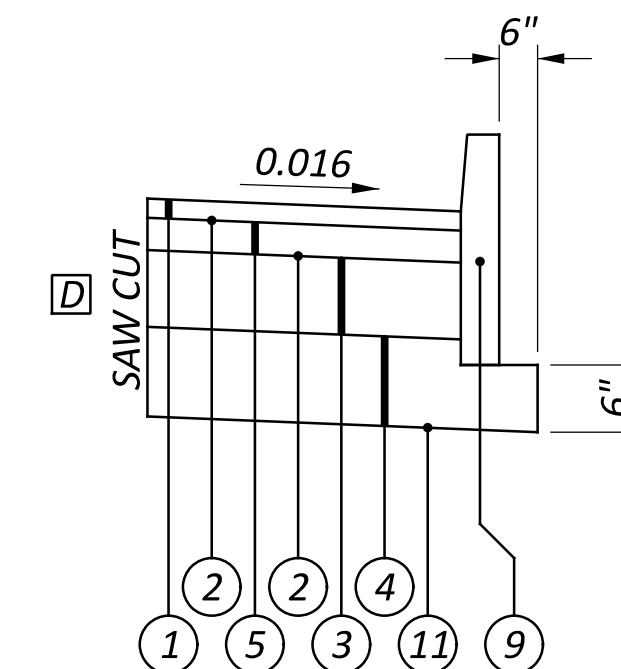
**FRANKLIN STREET UNCURBED SECTION**

STA. 25+21.03 TO STA. 33+26.21  
 STA. 34+93.05 TO STA. 35+62.50



**FRANKLIN STREET CURB BUMP OUT (SEE SHEET 24)**

STA. 15+07.08 RT TO STA. 16+04.58 RT  
 STA. 15+55.49 LT TO STA. 16+31.09 LT



\*\* FULL DEPTH PAVEMENT BUILD UP DETAIL  
 (NOT TO SCALE)

DESIGN AGENCY



DESIGNER

JMD

REVIEWER

BMG 07/19/23

PROJECT ID

125940

SHEET

3

TOTAL

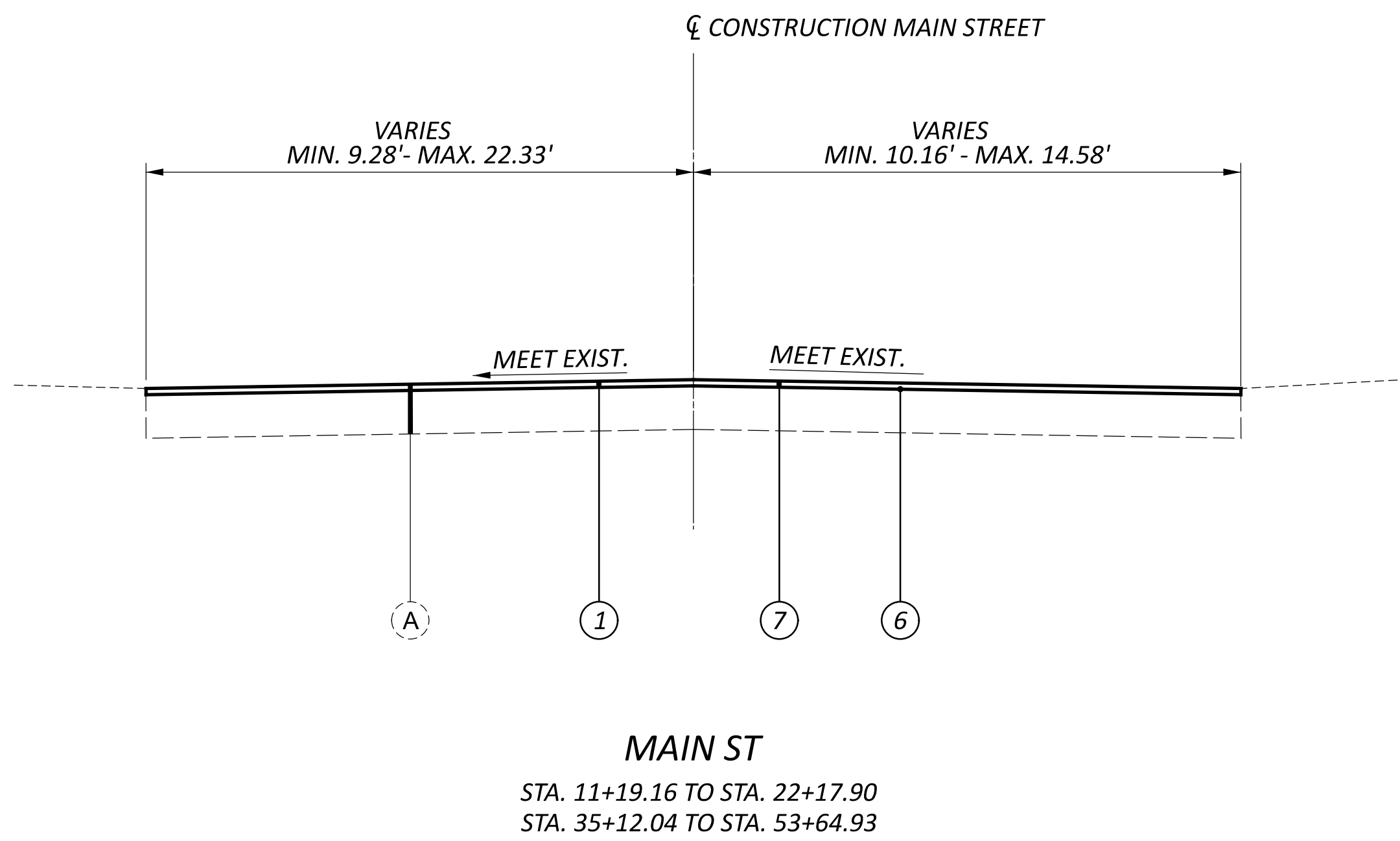
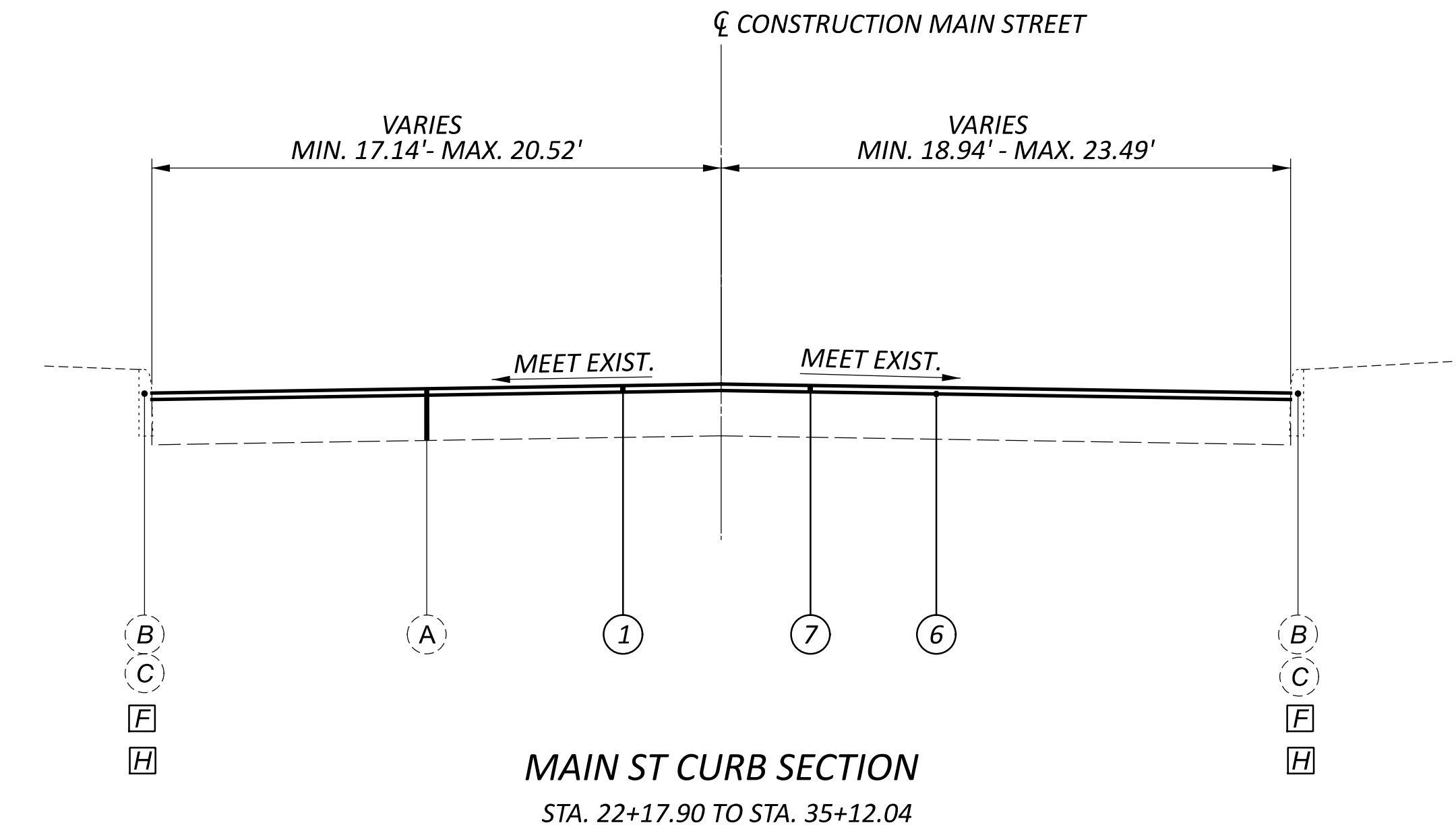
47

**F** ASPHALT CURB

STA. 11+19.39 TO 22+18.08  
 STA. 34+33.97 TO 53+73.32

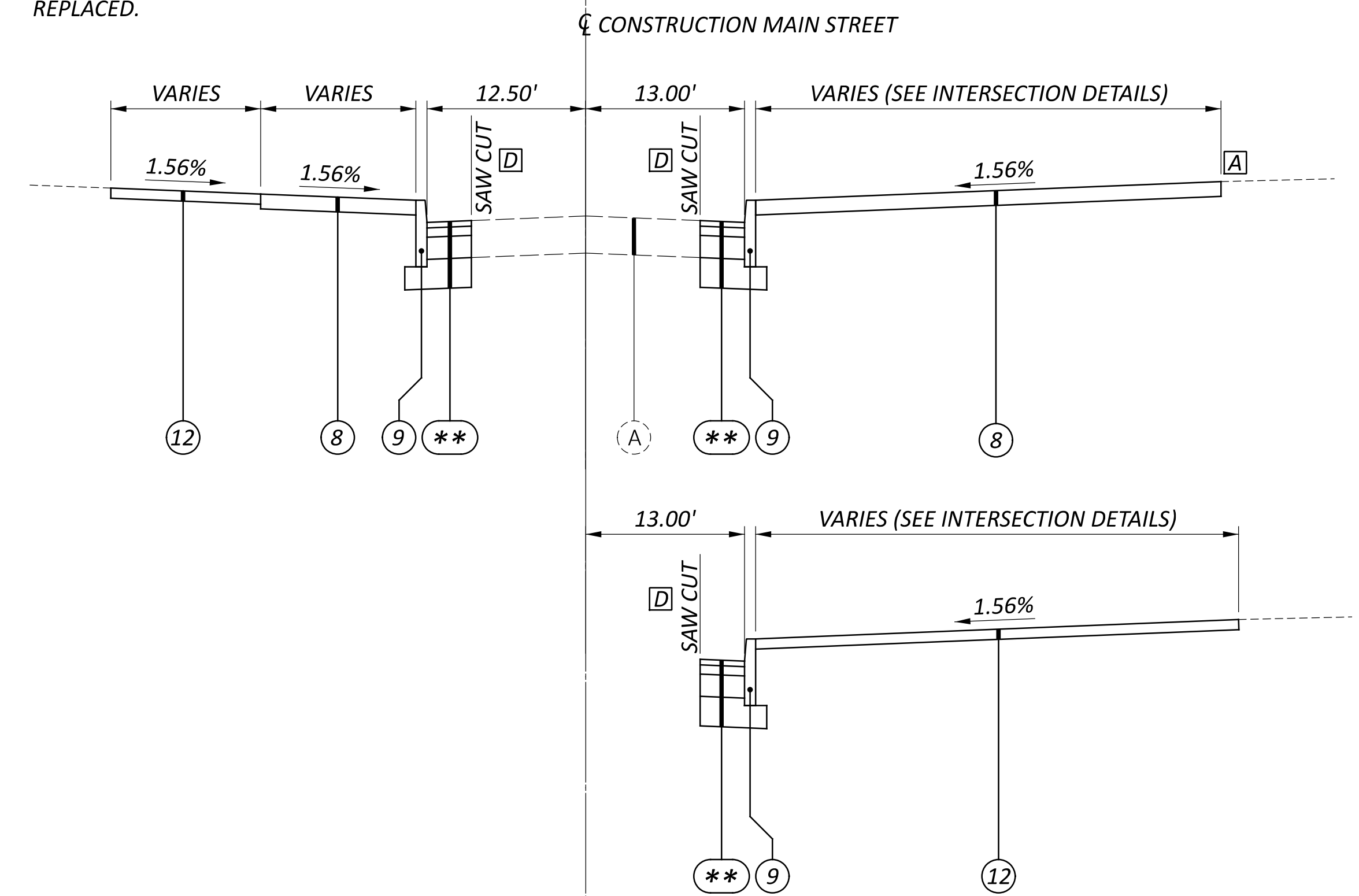
**H** CURB AND GUTTER

STA. 22+18.08 TO STA. 34+33.97



**D** THE EXISTING PAVEMENT EDGES SHALL BE SAW CUT EITHER 1 FT INTO THE EXISTING PAVEMENT OR 2 FT FROM THE PROPOSED CURB, WHICHEVER IS GREATER, TO LOCATE A SOUND PAVEMENT EDGE. FOR ESTIMATING PURPOSES, QUANTITIES INCLUDED IN THE PLAN INDICATE AN AVERAGE WIDTH OF 1 FT OF EXISTING PAVEMENT BEING REPLACED.

**A** MATCH EXISTING BACK OF WALK



TYPICAL SECTIONS

DESIGN AGENCY



DESIGNER

JMD

REVIEWER

BMG 07/19/23

PROJECT ID

125940

SHEET TOTAL

4 47



**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

**GAS:**  
CENTERPOINT ENERGY COMPANY (DISTRIBUTION)  
KELLY SPURLOCK  
6500 CLYO RD.  
CENTERVILLE, OH 45459  
937-291-7116  
KELLY.SPURLOCK@CENTERPOINTENERGY.COM

CENTERPOINT ENERGY COMPANY (TRANSMISSION)  
NICK DEARING  
6500 CLYO RD.  
CENTERVILLE, OH 45459  
765-648-3246  
NICHOLAS.DEARING@CENTERPOINTENERGY.COM

**ELECTRIC:**  
AES OHIO  
WILLIAM WARD  
1900 DRYDEN RD.  
DAYTON, OH 45439  
937-554-9063  
WILLIAM.WARD@AES.COM

**WATER:**  
CITY OF BELLBROOK  
RYAN PASLEY  
15 EAST FRANKLIN ST.  
BELLBROOK, OH 45305  
937-296-3588  
R.PASLEY@CITYOFBELLBROOK.ORG

GREENE COUNTY SANITARY ENGINEERS  
667 DAYTON-XENIA RD.  
XENIA, OH 45385  
937-562-7461  
SED\_PED@GREENECOUNTYOHI.OV

**SANITARY:**  
GREENE COUNTY SANITARY ENGINEERS  
667 DAYTON-XENIA RD.  
XENIA, OH 45385  
937-562-7461  
SED\_PED@GREENECOUNTYOHI.OV

**TELECOMM:**  
AT&T - OHIO  
HOWARD LAUDERMILK  
3233 WOODMAN DR.  
DAYTON, OH 45420  
937-296-3588  
HL1596@ATT.COM

CHARTER COMMUNICATIONS  
TARA WILLIAMSON  
3691 TURNER RD.  
DAYTON, OH 45415  
937-425-6854  
TARA.WILLIAMSON@CHARTER.COM

**LUMEN**  
TERRY SPAW  
9490 MERIDIAN WAY  
WEST CHESTER, OH 45069  
513-615-2282  
TERRY.SPAW@LUMEN.COM

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

**PROJECT CONTROL**

POSITIONING METHOD: ODOT VRS

**VERTICAL POSITIONING**

ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEIOD 18 (CONUS)

**HORIZONTAL POSITIONING**

ELLIPSOID: 804.5'  
COMBINED SCALE FACTOR: 0.999912288

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

**FULL DEPTH PAVEMENT AND SIDEWALK REPAIR**

THE ENGINEER/INSPECTOR SHALL COMPELTE A FIELD VERIFICATION OF THE EXISTING ASPHALT PAVEMENT AND CONCRETE SIDEWALK TO DETERMINE THE AMOUNT OF FULL DEPTH AND SIDEWALK REPAIR NEEDED. THE PAVEMENT BUILDUP FOR FULL DEPTH PAVEMENT REPAIR SHALL MATCH THE FULL DEPTH PAVEMENT BUILDUP SHOWN ON THE TYPICAL SECTIONS ON SHEET 2.

THE FOLLOWING QUANTITIES SHALL BE USED, AT THE DISCRETION OF THE ENGINEER/INSPECTOR, AS REPLACEMENT FOR PAVEMENT AND/OR SIDEWALK IN POOR CONDITION.

|   |         |
|---|---------|
| ITEM 253 - PAVEMENT REPAIR, AS PER PLAN | 400 SY  |
| ITEM 608 - 4" CONCRETE WALK             | 1180 SF |

**CONSTRUCTION LIMITS**

THE CONSTRUCTION LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE CONSTRUCTION LIMITS.

ADDITIONALLY, CONSTRUCTION LIMITS FOR AREAS OUTSIDE OF CURB BUMP OUTS AND CURB RAMP REPLACEMENTS SHALL BE LIMITED TO THE EDGE OF PAVEMENT, FACE OF CURB AND/OR FACE OF GUTTER PLATE. EXACT CONSTRUCTION LIMIT LINES ARE NOT SHOWN WITHIN AREAS OF RESURFACING, FOR CLARITY.

**CLEARING AND GRUBBING**

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

| SIZES | NO. TREES | NO. STUMPS | TOTAL |
|-------|-----------|------------|-------|
| 18"   | 1         | 0          | 1     |

**ITEM 608 - DETECTABLE WARNING, AS PER PLAN**

REMOVE EXISTING BRICK DETECTABLE WARNING AND REPLACE WITH BRICK RED DETECTABLE WARNING PADS, AS SUPPLIED BY ADA SOLUTIONS OR APPROVED EQUAL. FOLLOW SPECIFICATIONS OUTLINED IN ODOT CMS SECTION 608.07. ALL LABOR AND MATERIAL REQUIRED TO REMOVE EXISTING DETECTABLE WARNINGS AND INSTALL NEW DETECTABLE WARNINGS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR ITEM 608 - DETECTABLE WARNING, AS PER PLAN.

**ITEM 608 - WALKWAY, MISC: SIDEWALK PAVERS**

PAVING BRICK PAVER SHALL BE NOMINALLY 4" X 8" X 2 1/4" BRICK, SOLID (UNCORED) COMPLYING WITH REQUIREMENTS OF ASTM C902, CLASS SX, TYPE I STANDARD SPECIFICATIONS FOR PEDESTRIAN AND LIGHT TRAFFIC.

FINAL PAVER APPROVAL SHALL BE MADE ON SITE. CONTRACTOR SHALL PERFORM MOCKUP WITH A FIELD SAMPLE FOR REVIEW AND APPROVAL OF PAVERS PRIOR TO INSTALLATION OF UNIT PAVERS. THE FOLLOWING COLOR SHOULD BE USED IN PAVER INSTALLATION:

"LIGHT COLOR" - "CLEAR RED (RUSTIC) #30" PER WG, OR APPROVED EQUAL.

WG = WHITAKER GREER PAVERING BRICK CO., 1400 S. MAHONING AVE., AFFIANCE, OH 44601, 800-947-2837

**BITUMINOUS SETTING-BED MATERIALS**

PRIMER FOR BASE: ASTM D 2028/D 2028M, CUTBACK ASPHALT, GRADE AS RECOMMENDED BY UNIT PAVER MANUFACTURER.

FINE AGGREGATE FOR SETTING BED: ASTM D 1073, NO. 2 OR NO. 3

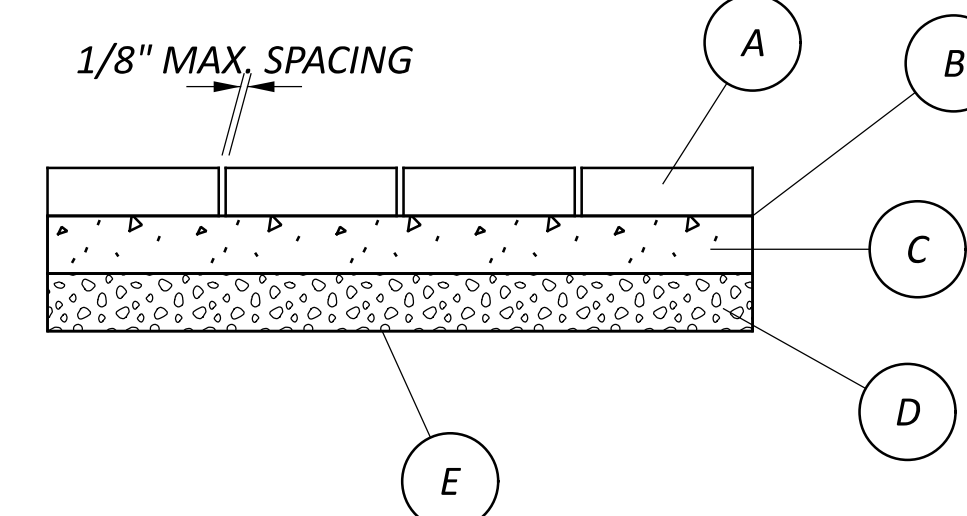
ASPHALT CEMENT: ASTM D 3381/D 3381M, VISCOSITY GRADE AC-10 OR GRADE AC-20

NEOPRENE MODIFIED ASPHALT ADHESIVE: PAVING MANUFACTURER'S STANDARD ADHESIVE CONSISTING OF OXIDIZED ASPHALT COMBINED WITH 2 PERCENT NEOPRENE AND 10 PERCENT LONG-FIBERED MINERAL FIBERS CONTAINING NO ASBESTOS

SAND FOR JOINTS: POLYMERIC SAND: FINE, SHARP, WASHED, NATURAL SAND OR CRUSHED STONE WITH 100 PERCENT PASSING NO. 16 SIEVE ADN NO MORE THAN 10 PERCENT PASSING NO. 200 SIEVE, MIXED WITH POLYMERS FOR PAVEMENT JOINT STABILIZATION.

1. PROVIDE SAND OF COLOR NEEDED TO PRODUCE REQUIRED JOINT COLOR.

MIX BITUNIMOUS SETTING-BED MATERIALS AT AN ASPHALT PLANT IN APPROXIMATE PROPORTION, BY WEIGHT, OF 7 PERCENT ASPHALT CEMENT TO 93 PERCENT FINE AGGREGATE UNLESS OTHERWISE INDICATED. HEAT MIXTURE TO 300 DEGREES F.



NOTES:

- (A) PAVERS
- (B) 3/4" BITUMINOUS SETTING-BED
- (C) 4" ITEM 452 - NON-REINFORCED CONCRETE
- (D) 4" ITEM 304 - AGGREGATE BASE
- (E) COMPACTED SUBGRADE PER 204.03

**ITEM 611 - SPECIAL - TRENCH DRAIN**

FURNISH AND CONSTRUCT A TRENCH DRAIN SYSTEM, TO CONVEY STORM WATER THROUGH PROPOSED CURB BUMP OUTS SHOWN ON SHEETS 24 AND 25. THE TRENCH DRAIN SYSTEM SHALL BE A NEENAH FOUNDRY 4990-FX, WITH RIVERWALK GRATE, OR APPROVED EQUAL. ALL LABOR AND MATERIALS NEEDED TO CONSTRUCT THE TRENCH DRAINS IDENTIFIED IN THE PLANS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR ITEM 611 - SPECIAL - TRENCH DRAIN.

**ITEM 661 - SPECIAL - LANDSCAPING**

LANDSCAPE ARCHITECTURE AND AESTHETICS PLANS ARE SHOWN ON SHEETS 43 TO 47. ALL LABOR AND MATERIALS TO PERFORM THE WORK OUTLINED IN THESE PLANS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR THIS ITEM.

WORK SHOWN ON SHEET 44 SHALL BE BID SEPARATE AND INCLUDED WITH THE ALTERNATE BID QUANTITIES SHOWN ON SHEET 9.

AN ITEMIZED LIST OF PLANTS, SHRUBS, BOULDERS, BIKE RACKS AND OTHER MISCENALLEOUS ITEMS, CAN BE FOUND ON SHEETS 43 AND 44. THESE ITEMS SHOULD ALL BE INLCUDED IN THE CONTRACT UNIT BID PRICE FOR ITEM 661 - SPECIAL - LANDSCAPING.

**ALTERNATE BID - WALNUT AND MAIN STREET CURB BUMP OUT**

THE CURB BUMP OUT WORK SHOWN ON SHEET 25, AT THE WALNUT AND MAIN STREET INTERSECTION, SHALL BE INCLUDED IN THE PROJECT BID PACKAGE AS AN ALTERNATE BID. THE CITY OF BELLBROOK RESERVES THE RIGHT TO AWARD THE PROJECT AND REJECT THE ALTERNATE BID FOR THIS WORK.

IN THE EVENT THE ALTERNATE BID IS NOT AWARDED, RESURFACING AND PLACEMENT OF PAVEMENT MARKINGS SHALL REMAIN A PART OF THE MAIN PROJECT, TO THE LIMITS SHOWN ON THE PLANS.

DESIGN AGENCY



DESIGNER

ASN

REVIEWER

BMG 07/19/23

PROJECT ID

125940

SHEET

5

TOTAL

47



**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

**1.2 RELATED SECTIONS**

1. SECTION {321216} - "ASPHALT PAVING" FOR NEW ASPHALT PAVEMENT.

2. SECTION {321723} PLASTIC PAVEMENT MARKINGS

**1.3 SUMMARY**

A. DECORATIVE IMPRESSED ASPHALT SHALL CONSIST OF A DURABLE IMPRESSED AGGREGATE REINFORCED PREFORMED THERMOPLASTIC PAVEMENT MARKING SYSTEM (HEREIN "SYSTEM") THAT PROVIDES A TEXTURED, HIGHLY ATTRACTIVE AND DURABLE TOPICAL TREATMENT TO THE SURFACE OF THE ASPHALT PAVEMENT.

B. THE SYSTEM IS INTENDED FOR USE ON ASPHALT PAVEMENTS TO CREATE TRAFFIC CALMING SOLUTIONS FOR DECORATIVE CROSSWALKS, MEDIANS, AND INTERSECTIONS. IT IS APPLIED OVER PAVEMENT TO CREATE FUNCTIONAL AND DECORATIVE CROSSWALKS AND INTERSECTIONS, AS SHOWN ON THE CONTRACT DRAWINGS.

C. ALL SYSTEM MATERIALS SHALL BE PRODUCED UNDER A QUALITY SYSTEM AS SPECIFIED IN THIS SECTION AND DESIGNED TO PROVIDE DURABILITY, LOAD CARRYING CAPACITY AND ARCHITECTURAL COMPATIBILITY WITH THE ENVIRONMENT. ALL RAW MATERIALS SHALL BE CAREFULLY GRADED FOR CONSISTENCY AND QUALITY TO OBTAIN THE HIGHEST STANDARDS.

D. THE SYSTEM SHALL BE INSTALLED TO THE EXISTING SUBSTRATE.

E. ONLY ACCREDITED DECORATIVE IMPRESSED ASPHALT SYSTEM INSTALLERS AUTHORIZED BY THE MANUFACTURERS OF THE DECORATIVE IMPRESSED ASPHALT PRODUCT MAY PERFORM THIS WORK.

**1.4 UNIT PRICES**

A. WORK OF THIS SECTION IS BASED ON LABOR AND MATERIALS PER PROJECT.

B. METHOD OF MEASUREMENT: THE WORK WILL BE MEASURED BY THE INSTALLED AREA OF SQUARE FEET, MEASURED AND ACCEPTED IN PLACE. NO DEDUCTION WILL BE MADE FOR THE AREA(S) OCCUPIED BY MANHOLES, INLETS, DRAINAGE STRUCTURES, BOLLARDS OR BY ANY PUBLIC UTILITY APPURTENANCES WITHIN THE AREA.

C. BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR "DECORATIVE IMPRESSED ASPHALT PAVEMENT MARKING" AND ACCEPTED IN PLACE. PRICE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, TOOLS AND LABOR INCIDENTAL THERETO. THERE WILL BE NO DIRECT PAYMENT FOR SURFACE PREPARATION; BUT THE COST OF THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE GENERAL COST OF THE WORK.

**1.5 PREINSTALLATION MEETINGS**

A. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE (INSERT LOCATION).

B. CONFERENCE SHALL CONSIST OF OWNER, OWNERS REPRESENTATIVE, ENGINEER, LANDSCAPE ARCHITECT, CERTIFIED APPLICATOR, MANUFACTURER'S REPRESENTATIVE.

**1.6 DEFINITIONS**

A. "HMA PAVEMENT" IS HOT MIX ASPHALT PAVEMENT.

B. "PCC PAVEMENT" IS PORTLAND CEMENT CONCRETE PAVEMENT.

C. "OWNER" MEANS THE OWNER AND REFERS TO THE REPRESENTATIVE PERSON OF THE CERTIFIED APPLICATOR WHO HAS DECISION MAKING AUTHORITY FOR THE WORK.

D. "ACCREDITED INSTALLER" REFERS TO A CONTRACTOR AUTHORIZED BY THE SYSTEM MANUFACTURER TO INSTALL THE DECORATIVE IMPRESSED ASPHALT (SYSTEM).

**1.7 SUBMITTALS**

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT PER MANUFACTURER'S OFFERING.

B. MANUFACTURER DATA: SYSTEM TYPE AND PRODUCT TYPE

C. SAMPLES FOR INITIAL SELECTION: FOR EACH TYPE OF PRODUCT REQUIRING COLOR SELECTION. SAMPLES FOR VERIFICATION: FOR EACH PATTERN AND COLOR IN MANUFACTURER'S STANDARD SIZES.

D. THE ACCREDITED INSTALLER SHALL PROVIDE WRITTEN PROOF OF THEIR ACCREDITATION.

E. THE ACCREDITED INSTALLER SHALL GAIN CONFIRMATION OF CORRECT STAMPING PATTERN(S) AND COLORS FROM THE CITY OF BELLBROOK PRIOR TO STARTING THE WORK.

F. THE ACCREDITED INSTALLER SHALL SUPPLY THREE REFERENCES OF WORK OF A SIMILAR NATURE PROVIDED TO THE CITY OF BELLBROOK WITHIN THE STATE OF OHIO.

G. CONSTRUCTION OF MOCK-UP (SHALL BE A MINIMUM OF A 6'X6' SECTION FOR EACH COLOR AND STAMP PATTERN SPECIFIED).

H. THE SYSTEM MANUFACTURER MUST BE ISO9001:2015 CERTIFIED FOR DESIGN, DEVELOPMENT AND MANUFACTURING OF PREFORMED THERMOPLASTIC, AND PROVIDE PROOF OF CURRENT CERTIFICATION.

I. SHOP DRAWINGS: INDICATE IMPRESSED PATTERNS, COLORS, AND DIMENSIONS TO ADJACENT WORK

**1.8 QUALITY ASSURANCE**

A. INSTALLER QUALIFICATIONS: IMPRESSED-ASPHALT MANUFACTURER'S AUTHORIZED INSTALLER WHO IS TRAINED AND APPROVED FOR INSTALLATION OF IMPRESSED ASPHALT REQUIRED FOR THIS PROJECT.

B. REGULATORY REQUIREMENTS: COMPLY WITH MATERIALS, WORKMANSHIP, AND OTHER APPLICABLE REQUIREMENTS OF THE ODOT CMS FOR IMPRESSED ASPHALT WORK.

1. MEASUREMENT AND PAYMENT PROVISIONS AND SAFETY PROGRAM SUBMITTALS INCLUDED IN STANDARD SPECIFICATIONS DO NOT APPLY TO THIS SECTION.

**1.9 FIELD CONDITIONS**

A. ENVIRONMENTAL LIMITATIONS: PROCEED WITH IMPRESSED PAVEMENT ONLY WHEN AIR TEMPERATURE IS AT LEAST 45 DEG F (7.2 DEG C) AND RISING. PROCEED ONLY IF NO PRECIPITATION IS EXPECTED. ENSURE THERE IS NO MOISTURE IN THE SUBSTRATE PRIOR TO APPLICATION. GROUND SHOULD NOT HAVE ANY FROST OR MOISTURE PRESENT. HIGH WINDS COULD ALSO AFFECT THE INSTALLATION OF THE IMPRESSED MATERIAL.

**PART 2 - PRODUCTS****2.1 MATERIALS**

A. MANUFACTURER - BASIS OF DESIGN ENNIS-FLINT, INC. TRAFFICPATTERNSXD@IMPRESSED SURFACE SYSTEM  
1. CONTACT WWW.ENNISFLINTAMERICAS.COM

**B. DECORATIVE IMPRESSED ASPHALT MATERIAL**

1. PREFORMED THERMOPLASTIC MATERIAL: MUST BE COMPOSED OF AN ESTER MODIFIED ROSIN IMPERVIOUS TO DEGRADATION BY MOTOR FUELS, LUBRICANTS, ETC. IN CONJUNCTION WITH AGGREGATES, PIGMENTS, BINDERS, AND ANTI-SKID/ANTI-SLIP ELEMENTS. PIGMENTS AND ANTI-SKID/ANTI-SLIP ELEMENTS MUST BE UNIFORMLY DISTRIBUTED THROUGHOUT THE MATERIAL. THE MATERIAL CONFORMS TO AASHTO DESIGNATION M249, WITH THE EXCEPTION OF THE RELEVANT DIFFERENCES DUE TO THE MATERIAL BEING SUPPLIED IN A PREFORMED STATE, BEING NON-REFLECTIVE, AND POTENTIALLY BEING OF A COLOR DIFFERENT FROM WHITE OR YELLOW.

2. THE SYSTEM SHALL UTILIZE A RESILIENT, AGGREGATE REINFORCED PREFORMED THERMOPLASTIC PRODUCT WHICH CONTAINS A MINIMUM OF THIRTY PERCENT (30%) INTERMIXED ANTI-SKID/ANTI-SLIP ELEMENTS AND WHERE THE TOP SURFACE CONTAINS ANTI-SKID/ANTI-SLIP ELEMENTS. THESE ANTI-SKID/ANTI-SLIP ELEMENTS MUST HAVE A MINIMUM HARDNESS OF 6 (MOHS SCALE).

3. THE SYSTEM MUST BE RESISTANT TO THE DETRIMENTAL EFFECTS OF MOTOR FUELS, ANTIFREEZE, LUBRICANTS, HYDRAULIC FLUIDS, ETC.

**4. PIGMENTS:**

A. WHITE: THE MATERIAL SHALL BE MANUFACTURED WITH SUFFICIENT TITANIUM DIOXIDE PIGMENT TO MEET FHWA DOCKET NO. FHWA-99-6190 TABLE 5 AND TABLE 6 AS REVISED AND CORRECTED.

B. OTHER COLORS: THE PIGMENT SYSTEM MUST NOT CONTAIN HEAVY METALS NOR ANY CARCINOGEN, AS DEFINED IN 29 CFR 1910.1200 IN AMOUNTS EXCEEDING PERMISSIBLE LIMITS AS SPECIFIED IN RELEVANT FEDERAL REGULATIONS.

5. SKID RESISTANCE: THE SURFACE OF THE MATERIAL SHALL CONTAIN FACTORY APPLIED ANTI-SKID/ANTI-SLIP ELEMENTS WITH A MINIMUM HARDNESS OF 6 (MOHS SCALE). UPON APPLICATION THE MATERIAL SHALL PROVIDE A MINIMUM SKID RESISTANCE VALUE OF 60 BPN WHEN TESTED ACCORDING TO ASTM E 303.

6. SLIP RESISTANCE: THE SURFACE OF THE MATERIAL SHALL CONTAIN FACTORY APPLIED ANTI-SKID/ANTI-SLIP ELEMENTS WITH A MINIMUM HARDNESS OF 6 (MOHS SCALE). UPON APPLICATION THE MATERIAL SHALL PROVIDE A MINIMUM STATIC FRICTION OF COEFFICIENT OF 0.6 WHEN TESTED ACCORDING TO ASTM C 1028 (WET AND DRY), AND A MINIMUM STATIC COEFFICIENT OF FRICTION OF 0.6 WHEN TESTED ACCORDING TO ASTM D 2047.

7. THICKNESS: THE MATERIAL MUST BE SUPPLIED AT A MINIMUM THICKNESS OF 150 MIL (3.8MM).

8. ENVIRONMENTAL RESISTANCE: THE MATERIAL MUST BE RESISTANT TO DETERIORATION DUE TO EXPOSURE TO SUNLIGHT, WATER, SALT OR ADVERSE WEATHER CONDITIONS AND IMPERVIOUS TO OIL AND GASOLINE.

C. DECORATIVE IMPRESSED ASPHALT MATERIAL STAMPING GRID: A WIRE ROPE GRID IS REQUIRED IN THE EXECUTION OF THE SYSTEM. THE GRID IS USED FOR IMPRESSING THE DEFINED PATTERNS ONCE THE PREFORMED THERMOPLASTIC HAS BEEN APPLIED. THE WIRE ROPE DIAMETER FOR THE IMPRESSING TEMPLATE USED FOR THE SPECIFIED PATTERN IS 3/8 IN. (9.5MM). THE STAMPING GRIDS ARE DISTRIBUTED BY THE SYSTEM MANUFACTURER.

