



SHAWNEE COUNTY INVITATION TO BID

Quotation Number: 013-24
Date Issued: 03-14-2024
Closing Date: 04-05-2024, 2:00pm

Vendor Name: _____
Address: _____
Phone Number: _____

DOCUMENT 020 INVITATION TO BID

1. **SHAWNEE COUNTY PROJECT:** S-841013.00: Pavement Replacement – NW 46th Street: NW Hiawatha Place to NW Oakley Avenue.
2. **BIDS RECEIVED UNTIL:** 2:00 P.M., Local Time, Friday April 5, 2024, through the Shawnee County bid portal, www.snco.us/purchasing/
3. **BID OPENING:** Bids from the portal will be publically read and recorded at 2:30 P.M., Local Time, Friday April 5, 2024, in the County Commission Chambers, 707 SE Quincy, 1st Floor., Topeka, Kansas
4. **DESCRIPTION OF MAJOR UNITS OF WORK:**

PAVEMENT REMOVAL - 6,435 SY 10"
ASPHALT PAVEMENT - 5,718 SY
6" CONCRETE PAVEMENT - 437 SY
CONCRETE CURB & GUTTER - 2,910 LF
PAVEMENT MARKING - 3,257 LF
TEMPORARY TRAFFIC CONTROL - 1 LS
5. **DESIGN ENGINEER:** SBB Engineering LLC, Topeka, KS
6. **BID DOCUMENTS:** Digital (pdf) Project Drawings and Project Manual may be obtained free of charge from the bid portal, or by emailing a request to Courtney.liberato@sbbeng.com
7. **BID SECURITY REQUIREMENTS:** All bids must be accompanied by a certified check, cashier's check or a bid bond for not less than five percent (5%) of the amount bid (including alternates), made payable to the County Clerk of Shawnee County, Kansas.
8. **PRE-BID CONFERENCE:** A pre-bid conference will be held at N/A.
9. **SUBMITTAL:** Bid Submittal requirements are explained in the Instructions to Bidders.

**DOCUMENT 020
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SHAWNEE COUNTY, KANSAS

SPECIFICATIONS AND CONTRACT

DOCUMENTS

PAVEMENT REPLACEMENT
Project No. S-841013.00
NW 46th Street: NW Hiawatha Place to NW Oakley Ave.

**DIRECTOR OF PUBLIC WORKS/
SHAWNEE COUNTY ENGINEER**

Curt F. Niehaus, P.E.

**BOARD OF COUNTY
COMMISSIONERS**

Kevin J. Cook
Chair

Aaron Mays
Vice-Chair

William D. Riphahn
Member

Shawnee County
Department of Public Works
1515 NW Saline Street
Topeka, Kansas

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9. **SUBMITTAL:** Bid Submittal requirements are explained in the Instructions to Bidders.

DOCUMENT 100
INSTRUCTIONS TO BIDDERS

1. Defined Terms.

Terms used in these Instructions to Bidders shall have the meanings assigned to them in the General Conditions. The term "Successful Bidder" means the lowest, qualified, responsible Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

2. Copies of Bidding Documents.

2.1. Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Invitation may be obtained from the office designated in the Invitation to Bid.

2.2. Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Design Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3. Owner and Design Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

3. Qualifications of Bidders.

To demonstrate qualifications to perform the Work, the apparent low Bidder must be prepared to submit within five days of Owner's request written evidence of the types set forth in the General or Supplementary Conditions, such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located. Any information furnished pursuant to this section shall be deemed confidential and will not be disclosed by the Owner. Each Bid must contain evidence of Bidder's qualification to do business in the State of Kansas or covenant to obtain such qualification prior to award of the contract.

4. Examination of Contract Documents and Site.

4.1. Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Contract Documents.

4.2. Reference is made to the Supplementary Conditions for the identification of those reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Work which have been relied upon by Engineer in preparing the Drawings and Specifications. Owner will make copies of such reports available to any Bidder requesting them. These reports are not guaranteed as to accuracy or completeness, nor are they part of the Contract Documents. Before submitting his Bid each Bidder will, at his own expense, make such additional investigations and tests as the

Bidder may deem necessary to determine his Bid for performance of the Work in accordance with the specified calendar completion dates, price and other terms and conditions of the Contract Documents.

4.3. On request Owner will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his Bid.

4.4. The lands upon which the Work is to be performed, rights-of-way for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Supplementary Conditions, Specifications or Drawings.

4.5. The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Article 4 and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms, and conditions for performance of the Work.

5. Interpretations.

All questions about the meaning or intent of the Contract Documents shall be submitted to the Design Engineer as defined in Article 2 of the Agreement in writing at least 10 calendar days prior to the opening of Bids. Replies will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6. Bid Security.

6.1. Bid Security shall be made payable to County Clerk of Shawnee County, in an amount of five percent of the Bidder's maximum Bid price (including alternates) and in the form of a certified, cashier's check or a Bid Bond issued by a Surety meeting the requirement of paragraph 5.1 of the General Conditions. All forms of Bid Security must be delivered in original form. Facsimile transmission of Bid Security documents will not be accepted.

6.2. The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if the successful Bidder fails to execute and deliver the Agreement and furnish the required Contract Security within 10 days of the award of contract, Owner may annul the award and the Bid Security of that bidder will be forfeited to the Owner.

The Bid Security of any Bidder whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the seventh day after the "Effective date of the Agreement" (which term is defined in the General Conditions). Bid Security of other Bidders will be returned within seven days of the Bid opening.

7. Calendar Completion Date Contract.

The specified calendar completion dates by which the Work is to be completed is set forth in the Agreement.

8. Liquidated Damages.

Provisions for liquidated damages are set forth in the Agreement.

9. Substitute Material and Equipment.

The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated in the Drawings or allowed by Specifications that a substitute or an "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the "Effective date of the Agreement". The procedure for submittal of any such application by Contractor and consideration by Engineer is set forth in paragraphs 6.7.1, 6.7.2 and 6.7.3 of the General Conditions which may be supplemented in the Specifications.

10. Subcontractors, etc.

10.1. Bidder must submit to Owner, as part of their Bid Form, a complete list of all Subcontractors and other persons and organizations (including those who will be furnishing the principal items of material and equipment) proposed to be used by the bidder to complete this project. Failure by the Bidder to provide this list with his bid shall render the bid nonresponsive. If requested by the Owner, the Successful Bidder shall submit to the owner, in writing, an experience statement with pertinent information as to similar projects and other evidence of qualifications for each such Subcontractor, person and organization listed on the Bid Form. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, other person or organization, either Owner or Engineer may before giving the award of contract, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid Price. If the apparent Successful Bidder declines to make any such substitution, the contract shall not be awarded to such Bidder, but his declining to make any such substitution will not constitute grounds for sacrificing his Bid Security. Any Subcontractor, other person or organization so listed and to whom Owner or Engineer does not make written objection prior to giving the award of contract, will be deemed acceptable to Owner and Engineer. Substitutions to this list of acceptable Subcontractors and other persons and organizations after the apparent Successful Bidder has been awarded a contract by the Owner will not be allowed without the written approval of the Owner or Engineer.

10.2. No Contractor shall be required to employ any Subcontractor, other person or organization against whom he has reasonable objection.

10.3. No Subcontractor who is on the Owner's "List of Suspended Contractors" as of the date of the opening of Bids may be employed by the Contractor on the project. A current list of suspended contractors may be obtained from the County Clerk's Office.

10.4. The amount of the Work performed by Subcontractors in aggregate shall not exceed seventy (70) percent of the Total Bid in accordance with paragraph 6.8.3 of the General Conditions. A contract will not be awarded to a bidder not in compliance with this requirement.

11. Bid Form.

11.1. The Bid Form is included in this Project Manual.

11.2. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address shall be shown below the signature.

11.3. Bids by partnerships must be executed in the partnership name and signed by a partner whose title must appear under the signature and the official address of the partnership must be shown below the signature.

11.4. All names must be typed or printed below the signature.

11.5. The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).

11.6. The address to which communications regarding the Bid are to be directed must be shown, if different than that required above.

12. Submission of Bids.

12.1. Bids must be submitted through the Shawnee County bid portal, www.snco.us/purchasing/ on a duly executed copy of the Bid Form. Use the Bid Form bound with the Project Manual.

12.2. Bids will not be accepted from any Contractor who is on the Owner's "List of Suspended Contractors" as of the date of the Opening of Bids. Bids received from suspended Contractors will automatically be rejected and returned unopened.

13. Modification and Withdrawal of Bids.

13.1. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

13.2. If, within twenty-four hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of his Bid, Owner may, at its sole discretion, allow that bidder to withdraw his Bid and the Bid Security will be returned.

14. Opening of Bids.

Bids received from the Shawnee County bid portal, www.snco.us/purchasing/ at the time and date indicated in the Invitation to Bid and will be publically read aloud and recorded in the County Commission Chambers, 707 SE Quincy, 1st Floor, Topeka, Kansas at the time and date indicated in the Invitation to Bid .

15. Bids to Remain Open.

All Bids shall remain open for thirty (30) days after the day of the bid opening, but Owner may, in his sole discretion, release any Bid and return the Bid Security prior to that date.

16. Award of Contract.

16.1. Owner reserves the right to reject any and all Bids, to waive any and all informalities and to negotiate contract terms with the Successful Bidder. Owner reserves the right to reject all nonconforming, nonresponsive or conditional Bids. Discrepancies in the indicated multiplication of unit prices and quantities shall be resolved in favor of the correct multiplication based on the unit prices indicated. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

16.2. In evaluating Bids, Owner shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements and alternates and unit prices if requested in the Bid forms. It is Owner's intent to accept alternates (if any are accepted) in the order in which they are listed in the Bid form but Owner may accept them in any order or combination.

16.3. Owner may consider the qualifications, experience and financial ability of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in the General Conditions. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by Owner.

16.4. Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

16.5. If the contract is to be awarded it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Owner.

16.6. If the contract is to be awarded, Owner will notify the Successful Bidder within thirty (30) days after the day of the Bid opening.

17. Performance and Other Bonds.

Paragraph 5.1 of the General Conditions sets forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Contract Security.

18. Signing of Agreement.

Owner will notify the apparent low Bidder in writing that their bid will be recommended for award of contract, it will be accompanied by at least three unsigned counterparts of the Agreement and all other Contract Documents. Contractor shall sign and deliver all counterparts of the Agreement to Owner with all other Contract Documents attached by the date and time specified in Document 820, Supplementary Conditions. The Contractor shall also submit certificates of insurance in accordance with paragraph 2.1 of the General Conditions and an estimated construction schedule in accordance with paragraph 2.6 of the General Conditions with the executed Agreement. Within ten days after contract award, Owner will deliver all fully signed counterparts to Contractor.

19. Sales Taxes.

19.1. For all projects, payment of Kansas State Sales Tax or Compensating (Use) tax is not necessary and should not be included in unit prices bid for materials to be incorporated in the work. The County Engineer will furnish an exemption certificate (including exemption certificate number) obtained from the Sales and Compensating Tax Division of the Department of Revenue of the State of Kansas to the Contractor, Subcontractor or repairmen making purchases of any tangible personal property to be incorporated in this project. The Contractor, Subcontractor or repairmen must furnish all suppliers with a copy of the properly executed exemption certificate secured for this project. He may reproduce as many copies of the certificate as he may need.

20. State Registration of Out-of-State Contractors.

Bidders are advised that K.S.A. 79-1008, 79-1009 requires the registration of out-of-state contractors with the Director of Revenue for collection of tax.

21. Non-Resident Bidders.

Attention is directed to Section 16-113 and 16-114 of the Kansas Statutes Annotated which requires that any Non-Resident Contractor who undertakes the construction of any public improvement to be paid for out of public funds, must appoint in writing and file with the Kansas Secretary of State, some person (resident in Shawnee County, Kansas) on whom service may be had in any civil action which may arise out of such contractual relation.

22. Equal Employment Opportunity.

It is the policy of Shawnee County, Kansas to require that all bidders and contractors are expected to comply with the provisions of K.S.A. 44-1030 and 44-1031 and other applicable Federal and Kansas laws governing equal employment opportunity.

22.1. Comply with K.S. A. 44-1030 requiring that:

- a. The Contractor shall observe the provisions of the Kansas act against discrimination and shall not discriminate against any person in the performance of work under the present contract because of race, religion, color, sex, physical handicap unrelated to such person's ability to engage in the particular work, national origin or ancestry;
- b. In all solicitations or advertisements for employees, the Contractor shall include the phrase, "equal opportunity employer," or a similar phrase to be approved by the commission;
- c. If the Contractor fails to comply with the manner in which the Contractor reports to the commission in accordance with the provisions of K.S.A. 44-1031, the Contractor shall be deemed to have breached the present contract and it may be cancelled,

terminated or suspended, in whole or in part, by the Owner;

d. If the Contractor is found guilty of a violation of the Kansas act against discrimination under a decision or order of the commission which has become final, the Contractor shall be deemed to have breached the present contract and it may be cancelled, terminated or suspended, in whole or in part, by the Owner; and

e. The Contractor shall include the provisions of paragraphs (a) through (d) inclusively of this subsection 22.1. in every sub-contract or purchase order so that such provisions will be binding upon such Subcontractor or vendor.

22.2. Guarantee that during the performance of any County contract or agreement the Contractor, Subcontractor, vendor, or supplier of the County shall comply with all provisions of the Civil Rights Act of 1964, The Equal Employment Opportunity Act of 1972, Executive Order 11246, Age Discrimination in Employment Act of 1967, Part 20 Title 41 of the Code of Federal Regulations, Rehabilitation Act of 1973.

23. Standard Technical Specifications.

This project shall be subject to the applicable sections of the City of Topeka and Shawnee County Standard Technical Specifications, 2016 Edition with any addenda thereto.

DOCUMENT 101
MODIFICATIONS TO INSTRUCTIONS TO BIDDERS

These modifications to the Instruction to Bidders amend or supplement the Instruction to Bidders, Document 100, of this Project Manual, as listed below. All provisions which are not so amended or supplemented shall remain in full force and effect.

DOCUMENT 330
BID FORM

TO: Board of County Commissioners
707 SE Quincy, 1st Floor
Topeka, Kansas 66603

Project No. and Description: S-841013.00 – Pavement Replacement – NW 46th Street: NW
Hiawatha Place to NW Oakley Avenue.

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and be complete by the Calendar Completion Dates indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for thirty (30) days after the day of Bid opening. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within ten days after receipt of the award of contract and Contract Documents from the Owner.

3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

a. Bidder has examined copies of all the bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

| Date | Number |
|-------|--------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

b. Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

c. Bidder has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in paragraph 4.2 of the General Conditions, and accepts the determination set forth in the Supplementary Conditions (if applicable) of the extent of the technical data contained in such reports and drawings upon which Bidder is entitled to rely.

d. Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in

addition to or to supplement these referred to in (c) above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as Bidder considers necessary for the performance or furnishing of the Work at the Contract Price, by the Calendar Completion Date and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by Bidder for such purposes.

e. Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by Bidder in order to perform and furnish the Work at the Contract Price, by the Calendar Completion Date and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

f. Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

g. Bidder has given the Design Engineer written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder.

h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other bidder or over Owner.

Project No. and Description: S-841013.00 – Pavement Replacement Project - NW 46th Street – NW Hiawatha Place to NW Oakley Avenue.

4. Bidder will complete the Work for the following price(s):

| <u>ITEM</u> | <u>DESCRIPTION</u> | <u>QTY</u> | <u>UNITS</u> | <u>UNIT PRICE</u> | <u>TOTAL</u> |
|-------------|--|------------|--------------|-------------------|--------------|
| 1 | CONTRACTOR CONSTRUCTION STAKING | 1 | LS | | |
| 2 | PAVEMENT REMOVAL | 6,435 | SY | | |
| 3 | 10" SUBGRADE STABILIZATION (ALLOWANCE) | 1,224 | SY | | |
| 4 | 10" ASPHALT PAVEMENT | 5,718 | SY | | |
| 5 | CONCRETE CURB AND GUTTER (SPECIAL) | 881 | LF | | |
| 6 | CONCRETE CURB AND GUTTER (TYPE I) | 1,263 | LF | | |
| 7 | CONCRETE CURB AND GUTTER (TYPE III)(6") | 766 | LF | | |
| 8 | 6" CONCRETE PAVEMENT | 437 | SY | | |
| 9 | 6" SIDEWALK RAMP | 26 | SY | | |
| 10 | PAVEMENT MARKING (6")(WHITE)(THERMOPLASTIC) | 970 | LF | | |
| 11 | PAVEMENT MARKING (8")(WHITE)(THERMOPLASTIC) | 914 | LF | | |
| 12 | PAVEMENT MARKING (12")(WHITE)(THERMOPLASTIC) | 27 | LF | | |
| 13 | PAVEMENT MARKING (24")(WHITE)(PRE-FORMED THERMOPLASTIC) | 160 | LF | | |
| 14 | PAVEMENT MARKING (24")(WHITE)(YIELD)(PRE-FORMED THERMOPLASTIC) | 48 | LF | | |
| 15 | PAVEMENT MARKING (4")(YELLOW)(THERMOPLASTIC) | 1,127 | LF | | |
| 16 | PAVEMENT MARKING (12")(YELLOW)(THERMOPLASTIC) | 11 | LF | | |
| 17 | PAVEMENT MARKING REMOVAL (6") | 624 | LF | | |
| 18 | TEMPORARY TRAFFIC CONTROL | 1 | LS | | |
| 19 | PERMANENT SEEDING, MULCHING, & FERTILIZING | 1 | LS | | |
| 20 | TEMPORARY INLET SEDIMENT BARRIER | 7 | EACH | | |

TOTAL BASE BID \$ _____

Bidder shall enter the *price difference* for the corresponding bid items from the Base Bid that will be applied to the Base Bid unit prices if the Bid Alternate is selected:

| <u>ITEM</u> | <u>DESCRIPTION</u> | <u>QTY</u> | <u>UNITS</u> | <u>UNIT PRICE</u> | <u>TOTAL</u> |
|-------------|-------------------------------------|------------|--------------|-------------------|--------------|
| 4-ALT | 10" CONCRETE PAVEMENT (NRDJ)(AE) | 5,718 | SY | | |
| 10-ALT | PAVEMENT MARKING (6")(WHITE)(MMA) | 970 | LF | | |
| 11-ALT | PAVEMENT MARKING (8")(WHITE)(MMA) | 914 | LF | | |
| 12-ALT | PAVEMENT MARKING (12")(WHITE)(MMA) | 27 | LF | | |
| 15-ALT | PAVEMENT MARKING (4")(YELLOW)(MMA) | 1,127 | LF | | |
| 16-ALT | PAVEMENT MARKING (12")(YELLOW)(MMA) | 11 | LF | | |

TOTAL CONCRETE BID ALTERNATE \$ _____

5. Quantities are estimated. Final payment will be based on actual quantities unless otherwise stated in the Contract Documents.
6. Bidder agrees that the Work will be substantially complete by the calendar completion date for substantial completion given in the Agreement and General Conditions.
7. Bidder accepts the provisions of the Agreement for Liquidated Damages in the event of failure to complete the work by the calendar completion date.
8. The following documents are attached to and made a condition of this Bid:
 - a. Required Bid Security in the form of a certified or bank check or a bid bond in accordance with the provisions of the Instructions to Bidders.
 - b. List of Subcontractors/Suppliers.
9. The terms used in this Bid which are defined in the General Conditions included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

SUBMITTED on _____, 2024

Name of Bidder a(n) _____
(individual,partnership,corporation)

Address of Bidder

Telephone Number

By: _____, (Corporate Seal)
Authorized Person

Title

Project Number: S-841013.00

Contractor's Name: _____

List of Subcontractors/Suppliers

The Bidder is required to furnish the following information in accordance with the provisions of Section 100, Instructions to Bidders for ALL Subcontractors. Each Supplier performing more than 10 % of the Total Bid shall also be furnished. Do not list alternate subcontractors/suppliers for the same work. The Contractor shall list only one subcontractor/supplier for each such portion of Work as is defined by the Contractor in his bid. Contractor shall not substitute any person as subcontractor/supplier in the place of a subcontractor/supplier listed below, except as provided in Section 100.

The Bidder understands that if he fails to specify a subcontractor/supplier for any portion of the Work to be performed under the contract or specifies more than one subcontractor/supplier for the same portion of the Work, he shall be deemed to have agreed that he is fully qualified to perform that portion himself and that he shall not be permitted to sublet or subcontract that portion of the Work, except as provided in Section 100.

Subcontractor: _____
Amount: _____ (\$ _____)
(words)

Subcontractor: _____
Amount: _____ (\$ _____)
(words)

Subcontractor: _____
Amount: _____ (\$ _____)
(words)

Subcontractor: _____
Amount: _____ (\$ _____)
(words)

DOCUMENT 530
AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2024 by and between Shawnee County, Kansas (hereinafter called Owner) and

_____ (hereinafter called Contractor).

Owner and Contractor in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. Work.

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Project for which the Work under the Contract Documents is to be performed is: Project No. S-841013.00: PAVEMENT REPLACEMENT – NW 46th Street: NW Hiawatha Place to NW Oakley Ave.

Article 2. Engineer.

The project has been designed by SBB Engineering LLC, Topeka, Kansas. The Design Engineer, is hereinafter designated as the Engineer and is to act as Owner's project representative, assume all duties and responsibilities and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 3. Calendar Completion Date Contract.

3.1. This is a Calendar Completion Date contract.

Owner will issue Contractor a Construction Work Order on April 22, 2024 provided the Contractor complies with the required submittal times for the executed Agreement and its counterparts.

Contractor will commence Work on Monday April 29, 2024.

Contractor shall have all the work on the project Substantially Completed on or before Close of Business Friday, October 25, 2024.

Contractor shall have the project Ready for Final Payment and Acceptance in accordance with paragraph 14.13 of the General Conditions on or before Close of Business Friday, November 1.

3.2. Liquidated Damages. Owner and Contractor recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed by the calendar completion dates specified in paragraph 3.1 above. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner according to the following schedule:

| | | |
|-----------------|------------------------|-------------------|
| Contract Amount | Substantial Completion | Final Payment and |
|-----------------|------------------------|-------------------|

| | Liquidated Damages | Acceptance Liquidated Damages |
|-------------------------------|--------------------|-------------------------------|
| \$0 to \$500,000 | \$750.00 | \$750.00 |
| \$500,000.01 to \$1,000,000 | \$1,250.00 | \$750.00 |
| \$1,000,000.01 to \$1,500,000 | \$2,000.00 | \$1,250.00 |
| \$1,500,000.01 to \$2,000,000 | \$2,500.00 | \$1,500.00 |
| \$2,000,000.01 to \$5,000,000 | \$3,000.00 | \$2,000.00 |
| \$5,000,000.01 and up | \$5,000.00 | \$3,000.00 |

For each day that expires after the date specified in paragraph 3.1 for Substantial Completion until the work is certified by the engineer as Substantially Complete and after certification of Substantial Completion if Contractor neglects, refuses or fails to complete the remaining Work by the calendar completion date for Final Payment and Acceptance. The Owner shall deduct the accrued liquidated damages from the final payment due to the Contractor.

Article 4. Contract Price.

4.1. Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents in current funds as per the Contractor's Bid, which is attached as an exhibit to this Agreement.

Article 5. Payment Procedures.

Applications for Payment shall be in accordance with Article 14 of the General Conditions.

5.1. Progress Payments. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's signed Applications for Payment as recommended by Engineer within thirty-five (35) days following the end of the period for which payment is being requested, provided the application for payment is submitted within seven (7) days following the end of the period. Period shall end on the last calendar day of each month. All progress payments will be based on the number of units or estimated percentage of the Work completed in accordance with paragraph 14.1 of the General Conditions.

5.1.1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as Engineer shall determine, or Owner may withhold, in accordance with paragraph 14.7 of the General Conditions.

(1) 90% of Work completed. If the project has been 50% completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer upon written request by the Contractor, Owner, may determine that as long as the character and progress of the Work remain satisfactory to them, that the retainage on account of Work completed be reduced

or eliminated. Reduction or elimination of the retainage will be at the sole discretion of the Owner.

- (2) 0 % of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to Owner as provided in paragraph 14.2 of the General Conditions).

5.1.2. Upon Substantial Completion, in an amount sufficient to increase total payments to Contractor to 95% of the Contract Price, less such amounts as Engineer shall determine, or Owner may withhold, in accordance with paragraph 14.7 of the General Conditions.

5.2. Final Payment. Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said paragraph 14.13.

5.3. Interest. All monies not paid when due hereunder shall not bear interest.

Article 6. Contractor's Representations.

In order to induce Owner to enter into this Agreement, Contractor represents that he fully complies with the requirements stated in paragraphs 3b. through 3g. of the Bid Form, which is attached as an exhibit to this Agreement.

Article 7. Contract Documents.

The Contract Documents which comprise the entire agreement between Owner and Contractor concerning the Work consist of the following:

- 7.1. This Agreement.
- 7.2. Performance and other Bonds contained in this Project Manual.
- 7.3. Work Order.
- 7.4. General Conditions, Doc 700.
- 7.5. Supplementary Conditions contained in this Project Manual, if any.
- 7.6. City of Topeka and Shawnee County Standard Technical Specifications, 2016 Edition with any addenda thereto and KDOT Standard Specification for Road & Bridges, latest edition with any addenda thereto.
- 7.7. Specifications contained in this Project Manual, if any.
- 7.8. Project Drawings, bearing the following title: Pavement Replacement Project No. S-841013.00: NW 46th Street – NW Hiawatha Place to NW Oakley Avenue.
- 7.9. Addenda _____ to _____, inclusive.
- 7.10. Contractor's Bid, including all attachments to Bid, which is attached as an exhibit to this Agreement.
- 7.11. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Change Orders and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.4 and 3.5 of the General Conditions.

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.4 and 3.5 of the General Conditions.

Article 8. Suspension of Contractor.