D. HEATING EQUIPMENT: SYSTEM-SPECIFIC RECIPROCATING INFRARED HEATING EQUIPMENT IS DESIGNED SPECIFICALLY TO ELEVATE THE TEMPERATURE OF THE PREFORMED THERMOPLASTIC MATERIAL AND ASPHALT PAVEMENT WITHOUT ADVERSELY AFFECTING IT. THE PRIMARY HEATING UNIT MUST EMPLOY A BANK OF PROPANE-FIRED INFRARED HEATERS, MOUNTED ON A TRACK DEVICE THAT ALLOWS THE HEATER BANK TO RECIPROCATATE BACK AND FORTH OVER A DESIGNATED AREA, THEREBY ALLOWING THE OPERATOR TO MONITOR THE TEMPERATURE OF THE PREFORMED THERMOPLASTIC AT ALL TIMES DURING THE PAVEMENT HEATING PROCESS. A SMALLER, MOBILE INFRARED HEATER IS DESIGNED SPECIFICALLY TO HEAT AREAS SUCH AS BORDERS AND NARROW AREAS THAT ARE INACCESSIBLE TO THE PRIMARY HEATERS. THIS SECONDARY HEATER ALSO ALLOWS THE OPERATOR TO MONITOR THE TEMPERATURE OF THE PREFORMED THERMOPLASTIC AT ALL TIMES DURING THE HEATING PROCESS.

E. MATERIALS SEALER: A TWO-PART EPOXY SEALER SPECIFIED AND DISTRIBUTED BY THE SYSTEM MANUFACTURER MUST BE APPLIED TO THE SUBSTRATE PRIOR TO MATERIAL APPLICATION TO ENSURE PROPER ADHESION, AND TO PROVIDE REINFORCEMENT FOR LARGER AREAS OF MATERIAL.

F. MATERIALS AGGREGATE: SUPPLEMENTAL ANTI-SKID/ANTI-SLIP ELEMENTS TO BE APPLIED TO THE SURFACE OF THE MOLTEN PREFORMED THERMOPLASTIC AS NEEDED, IF THE FACTORY APPLIED ANTI-SKID/ANTI-SLIP ELEMENTS EMBED TOO DEEPLY INTO THE SURFACE OF THE MOLTEN PREFORMED THERMOPLASTIC MATERIAL DURING THE HEATING PROCESS. (EMBEDDED AGGREGATE IS EXPOSED UPON WEAR FOR EXTENDED SKID RESISTANCE.) THE AGGREGATE IS DISTRIBUTED BY THE SYSTEM MANUFACTURER.

**G. PATTERNS & COLORS****1. PATTERNS AND COLORS ARE DESCRIBED BELOW:**

A. DECORATIVE IMPRESSED ASPHALT - TYPE A  
**DIAGONAL HERRINGBONE PATTERN (12-101)  
COLONIAL BRICK COLOR  
LIMITS SHOWN ON SHEET 23**

2. CONTRACTOR SHALL VERIFY ALL COLORS AND PATTERNS WITH OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT.

H. SHELF LIFE AND STORAGE THE SHELF LIFE OF DECORATIVE IMPRESSED ASPHALT MATERIALS IS TWO YEARS PROVIDED IT IS PROTECTED FROM THE WEATHER, SPECIFICALLY UV DEGRADATION AND RAIN. THE MATERIALS ARE TO BE STORED IN THEIR ORIGINAL PACKAGING AND KEPT DRY UNDER COVER AND OR AS PER MANUFACTURER'S SPECIFICATIONS

**PART 3- EXECUTION****3.1 EXAMINATION**

A. VERIFY THAT PAVEMENT IS DRY AND IN SUITABLE CONDITION TO BEGIN THE IMPRESSING PROCESS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. PROCEED WITH ASPHALT IMPRESSING ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

C. VERIFY THAT UTILITIES, TRAFFIC LOOP DETECTORS, AND OTHER ITEMS REQUIRING A CUT AND INSTALLATION BENEATH THE ASPHALT SURFACE HAVE BEEN COMPLETED AND THAT ASPHALT SURFACE HAS BEEN REPAIRED FLUSH WITH ADJACENT ASPHALT PRIOR TO BEGINNING INSTALLATION OF IMPRESSED ASPHALT.

**3.2 IMPRESSING ASPHALT**

A. GENERAL: IMPRESS ASPHALT ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, USING MANUFACTURER'S RECOMMENDED EQUIPMENT.

B. PRE-CONDITIONS: DECORATIVE IMPRESSED ASPHALT SHALL BE INSTALLED OVER NEW PAVEMENT. THE PAVEMENT MUST BE FIRM, STABLE AND IN EXCELLENT CONDITION; IT MUST BE FREE FROM DEFECTS SUCH AS CRACKS, SETTLEMENT, VISIBLE SEAMS, RUTS, BIRD BATHS AND SPALLING.

1. CRACKING, SETTLEMENT AND OTHER DEFICIENCIES OF THE SUBSTRATE WILL LIKELY REFLECT THROUGH THE DECORATIVE PREFORMED THERMOPLASTIC. GOOD AND PROPER CONSTRUCTION PROCEDURES FOR THE INSTALLATION OF THE SUBSTRATE MUST BE FOLLOWED IN ORDER TO MITIGATE CRACKING OF DECORATIVE PREFORMED THERMOPLASTIC.

2. SURFACES WITH A HIGH DEGREE OF POROSITY SHOULD BE AVOIDED DUE TO THE PROBLEMS ASSOCIATED WITH ENTRAPPED WATER.

3. SURFACES THAT MAY BE SUBJECT TO UNCONTROLLED MOVEMENT IN EITHER A HORIZONTAL OR VERTICAL DIRECTION SHALL BE AVOIDED AS THERE MAY BE A RISK OF REFLECTIVE CRACKING THROUGH TO THE DECORATIVE PREFORMED THERMOPLASTIC. NOTIFY THE ENGINEER IF THESE CONDITIONS ARE PRESENT BEFORE INSTALLING DECORATIVE PREFORMED THERMOPLASTIC.

D. PREPARING OF THE SUBSTRATE: ALL PAVEMENT SUBSTRATES MUST BE OF HIGH QUALITY AND STABLE FOR THE INSTALLATION OF DECORATIVE IMPRESSED ASPHALT.

THIS SECTION IS TO BE USED AS A GUIDE TO ENSURE A HIGH-QUALITY PAVEMENT SUBSTRATE IS PROVIDED AND READY FOR THE INSTALLATION OF THE DECORATIVE SYSTEM. IT DOES NOT SUPERSEDE OTHER SPECIFICATIONS PERTAINING TO THIS WORK, NOR DOES IT REPLACE RECOMMENDATIONS MADE BY THE ENGINEER OF RECORD FOR THIS WORK.

1. THE BASE AND SUB-GRADE OVER WHICH NEW PAVEMENT IS INSTALLED MUST BE FIRM AND STABLE.

2. THE PAVEMENT MIX MUST BE DESIGNED FOR THE INTENDED USE.

3. THE PAVEMENT MUST BE INSTALLED IN ACCORDANCE WITH PROPER PLACEMENT PRACTICES AND THESE SPECIFICATIONS.

4. THE ASPHALT PAVEMENT MUST BE PERMITTED TO CURE PROPERLY BEFORE INSTALLING DECORATIVE IMPRESSED ASPHALT.

E. SURFACE PREPARATION: THE PAVEMENT SURFACE SHALL BE DRY AND CLEAN; FREE OF ALL DIRT, DEBRIS, SALTS, CONCRETE ADMIXTURES AND ANY CHEMICAL RESIDUES.

1. BITUMINOUS RESIDUE MUST BE REMOVED FROM NEW ASPHALT PAVEMENT SURFACE PRIOR TO INSTALLATION OF DECORATIVE IMPRESSED ASPHALT.

2. REMOVAL OF CONTAMINANTS MAY BE DONE BY BROOMING, COMPRESSED AIR, PRESSURE WASHING (MOISTURE MUST BE REMOVED AND THE SURFACE DRY AS NOTED ABOVE) OR, IF NECESSARY, LIGHT-GRIT BLASTING. WIRE BRUSH MAY BE USED TO REMOVE LOOSE OR POWDERY MATERIALS.

F. INSTALLATION OF DECORATIVE IMPRESSED ASPHALT: DECORATIVE IMPRESSED ASPHALT SYSTEM IS TO BE INSTALLED ONLY BY AN ACCREDITED INSTALLER.

1. THE SYSTEM MUST BE ABLE TO BE APPLIED TO ASPHALT SURFACES WITHOUT PRE-HEATING THE APPLICATION SURFACE TO A SPECIFIC TEMPERATURE.

2. THE SYSTEM IS APPLIED TO ASPHALT PAVEMENT PRIMARILY USING RECIPROCATING INFRARED HEATING EQUIPMENT. AN APPROVED HAND-HELD PROPANE HEAT TORCH DISTRIBUTED BY THE SYSTEM MANUFACTURER SHALL BE USED TO HEAT ISOLATED AREAS OF THE PREFORMED THERMOPLASTIC.

3. A SPECIALIZED SEALER DISPENSING GUN, HANDHELD FINISHING TOOL, AGGREGATE AND VIBRATORY PLATE COMPACTORS ARE USED AS PART OF THE INSTALLATION PROCESS

4. THE AGGREGATE REINFORCED PREFORMED THERMOPLASTIC IS TYPICALLY SUPPLIED IN PANELS MEASURING 2 FT. X 2 FT. [±?IN.] (.61M X .61M [±3MM]).

5. THE SYSTEM IS AVAILABLE IN A VARIETY OF STANDARD COLORS AND PATTERNS. COLOR CAN BE USED TO CREATE PATTERNS WITHIN THE CROSSWALK AREA TO REFLECT THE TYPICAL WHITE 'CONTINENTAL' CROSSWALK BARS FOR ADDITIONAL VISIBILITY AND AWARENESS.

6. THE MATERIAL MUST BE ABLE TO BE APPLIED AT AMBIENT AND ROAD TEMPERATURES WITH A MINIMUM TEMPERATURE OF 45°F (7°C) AND RISING.

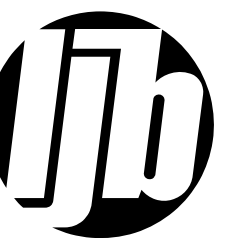
7. A TWO-PART EPOXY SEALER SPECIFIED BY THE MANUFACTURER MUST BE APPLIED TO THE SUBSTRATE PRIOR TO PREFORMED THERMOPLASTIC APPLICATION. IMMEDIATELY FOLLOWING SEALER APPLICATION, THE PANELS OF AGGREGATE REINFORCED PREFORMED THERMOPLASTIC ARE POSITIONED PROPERLY ON THE ASPHALT SUBSTRATE WITH THE AGGREGATE SIDE FACING UP. THE PREFORMED THERMOPLASTIC IS THEN HEATED TO THE REQUIRED MELTING TEMPERATURE. ADDITIONAL AGGREGATE MAY BE APPLIED TO THE PREFORMED THERMOPLASTIC SURFACE AS NEEDED FOLLOWING THE MELTING PROCESS.

8. AS THE MATERIAL COOLS TO 160 DEGREES FAHRENHEIT, IT IS IMPRESSED WITH A STAMPING GRID MADE FROM 3/8 IN. (9.5 MM) FLEXIBLE WIRE ROPE IN THE REQUIRED DESIGN USING A VIBRATORY PLATE COMPACTOR.

9. THE PREFORMED THERMOPLASTIC MATERIAL IS THEN ALLOWED TO COOL THOROUGHLY BEFORE BEING OPENED TO VEHICLE OR PEDESTRIAN TRAFFIC. (CONSULT THE MANUFACTURER'S PUBLISHED APPLICATION PROCEDURES FOR COMPLETE INFORMATION.) THE TIMING OF OPENING TRAFFIC WILL BE SUBJECT TO EXTERIOR TEMPERATURE CONDITIONS. MORE TIME MAY BE REQUIRED IN HOT WEATHER. THE ACCREDITED INSTALLER CAN ADVISE WHEN THE WORK IS READY FOR TRAFFIC.

10. INSTALL PREMARK@WHITE 125MIL PREFORMED THERMOPLASTIC MATERIAL WITH GLASS BEADS AS THE TRANSVERSE LINES ON THE OUTSIDE AREAS OF THE INSTALLED TRAFFICPATTERNSXD@MARKING SYSTEM AS REQUIRED TO MEET MUTCD REQUIREMENTS.

DESIGN AGENCY



DESIGNER

ASN

REVIEWER

BMG 08/08/23

PROJECT ID

125940

SHEET TOTAL

6 47



**ITEM 614, MAINTAINING TRAFFIC (AT ALL TIMES)**

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT. TRAFFIC SHALL BE MAINTAINED AT ALL INTERSECTIONS AND DRIVES AT ALL TIMES.

**SEQUENCE OF CONSTRUCTION**

PHASE 1A

USING ODOT SCD MT-95.61 (ADJUSTED FOR SINGLE LANE, 25-MPH SHIFT), MAINTAIN TWO-WAY TRAFFIC AND SHIFT EB AND WB TRAFFIC TO THE NORTH SIDE OF FRANKLIN STREET. MAINTAIN A 1' MINIMUM SHOULDER BETWEEN EXISTING CURBS AND PROPOSED DRUMS AND 10' LANES IN BOTH DIRECTIONS.

CONSTRUCT CURB BUMP OUT ON SOUTH SIDE OF FRANKLIN STREET, INCLUDING SIDEWALK, CURB RAMP AND ENHANCED CROSSWALK, UP TO WITHIN 1' OF PROPOSED DRUMS.

AFTER BUMP OUT HAS BEEN CONSTRUCTED, CLOSE CROSSWALK AND CURB RAMP UNTIL PHASE 1B HAS BEEN COMPLETED.

PHASE 1B

USING ODOT SCD MT-95.61 (ADJUSTED FOR SINGLE LANE, 25-MPH SHIFT), MAINTAIN TWO-WAY TRAFFIC AND SHIFT EB AND WB TRAFFIC TO THE SOUTH SIDE OF FRANKLIN STREET. MAINTAIN A 1' MINIMUM SHOULDER BETWEEN PROPOSED CURBS AND PROPOSED DRUMS AND 10' LANES IN BOTH DIRECTIONS.

CONSTRUCT CURB BUMP OUT ON NORTH SIDE OF FRANKLIN STREET, INCLUDING SIDEWALK, CURB RAMP AND REMAINING ENHANCED CROSSWALK.

OPEN CROSSWALK AND CURB RAMP PREVIOUSLY CLOSED IN PHASE 1A.

USING ODOT SCD MT-95.61, MILL 1½" SURFACE COURSE OFF FOR THE ENTIRETY OF THE RESURFACING AREA, AS SHOWN ON THE PLANS. PLACE WORK ZONE PAVEMENT MARKINGS FOR LONG LINE MARKINGS (INCLUDING STOP BARS) FOR USE WHILE PAVEMENT

PHASE 2A

USING ODOT SCD MT-97.11, MILL 1½" SURFACE COURSE FOR THE ENTIRETY OF THE RESURFACING AREA ON FRANKLIN STREET, AS SHOWN ON THE PLANS. PLACE WORK ZONE PAVEMENT MARKINGS FOR LONG LINE MARKINGS (INCLUDING STOP BARS) FOR USE WHILE PAVEMENT IS MILLED OFF.

PLACE 1½" SURFACE COURSE OVER RESURFACING AREA ON FRANKLIN STREET. REPLACE LONG LINE PAVEMENT MARKINGS WITH WORK ZONE PAVEMENT MARKINGS, PRIOR TO PERMANENT PAVEMENT MARKING PLACEMENT.

PHASE 2B

USING ODOT SCD MT-97.11, MILL 1½" SURFACE COURSE FOR THE ENTIRETY OF THE RESURFACING AREA ON MAIN STREET, AS SHOWN ON THE PLANS. PLACE WORK ZONE PAVEMENT MARKINGS FOR LONG LINE MARKINGS (INCLUDING STOP BARS) FOR USE WHILE PAVEMENT IS MILLED OFF.

PLACE 1½" SURFACE COURSE OVER RESURFACING AREA ON FRANKLIN STREET. REPLACE LONG LINE PAVEMENT MARKINGS WITH WORK ZONE PAVEMENT MARKINGS, PRIOR TO PERMANENT PAVEMENT MARKING PLACEMENT.

PHASE 3

PLACE REMAINING PERMANENT PAVEMENT MARKINGS AND PROPOSED SIGNAGE ALONG BOTH FRANKLIN STREET AND MAIN STREET. MAINTAIN TRAFFIC USING ODOT SCD MT-97.11 AND MT-99.20.

**SEQUENCE OF CONSTRUCTION CONT.**

WALNUT AND MAIN STREET

IN THE EVENT THE WALNUT AND MAIN STREET BUMP-OUT ALTERNATE IS AWARDED, CONSTRUCT BOTH THE EAST AND WEST SIDE BUMP-OUTS IN A SIMILAR MANNER TO THE BUMP-OUT LOCATIONS ALONG FRANKLIN STREET. THESE BUMP-OUTS SHOULD BE TREATED AS PHASES 1C AND 1D, IF AWARDED.

**MAINTENANCE OF TRAFFIC COORDINATION**

THE MAINTENANCE OF TRAFFIC SCHEME DEVELOPED FOR THIS PROJECT ASSUMES THE ADJACENT BRIDGE PROJECT, ODOT PID 110612, IS COMPLETED.

IF ODOT PID 110612 IS IN CONSTRUCTION PHASE 1 OR 2, AT THE TIME THIS PROJECT BEGINS, COORDINATION WITH ODOT DISTRICT 8 AND THE CONTRACTOR FOR PID 110612 IS NEEDED TO DETERMINE AN UPDATED MAINTENANCE OF TRAFFIC SCHEME.

IF ODOT PID 110612 IS IN CONSTRUCTION PHASE 1 OR 2 AND THE ALTERNATE BID FOR THIS PROJECT IS AWARDED, PHASE 1C AND 1D ARE TO BE COMPLETED PRIOR TO PHASE 1A AND 1B.

IF ODOT PID 110612 IS IN CONSTRUCTION PHASE 3, PHASE 1B AND PHASE 1A OF THIS PROJECT SHALL BE FLIPPED, TO BETTER COORDINATE WITH ODOT PID 110612.

**NOTIFICATION OF TRAFFIC RESTRICTIONS**

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

**NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE**

| ITEM  | DURATION OF CLOSURE | NOTICE DUE TO CITY                       |
|---|---------------------|--|
| LANE CLOSURES & RESTRICTIONS                    | >= 2 WEEKS          | 14 CALENDAR DAYS PRIOR TO CLOSURE        |
|   | < 2 WEEKS           | 5 BUSINESS DAYS PRIOR TO CLOSURE         |
| START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES | N/A                 | 14 CALENDAR DAYS PRIOR TO IMPLEMENTATION |

LANE CLOSURES & RESTRICTIONS

>= 2 WEEKS 14 CALENDAR DAYS PRIOR TO CLOSURE

< 2 WEEKS 5 BUSINESS DAYS PRIOR TO CLOSURE

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

**WORK ZONE PAVEMENT MARKINGS**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11. THE FOLLOWING PAVEMENT MARKING ITEMS ARE TO BE PLACED ON MILLED ASPHALT PAVEMENT, IMMEDIATELY FOLLOWING MILLING OPERATIONS. ADDITIONALLY, THESE PAVEMENT MARKINGS ARE TO BE AGAIN PLACED ON THE FINAL SURFACE COURSE, PRIOR TO FINAL, THERMOPLASTIC PAVEMENT MARKINGS BEING PLACED.

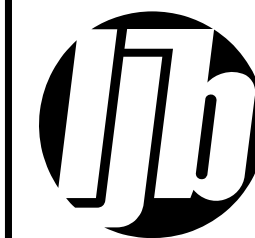
ITEM 614 WORK ZONE CENTERLINE, CLASS 1 2.46 MILE

ITEM 614 WORK ZONE EDGE LINE, CLASS 1, 6" 4.26 MILE

ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS 1, 8" 778 FT

ITEM 614 WORK ZONE STOP LINE, CLASS 1, 214 FT

DESIGN AGENCY



DESIGNER

ASN

REVIEWER

BMG 07/19/23

PROJECT ID

125940

SHEET TOTAL

7 | 47

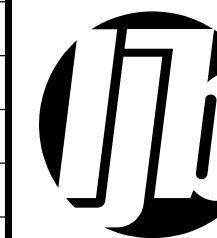
FRANKLIN AND MAIN STREET IMPROVEMENTS

MODEL: Sheet\_SurvFI\_PAPER SIZE: 34x42 (in.) DATE: 8/11/2023 TIME: 2:32:57 PM USER: bgressel  
 C:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940-400-Engineering\Roadway\Sheets\125940\_CG001.dgn

| SHEET NUM. |  |  |  |  |  |  |  |  |  |  |  |  | PART. | ITEM    | ITEM<br>EXT | GRAND<br>TOTAL | UNIT | DESCRIPTION   | SEE<br>SHEET NO. |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|-------|---------|-------------|----------------|------|---|------------------|
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | ROADWAY   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 201     | 11000       | LS             |      | CLEARING AND GRUBBING   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 202     | 23000       | 228            | SY   | PAVEMENT REMOVED  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 202     | 30000       | 1,309          | SF   | WALK REMOVED  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 202     | 32000       | 204            | FT   | CURB REMOVED  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 203     | 10000       | 30             | CY   | EXCAVATION  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 203     | 20000       | 15             | CY   | EMBANKMENT  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 204     | 10000       | 63             | SY   | SUBGRADE COMPACTION   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 608     | 10000       | 2,018          | SF   | 4" CONCRETE WALK  | 5                |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 608     | 52000       | 461            | SF   | CURB RAMP   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 608     | 53020       | 61             | SF   | DETECTABLE WARNING  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 608     | 53021       | 127            | SF   | DETECTABLE WARNING, AS PER PLAN   | 5                |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 608     | 98000       | 967            | SF   | WALKWAY, MISC.; SIDEWALK PAVERS   | 5                |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | EROSION CONTROL   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 832     | 15000       | LS             |      | STORM WATER POLLUTION PREVENTION PLAN   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 832     | 30000       | 10,000         | EACH | EROSION CONTROL   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | DRAINAGE  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | SPECIAL | 61199830    | 146            | FT   | TRENCH DRAIN  | 5                |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | PAVEMENT  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 253     | 01001       | 400            | SY   | PAVEMENT REPAIR, AS PER PLAN  | 5                |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 254     | 01000       | 24,063         | SY   | PAVEMENT PLANING, ASPHALT CONCRETE T = 1.5"   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 301     | 56000       | 11             | CY   | ASPHALT CONCRETE BASE, PG64-22, (449)   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 304     | 20000       | 14             | CY   | AGGREGATE BASE  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 407     | 20000       | 2,054          | GAL  | NON-TRACKING TACK COAT  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 441     | 70000       | 1,006          | CY   | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 441     | 70300       | 5              | CY   | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 441     | 91000       | 29             | SY   | ASPHALT CONCRETE, MISC.:TRAFFICPATTERNSXD STAMPED CROSSWALK DIAGONAL HERRINGBONE PATTERN (12-101), COLONIAL BRICK | 6                |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 609     | 26000       | 209            | FT   | CURB, TYPE 6  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | TRAFFIC CONTROL   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 630     | 03100       | 21             | FT   | GROUND MOUNTED SUPPORT, NO. 3 POST  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 630     | 08600       | 3              | EACH | SIGN POST REFLECTOR   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 630     | 80100       | 58             | SF   | SIGN, FLAT SHEET  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 630     | 84900       | 2              | EACH | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 630     | 85100       | 1              | EACH | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00104       | 2.13           | MILE | EDGE LINE, 6"   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00300       | 1.23           | MILE | CENTER LINE   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00400       | 389            | FT   | CHANNELIZING LINE, 8"   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00500       | 128            | FT   | STOP LINE   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00620       | 924            | FT   | CROSSWALK LINE, 12"   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00630       | 70             | FT   | CROSSWALK LINE, 24"   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00700       | 426            | FT   | TRANSVERSE/DIAGONAL LINE, WHITE   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 00700       | 216            | FT   | TRANSVERSE/DIAGONAL LINE, YELLOW  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 01200       | 1,014          | FT   | PARKING LOT STALL MARKING   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 01300       | 10             | EACH | LANE ARROW  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 644     | 01400       | 1              | EACH | WORD ON PAVEMENT, 72"   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | TRAFFIC SIGNALS   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 625     | 32000       | 2              | EACH | GROUND ROD  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 630     | 97700       | 2              | EACH | SIGNING, MISC.:SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY                               | 28               |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 632     | 26000       | 2              | EACH | PEDESTRIAN PUSHBUTTON   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 632     | 64020       | 2              | EACH | PEDESTAL FOUNDATION   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | LANDSCAPING   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | SPECIAL | 66199000    | LS             |      | LANDSCAPING (SEE SHEET 43 FOR ITEMIZED QUANTITIES)  | 5                |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | MAINTENANCE OF TRAFFIC  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 614     | 21000       | 2.46           | MILE | WORK ZONE CENTER LINE, CLASS I  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 614     | 22010       | 4.26           | MILE | WORK ZONE EDGE LINE, CLASS I, 6"  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 614     | 23000       | 778            | FT   | WORK ZONE CHANNELIZING LINE, CLASS I, 8"  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 614     | 26000       | 214            | FT   | WORK ZONE STOP LINE, CLASS I  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       |         |             |                |      | INCIDENTALS   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 614     | 11000       | LS             |      | MAINTAINING TRAFFIC   |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 623     | 10000       | LS             |      | CONSTRUCTION LAYOUT STAKES AND SURVEYING  |                  |
|            |  |  |  |  |  |  |  |  |  |  |  |  |       | 624     | 10000       | LS             |      | MOBILIZATION  |                  |

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER  
ASN

REVIEWER  
BMG 08/08/23

PROJECT ID  
125940






|       |       |
|-------|-------|
| SHEET | TOTAL |
| 8     | 47    |

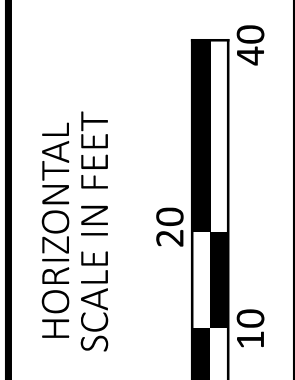
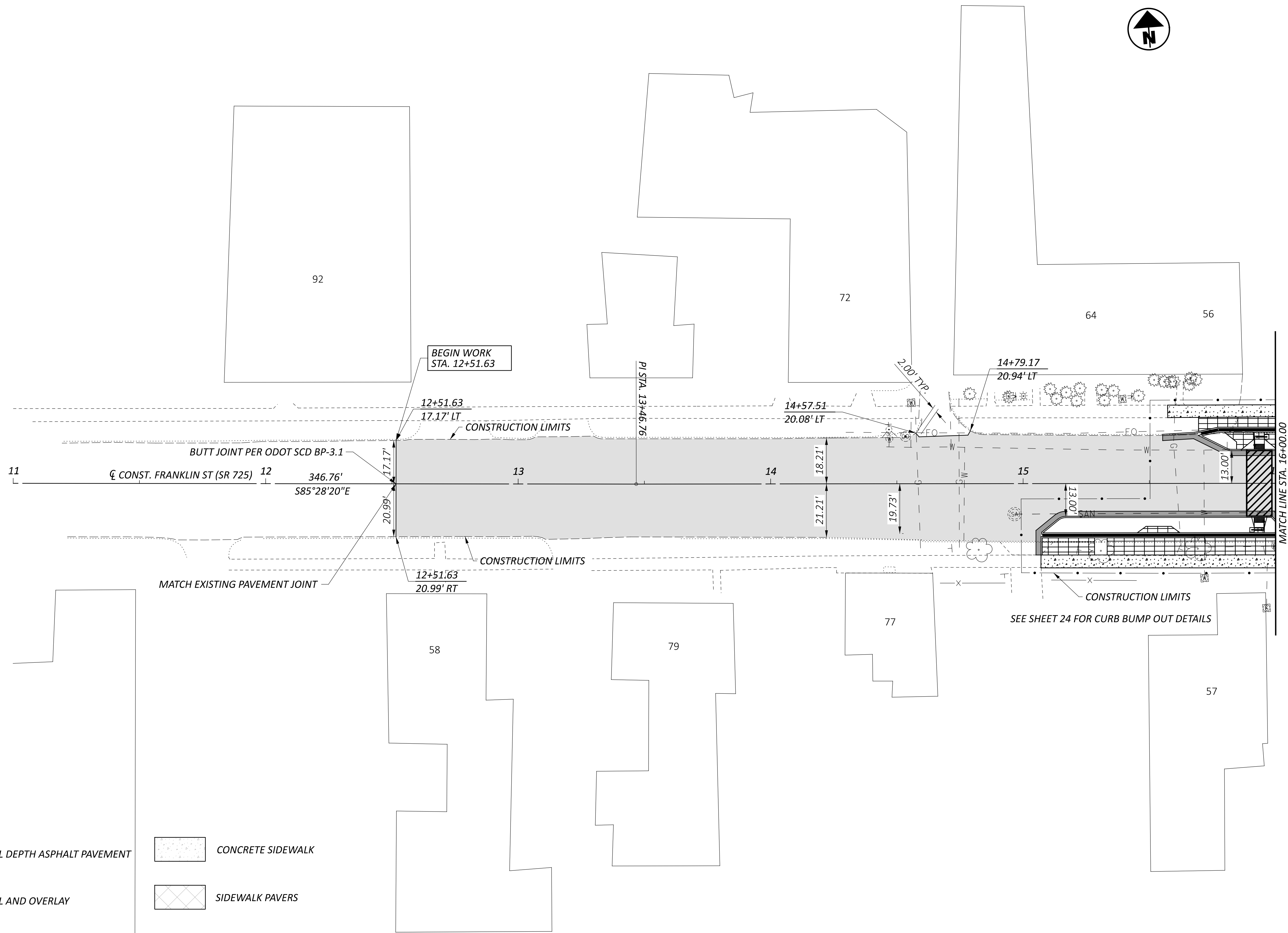


**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: 125940\_GP101.PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:01 PM USER: bgressel  
 C:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP101.dgn

**LEGEND**

-  FULL DEPTH ASPHALT PAVEMENT
-  MILL AND OVERLAY
-  TRAFFIC PATTERNS XD STAMPED CROSSWALK
-  CONCRETE SIDEWALK
-  SIDEWALK PAVERS



**PLAN - FRANKLIN STREET  
 STA. 12+51.63 TO STA. 16+00.00**

DESIGN AGENCY



DESIGNER  
AA

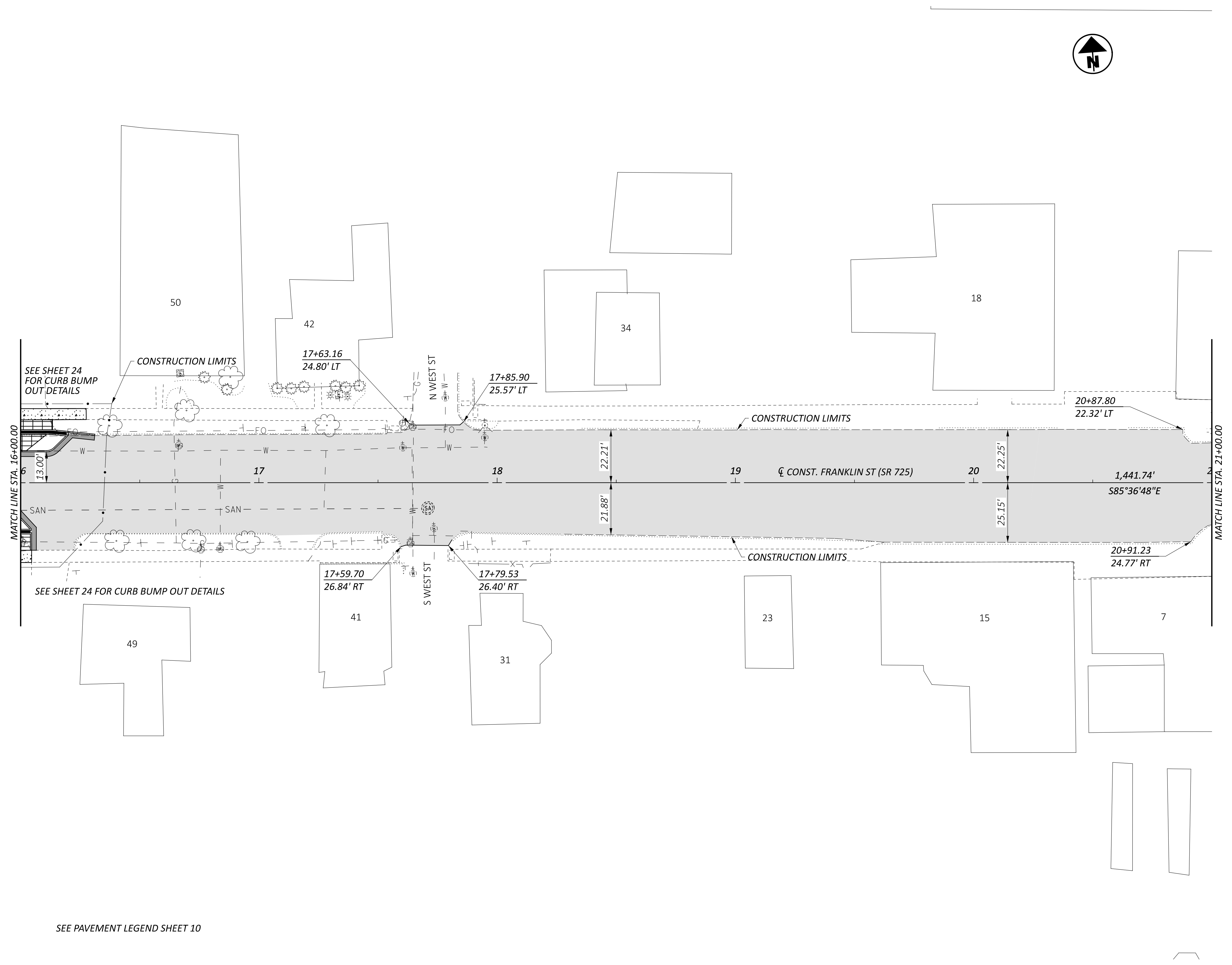
REVIEWER  
BMG 07/19/23

PROJECT ID  
125940

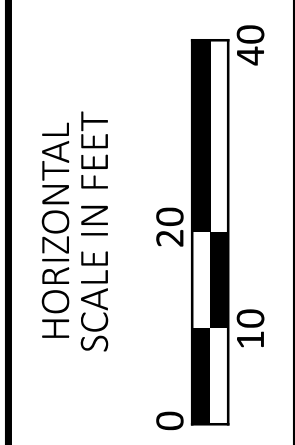
SHEET TOTAL  
10 47

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: 125940\_GP102\_PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:01 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP102.dgn

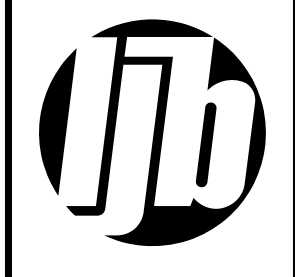


SEE PAVEMENT LEGEND SHEET 10



**PLAN - FRANKLIN STREET  
 STA. 16+00.00 TO STA. 21+00.00**

DESIGN AGENCY



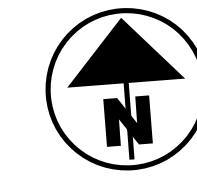
|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 11         | 47           |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: 125940\_GP103\_PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:02 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP103.dgn

SEE SHEET 19 FOR N MAIN ST

SEE SHEET 18 FOR S MAIN ST



SEE SHEET 27 FOR INTERSECTION DETAILS

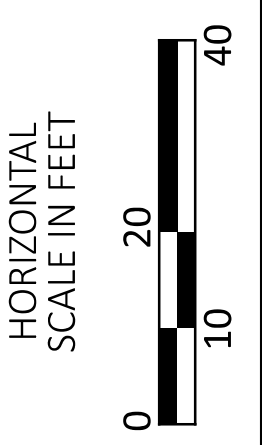
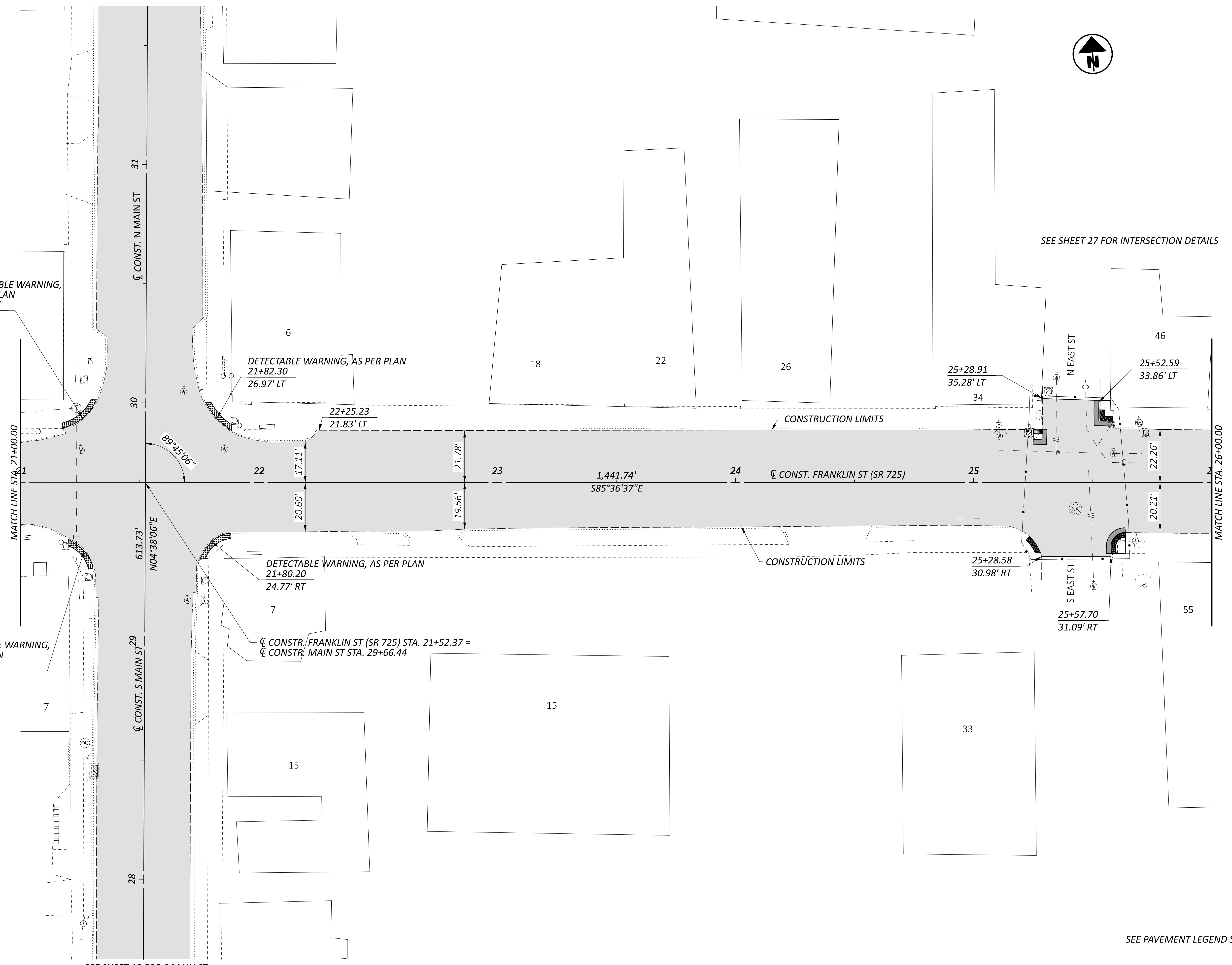
DETECTABLE WARNING,  
AS PER PLAN  
21+26.07  
27.04' LT

DETECTABLE WARNING, AS PER PLAN  
21+82.30  
26.97' LT

DETECTABLE WARNING, AS PER PLAN  
21+80.20  
24.77' RT

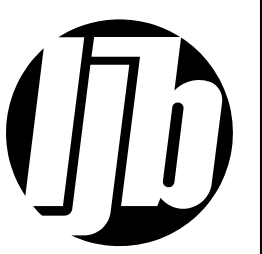
DETECTABLE WARNING,  
AS PER PLAN  
21+26.62  
28.68' RT

☉ CONSTR. FRANKLIN ST (SR 725) STA. 21+52.37 =  
☉ CONSTR. MAIN ST STA. 29+66.44



**PLAN - FRANKLIN STREET  
STA. 21+00.00 TO STA. 26+00.00**

DESIGN AGENCY



|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 12         | 47           |

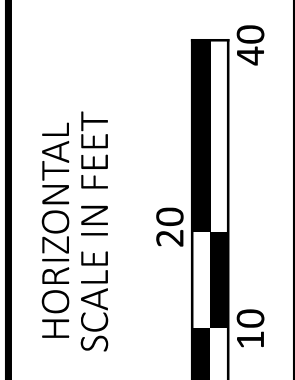
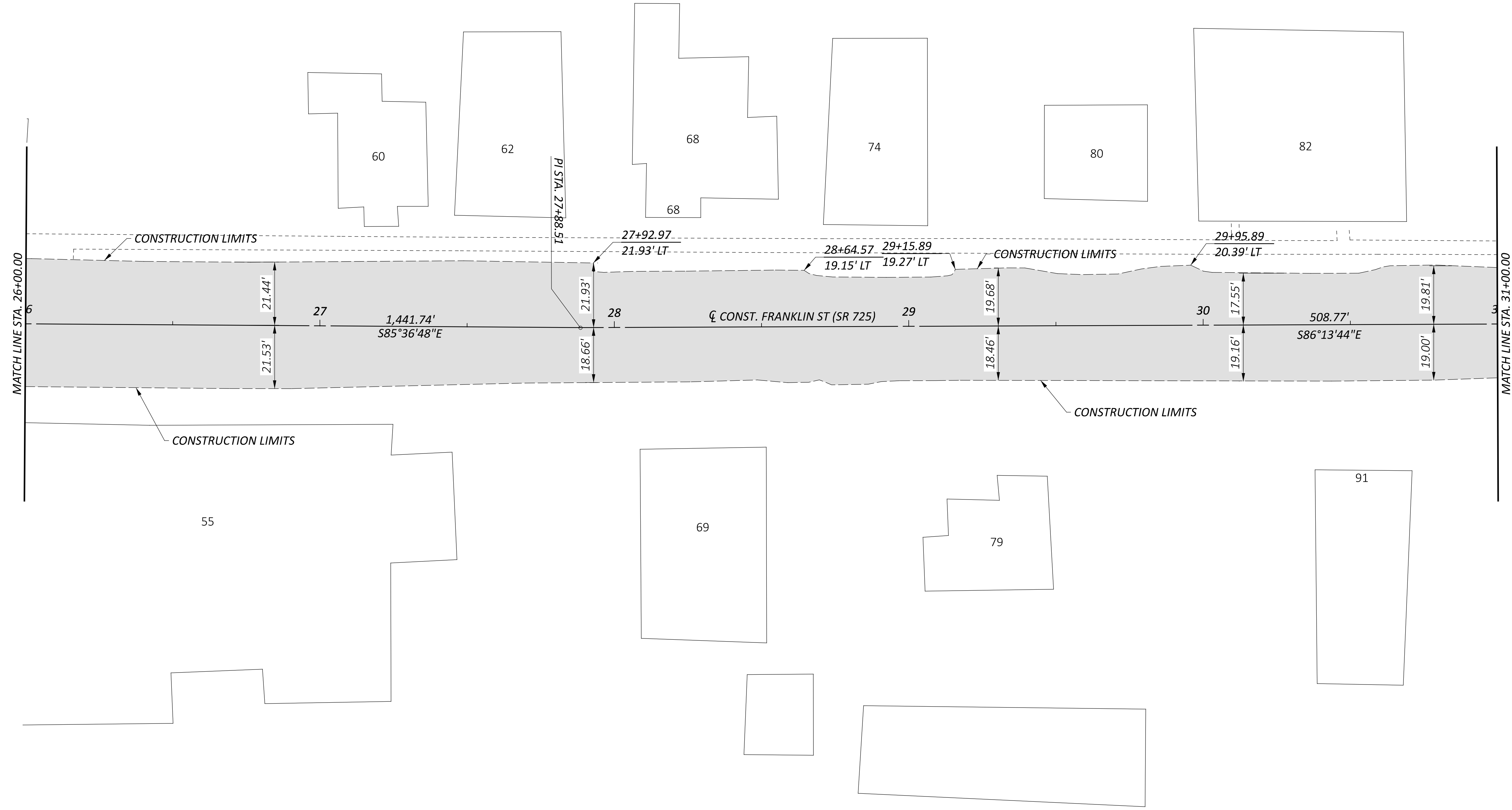
SEE PAVEMENT LEGEND SHEET 10



**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: 125940\_GP104\_PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:03 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP104.dgn

SEE PAVEMENT LEGEND SHEET 10



**PLAN - FRANKLIN STREET  
 STA. 26+00.00 TO STA. 31+00.00**

DESIGN AGENCY



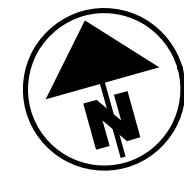
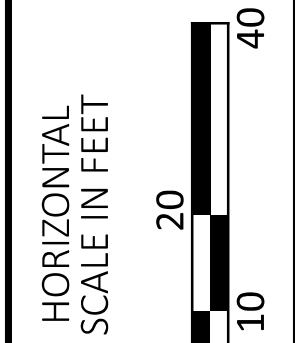
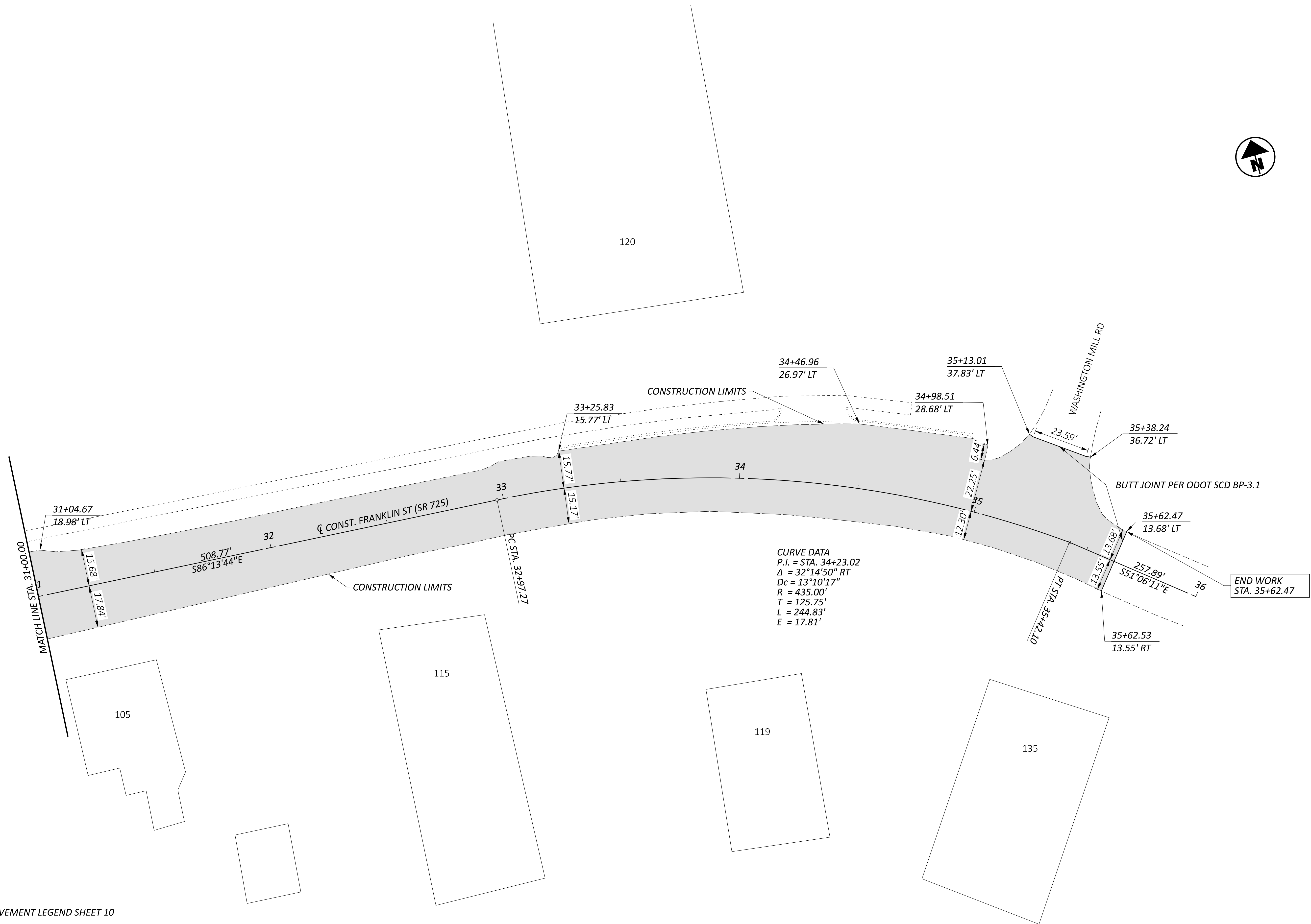
|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 13         | 47           |



**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: 125940\_GP105\_PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:04 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP105.dgn

SEE PAVEMENT LEGEND SHEET 10



**PLAN - FRANKLIN STREET**  
 STA. 31+00.00 TO STA. 35+62.53

DESIGN AGENCY



DESIGNER  
AA

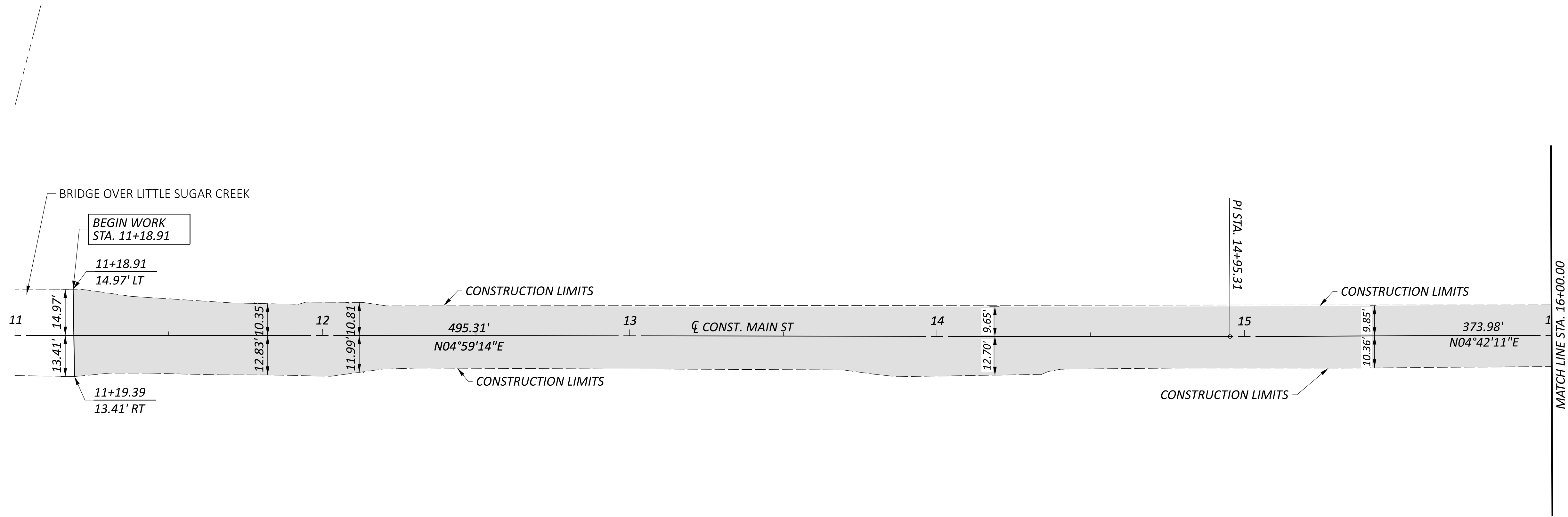
REVIEWER  
BMG 07/19/23

PROJECT ID  
125940

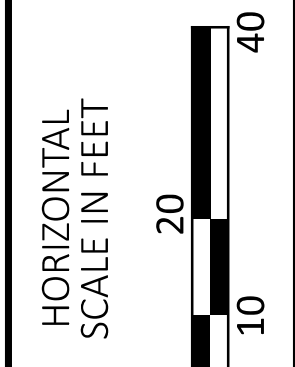
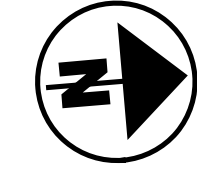
|       |       |
|-------|-------|
| SHEET | TOTAL |
| 14    | 47    |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_002 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:05 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP201.dgn



SEE PAVEMENT LEGEND SHEET 10



**PLAN - MAIN STREET  
 STA. 11+18.91 TO STA. 16+00.00**

DESIGN AGENCY



DESIGNER  
AA

REVIEWER

BMG 07/19/23

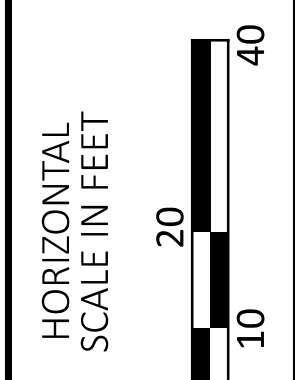
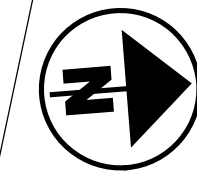
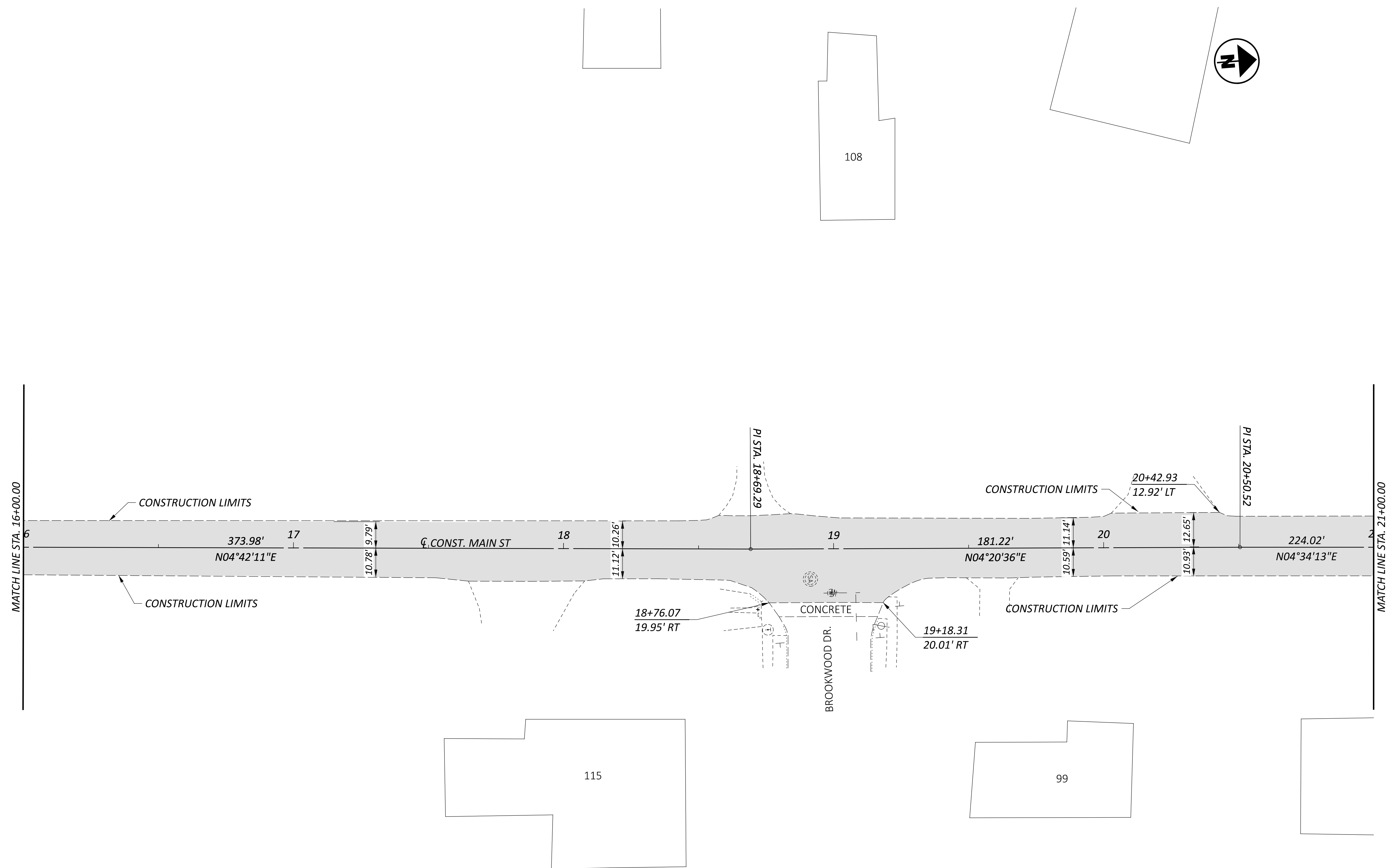
PROJECT ID  
125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 15    | 47    |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_003 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:05 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP202.dgn

SEE PAVEMENT LEGEND SHEET 10



**PLAN - MAIN STREET**  
**STA. 16+00.00 TO STA. 21+00.00**

DESIGN AGENCY



DESIGNER  
 AA

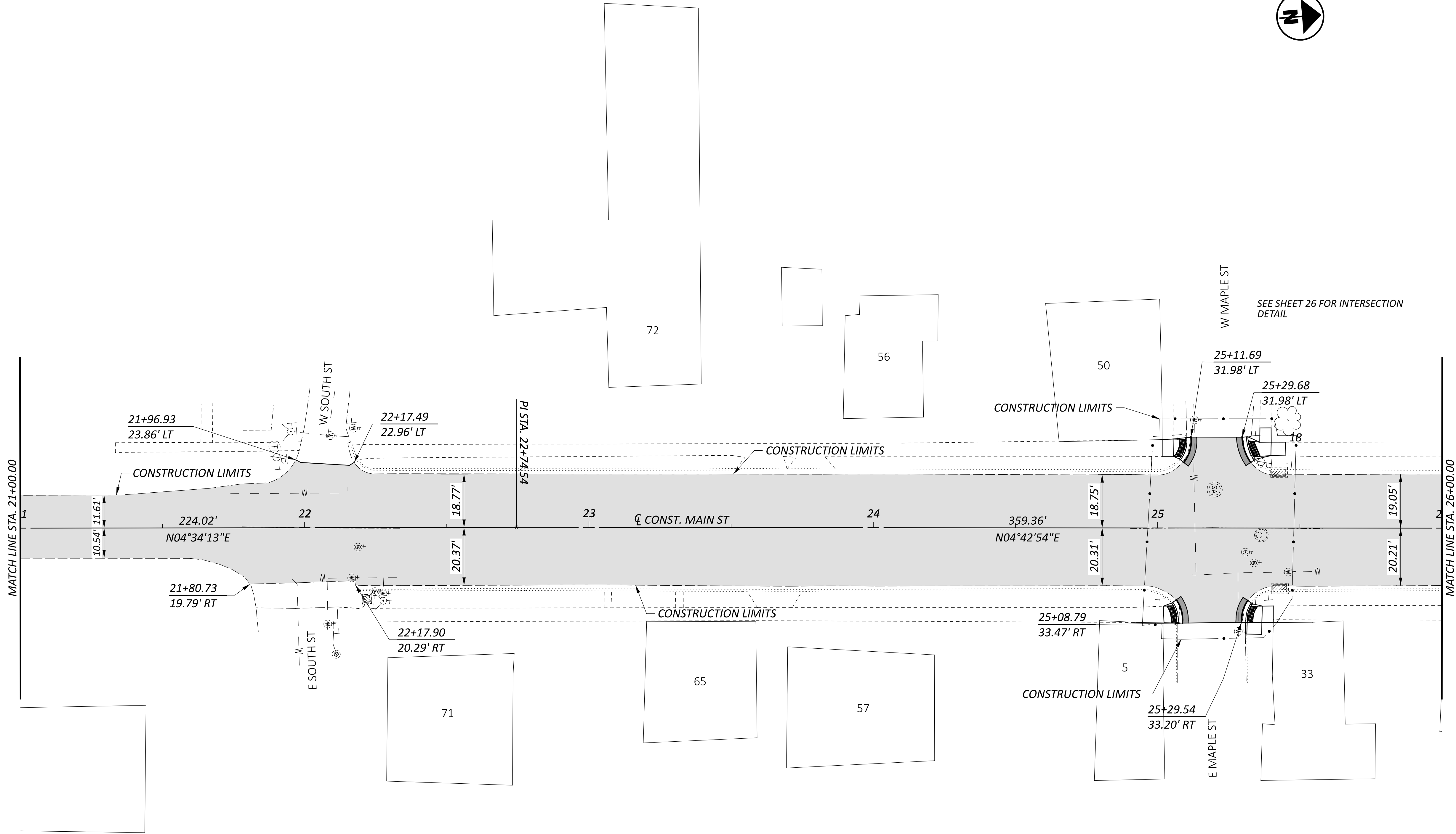
REVIEWER  
 BMG 07/19/23

PROJECT ID  
 125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 16    | 47    |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_004 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:06 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP203.dgn



SEE PAVEMENT LEGEND SHEET 10



**PLAN - MAIN STREET**  
 STA. 21+00.00 TO STA. 26+00.00

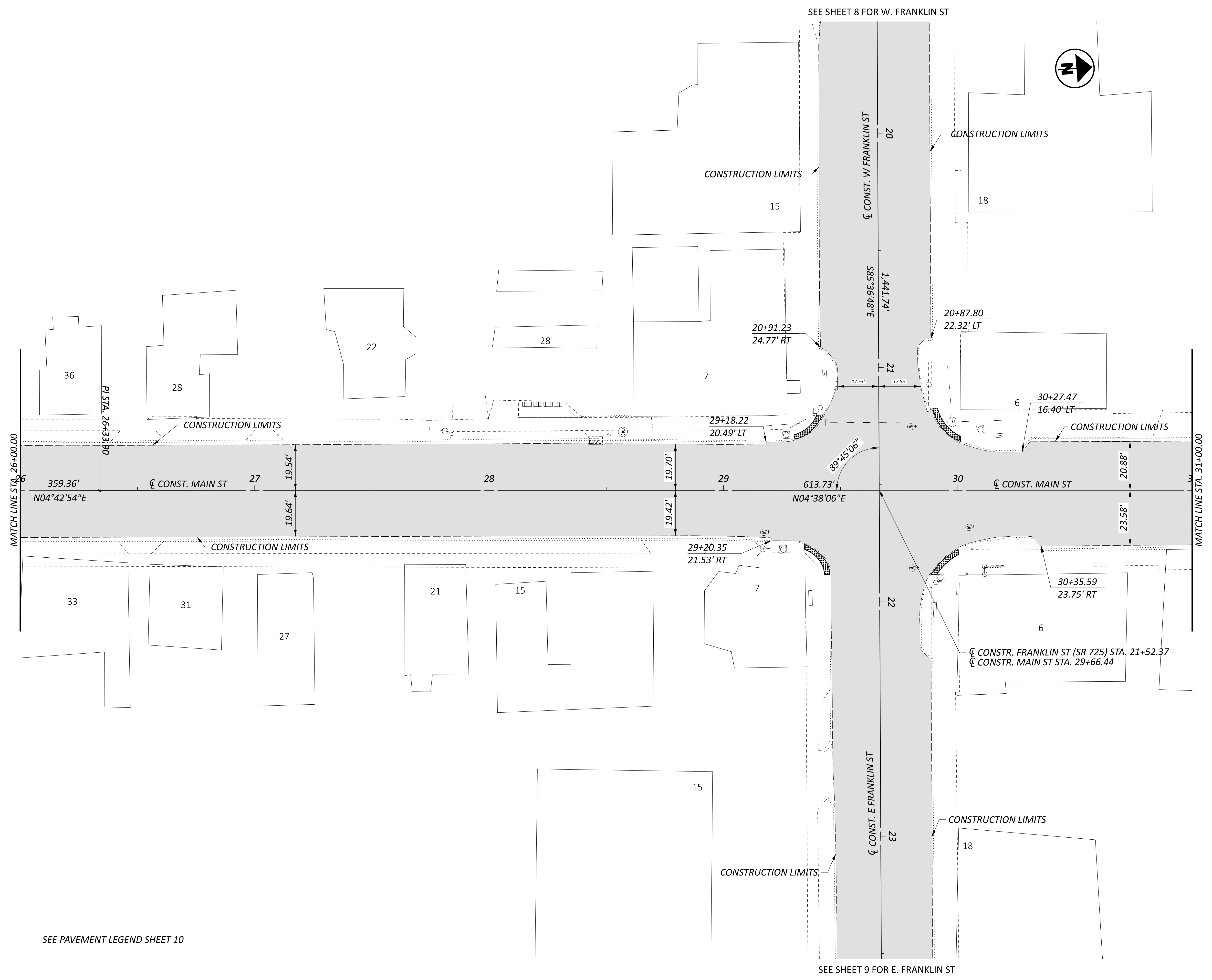
DESIGN AGENCY



|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 17         | 47           |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

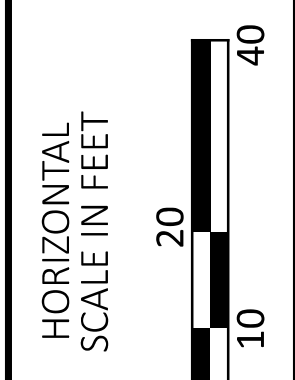
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 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP204.dgn



SEE PAVEMENT LEGEND SHEET 10

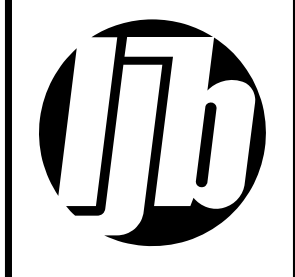
SEE SHEET 8 FOR W. FRANKLIN ST

SEE SHEET 9 FOR E. FRANKLIN ST



PLAN - MAIN STREET  
 STA. 26+00.00 TO STA. 31+00.00

DESIGN AGENCY



DESIGNER  
 AA

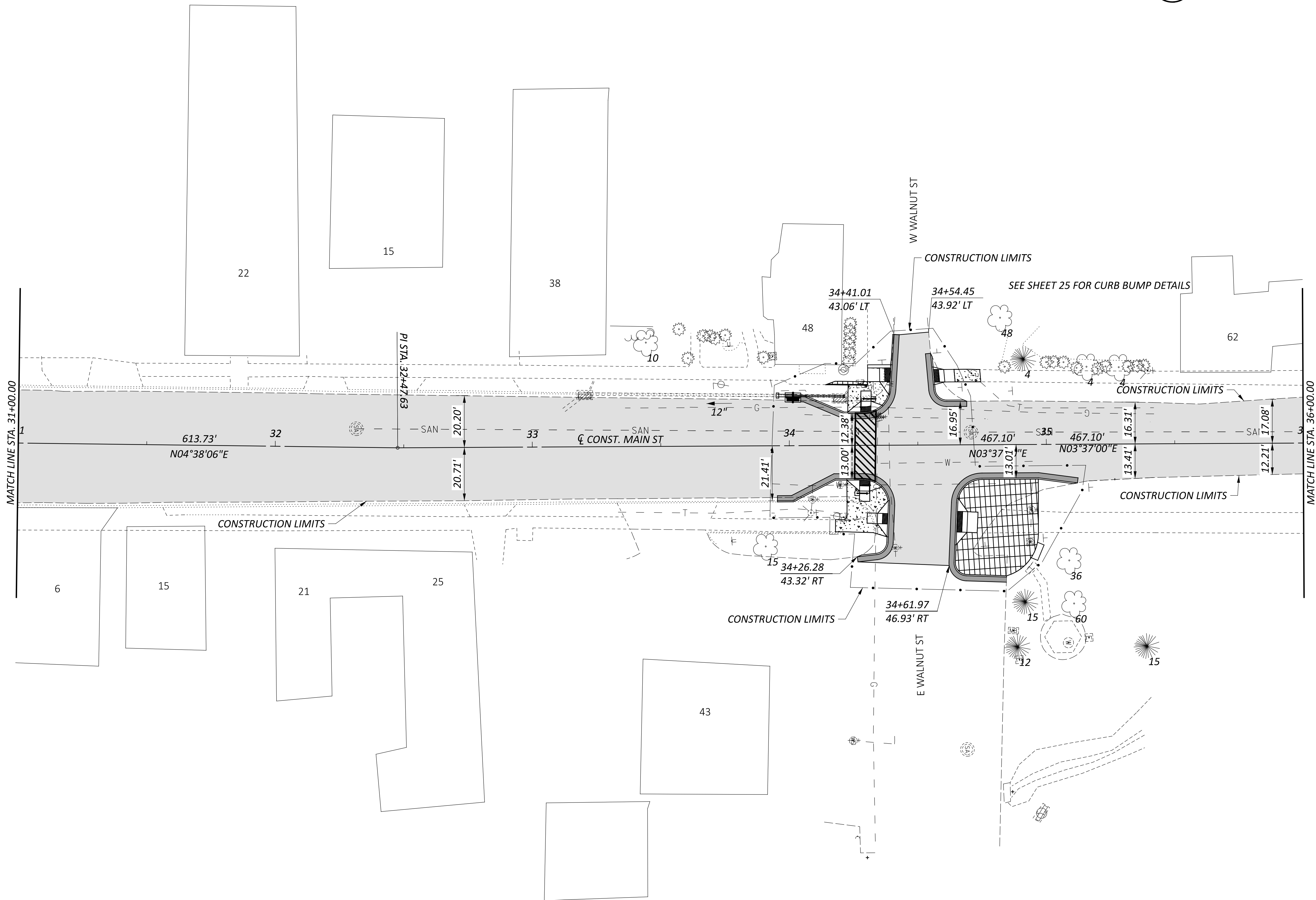
REVIEWER  
 BMG 07/19/23

PROJECT ID  
 125940

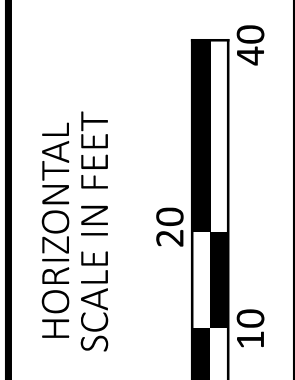
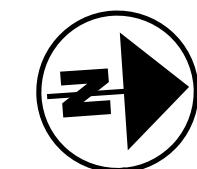
|       |       |
|-------|-------|
| SHEET | TOTAL |
| 18    | 47    |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_006 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:08 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP205.dgn



SEE PAVEMENT LEGEND SHEET 10



**PLAN - MAIN STREET**  
**STA. 31+00.00 TO STA. 36+00.00**

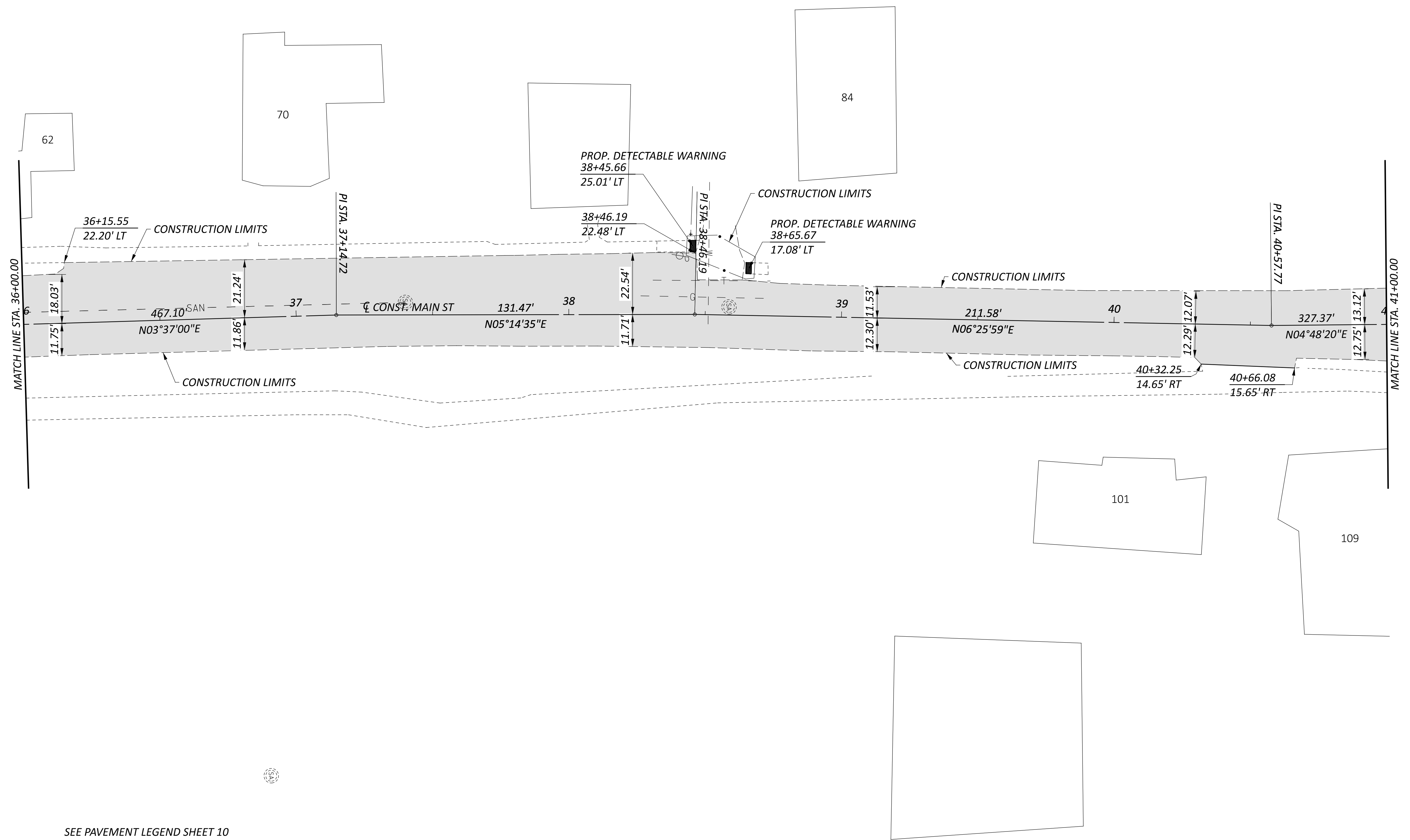
DESIGN AGENCY



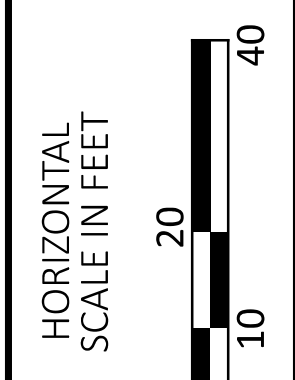
|            |        |
|------------|--------|
| DESIGNER   | AA     |
| REVIEWER   | BMG    |
| PROJECT ID | 125940 |
| SHEET      | TOTAL  |
| 19         | 47     |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_07 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:09 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP206.dgn



SEE PAVEMENT LEGEND SHEET 10



**PLAN - MAIN STREET**  
**STA. 36+00.00 TO STA. 41+00.00**

DESIGN AGENCY



DESIGNER  
AA

REVIEWER  
BMG 07/19/23

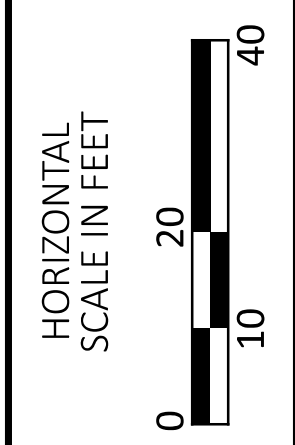
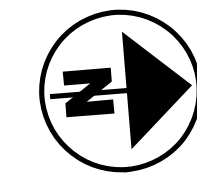
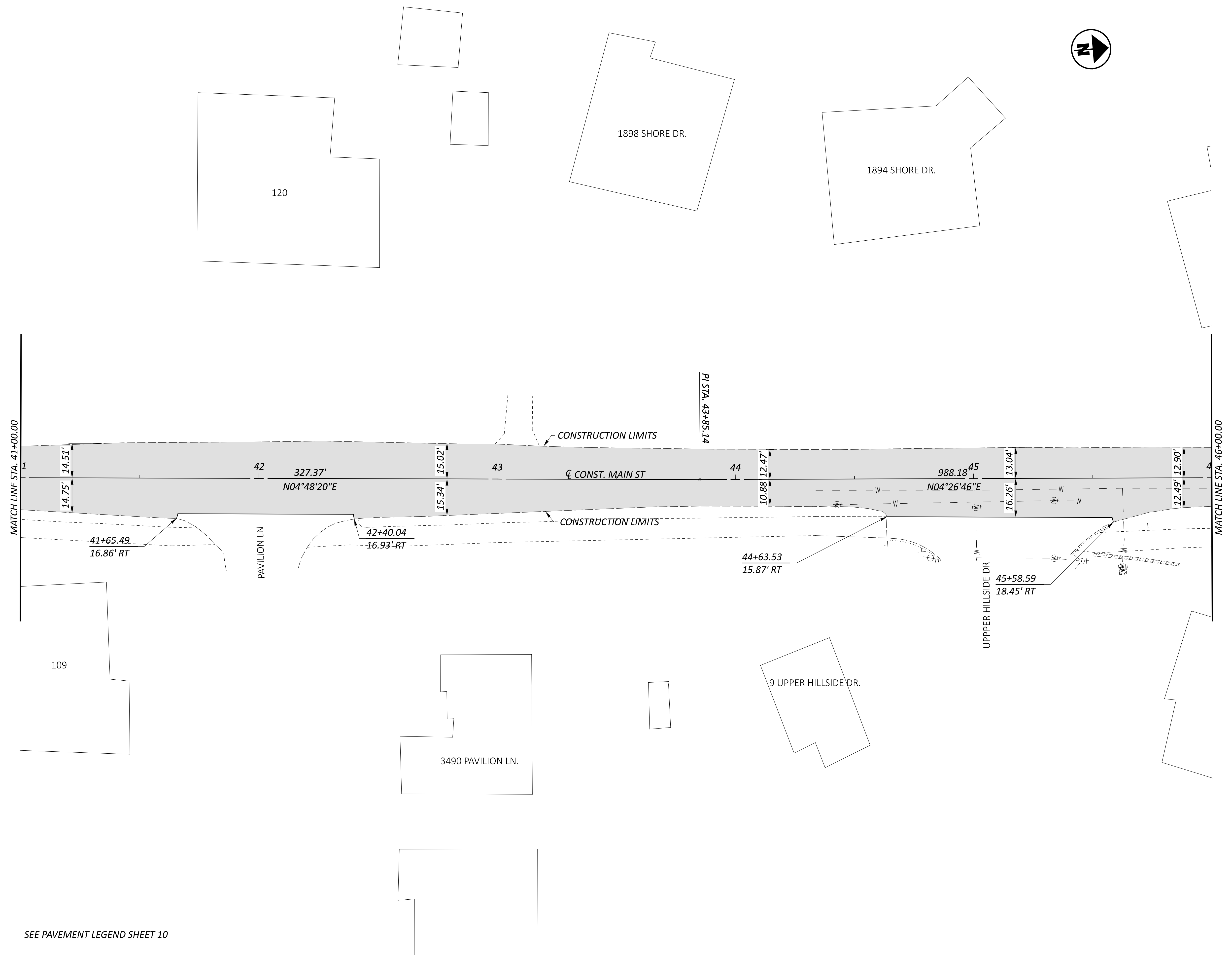
PROJECT ID  
125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 20    | 47    |