8.1. Contractor may be placed on Owner's "List of Suspended Contractors" for a period of time from the date of written notification by Owner if Contractor fails to perform in accordance with specific provisions stated in paragraph 8.2 of this Article 8. The period of Suspension shall be established as follows:

First Suspension - 1 year
Second Suspension - 2 years
Third Suspension - Permanent

During the period of suspension, the Contractor will not be permitted to submit a bid to Owner to perform Work either directly or indirectly or as a subcontractor.

8.2. The Contractor shall be suspended upon written notification by Owner:

8.2.1. If Contractor exceeds the date established for substantial completion or final payment and acceptance as indicated in paragraph 3.1, or

8.2.2. Upon occurrence of any of the events stated in paragraph 15.2 of the General Conditions.

8.2.3. If Contractor fails to complete any outstanding "One-Year Correction Period" work, as defined in paragraph 13.12 of the General Conditions, on previously completed projects within 90 calendar days of written notification by the Owner, the Contractor will be placed on Owners "List of Suspended Contractors", as defined in paragraph 8.1, Article 8. Suspension of Contractor, and shall remain suspended until such time as the corrective work has been certified as complete in writing by the Owner.

Article 9. Miscellaneous.

9.1. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

9.2. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.3. Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in triplicate. One counterpart each has been delivered to Owner, Contractor and Design Engineer. All portions of the

Contract Documents have been signed or identified by Owner and Contractor or by Design Engineer on their behalf.

OWNER: Shawnee County, Kansas

CONTRACTOR _____

By: _____
Chair,
Board of County Commissioners

By: _____

[CORPORATE SEAL]

Attest: _____
Shawnee County Clerk

Attest: _____

Date: _____

Attachment To
Shawnee County Contract C _____

CONTRACTUAL PROVISIONS ATTACHMENT

The undersigned parties agree that the following provisions are hereby incorporated into the contract to which it is attached and made a part thereof, said contract being dated the _____ day of _____, 2024.

1. **TERMS HEREIN CONTROLLING PROVISIONS.** It is expressly agreed that the terms of each and every provision in this attachment shall prevail and control over the terms of any other conflicting provision in any other document relating to and a part of the contract in which this attachment is incorporated.
2. **AGREEMENT WITH KANSAS LAW.** It is agreed by and between the undersigned that all disputes and matters whatsoever arising under, in connection with or incident to this contract shall be litigated, if at all, in and before a Court located in the State of Kansas, U.S.A., to the exclusion of the Courts of any other states or country. All contractual agreements shall be subject to, governed by, and construed according to the laws of the State of Kansas.
3. **TERMINATION DUE TO LACK OF FUNDING APPROPRIATION.** Shawnee County is subject to the Kansas Cash Basis Law, K.S.A. 10-1101 *et seq.* If, in the judgment of the Financial Administrator, Audit-Finance Office, sufficient funds are not appropriated to continue the function performed in this agreement and for the payment of the charges hereunder, County may terminate this agreement at the end of its current fiscal year. County agrees to give written notice of termination to contractor at least thirty (30) days prior to the end of its current fiscal year. In the event this agreement is terminated pursuant to this paragraph, County will pay to the contractor all regular contractual payments incurred through the end of such fiscal year. The termination of the contract pursuant to this paragraph shall not cause any penalty to be charged to the County or the contractor.
4. **DISCLAIMER OF LIABILITY.** Neither the County of Shawnee nor any department thereof shall hold harmless or indemnify any contractor for any liability whatsoever.
5. **ANTI-DISCRIMINATION CLAUSE.** The contractor agrees: (a) to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 *et seq.*) and the Kansas Age Discrimination in Employment Act, (K.S.A. 44-1111 *et seq.*) and the applicable provisions of the Americans With Disabilities Act (42 U.S.C. 12101 *et seq.*) [ADA] and to not discriminate against any person because of race, religion, color, sex, disability, national origin or ancestry, or age in the admission of access to or treatment or employment in, its programs or activities; (b) to include in all solicitations or advertisements for employees, the phrase "equal opportunity employer"; (c) to comply with the reporting requirements set out in K.S.A. 44-1031 and K.S.A. 44-1116; (d) to include those provisions in every subcontract or purchase order so that they are binding upon such subcontractor or vendor; (e) that a failure to comply with the reporting requirements of (c) above or if the contractor is found guilty of any violation of such acts by the Kansas Human Rights Commission, such violation shall constitute a breach of contract; (f) if the contracting agency determines that the contractor has violated applicable provisions of ADA, that violation shall constitute a breach of contract; (g) if (e) or (f) occurs, the contract may be cancelled, terminated or suspended in whole or in part by the County. Parties to this contract understand that subsections (b) through (e) of this paragraph number 5 are not applicable to a contractor who employs fewer than four employees or whose contract with the County totals \$5,000 or less during this fiscal year.

6. **ACCEPTANCE OF CONTRACT.** This contract shall not be considered accepted, approved or otherwise effective until the required approvals and certifications have been given and this is signed by the Board of County Commissioners of the County of Shawnee, Kansas.
7. **ARBITRATION, DAMAGES, WARRANTIES.** Notwithstanding any language to the contrary, no interpretation shall be allowed to find the County has agreed to binding arbitration, or the payment of damages or penalties upon the occurrence of a contingency. Further, the County shall not agree to pay attorney fees and late payment charges; and no provisions will be given effect which attempts to exclude, modify, disclaim or otherwise attempt to limit implied warranties of merchantability and fitness for a particular purpose.
8. **REPRESENTATIVE'S AUTHORITY TO CONTRACT.** By signing this document, the representative of the contractor thereby represents that such person is duly authorized by the contractor to execute this document on behalf of the contractor and that the contractor agrees to be bound by the provisions thereof.
9. **RESPONSIBILITY FOR TAXES.** The County shall not be responsible for, nor indemnify a contractor for, any federal, state or local taxes which may be imposed or levied upon the subject matter of this contract.
10. **INSURANCE.** The County shall not be required to purchase, any insurance against loss or damage to any personal property to which this contract relates, nor shall this contract require the County to establish a "self-insurance" fund to protect against any such loss or damage. Subject to the provisions of the Kansas Tort Claims Act (K.S.A. 75-6101 *et seq.*), the vendor or lessor shall bear the risk of any loss or damage to any personal property to which vendor or lessor holds title.
11. **AUTOMATED CLEARING HOUSE (ACH).** Shawnee County prefers to pay its vendor invoices via electronic funds transfers through the automated clearing house (ACH) network. Shawnee County may require vendors to accept payments via ACH. To initiate payment of invoices, vendors shall execute the County's standard ACH Vendor Payment Authorization Agreement. Upon verification of the data provided, the Payment Authorization Agreement will authorize the County to deposit payment for services rendered or goods provided directly into vendor accounts with financial institutions. All payments shall be made in United States currency.

VENDOR/CONTRACTOR:

By: _____

Title: _____

Date: _____

**BOARD OF COUNTY COMMISSIONERS
SHAWNEE COUNTY, KANSAS**

Kevin J. Cook, Chair

Date: _____

ATTEST:

Cynthia A. Beck, Shawnee County Clerk

Performance Bond

Any singular reference to Contractor, Surety, Owner of other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location): S-841013.00 Pavement Replacement Project - NW 46th St. (NW Hiawatha Pl. to NW Oakley Ave.)
Shawnee County, KS

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-A (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1. The Surety in accordance with the terms of the Contract;

3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;

4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in

whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1. Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY---Name, Address and Telephone)
AGENT or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):

STATUTORY BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT we, the undersigned _____ of _____, hereinafter referred to as "CONTRACTOR", and _____ a corporation organized under the laws of the State of _____, and authorized to transact business in the State of Kansas, as "Surety", are held and firmly bound unto the State of Kansas, in the penal sum of _____ Dollars (\$ _____), lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, or heirs, executors, administrators, successors and assigns, jointly and severally by these presents.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT:

WHEREAS, the above bonded CONTRACTOR has, on the _____ day of _____, 2024, entered into the Public Improvement Agreement with the Shawnee County, Kansas, for the construction of the public improvements described in the attached contract documents and below.

Pavement Replacement Project S-841013.00: NW 46th Street: NW Hiawatha Place to NW Oakley Ave.

Date of Project: April 18, 2024

NOW, THEREFORE, if the CONTRACTOR and his SUBCONTRACTORS shall pay all indebtedness incurred for supplies, materials, or labor furnished, used or consumed in connection with, or in, or about the construction or making of, public improvements, including gasoline, lubricating oils, fuel oils, greases, coal, and similar items used or consumed directly in furtherance of such improvements, this obligation shall be void; otherwise it shall remain in full force and effect.

PROVIDED FURTHER, that the surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder, or the specifications accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the specifications.

PROVIDED FURTHER, that the surety agrees that any person to whom there is due any sum for supplies, materials, or labor, as herein before stated, or his assigns, may bring an action on this bond for the recovery of the indebtedness; PROVIDED, that no action shall be brought on the bond after six (6) months from the completion of the public improvements.

IN TESTIMONY WHEREOF, the CONTRACTOR has hereunto set his hand, and said surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact duly authorized to do so at _____ on this _____ day of _____, 2024_.

NAME

(NAME PRINTED)

(ADDRESS)

(TELEPHONE)

BY

TITLE

Surety

By _____
Attorney-in-Fact

Address

Phone No.

By _____
State Representative

(Accompany this bond with the attorney-in-fact's authority from the surety company certified to include the date of bond).

WHEREBY certify that the above bond is approved and that said bond has been filed in the records of _____ County, this _____ day of _____, 2024_.

Clerk of the District Court

DOCUMENT 700

**GENERAL CONDITIONS
CALENDAR COMPLETION DATE CONTRACT**

FOR

SHAWNEE COUNTY

DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PROJECTS

CALENDAR COMPLETION DATE

7/1/13

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CALENDAR COMPLETION DATE

7/1/13

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Addenda - Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

Agreement - The written agreement between Owner and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment - A form acceptable to the Owner which is to be used by Engineer in preparation of progress or final payments for signature by the Contractor and which is to include such supporting documentation as is required by the Contract Documents.

Bid - The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bonds - Bid, performance and statutory bonds and other instruments of security.

Change Order - A document recommended by Engineer, which is signed by Contractor and Owner and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price, issued on or after the Effective Date of the Agreement.

County Engineer - The County Engineer of Shawnee County or authorized representatives of the Public Works Department of Shawnee County.

Contract Documents - The Agreement, Addenda (which pertain to the Contract Documents), Contractor's Bid (including documentation accompanying the bid and any post-Bid documentation submitted prior to the Award of contract) the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements issued pursuant to paragraphs 3.4 and 3.5 on or after the Effective Date of the Agreement.

Contract Price - The moneys payable by Owner to Contractor under the Contract Documents as stated in the Agreement.

Contractor - The person, firm or corporation with whom Owner has entered into the Agreement.

Calendar Completion Date – Dates specified in of Article 3, Paragraph 3.1 of the Agreement stipulating the date for Substantial Completion and the date the project is ready for Final Payment and Acceptance.

Defective - An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the

protection thereof has been assumed by Owner at Substantial Completion in accordance with paragraph 14.8 or 14.10).

Design Engineer - The person, firm or corporation responsible for the design of the project and named as such in the Agreement.

Drawings - The drawings which show the character and scope of the work to be performed and which have been prepared or approved by Engineer and are referred to in the Contract Documents.

Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

Engineer - The Engineer shall be either the Design Engineer, County Engineer or the Owner's Project Representative as designated in the Agreement.

Field Order - A verbal or written order issued by Engineer which orders minor changes in the Work in accordance with paragraph 9.5 but which does not involve a change in the Contract Price.

Final Acceptance – The date when the Owner accepts in writing that the construction of the project is complete in accordance with the Contract Documents such that the entire project can be utilized for the purposes for which it is intended and Contractor is entitled to final payment.

Final Completion – The date when the construction of the project is complete and all identified incomplete or defective items of work have been corrected to the satisfaction of the Engineer and all required documents have been submitted, including but not limited to Final Application for Payment.

Force Account Work - Work authorized and approved by the Owner to be paid on the basis of actual cost in accordance with paragraphs 11.4 through 11.7.

Laws and Regulations; Laws or Regulations - Laws, rules, regulations, ordinances, codes and/or orders.

Owner – Shawnee County, Kansas with whom Contractor has entered into the Agreement and for whom the Work is to be provided.

Owner's Project Representative - The authorized representative of the Owner, who is assigned to the project or any part thereof with the authority to act on behalf of the Owner.

Pdf format: All documents submitted electronically shall be submitted in Portal Document Format.

Partial Utilization - Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

Project - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by Contractor to illustrate material or equipment for some portion of the Work.

Specifications – Kansas Department of Transportation Standard Road and Bridge Specifications and

City of Topeka and Shawnee County Standard Technical Specifications, latest editions or the portion of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor - An individual, firm or corporation having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

Submittal – Shop drawing, certification, test result or other required documentation regarding any portion of the Work.

Substantial Completion - The Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer as evidenced by Engineer's notice of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if there be no such certificate issued, when final payment is due in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof.

Supplementary Conditions - The part of the Contract Documents which amends, modifies or supplements these General Conditions, other provisions of the Contract Documents, the Standard Technical Specifications or the Drawings.

Supplier - A manufacturer, fabricator, supplier, distributor, or vendor.

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work - Work to be paid for on the basis of unit prices.

Work - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

Work Change Directive - A written directive to Contractor, issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer, ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.22. A Work Change Directive may not change the contract Price, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by parties as to its effect, if any, on the Contract Price as provided in paragraph 10.2.

Work Order - A written notice given by Owner to Contractor fixing the date on which the Contract Work will commence to run and on which Contractor shall start to perform Contractor's obligations under the Contract Documents.

ARTICLE 2 - PRELIMINARY MATTERS

Delivery of Bonds and Evidence of Insurance:

2.1. When Contractor delivers the executed Agreements to Owner, Contractor shall also deliver to Owner such Bonds as Contractor may be required to furnish in accordance with paragraph 5.1. Contractor shall also deliver with the executed Agreements certificates of insurance which Contractor is required to purchase and maintain in accordance with paragraphs 5.3 through 5.7. All Certificates of Insurance shall utilize the ACORD 25-S form, most recent revision date.

Copies of Documents:

2.2. Owner shall furnish to Contractor up to three (3) copies (unless otherwise specified in the Supplementary Conditions) of the Contract documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

Commencement of Contract Work:

2.3. Contract Work will commence on the day indicated on the Work Order. A Work Order will be issued by the Owner or Engineer on the date specified in Article 3, Paragraph 3.1 of the Agreement.

Starting the Project:

2.4. Contractor shall start to perform the Work on the date stated on the Work Order, but no Work shall be done at the site prior to the date stated on the Work Order.

Before Starting Construction:

2.5. Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby; however, Contractor shall not be liable to Owner, or Engineer for failure to report any conflict, error or discrepancy in the Contract Documents, unless Contractor had actual knowledge thereof or should reasonably have known thereof.

Schedule Requirements:

2.6.1. The Contractor shall submit, with the executed Agreement and Contract

Documents, a schedule of proposed construction operations which is acceptable to the Owner for any project with a substantial completion time greater than 60 days or with a calendar completion date as defined in paragraph 3.1 of the Agreement; however, on any project for which more than one pay application will be submitted, a schedule of proposed construction operations shall be submitted. The schedule shall comply with all provisions of this specification. The schedule shall be a bar graph type schedule which identifies the target starting and completion dates for each bid item of the Work. The schedule shall indicate completion of the various parts of the Work and the total project by the calendar completion dates called out in the Agreement.

The schedule will be used to monitor the performance of the Contractor and shall be monitored and updated monthly or more frequently if deemed necessary by the Engineer during the course of the project. Contractor shall submit the updated and/or revised project schedule with the signed monthly application for payment in accordance with paragraph 14.2. Should the Work fall significantly (20%) behind schedule, the Contractor shall submit a revised schedule detailing corrective measures to be taken to complete the project by the calendar completion date specified in the Agreement. Owner may require Contractor to add to his equipment or construction forces, as well as increase the working hours, if operations fall behind schedule at any time during the construction period. Owner may require Contractor to reimburse Owner for all costs, including charges of Engineer and Owner's professional consultants, caused by any increase in Contractor's allowable working hours as defined below. Owner may deduct such costs from any payment due Contractor.

The following requirements shall be taken into consideration in preparing the schedule of construction operations: No Work shall be done between the hours of 8:00 p.m. and 6:00 a.m., without permission of Owner, except such Work as may be necessary for the proper care, maintenance, and protection of the Project, or in the case of an emergency. Such permission may be granted or denied at the complete discretion and convenience of the Owner and, if granted, may be revoked at any time if the Contractor fails to maintain adequate equipment and supervision for the proper prosecution and control of the Work and all operations performed thereunder, or if the Contractor fails to comply with any conditions of the Owner's authorization.

2.6.2. The Engineer shall provide Contractor, prior to the date of the Preconstruction Conference, a schedule of required submittals. Contractor shall provide all Submittals promptly to Engineer for review to avoid delay in any activity beyond the scheduled start date. Sufficient time shall be allowed for initial review, corrections and resubmission, and final review of each submittal. Engineer will be given a minimum ten (10) days to review each submittal. Initial schedule shall not limit Engineer's ability to require additional submittals as deemed necessary throughout the project. In no instance shall any portion of the Work requiring a submittal, as listed on initial schedule or otherwise, be incorporated into work until said submittal has been approved by Engineer.

Preconstruction Conference:

2.7. A Preconstruction Conference attended by Contractor, Engineer and others as appropriate will be held to discuss the schedules referred to in paragraph 2.6, to discuss procedures for handling Submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. The Contractor's representative shall be the resident superintendent or an individual fully qualified and knowledgeable of the Contractor's field operations, either of whom shall have the authority to act, separately or together, on behalf of the Contractor on a daily basis throughout the duration of the contract.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

Intent:

3.1. The Contract Documents comprise the entire agreement between Owner and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with all applicable laws and ordinances.

3.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids). However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Owner, Contractor, Engineer, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Engineer, or any of Engineer's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in paragraph 9.4.

3.3. If, during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, Contractor shall so report to Engineer in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from Engineer; however, Contractor shall not be liable to Owner, Engineer for failure to report any conflict, error or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof or should reasonably have known thereof.

Amending and Supplementing Contract Documents:

3.4. The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

3.4.1. A Change Order (pursuant to paragraph 10.4),

or

3.4.2. A Work Change Directive (pursuant to paragraph 10.1).

As indicated in paragraphs 11.2, Contract Price may only be changed by a Change Order.

3.5. In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

3.5.1. A Field Order (pursuant to paragraph 9.5),

3.5.2. Engineer's approval of a Submittal or sample (pursuant to paragraphs 6.26 and 6.27), or

3.5.3. Engineer's written interpretation or clarification (pursuant to paragraph 9.4).

Reuse of Documents:

3.6. Neither Contractor nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with Owner shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of Design Engineer; and they shall not reuse any of them on extensions of the Project or any other project without written consent of Owner and Design Engineer and specific written verification or adaptation by Design Engineer.

ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; CONSTRUCTION LAYOUT

Availability of Lands:

4.1. Owner shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by Owner, unless otherwise provided in the Contract Documents. Temporary easements will be provided to accommodate normal construction methods and the Contractor may be required to protect designated structures or vegetation from damage. The Contractor may provide additional lands required for temporary construction facilities and storage of materials and equipment at his own

expense. Evidence, in writing, of permission to occupy or use areas outside the limits of public right-of-way or easements provided by the Owner shall be supplied to the Engineer.

Physical Conditions:

4.2.1. Explorations and Reports: Reference is made to the Supplementary Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by Design Engineer in preparation of the Contract Documents. These reports are not guaranteed as to accuracy or completeness, nor are they part of the Contract Documents. Contractor shall have full responsibility with respect to subsurface conditions at the site.

4.2.2. Existing Structures: Reference is made to the Supplementary Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 4.3) which are at or contiguous to the site that have been utilized by the Design Engineer in preparation of the Contract Documents. Contractor may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for Contractor's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, Contractor shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3. Report of Differing Conditions: If Contractor believes that:

4.2.3.1. Any technical data on which Contractor is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2. Any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents,

Contractor shall, promptly after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.22), notify Owner and Engineer in writing about the inaccuracy or difference.

4.2.4. Engineer's Review: Engineer will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

4.2.5. Possible Document Change: If Engineer concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6. Possible Price Adjustments: In each such case, an increase or decrease in the Contract Price, will be allowable to the extent that they are attributable to any such inaccuracy or difference. If Owner and Contractor are unable to agree as to the amount, a claim may be made therefor as provided in Articles 11.

Physical Conditions - Underground Facilities:

4.3.1. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to Owner or Design Engineer by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

4.3.1.1. Owner and Design Engineer shall not be responsible for the accuracy or completeness of any such information or data; and,

4.3.1.2. Contractor shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.3.2. Not Shown or Indicated. If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of, Contractor shall promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.22), identify the Owner of such Underground Facility and give written notice thereof to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. Contractor may be allowed an increase in the Contract Price, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of. If the parties are unable to agree as to the amount thereof, Contractor may make a claim therefor as provided in Articles 11.

Reference Points:

4.4.1 Engineer shall provide engineering surveys to establish reference points and

benchmarks for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall protect and preserve the established reference points and benchmarks and shall make no changes or relocations without the prior written approval of Engineer. Contractor shall report to Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

4.4.2. The Contractor shall protect from physical disturbance all monuments and benchmarks of the City, County, State or Federal Government without the prior written approval of the Owner or until they have been removed, witnessed or otherwise disposed of by the Engineer.

Construction Layout:

4.5. The County Engineer, or the Design Engineer, as designated at the pre-construction conference, will provide construction layout (staking) of all improvements at no cost to the Contractor. The Contractor shall be responsible for scheduling staking and shall provide the Engineer with at least 48 hours notice prior to the time staking is required. The Contractor must satisfy himself as to the meaning of all stakes and marks prior to start of any construction activity based on those stakes. The Engineer assumes no liability for stakes that are misinterpreted by the Contractor or are damaged due to any activity. Once stakes are set and marked, it is the Contractor's responsibility to preserve them from all types of damage, and in the event of his failure to do so, Contractor shall pay the Engineer to reset the stakes.

ARTICLE 5 - BONDS AND INSURANCE

Performance and Statutory Bonds:

5.1. Performance Bond. Contractor shall furnish a performance bond, in an amount equal to the Contract Price as security for the faithful performance of all Contractor's obligations under the Contract Documents. The performance bond shall remain in effect at least until one (1) year after the date when final payment becomes due, except as otherwise provided by Law or Regulation or by the Contract Documents. The performance bond shall acknowledge the one year correction period in accordance with the requirements of Article 13.

5.1.1 Statutory Bond (K.S.A. 60-1111). Contractor shall provide and file with the Clerk of the District Court of Shawnee County, a Kansas statutory bond, in an approved form and in an amount equal to the Contract Price, to ensure payment of all indebtedness incurred for all supplies, materials, or labor furnished, used or consumed in connection with, in, or about the construction or making of, public improvements.

5.1.2 All Bonds shall be in the forms prescribed by Law, Regulation, or by the Contract Documents and be executed by such sureties who are authorized to conduct business in the State of Kansas and who are named in the current list of "Companies Holding Certificates of

Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act. The name of the Contractor on this Agreement, bonds, and certificate of insurance shall be identical.

5.2. If the surety on any Bond furnished by Contractor is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.1, Contractor shall within five (5) days thereafter substitute another Bond and Surety, both of which must be acceptable to Owner.

Contractor's Liability Insurance:

5.3. Contractor shall purchase and maintain such commercial general liability and other insurance as is appropriate for the Project and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance and furnishing of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by Contractor, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

5.3.1. Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts, including "all-states" endorsement, as per state and federal statutory requirements.

5.3.2. Employers Liability Insurance covering claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees with a \$500,000.00 each person, limit.

5.3.3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

5.3.4. Claims for property damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;

5.3.5. Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and

5.3.6. The commercial general liability insurance required under paragraphs 5.3.3 through 5.3.5 shall have the following specific coverages:

(1) Bodily Injury (including completed operations and products liability):

| | |
|-------------|------------------|
| \$ 500,000 | Each Occurrence |
| \$1,000,000 | Annual Aggregate |

Property Damage:

| | |
|---|------------------|
| \$ 500,000 | Each Occurrence |
| \$1,000,000 | Annual Aggregate |
| or a combined single limit of \$1,000,000 | |

(2) Personal Injury, with employment exclusion deleted:

| | |
|-------------|------------------|
| \$1,000,000 | Annual Aggregate |
|-------------|------------------|

(3) Excess Liability:

Bodily Injury and Property Damage Combined:

| | |
|-------------|------------------|
| \$1,000,000 | Each Occurrence |
| \$1,000,000 | Annual Aggregate |

The commercial general liability insurance shall include completed operations insurance. Property Damage liability insurance shall be provided with coverages for explosion, collapse, and underground hazards, where applicable. The Owner shall be named as an additional insured on the Contractor's general liability policy.

5.3.7. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle. Coverages for hired car and employee non-owned auto liability shall also be provided. The coverage limits shall be:

(1) Bodily Injury:

| | |
|-------------|-----------------|
| \$ 500,000 | Each Person |
| \$1,000,000 | Each Occurrence |

(2) Property Damage:

| | |
|---|-----------------|
| \$ 500,000 | Each Occurrence |
| or a combined single limit of \$1,000,000 | |

Contractual Liability Insurance:

5.4. The commercial general liability insurance required by paragraph 5.3 will include contractual liability insurance applicable to Contractor's obligations under paragraphs 6.30 and 6.31. The coverage limits shall be:

(1) Bodily Injury:

\$ 500,000

Each Occurrence

(2) Broad Form Property Damage:

\$ 500,000

Each Occurrence

\$1,000,000

Annual Aggregate

Property Insurance:

5.5. Contractor shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as required by Laws and Regulations) for all projects which include construction of or modification to above ground structures. This insurance shall include the interests of Owner, Contractor, and Subcontractors all of whom shall be listed as insured or additional insured parties, shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse, and water damage, and shall include damages, losses, and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance, Contractor shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment.