**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_008 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:09 PM USER: bgressel  
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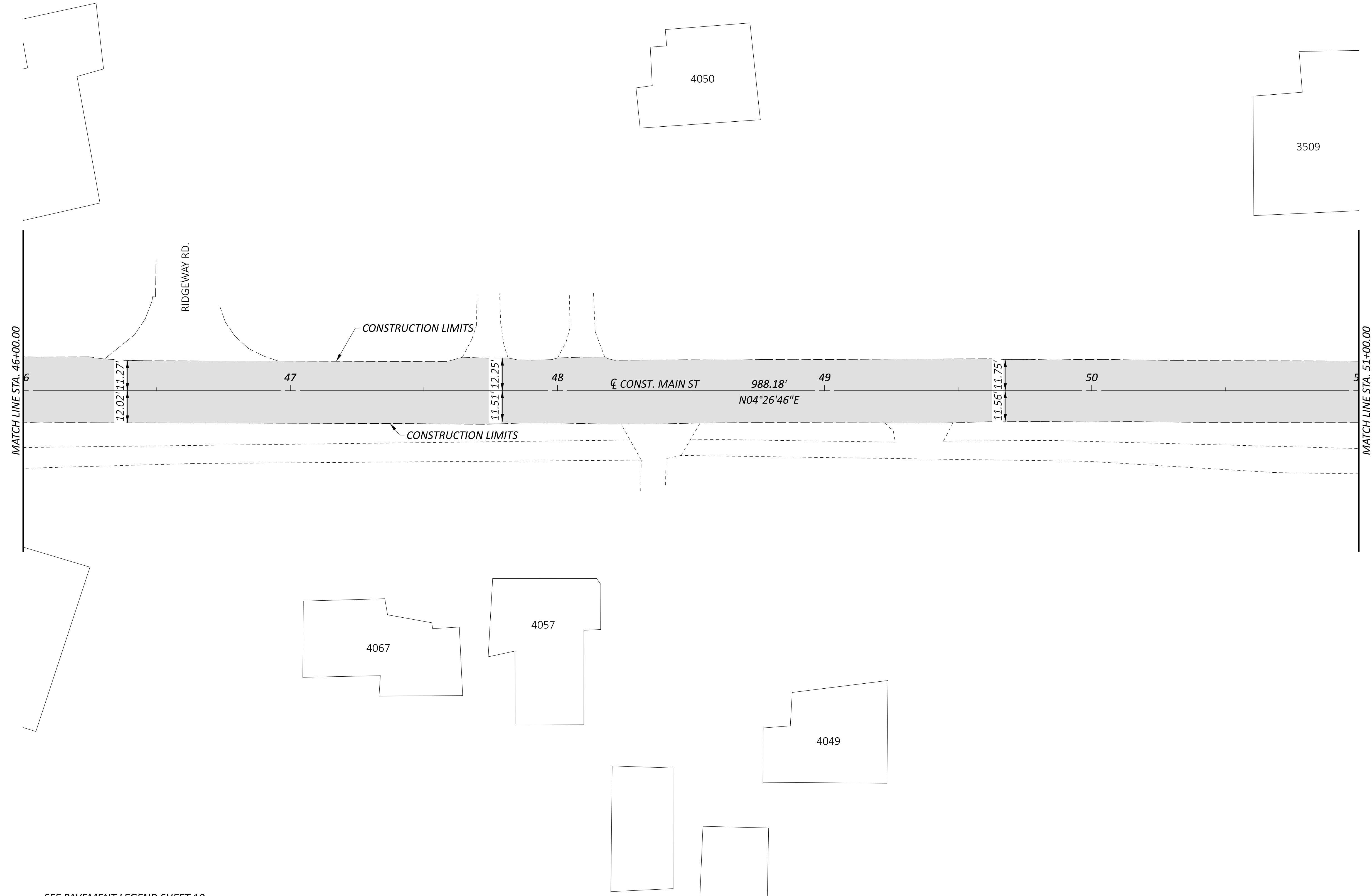
**PLAN - MAIN STREET**  
**STA. 41+00.00 TO STA. 46+00.00**

SEE PAVEMENT LEGEND SHEET 10

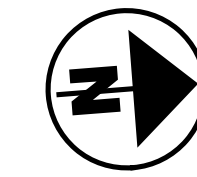
|               |              |
|---------------|--------------|
| DESIGN AGENCY |              |
|               |              |
| DESIGNER      | AA           |
| REVIEWER      | BMG 07/19/23 |
| PROJECT ID    | 125940       |
| SHEET         | TOTAL        |
| 21            | 47           |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_009 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:10 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP208.dgn

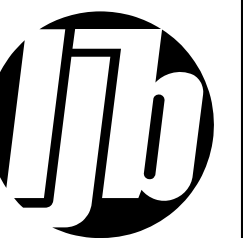


SEE PAVEMENT LEGEND SHEET 10



**PLAN - MAIN STREET**  
**STA. 46+00.00 TO STA. 51+00.00**

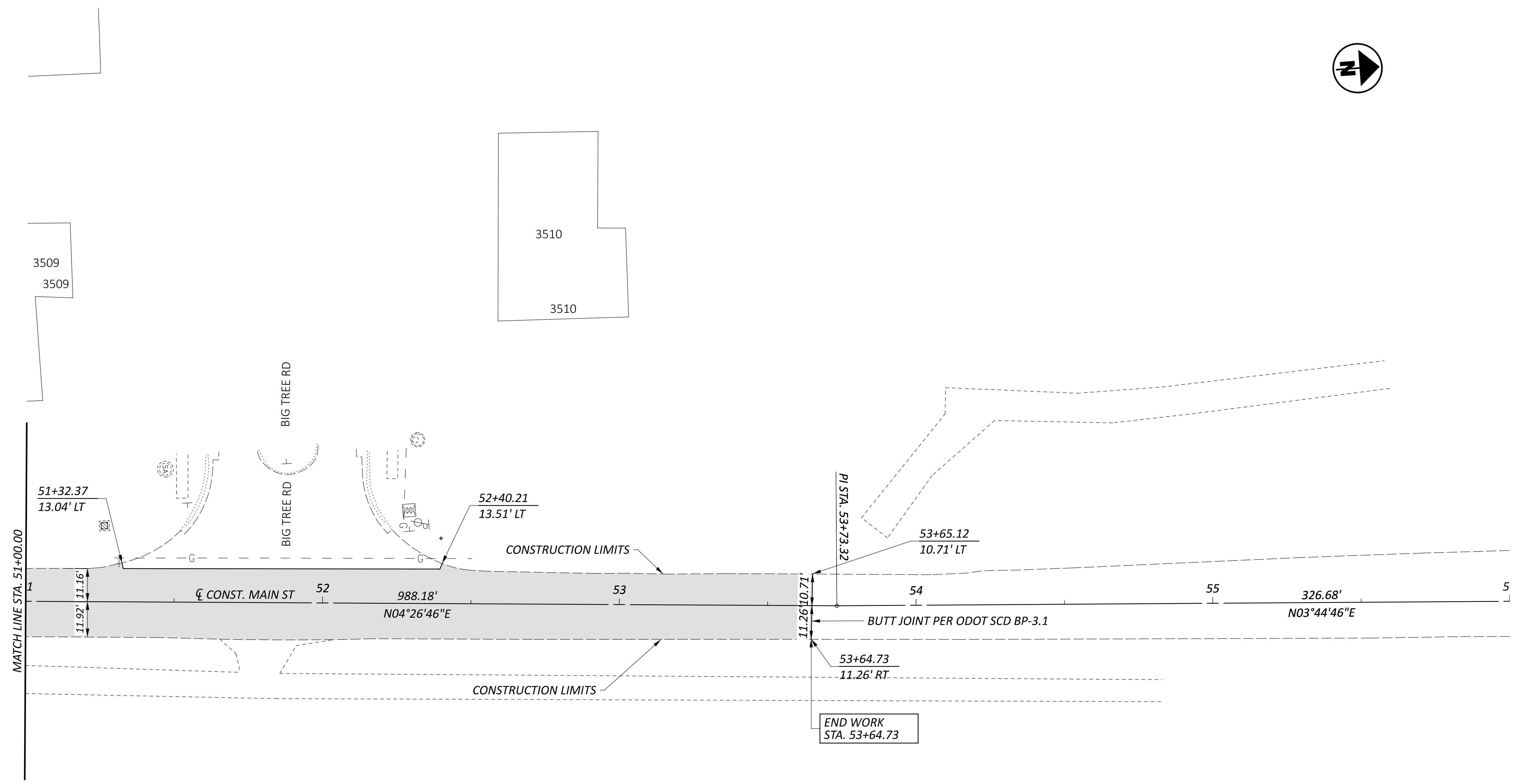
DESIGN AGENCY



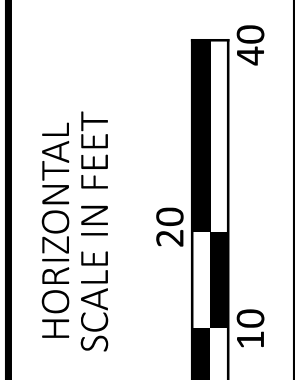
|              |        |
|--------------|--------|
| DESIGNER     | AA     |
| REVIEWER     |        |
| BMG 07/19/23 |        |
| PROJECT ID   | 125940 |
| SHEET        | TOTAL  |
| 22           | 47     |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: CLP - Franklin - GP\_010 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:11 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_GP209.dgn



SEE PAVEMENT LEGEND SHEET 10



**PLAN - MAIN STREET**  
**STA. 51+00.00 TO STA. 53+65.12**

DESIGN AGENCY



DESIGNER  
AA

REVIEWER  
BMG 07/19/23

PROJECT ID  
125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 23    | 47    |

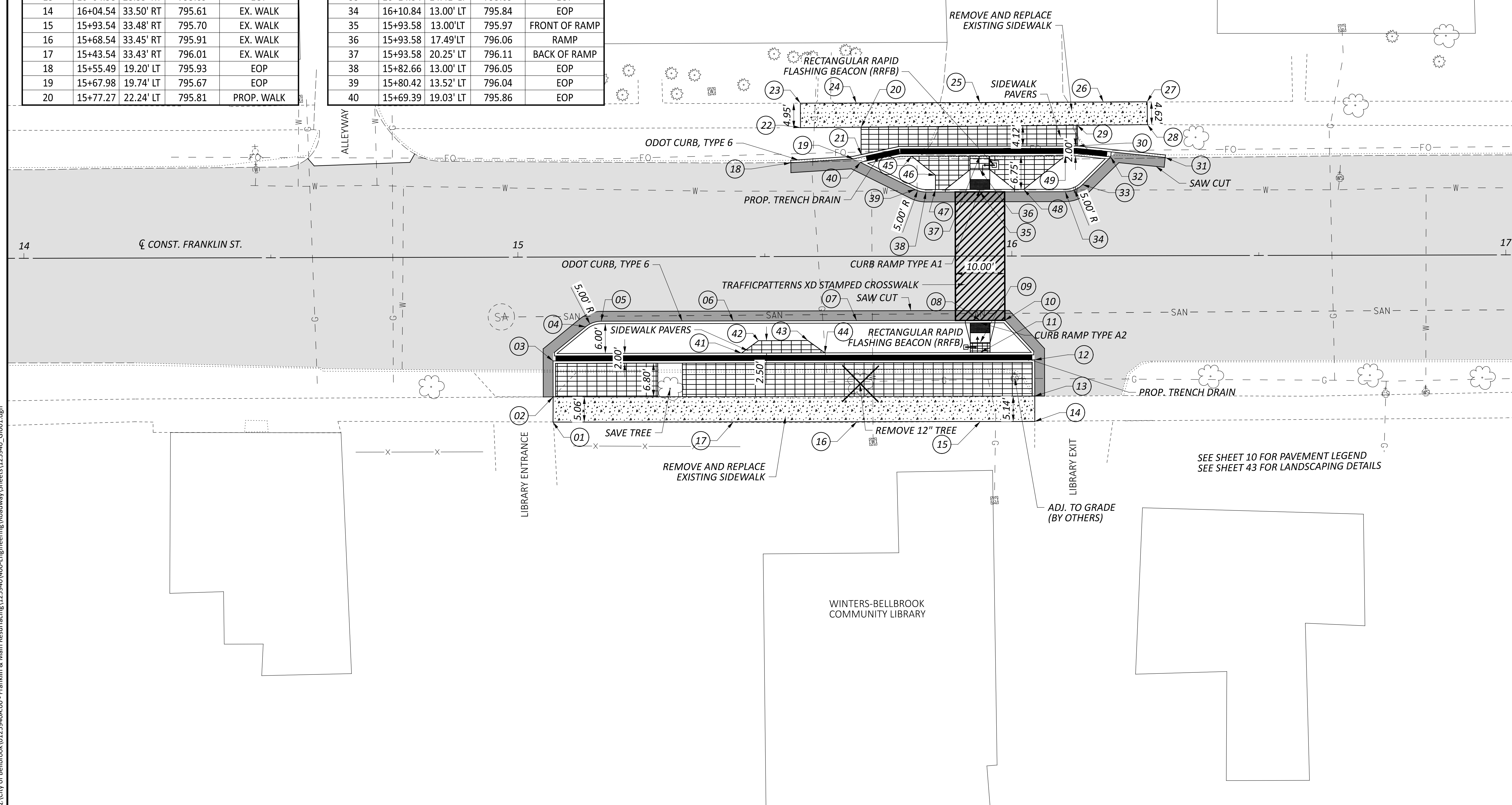
**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: Sheet\_SurvFt\_PAPER: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:11 PM USER: bgressel  
 C:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_G1001.dgn

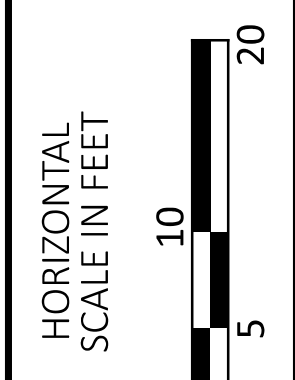
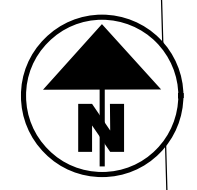
| CURB BUMP OUT DETAILS |          |           |           |               |
|-----------------------|----------|-----------|-----------|---------------|
| LOCATION              | STATION  | OFFSET    | ELEVATION | DETAIL        |
| 01                    | 15+07.04 | 33.39' RT | 796.10    | EX. WALK      |
| 02                    | 15+07.08 | 28.30' RT | 796.18    | EOP           |
| 03                    | 15+07.08 | 21.51' RT | 796.15    | EOP           |
| 04                    | 15+13.70 | 14.13' RT | 796.47    | EOP           |
| 05                    | 15+16.86 | 13.00' RT | 796.51    | EOP           |
| 06                    | 15+43.56 | 13.00' RT | 796.33    | EOP           |
| 07                    | 15+68.56 | 13.00' RT | 796.14    | EOP           |
| 08                    | 15+93.56 | 13.00' RT | 795.99    | FRONT OF RAMP |
| 09                    | 15+93.56 | 17.50' RT | 796.08    | RAMP          |
| 10                    | 15+98.56 | 13.00' RT | 795.95    | EOP           |
| 11                    | 15+93.55 | 19.50' RT | 796.11    | BACK OF RAMP  |
| 12                    | 16+04.58 | 21.00' RT | 795.62    | EOP           |
| 13                    | 16+04.58 | 28.35' RT | 795.69    | EOP           |
| 14                    | 16+04.54 | 33.50' RT | 795.61    | EX. WALK      |
| 15                    | 15+93.54 | 33.48' RT | 795.70    | EX. WALK      |
| 16                    | 15+68.54 | 33.45' RT | 795.91    | EX. WALK      |
| 17                    | 15+43.54 | 33.43' RT | 796.01    | EX. WALK      |
| 18                    | 15+55.49 | 19.20' LT | 795.93    | EOP           |
| 19                    | 15+67.98 | 19.74' LT | 795.67    | EOP           |
| 20                    | 15+77.27 | 22.24' LT | 795.81    | PROP. WALK    |

| CURB BUMP OUT DETAILS |          |           |           |               |
|-----------------------|----------|-----------|-----------|---------------|
| LOCATION              | STATION  | OFFSET    | ELEVATION | DETAIL        |
| 21                    | 15+77.53 | 26.09' LT | 795.62    | PROP. WALK    |
| 22                    | 15+57.28 | 26.07' LT | 795.75    | EX. WALK      |
| 23                    | 15+57.28 | 31.02' LT | 795.74    | EX. WALK      |
| 24                    | 15+68.59 | 31.04' LT | 795.71    | EX. WALK      |
| 25                    | 15+93.59 | 31.08' LT | 795.56    | EX. WALK      |
| 26                    | 16+18.59 | 31.12' LT | 795.27    | EX. WALK      |
| 27                    | 16+27.46 | 31.14' LT | 795.16    | EX. WALK      |
| 28                    | 16+27.53 | 26.51' LT | 795.2     | EX. WALK      |
| 29                    | 16+13.33 | 26.42' LT | 795.37    | PROP. WALK    |
| 30                    | 16+13.37 | 22.23' LT | 795.37    | PROP. WALK    |
| 31                    | 16+31.09 | 19.87' LT | 795.26    | EOP           |
| 32                    | 16+20.07 | 20.02' LT | 795.35    | EOP           |
| 33                    | 16+14.34 | 14.41' LT | 795.69    | EOP           |
| 34                    | 16+10.84 | 13.00' LT | 795.84    | EOP           |
| 35                    | 15+93.58 | 13.00' LT | 795.97    | FRONT OF RAMP |
| 36                    | 15+93.58 | 17.49' LT | 796.06    | RAMP          |
| 37                    | 15+93.58 | 20.25' LT | 796.11    | BACK OF RAMP  |
| 38                    | 15+82.66 | 13.00' LT | 796.05    | EOP           |
| 39                    | 15+80.42 | 13.52' LT | 796.04    | EOP           |
| 40                    | 15+69.39 | 19.03' LT | 795.86    | EOP           |

| CURB BUMP OUT DETAILS |          |           |           |              |
|-----------------------|----------|-----------|-----------|--------------|
| LOCATION              | STATION  | OFFSET    | ELEVATION | DETAIL       |
| 41                    | 15+45.23 | 19.50' RT | 796.83    | PROP. PAVERS |
| 42                    | 15+48.67 | 17.00' RT | 796.79    | PROP. PAVERS |
| 43                    | 15+58.67 | 17.00' RT | 796.71    | PROP. PAVERS |
| 44                    | 15+62.21 | 19.50' RT | 796.75    | PROP. PAVERS |
| 45                    | 15+80.33 | 20.25' LT | 796.25    | PROP. PAVERS |
| 46                    | 15+84.36 | 16.90' LT | 796.43    | PROP. PAVERS |
| 47                    | 15+84.58 | 13.50' LT | 796.53    | PROP. PAVERS |
| 48                    | 16+02.44 | 13.50' LT | 796.40    | PROP. PAVERS |
| 49                    | 16+10.88 | 20.25' LT | 796.00    | PROP. PAVERS |



SEE SHEET 10 FOR PAVEMENT LEGEND  
 SEE SHEET 43 FOR LANDSCAPING DETAILS



**CURB BUMP OUT DETAIL  
 FRANKLIN STREET - LIBRARY AND DAIRY SHED**

DESIGN AGENCY



|            |              |
|------------|--------------|
| DESIGNER   | ASN          |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 24         | 47           |

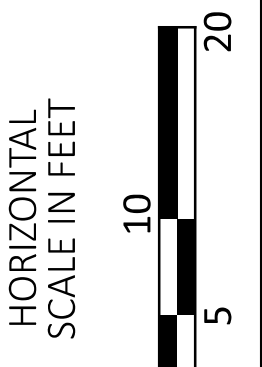
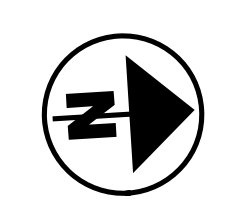
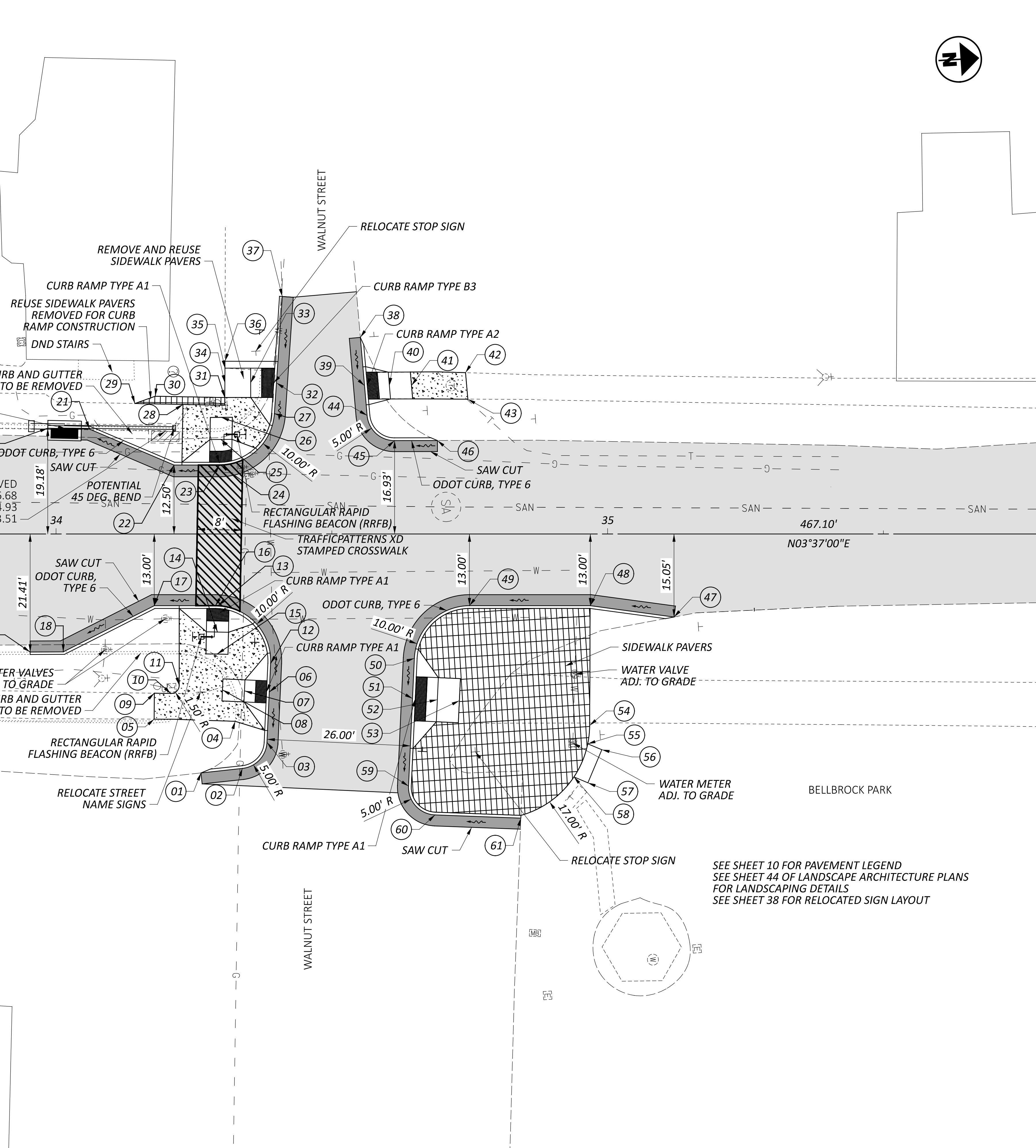
**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: Sheet\_SurvFt\_PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 4:23:13 PM USER: bgressel  
 C:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_G1002.dgn

| CURB BUMP OUT DETAILS |          |           |           |               |
|-----------------------|----------|-----------|-----------|---------------|
| LOCATION              | STATION  | OFFSET    | ELEVATION | DETAIL        |
| 01                    | 34+26.28 | 43.32' RT | 798.27    | EOP           |
| 02                    | 34+33.79 | 42.51' RT | 797.72    | EOP           |
| 03                    | 34+38.24 | 37.77' RT | 798.01    | EOP           |
| 04                    | 34+32.47 | 33.96' RT | 798.04    | PROP. WALK    |
| 05                    | 34+17.80 | 33.57' RT | 797.39    | EX. WALK      |
| 06                    | 34+38.66 | 28.65' RT | 798.05    | FRONT OF RAMP |
| 07                    | 34+34.16 | 28.44' RT | 798.10    | RAMP          |
| 08                    | 34+30.17 | 28.26' RT | 798.12    | BACK OF RAMP  |
| 09                    | 34+17.81 | 28.87' RT | 797.29    | EX. WALK      |
| 10                    | 34+20.81 | 28.91' RT | 797.37    | EX. WALK      |
| 11                    | 34+22.34 | 27.41' RT | 797.38    | EX. WALK      |
| 12                    | 34+38.90 | 23.46' RT | 798.01    | EOP           |
| 13                    | 34+29.35 | 13.01' RT | 797.70    | FRONT OF RAMP |
| 14                    | 34+29.26 | 17.78' RT | 797.73    | RAMP          |
| 15                    | 34+29.19 | 21.78' RT | 797.60    | BACK OF RAMP  |
| 16                    | 34+28.91 | 13.00' RT | 797.70    | EOP           |
| 17                    | 34+17.80 | 13.00' RT | 797.06    | EOP           |
| 18                    | 34+01.30 | 21.38' RT | 796.11    | EOP           |
| 19                    | 33+95.30 | 21.41' RT | 795.78    | EOP           |
| 20                    | 33+98.49 | 19.18' LT | 795.58    | EOP           |

| CURB BUMP OUT DETAILS |          |           |           |               |
|-----------------------|----------|-----------|-----------|---------------|
| LOCATION              | STATION  | OFFSET    | ELEVATION | DETAIL        |
| 21                    | 34+06.07 | 19.02' LT | 796.03    | EOP           |
| 22                    | 34+21.39 | 12.50' LT | 797.12    | EOP           |
| 23                    | 34+29.61 | 12.50' LT | 797.61    | EOP           |
| 24                    | 34+29.81 | 12.50' LT | 797.61    | FRONT OF RAMP |
| 25                    | 34+29.90 | 17.15' LT | 797.65    | RAMP          |
| 26                    | 34+29.97 | 21.15' LT | 797.69    | BACK OF RAMP  |
| 27                    | 34+39.59 | 21.83' LT | 798.48    | EOP           |
| 28                    | 34+23.01 | 23.49' LT | 797.17    | PROP. WALK    |
| 29                    | 34+14.29 | 23.66' LT | 796.75    | EX. WALK      |
| 30                    | 34+17.98 | 24.98' LT | 796.94    | EX. WALK      |
| 31                    | 34+30.60 | 24.74' LT | 797.76    | EX. WALK      |
| 32                    | 34+39.96 | 27.41' LT | 798.79    | FRONT OF RAMP |
| 33                    | 34+35.28 | 27.41' LT | 797.81    | RAMP          |
| 34                    | 34+30.61 | 27.41' LT | 797.69    | BACK OF RAMP  |
| 35                    | 34+30.62 | 30.08' LT | 798.11    | EX. WALK      |
| 36                    | 34+30.62 | 31.32' LT | 798.18    | EX. WALK      |
| 37                    | 34+41.01 | 43.06' LT | 800.13    | EOP           |
| 38                    | 34+55.17 | 35.64' LT | 800.01    | EOP           |
| 39                    | 34+55.92 | 26.90' LT | 799.43    | FRONT OF RAMP |
| 40                    | 34+60.44 | 26.92' LT | 799.49    | RAMP          |

| CURB BUMP OUT DETAILS |          |           |           |               |
|-----------------------|----------|-----------|-----------|---------------|
| LOCATION              | STATION  | OFFSET    | ELEVATION | DETAIL        |
| 41                    | 34+64.45 | 26.93' LT | 799.80    | BACK OF RAMP  |
| 42                    | 34+74.24 | 29.25' LT | 800.78    | EX. WALK      |
| 43                    | 34+74.66 | 24.46' LT | 800.76    | EX. WALK      |
| 44                    | 34+56.39 | 21.50' LT | 799.30    | EOP           |
| 45                    | 34+61.39 | 16.93' LT | 799.32    | EOP           |
| 46                    | 34+69.14 | 16.95' LT | 799.75    | EOP           |
| 47                    | 35+12.04 | 15.05' RT | 801.46    | EOP           |
| 48                    | 34+96.87 | 13.00' RT | 800.80    | EOP           |
| 49                    | 34+74.96 | 13.00' RT | 799.85    | EOP           |
| 50                    | 34+64.97 | 22.54' RT | 798.79    | EOP           |
| 51                    | 34+64.63 | 29.84' RT | 798.70    | FRONT OF RAMP |
| 52                    | 34+69.13 | 30.04' RT | 798.79    | RAMP          |
| 53                    | 34+73.12 | 30.23' RT | 798.86    | BACK OF RAMP  |
| 54                    | 34+96.75 | 34.72' RT | 800.22    | PROP. WALK    |
| 55                    | 34+96.40 | 38.04' RT | 800.33    | PROP. WALK    |
| 56                    | 34+98.95 | 39.12' RT | 800.65    | PROP. WALK    |
| 57                    | 34+96.43 | 45.11' RT | 800.77    | PROP. WALK    |
| 58                    | 34+93.90 | 44.05' RT | 800.58    | PROP. WALK    |
| 59                    | 34+63.91 | 45.71' RT | 798.66    | EOP           |
| 60                    | 34+68.71 | 50.93' RT | 798.75    | EOP           |
| 61                    | 34+84.27 | 51.52' RT | 799.44    | EOP           |



**CURB BUMP OUT DETAIL  
 MAIN STREET & WALNUT STREET**

SEE SHEET 10 FOR PAVEMENT LEGEND  
 SEE SHEET 44 OF LANDSCAPE ARCHITECTURE PLANS  
 FOR LANDSCAPING DETAILS  
 SEE SHEET 38 FOR RELOCATED SIGN LAYOUT

DESIGN AGENCY

DESIGNER  
**ASN**

REVIEWER  
**BMG 07/19/23**

PROJECT ID  
**125940**

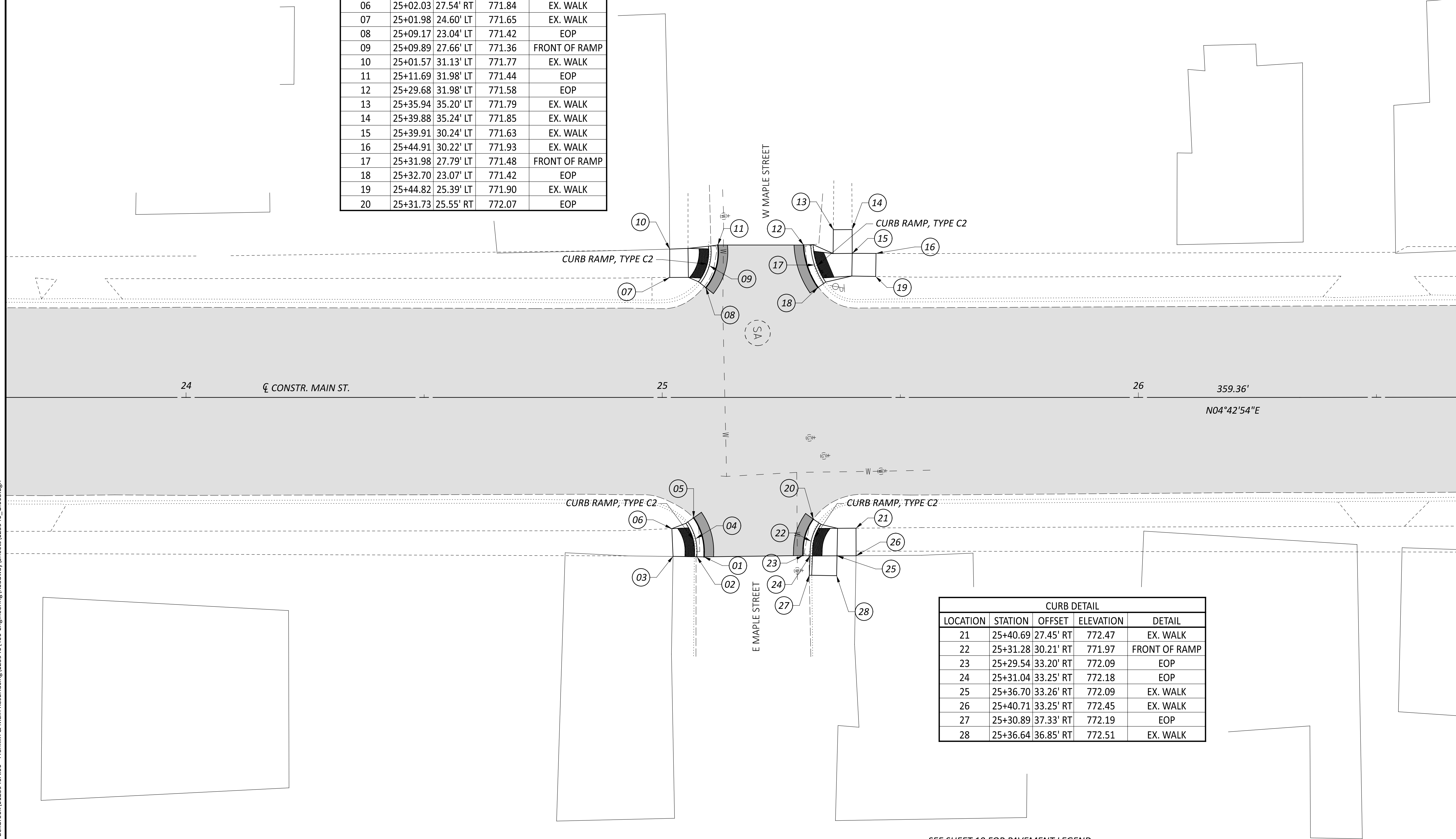
SHEET TOTAL  
 25 | 47



**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: Sheet\_SurvFt\_PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:13 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_G1003.dgn

| CURB DETAIL |          |           |           |               |
|-------------|----------|-----------|-----------|---------------|
| LOCATION    | STATION  | OFFSET    | ELEVATION | DETAIL        |
| 01          | 25+08.79 | 33.47' RT | 771.79    | EOP           |
| 02          | 25+07.29 | 33.44' RT | 771.85    | EOP           |
| 03          | 25+02.27 | 33.36' RT | 771.90    | EX. WALK      |
| 04          | 25+06.99 | 29.68' RT | 771.62    | FRONT OF RAMP |
| 05          | 25+06.59 | 25.28' RT | 771.45    | EOP           |
| 06          | 25+02.03 | 27.54' RT | 771.84    | EX. WALK      |
| 07          | 25+01.98 | 24.60' LT | 771.65    | EX. WALK      |
| 08          | 25+09.17 | 23.04' LT | 771.42    | EOP           |
| 09          | 25+09.89 | 27.66' LT | 771.36    | FRONT OF RAMP |
| 10          | 25+01.57 | 31.13' LT | 771.77    | EX. WALK      |
| 11          | 25+11.69 | 31.98' LT | 771.44    | EOP           |
| 12          | 25+29.68 | 31.98' LT | 771.58    | EOP           |
| 13          | 25+35.94 | 35.20' LT | 771.79    | EX. WALK      |
| 14          | 25+39.88 | 35.24' LT | 771.85    | EX. WALK      |
| 15          | 25+39.91 | 30.24' LT | 771.63    | EX. WALK      |
| 16          | 25+44.91 | 30.22' LT | 771.93    | EX. WALK      |
| 17          | 25+31.98 | 27.79' LT | 771.48    | FRONT OF RAMP |
| 18          | 25+32.70 | 23.07' LT | 771.42    | EOP           |
| 19          | 25+44.82 | 25.39' LT | 771.90    | EX. WALK      |
| 20          | 25+31.73 | 25.55' RT | 772.07    | EOP           |



| CURB DETAIL |          |           |           |               |
|-------------|----------|-----------|-----------|---------------|
| LOCATION    | STATION  | OFFSET    | ELEVATION | DETAIL        |
| 21          | 25+40.69 | 27.45' RT | 772.47    | EX. WALK      |
| 22          | 25+31.28 | 30.21' RT | 771.97    | FRONT OF RAMP |
| 23          | 25+29.54 | 33.20' RT | 772.09    | EOP           |
| 24          | 25+31.04 | 33.25' RT | 772.18    | EOP           |
| 25          | 25+36.70 | 33.26' RT | 772.09    | EX. WALK      |
| 26          | 25+40.71 | 33.25' RT | 772.45    | EX. WALK      |
| 27          | 25+30.89 | 37.33' RT | 772.19    | EOP           |
| 28          | 25+36.64 | 36.85' RT | 772.51    | EX. WALK      |