5.6. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by Laws and Regulations which will include the interests of Owner, Contractor, and Subcontractors all of whom shall be listed as insured or additional insured parties.

Owners Liability Insurance:

5.7. Contractor, at his sole expense, shall purchase Owner's Protective Liability Insurance. This insurance shall be maintained in full force and effect for the duration of the Contract by Contractor and shall name the Owner as the named Insured.

This insurance shall have the same limits of liability as the commercial general liability insurance and shall protect Owner against any and all claims and liabilities for injury to or death of persons, or damage to property caused in whole or in part by, or alleged to have been caused in whole or in part by, the negligent acts or omissions of Contractor or Subcontractors or any agent, servant, worker, or employee of Contractor or Subcontractor arising from the operations or Work for the project.

Notice of Cancellation:

5.8. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) in accordance with paragraphs 5.3 through 5.7 shall contain a provision or endorsement that the coverage afforded will not be canceled, materially

changed or renewal refused until at least thirty (30) days prior written notice has been given to Owner by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with paragraph 13.12. In addition, Contractor shall maintain such completed operations insurance for one (1) year after final payment and furnish Owner with evidence of continuation of such insurance at final payment.

Receipt and Application of Proceeds:

5.9. Any insured loss under the policies of insurance required by paragraphs 5.5 and 5.6 will be adjusted with Owner and made payable to Owner as trustee for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.12. Owner shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order.

5.10. Owner as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, Owner as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of such duties.

Acceptance of Insurance:

5.11. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor in accordance with paragraphs 5.3 through 5.7 on the basis of its not complying with the Contract Documents, Owner shall notify Contractor in writing thereof within thirty (30) days of the date of delivery of such certificates to Owner in accordance with paragraph 2.1. Contractor shall provide to Owner such additional information in respect of insurance provided by Contractor as Owner may reasonably request. Failure by Owner to give any such notice of objection within the time provided shall constitute acceptance of such insurance purchased by Contractor as complying with the Contract Documents.

Partial Utilization - Property Insurance:

5.12. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in accordance with paragraph 14.10. Property Insurance shall not be canceled or lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence:

6.1. Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

6.2. Contractor shall keep on site at all times during Work progress a competent resident superintendent, who shall not be replaced without written notice and approval of the Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the site and shall have full authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor. Failure to comply with this requirement may result in the suspension of work or termination of the contract.

Labor, Materials and Equipment:

6.3. Contractor shall provide competent, suitably qualified personnel to perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during the allowable working hours as defined in paragraph 2.6.1.

6.4. Unless otherwise specified in the Supplementary Conditions, Contractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.5. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16.

6.5.1. Salvaged Materials. All materials designated for salvage during the progress of

the Work and or specified to be reused in new construction, shall remain the property of the Owner. Salvaged materials shall be delivered and neatly piled at any point within the public right-of-way which is designated by the Owner or Engineer. Transportation and handling shall be at the Contractor's expense. Salvaged materials will be considered to be in the custody of the Contractor, and he will be held responsible for their care and protection and must cover any losses resulting from damage, theft, or misappropriation while they remain on the job site or while enroute to the place of storage.

6.5.2. Storage of Materials. All materials delivered to and stored on the project site shall be neatly placed to minimize obstruction and allow for convenient inspection. No materials or equipment shall be stored within five (5) feet of fire hydrants or trees which are to be protected. All fire hydrants shall remain readily accessible to the Fire Department throughout the project unless otherwise approved by the Owner.

Adjusting Progress Schedule:

6.6. Contractor shall submit to Engineer, for acceptance as defined in paragraph 2.6.1, any adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any other provisions of the Contract Documents applicable thereto.

Substitutes of "Or-Equal" Items:

6.7.1. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by Engineer if sufficient information is submitted by Contractor to allow Engineer to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by Engineer will include the following. Requests for review of substitute items of material and equipment will not be accepted by Engineer from anyone other than Contractor. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall make written application to Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by Engineer in evaluating the proposed substitute. Engineer may require Contractor to furnish at Contractor's expense additional data about the proposed substitute.

6.7.2. If a specific means, method, technique, sequence or procedure of construction is

indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Engineer, if Contractor submits sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by Engineer will be similar to that provided in paragraph 6.7.1 as applied by Engineer.

6.7.3. Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. Engineer will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved Submittal.

Concerning Subcontractors, Suppliers and Others:

6.8.1. Contractor shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to Owner and Engineer as indicated in paragraph 6.8.2), whether initially or as a substitute, against whom Owner or Engineer may have reasonable objection. Contractor shall not employ any Subcontractor who is on the Owner's "List of Suspended Contractors" at the date of the Opening of Bids. Contractor shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom Contractor has reasonable objection.

6.8.2. If the Owner requests the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to Owner in advance of the specified date prior to the Effective Date of the Agreement for acceptance by Owner and Engineer and if Contractor has submitted a list thereof in accordance with said request, Owner's or Engineer's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case Contractor shall submit an acceptable substitute. No acceptance by Owner or Engineer of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

6.8.3. The amount of the work performed by Subcontractors in aggregate shall not exceed seventy (70) percent of the total Contract Price as determined based on the units of work to be performed by Subcontractors at the actual unit prices contained in the Agreement. For the purposes of this paragraph 6.8.3, "work" shall include all services, labor, equipment and materials associated with each specific item of the contract. The purchase of materials by the Contractor for use by Subcontractors in completing the project shall not be credited toward the amount of work performed by the Contractor. If Engineer has reason to believe that any unit price contained in the agreement does not represent a reasonable price for the Work involved with the specific item, Contractor

shall furnish full documentation of the unit price(s) determination in accordance with the provisions of paragraphs 11.4, 11.5 and 11.6. If deemed necessary by the Engineer, the unit price shall be adjusted, the purposes of determining subcontractor participation only, based on a determination of costs in accordance with paragraphs 11.4, 11.5 and 11.6. If specific units of Work involve more than one Subcontractor, Contractor shall provide documentation which enables Engineer to determine the portion of the unit price attributable to each Subcontractor. If it is determined during the course of the Work that the aggregate amount of the work being performed by subcontractors exceeds seventy (70) percent of the Contract Price, Contractor shall take appropriate actions to comply with the requirements of this paragraph 6.8.3.

6.9. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner or Engineer to pay or to see to the payment of any monies due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

6.10. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.11. All Work performed for Contractor by a Subcontractor will be pursuant to an appropriate agreement between Contractor and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Contractor shall pay each Subcontractor a just share of any insurance moneys received by Contractor on account of losses under policies issued pursuant to paragraphs 5.5 and 5.6.

Patent Fees and Royalties:

6.12. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents. Contractor shall indemnify and hold harmless Owner and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees and court costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in

the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

Permits:

6.13. The Owner will obtain permits required for work in highways, railroads and regulation of other governmental agencies. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all other construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids, on the Effective Date of the Agreement. Contractor shall pay all charges of utility owners for connections to the Work, and Owner shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

Laws and Regulations:

6.14.1. Contractor shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations. Specifically, the Contractor shall observe all applicable provisions of K.S.A. 44-201 and any amendments thereto in effect as of the Effective Date of Agreement.

6.14.2. If Contractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, Contractor shall give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If Contractor performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to Engineer Contractor shall bear all costs arising therefrom; however, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Taxes:

6.15. For all projects, payment of the Kansas State Sales Tax or Compensating Tax is not required. Shawnee County will furnish an exemption certificate (including exemption certificate number) obtained from the Sales and Compensating Tax Division, of the Department of Revenue of the State of Kansas to the Contractor, Subcontractor or repairman making purchases of any tangible personal property to be incorporated in this project. The Contractor, Subcontractor or repairman must furnish all suppliers with a copy of the properly executed exemption certificate secured for this project. He may reproduce as many copies of the certificate as he may need.

Use of Premises:

6.16. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against Owner or Engineer by any such owner or occupant because of the performance of the work, Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim at law. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner, and Engineer harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court costs) arising directly indirectly or consequentially out of any action, legal or equitable, brought by any such other party against Owner or Engineer to the extent based on a claim arising out of Contractor's performance of the Work.

6.17. During the progress of the Work, Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by Owner. Contractor shall restore to original condition all property not designated for alteration by the Contract Documents

6.18. Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

Documents On-Site:

6.19. Contractor shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order. These documents together with all approved samples and a counterpart of all approved Submittals will be available to Engineer for reference.

Safety and Protection:

6.20. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.20.1. All employees on the Work and other persons and organizations who may be

affected thereby;

6.20.2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

6.20.3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner, or Design Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor). Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with paragraph 14.13 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.21. Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Owner.

Emergencies:

6.22. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from Engineer or Owner, is obligated to act to prevent threatened damage, injury or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Engineer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Work Change Directive or Change Order will be issued to document the consequences of the changes or variations.

Submittals:

6.23. After checking and verifying all field measurements, Contractor shall submit to Engineer for review and approval in accordance with the accepted schedule of Submittals (see paragraph 2.6.2), or for other appropriate action if so indicated in the Supplementary Conditions, a pdf formatted copy (via electronic mail) of all submittals (unless otherwise specified), which bear a

stamp or written indication that Contractor has satisfied Contractor's responsibilities under the contract documents with respect to the submission. All submissions will be identified as Engineer may require. The data shown on the Submittals will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable Engineer to review the information as required.

6.24. Contractor shall also submit to Engineer for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

6.25.1. Before submission of each Submittal or sample Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Submittal or sample with other Submittals and samples and with the requirements of the Work and the Contract Documents.

6.25.2. At the time of each submission, Contractor shall give Engineer specific written notice of each variation that the Submittal or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Submittal submitted to Engineer for review and approval of each such variation.

6.26. Engineer will review and approve with reasonable promptness Submittals and samples, but Engineer's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make corrections required by Engineer, and shall return the required number of corrected copies of Submittals and submit as required new samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.27. Engineer's review and approval of Submittals or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called Engineer's attention to each such variation at the time of submission as required by paragraph 6.25.2 and Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Submittal or sample approval; nor will any approval by Engineer relieve Contractor from responsibility for errors or omissions in the Submittals or from responsibility for having complied with the provisions of paragraph 6.25.1.

6.28. Where a Submittal or sample is required by the Specifications, any related Work performed prior to Engineer's review and approval of the pertinent submission will be the sole expense and responsibility of Contractor.

Continuing the Work:

6.29. Contractor shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as Contractor and Owner may otherwise agree in writing.

Indemnification:

6.30. To the fullest extent permitted by Laws and Regulations Contractor shall indemnify and hold harmless Owner and Engineer and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

6.31. In any and all claims against Owner, or Engineer, or any of their consultants, agents or employees by any employee of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.30 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

6.32. The obligations of Contractor under paragraph 6.30 shall not extend to the liability of Engineer, Engineer's consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, design or specifications.

Coordination with Utilities.

6.33. The Contractor shall notify in writing responsible representatives of public utilities, railroads, or any other facilities or property that will be affected by his operations. Such notice shall be given in a timely manner before beginning work. The Contractor shall thereafter coordinate his work with the work necessary to protect or relocate such utilities, property or facilities, and cooperate to the fullest extent to avoid damage or service interruptions. Contractor shall keep Engineer informed of all such coordination and provide copies of written correspondence at time of notification. For obtaining underground utility locations, the

Contractor shall utilize the Kansas One-Call service, telephone no. 1-800-344-7233.

Public Convenience.

6.34. The Contractor shall notify owners of adjacent property and cooperate with them in the protection of their property. Engineer shall be informed of all actions and issued copies of any written correspondence with property owners. Access to driveways, houses and buildings, and temporary approaches and crossings of streets and sidewalks shall be provided, unless otherwise directed by the Engineer, and kept in good condition.

Traffic Control.

6.35. The Contractor shall comply with all pertinent requirements set forth in the drawing "Typical Traffic Control Through Construction Areas", of the Contract Documents, and as directed by the Engineer. The Contractor shall obtain approval of traffic control devices and methods from the County Engineer at least three (3) days prior to beginning work. All barricades, signs, lights and traffic control devices of any nature shall conform with current requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways."

Emergency Project Identification:

6.36. The Contractor, at the discretion of the Engineer, shall erect in a prominent place on the project a legible sign printed in letters and figures not less than three (3) inches high, showing the name of the Contractor, his County address, and the phone numbers of responsible personnel for day or night emergency contact.

Relations Between Contractor and Labor:

6.37. The Contractor and any Subcontractors shall take affirmative action to insure that employees are treated without regard to their race, religion, creed, color, sex, physical handicaps (which is unrelated to the ability to perform a particular job or occupation), national origin, ancestry or age. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

Sanitary Conveniences:

6.39. The Contractor shall provide all necessary privy accommodations for the use of his employees and shall maintain the same in a clean and sanitary condition. He shall not create or permit any nuisance to the public or to residents in the vicinity of the work.

ARTICLE 7 - OTHER WORK

Related Work at Site:

7.1. Owner may perform other work related to the Project at the site by Owner's own forces, have other work performed by utility owners or let other direct contracts therefor which may contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Supplementary Conditions, written notice thereof will be given to Contractor prior to starting any such other work; and, if Contractor believes that such performance will involve additional expense to Contractor and the parties are unable to agree as to the extent thereof, Contractor may make a claim therefor as provided in Articles 11. If the Work of others is identified in the Supplementary Conditions or elsewhere in the Contract Documents, coordination with said Work shall be considered a requirement of this project and as such Contractor shall not be entitled to an adjustment in Price for coordination with the Work of others.

7.2. Contractor shall afford each utility owner and other Contractor who is a party to such a direct contract (or Owner, if Owner is performing the additional work with Owner's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected.

7.3. If any part of Contractor's Work depends for proper execution or results upon the work of any such other contractor or utility owner (or Owner), Contractor shall inspect and promptly report to Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure so to report will constitute an acceptance of the other work as fit and proper for integration with Contractor's Work except for latent or non-apparent defects and deficiencies in the other work.

Coordination:

7.4. If Owner contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Supplementary Conditions, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Supplementary Conditions. Unless otherwise provided in the Supplementary Conditions, neither Owner nor Engineer shall have any authority or responsibility in respect of such coordination.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.1. Owner shall issue all communications to Contractor through Engineer.

8.2. In case of termination of the employment of Engineer, Owner shall appoint an engineer against whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.3. Owner shall furnish the data required of Owner under the Contract Documents promptly and shall make payments to Contractor promptly after they are due as provided in paragraphs 14.4 and 14.13.

8.4. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1, 4.4 and 4.5. Paragraph 4.2 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by Design Engineer in preparing the Drawings and Specifications.

8.5. Owner is obligated to execute Change Orders as indicated in paragraph 10.4.

8.6. Owner's responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.

8.7. In connection with Owner's right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 deals with Owner's right to terminate services of Contractor under certain circumstances.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

Owner's Representative:

9.1. Engineer will be Owner's representative during the construction period. The Engineer for these purposes may be either the Design Engineer, County Engineer or Owner's Project Representative as designated in the Agreement. The owner's project representative may be a separate firm, other than the Design Engineer, retained by the Owner for the purpose of providing project representation during the construction period and not to ensure Contractor's quality control and not as a substitute for Contractor's obligation to deliver acceptable work. The duties and responsibilities and the limitations of authority of the Engineer, as Owner's Project Representative during construction, are set forth in the Contract Documents and shall not be extended without written consent of the Owner.

Visits to Site:

9.2. Engineer will determine, if the Work is proceeding in accordance with the Contract Documents. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform to the Contract Documents.

Project Representation:

9.3. Engineer will be responsible for observing the performance of the Work. The Engineer will be required to provide full-time observation of the Work. The Engineer or Owner's Project Representative's dealings in matters pertaining to the on-site Work shall in general be only with Contractor, and dealings with subcontractors shall only be through or with the full knowledge of Contractor. Written communication with Owner will be only through or as directed by Engineer.

9.3.1 The Engineer will:

- (1) Serve as Owner's liaison with Contractor, working principally through Contractor's superintendent and assisting him in understanding the intent of the Contract Documents when Contractor's operations affect Owner's on-site operations.
- (2) Assist in obtaining from Owner additional details or information, when required at the job site for proper execution of the Work.
- (3) Conduct, for the sole benefit of the Owner, on-site observations, measurements and testing of the Work in progress to determine if the Work is proceeding in accordance with the Contract Documents and that completed Work will conform to the Contract Documents.
- (4) Be responsible for the maintenance of record documents showing changes made during construction and recording items of work completed for the purpose of generating applications for progress payments and final payment in respect to Article 14, paragraphs 14.2 and 14.13.

9.3.2 The duties and responsibilities and the authority of the Engineer during construction shall not exceed in any case those of the Owner during construction. Except on written instructions by the Owner, the Engineer may not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.

9.3.3. Specifically omitted from the Engineer's duties are any review of the Contractor's safety precautions, or the means, methods, sequences or procedures required for the Contractor to perform the work but not relating to the final or completed Project. Omitted design or review services include, but are not limited to, shoring, scaffolding, underpinning, temporary retainment, excavations, and any erection methods and temporary bracing.

Clarifications and Interpretations:

9.4. Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as Engineer may determine necessary, which shall be consistent with or reasonably

inferable from the overall intent of the Contract Documents. If Contractor believes that a written clarification or interpretation justifies an increase in the Contract Price and the parties are unable to agree to the amount, Contractor may make a claim therefor as provided in Article 11.

Authorized Variations in Work:

9.5. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner, and also on Contractor who shall perform the Work involved promptly. A Field Order may authorize a change in the Work which results in a minor change in the quantity of specific unit price items included in the Agreement. If Contractor believes that a Field Order justifies an increase in the Contract Price, other than minor variations in quantities for Unit Price items and the parties are unable to agree as to the amount thereof, Contractor may make a claim therefor as provided in Article 11.

Rejecting Defective Work:

9.6. Engineer will have authority to disapprove or reject Work which Engineer believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 13.9, whether or not the Work is fabricated, installed or completed.

Submittals, Change Orders and Payments:

9.7. In connection with Engineer's responsibility for Submittals and samples, see paragraphs 6.23 through 6.28 inclusive.

9.8. In connection with Engineer's responsibilities as to Change Orders, see Articles 10 and 11.

9.9. In connection with Engineer's responsibilities in respect of Applications for Payment, etc., see Article 14.

Determinations of Quantities:

9.10. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Contractor will be provided the opportunity to jointly review quantity determinations and classifications of Unit Price Work prior to the preparation of a Pay Application. Contractor's failure to participate in the joint review will negate Contractor's right to appeal quantity determinations. Engineer's written decisions thereon will be final and binding upon Owner and Contractor as relates to progress and final payments.

Decisions on Disputes:

9.11. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 11 in respect of changes in the Contract Price will be referred initially to Engineer in writing with a request for a formal decision in accordance with this paragraph, which Engineer will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered by the claimant to Engineer and the other party to the Agreement promptly (but in no event later than fifteen days) after the occurrence of the event or after the end of the period of events giving rise thereto, and written supporting data will be submitted to Engineer and the other party within thirty days after such occurrence unless Engineer allows an additional period of time to ascertain more accurate data in support of the claim.

9.12. When functioning as interpreter and judge under paragraphs 9.10 and 9.11, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by Engineer pursuant to paragraphs 9.10 and 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.16) will be a condition precedent to any exercise by Owner or Contractor of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter.

Limitations on Engineer's Responsibilities:

9.13 Neither Engineer's authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of Engineer to Contractor, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

9.14. Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of Engineer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16.

9.15. Engineer will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and Engineer will not be responsible for Contractor's failure to perform or furnish the Work in

accordance with the Contract Documents.

9.16. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 10 - CHANGES IN THE WORK

10.1. Without invalidating the Agreement and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Field Order (written or verbal where no change in contract price is involved), Work Change Directive, or Change Order. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.2. If Owner and Contractor are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price that should be allowed as a result of a Work Change Directive, a claim may be made therefor as provided in Article 11.

10.3. Contractor shall not be entitled to an increase in the Contract Price with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.4 and 3.5, except in the case of an emergency as provided in paragraph 6.22 and except in the case of uncovering Work as provided in paragraph 13.9.

10.4. Owner and Contractor shall execute appropriate Change Orders covering:

10.4.1. Changes in the Work which are ordered by Owner pursuant to paragraph 10.1 (excluding Field Orders), are required because of acceptance of defective Work under paragraph 13.13 or correcting defective Work under paragraph 13.14, or are agreed to by the parties;

10.4.2. Changes in the Contract Price which are agreed to by the parties; and

10.4.3. Changes in the Contract Price which embody the substance of any written decision rendered by Engineer pursuant to paragraph 9.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.29.

10.5 If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be Contractor's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

ARTICLE 11 - CHANGE OF CONTRACT PRICE

11.1. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at his expense without change in the Contract Price.

11.2. The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to Engineer promptly (but in no event later than fifteen days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within thirty days after such occurrence (unless Engineer allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Price shall be determined by Engineer in accordance with paragraph 9.11 if Owner and Contractor cannot otherwise agree on the amount involved. Failure to submit a claim for an adjustment in the Contract Price in accordance with this paragraph 11.2. will invalidate said claim.

11.3. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

11.3.1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1 through 11.9.3, inclusive).

11.3.2. By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2.1.)

11.3.3. On the basis of the cost of the Work or a Force Account (determined as provided in paragraphs 11.4 and 11.5) plus a Contractor's Fee for overhead and profit (determined as provided in paragraphs 11.6 and 11.7)

Cost of the Work:

11.4. The term Cost of the work means the sum of all costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5.

11.4.1. Payroll costs for employees in the direct employ of Contractor in the

performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, shall be included in the above to the extent authorized by Owner.

11.4.2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

11.4.3. Payments made by Contractor to the Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to Contractor and shall deliver such bids to Owner who will then determine, with the advice of Engineer, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as Contractor's Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.4.4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

11.4.5. Supplemental costs including the following:

11.4.5.1. The proportion of necessary transportation, travel and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

11.4.5.2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of Contractor.

11.4.5.3. All construction equipment and machinery and the parts thereof whether owned, leased or rented by the Contractor shall be compensated for at rental rates no higher than the monthly rate set forth in the Rental Rate Blue Book for Construction Equipment (Blue Book). The Blue Book rate is

calculated by dividing the monthly rate for the equipment by 176 and adjusting that rate by Blue Book age and regional adjustment factors before adding in Blue Book estimated hourly operating costs (the hourly operating costs includes costs for repair, fuel, and lubricants used or consumed). The use of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work. Equipment/machinery costs shall be apportioned to the actual time the equipment/machinery is in operation to perform the work. Down time or standby time shall not be charged to the Owner by the Contractor.

11.4.5.4. Any applicable taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

11.4.5.5. The cost of utilities, fuel and sanitary facilities at the site.

11.4.5.6. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.4.5.7. Cost of premiums for additional Bonds and insurance required because of changes in the Work.

11.5. The term Cost of the Work shall not include any of the following:

11.5.1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnership and sole proprietorships), general manager, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor whether at the site or in Contractor's principal or a branch office for general administration of the work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1 or specifically covered by paragraph 11.4.4 - all of which are to be considered administrative costs covered by the Contractor's Overhead and Fee.

11.5.2. Expenses of Contractor's principal and branch offices other than Contractor's office at the site.

11.5.3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

11.5.4. Cost of premiums for all Bonds and for all insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by sub-paragraph 11.4.5.7 above).

11.5.5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or

equipment wrongly supplied and making good any damage to property.

11.5.6. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

Contractor's Fee:

11.6. The Contractor's Fee allowed to Contractor for overhead and profit shall be determined as follows:

11.6.1. A mutually acceptable fixed fee; or if none can be agreed upon,

11.6.2. A fee based on the following percentages of the various portions of the cost of the Work:

11.6.2.1. For costs incurred under paragraphs 11.4.1 and 11.4.2, the Contractor's Fee shall be fifteen percent;

11.6.2.2. For costs incurred under paragraphs 11.4.3 and 11.4.4 the Contractor's Fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a fee, the subcontractor fee for overhead and profit shall be fifteen percent;

11.6.2.3. No fee shall be payable on the basis of costs itemized under paragraph 11.4.5;

11.6.2.4. The amount of credit to be allowed by Contractor to Owner for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in Contractor's Fee by an amount equal to ten percent of the net decrease; and

11.6.2.5. When both additions and credits are involved in any one change, the adjustment in Contractor's Fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.4, inclusive.

Force Account Work:

11.7. Whenever a change in the Work and Contract Price are authorized to be done on the basis of a Force Account, the cost of said Work shall be paid for pursuant to the requirements of paragraphs 11.4 through 11.6 and this paragraph 11.7. The Contractor and the Engineer shall compare and agree on proposed labor (by trades), materials and equipment to be incorporated in force account work prior to commencement of work. The Contractor and the Engineer shall compare and agree on all records for labor, material and equipment furnished on a daily basis. All applications for payment of Force Account Work shall be accompanied by fully documented and itemized breakdowns of all types of costs incurred together with supporting data. Supporting data shall include copies of all invoices for actual materials incorporated in the Work,

equipment rentals, subcontractor itemized invoices, etc.

Cash Allowances:

11.8. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to Engineer. Contractor agrees that:

11.8.1. The allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

11.8.2. Contractor's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Unit Price Work:

11.9.1. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer in accordance with Paragraph 9.10.

11.9.2. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

11.9.3. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment if the total cost of a particular item of Unit Price Work amounts to five percent (5%) or more of the Contract Price based on the original bid and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than twenty percent (20%) from the bid quantity of such item indicated in the Agreement unless otherwise specified in the Supplementary Conditions. Contractor may make a claim for an increase in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the amount of any such increase.

ARTICLE 12 - CHANGE OF CALENDAR COMPLETION DATE

12.1 This is a Calendar Completion Date Contract, no extension of Completion Dates beyond those dates specified for Substantial Completion and ready for Final Acceptance and Payment as stated in Article 3 of the Agreement, shall be considered for reasons including, but not limited to, variations between actual and bid quantities, availability of materials and equipment, abnormal weather conditions, addition of extra work contiguous with the project and normal coordination with the work of others.