SEE SHEET 10 FOR PAVEMENT LEGEND



**INTERSECTION DETAIL  
 MAIN ST. & MAPLE ST.**

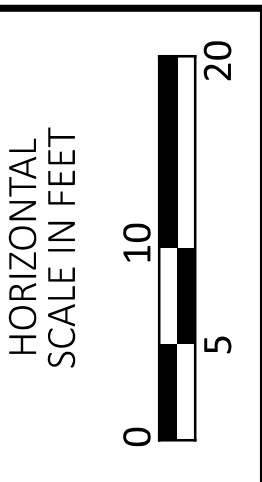
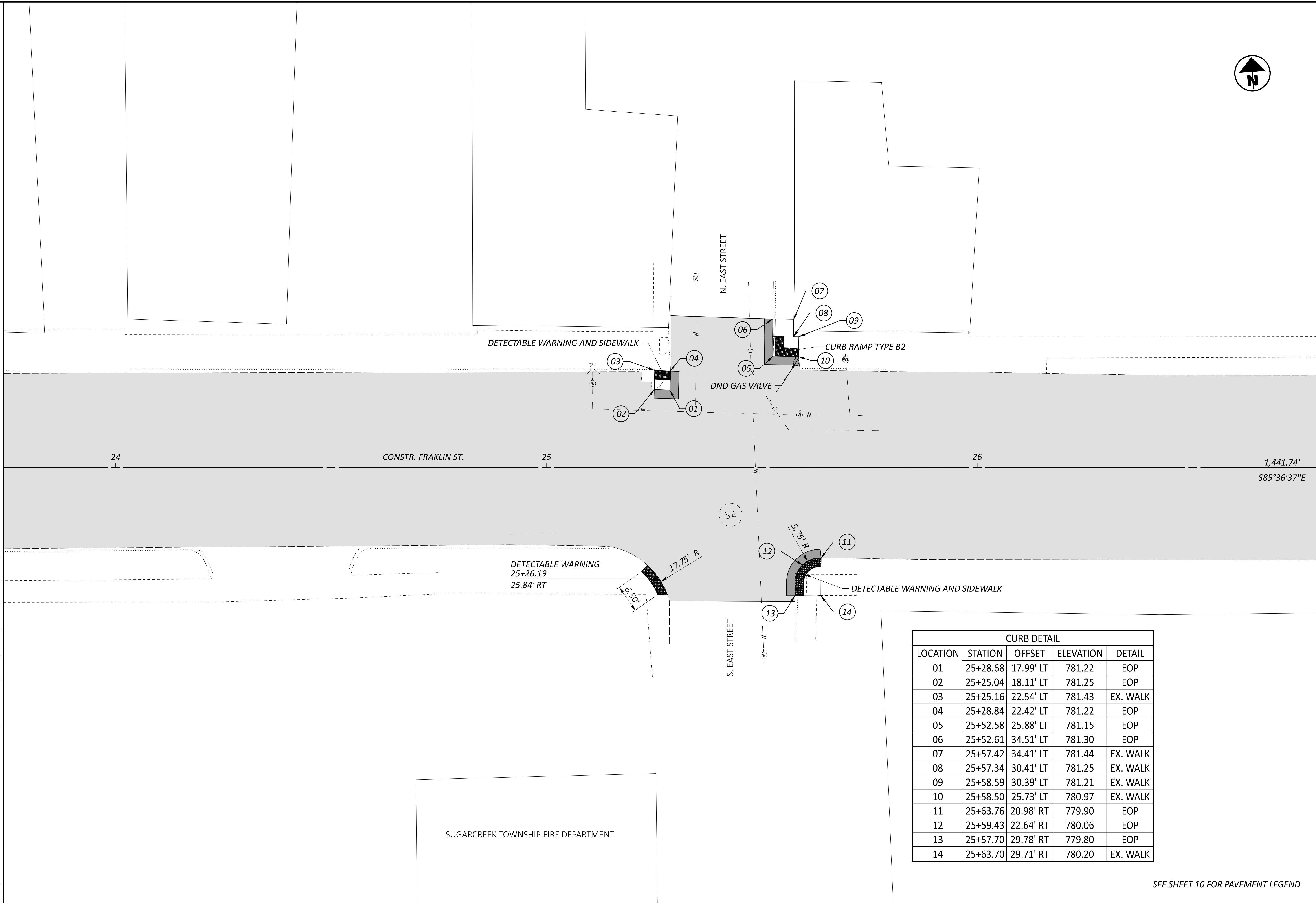
DESIGN AGENCY



DESIGNER  
**ASN**  
 REVIEWER  
**BMG 07/19/23**  
 PROJECT ID  
**125940**  
 SHEET TOTAL  
 26 | 47

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: Sheet\_SurvFt\_PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:14 PM USER: bgressel  
 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Roadway\Sheets\125940\_G1004.dgn



**INTERSECTION DETAIL  
FRANKLIN ST. & EAST ST.**

DETECTABLE WARNING  
25+26.19  
25.84' RT

| CURB DETAIL |          |           |           |          |
|-------------|----------|-----------|-----------|----------|
| LOCATION    | STATION  | OFFSET    | ELEVATION | DETAIL   |
| 01          | 25+28.68 | 17.99' LT | 781.22    | EOP      |
| 02          | 25+25.04 | 18.11' LT | 781.25    | EOP      |
| 03          | 25+25.16 | 22.54' LT | 781.43    | EX. WALK |
| 04          | 25+28.84 | 22.42' LT | 781.22    | EOP      |
| 05          | 25+52.58 | 25.88' LT | 781.15    | EOP      |
| 06          | 25+52.61 | 34.51' LT | 781.30    | EOP      |
| 07          | 25+57.42 | 34.41' LT | 781.44    | EX. WALK |
| 08          | 25+57.34 | 30.41' LT | 781.25    | EX. WALK |
| 09          | 25+58.59 | 30.39' LT | 781.21    | EX. WALK |
| 10          | 25+58.50 | 25.73' LT | 780.97    | EX. WALK |
| 11          | 25+63.76 | 20.98' RT | 779.90    | EOP      |
| 12          | 25+59.43 | 22.64' RT | 780.06    | EOP      |
| 13          | 25+57.70 | 29.78' RT | 779.80    | EOP      |
| 14          | 25+63.70 | 29.71' RT | 780.20    | EX. WALK |

SEE SHEET 10 FOR PAVEMENT LEGEND

DESIGN AGENCY



DESIGNER  
ASN

REVIEWER  
BMG 07/19/23

PROJECT ID  
125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 27    | 47    |

**630 SIGNING MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY**

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY. THE FLASHING UNIT SHALL BE SOLAR POWERED, PEDESTRIAN ACTIVATED, AND 2-SIDED WITH TWO LED ARRAY BASED YELLOW INDICATIONS ON EACH SIDE. MULTIPLE UNITS SHALL BE WIRELESSLY CONTROLLED AND SYNCHRONIZED. THE UNIT SHALL BE COMPLIANT WITH THE MOST CURRENT OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) AND FHWA INTERIM APPROVAL FOR RRFBs (IA-21).

**GENERAL REQUIREMENTS -**

EACH RRFB SHALL CONSIST OF TWO RAPIDLY FLASHED RECTANGULAR-SHAPED YELLOW INDICATIONS HAVING LED ARRAY BASED LIGHT SOURCE.

EACH RRFB SHALL BE A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.).

EACH RRFB SHALL CONTAIN A PEDESTRIAN INDICATION LIGHT VISIBLE BY THE PEDESTRIAN IN THE DIRECTION OF TRAVEL.

**FUNCTIONAL REQUIREMENTS -**

EACH RRFB SHALL UTILIZE SOLAR POWER.

EACH RRFB SHALL BE ACTIVATED BY ADA COMPLIANT PUSHBUTTONS.

THE RRFB SHALL BE NORMALLY DARK, SHALL INITIATE OPERATION ONLY UPON PEDESTRIAN ACTUATION, AND SHALL CEASE OPERATION AFTER A PREDETERMINED TIME LIMIT (BASED ON OMUTCD PROCEDURES).

EACH REMOTE RRFB SHALL BE WIRELESSLY ACTIVATED.

ALL RRFB LIGHT INDICATIONS SHALL BE WIRELESSLY SYNCHRONIZED (ALL LIGHTS WILL TURN ON WITHIN 120 MSEC AND REMAIN SYNCHRONIZED THROUGHOUT THE DURATION OF THE FLASHING CYCLE).

THE UNIT SHALL BE CAPABLE OF RUNNING 14 DAYS WITHOUT SUNLIGHT.

**MATERIALS -**

FURNISH A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS, AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.). THE RRFB ASSEMBLY INCLUDES THE FOLLOWING ITEMS:

**1. RRFB INDICATIONS**

- A. EACH RRFB INDICATION LENS SHALL BE A MINIMUM SIZE OF APPROXIMATELY 5" WIDE X 2" HIGH.
- B. THE RRFB INDICATIONS SHALL BE ALIGNED HORIZONTALLY, WITH THE LONGER DIMENSION OF THE INDICATION HORIZONTAL. THERE SHALL BE TWO INDICATIONS ON THE FRONT AND TWO INDICATIONS ON THE BACK.
- C. EACH RRFB SHALL BE SUPPLIED WITH ALL REQUIRED HARDWARE TO INSTALL ASSEMBLY. ALL EXPOSED HARDWARE SHALL BE ANTI-VANDAL.

- D. EACH RRFB SHALL BE LOCATED BETWEEN THE BOTTOM OF THE CROSSING WARNING SIGN AND THE TOP OF THE SUPPLEMENTAL DOWNWARD DIAGONAL ARROW PLAQUE.
- E. THE LIGHT INTENSITY OF THE YELLOW INDICATIONS SHALL MEET THE MINIMUM CLASS 1 SPECIFICATIONS OF SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) STANDARD J595 (DIRECTIONAL FLASHING OPTICAL WARNING DEVICES FOR AUTHORIZED EMERGENCY, MAINTENANCE, AND SERVICE VEHICLES) DATED JANUARY, 2005.
- F. TO MINIMIZE EXCESSIVE GLARE DURING NIGHTTIME CONDITIONS, AN AUTOMATIC SIGNAL DIMMING DEVICE SHALL BE USED TO REDUCE THE BRILLIANCE OF THE RRFB INDICATIONS.
- G. An LED PEDESTRIAN CONFIRMATION LIGHT DIRECTED AT AND VISIBLE TO PEDESTRIANS IN THE CROSSWALK SHALL BE INSTALLED INTEGRAL TO THE RRFB OR PUSHBUTTON TO GIVE CONFIRMATION THAT THE RRFB IS IN OPERATION.
- H. THE PEDESTRIAN CONFIRMATION LIGHT SHALL HAVE A MINIMUM AREA OF 0.5 SQUARE INCHES AND BE CONSPICUOUS TO PEDESTRIANS AT ALL DISTANCES FROM THE BEGINNING OF THE CONTROLLED CROSSWALK TO A POINT 10 FEET FROM THE END OF THE CONTROLLED CROSSWALK DURING BOTH DAY AND NIGHT.

**2. SIGNS**

- A. ALL SIGN ASSEMBLIES SHALL USE ANTI-VANDAL FASTENERS TO MOUNT COMPONENTS TO SIGN AND SIGN TO FIXTURE.
- B. PEDESTRIAN PUSHBUTTONS SIGNS SHALL BE PROVIDED AND INCLUDE THE LEGEND "PUSH BUTTON TO TURN ON WARNING LIGHTS". SIGNS SHOULD BE MOUNTED ADJACENT TO OR INTEGRAL WITH EACH PEDESTRIAN PUSHBUTTON.
- C. TWO SETS OF SIGNS SHALL BE REQUIRED PER UNIT FOR VIEW FROM EACH APPROACH.
- D. ASSURE SIGN MEETS THE REQUIREMENTS OF C&MS 630.

**3. CONTROL CIRCUIT**

- A. THE CONTROL CIRCUIT SHALL HAVE THE CAPABILITY OF INDEPENDENTLY FLASHING UP T TWO INDEPENDENT OUTPUTS. THE LED LIGHT OUTPUTS AND FLASH PATTERN SHALL BE COMPLETELY PROGRAMMABLE.
- B. THE CONTROL CIRCUIT SHALL BE SEALED WATERTIGHT TO ELIMINATE DIRT CONTAMINATION AND ALLOW FOR SAFE HANDLING IN ALL WEATHER CONDITIONS.
- C. THE LEDS SHALL BE SEALED AGAINST DUST AND MOISTURE INTRUSION AS PER THE REQUIREMENTS OF NEMA STANDARD 250-1991 FOR TYPE 4 ENCLOSURE AND TO PROTECT ALL INTERNAL LED AND ELECTRICAL COMPONENTS.

**4. BATTERY AND SOLAR PANELS**

- A. BATTERY UNIT SHALL BE A 12VDC, 35 AHR MINIMUM, SEALED GEL OR AGM LEAD ACID BATTERY. BATTERIES SHALL HAVE A WRITTEN TWO YEAR FULL

**REPLACEMENT WARRANTY.**

- B. THE SOLAR PANEL SHALL PROVIDE A MINIMUM OF 40 WATTS PEAK TOTAL OUTPUT.
- C. THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET AT AN ANGLE OF 45 DEGREES - 60 DEGREES TO PROVIDE MAXIMUM OUTPUT.
- D. ALL FASTENERS USED SHALL BE ANTI-VANDAL.

**5. WIRELESS RADIO**

- A. RADIO CONTROL SHALL OPERATE ON A 900 MHZ FREQUENCY HOPPING SPREAD SPECTRUM NETWORK, WI-FI OR APPROVED EQUAL.
- B. RADIO SHALL INTEGRATE COMMUNICATION OF RRFB CONTROL CIRCUIT TO ACTIVATE SIGN FROM PUSHBUTTON INPUT.
- C. THE RADIO SHALL BE SYNCHRONIZED SO ALL OF THE REMOTE RRFB LIGHT INDICATIONS WILL TURN ON WITHIN 120 MSEC OF EACH OTHER AND REMAIN SYNCHRONIZED THROUGH-OUT THE DURATION OF THE FLASHING CYCLE.

**6. PUSHBUTTON**

- A. THE PUSHBUTTON SHALL BE CAPABLE OF CONTINUOUS OPERATION OVER A TEMPERATURE RANGE OF -30 DEGREES F TO +165 DEGREES F.
- B. PUSHBUTTON SHALL BE ADA COMPLIANT.

- 7. PEDESTAL SHAFT AND BASE - MOUNT ON A STANDARD 4.5-INCH OD ALUMINUM PEDESTAL POLE WITH TRANSFORMER BASE. A 14 FOOT POLE SHALL BE PROVIDED AND FIELD ADJUSTED AND CAPPED TO MAINTAIN THE PROPER SIGN MOUNTING HEIGHTS, UNLESS SPECIFIED OTHERWISE IN THE PLANS. POLE AND BASE MANUFACTURER SHALL BE LISTED ON ODOT'S QUALIFIED PRODUCTS LIST.

**CONSTRUCTION -**

THE RRFB SHALL BE ASSEMBLED AND CONSTRUCTED BY THE CONTRACTOR AS SHOWN AND SPECIFIED ON THE PLANS.

**WARRANTY -**

WARRANTY SHALL BE TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.

**MEASUREMENT -**

THE DEPARTMENT WILL MEASURE THE ITEM COMPLETE IN PLACE, INCLUDING ALL MATERIALS, TESTING, LABOR AND SOFTWARE FOR A FULLY FUNCTIONAL UNIT.

**PAYMENT -**

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 630 "SIGNING MISC.: SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY".

**PEDESTAL, 8' TRANSFORMER BASE**

THE EXTERIOR OF PEDESTALS AND BASES PROVIDED AS PART OF THE "ITEM 630, SIGNING, MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB)" SHALL BE POWDER COATED BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE INCIDENTAL TO "ITEM 630, SIGNING, MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB)".

DESIGN AGENCY



DESIGNER

ASN

REVIEWER

BMG 07/19/23

PROJECT ID

125940

SHEET

28

TOTAL

47



**FRANKLIN AND MAIN STREET IMPROVEMENTS**

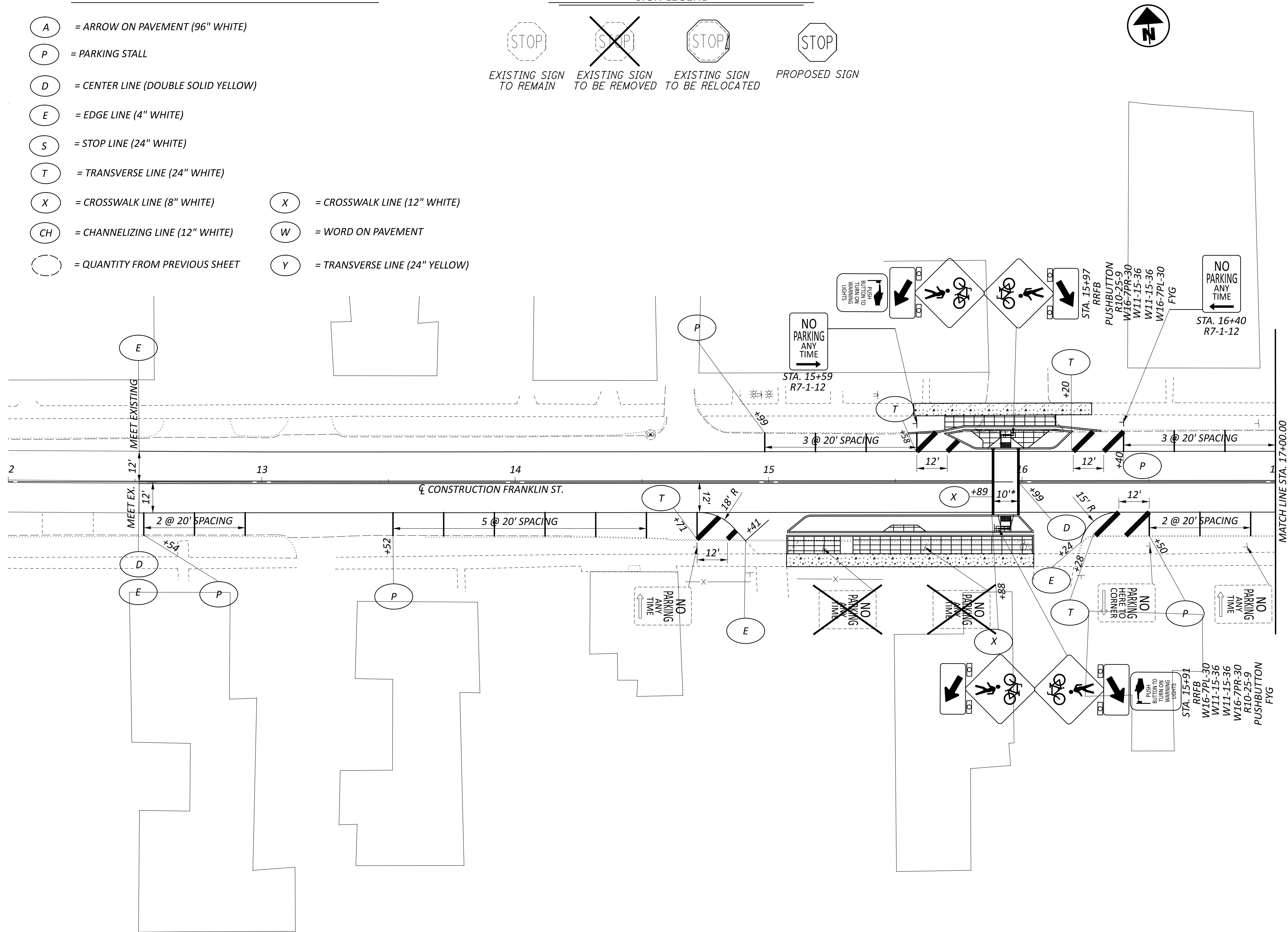
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 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Traffic\Sheets\125940\_TP101.dgn

**PAVEMENT MARKING LEGEND**

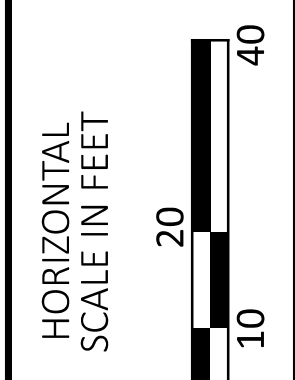
- (A) = ARROW ON PAVEMENT (96" WHITE)
- (P) = PARKING STALL
- (D) = CENTER LINE (DOUBLE SOLID YELLOW)
- (E) = EDGE LINE (4" WHITE)
- (S) = STOP LINE (24" WHITE)
- (T) = TRANSVERSE LINE (24" WHITE)
- (X) = CROSSWALK LINE (8" WHITE)
- (CH) = CHANNELIZING LINE (12" WHITE)
- ( ) = QUANTITY FROM PREVIOUS SHEET
- (X) = CROSSWALK LINE (12" WHITE)
- (W) = WORD ON PAVEMENT
- (Y) = TRANSVERSE LINE (24" YELLOW)

**SIGN LEGEND**

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- EXISTING SIGN TO BE RELOCATED
- PROPOSED SIGN

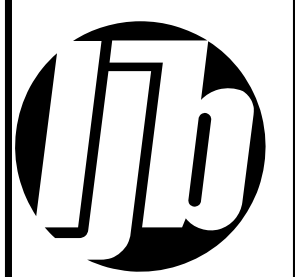


\*PLACE 12" CROSSWALK LINE ON PERIMETER OF TRAFFIC PATTERNS XD ENHANCED CROSSWALK



**TRAFFIC CONTROL PLAN**  
 STA. 12+51.00 - STA. 17+00.00

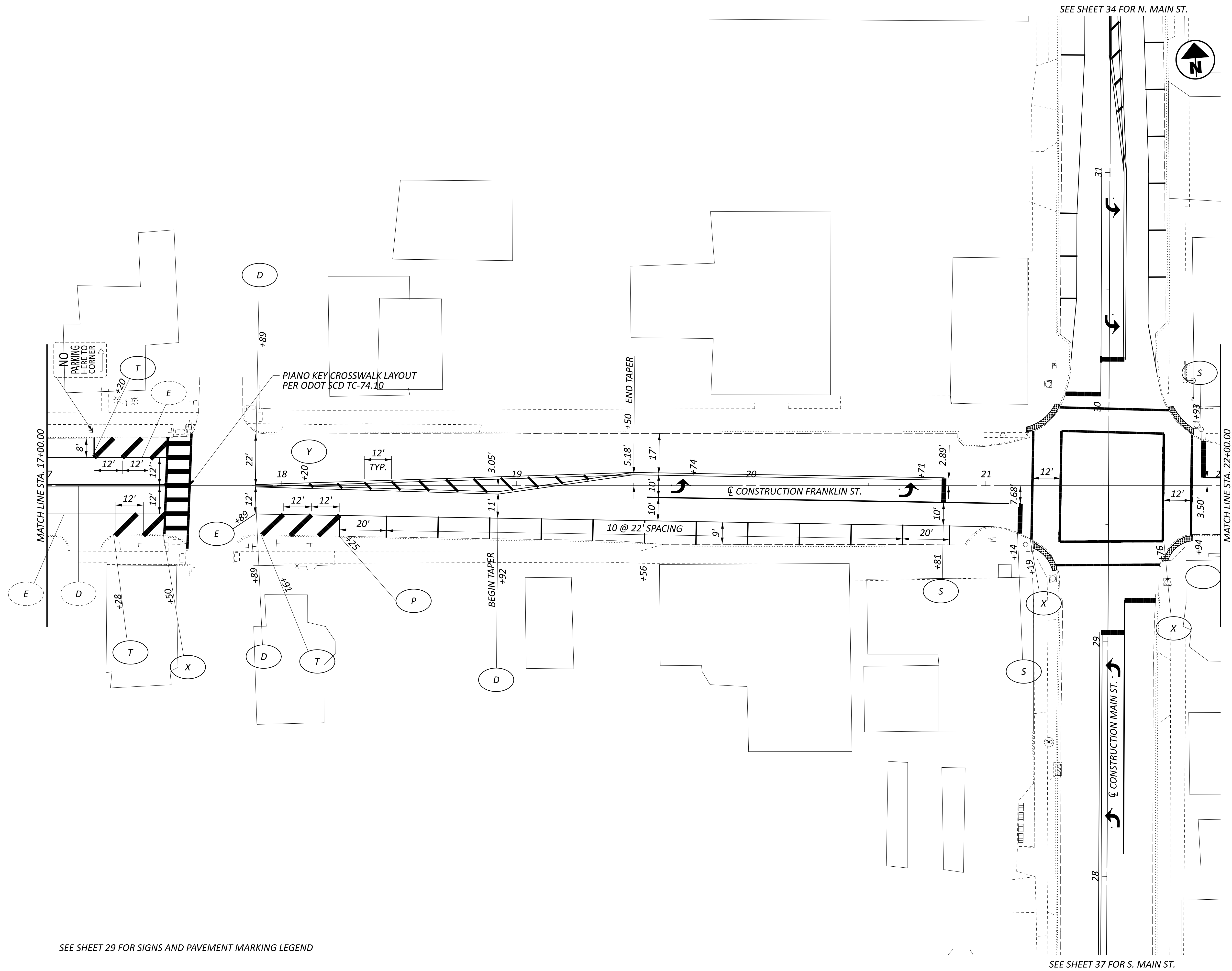
DESIGN AGENCY



|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 29         | 47           |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

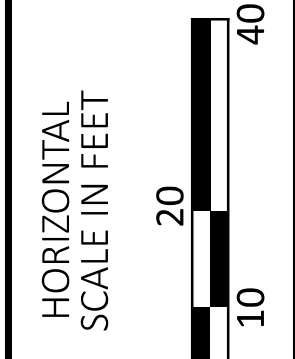
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SEE SHEET 29 FOR SIGNS AND PAVEMENT MARKING LEGEND

SEE SHEET 37 FOR S. MAIN ST.

SEE SHEET 34 FOR N. MAIN ST.



**TRAFFIC CONTROL PLAN**  
 STA. 17+00 TO STA. 22+00



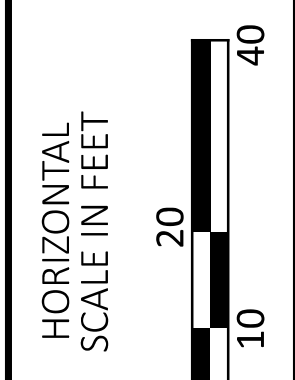
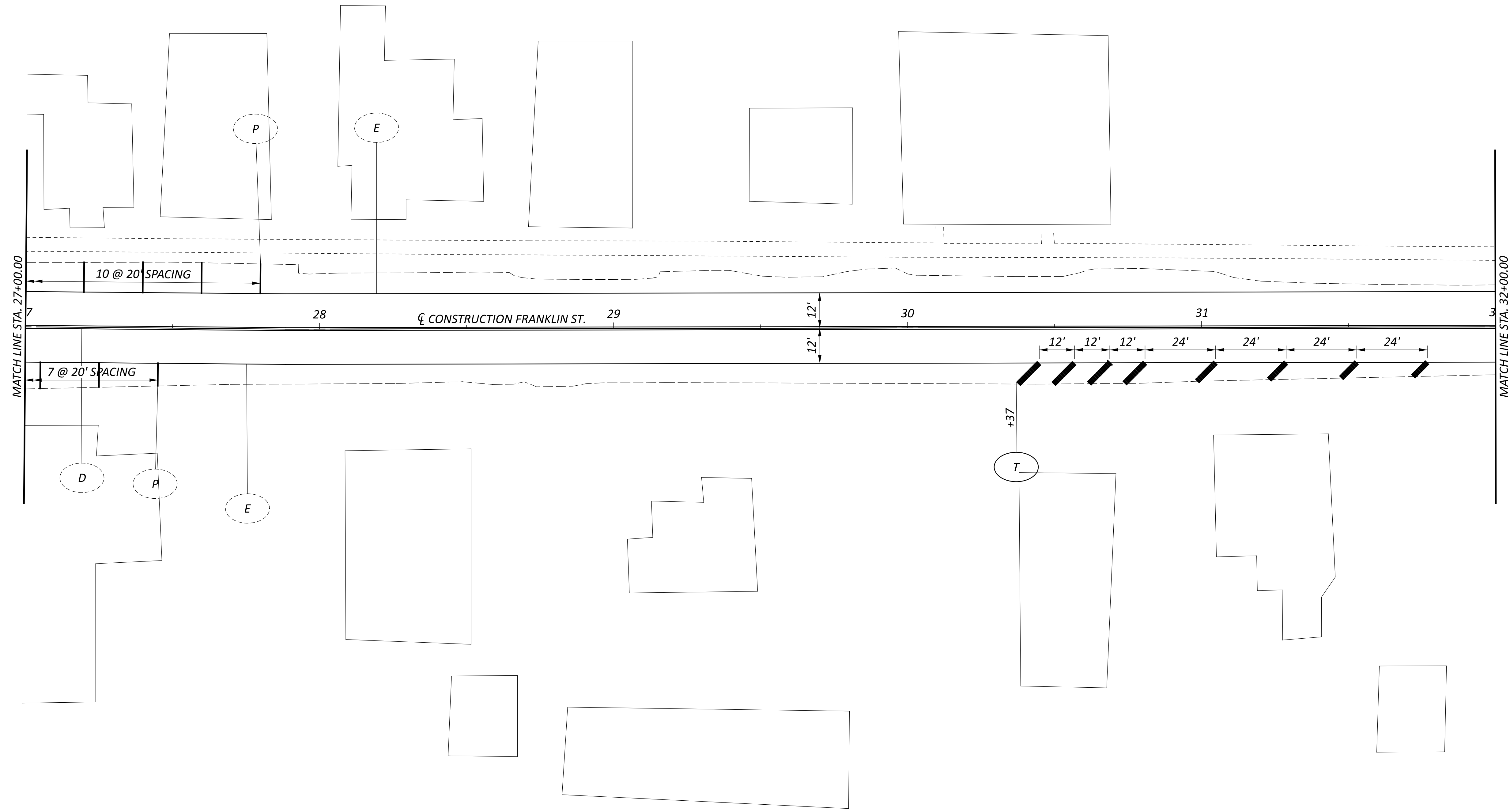
|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 30         | 47           |



**FRANKLIN AND MAIN STREET IMPROVEMENTS**

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 Q:\City of Bellbrook\0125940A.00 - Franklin & Main Resurfacing\125940\400-Engineering\Traffic\Sheets\125940\_TP104.dgn

SEE SHEET 29 FOR SIGNS AND PAVEMENT MARKING LEGEND



**TRAFFIC CONTROL PLAN**  
 STA. 27+00 TO STA. 32+00

DESIGN AGENCY

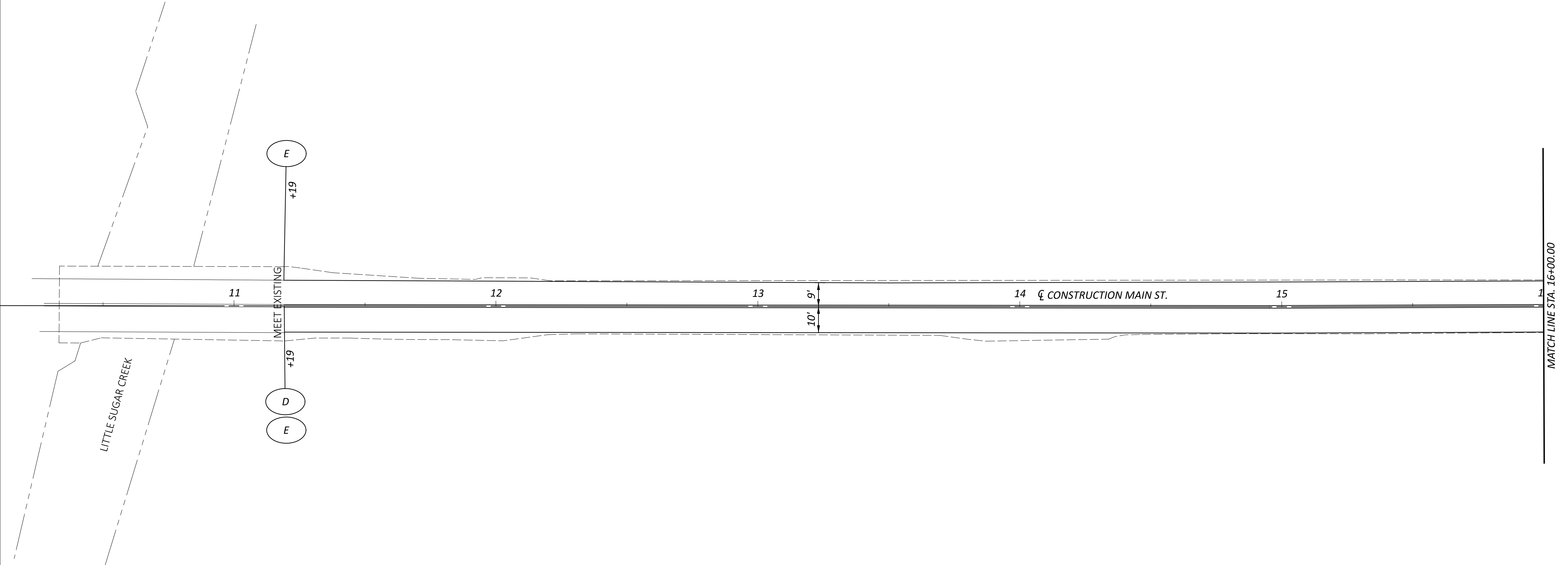


|            |              |
|------------|--------------|
| DESIGNER   | AA           |
| REVIEWER   | BMG 07/19/23 |
| PROJECT ID | 125940       |
| SHEET      | TOTAL        |
| 32         | 47           |

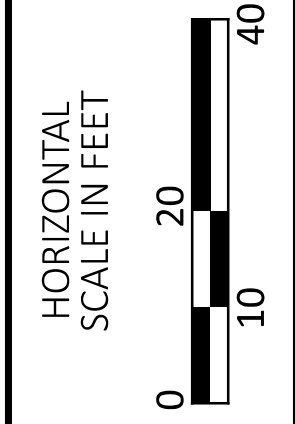
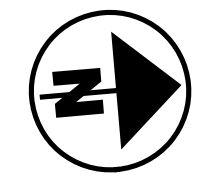


**FRANKLIN AND MAIN STREET IMPROVEMENTS**

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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND



**TRAFFIC CONTROL PLAN**  
STA. 11+19.00 - STA. 16+00.00

DESIGN AGENCY



DESIGNER  
AA

REVIEWER  
BMG 07/19/23

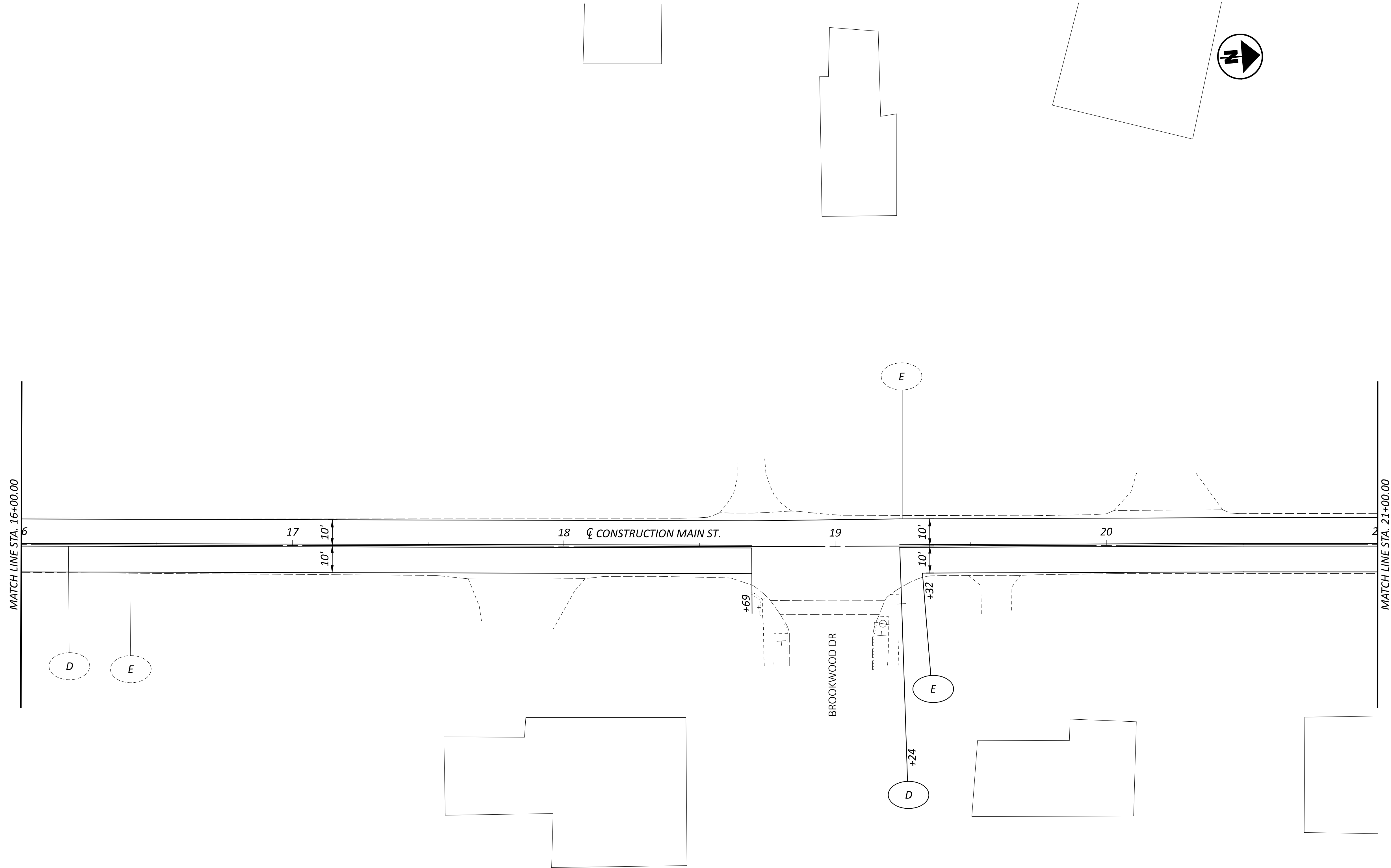
PROJECT ID  
125940

SHEET TOTAL  
34 47



**FRANKLIN AND MAIN STREET IMPROVEMENTS**

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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND

**TRAFFIC CONTROL PLAN**  
 STA. 16+00 TO STA. 21+00

DESIGN AGENCY



DESIGNER  
AA

REVIEWER

BMG 07/19/23

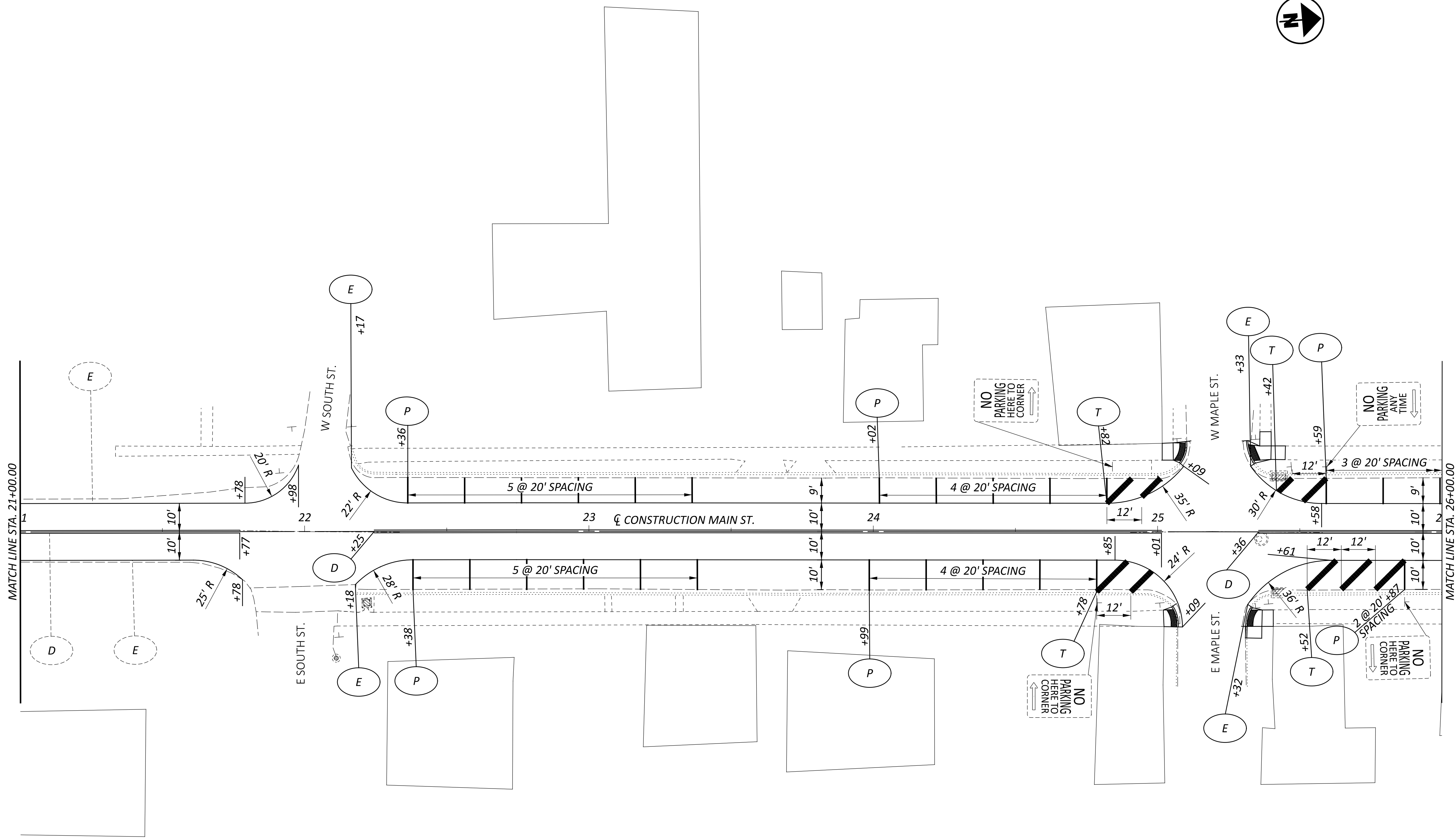
PROJECT ID  
125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 35    | 47    |

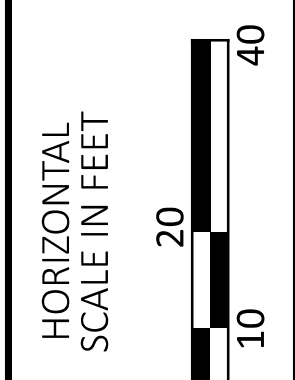


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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND



**TRAFFIC CONTROL PLAN**  
 STA. 21+00 TO STA. 26+00

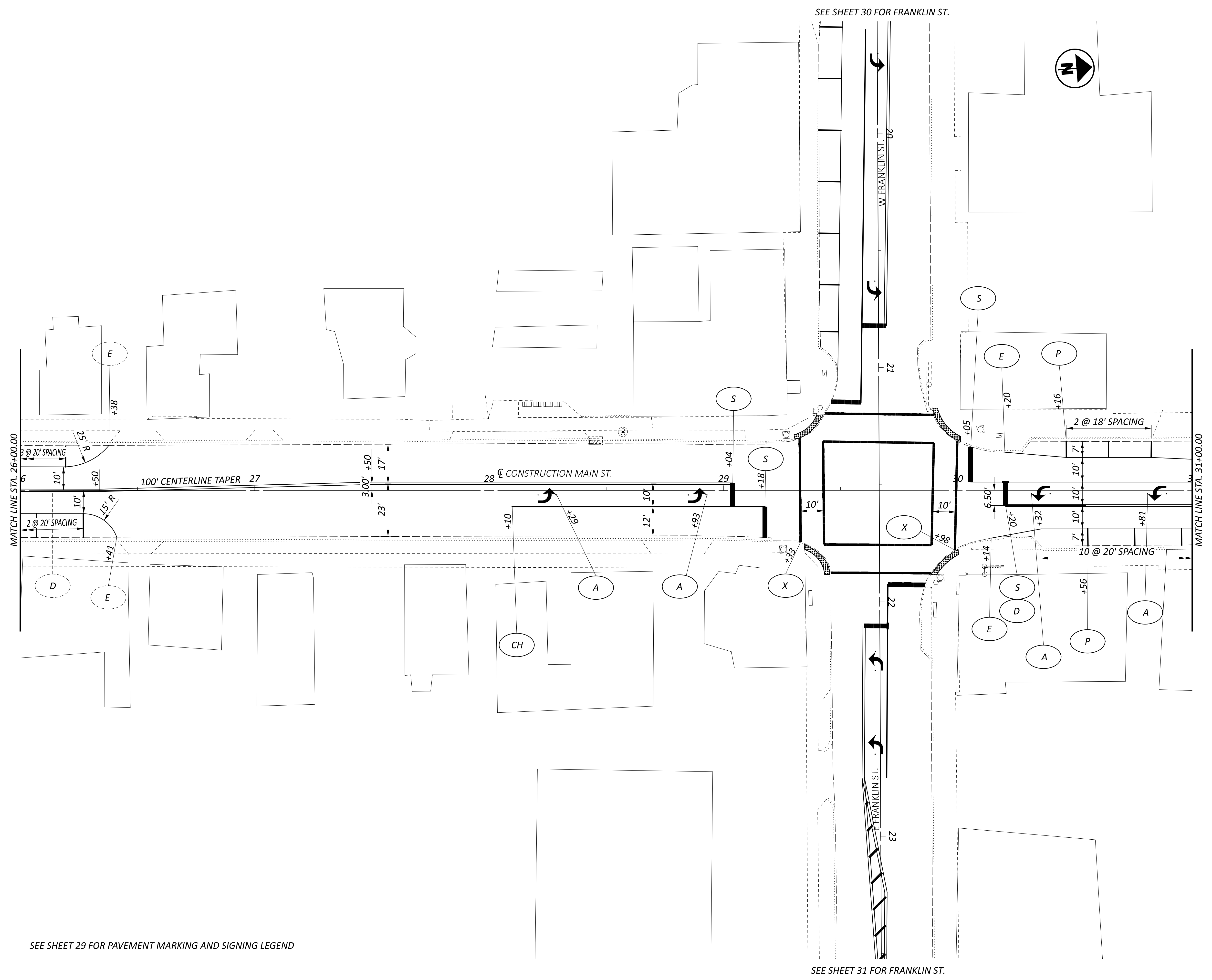
DESIGN AGENCY



|            |        |
|------------|--------|
| DESIGNER   | AA     |
| REVIEWER   | BMG    |
| PROJECT ID | 125940 |
| SHEET      | TOTAL  |
| 36         | 47     |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

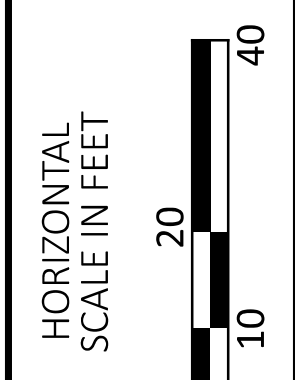
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SEE SHEET 30 FOR FRANKLIN ST.

SEE SHEET 31 FOR FRANKLIN ST.

SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND



**TRAFFIC CONTROL PLAN  
 STA. 26+00 TO STA. 31+00**

DESIGN AGENCY



DESIGNER  
 AA

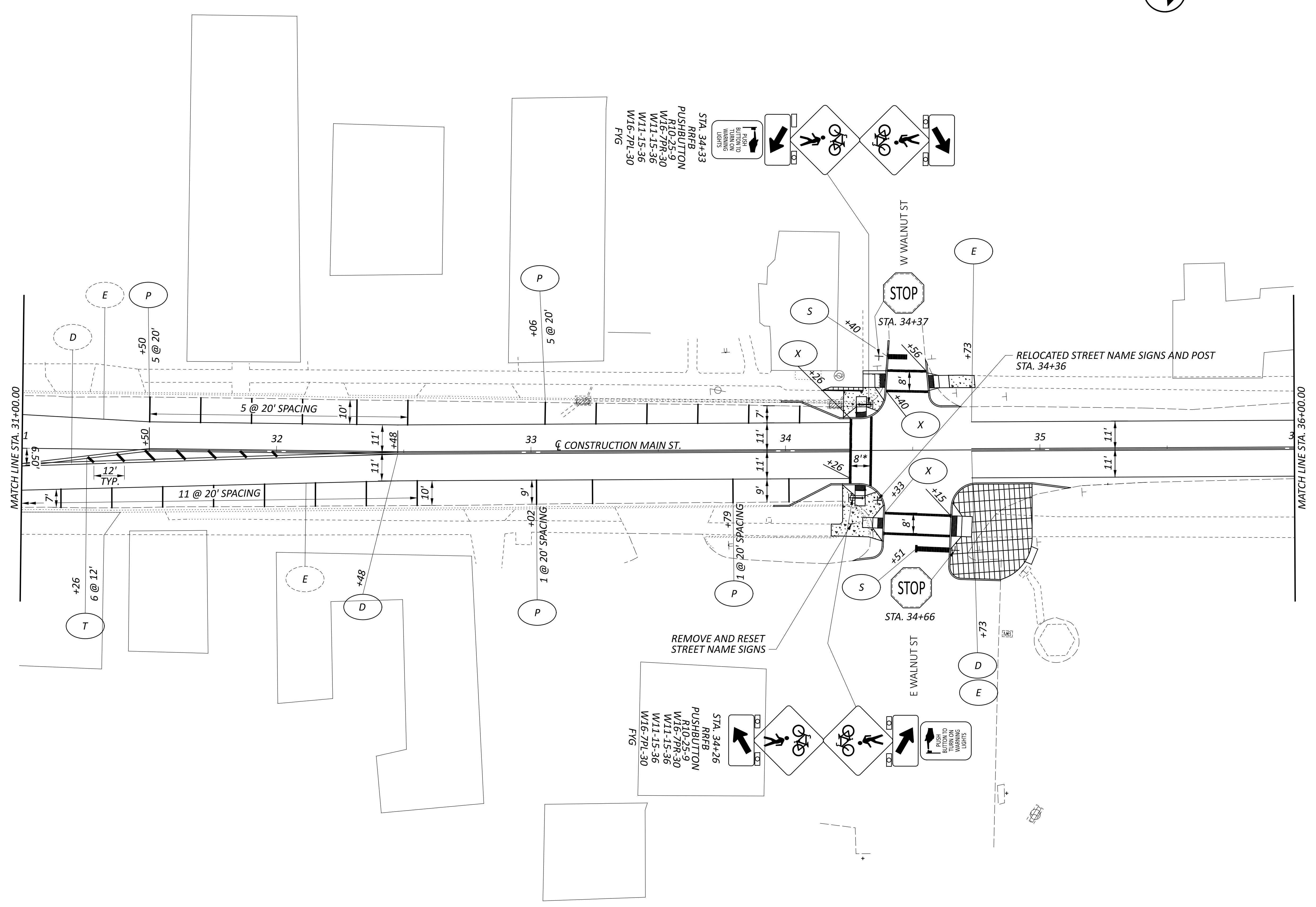
REVIEWER  
 BMG 07/19/23

PROJECT ID  
 125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 37    | 47    |

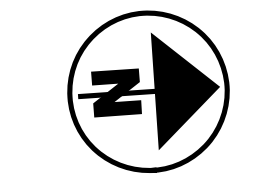
**FRANKLIN AND MAIN STREET IMPROVEMENTS**

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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND

\*PLACE 12" CROSSWALK LINE ON PERIMETER OF TRAFFIC PATTERNS XD ENHANCED CROSSWALK



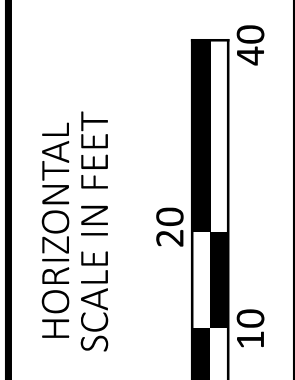
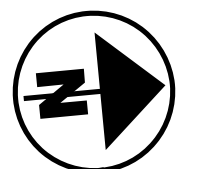
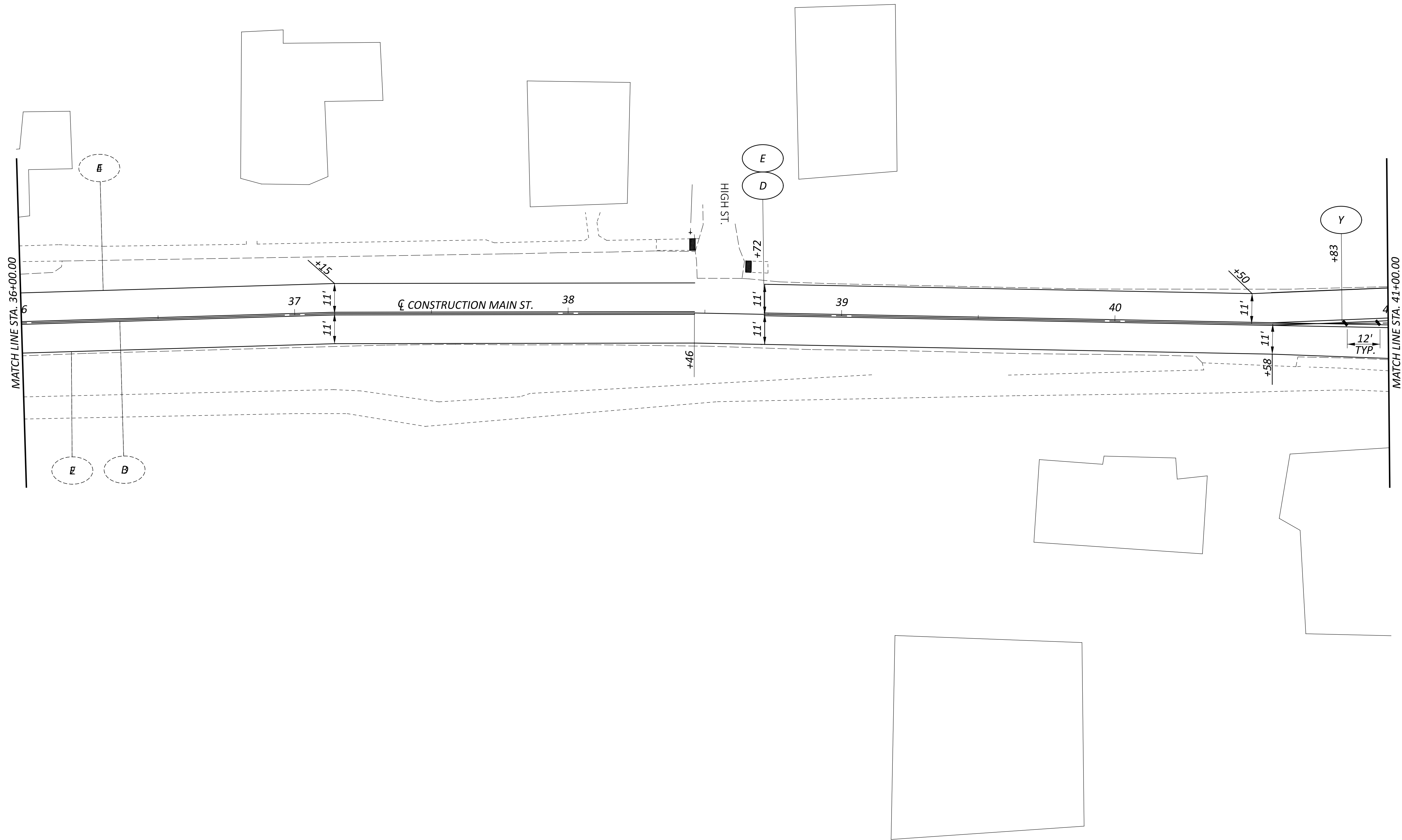
|               |              |
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| DESIGN AGENCY |              |
|               |              |
| DESIGNER      | AA           |
| REVIEWER      | BMG 07/19/23 |
| PROJECT ID    | 125940       |
| SHEET         | TOTAL        |
| 38            | 47           |

**TRAFFIC CONTROL PLAN**  
 STA. 31+00.00 - STA. 36+00.00

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

MODEL: 125940\_TP206 PAPER SIZE: 34x22 (in.) DATE: 8/11/2023 TIME: 2:33:52 PM USER: bgressel  
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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND



**TRAFFIC CONTROL PLAN**  
 STA. 36+00 TO STA. 41+00

DESIGN AGENCY



DESIGNER  
AA

REVIEWER  
BMG 07/19/23

PROJECT ID  
125940

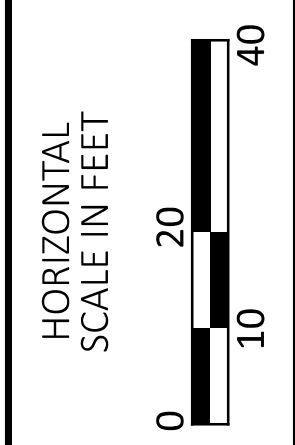
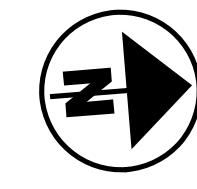
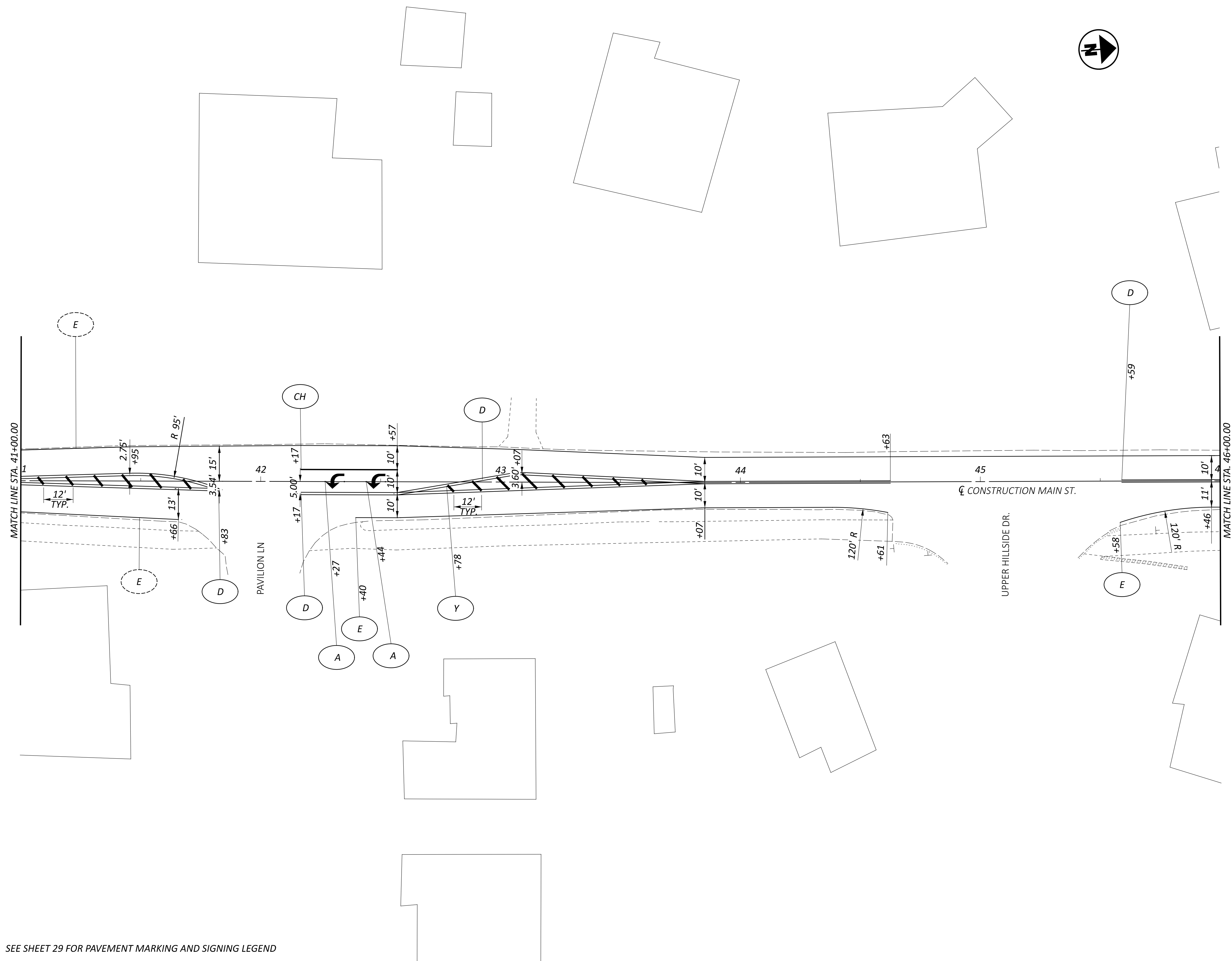
|       |       |
|-------|-------|
| SHEET | TOTAL |
| 39    | 47    |



# FRANKLIN AND MAIN STREET IMPROVEMENTS

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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND



## TRAFFIC CONTROL PLAN STA. 41+00 TO STA. 46+00

DESIGN AGENCY



DESIGNER  
AA

REVIEWER  
BMG 07/19/23

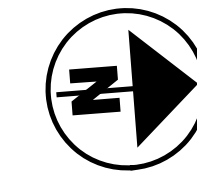
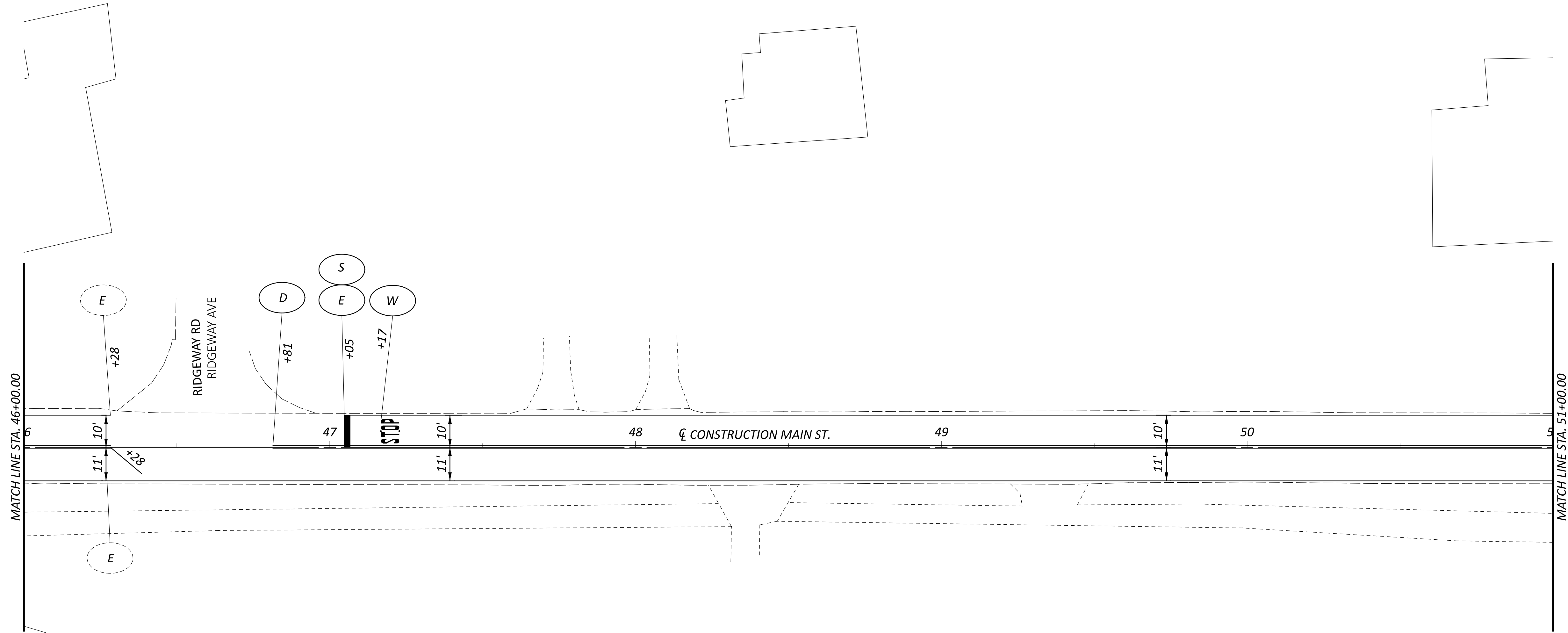
PROJECT ID  
125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 40    | 47    |

**FRANKLIN AND MAIN STREET IMPROVEMENTS**

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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND



**TRAFFIC CONTROL PLAN  
 STA. 46+00 TO STA. 51+00**

DESIGN AGENCY

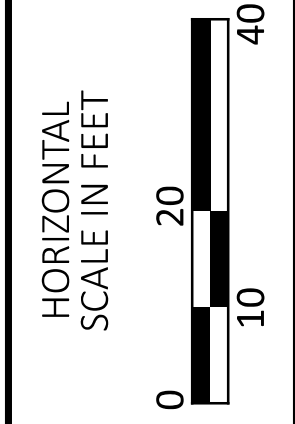


DESIGNER  
AA

REVIEWER  
BMG 07/19/23

PROJECT ID  
125940

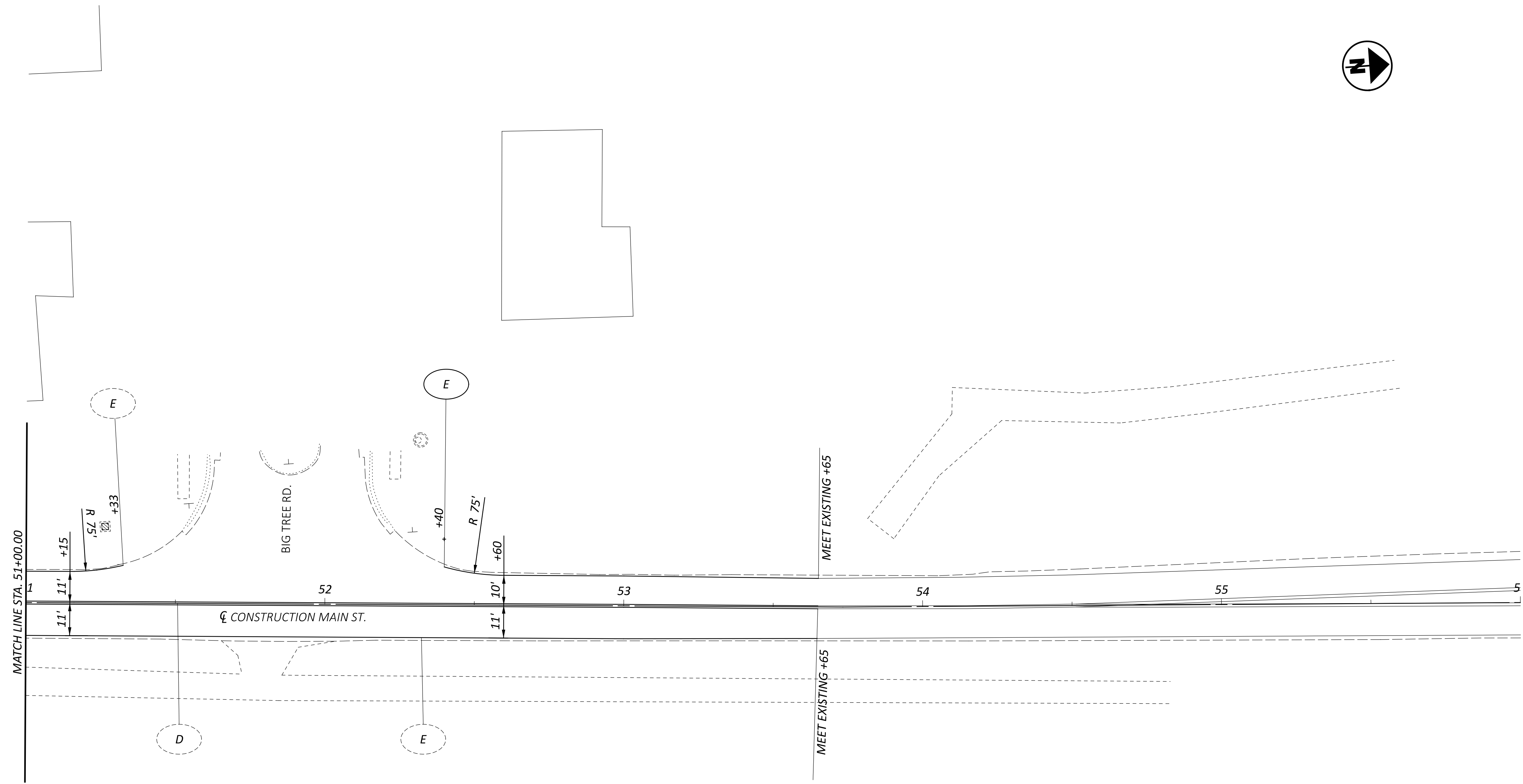
|       |       |
|-------|-------|
| SHEET | TOTAL |
| 41    | 47    |



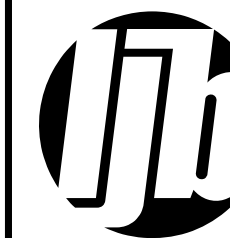
**FRANKLIN AND MAIN STREET IMPROVEMENTS**

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SEE SHEET 29 FOR PAVEMENT MARKING AND SIGNING LEGEND



DESIGN AGENCY



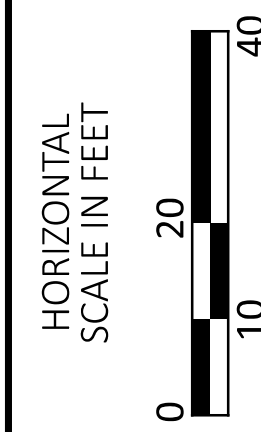
DESIGNER  
AA

REVIEWER  
BMG 07/19/23

PROJECT ID  
125940

|       |       |
|-------|-------|
| SHEET | TOTAL |
| 42    | 47    |


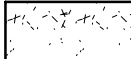
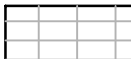








**TRAFFIC CONTROL PLAN**  
 STA. 51+00 TO STA. 53+65



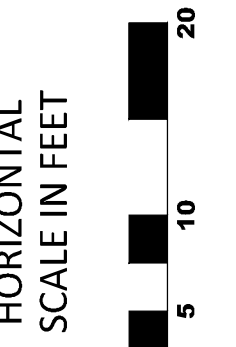
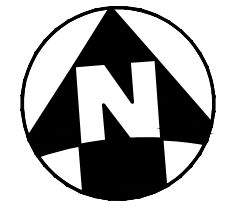
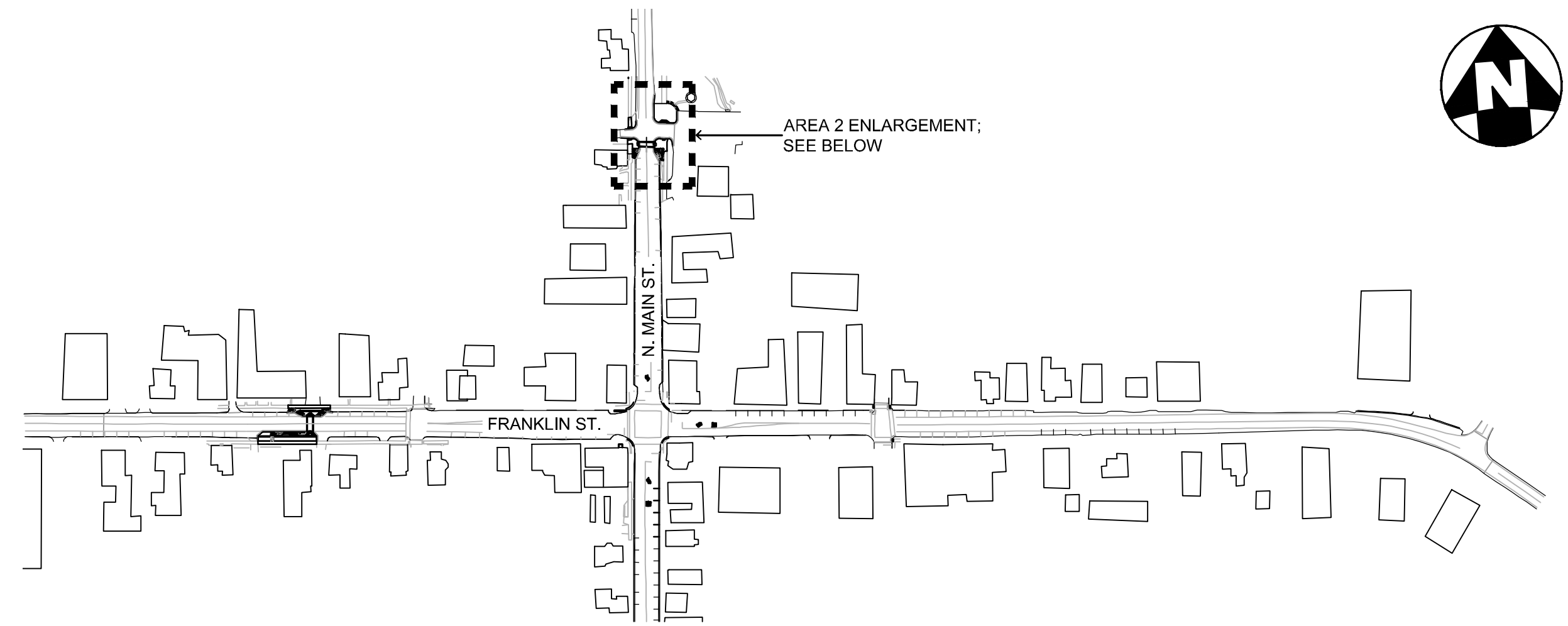


| KEY   | ITEM      | UNIT | DESCRIPTION   | SIZE     | QTY. | COMMON NAME              | SPACING  |
|-------|-----------|------|---|----------|------|--------------------------|----------|
|       | 659E10001 | SF   | SEEDING, AS PER PLAN  |          | 620  | TURF SEED                |          |
|       | 661E00501 | CY   | MULCH, AS PER PLAN  |          | 3    | MULCH                    |          |
| LIR   | 661E14001 | EACH | PERENNIALS (LIRIOPE MUSCARI), AS PER PLAN                   | #1 CONT. | 57   | LIRIOPE                  | 18" O.C. |
| NEP   | 661E14001 | EACH | PERENNIALS (NEPETA FAASSENII), AS PER PLAN                  | #1 CONT. | 21   | CATMINT                  | 24" O.C. |
| SCH   | 661E14001 | EACH | PERENNIALS (SCHIZACHYRIUM SCOPARIUM), AS PER PLAN           | #1 CONT. | 36   | LITTLE BLUESTEM          | 24" O.C. |
| PEN   | 661E14001 | EACH | PERENNIALS (PENNISETUM ALOPECUROIDES 'HAMELN'), AS PER PLAN | #2 CONT. | 21   | DWARF FOUNTAIN GRASS     | 24" O.C. |
| RUD   | 661E14001 | EACH | PERENNIALS (RUDBECKIA FULGIDA 'GOLDSTURM'), AS PER PLAN     | #1 CONT. | 38   | BLACK EYED SUSAN         | 24" O.C. |
| IL GL | 661E30070 | EACH | EVERGREEN SHRUB (ILEX GLABRA 'STRONGBOX'), AS PER PLAN      | B&B      | 8    | STRONGBOX INKBERRY HOLLY | 36" O.C. |
|       | 690E98700 | CY   | BACKFILL MIX  |          | 25   | BACKFILL MIX             |          |