ARTICLE 13 - WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

Warranty and Guarantee:

13.1. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to Contractor. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.

Access to Work:

13.2. Engineer and other representatives of Owner, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at all times for their observation, inspecting and testing. Contractor shall provide proper and safe conditions for such access.

Tests and Inspections:

13.3. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests or approvals.

13.4. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, Contractor shall assume full responsibility therefore, pay all costs in connection therewith and furnish Engineer the required certificates of inspection, testing or approval. Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Owner's, or Engineer's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. The cost of all inspections, tests and approvals in addition to the above which are required by the Contract Documents shall be paid by Owner (unless otherwise specified).

13.5. All inspections, tests or approvals other than those required by Laws or Regulations of

any public body having jurisdiction shall be performed by organizations acceptable to Owner and Contractor (or by Engineer if so specified).

13.6. If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.7. Neither observations by Engineer nor inspections, tests or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

Uncovering Work:

13.8. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

13.9. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as Engineer may require, that portion of the work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, Contractor shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals), and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefor as provided in Article 11. If, however, such Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and, if the parties are unable to agree as to the amount or extent thereof, Contractor may make a claim therefor as provided in Articles 11.

Owner May Stop the Work:

13.10. If the Work is defective, or Contractor fails to supply a supervisor or superintendent and sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any other party.

Correction or Removal of Defective Work:

13.11. If required by Engineer, Contractor shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been

rejected by Engineer, remove it from the site and replace it with non-defective Work. Contractor shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

One Year Correction Period:

13.12. If within one year after the date of Final Acceptance and Payment or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work, or, if it has been rejected by Owner, remove it from the site and replace it with non-defective work. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by Contractor. In special circumstances where a particular portion is placed in continuous service before Final Acceptance and Payment of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications. Contractor shall not be held liable for damage to work during the one year correction period resulting from normal wear and tear expected to occur from intended usage.

Acceptance of Defective Work:

13.13. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final acceptance and payment) prefers to accept it, Owner may do so. Contractor shall bear all direct, indirect and consequential costs attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to Engineer's recommendation of final acceptance and payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner or deducted from amounts owed to Contractor.

Owner May Correct Defective Work:

13.14. If Contractor fails within a reasonable time after written notice of Engineer to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with paragraph 13.11, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days' written notice to

Contractor, correct and remedy any such deficiency. To the extent necessary to complete corrective and remedial action, Owner may exclude Contractor from all or part of the site, take possession of all or part of the Work, and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, agents and employees such access to the site as may be necessary to enable Owner to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of Owner in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefor as provided in Article 11. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Contractor's defective Work.

Owner May Regulate Work:

13.15. The Owner shall have the authority to regulate the amount of work which may be open or under construction in advance of the completed portions of the Work. The sequence of construction shall be approved by the Engineer prior to construction if not specifically covered in the Contract Documents.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

Basis of Payment:

14.1. Progress payments for unit price contracts shall be based on the number of units completed. If a number of units are partially completed, the estimated percentage of the partially completed units times the number of units shall determine the completed units for that item. Lump sum items shall be paid based on the estimated percentage of completion at the end of each progress payment period.

Application for Progress Payment:

14.2 Engineer shall prepare and submit electronically to Contractor a Pdf file for review and signature an Application for Payment covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. All applications for payment shall include an updated and/or revised project schedule conforming to the requirements of paragraph 2.6.1. Contractor shall return a signed copy of the Application for Payment to the Engineer, in Pdf format, within seven (7) days following the end of the period covered by the Application for Payment. If payment covers materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be

accompanied by a bill of sale, invoice or other documentation and proof of payment for said materials warranting that Owner has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate Contractor furnished property insurance and/or other arrangements to protect Owner's interest therein, all of which will be satisfactory to Owner. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

Contractor's Warranty of Title:

14.3. Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner, no later than the time of payment, free and clear of all Liens.

Recommendation of Applications for Progress Payment:

14.4. Engineer will, within seven (7) days after receipt of a signed Application for Payment, accompanied by supporting documents and schedules, submit, in Pdf format, to Owner their recommendation of payment or return the Application to Contractor indicating in writing Engineer's reason for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application. Engineer will, within seven (7) days, review the resubmitted application as detailed above. Twenty Eight (28) days after presentation of the Application for Payment with Engineer's recommendation for approval, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by Owner to Contractor.

14.5. Engineer's recommendation of any Payment will constitute a representation by Engineer to Owner, based on Engineer's on-site observations of the Work in progress as an experienced and qualified professional that the Work has progressed to the point indicated; that, to the best of Engineer's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10, and to any other qualifications stated in the recommendation); and that Contractor is entitled to payment of the amount recommended.

14.6. Engineer's recommendation of final acceptance and payment will constitute an additional representation by Engineer to Owner that the conditions precedent to Contractor's being entitled to final acceptance and payment as set forth in paragraph 14.13 have been fulfilled.

14.7. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make such representations to the Owner. Engineer may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

14.7.1. The Work is defective, or completed Work has been damaged requiring correction or replacement,

14.7.2. The Contract Price has been reduced by Change Order.

14.7.3. Owner has been required to correct defective Work or complete Work in accordance with paragraph 13.14, or

14.7.4. Of Engineer's actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

Owner may refuse to make payment of the full amount recommended by Engineer because claims have been made against Owner on account of Contractor's performance or furnishing of the Work or Liens have been filed in connection with the Work or there are other items entitling Owner to a set-off against the amount recommended, but Owner must give Contractor immediate written notice stating the reasons for such action.

Substantial Completion:

14.8. When Contractor considers the entire Work ready for its intended use Contractor shall notify Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a notice of Substantial Completion. Within a reasonable time thereafter, Owner, Contractor and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor. If Engineer considers the Work substantially complete, Engineer will prepare and deliver to Owner and Contractor a notice of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items "Punch List" to be completed or corrected before final payment. At the time of delivery of the notice of Substantial Completion Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final acceptance and payment between Owner and Contractor with respect to operation, safety, maintenance, insurance and warranties.

14.9. Owner shall have the right to exclude Contractor from the Work after the date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the list.

Partial Utilization:

14.10 The Owner shall have the right to take possession of and use any finished part of the Works when it can be established by the Owner and Engineer that the part in question constitutes a separately functioning and usable part of the Work that can be used by Owner without significant interference with Contractor's performance of the remainder of the Work, subject to the following:

14.10.1 Owner at any time may request Contractor in writing to permit Owner to use any such part of the Work which Owner believes to be ready for its intended use and substantially complete. Contractor will certify to Owner and Engineer that said part of the Work is substantially complete. Engineer will then issue a notice of Substantial Completion for said part of the Work. The provisions of paragraphs 14.8 and 14.9 will apply with respect to said Substantial Completion and the division of responsibility in respect thereof and access thereto.

14.10.2. Owner may at any time notify Contractor in writing of Owner's intent to take over operation or use of any such part of the Work although it is not substantially complete. Engineer shall make an inspection of that part of the work to determine its status of completion and prepare a "Punch List" of items remaining to be completed or corrected thereon before final payment. Engineer shall submit said list together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to operation, safety, maintenance, insurance, warranties and guarantees for that part of the Work which will become binding upon Owner and Contractor at the time when Owner takes over such operation or use. During such operation or use and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

Final Inspection:

14.11. Upon notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will make a final inspection with Owner and Contractor and will notify Contractor in writing of all "Punch List" particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

Final Application for Payment:

14.12. After Contractor has completed all such corrections to the satisfaction of Engineer and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents - all as required by the Contract Documents, and after Engineer has indicated that the Work is acceptable (subject to the provisions of paragraph 14.16), Engineer shall prepare application for final payment following the procedure for progress payments. The Contractor shall sign and return final Application for Payment to Engineer. Final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to Owner) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by Owner, Contractor may furnish receipts or releases and receipts in full; an affidavit of Contractor that the releases include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible, have been paid or

otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

Final Payment and Acceptance:

14.13. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract documents have been completed, Engineer shall prepare the final Application for Payment. Engineer shall submit final Application for Payment, with a request for all accompanying documentation as required by the Contract Documents, to the Contractor for review and signature. Contractor will, within seven (7) days after receipt of the final Application for Payment from the Engineer, return a signed copy of the final Application for Payment and accompanying documentation to the Engineer. Engineer will indicate in writing Engineer's recommendation for payment and present the Application to Owner for payment. Thereupon Engineer will give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of paragraph 14.16. Thirty (30) days after presentation to Owner of the application and accompanying documentation, in appropriate form and substance, and with Engineer's recommendation and notice of acceptability, the amount recommended by Engineer will become due and will be paid by Owner to Contractor.

14.14. If, through no fault of Contractor, final completion of the Work is significantly delayed and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment and recommendation of Engineer, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

Contractor's Continuing Obligation:

14.15. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by Engineer to Owner, nor the notice of Substantial Completion, nor any payment by Owner to Contractor under the Contract Documents, nor any use or occupancy of the Work or any part thereof by Owner, nor any act of acceptance by Owner nor any failure to do so, nor any review and approval of a Submittal or sample submission, nor the issuance of a notice of acceptability by Engineer pursuant to paragraph 14.13, nor any correction of defective Work by Owner will constitute an acceptance of Work not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 14.16).

Waiver of Claims:

14.16. The making and acceptance of final payment will constitute:

14.16.1. A waiver of all claims by Owner against Contractor, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.11 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by Owner of any rights in respect of Contractor's continuing obligations under the contract Documents; and

14.16.2. A waiver of all claims by Contractor against Owner other than those previously made in writing and still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work:

15.1. Owner may, at any time and without cause, suspend the work, or any portion thereof, for a period of not more than 120 days, by notice in writing to Contractor and Engineer. Contractor shall resume the Work on the date fixed by Owner by notice in writing to Contractor and Engineer. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension by Owner without cause and in excess of 120 days if Contractor makes an approved claim therefor as provided in Articles 11 and 12.

Owner May Terminate:

15.2. Upon the occurrence of any one or more of the following events:

15.2.1. If Contractor commences a voluntary case under any chapter of the bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

15.2.2. If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

15.2.3. If Contractor makes a general assignment for the benefit of creditors;

15.2.4. If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of

property of Contractor is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;

15.2.5. If Contractor admits in writing an inability to pay its debts generally as they become due;

15.2.6. If Contractor persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.6 as revised from time to time);

15.2.7. If Contractor disregards Laws or Regulations of any public body having jurisdiction;

15.2.8. If Contractor disregards the authority of Engineer; or

15.2.9. If Contractor otherwise violates in any substantial way any provisions of the Contract Documents; or

15.2.10. If Contractor fails to provide full time on-site project supervisor or superintendent.

Owner may, after giving Contractor (and the surety, if there be one) seven (7) days written notice and to the extent permitted by Laws and Regulations, terminate the services of Contractor, exclude Contractor from the site and take possession of the Work, incorporate in the Work all materials and equipment stored at the site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) such excess will be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to Owner. Such costs incurred by Owner will be approved as to reasonableness by Engineer and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph Owner shall not be required to obtain the lowest price for the Work performed.

15.3. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

15.4. Upon seven (7) days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited

to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court costs).

Contractor May Stop Work or Terminate:

15.5. If, through no act or fault of Contractor, the Work is suspended for a period of more than 120 days by Owner or under an order of court or other public authority, or Engineer fails to act on any Application for Payment within forty-five (45) days after it has been signed and submitted, or Owner fails for forty-five (45) days after submittal of the application to pay Contractor any sum finally determined to be due provided that Contractor has complied with all appropriate requirements of these Contract Documents, then Contractor may, upon seven (7) days written notice to Owner and Engineer, terminate the Agreement and recover from Owner payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if Engineer has failed to forward to Owner a signed Application for Payment or Owner has failed to make any payment as aforesaid, Contractor may upon seven (7) days written notice to Owner and Engineer stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve Contractor of the obligations under paragraph 6.29 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with Owner.

ARTICLE 16 - MISCELLANEOUS

Giving Notice:

16.1. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by regular mail postage prepaid, to the last business address known to the giver of the notice.

General:

16.2. Should Owner or Contractor suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 16.2 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

16.3. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by paragraphs 6.30, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to Owner and Engineer thereunder, are in addition to, and are not to be construed in any way as a limitation of, any

rights and remedies available to any or all of them which are otherwise imposed or available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

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Footnote: These General Conditions are based on the "Standard General Conditions of the Construction Contract", prepared by the Engineers Joint Contract Documents Committee, EJCDC No.1910-8 (1983 Edition). Deletions and additions have been made to the referenced document as deemed appropriate for use by Shawnee County, Kansas.

DOCUMENT 820 SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend, modify or supplement the General Conditions for Shawnee County Department of Public Works Construction Projects, Document 700, and other provisions of the Contract Documents, the Standard Technical Specifications or the Drawings, as indicated below. All provisions which are not so amended, modified or supplemented shall remain in full force and effect.

SC-1: The Contractor shall use the following dates in preparation of the Progress Schedule:

| Description | Date / Time / Place |
|--|---|
| BIDS RECEIVED | Bids received until 2:00 PM Friday April 5, 2024, through the Shawnee County bid portal, www.snco.us/purchasing . |
| BIDS PUBLICALLY READ & RECORDED | Bids from the portal will be publically read and recorded at 2:30 PM in the County Commission Chambers, 707 SE Quincy, 1 st Floor. |
| Shawnee County Department of Public Works notifies successful bidder of County's intent to Award Contract. Included in notification will be three (3) unsigned counterparts of the Agreement and all other Contract Documents. | Friday, April 5, 2024 |
| Contractor returns three (3) executed Agreements, Performance and Statutory Bonds and Insurance to Shawnee County Department of Public Works, 1515 NW Saline Street, Topeka, Kansas 66618 Attn: Tom Flanagan P.E. | Date: Friday, April 12, 2024 Time: NOON Place: Shawnee County Public Works 1515 NW Saline Street, 2 nd Floor Topeka, Kansas |
| Contract Award by Board of County Commissioners | Thursday, April 18, 2024 |
| | |
| PRE-CONSTRUCTION CONFERENCE | Monday April 22, 2024 @ 10:00 AM – Shawnee County Annex, 1515 NW Saline Street, Topeka, KS, Public Works Conference Rm, 2 nd Floor |
| CONSTRUCTION WORK ORDER ISSUED | Monday April 22, 2024 |
| CONSTRUCTION START WORK | Monday, April 29, 2024 |
| SUBSTANTIAL COMPLETION | Close of Business, Friday October 25, 2024 |
| FINAL PAYMENT and ACCEPTANCE | Close of Business Friday, November 1, 2024 |

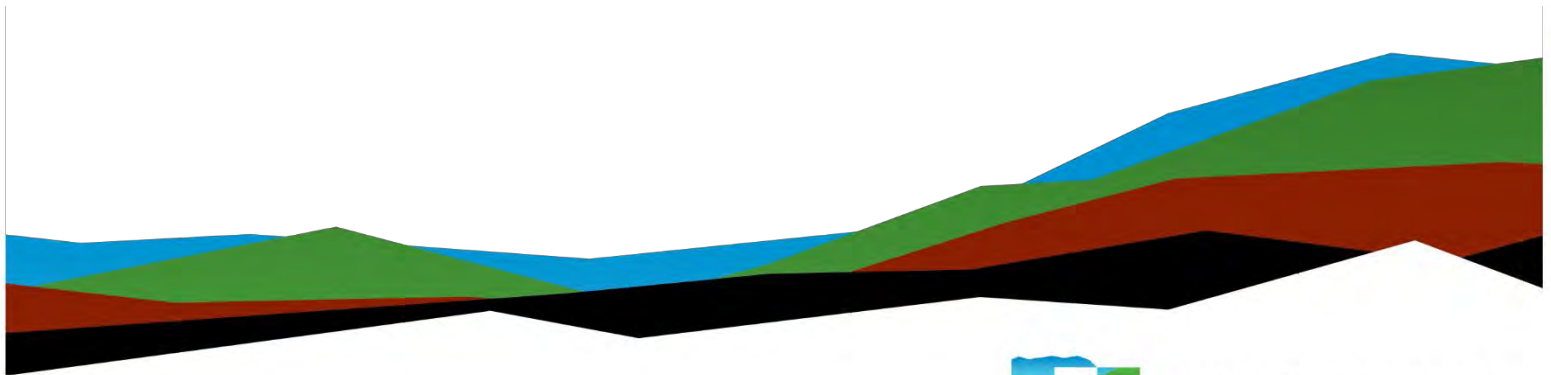
ALL materials, equipment and work provided for on this project shall be in accordance with current City of Topeka and Shawnee County Standard Technical Specifications and KDOT Standard Specifications for Road & Bridges, current edition and addenda thereto.

NW 46th & US-75 Roundabout Geotechnical Engineering Report

February 27, 2023 | Terracon Project No. 14235059

Prepared for:

SBB Engineering, LLC
Topeka, Kansas



Nationwide
[Terracon.com](https://www.terracon.com)

- Facilities
- Environmental
- Geotechnical
- Materials



2016 SW 37th Street
Topeka, KS 66611
(785) 267-3310
Terracon.com

February 27, 2023

SBB Engineering, LLC
101 S Kansas Ave.
Topeka, Kansas

Attn: Mr. Brian Austin
P: (785) 215-8630
E: Brian.Austin@sbbeng.com

Re: Geotechnical Engineering Report
NW 46th & US-75 Roundabout
Intersection of NW 46th & US-75
Topeka, Kansas
Terracon Project No. 14235059

Dear Mr. Austin:

We have completed a subsurface exploration and geotechnical engineering evaluation for the referenced project in general accordance with Terracon Proposal No. P14235059 dated October 11, 2023. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of pavements for the project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon

Michael A. Snapp, P.E.
Geotechnical Engineer
Kansas PE: 27005

For: Stephen B. Pretsch, P.E.
Principal
Kansas PE: 16602

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Supporting Information

Note: This report was originally delivered in a web-based format. **Blue Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the  logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

Refer to each individual Attachment for a listing of contents.



Introduction

This report presents the results of our subsurface exploration and Geotechnical Engineering services performed for the proposed roadway improvements to be located at the roundabout at the intersection of NW 46th Street and Highway 75 north of Topeka, Kansas. The purpose of these services was to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Pavements

Drawings showing the site and boring locations are shown on the attached [Site Location](#) and [Exploration Plan](#). The results of the laboratory testing performed on soil samples obtained from the site during our field exploration are included on the boring logs in [Exploration Results](#).

Project Description

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

| Item | Description |
|----------------------|---|
| Information Provided | Our understanding of the project is from email correspondence with the Client, the provided Roadway Improvement Plan Sheet dated 9/19/2023 and the Typical Section Sheet from the existing pavement dated 4/2/2002. |
| Project Description | The existing pavement section, as detailed, consists of a 10" concrete section underlain by 4" cement treated base and 6" of lime treated subgrade. The project will include the removal and replacement of the existing concrete pavement section only, and no utility improvements are planned at this time. We understand it is desired to keep the existing chemically modified subgrade in place provided the expected subgrade strengths are present. We were also informed the 10" needed to reestablish final grades should consist of either concrete or asphalt. With the pavement thickness established, our scope of services was to evaluate the design life expectancy of both concrete and asphalt sections. |
| Grading/Slopes | We understand current roadway grades will not be modified. |

| Item | Description |
|-----------|--|
| Pavements | <p>The following parameters were provided by the Client or were based on City of Topeka design standards:</p> <ul style="list-style-type: none"> ■ 7,000 vehicles per day in 2024 (provided) ■ 3% trucks, Class 8, 4A-St (provided) ■ 2% traffic growth rate (provided) ■ 25-year analysis (provided) ■ Initial serviceability 4.5 (City of Topeka standards) ■ Terminal serviceability 2.5 (City of Topeka standards) |

Terracon should be notified if any of the above information is inconsistent with the planned construction, as modifications to our recommendations may be necessary.

Site Conditions

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

| Item | Description |
|-----------------------|--|
| Project Location | <p>The project is located at the existing roundabout at the intersection of NW 46th Street and US Highway 75 north of Topeka, Kansas.</p> <p>Latitude/Longitude: 39.1294, -95.7196 (approximate)</p> <p>See Site Location</p> |
| Existing Improvements | NW 46 th Street at this location is currently a roundabout located below the overpass of US Highway 75. |
| Current Ground Cover | Concrete paving with concrete and gravel "green" area |
| Existing Topography | Relatively level |

Geotechnical Characterization

We have developed a general characterization of the subsurface conditions based on the subsurface exploration, laboratory data, geologic setting, and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical evaluation. Conditions observed at each boring location are indicated on the individual logs. The individual logs and GeoModel are in the [Exploration Results](#) section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the individual boring logs and GeoModel.

| Model Layer | Layer Name | General Description |
|-------------|------------------------|--|
| 1 | Surface | Concrete surface with treated subgrade |
| 2 | Fill and Possible Fill | Lean Clay, varying amounts of sand, gravel, and organics |
| 3 | Cohesive Soils | Lean and Lean to Fat Clays, varying amounts of sand, shale and limestone, stiff to very stiff. |

The borings were observed during drilling and shortly after completion of drilling for the presence and level of water. Groundwater was not observed at these times during our exploration; however, this does not necessarily mean the borings terminated above groundwater. A longer period of time may be required for groundwater to develop and stabilize in a borehole. Longer term observations in piezometers or observation wells, sealed from the influence of surface water, are often required to define groundwater levels.

Groundwater levels may fluctuate due to seasonal variations in the amount of rainfall, **runoff, and other factors not evident at the time the borings were performed.** "Perched" water could occur above lower permeability **soil layers** and "trapped" water could be present within existing fill materials. Therefore, groundwater conditions at other times may be different than the conditions encountered in our exploratory borings. The potential for water level fluctuations and perched water should be considered when developing design and construction plans and specifications for the project.

Geotechnical Overview

The field testing of the subgrade immediately below the existing pavement section suggests the previously chemically treated soils have maintained relatively high strength and, in our opinion, could remain as part of the new pavement section. However, variable subgrade support conditions could be encountered during construction in unexplored areas. Terracon should be present after the full removal of the existing concrete pavement to further evaluate subgrade support conditions. Any impacted areas identified should be remediated as recommended herein. We have provided several possible remedial options in the [Earthwork](#) section, if needed.

The recommendations contained in this report are based upon the results of field and laboratory testing (presented in the [Exploration Results](#)), engineering analyses, and our current understanding of the proposed project. The [General Comments](#) section provides an understanding of the report limitations.

Earthwork

We recommend earthwork on this project be observed and evaluated by Terracon. The evaluation of earthwork should include observation and testing of the existing pavement subgrade, observation and testing of any subgrade areas needing repair, and other geotechnical conditions exposed during the construction of the project.

Site Preparation

After removal of the existing pavement surface, the exposed subgrade soils should be proofrolled with a loaded tandem-axle dump truck and tested with a light weight deflectometer (LWD). Areas identified as having lower strength should be remediated as described in the section below.

Subgrade Remediation

Subgrade support conditions performing less than expected for chemically treated soils may be encountered after removal of the pavement surface or are a result of weather impacts during construction. Remedial options will be provided in the field by a representative of Terracon but will likely include some type of removal and replacement option. Depending on the extent of remediation, crushed rock may be recommended but we would anticipate a thicker zone of crushed rock being needed to model the existing **10"** chemically modified section. If the remedial area is large enough, the subgrade soil could be modified with 6% cement up **to the original design depth of 10"**. The most appropriate type of stabilization will be dependent upon soil, the size of unsuitable area, and weather conditions at the time of construction. The construction schedule, and construction methods will also affect the selection of stabilization method. Terracon should be retained during construction to help provide recommendations as needed.

Fill Material Types

Fill required to achieve design grades should be classified as engineered fill. Engineered fill could be further classified as structural fill and general fill. Structural fill is material used below pavements. General fill is material used to achieve grade outside of these areas.

Reuse of On-Site Soil: Excavated on-site native and existing fill soils may be selectively reused as engineered fill. Material property requirements for on-site soil for use as general fill and engineered fill are noted in the table below:

| Fill Type ¹ | USCS Classification | Acceptable Location for Placement |
|----------------------------------|---------------------|---|
| Fat clays and/or lean clays | CH, CL | > 10 inches below pavement subgrade unless chemically treated |
| Existing chemically treated fill | N/A ² | > 10 inches below pavement subgrade unless again chemically treated |

Imported Fill Materials: Imported fill materials should meet the following material property requirements. Regardless of its source, engineered fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade.

| Fill Type ¹ | USCS Classification | Acceptable Location for Placement |
|------------------------------------|---------------------|--|
| Fat clays and/or lean clays | CH, CL | > 10 inches below pavement subgrade unless chemically modified |
| Cement modified soils ² | N/A | All locations and elevations |
| Well graded granular | GM ³ | All locations and elevations |

1. Engineered fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade.
2. If designed and constructed as recommended.
3. KDOT AB-1 or AB-3 crushed limestone base or other dense graded crushed rock approved by Terracon.

Fill Placement and Compaction Requirements

Structural and general fill should meet the following compaction requirements.

| Item | Structural Fill | General Fill |
|--|---|-------------------------|
| Maximum Lift Thickness | 9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used | Same as structural fill |
| Minimum Compaction Requirements ^{1,2,3} | 95% of max. for cohesive soils | Same as structural fill |

| Item | Structural Fill | General Fill |
|----------------------------------|--|--|
| Water Content Range ¹ | Low plasticity cohesive (LL<45): -2% to +2% of optimum High plasticity cohesive (LL≥45): 0 to +4% of optimum Granular: -3% to +3% of optimum | As required to achieve min. compaction requirements ⁴ |

1. Maximum density and optimum water content as determined by the standard Proctor test (ASTM D 698).
2. High plasticity cohesive fill should not be compacted to more than 100% of standard Proctor maximum dry density.
3. If the granular material is a coarse sand or gravel, or of a uniform size, or has a low fines content, compaction comparison to relative density may be more appropriate. In this case, granular materials should be compacted to at least 70% relative density (ASTM D 4253 and D 4254). Materials not amenable to density testing should be placed and compacted to a stable condition observed by the Geotechnical Engineer or representative.
4. Typically -3% to +3% of optimum

Earthwork Construction Considerations

Care should be taken to avoid disturbance of prepared subgrades. Unstable subgrade conditions can develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. If unstable subgrade conditions develop, stabilization measures will need to be employed. Construction traffic over the completed subgrade should be avoided to the extent practical. If the subgrade becomes frozen, desiccated, saturated, or disturbed, the affected materials should be removed or these materials should be scarified, moisture conditioned, and compacted prior to floor slab construction.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part **1926, Subpart P, "Excavations"** and its appendices, and in accordance with any applicable local, state, and federal safety regulations. The contractor should be aware that slope height, slope inclination, and excavation depth should in no instance exceed those specified by these safety regulations. Flatter slopes than those dictated by these regulations may be required depending upon the soil conditions encountered and other external factors. These regulations are strictly enforced and if they are not followed, the owner, contractor, and/or earthwork and utility subcontractor could be liable and subject to substantial penalties. Under no circumstances should the information provided in this report be interpreted to mean that Terracon is responsible for construction site safety or the contractor's activities. **Construction site safety is the sole responsibility of the contractor who shall also be solely responsible for the means, methods, and sequencing of the construction operations.**

Construction Observation and Testing

The earthwork efforts should be observed by the Geotechnical Engineer (or others under their direction). Observation should include documentation of adequate removal of surficial materials (vegetation, topsoil, and pavements), evaluation of existing fill materials, as well as proofrolling and mitigation of unsuitable areas delineated by the proofroll.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, as recommended by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 5,000 square feet in pavement areas. Where not specified by local ordinance, one density and water content test should be performed for every 100 linear feet of compacted utility trench backfill and a minimum of one test performed for every 12 vertical inches of compacted backfill.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project **provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions**, including assessing variations and associated design changes.

Pavements

Pavement Section Thicknesses Evaluation

We understand from the Client the traffic estimate for 2024 is 7,000 vehicles per day and we are to assume 2% traffic growth rate and 3% trucks that are Class 8, 4A-ST. As the pavement section of 10 inches has been set, we evaluated the expected design life for both concrete and asphalt pavement replacement sections considering general City of Topeka/Shawnee County street design criteria. Based on our analysis, we have calculated that both sections meet the 30-year design life that is commonly required provided the chemically treated subgrade is in a suitable condition and routine maintenance is performed. If heavier or lighter traffic loading is expected, Terracon should be provided with the information and should be allowed to review our analysis.

The pavement sections should conform with the current City of Topeka and Shawnee County Standard Technical Specifications. If asphalt is used, we recommend applying a prime coat to the chemically modified soil surface. We also recommend the surface course asphalt not contain recycled asphalt product (RAP). The maximum allowable RAP in the base course should be limited to 10%. The mix design should utilize the specified Performance Graded (PG) asphalt cement. To further increase the performance of the surface mix, a Para-Aramid synthetic fibres could be introduced into the mix.

Pavements and subgrades will be subject to freeze-thaw cycles and seasonal fluctuations in moisture content. The subgrade support parameters for the pavement thickness

evaluation does not account for shrink/swell movements of a subgrade constructed of expansive clay soils. Therefore, the pavement may be adequate from a structural standpoint, yet still experience cracking and deformation due to shrink/swell related movement of the subgrade.

The pavement sections provided above consider that the subgrade soils will not experience significant changes in moisture content. Paved areas should be sloped to provide rapid drainage of surface water and to drain water away from the pavement edges. Pavements should be designed so water does not accumulate on or adjacent to the pavement, since this could saturate and soften the subgrade soils and subsequently accelerate pavement deterioration.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses, and periodic maintenance and repairs should be anticipated. Preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Pavement care consists of both localized (e.g., crack sealing, joint sealing, and patching) and global maintenance (e.g., surface sealing). Additional engineering consultation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur, and repairs may be required.

Pavement performance is affected by the **pavement's surroundings**. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.
- Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

General Comments

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Support of pavements above existing fill is discussed in this report. Even with the construction observation/testing recommended in this report, the owner must accept the risk that unsuitable materials within or buried by the fill will not be discovered. This may result in larger than normal settlement and damage to slabs and pavements supported above existing fill, requiring additional maintenance. This risk cannot be eliminated without removing the existing fill from below the building and pavement areas, but it can be reduced by thorough observation and testing as discussed herein.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, cost estimating, excavation support, and dewatering requirements/design are the responsibility of others. Construction and site development have the potential to affect adjacent properties. Such

impacts can include damages due to vibration, modification of groundwater/surface water flow during construction, foundation movement due to undermining or subsidence from excavation, as well as noise or air quality concerns. Evaluation of these items on nearby properties are commonly associated with contractor means and methods and are not addressed in this report. The owner and contractor should consider a preconstruction/precondition survey of surrounding development. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

Attachments

Exploration and Testing Procedures

Field Exploration

| Number of Borings | Approximate Boring Depth (feet) | Location |
|-------------------|---------------------------------|--------------------------------|
| 4 | 10 | Inside the existing roundabout |

Boring Layout and Elevations: Terracon personnel provided the boring layout using handheld GPS equipment (estimated horizontal accuracy of about ± 10 feet) and referencing existing site features. Approximate ground surface elevations at each boring were estimated using Google Earth. If more precise elevations or boring layout are desired, we recommend the borings be surveyed.

Subsurface Exploration Procedures: We advanced the borings with a track-mounted rotary drill rig using continuous solid stem flight augers. Four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths.

We also observed the boreholes while drilling and at the completion of drilling for the presence of groundwater. Groundwater was not observed at these times in the boreholes.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a geotechnical engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials observed during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

For safety purposes, all borings were backfilled with auger cuttings after their completion. Pavements were patched with pre-mixed concrete. Because backfill material often settles below the surface after a period, we recommend boreholes be checked periodically and backfilled, if necessary.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests. The laboratory testing program included the following tests on selected samples:

- Moisture Content
- Hand Penetrometer
- Atterberg Limits

The laboratory testing program included examination of soil samples by an engineer or geologist. Based on the results of our field and laboratory programs, we described and classified the soil samples in accordance with the Unified Soil Classification System.

Site Location and Exploration Plans

Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

Diagram is for general location only and is not intended for construction purposes. Map provided by Microsoft Bing Maps.

Exploration Plan



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

Exploration and Laboratory Results





Contents:

Boring Logs (B-1 through B-4)

GeoModel

Note: All attachments are one page unless noted above.

Boring Log No. B-1

| Model Layer | Graphic Log | Location: See Exploration Plan Latitude: 39.1296° Longitude: -95.7196° Depth (Ft.) Elevation: 972 (Ft.) +/- | Depth (Ft.) | Water Level Observations | Sample Type | Recovery (In.) | Field Test Results | Sample Number | HP (psf) | Unconfined Compressive Strength (psf) | Water Content (%) | Dry Unit Weight (pcf) | Atterberg Limits LL-PL-PI |
|-------------|--|---|-------------|--------------------------|-------------|----------------|--------------------|---------------|-----------|---------------------------------------|-------------------|-----------------------|------------------------------|
| 1 |  | 10 INCHES CONCRETE 0.8 971.17 | | | | | | | | | | | |
| |  | 10 INCHES TREATED SUBGRADE 1.7 970.33 | | | X | 4 | 50/4" | 1 | | | 12.1 | | |
| 2 |  | FILL - GRAVELLY LEAN CLAY WITH SAND , brownish gray 4.0 968 | | | | | | | | | | | |
| |  | SHALEY CLAY (CL/CH) , trace sand, gravel, and limestone fragments, dark gray, stiff to very stiff 5 with limestone fragments, trace gypsum, less sand and gravel, olive gray 3 less limestone fragments and gypsum, dark gray and tannish gray 10.0 962 | 5 | | X | 12 | 3-3-6 N=9 | 2 | 6000 (HP) | | 19.6 | | |
| | | | | | X | 11 | 3-6-5 N=11 | 3 | 2500 (HP) | | 27.3 | | |
| | | | | | X | 12 | 3-5-12 N=17 | 4 | 6000 (HP) | | 24.0 | | |
| | | Boring Terminated at 10 Feet | 10 | | | | | | | | | | |

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
 See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were estimated from Google Earth.

Water Level Observations

Drill Rig
D-50

Hammer Type
Automatic

Driller
BB

Logged by
BH

Advancement Method

Sectional Flight Auger






Abandonment Method

Boring backfilled with Auger Cuttings and/or Bentonite

Boring Started
02-08-2024

Boring Completed
02-08-2024

Boring Log No. B-2

| Model Layer | Graphic Log | Location: See Exploration Plan Latitude: 39.1293° Longitude: -95.7202° Depth (Ft.) Elevation: 974 (Ft.) +/- | Depth (Ft.) | Water Level Observations | Sample Type | Recovery (In.) | Field Test Results | Sample Number | HP (psf) | Unconfined Compressive Strength (psf) | Water Content (%) | Dry Unit Weight (pcf) | Atterberg Limits LL-PL-PI |
|-------------|--|---|-------------|--------------------------|-------------|----------------|--------------------|---------------|---------------|---------------------------------------|-------------------|-----------------------|------------------------------|
| 1 |  | 10 INCHES CONCRETE 0.8 973.17 | | | | | | | | | | | |
| |  | 10 INCHES TREATED SUBGRADE 1.7 972.33 | | | | | | | | | | | |
| |  | FILL - GRAVELLY LEAN CLAY , trace organics, dark gray 3.0 971 | | | | 8 | 25-10-9 N=19 | 1 | 9000+ (HP) | | 21.6 | | |
| 2 |  | LEAN CLAY , with sand, trace gravel and limestone fragments, olive with tan, stiff, (Possible Fill) 5.0 969 | | | | 8 | 3-4-5 N=9 | 2 | 3000 (HP) | | 13.6 | | |
| |  | SHALEY CLAY (CL/CH) , dark gray and olive, stiff olive and tan 10.0 964 | 5 | | | 15 | 2-4-5 N=9 | 3 | 3000 (HP) | | 25.0 | | |
| 3 | | | | | | 17 | 3-4-7 N=11 | 4 | 7000 (HP) | | 24.2 | | |
| | | Boring Terminated at 10 Feet | 10 | | | | | | | | | | |

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
 See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were estimated from Google Earth.

Water Level Observations

Drill Rig
D-50

Hammer Type
Automatic

Driller
BB

Logged by
BH

Boring Started
02-08-2024

Boring Completed
02-08-2024






Advancement Method

Sectional Flight Auger

Abandonment Method






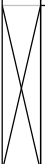
Boring backfilled with Auger Cuttings and/or Bentonite

Boring Log No. B-3

| Model Layer | Graphic Log | Location: See Exploration Plan | | Depth (Ft.) | Water Level Observations | Sample Type | Recovery (In.) | Field Test Results | Sample Number | HP (psf) | Unconfined Compressive Strength (psf) | Water Content (%) | Dry Unit Weight (pcf) | Atterberg Limits | |
|-------------|---|--|--------------------------|---------------|--------------------------|-------------|----------------|--------------------|---------------|-----------|---------------------------------------|-------------------|-----------------------|------------------|--|
| | | Latitude: 39.1293° Longitude: -95.7190° | Elevation: 972 (Ft.) +/- | | | | | | | | | | | LL-PL-PI | |
| 1 |  | 10 INCHES CONCRETE | | 0.8 971.17 | | | | | | | | | | | |
| | | 10 INCHES TREATED SUBGRADE | | | | | | | | | | | | | |
| 2 |  | FILL - GRAVELLY LEAN CLAY , with limestone fragments, tannish brown and gray | | 1.7 970.33 | | | 5 | 50/6" | 1 | | | 17.4 | | | |
| | | | | | | | | | | | | | | | |
| 3 |  | SHALEY CLAY (CL/CH) , trace silt, sand, and organics, dark gray with brown, stiff | | 4.0 968 | | | 16 | 4-4-8 N=12 | 2 | 6500 (HP) | | 28.6 | | | |
| | | | | | | | | | | | | | | | |
| 3 |  | less silt, olive | | 5 | | | 12 | 3-4-5 N=9 | 3 | 5000 (HP) | | 24.5 | | | |
| | | | | | | | | | | | | | | | |
| 3 |  | | | 10.0 962 | | | 14 | 3-4-6 N=10 | 4 | 4000 (HP) | | 21.8 | | | |
| | | | | | | | | | | | | | | | |
| | | Boring Terminated at 10 Feet | | 10 | | | | | | | | | | | |

| | | | |
|---|--|---|--|
| <p>See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).</p> <p>See Supporting Information for explanation of symbols and abbreviations.</p> | <p>Water Level Observations</p> | | <p>Drill Rig D-50</p> <p>Hammer Type Automatic</p> <p>Driller BB</p> <p>Logged by BH</p> <p>Boring Started 02-08-2024</p> <p>Boring Completed 02-08-2024</p> |
| | <p>Notes</p> <p>Elevation Reference: Elevations were estimated from Google Earth.</p> | <p>Advancement Method Sectional Flight Auger</p> <p>Abandonment Method Boring backfilled with Auger Cuttings and/or Bentonite</p> | |

Boring Log No. B-4

| Model Layer | Graphic Log | Location: See Exploration Plan Latitude: 39.1291° Longitude: -95.7196° Depth (Ft.) Elevation: 972 (Ft.) +/- | Depth (Ft.) | Water Level Observations | Sample Type | Recovery (In.) | Field Test Results | Sample Number | HP (psf) | Unconfined Compressive Strength (psf) | Water Content (%) | Dry Unit Weight (pcf) | Atterberg Limits LL-PL-PI |
|-------------|--|---|-------------|---|-------------|----------------|--------------------|---------------|-----------|---------------------------------------|-------------------|-----------------------|------------------------------|
| 1 |  | 10 INCHES CONCRETE 0.8 971.17 | | | | | | 1 | | | 18.1 | | |
| | | 10 INCHES TREATED SUBGRADE 1.7 970.33 | | | | | | | | | | | |
| 2 |  | FILL - GRAVELLY LEAN CLAY WITH SAND , brownish gray 4.0 968 | | | | | | | | | | | |
| 3 |  | SHALEY CLAY (CL) , trace limestone fragments, olive and tan, stiff 5 968 | 5 |  | | 14 | 5-6-8 N=14 | 2 | 6000 (HP) | | 22.2 | | 41-22-19 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | |  | | 13 | 4-5-7 N=12 | 3 | 5500 (HP) | | 22.5 | | |
| | | | | | | | | | | | | | |
| | | | |  | | 14 | 3-5-8 N=13 | 4 | 6500 (HP) | | 19.5 | | |
| | | 10.0 962 Boring Terminated at 10 Feet | 10 | | | | | | | | | | |

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
 See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were estimated from Google Earth.

Water Level Observations

Advancement Method

Sectional Flight Auger

Abandonment Method

Boring backfilled with Auger Cuttings and/or Bentonite

Drill Rig
D-50

Hammer Type
Automatic

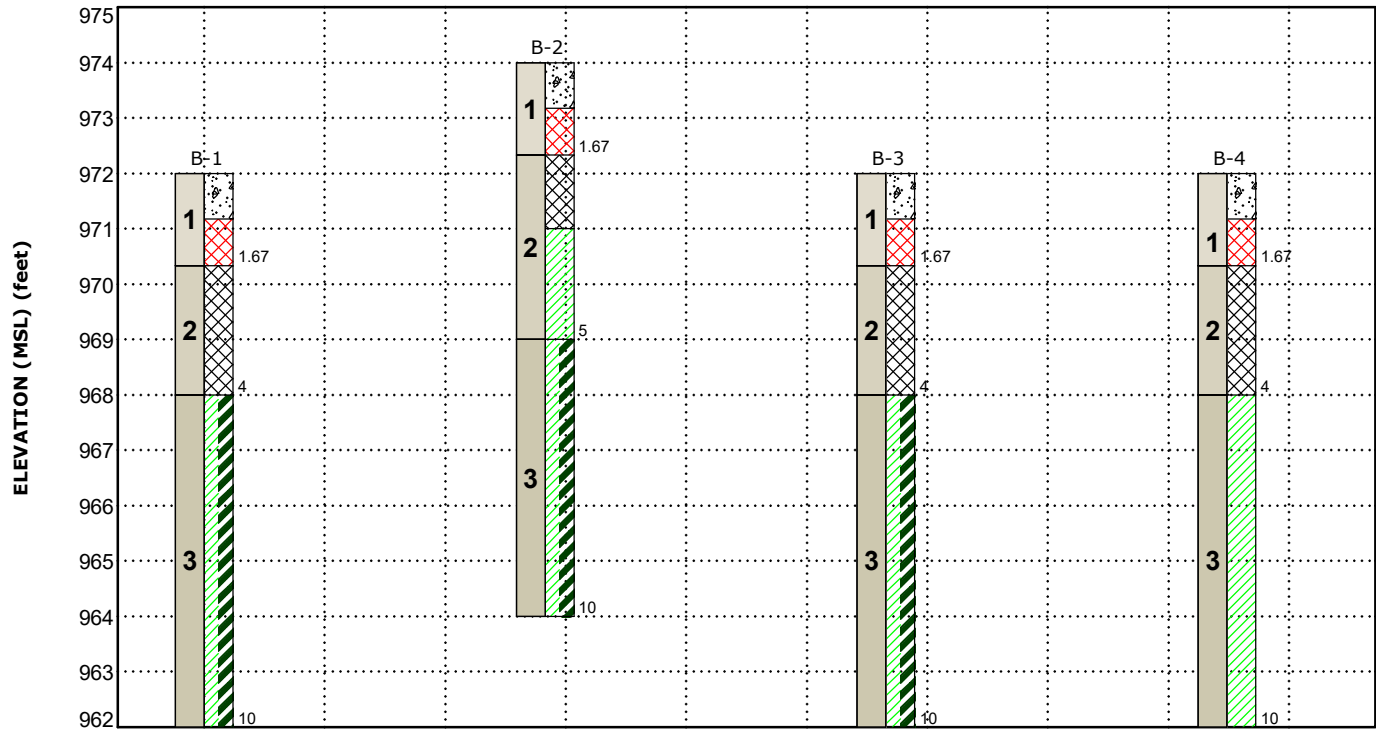
Driller
BB

Logged by
BH

Boring Started
02-08-2024

Boring Completed
02-08-2024

GeoModel



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

| Model Layer | Layer Name | General Description | Legend | |
|-------------|-----------------------|--|-----------|--------------------|
| 1 | Surface | Concrete with treated subgrade | Concrete | Fill |
| 2 | Fill or Possible Fill | Lean Clay, varying amounts of sand, gravel, and organics. | Fill | Lean Clay/Fat Clay |
| 3 | Cohesive Soils | Lean and Lean to Fat Clay, varying amounts of sand, shale, and limestone, stiff to very stiff. | Lean Clay | |

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project.
Numbers adjacent to soil column indicate depth below ground surface.

Supporting Information









Contents:

General Notes

Unified Soil Classification System

Note: All attachments are one page unless noted above.

General Notes

| Sampling | Water Level | Field Tests |
|---|---|--|
| <div><div>Rock Core</div><div>Grab Sample</div><div>Shelby Tube</div><div>Split Spoon</div></div> | <div>Water Initially Encountered</div> <div>Water Level After a Specified Period of Time</div> <div>Water Level After a Specified Period of Time</div> <div>Cave In Encountered</div> | <div>NStandard Penetration Test Resistance (Blows/Ft.)</div> <div>(HP)Hand Penetrometer</div> <div>(T)Torvane</div> <div>(DCP)Dynamic Cone Penetrometer</div> <div>UCUnconfined Compressive Strength</div> |

Descriptive Soil Classification

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

Location and Elevation Notes

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

Strength Terms

| Relative Density of Coarse-Grained Soils (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance | | Consistency of Fine-Grained Soils (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance | | |
|---|---|---|--|---|
| Relative Density | Standard Penetration or N-Value (Blows/Ft.) | Consistency | Unconfined Compressive Strength Qu (psf) | Standard Penetration or N-Value (Blows/Ft.) |
| Very Loose | 0 – 3 | Very Soft | less than 500 | 0 – 1 |
| Loose | 4 – 9 | Soft | 500 – 1000 | 2 – 4 |
| Medium Dense | 10 – 29 | Medium Stiff | 1000 – 2000 | 4 – 8 |
| Dense | 30 – 50 | Stiff | 2000 – 4000 | 8 – 15 |
| Very Dense | > 50 | Very Stiff | 4000 – 8000 | 15 – 30 |
| | | Hard | > 8,000 | > 30 |

Relevance of Exploration and Laboratory Test Results

Exploration/field results and/or laboratory test data contained within this document are intended for application to the project as described in this document. Use of such exploration/field results and/or laboratory test data should not be used independently of this document.

Unified Soil Classification System

| Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A | | | | Soil Classification | |
|--|--|---|--|---------------------|------------------------------------|
| | | | | Group Symbol | Group Name ^B |
| Coarse-Grained Soils: More than 50% retained on No. 200 sieve | Gravels: More than 50% of coarse fraction retained on No. 4 sieve | Clean Gravels: Less than 5% fines ^C | $Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E | GW | Well-graded gravel ^F |
| | | | $Cu < 4$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ ^E | GP | Poorly graded gravel ^F |
| | | Gravels with Fines: More than 12% fines ^C | Fines classify as ML or MH | GM | Silty gravel ^{F, G, H} |
| | | | Fines classify as CL or CH | GC | Clayey gravel ^{F, G, H} |
| | Sands: 50% or more of coarse fraction passes No. 4 sieve | Clean Sands: Less than 5% fines ^D | $Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E | SW | Well-graded sand ^I |
| | | | $Cu < 6$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ ^E | SP | Poorly graded sand ^I |
| | | Sands with Fines: More than 12% fines ^D | Fines classify as ML or MH | SM | Silty sand ^{G, H, I} |
| | | | Fines classify as CL or CH | SC | Clayey sand ^{G, H, I} |
| Fine-Grained Soils: 50% or more passes the No. 200 sieve | Silts and Clays: Liquid limit less than 50 | Inorganic: | $PI > 7$ and plots above "A" line ^J | CL | Lean clay ^{K, L, M} |
| | | | $PI < 4$ or plots below "A" line ^J | ML | Silt ^{K, L, M} |
| | | Organic: | $\frac{LL \text{ oven dried}}{LL \text{ not dried}} < 0.75$ | OL | Organic clay ^{K, L, M, N} |
| | | | | | Organic silt ^{K, L, M, O} |
| | Silts and Clays: Liquid limit 50 or more | Inorganic: | PI plots on or above "A" line | CH | Fat clay ^{K, L, M} |
| | | | PI plots below "A" line | MH | Elastic silt ^{K, L, M} |
| | | Organic: | $\frac{LL \text{ oven dried}}{LL \text{ not dried}} < 0.75$ | OH | Organic clay ^{K, L, M, P} |
| | | | | | Organic silt ^{K, L, M, Q} |
| Highly organic soils: | Primarily organic matter, dark in color, and organic odor | | | PT | Peat |

^A Based on the material passing the 3-inch (75-mm) sieve.

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

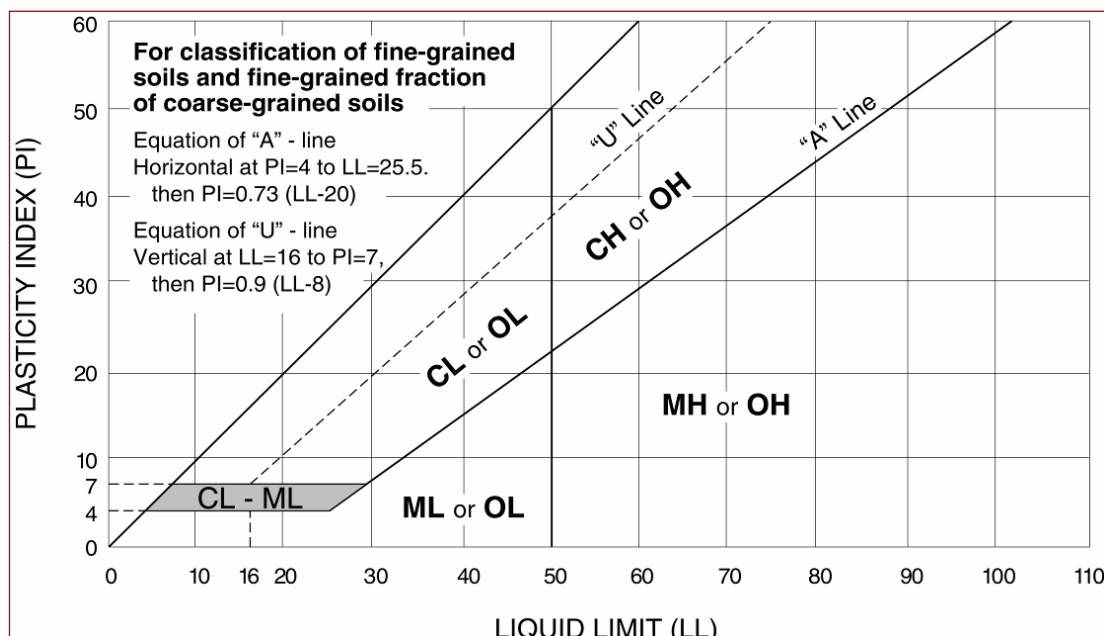
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



DOCUMENT 830
SUBMITTAL CONTROL SHEET

| Project: Pavement Replacement - NW 46th Street: NW Hiawatha Pl. to NW Oakley Ave. | | | | | | | | | | Project Manager: | | | | | | |
|---|------------------------------|---------|------------|---------------------|------------------|------------------|-------------|----------------|------------------|------------------|-------------------|---------------|------------------------|-----------------------------|--------------------------|-------|
| Project No.: S-841013.00 | | | | | | | | | | Contractor: | | | | | | |
| Section No. | Specifications Section Title | Samples | Shop Dwgs. | Matl. Or Parts List | Descriptive Data | Mfrgs Literature | Mix Designs | Certifications | Operation Instr. | Tests | Date of Submittal | Date Rejected | Date Revise & Resubmit | Date Make Corrections Noted | Date No Exceptions Taken | Notes |
| | Concrete | | | | | | x | x | | | | | | | | |
| | Rebar | | | | x | | | x | | | | | | | | |
| | Asphalt | | | | | | x | | | x | | | | | | |
| | Para-Aramid Fibers | | | | x | x | | x | x | | | | | | | |
| | Pavement Markings | | | | x | x | | x | | | | | | | | |
| | Temporary Traffic Control | | | | x | x | | x | | | | | | | | |
| | Detectable Sidewalk Panels | | | | x | x | | | | | | | | | | |
| | Concrete Washout Location | | | | x | | | | | | | | | | | |
| | Inlet Sediment Barriers | | | | x | x | | | | | | | | | | |
| | Seed, Mulch, Fertilizer | | | | x | x | | | | | | | | | | |

Note: Contractor shall furnish all specified submittal's indicated on the Submittal Control Sheet as directed by the Engineer.