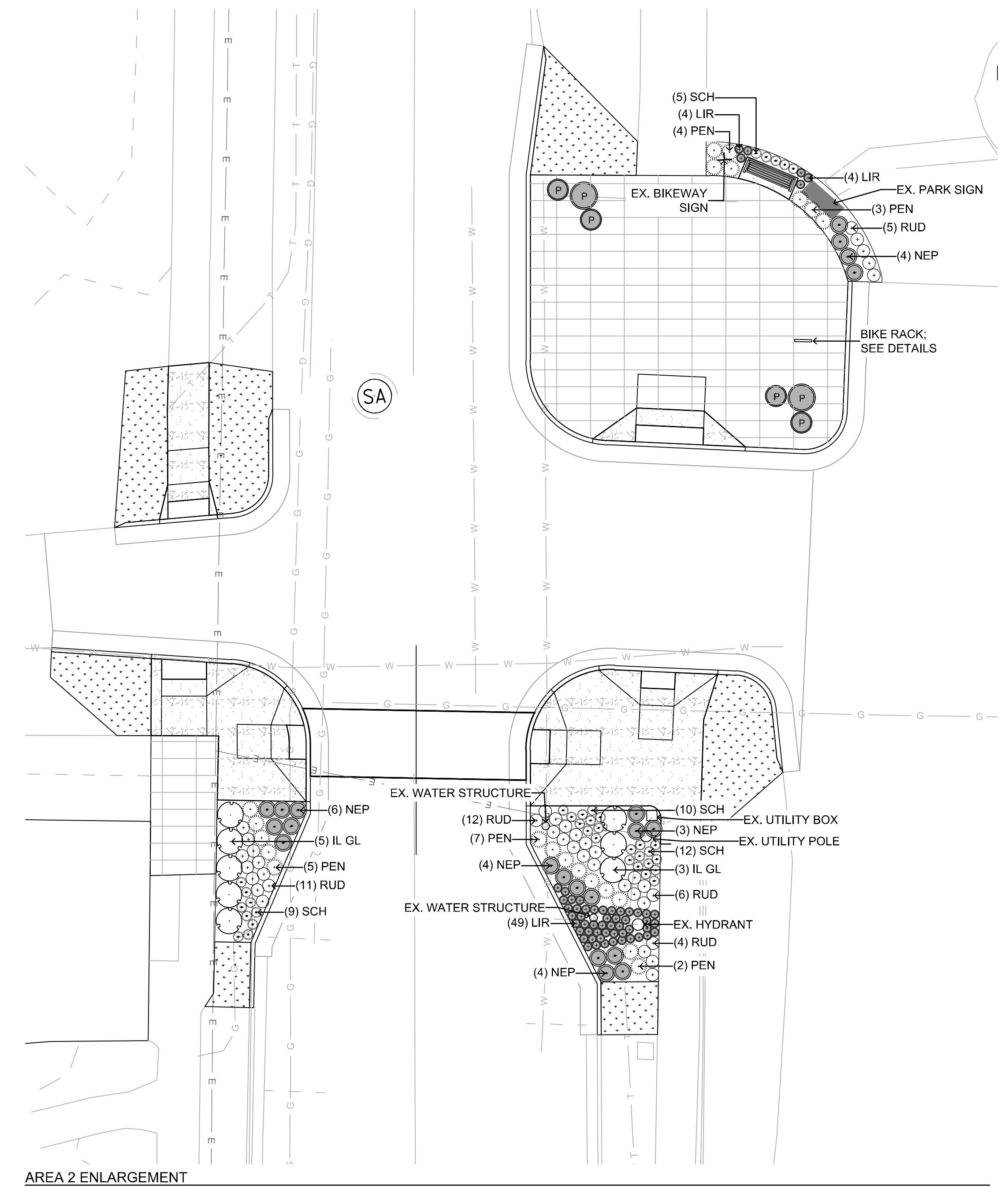
**LEGEND**

-  TURF SEED
-  CONCRETE, SEE CIVIL DRAWINGS
-  PAVERS, SEE CIVIL DRAWINGS
-  EXISTING TREE TO REMAIN
-  SHRUBS & PERENNIALS, SEE DETAILS 2-5 / SHEET 3
-  PROPOSED LIGHT POLE LOCATION; NOT INSTALLED IN THIS PHASE
-  ITEM 690E98000 SPECIAL - BENCH, SEE DETAIL 4/ SHEET 46
-  ITEM 690E98000 SPECIAL - PLANTER, SEE DETAIL 1/ SHEET 46
-  ITEM 680E14550 SPECIAL - TRASH RECEPTACLE, SEE DETAIL 2/ SHEET 46
-  ITEM 690E50560 SPECIAL - BIKE RACK, SEE DETAIL 3/ SHEET 46
-  ITEM 690E98000 SPECIAL - BOULDER, SEE DETAIL 6/ SHEET 45

KEY MAP: 1" = 200' - 0"



**LANDSCAPE & MATERIALS PLAN**



DESIGN AGENCY

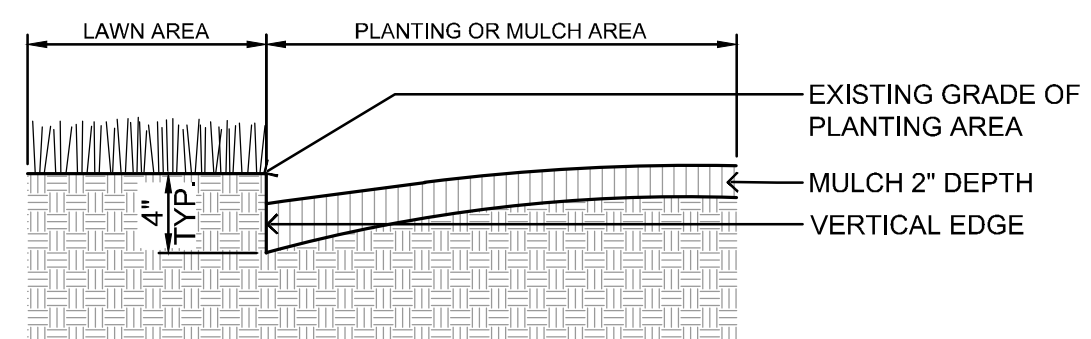
DESIGNER  
**NTH**

REVIEWER  
**BMG 08-11-23**

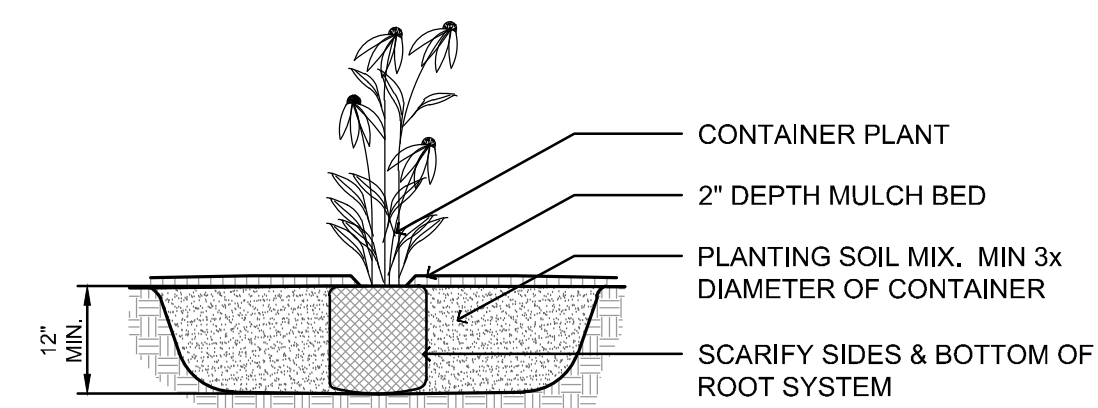
PROJECT ID  
**125940**

SHEET TOTAL  
**44 47**

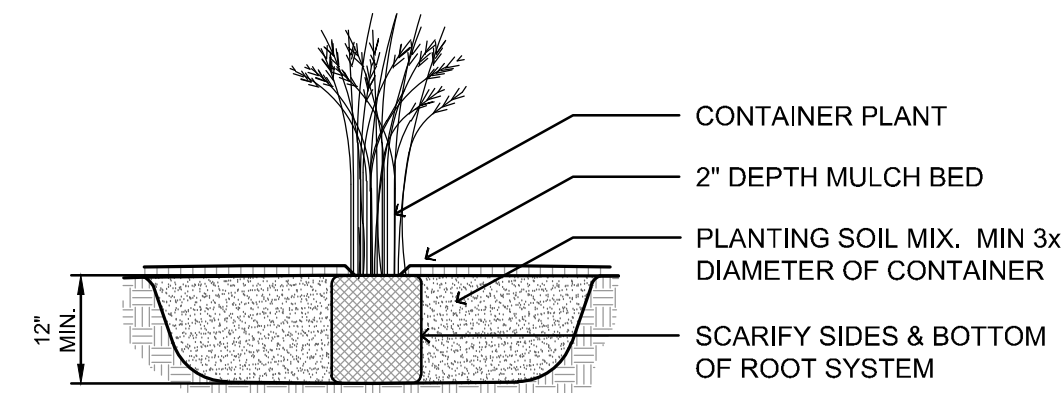




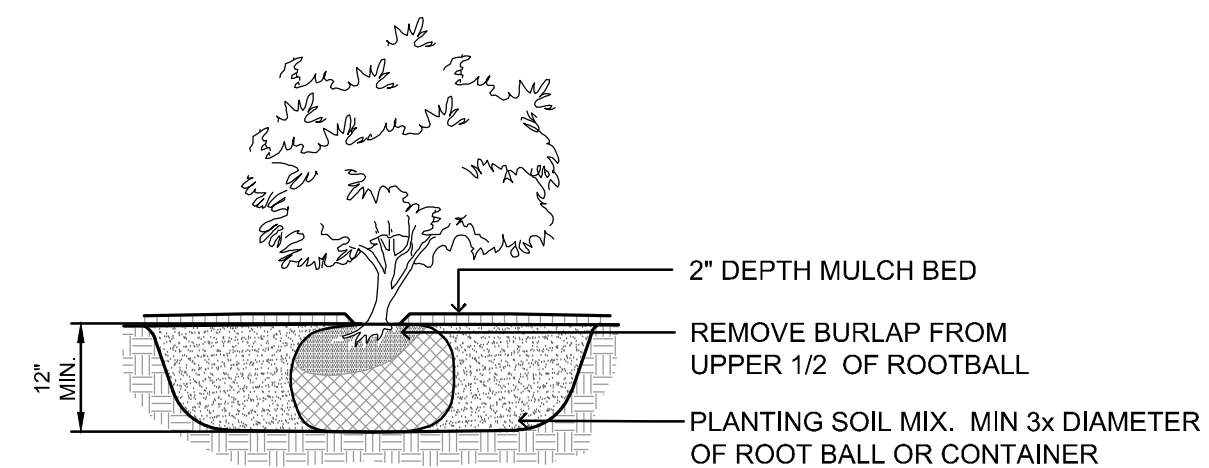
1 PLANTING BED EDGING DETAIL  
N.T.S.



2 PERENNIAL PLANTING  
N.T.S.



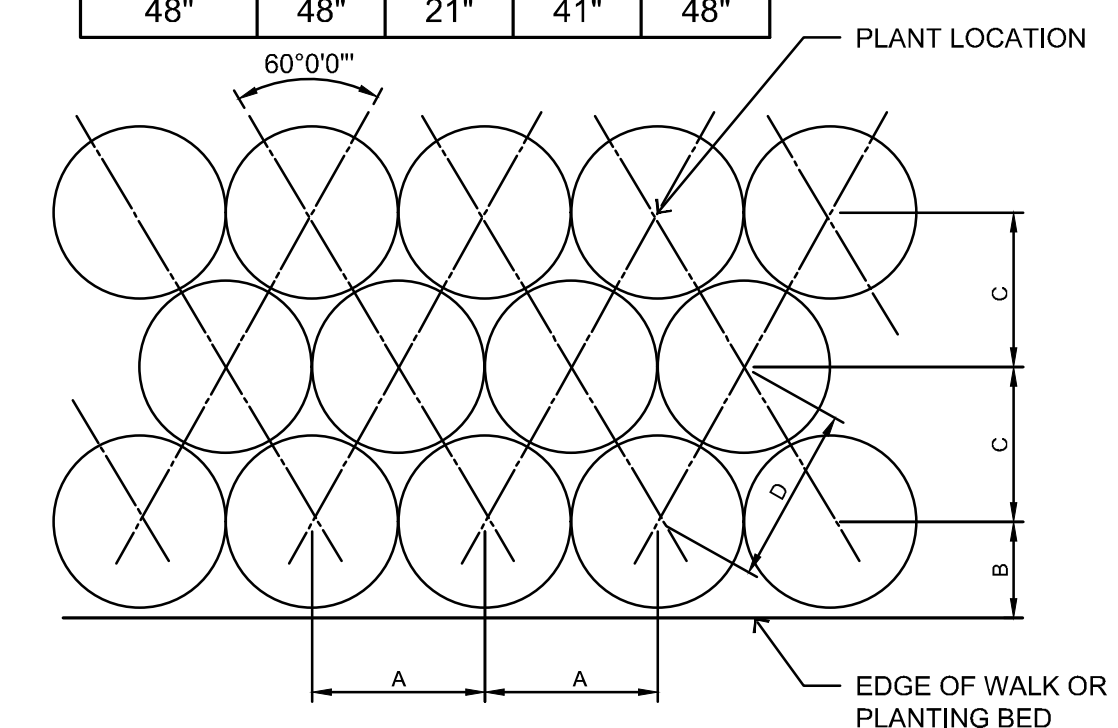
3 ORNAMENTAL GRASS PLANTING  
N.T.S.



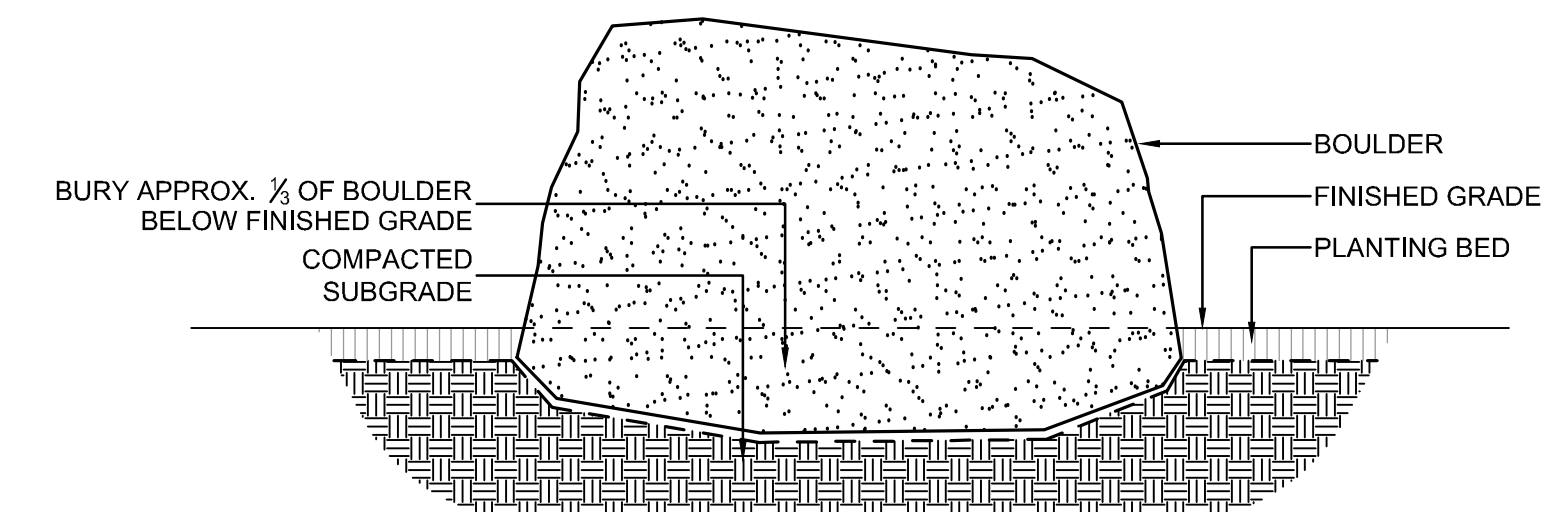
4 SHRUB PLANTING  
N.T.S.

| SPACING | A   | B   | C   | D   |
|---------|-----|-----|-----|-----|
| 12"     | 12" | 6"  | 10" | 12" |
| 18"     | 18" | 8"  | 15" | 18" |
| 24"     | 24" | 10" | 20" | 24" |
| 30"     | 30" | 15" | 25" | 30" |
| 36"     | 36" | 18" | 31" | 36" |
| 48"     | 48" | 21" | 41" | 48" |

A = SPACING  
B = SP/2  
C = SP/1.2  
D = SPACING



5 PERENNIAL SPACING  
N.T.S.



NOTES:

- BOULDERS SHALL BE LIMESTONE FROM LOCAL SUPPLIER.
- BOULDER SIZE SHALL RANGE FROM 24" - 36".
- BOULDERS SHALL HAVE A NATURAL SHAPE.

6 LIMESTONE BOULDER  
NTS

PLANTING NOTES

- EACH CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES.
- CONTRACTOR SHALL VERIFY ALL PLANTING CONDITIONS FOR OBSTRUCTIONS, EXISTING TREE CANOPY COVERAGE, AND OVERHEAD ELECTRICAL POWER LINES PRIOR TO PLANTING. IF ADVERSE PLANTING CONDITIONS ARE OBSERVED, CONTACT THE OWNERS REPRESENTATIVE IMMEDIATELY.
- ALL SHRUB MASSES TO BE INCORPORATED BY A CONTINUOUS MULCH BED TO LIMITS SHOWN AND AS SPECIFIED. MULCH BEDS TO HAVE A NEAT, EDGED APPEARANCE.
- SUBSURFACE IMPROVEMENTS SHALL BE OBSERVED. THE CONTRACTOR SHALL CONTACT THE OHIO UTILITIES PROTECTION SERVICE (OUPS) 48 HOURS PRIOR TO ANY EXCAVATION OR DIGGING TO ENSURE THE LOCATION OF UNDERGROUND UTILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT SUCH UNDERGROUND UTILITIES.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE FINE GRADED AND SEEDED.
- ALL TREES WITHIN A SPECIES SHALL HAVE MATCHING FORM.
- THE CONTRACTOR SHALL ENSURE THAT ALL NEWLY PLANTED TREES ARE PERFECTLY ALIGNED AND SET PLUMB WITH PROPER RELATIONSHIP TO THE SURROUNDING GRADE. CONFIRM FINISHED GRADE PRIOR TO PLANTING.
- ALL PLANT MATERIAL SHALL BE OF THE SIZE AND TYPE SPECIFIED. IF SUBSTITUTIONS ARE APPROVED BY THE OWNER'S REPRESENTATIVE, THE SIZE AND GRADING STANDARDS SHALL CONFORM TO THOSE OF THE AMERICAN ASSOCIATION OF NURSERYMEN.

DESIGN AGENCY

DESIGNER

NTH

REVIEWER

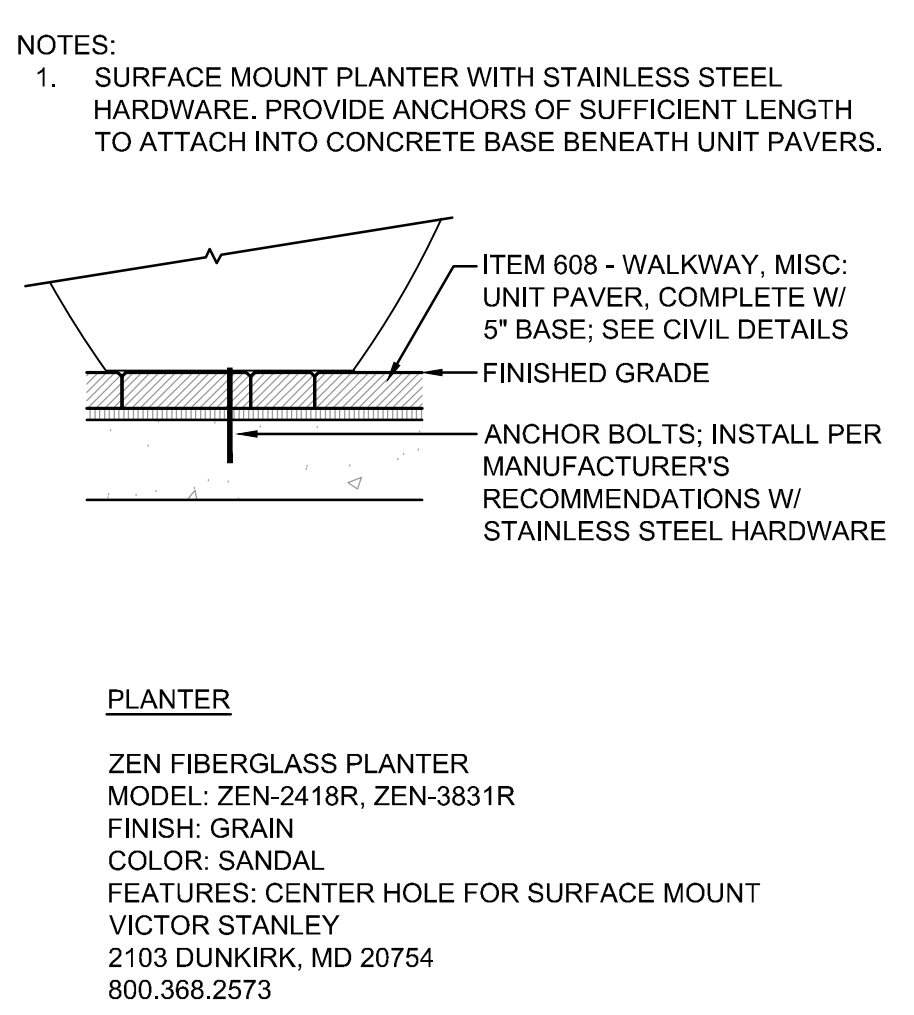
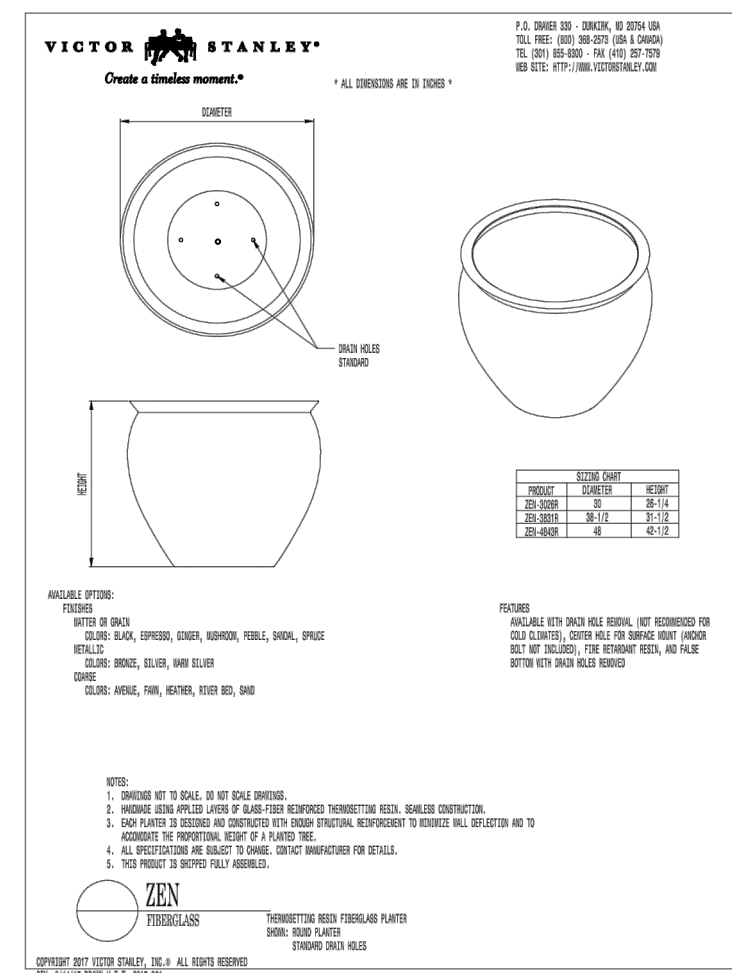
BMG 08-11-23

PROJECT ID

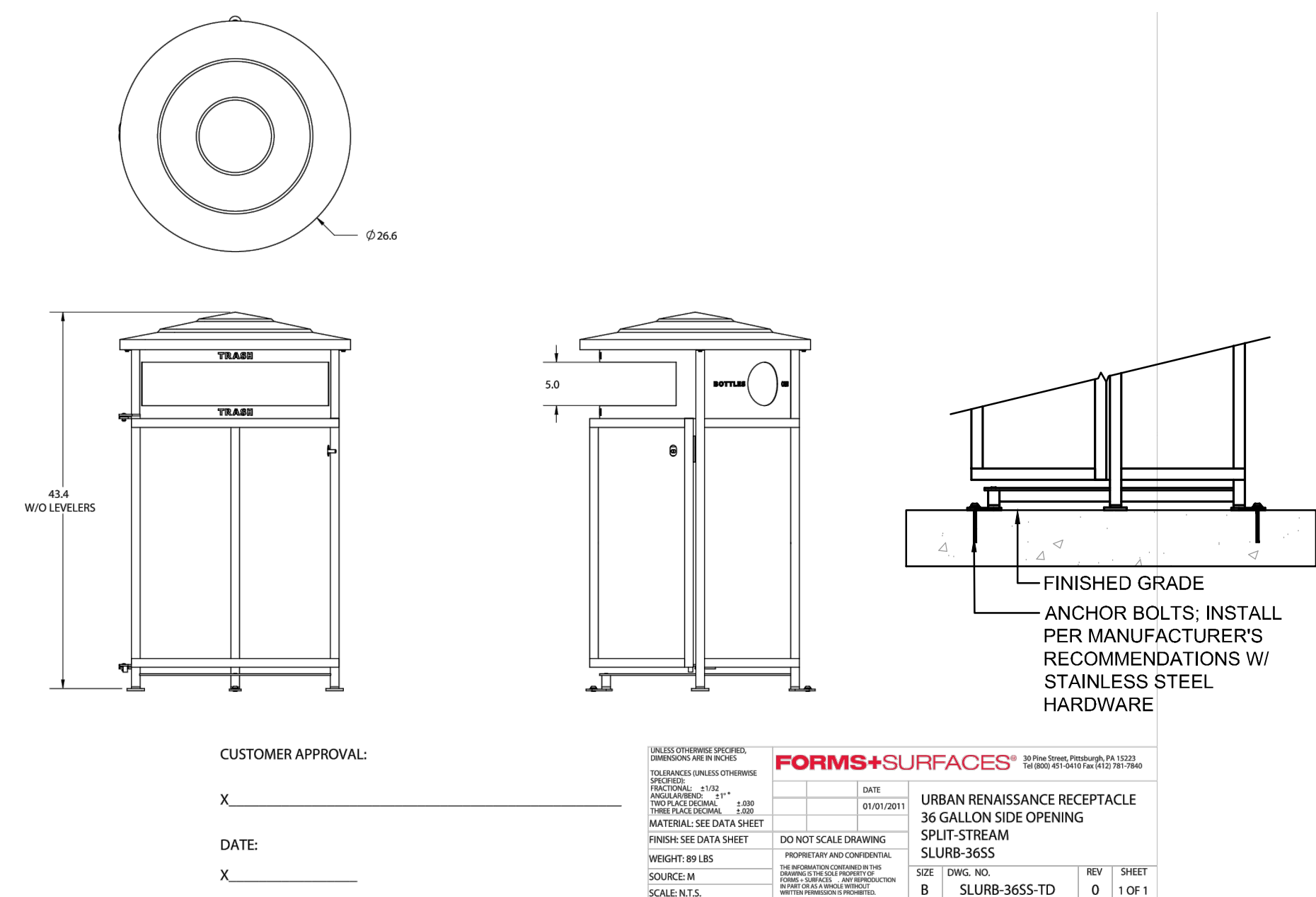
125940

SHEET TOTAL

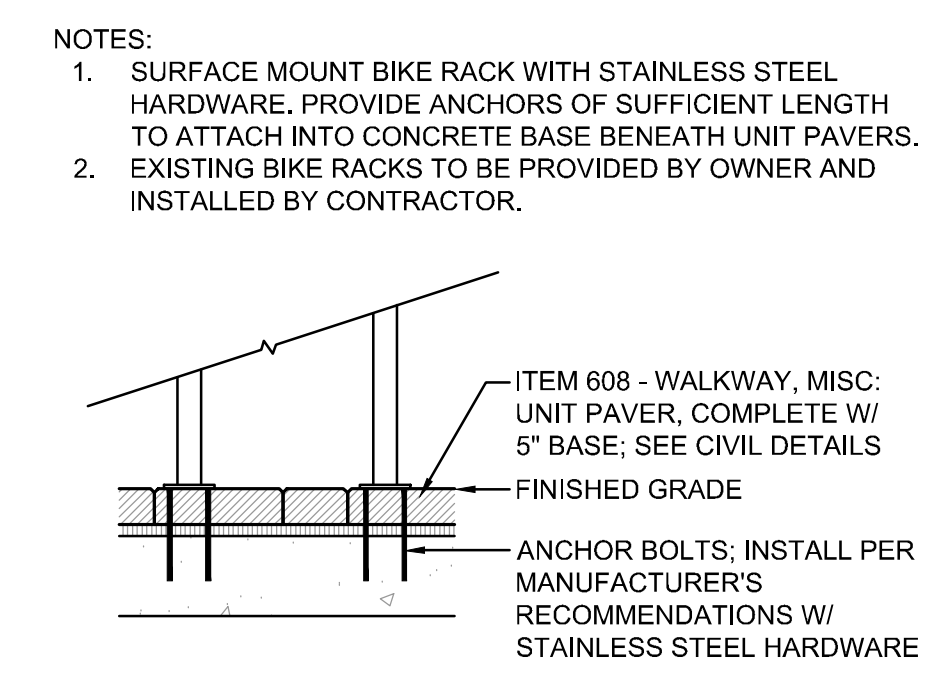
45 47



① ITEM 690 SPECIAL - PLANTER  
N.T.S.



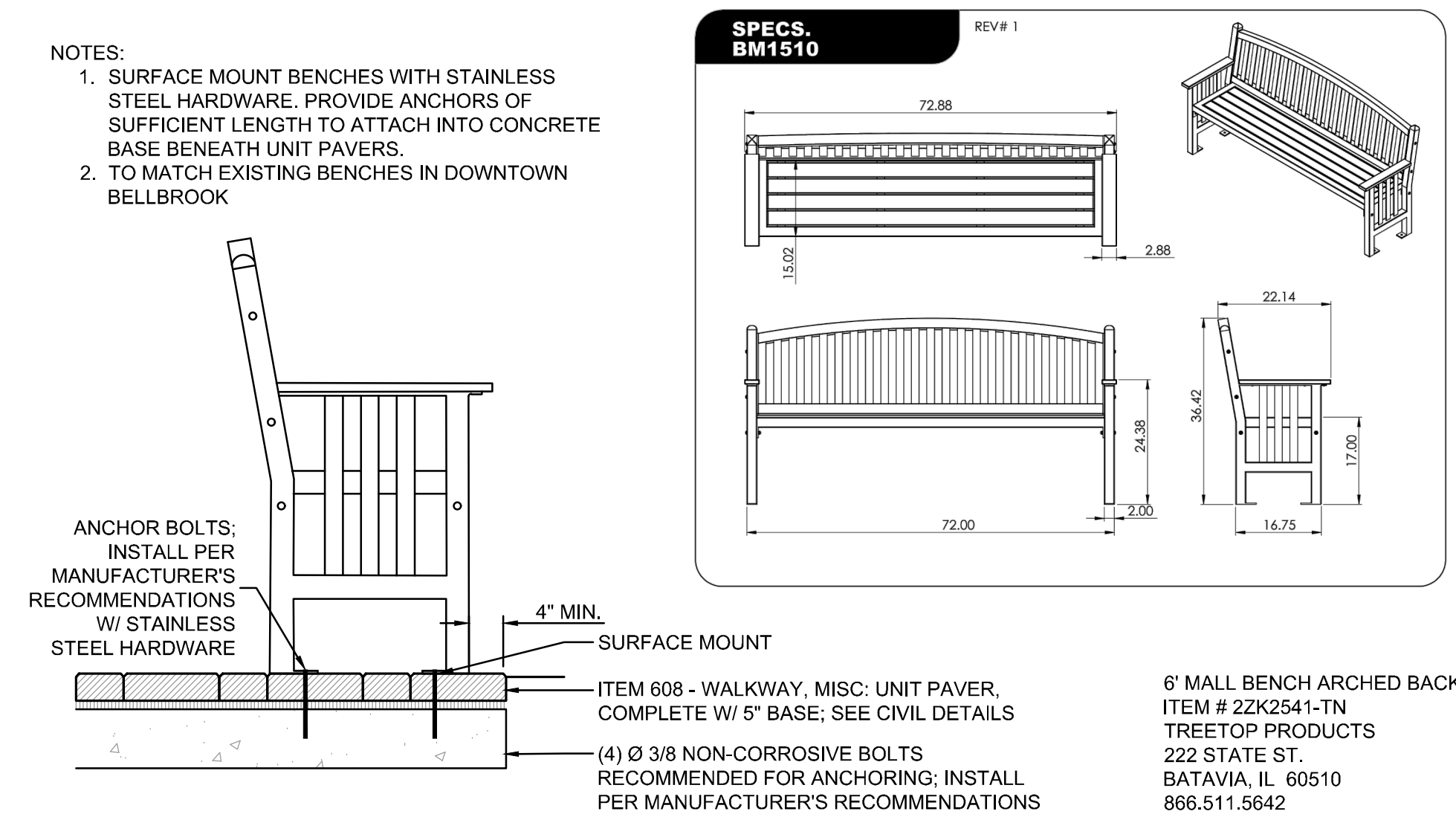
② ITEM 680 SPECIAL - TRASH RECEPTACLE  
N.T.S.



③ ITEM 690 SPECIAL - BICYCLE RACK  
N.T.S.



**NOTES:**  
1. SURFACE MOUNT BENCHES WITH STAINLESS STEEL HARDWARE. PROVIDE ANCHORS OF SUFFICIENT LENGTH TO ATTACH INTO CONCRETE BASE BENEATH UNIT PAVERS.  
2. TO MATCH EXISTING BENCHES IN DOWNTOWN BELLBROOK



④ ITEM 690 SPECIAL - BENCH  
N.T.S.

|               |              |
|---------------|--------------|
| DESIGN AGENCY |              |
| DESIGNER      | NTH          |
| REVIEWER      |              |
| PROJECT ID    | BMG 08-11-23 |
| SHEET         | 125940       |
| TOTAL         | 46           |
|               | 47           |



**GENERAL NOTES**

- EACH CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES.
- SUBSURFACE IMPROVEMENTS SHALL BE OBSERVED. THE CONTRACTOR SHALL CONTACT THE OHIO UTILITIES PROTECTION SERVICE (OUPS) 48 HOURS PRIOR TO ANY EXCAVATION OR DIGGING TO ENSURE THE LOCATION OF UNDERGROUND UTILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT SUCH UNDERGROUND UTILITIES.
- ALL CONCRETE FORMS SHALL BE FIELD STAKED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO CONCRETE INSTALLATION.
- ALL HORIZONTAL AND VERTICAL LAYOUT SHALL BE REVIEWED BY THE OWNER'S REPRESENTATIVE TO ENSURE GENERAL CONFORMANCE PRIOR TO CONSTRUCTION.
- PROVIDE ISOLATION JOINT WHERE CONCRETE PAVING ABUTS BUILDINGS, COLUMNS, AND STRUCTURES. VERIFY COLOR OF SEALANT WITH OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS, AREA DISCREPANCIES AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE TO CONSULT WITH SITE SUPERINTENDENT, APPROPRIATE AGENCIES, AND PLANS FOR LOCATION OF ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES.
- CONTRACTOR TO REPORT TO ENGINEER ANY ADDITIONAL UTILITY LINES FOUND DURING CONSTRUCTION.

**GENERAL REQUIREMENTS**

PER JANUARY 1, 2019 ODOT CONSTRUCTION & MATERIAL SPECIFICATIONS MANUAL ALL PLANT MATERIALS, TURF GRASS, AND PLANTING OPERATIONS TO MEET OR EXCEED STANDARDS SET OUT IN ODOT ITEMS 659, 661, & 662, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PROVIDE AN ONA (OHIO NURSERYMAN'S ASSOCIATION) CERTIFIED LANDSCAPE TECHNICIAN TO SUPERVISE THE PLANTING OPERATIONS.

**PERIOD OF ESTABLISHMENT**

MAINTENANCE:

DURING PLANTING: MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE FOR A PERIOD OF ONE YEAR AFTER COMPLETION OF PROJECT. PLANTS SHALL BE WATERED, MULCHED AND PRUNED, WEED GROWTH CONTROLLED, AND OTHERWISE MAINTAINED AS NEEDED DURING THE WARRANTY PERIOD. SETTLED PLANTS SHALL BE RAISED AND STRAIGHTENED. IF STAKING OR GUY WIRES ARE USED, THEY SHALL BE TIGHTENED AND REPAIRED.

WARRANTY:

THE CONTRACTOR SHALL WARRANTY ALL PLANTS TO BE IN SATISFACTORY GROWING CONDITION AND TO LIVE FOR A PERIOD OF ONE YEAR FROM COMPLETION OF PROJECT. ALL PLANTS INSTALLED PRIOR TO DECEMBER 31ST SHALL BE GUARANTEED TO BREAK INTO GROWTH (NOT JUST BUD BREAK) AND 2ND SPRING. PLANTS THAT ARE MORE THAN 25 PERCENT DEAD OR IN AN UNHEALTHY CONDITION WILL BE REPLACED AS MANY TIMES AS NECESSARY DURING THE ONE YEAR MAINTENANCE BOND. COMPLY WITH ODOT ITEM 661.

ADDITIONALLY, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO WATER AND PERFORM ANY MAINTENANCE AS NECESSARY FOR THE CONTINUOUS VIGOR OF THE PLANTS DURING THE WARRANTY PERIOD. THE COST OF WATERING AND MAINTENANCE WILL BE AT THE SOLE COST OF THE CONTRACTOR. CONTRACTOR MUST COORDINATE WITH THE CITY AS NECESSARY FOR TRAFFIC CONTROL, AS NEEDED.

IN ORDER TO PROVIDE PLANT MATERIALS THAT MEET THE SOIL AND CLIMATE CONDITIONS OF BEAVERCREEK, OHIO, THEY MUST BE OBTAINED FROM SOUTHWEST/SOUTH CENTRAL OHIO. TREES OF THE SAME SPECIES SHALL BE PURCHASED FROM THE SAME NURSERY SO AS TO PROVIDE UNIFORMITY AMONG EACH SPECIES.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN THE CONSTRUCTION SITE AFTER EACH DAY OF WORK. PRIVATE LOTS SHALL BE FREE OF ANY DEBRIS, SAFETY HAZARDS, AND/OR OBSTRUCTIONS. IF A TREE PIT IS UNPROTECTED, IT SHALL HAVE FENCE PROTECTION TO PREVENT INJURY. SIDEWALKS AND STREETS SHALL BE FREE OF ANY DEBRIS, ROCKS, LOOSE MATERIAL AND OBSTRUCTIONS AT ALL TIMES. AT THE TIME OF FINAL COMPLETION, CONTRACTOR MUST CLEAN ALL ROADS, SIDEWALKS, AND PRIVATE LOTS PER THE CITY'S DIRECTION.

**ITEM 690 SPECIAL - BACKFILL MIX**

BACKFILL MIX SHALL BE PER TEM 661.09 EXCEPT MODIFIED TO READ:

FOR ALL PLANTINGS, USE BACKFILL MIX CONSISTING OF THE FOLLOWING:

- PART TOPSOIL PER ITEM 659.05
- PART SPHAGNUM PEAT MOSS
- PART EPA RATED CLASS IV COMPOST PER ITEM 659.06

INSTALL BACKFILL MIX TO 12" DEPTH IN ALL PLANT BEDS.

DO NOT USE BACKFILL MIX THAT IS FROZEN OR MUDDY.

PAYMENT FOR BACKFILL MIX AND PLACEMENT OF BACKFILL MIX SHALL BE PAID FOR IN ITEM SPECIAL - BACKFILL MIX.

**ITEM 661 PLANTING TREES, SHRUBS, AND VINES**

GENERAL PLANTING NOTES

- LANDSCAPE WATERING PER ODOT ITEM 662 IS CONSIDERED INCIDENTAL TO ODOT ITEM 661 AND MUST BE CONTINUED THROUGH THE ESTABLISHMENT PERIOD AS OUTLINED UNDER ODOT ITEM 661.14. THE COST FOR LANDSCAPE WATERING SHALL BE CONSIDERED INCIDENTAL TO ODOT ITEM 661 AND MUST BE CONTINUED THROUGH THE ESTABLISHMENT PERIOD AS OUTLINED UNDER ODOT ITEM 661.14.
- CONTRACTOR MUST FOLLOW STANDARD HORTICULTURAL PRACTICES DURING THE PERIOD OF ESTABLISHMENT TO ENSURE THAT ALL THE PLANTS MAINTAIN GROWTH AND VIGOR. THE CONTRACTOR SHALL WATER, RE-MULCH, RE-STAKE AND CULTIVATE / WEED AS NECESSARY.
- ALL LANDSCAPE BEDS TO RECEIVE A GRANULAR PRE-EMERGENT WEED PREVENTATIVE PRIOR TO MULCHING PER ODOT ITEM 661. (PREEN, TREFLAN, OR ACCEPTED EQUIVALENT)
- ALL PLANTS ARE TO BE BALLED AND BURLAPPED (B&B) OR IN CONTAINERS AS NOTED IN PLANT SCHEDULE. NO BARE ROOTED OR CONTAINER TREES ARE PERMITTED. SIZES ARE PER OHIO NURSERY ASSOCIATION STANDARDS.
- PLANT IN ACCORDANCE WITH PLAN NOTE ITEM 661: PLANTING TREES, SHRUBS, AND GROUND COVER AS PER PLAN AND ODOT L.A. 1.1 AND LA 1.2 STANDARD CONSTRUCTION DRAWINGS.
- SIZE OF PIT VARIES WITH SIZE OF ROOT BALL.
- SPREAD FERTILIZER EVENLY IN SAUCER PRIOR TO PLANTING PER ODOT ITEM 661.
- ALL PLANT MATERIAL FURNISHED SHALL BE FULL, WELL BRANCHED, WELL PROPORTIONED, AND HAVE A VIGOROUS, WELL DEVELOPED ROOT SYSTEM CAPABLE OF SUSTAINING VIGOROUS GROWTH.
- ALL TREES AND SHRUBS SHALL BE NO. 1 GRADE PLANTS WITH GROWTH AND BRANCHING HABIT TYPICAL OF THE SPECIES. NO PARK GRADE (NO. 2 OR 3 GRADE) PLANTS WILL BE ACCEPTED.
- ALL TREES WITHIN A SPECIES SHALL HAVE MATCHING FORM. ALL PLANT MATERIAL SHALL BE OF THE SIZE AND TYPE SPECIFIED.
- IF SUBSTITUTIONS ARE REQUIRED, ALL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- OBSTRUCTIONS: NOTIFY OWNER OR OWNER'S REPRESENTATIVE IF UNEXPECTED ROCKS OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS ARE ENCOUNTERED DURING EXCAVATION.
- THE COST FOR ALL FERTILIZER, HERBICIDE, WATERING, AND PLANTS, THAT MUST OCCUR BASED ON NEW PLANTING / CONSTRUCTION SHALL BE INCIDENTAL TO ITEM 661 AND 662 LANDSCAPE PLANTINGS AND WATERING.
- THE CONTRACTOR SHALL CONDUCT WATERING OPERATIONS IN COMPLIANCE WITH ALL PROJECT SPECIFICATIONS AND SHALL PROTECT AGAINST WETTING OF THE PAVEMENT SURFACE.
- EACH CONTRACTOR SHALL NOTIFY THE OWNER'S REP. IMMEDIATELY IF A DISCREPANCY IS FOUND BETWEEN THE DIMENSION GIVEN ON THE PLANS AND ACTUAL DIMENSIONS IN THE FIELD.
- REMOVE ALL TWINE, ROPE, BURLAP, AND WIRE FROM TOP HALF OF ROOTBALL.
- NOTIFY OWNER OR OWNER'S REPRESENTATIVE IF SUBSOIL CONDITIONS EVIDENCE UNEXPECTED WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PIT.
- ITEM 661.10 B PLANTING BEDS SHALL BE MODIFIED TO READ: ONE MONTH BEFORE CULTIVATION, TREAT ALL PLANTING BEDS THAT ARE TO BE DEVELOPED IN AREAS OF EXISTING TURF WITH PRE-EMERGENT AND POST-EMERGENT TYPE HERBICIDES. USE A STATE-LICENSED PESTICIDE APPLICATOR TO APPLY THE HERBICIDE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. BEFORE PLANTING, TOP DRESS ALL PLANTING BEDS WITH A MINIMUM OF 6 INCHES OF BACKFILL MIX, THEN CULTIVATE IT TO A DEPTH OF 12 INCHES USING A PLOW, DISC, OR ROTO-TILLER.

- ITEM 661.10 B PLANTING BEDS SHALL BE MODIFIED TO READ: DIMENSIONS AND PLANT LOCATIONS SHALL BE PLACED IN ACCORDANCE WITH THE DETAILS AND LOCATIONS SHOWN ON THE PLANS. IN NO CASE SHALL PROPOSED PLANT BEDS BE LOWER THAN EXISTING GRADES. GRADE ALL PLANT BEDS SMOOTHLY TO DRAIN. CONTRACTOR SHALL NOT REMOVE AND REPLACE EXISTING SOIL, RATHER THE EXISTING SOILS SHALL BE AMENDED FOR PROPER PLANT GROWTH.
- ITEM 661.10 B PLANTING BEDS SHALL BE MODIFIED TO READ: ALL PLANT BEDS SHALL BE COVERED WITH SHREDDED MULCH CONTINUOUSLY AS A CONTIGUOUS BED AS INDICATED ON THE PLAN. INDIVIDUALLY PLANTED TREES SHALL BE RINGED WITH SHREDDED MULCH RINGS SIZED AS INDICATED ON THE PLAN. MULCH SHALL BE PER ITEM 661.11.
- ALL ABOVE ITEMS ARE INCIDENTAL TO ODOT 661 ITEM AND SHALL BE CONTINUED THROUGH WARRANTY PERIOD.

PAYMENT: THE COST FOR THESE ITEMS SHALL INCLUDE ALL MATERIALS, EQUIPMENT, COORDINATION, AND LABOR COSTS ASSOCIATED WITH INSTALLING ITEM 661 TREES, SHRUBS, AND VINES AND THE NOTES AND DETAILS.

**ITEM 659 SEEDING AND MULCHING, AS PER PLAN**

THIS ITEM SHALL CONSIST OF FURNISHING ALL LABOR, TOOLS, MACHINERY, MATERIALS, AND PROCESSES REQUIRED FOR THE PLANTING OF SEEDED AREAS. SEEDING SHALL OCCUR TO THE PROJECT LIMITS SHOWN ON THE PLANS. ALL AREAS DISTURBED BY CONSTRUCTION, SHALL BE RESTORED, FINE GRADED, AND SEEDED. COST FOR DAMAGE RESTORATION OF EXISTING TURF AREAS DURING CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE.

ITEM SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF ITEM 659 SEEDING AND MULCHING UNLESS OTHERWISE DESCRIBED BELOW:

AREAS WITHIN THE PROJECT AREA THAT WILL BE GRADED AND DISTURBED AREAS TO BE SEEDED WITH THE FOLLOWING SEED MIX. PROVIDE OWNER WITH CERTIFIED SEED MIX LABEL PRIOR TO APPLICATION FOR APPROVAL:

- 80-90% TURF-TYPE TALL FESCUE (3 LB. /1,000 SQ. FT.)
- 5-10% KENTUCKY BLUEGRASS (3 LB. /1,000 SQ. FT.)
- 5-10% PERENNIAL RYEGRASS (2 LB. /1,000 SQ. FT.)

AREAS WITHIN THE PROJECT AREA THAT ARE NOT DISTURBED SHALL BE INTER-SEEDED PER ITEM 659.21 WITH THE SAME MIX.

ALL DESIGNATED TURF AREAS TO BE HYDRO SEEDED WITH A WOOD FIBER MULCH AS NOTED IN ODOT ITEM 659.15

ITEM 650.03 LIME SHALL BE APPLIED PER SPECIFICATION, AND SHALL BE INCIDENTAL TO THIS ITEM.

ITEM 659.04 COMMERCIAL FERTILIZER SHALL BE INCIDENTAL TO THIS ITEM.

ITEM 659.05 TOPSOIL SHALL BE INCIDENTAL TO THIS ITEM. ALL AREAS TO BE SEEDED SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL.

ITEM 659.17 WATER SHALL BE INCIDENTAL TO THIS ITEM.

ITEM 659.20 REPAIR SEEDING AND MULCHING SHALL BE INCIDENTAL TO THIS ITEM.

ITEM 659.23 PERFORMANCE: AT END OF MAINTENANCE PERIOD, A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 90 PERCENT OVER ANY 10 SQ. FT. AND BARE SPOTS NOT EXCEEDING 3 BY 3 INCHES.

TEMPORARY COVER:

AVENA SATIVA / COMMON OAT / 512.00  
LOLIUM MULTIFLORUM / ANNUAL RYE / 240.00

PAYMENT: THE COST OF THESE ITEMS SHALL INCLUDE ALL MATERIALS, EQUIPMENT COORDINATION AND LABOR COSTS ASSOCIATED WITH SUPPLYING AND INSTALLING SEEDING AND MULCHING AS PER PLAN.

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659, SEEDING AND MULCHING, AS PER PLAN  
70 SQ. YD.

ITEM 659, WATER

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**ITEM 661.11 MULCH, AS PER PLAN**

THE FOLLOWING REVISIONS TO ODOT 661 SHALL BE APPLICABLE TO THIS PROJECT 661.11 MULCH.

CHANGE THE SECOND SENTENCE IN THE SECOND PARAGRAPH TO READ, "...3-INCH LAYER OF LANDSCAPE MULCH...".

MULCH SHALL BE A FINELY SHREDDED DARK HARDWOOD MULCH. NON-DYED BLACK COLOR. 100% AGED SHREDDED HARDWOOD. TRIPLE GROUND.

**ITEM 680 SPECIAL - TRASH RECEPTACLE**

TRASH RECEPTACLE WITH DIVIDED TRASH AND RECYCLING OPENINGS. SEE DETAIL 2 / SHEET 4.

MANUFACTURER:

BASIS OF DESIGN: FORMS+SURFACES;  
MODEL: URBAN RENAISSANCE RECEPTACLE SLURB-36SS

COLOR: BLACK POWDERCOAT FRAME, DESERT TAN RECYCLED PLASTIC.

SURFACE MOUNTING PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ANCHORS OF SUFFICIENT LENGTH TO MOUNT INTO CONCRETE BASE BELOW UNIT PAVERS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM SPECIAL - TRASH RECEPTACLE.

**ITEM 690 SPECIAL - PLANTER**

24" PLANTER (SMALL) & 38.5" PLANTER (LARGE). SEE DETAIL 1 / SHEET 4.

MANUFACTURER:

BASIS OF DESIGN: VICTOR STANLEY  
MODEL: ZEN FIBERGLASS PLANTER, ZEN-2418R & ZEN-3831R

SANDAL, GRAIN FINISH

SURFACE MOUNTING PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ANCHORS OF SUFFICIENT LENGTH TO MOUNT INTO CONCRETE BASE BELOW UNIT PAVERS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM SPECIAL - PLANTER.

**ITEM 690 SPECIAL - BICYCLE RACK**

BICYCLE RACKS TO BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR.

SURFACE MOUNTING PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ANCHORS OF SUFFICIENT LENGTH TO MOUNT INTO CONCRETE BASE BELOW UNIT PAVERS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM SPECIAL - BIKE RACK.

**ITEM 690 SPECIAL - BENCH**

BACKED BENCH WITHOUT INTERMEDIATE ARMS OR DIVIDERS. SEE DETAIL 4 / SHEET 4.

MANUFACTURER:

TREETOP PRODUCTS  
222 STATE ST.  
BATAVIA, IL 60510  
866.511.5642  
MODEL: 6' MALL BENCH ARCHED BACK  
ITEM # 22K2541-TN

DIMENSIONS:

- DEPTH: 22".
- OVERALL HEIGHT: 36".
- ARM HEIGHT: 24".
- LENGTH: 72".

SEAT PATTERN: SLAT.

COLOR: BLACK POWDERCOAT FRAME, DESERT TAN RECYCLED PLASTIC.

SURFACE MOUNTING PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ANCHORS OF SUFFICIENT LENGTH TO MOUNT INTO CONCRETE BASE BELOW UNIT PAVERS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM SPECIAL - BENCH.

DESIGN AGENCY

DESIGNER

NTH

REVIEWER

BMG 08-11-23

PROJECT ID

125940

SHEET TOTAL

46 47

## Estimate Franklin & Main

Estimated Cost:\$817,287.41

Contingency: 4.00%

**Estimated Total: \$849,978.91**

CONTINGENCY = INFLATION (4%)

**Base Date: 08/11/23**

Spec Year: 23

Unit System: E

Work Type:

Highway Type:

Urban/Rural Type: URBAN CLASS

Season: SPRING

County: GREENE

Latitude of Midpoint: 393810

Longitude of Midpoint: -840415

District: 08

Federal/State Project Number:

*Prepared by ASN on 07/17/23*

*Checked by BMG on 07/17/23*

*Approved by BMG on 07/17/23*

| <u>Line #</u>                   | <u>Item Number</u> | <u>Quantity</u> | <u>Units</u> | <u>Unit Price</u> | <u>Extension</u> |
|---------------------------------|--------------------|-----------------|--------------|-------------------|------------------|
| <u>Description</u>              |                    |                 |              |                   |                  |
| <u>Supplemental Description</u> |                    |                 |              |                   |                  |

**Group 0010:** Roadway

|                                 |           |          |    |            |             |
|---------------------------------|-----------|----------|----|------------|-------------|
| 0057                            | 204E10000 | 63.00    | SY | \$5.66     | \$356.58    |
| SUBGRADE COMPACTION             |           |          |    |            |             |
| 0058                            | 202E30000 | 1,309.00 | SF | \$9.19     | \$12,029.71 |
| WALK REMOVED                    |           |          |    |            |             |
| 0059                            | 608E10000 | 2,018.00 | SF | \$10.14    | \$20,462.52 |
| 4" CONCRETE WALK                |           |          |    |            |             |
| 0060                            | 202E32000 | 204.00   | FT | \$22.25    | \$4,539.00  |
| CURB REMOVED                    |           |          |    |            |             |
| 0061                            | 202E23000 | 228.00   | SY | \$23.35    | \$5,323.80  |
| PAVEMENT REMOVED                |           |          |    |            |             |
| 0062                            | 608E52000 | 461.00   | SF | \$32.31    | \$14,894.91 |
| CURB RAMP                       |           |          |    |            |             |
| 0063                            | 203E10000 | 30.00    | CY | \$42.82    | \$1,284.60  |
| EXCAVATION                      |           |          |    |            |             |
| 0064                            | 608E53020 | 61.00    | SF | \$43.31    | \$2,641.91  |
| DETECTABLE WARNING              |           |          |    |            |             |
| 0065                            | 203E20000 | 15.00    | CY | \$44.21    | \$663.15    |
| EMBANKMENT                      |           |          |    |            |             |
| 0066                            | 608E53021 | 127.00   | SF | \$65.00    | \$8,255.00  |
| DETECTABLE WARNING, AS PER PLAN |           |          |    |            |             |
| 0067                            | 608E98000 | 967.00   | SF | \$65.00    | \$62,855.00 |
| WALKWAY, MISC.: SIDEWALK PAVERS |           |          |    |            |             |
| 0068                            | 201E11000 | 1.00     | LS | \$5,000.00 | \$5,000.00  |
| CLEARING AND GRUBBING           |           |          |    |            |             |

Total for Group 0010:\$138,306.18

**Group 0020:** Erosion Control

|                                       |           |           |      |            |             |
|---------------------------------------|-----------|-----------|------|------------|-------------|
| 0069                                  | 832E15000 | 1.00      | LS   | \$2,500.00 | \$2,500.00  |
| STORM WATER POLLUTION PREVENTION PLAN |           |           |      |            |             |
| 0070                                  | 832E30000 | 10,000.00 | EACH | \$1.00     | \$10,000.00 |
| EROSION CONTROL                       |           |           |      |            |             |

Total for Group 0020:\$12,500.00

**Group 0040:** Drainage

|      |           |        |    |          |             |
|------|-----------|--------|----|----------|-------------|
| 0017 | 611E99830 | 146.00 | FT | \$105.00 | \$15,330.00 |
|------|-----------|--------|----|----------|-------------|



| <u>Line #</u>                   | <u>Item Number</u> | <u>Quantity</u> | <u>Units</u> | <u>Unit Price</u> | <u>Extension</u> |
|---------------------------------|--------------------|-----------------|--------------|-------------------|------------------|
| <u>Description</u>              |                    |                 |              |                   |                  |
| <u>Supplemental Description</u> |                    |                 |              |                   |                  |

SPECIAL - TRENCH DRAIN

Total for Group 0040:\$15,330.00

**Group 0050:** Pavement

|   |           |           |     |          |              |
|---|-----------|-----------|-----|----------|--------------|
| 0018  | 254E01000 | 24,063.00 | SY  | \$3.05   | \$73,392.15  |
| PAVEMENT PLANING, ASPHALT CONCRETE  |           |           |     |          |              |
| 0019  | 407E20000 | 2,054.00  | GAL | \$3.93   | \$8,072.22   |
| NON-TRACKING TACK COAT  |           |           |     |          |              |
| 0020  | 609E26000 | 209.00    | FT  | \$47.74  | \$9,977.66   |
| CURB, TYPE 6  |           |           |     |          |              |
| 0021  | 304E20000 | 14.00     | CY  | \$104.21 | \$1,458.94   |
| AGGREGATE BASE  |           |           |     |          |              |
| 0022  | 253E01000 | 400.00    | SY  | \$135.00 | \$54,000.00  |
| PAVEMENT REPAIR   |           |           |     |          |              |
| 0023  | 441E70000 | 1,006.00  | CY  | \$285.00 | \$286,710.00 |
| ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22   |           |           |     |          |              |
| 0024  | 441E91000 | 29.00     | SY  | \$400.00 | \$11,600.00  |
| ASPHALT CONCRETE, MISC.: TRAFFICPATTERNSXD STAMPED CROSSWALK DIAGONAL<br>HERRINGBONE PATTERN (12-101), COLONIAL BRICK |           |           |     |          |              |
| 0025  | 301E56000 | 11.00     | CY  | \$449.44 | \$4,943.84   |
| ASPHALT CONCRETE BASE, PG64-22, (449)   |           |           |     |          |              |
| 0026  | 441E70300 | 5.00      | CY  | \$500.00 | \$2,500.00   |
| ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)   |           |           |     |          |              |

Total for Group 0050:\$452,654.81

**Group 0120:** Traffic Control

|                           |           |          |    |        |            |
|---------------------------|-----------|----------|----|--------|------------|
| 0027                      | 644E00400 | 389.00   | FT | \$2.08 | \$809.12   |
| CHANNELIZING LINE, 8"     |           |          |    |        |            |
| 0028                      | 644E01200 | 1,014.00 | FT | \$2.37 | \$2,403.18 |
| PARKING LOT STALL MARKING |           |          |    |        |            |
| 0029                      | 644E00620 | 924.00   | FT | \$3.72 | \$3,437.28 |
| CROSSWALK LINE, 12"       |           |          |    |        |            |
| 0030                      | 644E00630 | 70.00    | FT | \$5.67 | \$396.90   |
| CROSSWALK LINE, 24"       |           |          |    |        |            |
| 0031                      | 644E00700 | 426.00   | FT | \$6.01 | \$2,560.26 |
| TRANSVERSE/DIAGONAL LINE  |           |          |    |        |            |
| 0032                      | 644E00700 | 216.00   | FT | \$6.01 | \$1,298.16 |

| <u>Line #</u>                                 | <u>Item Number</u> | <u>Quantity</u> | <u>Units</u> | <u>Unit Price</u> | <u>Extension</u> |
|---|--------------------|-----------------|--------------|-------------------|------------------|
| <u>Description</u>                            |                    |                 |              |                   |                  |
| <u>Supplemental Description</u>               |                    |                 |              |                   |                  |
| TRANSVERSE/DIAGONAL LINE                      |                    |                 |              |                   |                  |
| 0033  | 644E00500          | 128.00          | FT           | \$7.78            | \$995.84         |
| STOP LINE                                     |                    |                 |              |                   |                  |
| 0034  | 630E03100          | 21.00           | FT           | \$18.36           | \$385.56         |
| GROUND MOUNTED SUPPORT, NO. 3 POST            |                    |                 |              |                   |                  |
| 0035  | 630E84900          | 2.00            | EACH         | \$22.66           | \$45.32          |
| REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL   |                    |                 |              |                   |                  |
| 0036  | 630E80100          | 58.00           | SF           | \$25.25           | \$1,464.50       |
| SIGN, FLAT SHEET                              |                    |                 |              |                   |                  |
| 0037  | 630E08600          | 3.00            | EACH         | \$47.82           | \$143.46         |
| SIGN POST REFLECTOR                           |                    |                 |              |                   |                  |
| 0038  | 630E85100          | 1.00            | EACH         | \$86.48           | \$86.48          |
| REMOVAL OF GROUND MOUNTED SIGN AND REERECTION |                    |                 |              |                   |                  |
| 0039  | 644E01300          | 10.00           | EACH         | \$116.87          | \$1,168.70       |
| LANE ARROW                                    |                    |                 |              |                   |                  |
| 0040  | 644E01400          | 1.00            | EACH         | \$124.95          | \$124.95         |
| WORD ON PAVEMENT, 72"                         |                    |                 |              |                   |                  |
| 0041  | 644E00104          | 2.13            | MILE         | \$4,175.67        | \$8,894.18       |
| EDGE LINE, 6"                                 |                    |                 |              |                   |                  |
| 0042  | 644E00300          | 1.23            | MILE         | \$5,416.29        | \$6,662.04       |
| CENTER LINE                                   |                    |                 |              |                   |                  |

Total for Group 0120:\$30,875.93

**Group 0130:** Traffic Signals

|  |           |      |      |            |             |
|--|-----------|------|------|------------|-------------|
| 0043   | 632E26000 | 2.00 | EACH | \$273.73   | \$547.46    |
| PEDESTRIAN PUSHBUTTON  |           |      |      |            |             |
| 0044   | 625E32000 | 2.00 | EACH | \$364.93   | \$729.86    |
| GROUND ROD   |           |      |      |            |             |
| 0045   | 632E64020 | 2.00 | EACH | \$1,234.15 | \$2,468.30  |
| PEDESTAL FOUNDATION  |           |      |      |            |             |
| 0046   | 630E97700 | 2.00 | EACH | \$8,500.00 | \$17,000.00 |
| SIGNING, MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY |           |      |      |            |             |

Total for Group 0130:\$20,745.62

**Group 0140:** Landscaping

|      |           |      |    |             |             |
|------|-----------|------|----|-------------|-------------|
| 0047 | 661E99000 | 1.00 | LS | \$27,980.00 | \$27,980.00 |
|------|-----------|------|----|-------------|-------------|

| <u>Line #</u>                   | <u>Item Number</u> | <u>Quantity</u> | <u>Units</u> | <u>Unit Price</u> | <u>Extension</u> |
|---------------------------------|--------------------|-----------------|--------------|-------------------|------------------|
| <u>Description</u>              |                    |                 |              |                   |                  |
| <u>Supplemental Description</u> |                    |                 |              |                   |                  |

SPECIAL - LANDSCAPING (SEE SUPPLEMENTAL ESTIMATE FOR ITEMIZED LANDSCAPE QUANTITIES)

Total for Group 0140:\$27,980.00

**Group 0220:** Maintenance of Traffic

|  |           |        |      |            |            |
|--|-----------|--------|------|------------|------------|
| 0048                                     | 614E21000 | 2.46   | MILE | \$1,500.32 | \$3,690.79 |
| WORK ZONE CENTER LINE, CLASS I           |           |        |      |            |            |
| 0049                                     | 614E22010 | 4.26   | MILE | \$1,482.71 | \$6,316.34 |
| WORK ZONE EDGE LINE, CLASS I, 6"         |           |        |      |            |            |
| 0050                                     | 614E23000 | 778.00 | FT   | \$0.81     | \$630.18   |
| WORK ZONE CHANNELIZING LINE, CLASS I, 8" |           |        |      |            |            |
| 0051                                     | 614E26000 | 214.00 | FT   | \$3.54     | \$757.56   |
| WORK ZONE STOP LINE, CLASS I             |           |        |      |            |            |

Total for Group 0220:\$11,394.87

**Group 0230:** Incidentals

|  |           |      |    |             |             |
|--|-----------|------|----|-------------|-------------|
| 0054                                     | 623E10000 | 1.00 | LS | \$7,500.00  | \$7,500.00  |
| CONSTRUCTION LAYOUT STAKES AND SURVEYING |           |      |    |             |             |
| 0055                                     | 614E11000 | 1.00 | LS | \$50,000.00 | \$50,000.00 |
| MAINTAINING TRAFFIC                      |           |      |    |             |             |
| 0056                                     | 624E10000 | 1.00 | LS | \$50,000.00 | \$50,000.00 |
| MOBILIZATION                             |           |      |    |             |             |

Total for Group 0230:\$107,500.00



CINCINNATI  
COLUMBUS  
DAYTON

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**OPINION OF PROBABLE CONSTRUCTION COST**  
**BELLBROOK STREETSCAPE - W. FRANKLIN**  
**DATE: June 25, 2023**

**LANDSCAPE ITEMS**

|                                    |     |    |          |                 |
|------------------------------------|-----|----|----------|-----------------|
| Turfgrass Seed                     | 150 | SF | \$ 0.25  | \$ 37.50        |
| Topsoil Lawn (6" depth)            | 3   | CY | \$ 65.00 | \$ 195.00       |
| Topsoil Plant Bed (12" depth)      | 23  | CY | \$ 65.00 | \$ 1,495.00     |
| Plant Beds (Plant Material)        | 650 | SF | \$ 12.00 | \$ 7,800.00     |
| Shredded Hardwood Mulch (2" depth) | 4   | CY | \$ 90.00 | \$ 360.00       |
| <b>LANDSCAPE SUBTOTAL \$</b>       |     |    |          | <b>9,887.50</b> |

**SITE AMENITIES**

|                                   |    |    |             |                  |
|-----------------------------------|----|----|-------------|------------------|
| Planter                           | 10 | EA | \$ 1,500.00 | \$ 15,000.00     |
| Benches                           | 4  | EA | \$ 1,975.00 | \$ 7,900.00      |
| Litter Receptacles                | 1  | EA | \$ 3,000.00 | \$ 3,000.00      |
| Bike Rack (installation only)     | 2  | EA | \$ 860.00   | \$ 1,720.00      |
| <b>SITE AMENITIES SUBTOTAL \$</b> |    |    |             | <b>27,620.00</b> |

**SUBTOTAL** ± \$ **27,980.00**

*\*Estimated Inflation costs included in full project cost estimate.*

THE LANDSCAPE ARCHITECT HAS USED HIS/HER BEST JUDGEMENT ON COST. THE LANDSCAPE ARCHITECT HAS NO CONTROL OVER THE COST OF LABOR, MATERIALS, OR THE CONTRACTOR'S METHODS OF DETERMINING BID PRICES, OR OVER COMPETITIVE BIDDING OR MARKET CONDITIONS. THEREFORE, THE LANDSCAPE ARCHITECT CANNOT GUARANTEE THAT BIDS OR CONSTRUCTION COST WILL NOT VARY FROM ANY ESTIMATES OF PROBABLE CONSTRUCTION COST PREPARED BY HIM/HER.

## Estimate WALNUT & MAIN

Estimated Cost:\$180,034.08

Contingency: 4.00%

**Estimated Total: \$187,235.44**

ALTERNATE BID (WALNUT AND MAIN STREET)  
CONTINGENCY = INFLATION (4%)

**Base Date: 08/11/23**

Spec Year: 23

Unit System: E

Work Type:

Highway Type:

Urban/Rural Type: URBAN CLASS

Season: SPRING

County: GREENE

Latitude of Midpoint: 393810

Longitude of Midpoint: -840415

District: 08

Federal/State Project Number:

*Prepared by ASN on 08/11/23*

*Checked by BMG on 08/11/23*

| <u>Line #</u>                   | <u>Item Number</u> | <u>Quantity</u> | <u>Units</u> | <u>Unit Price</u> | <u>Extension</u> |
|---------------------------------|--------------------|-----------------|--------------|-------------------|------------------|
| <u>Description</u>              |                    |                 |              |                   |                  |
| <u>Supplemental Description</u> |                    |                 |              |                   |                  |

**Group 0010:** Roadway

|                                 |           |          |      |            |             |
|---------------------------------|-----------|----------|------|------------|-------------|
| 0005                            | 201E11000 | 1.00     | LS   | \$2,500.00 | \$2,500.00  |
| CLEARING AND GRUBBING           |           |          |      |            |             |
| 0006                            | 202E23000 | 213.00   | SY   | \$23.76    | \$5,060.88  |
| PAVEMENT REMOVED                |           |          |      |            |             |
| 0007                            | 202E30000 | 342.00   | SF   | \$14.16    | \$4,842.72  |
| WALK REMOVED                    |           |          |      |            |             |
| 0008                            | 202E32000 | 91.00    | FT   | \$28.14    | \$2,560.74  |
| CURB REMOVED                    |           |          |      |            |             |
| 0009                            | 202E35100 | 30.00    | FT   | \$34.83    | \$1,044.90  |
| PIPE REMOVED, 24" AND UNDER     |           |          |      |            |             |
| 0010                            | 202E58100 | 1.00     | EACH | \$472.16   | \$472.16    |
| CATCH BASIN REMOVED             |           |          |      |            |             |
| 0011                            | 203E10000 | 15.00    | CY   | \$48.48    | \$727.20    |
| EXCAVATION                      |           |          |      |            |             |
| 0012                            | 203E20000 | 5.00     | CY   | \$12.68    | \$63.40     |
| EMBANKMENT                      |           |          |      |            |             |
| 0013                            | 204E10000 | 63.00    | SY   | \$5.66     | \$356.58    |
| SUBGRADE COMPACTION             |           |          |      |            |             |
| 0014                            | 608E10000 | 401.00   | SF   | \$15.48    | \$6,207.48  |
| 4" CONCRETE WALK                |           |          |      |            |             |
| 0015                            | 608E52000 | 394.00   | SF   | \$33.11    | \$13,045.34 |
| CURB RAMP                       |           |          |      |            |             |
| 0016                            | 608E98000 | 1,025.00 | SF   | \$45.00    | \$46,125.00 |
| WALKWAY, MISC.: SIDEWALK PAVERS |           |          |      |            |             |

Total for Group 0010:\$83,006.40

**Group 0020:** Erosion Control

|                                       |           |           |      |            |             |
|---------------------------------------|-----------|-----------|------|------------|-------------|
| 0017                                  | 832E15000 | 1.00      | LS   | \$2,500.00 | \$2,500.00  |
| STORM WATER POLLUTION PREVENTION PLAN |           |           |      |            |             |
| 0018                                  | 832E30000 | 10,000.00 | EACH | \$1.00     | \$10,000.00 |
| EROSION CONTROL                       |           |           |      |            |             |

Total for Group 0020:\$12,500.00

**Group 0040:** Drainage

|      |           |       |    |          |            |
|------|-----------|-------|----|----------|------------|
| 0019 | 611E01100 | 20.00 | FT | \$205.00 | \$4,100.00 |
|------|-----------|-------|----|----------|------------|



| <u>Line #</u>                   | <u>Item Number</u> | <u>Quantity</u> | <u>Units</u> | <u>Unit Price</u> | <u>Extension</u> |
|---------------------------------|--------------------|-----------------|--------------|-------------------|------------------|
| <u>Description</u>              |                    |                 |              |                   |                  |
| <u>Supplemental Description</u> |                    |                 |              |                   |                  |

|                     |           |      |      |            |            |
|---------------------|-----------|------|------|------------|------------|
| 6" CONDUIT, TYPE C  |           |      |      |            |            |
| 0020                | 611E04400 | 6.00 | FT   | \$250.00   | \$1,500.00 |
| 12" CONDUIT, TYPE B |           |      |      |            |            |
| 0021                | 611E98150 | 1.00 | EACH | \$4,268.87 | \$4,268.87 |
| CATCH BASIN, NO. 3  |           |      |      |            |            |

Total for Group 0040:\$9,868.87

**Group 0050:** Pavement

|  |           |        |     |          |             |
|--|-----------|--------|-----|----------|-------------|
| 0022   | 301E56000 | 11.00  | CY  | \$449.44 | \$4,943.84  |
| ASPHALT CONCRETE BASE, PG64-22, (449)  |           |        |     |          |             |
| 0023   | 304E20000 | 14.00  | CY  | \$104.21 | \$1,458.94  |
| AGGREGATE BASE   |           |        |     |          |             |
| 0024   | 407E20000 | 9.00   | GAL | \$4.19   | \$37.71     |
| NON-TRACKING TACK COAT   |           |        |     |          |             |
| 0025   | 441E70000 | 3.00   | CY  | \$550.00 | \$1,650.00  |
| ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22  |           |        |     |          |             |
| 0026   | 441E70300 | 5.00   | CY  | \$185.84 | \$929.20    |
| ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)  |           |        |     |          |             |
| 0027   | 441E91000 | 23.00  | SY  | \$400.00 | \$9,200.00  |
| ASPHALT CONCRETE, MISC.: TRAFFIC PATTERNSXD STAMPED CROSSWALK DIAGONAL<br>HERRINGBONE PATTERN (12-101), COLONIAL BRICK |           |        |     |          |             |
| 0028   | 609E26000 | 278.00 | FT  | \$45.52  | \$12,654.56 |
| CURB, TYPE 6   |           |        |     |          |             |

Total for Group 0050:\$30,874.25

**Group 0060:** Water Work

|                               |           |      |      |            |            |
|-------------------------------|-----------|------|------|------------|------------|
| 0029                          | 638E10800 | 3.00 | EACH | \$717.02   | \$2,151.06 |
| VALVE BOX ADJUSTED TO GRADE   |           |      |      |            |            |
| 0030                          | 638E10900 | 1.00 | EACH | \$1,500.00 | \$1,500.00 |
| SERVICE BOX ADJUSTED TO GRADE |           |      |      |            |            |

Total for Group 0060:\$3,651.06

**Group 0120:** Traffic Control

|   |           |      |      |         |          |
|---|-----------|------|------|---------|----------|
| 0031  | 630E85100 | 4.00 | EACH | \$73.22 | \$292.88 |
| REMOVAL OF GROUND MOUNTED SIGN AND REERECTION |           |      |      |         |          |

Total for Group 0120:\$292.88

| <u>Line #</u>                   | <u>Item Number</u> | <u>Quantity</u> | <u>Units</u> | <u>Unit Price</u> | <u>Extension</u> |
|---------------------------------|--------------------|-----------------|--------------|-------------------|------------------|
| <u>Description</u>              |                    |                 |              |                   |                  |
| <u>Supplemental Description</u> |                    |                 |              |                   |                  |

**Group 0130:** Traffic Signals

|            |           |      |      |          |          |
|------------|-----------|------|------|----------|----------|
| 0032       | 625E32000 | 2.00 | EACH | \$364.93 | \$729.86 |
| GROUND ROD |           |      |      |          |          |

|  |           |      |      |            |             |
|--|-----------|------|------|------------|-------------|
| 0033   | 630E97700 | 2.00 | EACH | \$8,500.00 | \$17,000.00 |
| SIGNING, MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY |           |      |      |            |             |

|                       |           |      |      |          |          |
|-----------------------|-----------|------|------|----------|----------|
| 0034                  | 632E26000 | 2.00 | EACH | \$273.73 | \$547.46 |
| PEDESTRIAN PUSHBUTTON |           |      |      |          |          |

|                     |           |      |      |            |            |
|---------------------|-----------|------|------|------------|------------|
| 0035                | 632E64020 | 2.00 | EACH | \$1,234.15 | \$2,468.30 |
| PEDESTAL FOUNDATION |           |      |      |            |            |

Total for Group 0130:\$20,745.62

**Group 0140:** Landscaping

|   |           |      |    |             |             |
|---|-----------|------|----|-------------|-------------|
| 0036  | 661E99000 | 1.00 | LS | \$19,095.00 | \$19,095.00 |
| SPECIAL - LANDSCAPING (SEE SUPPLEMENTAL ESTIMATE FOR ITEMIZED LANDSCAPE QUANTITIES) |           |      |    |             |             |

Total for Group 0140:\$19,095.00



**OPINION OF PROBABLE CONSTRUCTION COST**  
**BELLBROOK STREETSCAPE - N. MAIN**  
**DATE: June 25, 2023**

| <b>LANDSCAPE ITEMS</b>             |     |    |    |          |                       |
|------------------------------------|-----|----|----|----------|-----------------------|
| Turfgrass Seed                     | 620 | SF | \$ | 0.25     | \$ 155.00             |
| Topsoil Lawn (6" depth)            | 10  | CY | \$ | 65.00    | \$ 650.00             |
| Topsoil Plant Bed (12" depth)      | 13  | CY | \$ | 65.00    | \$ 845.00             |
| Plant Beds (Plant Material)        | 445 | SF | \$ | 12.00    | \$ 5,340.00           |
| Shredded Hardwood Mulch (2" depth) | 3   | CY | \$ | 90.00    | \$ 270.00             |
| <b>LANDSCAPE SUBTOTAL</b>          |     |    |    |          | <b>\$ 7,260.00</b>    |
| <b>SITE AMENITIES</b>              |     |    |    |          |                       |
| Planter                            | 6   | EA | \$ | 1,500.00 | \$ 9,000.00           |
| Benches                            | 1   | EA | \$ | 1,975.00 | \$ 1,975.00           |
| Bike Racks (installation only)     | 1   | EA | \$ | 860.00   | \$ 860.00             |
| <b>SITE AMENITIES SUBTOTAL</b>     |     |    |    |          | <b>\$ 11,835.00</b>   |
| <b>SUBTOTAL</b>                    |     |    |    |          | <b>± \$ 19,095.00</b> |

*\*Estimated Inflation costs included in full project cost estimate.*

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