SHAWNEE COUNTY
NW 46TH STREET PAVEMENT REPLACEMENT PROJECT S-841013.00
NW HIAWATHA PL. TO NW OAKLEY AVE.
SHAWNEE COUNTY, KANSAS



Know what's below. Call 811 before you dig
or visit us at www.kansasonecall.com

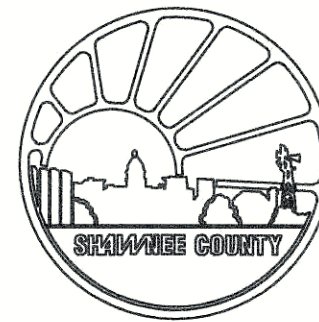
"Kansas One-Call" is the Underground Utility Notification center for the State of Kansas. Through this facility, you can notify operators of underground facilities of proposed excavations to request that the underground facilities be marked before you dig.

Kansas Statute annotated #66-1801 through #66-1815 requires anyone who engages in any type of excavation to provide advance notice of at least two full working days, but not more than 15 calendar days, excluding weekends and holidays.

The person who is doing the work is responsible for calling Kansas One-Call. If the owner contracts with a professional excavator to do the excavation, then the professional excavator is responsible for calling Kansas One-Call.

The service provided by Kansas One-Call to excavators is free of charge.

Call 785-368-3111 for emergencies with City of Topeka utilities.



NON-EMERGENCY UTILITY OWNER CONTACTS

Cable TV
Cox Communications
931 SW Henderson Rd.
Topeka, KS 66615
Glenn Calhoon
(785)215-6705
(785)207-1693
glenn.calhoon@cox.com

Electric
Evergy
PO Box 889
4001 NW 14th St.
Topeka, KS 66603
Aaron Spreer
(785)865-4850
(785)575-6300
aaron.spreer@evergy.com

Fiber Optic - City of Topeka
City of Topeka, Info. Tech.
620 SE Madison St., 3rd Flr
Topeka, KS 66603
Mark Biswell
(785)368-3718
mbiswell@topeka.org

Fiber Optic - CenturyLink CLEC
Centurylink CLEC
100 Centurylink Dr.
Monroe, LA 71203
Luke Hempler
(816)308-9639
luke.hempler@centurylink.com

Fiber Optic - USD 501
USD 501, Info. Tech.
1900 SW Hope St.
Topeka, KS 66604
Dickie Hanson
(785)438-4750
dhanson@tps501.org

Fiber Optic - KsFiberNet
Kansas Fiber Network LLC
10875 Benson, Ste. 250
Overland Park, KS 66210
Brad Burger
(913)213-2937
bburger@ksfiber.net

Gas
Kansas Gas Service
P.O. Box 3538
200 E 1st St.
Topeka, KS 66601
Dawn Hecker
(785)431-4251
dawn.hecker@onegas.com
For Gas Leaks 1-888-482-4950
911 must also be called immediately

Telephone
AT&T
220 SE 6th Ave., Ste. 236
Topeka, KS 66606
Randall Nicely
(785)276-5377
RN0380@att.com

Telephone - Civil Related
AT&T
220 SE 6th Ave., Ste. 236
Topeka, KS 66606
Daniel Chase
(785)596-9897
DC2553@att.com

Fiber Optic - AT&T Transmission
AT&T Services, Inc.
1425 Oak Street
Kansas City, MO 64016
Lenny Vohs
(770)335-8244
lv2121@att.com

Fiber Optic - Giant Communications
Giant Communications
515 S Kansas Ave., Ste. 210
Topeka, KS 66603
Lance Lyman
(785)362-3312
lancelymann@giantcomm.net

Telephone / Fiber Optics
Verizon / MCI
Jeffrey Wiard
(620)242-6647
Jeffrey.Wiard@verizonwireless.com

Sanitary/Storm Sewer
City of Topeka, WPC Div.
1115 NE Poplar St.
Topeka, KS 66616
Darrin A. Coffland
(785)368-2467
dcoffland@topeka.org

Water
City of Topeka, Water Dist.
3245 NW Waterworks Dr.
Topeka, KS 66606
Duncan Theuri
(785)368-0152
dtheuri@topeka.org

Traffic Signal
City of Topeka, Traffic Ops.
927 NW Harrison St.
Topeka, KS 66612
Duane Morris
(785)368-3913
dmorris@topeka.org

US-75

NW 46th St.

Project Location



INDEX to SHEETS

| Sheet | Title |
|---------|--|
| 1 | Title Sheet |
| 2 | General Notes, Summary of Quantities, & Typical Sections |
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| 7 - 10 | Phase 2 Plan Sheets |
| 11 - 13 | Phase 3 Plan Sheets |
| 14 - 19 | Shawnee County Standard Details |
| 20 - 21 | Pavement Marking Plans |
| 22 | Pavement Markings Standard Details |
| 23 - 32 | Temporary Traffic Control Plans |
| 33 - 36 | Temporary Traffic Control Standard Details |

LEGEND

| | |
|---------------------------------|-------------------------|
| Construction Limits | ----- |
| Traffic Signal Line | TS TS TS TS |
| Overhead Telephone Line | OHT OHT OHT OHT |
| Underground Telephone Line | T T T T |
| Overhead Cable | OTV OTV OTV OTV |
| Underground Cable | UTV UTV UTV UTV |
| Overhead Electric Line | OHP OHP OHP OHP |
| Underground Electric Line | UGP UGP UGP UGP |
| Water Line | W W W W |
| Gas Line | G G G G |
| Sanitary Sewer | ----- |
| Storm Sewer | ----- |
| Fiber Optic Line | FO FO FO FO |
| Centerline | ----- |
| Right-of-Way Line | ----- |
| Property Line | ----- |
| Lot Line | ----- |
| Fence | o o o o o o o o o o o o |
| Guard Rail | ----- |
| RailRoad Tracks | |
| Section Corner | △ |
| Bench Mark | ⊕ |
| Property Pin | ⊙ |
| Power Pole | ⊞ |
| Telephone Pole | ⊞ |
| Street Light | ⊙ |
| Guy Pole | ⊞ |
| Guy Wire | ⊞ |
| Fire Hydrant | ⊞ |
| Water Meter | ⊞ |
| Water Valve | ⊞ |
| Gas Meter | ⊞ |
| Gas Valve | ⊞ |
| Mail Box | ⊞ |
| Existing Storm Inlet | ⊞ |
| Existing Sanitary Sewer Manhole | ⊞ |
| Existing Storm Sewer Manhole | ⊞ |
| Existing Traffic Manhole | ⊞ |
| Sign | ⊞ |
| Tree, Deciduous | ⊞ |
| Tree, Coniferous | ⊞ |
| Stump | ⊞ |
| Shrub | ⊞ |

SHAWNEE COUNTY, KANSAS

DEPARTMENT OF PUBLIC WORKS - ENGINEERING DIVISION

RELEASED FOR CONSTRUCTION

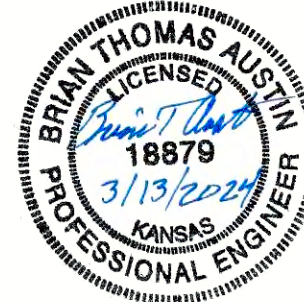
Thomas J. Flanagan 3-13-2024
for COUNTY ENGINEER DATE

ATTEST:

COUNTY CLERK

DATE

SBB PROJ. NO. 23-187



Title Sheet

DATE: 3/13/2024

SHEET: 1 OF 36

PROJ.: S-841013.00

DRAWN BY: L. O'CONNOR

APP'D BY: B. AUSTIN

FIELD BOOKS: -

SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT

1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702



SBB Engineering, LLC

101 S Kansas Ave., Topeka, KS 66603
Ph: (785) 215-8630 www.sbbeng.com

S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

GENERAL NOTE:

All construction methods and materials used in the construction of the improvements covered by these plans shall be in accordance with the Shawnee County Standard Technical Specifications.

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GENERAL NOTES:

1. All construction methods and materials used in the construction of the improvements covered by these plans shall be in accordance with the Shawnee County Standard Technical Specifications.
2. The location of all overhead and underground utilities may vary from what is indicated in these plans. It shall be the Contractor's responsibility to coordinate with the utility owner to locate and flag all underground utilities whether indicated or not. No excavation will be permitted in the area of underground utilities until all such utilities have been located and identified to the satisfaction of all parties and then only with extreme care to avoid any possibility of damage to the utility.
3. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a Flood Plain would require a Kansas State Board of Agriculture Permit. Any material dumped in waters of the United States or wetlands is subject to U.S. CORPS of Engineers Permitting Regulations. Any material buried or stockpiled beyond approved construction limits would require additional archeological investigations unless buried in previously approved borrow locations.
4. All concrete used on the project shall meet the requirement for Class A Pavement.
5. All saw cuts shall be full-depth. Saw cuts will not be paid for directly but shall be subsidiary to other bid items.
6. All pavement removal areas shall be full-depth saw cut to form a straight and uniform line.
7. The Contractor shall maintain construction limits within the existing and/or proposed Right of Way and any easements shown. Work within the street shall require Traffic Control per the Shawnee County Standard Details.
8. All Permits and fees necessary to construct the project are the responsibility of the Contractor unless otherwise noted.
9. Unless otherwise specified, all disturbed areas that are not hardscaped shall be either landscaped or seeded, fertilized and mulched in accordance with the Shawnee County Standard Technical Specifications.
10. Temporary Erosion Control shall be provided to control siltation and sediment movement, due to barren soils, into the storm sewer system. Contractor shall keep adjacent pavement free of soil, dirt, and construction debris on a daily basis. Temporary Erosion and Pollution Control is subsidiary.
11. All property pins disturbed by construction shall be replaced by a Land Surveyor. This work shall be subsidiary to other items of the contract.
12. Contractor shall provide work zone traffic control in compliance with Shawnee County Standards and the Manual on Uniform Traffic Control Devices (MUTCD) while working on or adjacent to public roadways is proceeding. Contractor shall apply for a Highway Use Permit (Form 304) through the KDOT KUPS system. An initial permit has been submitted for the project, reference Record No. 1-2024-0376, Activity No. TK24-4070.

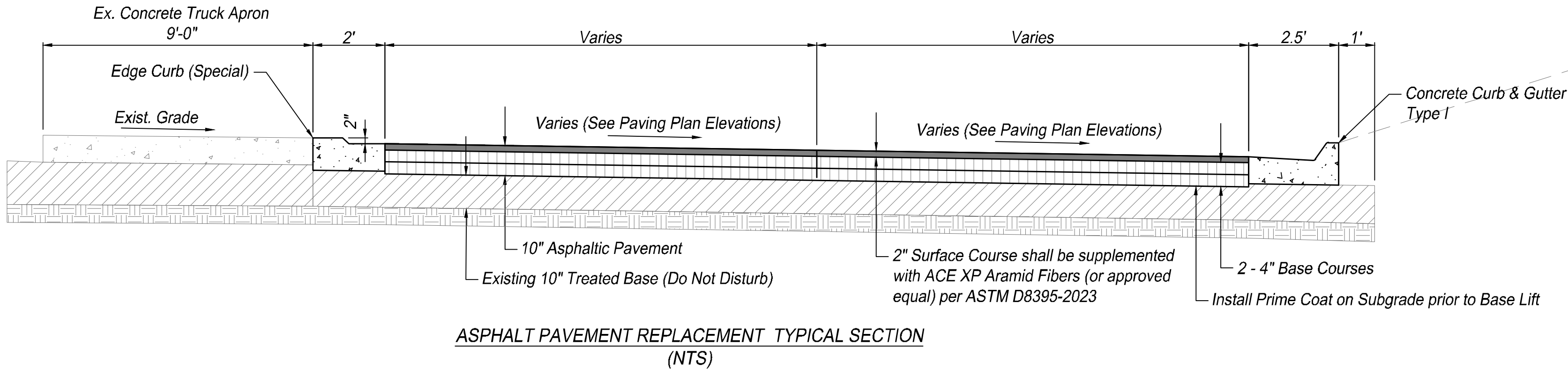
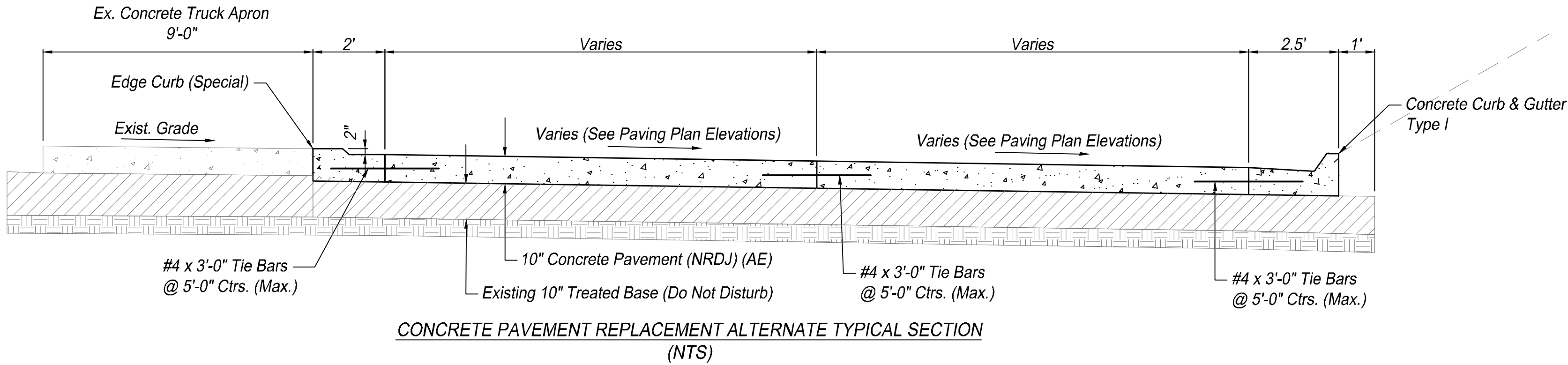
13. Traffic Control devices, Portable Changeable Message Signs (PCMS), and flagger operations necessary to complete the project shall not be paid for directly, but shall be considered subsidiary to the Bid Item "Temporary Traffic Control" (LS).
14. Contractor shall provide and maintain a Concrete Washout area through duration of construction.
15. Subgrade Preparation and Subgrade Treatment shall be in accordance with the Shawnee County Technical Specifications and supplemented by the Terracon Geotechnical Report included in the Contract Documents.
16. Contractor shall use care in removing existing pavements and minimize disturbance to the existing chemically treated subgrade. Construction traffic over the existing subgrade shall be minimized after pavement removal.
17. The 2" Asphalt Surface Course shall contain Surface Tech Ace XP Polymer Aramid Fibers (or approved equal) at a dose rate of 3.4 oz. coated weight per ton of asphalt mix. Contractor shall coordinate with Project Field Representative prior to fiber mixing at the batch plant.

SUMMARY OF QUANTITIES
NW 46TH STREET PAVEMENT REPLACEMENT PROJECT (NW HIAWATHA PL. TO NW OAKLEY AVE.)
S-841013.00

| PROJECT QUANTITIES | | | |
|--------------------|---|-------|-------|
| PHASE 1-3 | | | |
| ITEM | DESCRIPTION | QTY | UNITS |
| 1 | CONTRACTOR CONSTRUCTION STAKING | 1 | LS |
| 2 | PAVEMENT REMOVAL | 6,435 | SY |
| 3 | 10" SUBGRADE STABILIZATION (ALLOWANCE) | 1,224 | SY |
| 4 | 10" ASPHALT PAVEMENT | 5,718 | SY |
| 5 | CONCRETE CURB AND GUTTER (SPECIAL) | 881 | LF |
| 6 | CONCRETE CURB AND GUTTER (TYPE I) | 1,263 | LF |
| 7 | CONCRETE CURB AND GUTTER (TYPE III)(6") | 766 | LF |
| 8 | 6" CONCRETE PAVEMENT | 437 | SY |
| 9 | 6" SIDEWALK RAMP | 26 | SY |
| 10 | PAVEMENT MARKING (6") (WHITE) (THERMOPLASTIC) | 970 | LF |
| 11 | PAVEMENT MARKING (8") (WHITE) (THERMOPLASTIC) | 914 | LF |
| 12 | PAVEMENT MARKING (12") (WHITE) (THERMOPLASTIC) | 27 | LF |
| 13 | PAVEMENT MARKING (24") (WHITE) (PRE-FORMED THERMOPLASTIC) | 160 | LF |
| 14 | PAVEMENT MARKING (24") (WHITE) (YIELD) (PRE-FORMED THERMOPLASTIC) | 48 | LF |
| 15 | PAVEMENT MARKING (4") (YELLOW) (THERMOPLASTIC) | 1,127 | LF |
| 16 | PAVEMENT MARKING (12") (YELLOW) (THERMOPLASTIC) | 11 | LF |
| 17 | PAVEMENT MARKING REMOVAL (6") | 624 | LF |
| 18 | TEMPORARY TRAFFIC CONTROL | 1 | LS |
| 19 | PERMANENT SEEDING, MULCHING, & FERTILIZING | 1 | LS |
| 20 | TEMPORARY INLET SEDIMENT BARRIER | 7 | EACH |

BID ALTERNATE (10" CONCRETE PAVEMENT)

| PROJECT QUANTITIES | | | |
|--------------------|---------------------------------------|-------|-------|
| PHASE 1-3 | | | |
| ITEM | DESCRIPTION | QTY | UNITS |
| 4-ALT | 10" CONCRETE PAVEMENT (NRDJ)(AE) | 5,718 | SY |
| 10-ALT | PAVEMENT MARKING (6") (WHITE) (MMA) | 970 | LF |
| 11-ALT | PAVEMENT MARKING (8") (WHITE) (MMA) | 914 | LF |
| 12-ALT | PAVEMENT MARKING (12") (WHITE) (MMA) | 27 | LF |
| 15-ALT | PAVEMENT MARKING (4") (YELLOW) (MMA) | 1,127 | LF |
| 16-ALT | PAVEMENT MARKING (12") (YELLOW) (MMA) | 11 | LF |



ABBREVIATIONS

- TC Top of Curb
- TP Top of Pavement
- TS Top of Sidewalk
- TW Top of Retaining Wall
- TOP Top of Pipe
- M.E. Match Existing
- L.I.P. Leave in Place
- T.C.E. Temporary Construction Easement

DRAWN BY: L. O'CONNOR

APP'D BY: B. AUSTIN

FIELD BOOKS: -

SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
1515 NW SALINE
TOPEKA, KS 66618
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SBB Engineering, LLC
101 S Kansas Ave., Topeka, KS 66603
Ph: (785) 215-8630 www.sbbeng.com

S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

General Notes, Summary of
Quantities, & Typical Sections

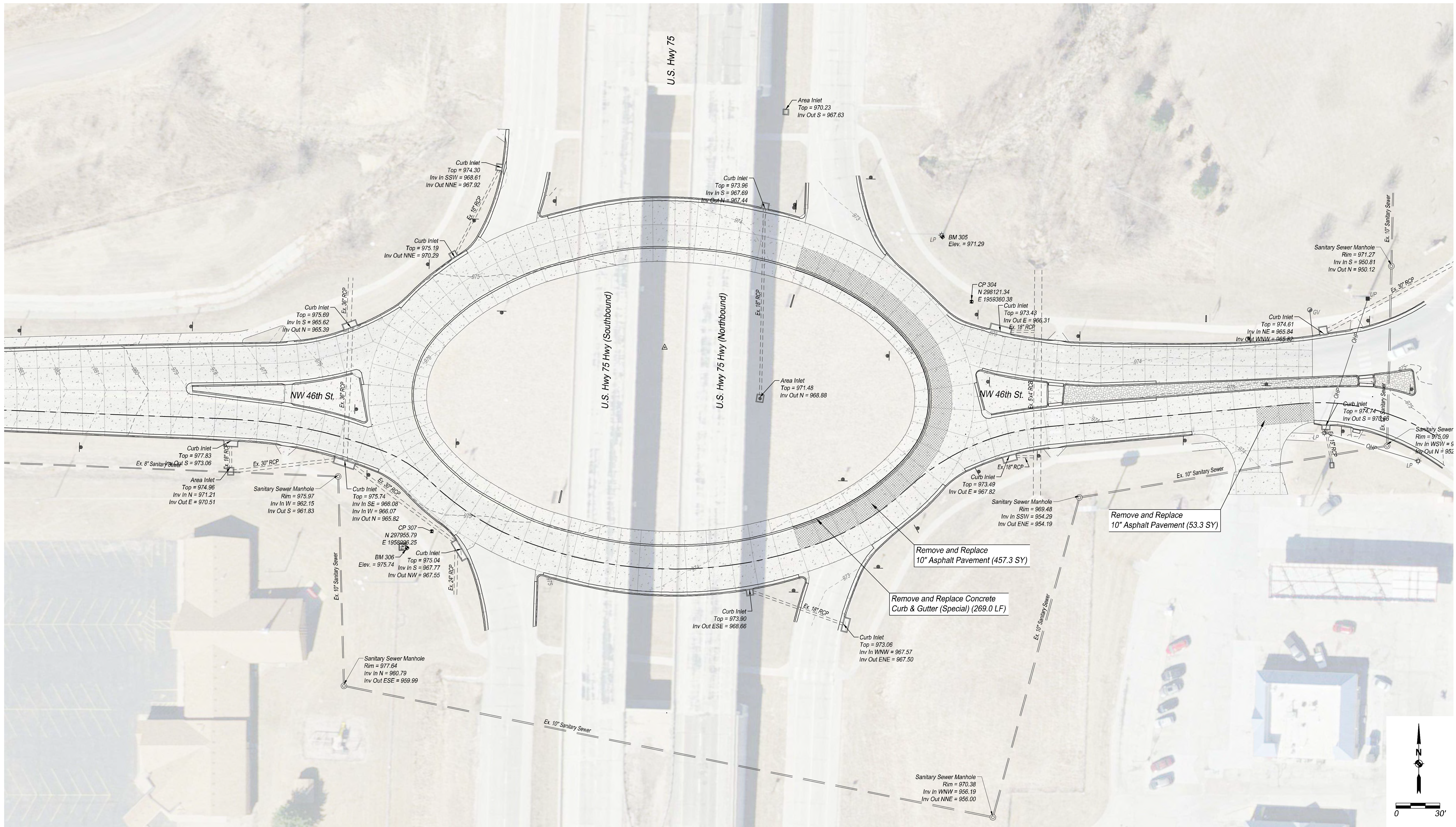
SBB PROJ. NO. 23-187

DATE: 3/13/2024

SHEET: 2 OF 36


PROJ.: S-841013.00

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DRAWN BY: L. O'CONNOR
APP'D BY: B. AUSTIN
FIELD BOOKS: -
SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
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TOPEKA, KS 66618
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SBB
ENGINEERING

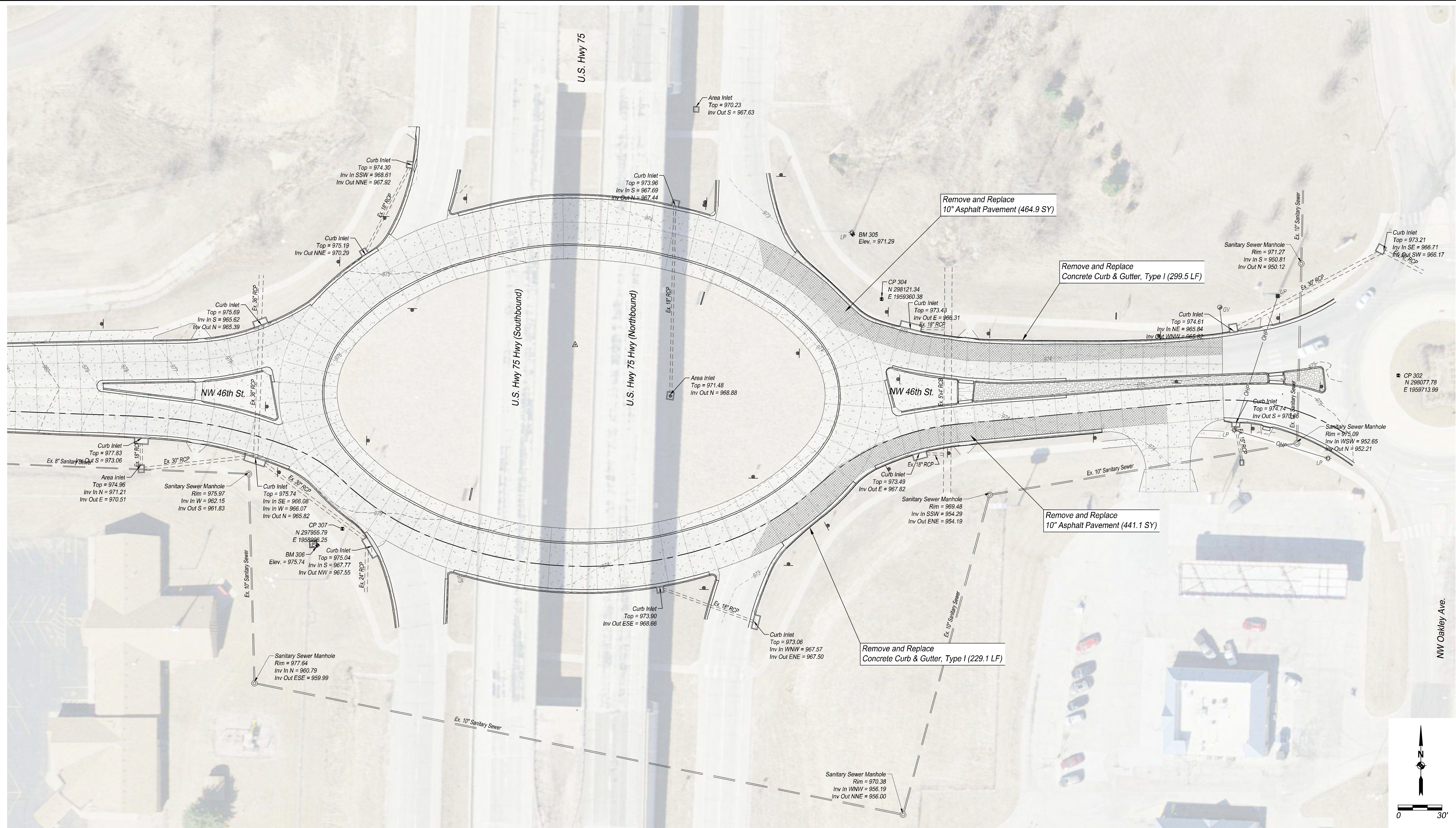
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Ph: (785) 215-8630 www.sbbeng.com

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NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

Plan Sheet
Phase 1A

SBB PROJ. NO. 23-187

DATE: 3/13/2024
SHEET: 3 OF 36
PROJ.: S-841013.00



SBB PROJ. NO. 23-187

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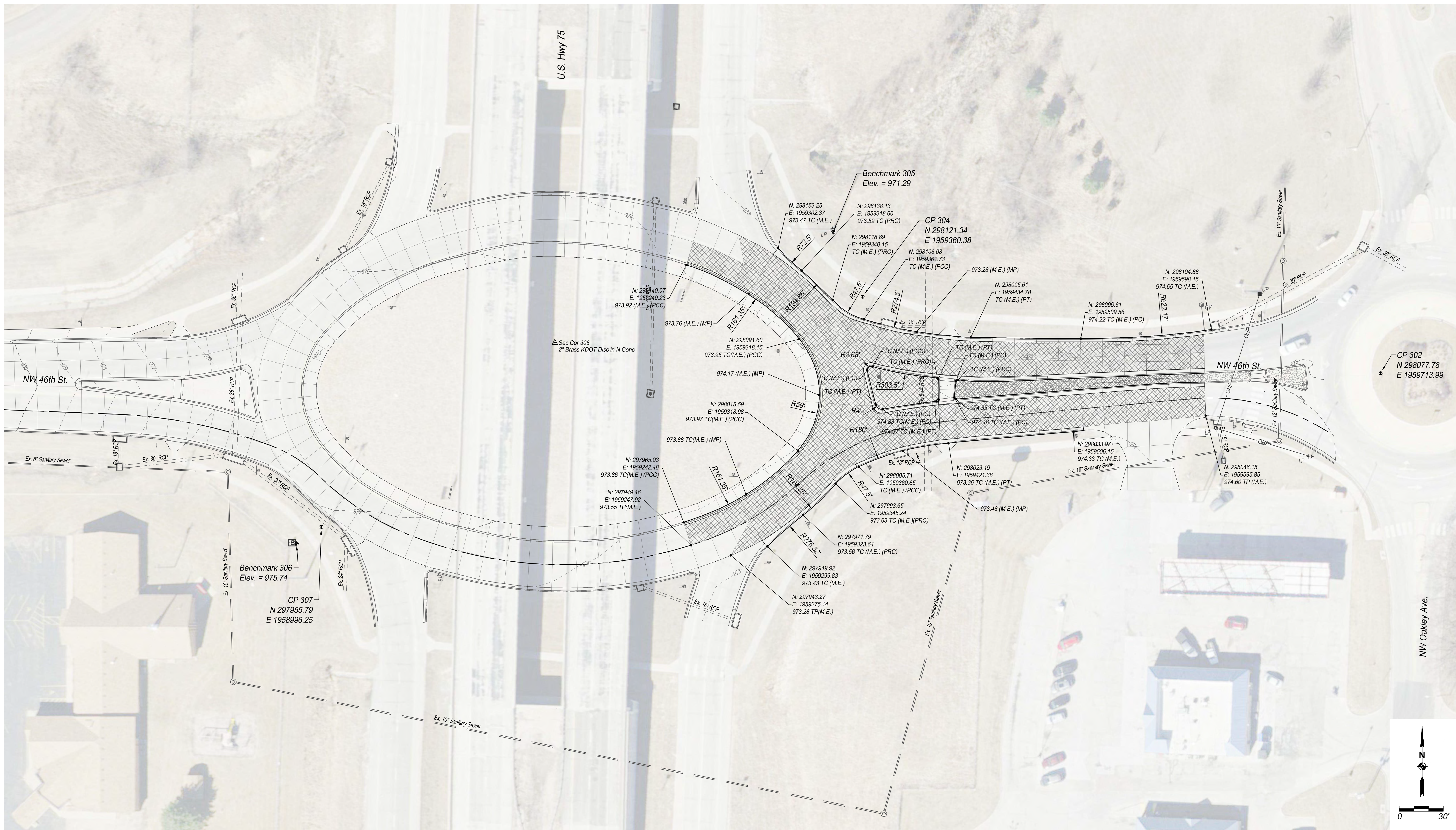
S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

DATE: 3/13/2024

SHEET: 4 OF 36

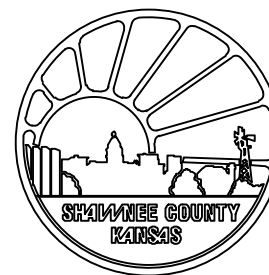
PROJ.: S-841013.00

[File Location: X:\11 SBB Drawings\10-2023\23-187 SNCC-US75 to Oakley.dwg] [Design/Sheet/Plans\23-187 Phase 1 Paving.dwg] [Plot Date: 3/13/2024 2:19:58 PM] [Last Saved: 3/13/2024 10:07:21 AM] [L:\C:\Users\j\Documents\2023\23-187 SNCC-US75 to Oakley.dwg]



| NO. | DATE: | REVISION | BY: | APP'D |
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DRAWN BY: L. O'CONNOR
APP'D BY: B. AUSTIN
FIELD BOOKS: -
SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702



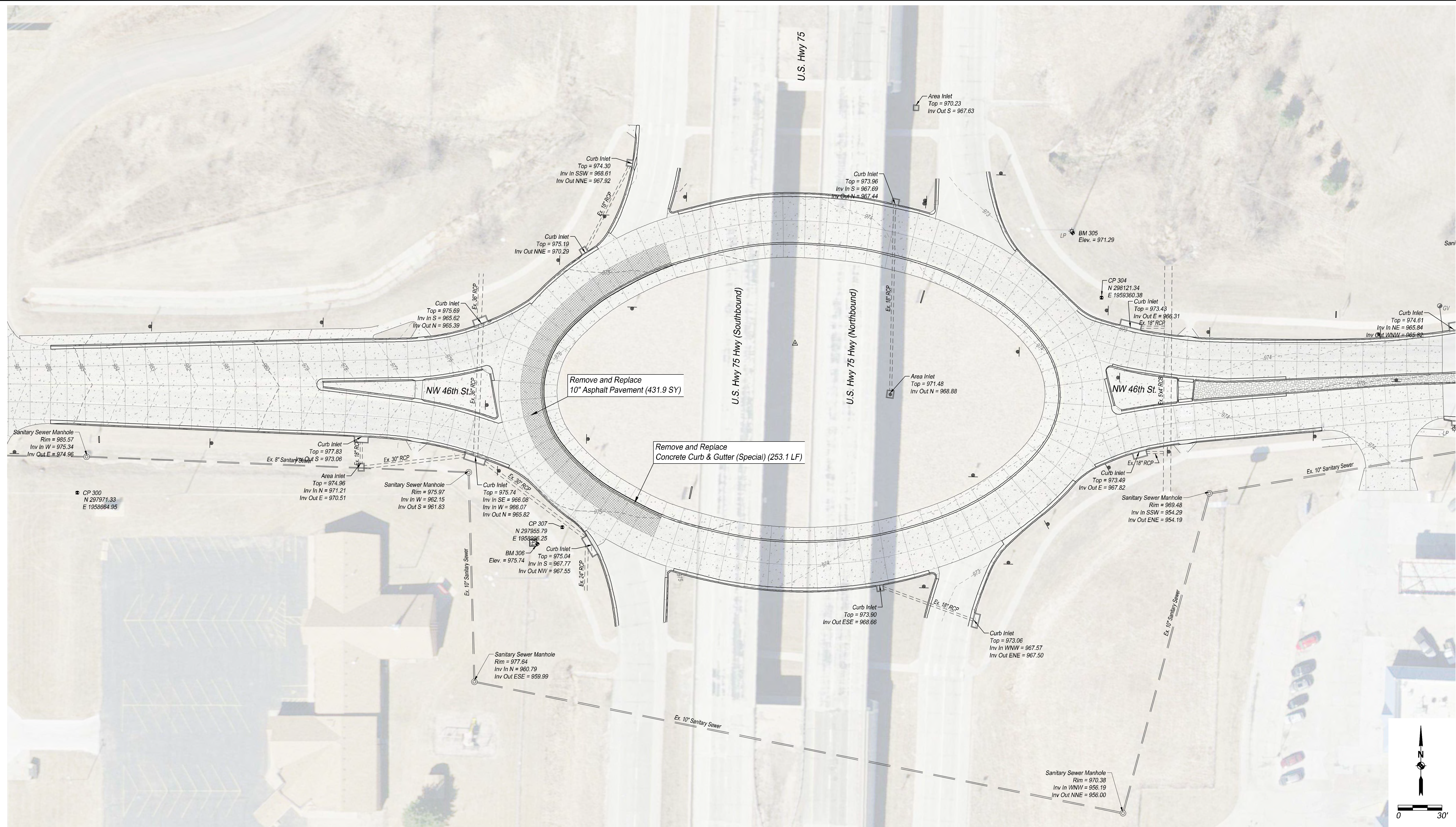
SBB Engineering, LLC
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NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

Paving Plan Sheet
Phase 1

DATE: 3/13/2024
SHEET: 6 OF 36
PROJ.: S-841013.00

SBB PROJ. NO. 23-187



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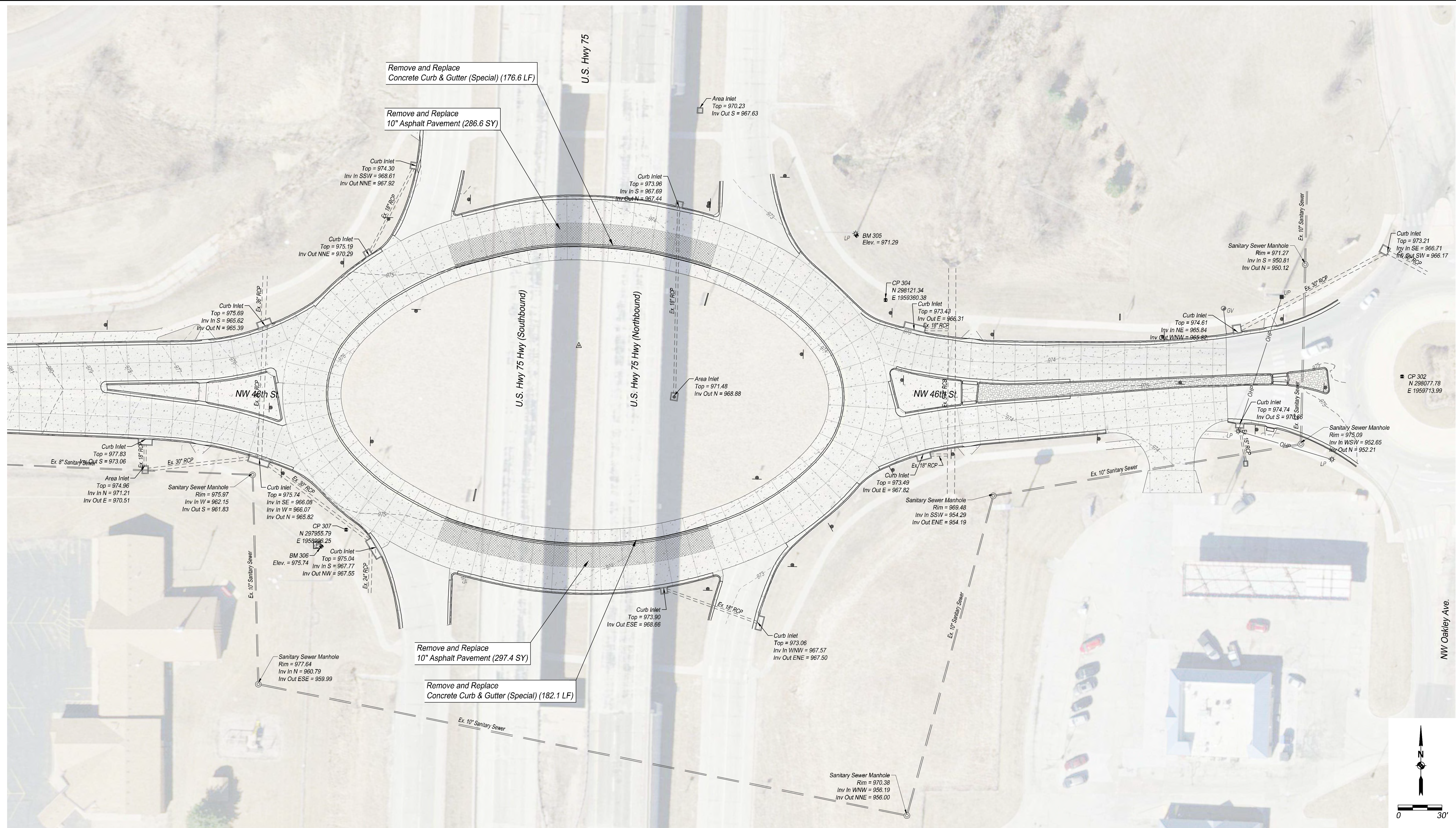
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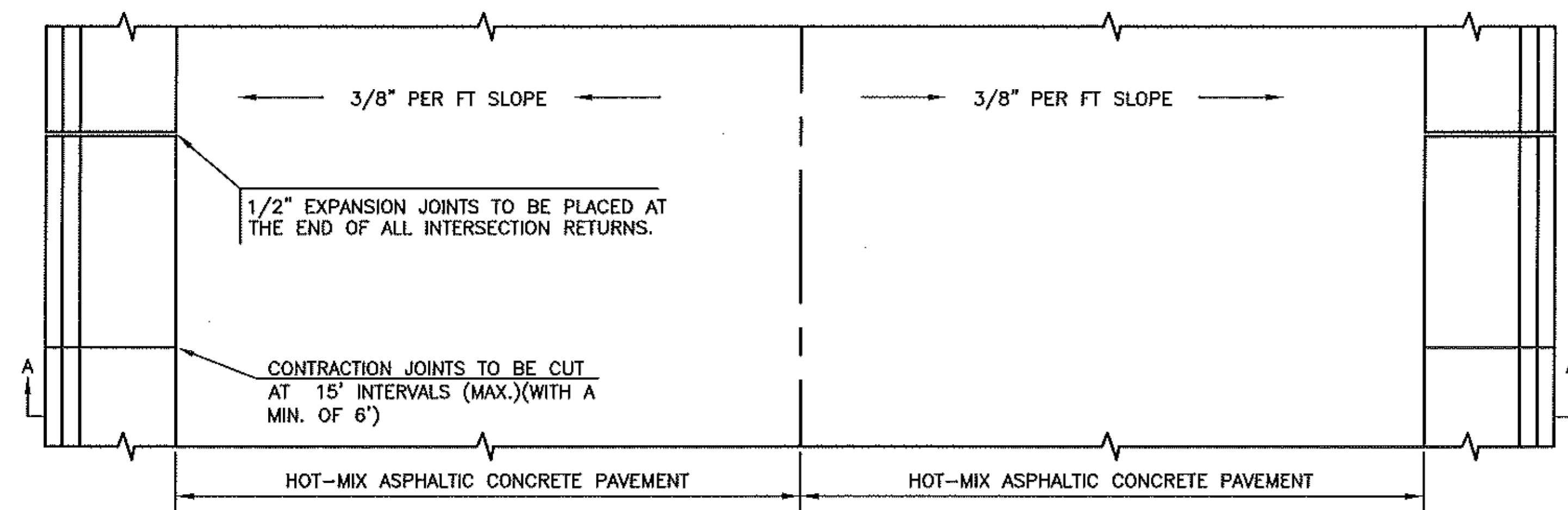
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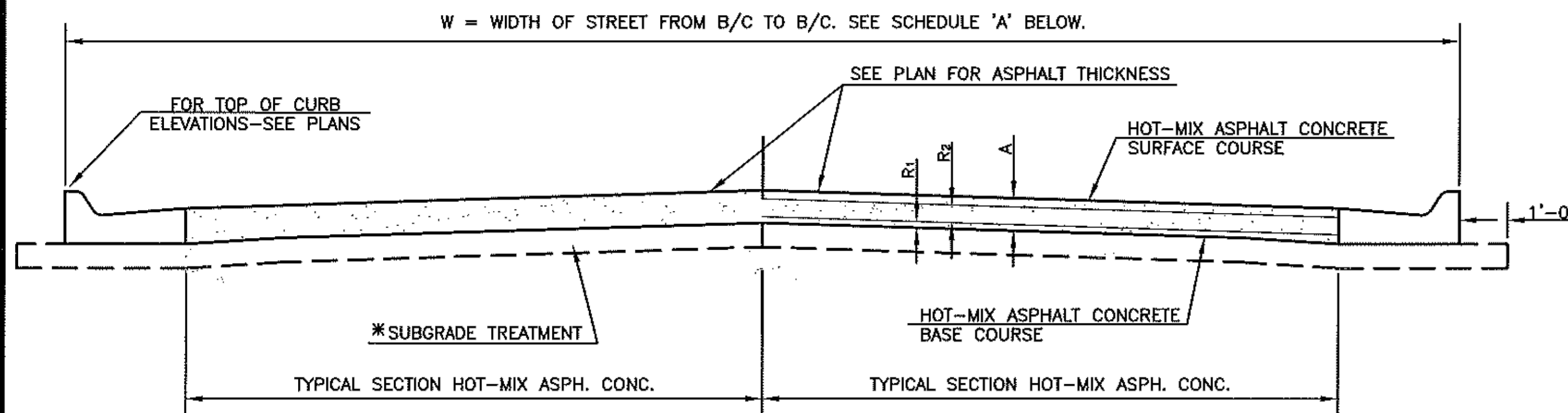
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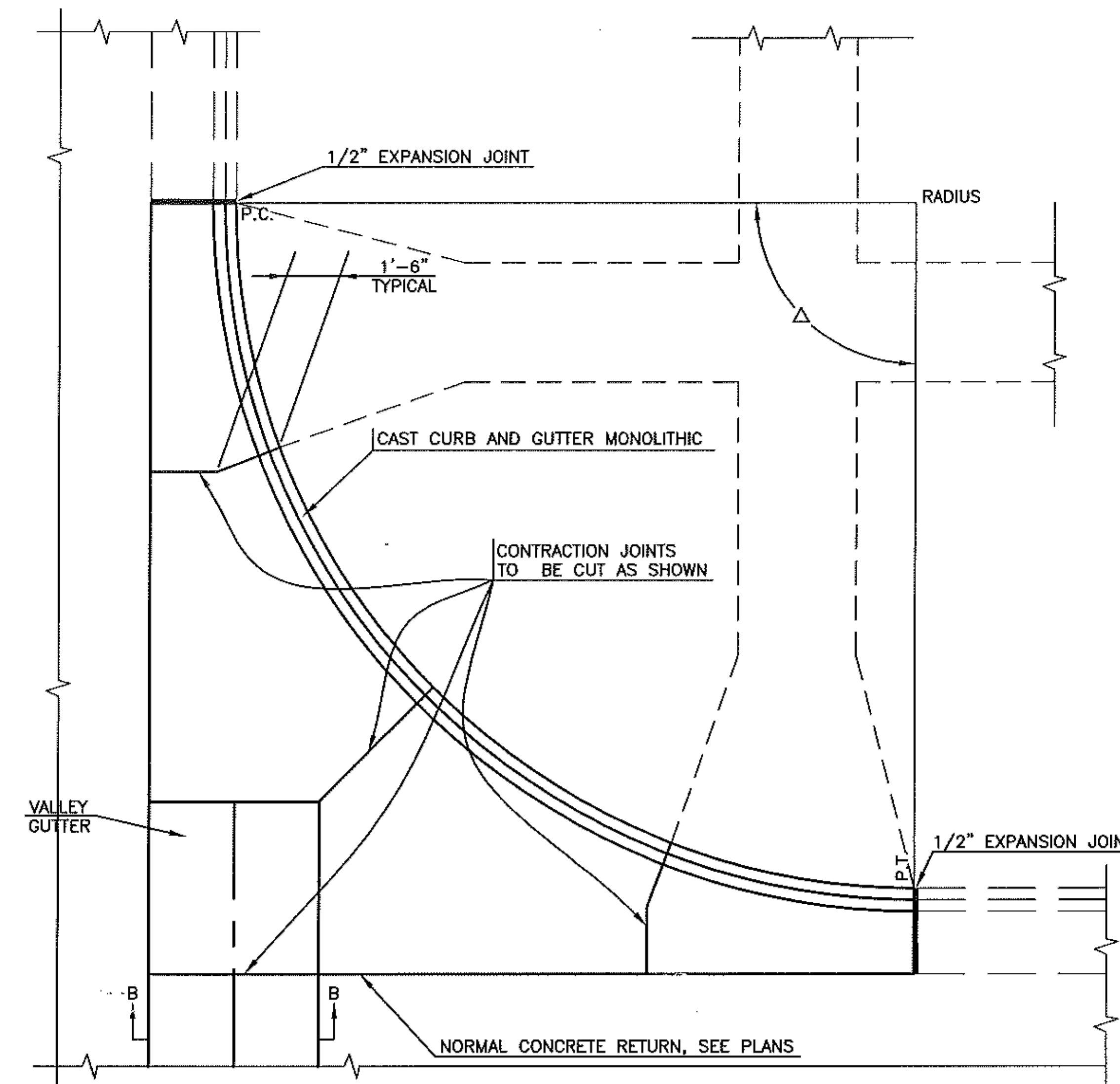
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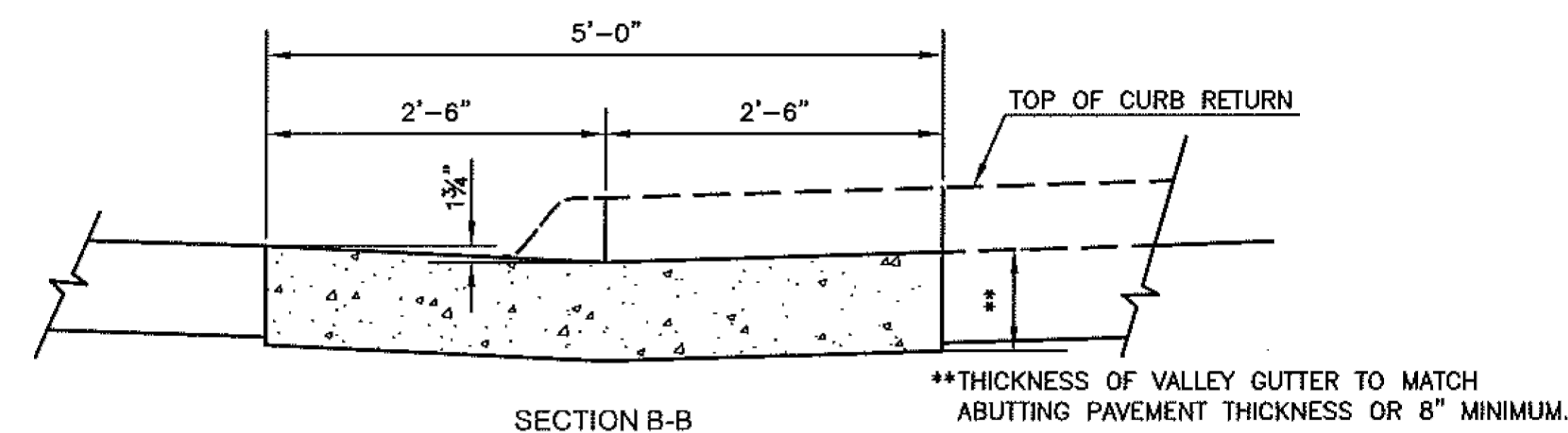
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TYPICAL JOINTING PLAN



VALLEY GUTTER DETAILS

- NOTES:
1. PAY LENGTH OF VALLEY GUTTER IS FROM P.C. TO P.C. ACROSS STREET INTERSECTION.
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 3. PAY AREA OF VALLEY GUTTER IS PAY LENGTH X PAY WIDTH (SQ. YD.)
 4. PAY CURB AND GUTTER FROM P.C. TO P.T. AROUND RADIAL.
 5. NO ADDITIONAL PAYMENT FOR OTHER WORK AND MATERIALS REQUIRED TO COMPLETE RETURN AS DETAILED. SEE PLANS FOR TYPE OF RETURN TO BE CONSTRUCTED.
 6. SAND IS NOT AN APPROVED FILL OR SUBGRADE MATERIAL.
 7. WHERE VALLEY GUTTER ABUTS CONCRETE PAVEMENT, THE VALLEY GUTTER SECTION SHALL BE TIED TO THE CONCRETE PAVEMENT WITH 1/2" x 3'-0" DEFORMED TIE BARS AT 5'-0" CENTERS.
 8. WHERE VALLEY GUTTER IS CONSTRUCTED ADJACENT TO NEW ASPHALT PAVEMENT, THE CONTRACTOR MAY, AT THEIR OPTION, CONSTRUCT A CONTINUOUS ASPHALT PAVEMENT SECTION THROUGH THE VALLEY GUTTER AREA, FOLLOWED BY SAWCUTTING AND REMOVING THE ASPHALT STRIP FOR CONSTRUCTION OF THE VALLEY GUTTER SECTION. NO PAY ADJUSTMENT SHALL BE MADE FROM PLAN QUANTITIES FOR THE ADDITIONAL ASPHALT PAVEMENT THAT IS REMOVED. SAWCUTS SHALL BE FULL DEPTH. THE SUBGRADE MUST MEET COMPACTION REQUIREMENTS IN THE REMOVAL AREA PRIOR TO PLACEMENT OF THE VALLEY GUTTER.

| NO. | DATE | REVISION | BY | APP'D |
|-----|------------|--|-----|-------|
| 3 | March 2013 | Added min jt. spacing & mode bar size* | DHS | SB |
| 2 | Dec. 2009 | Added to Valley Gutter Details | DHS | SB |
| 1 | Feb. 2008 | Mod. Typ. Jt. Plan & Pmnt. Det. | DHS | SB |

DRAWN BY: *mm/mc*
APP'D BY: *RE: [Signature]*



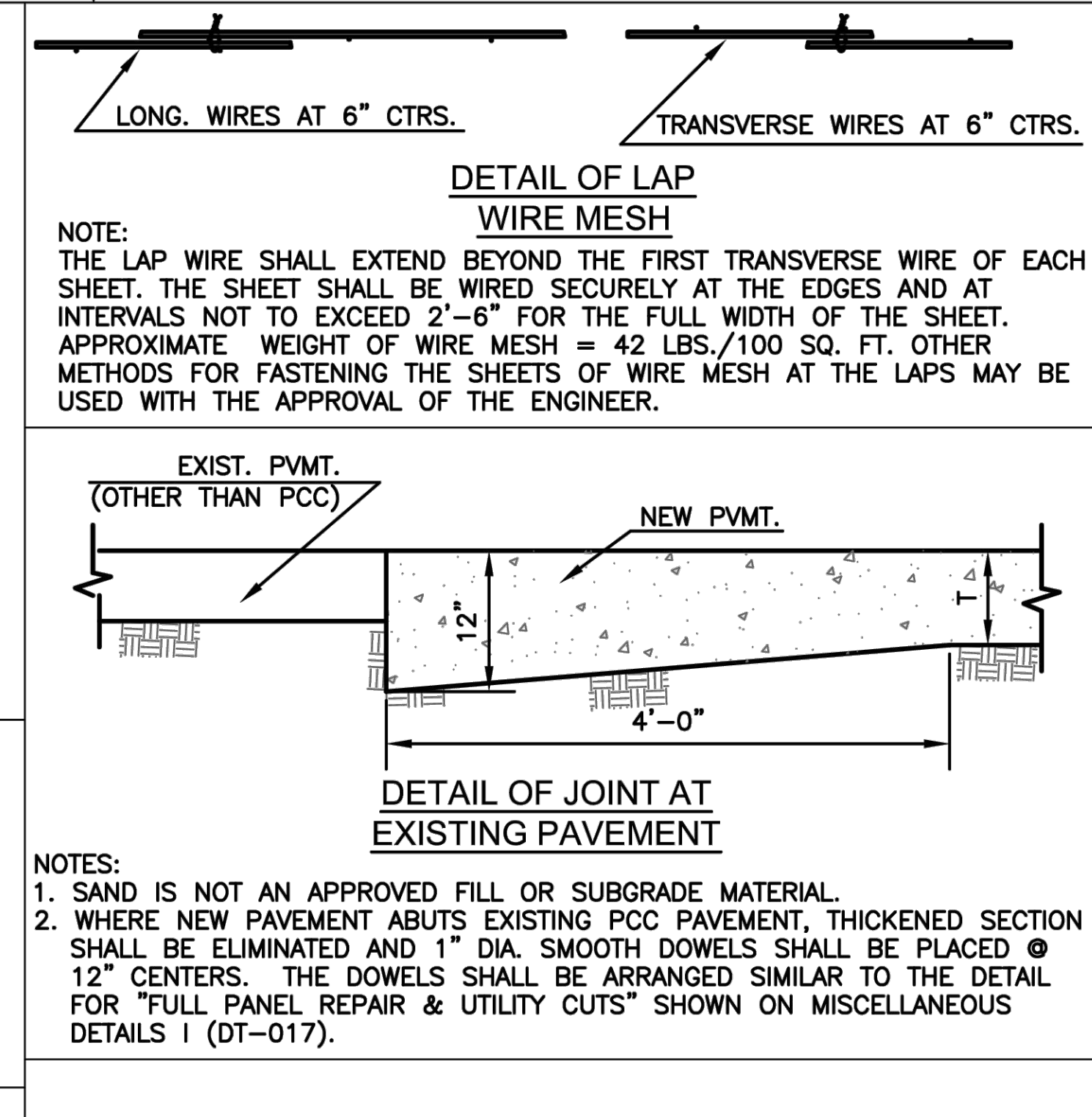
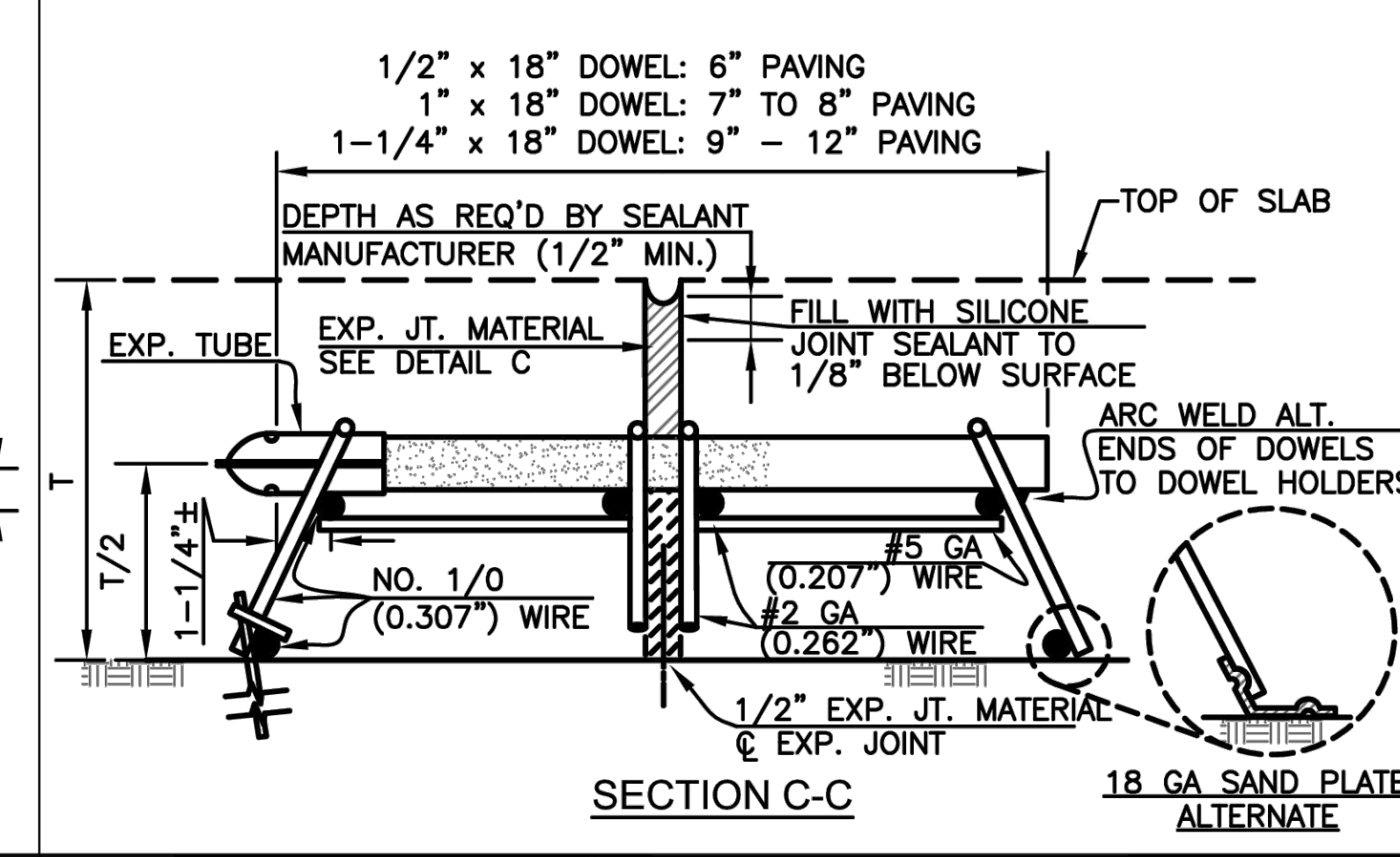
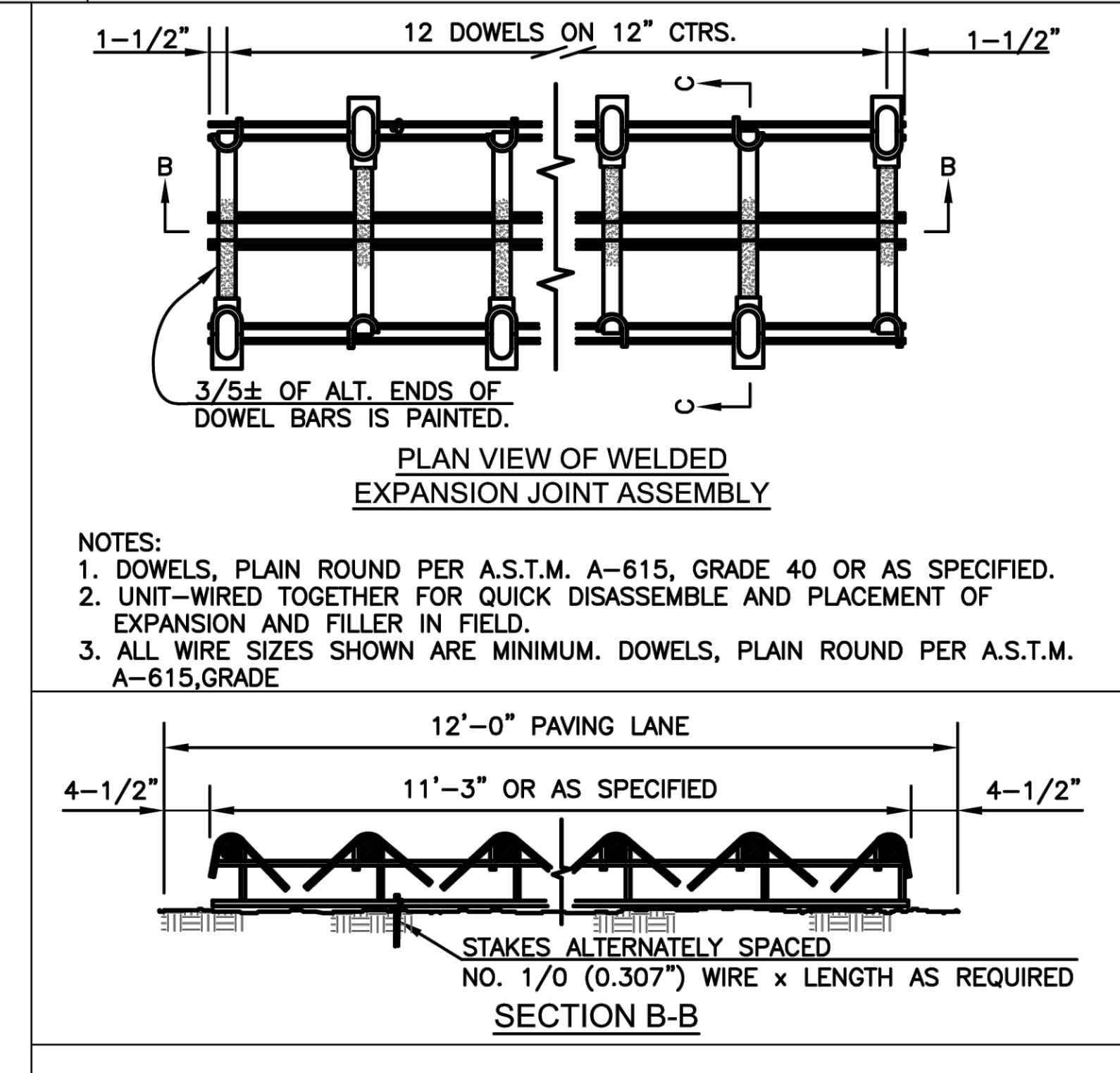
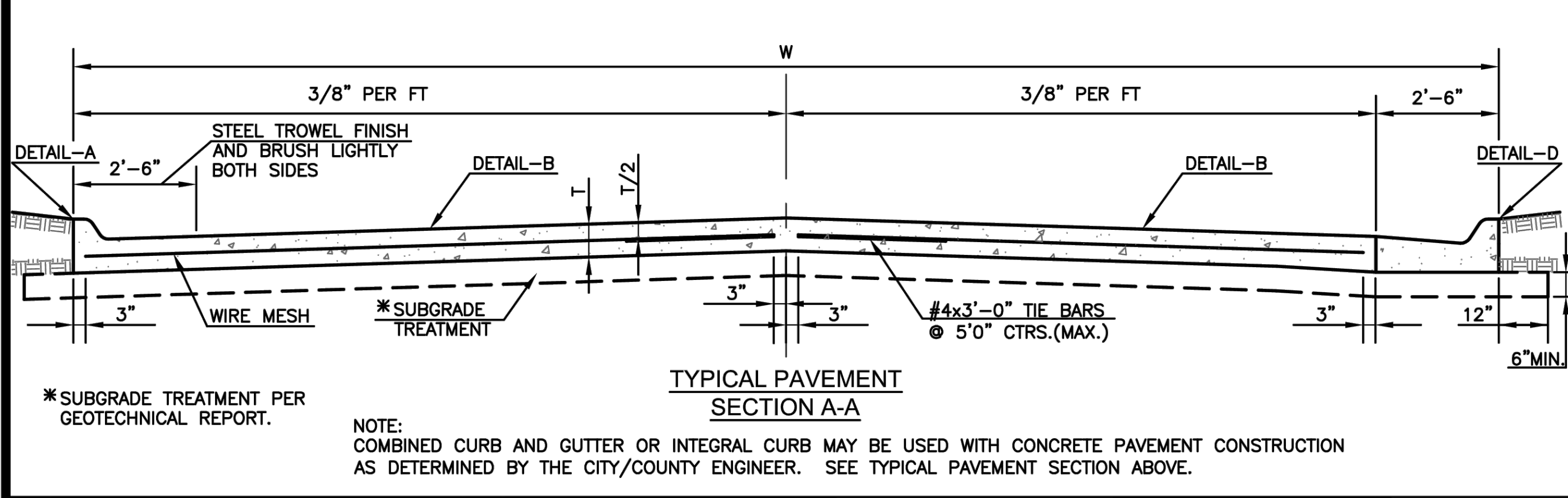
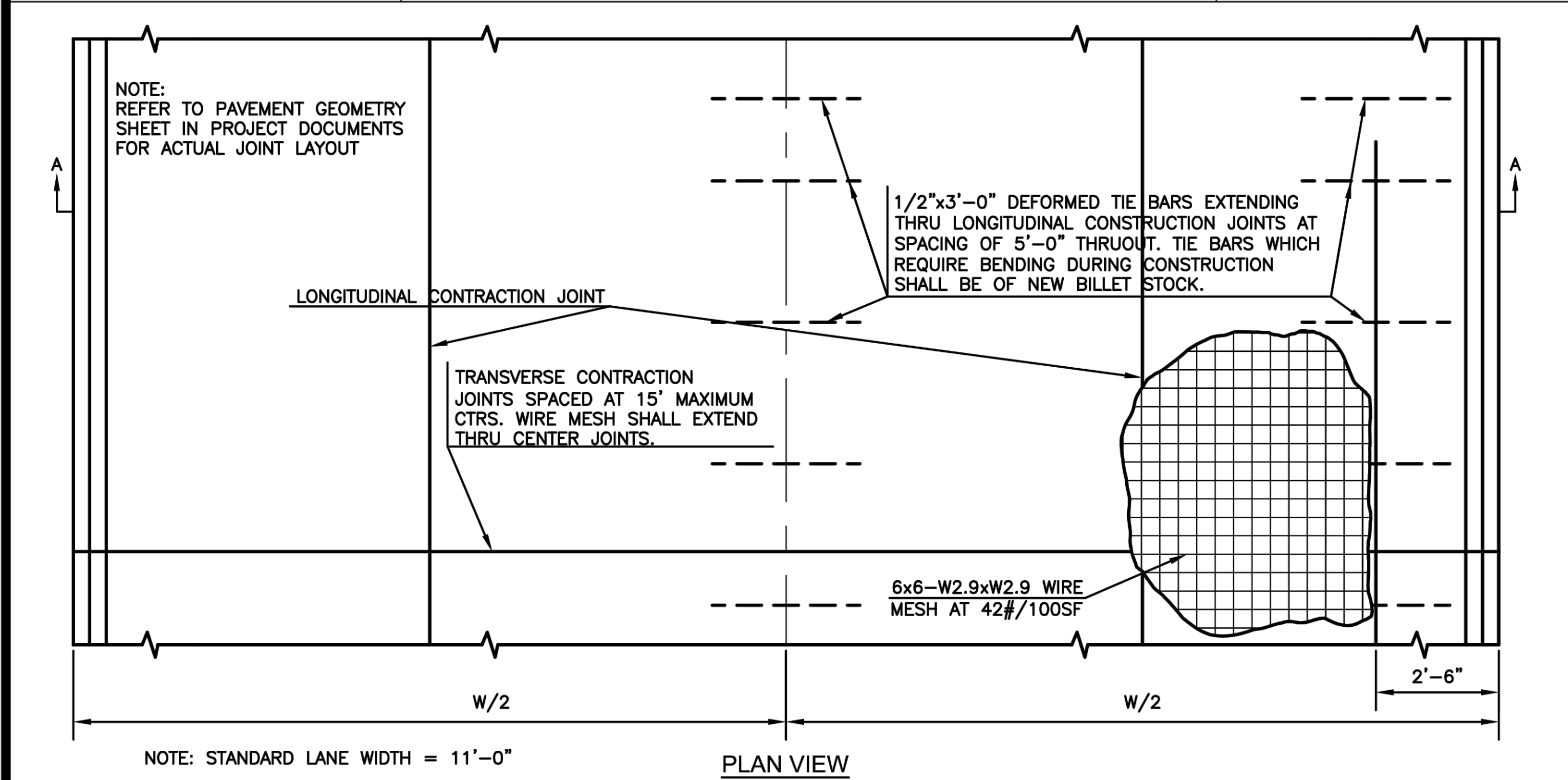
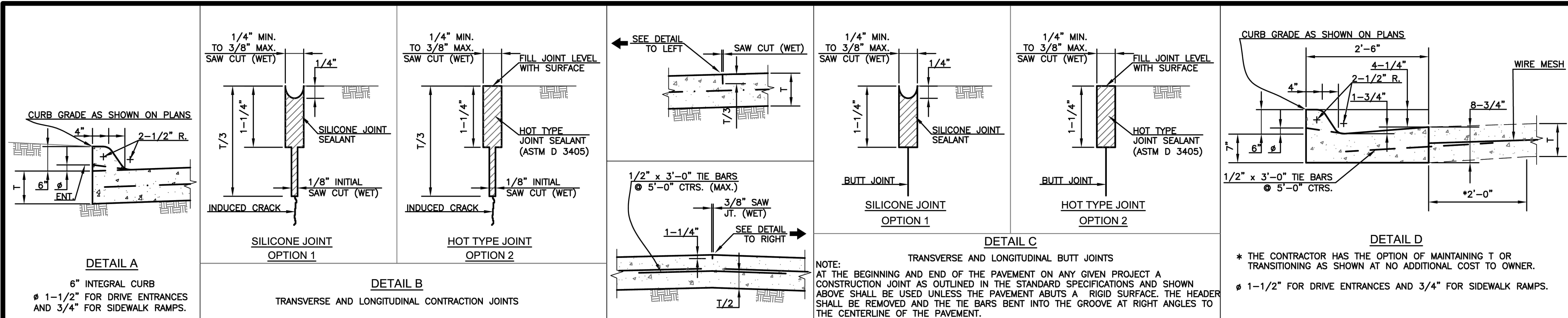
SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702

TOPEKA
Public Works
ENGINEERING
620 SE MADISON St. • 2nd Floor • TOPEKA, KS 66607
Phone: (785) 368-3842 • Fax: (785) 368-3881

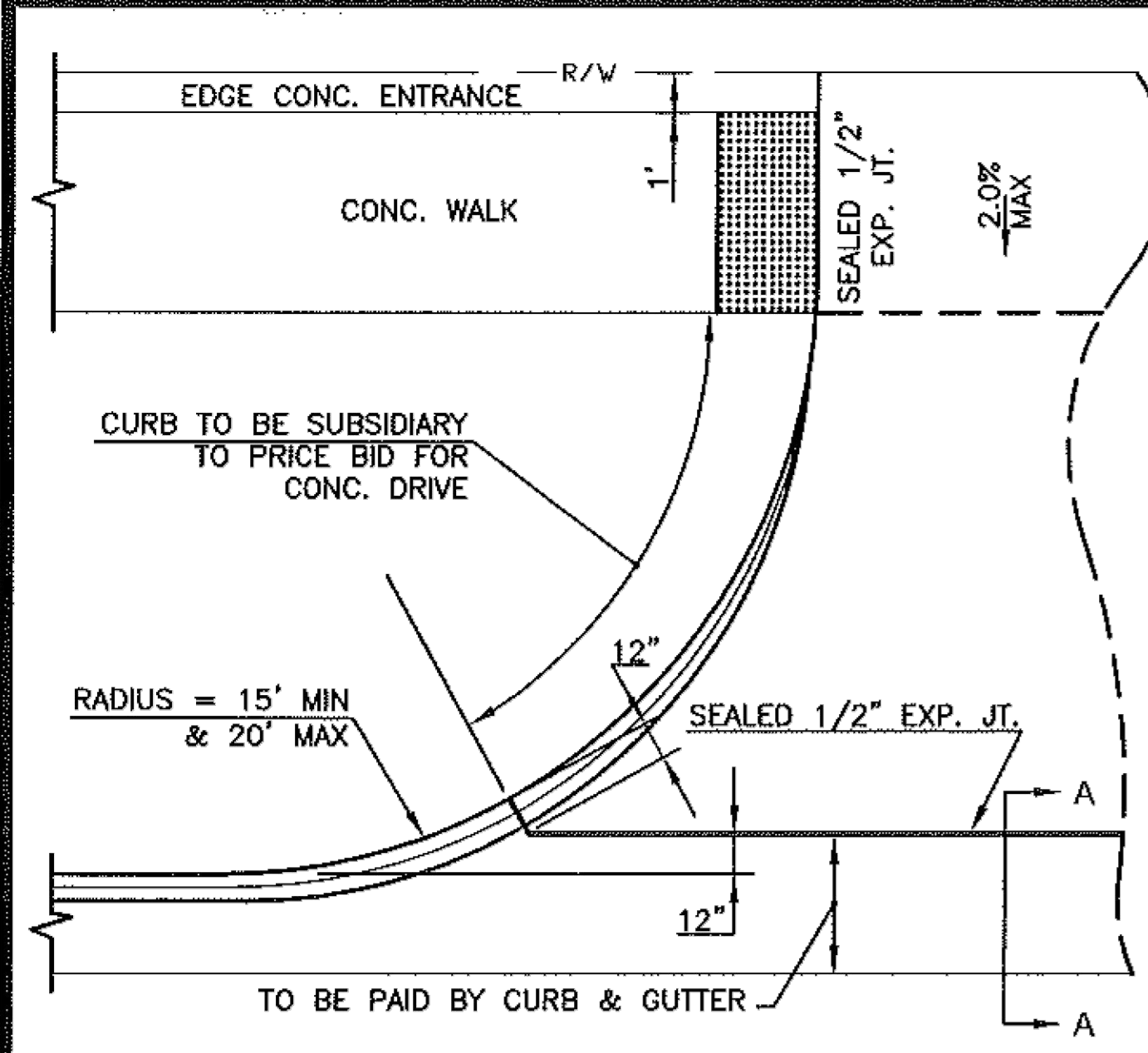
STANDARD DETAILS

**ASPHALT CONCRETE
PAVEMENT DETAILS**
(DT-001)

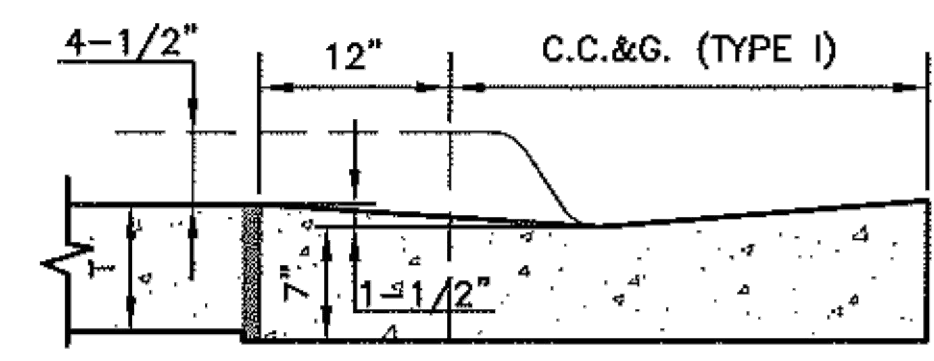
DATE: 3/13/2024
SHEET: 14 OF 36
PROJ.: S-841013.00



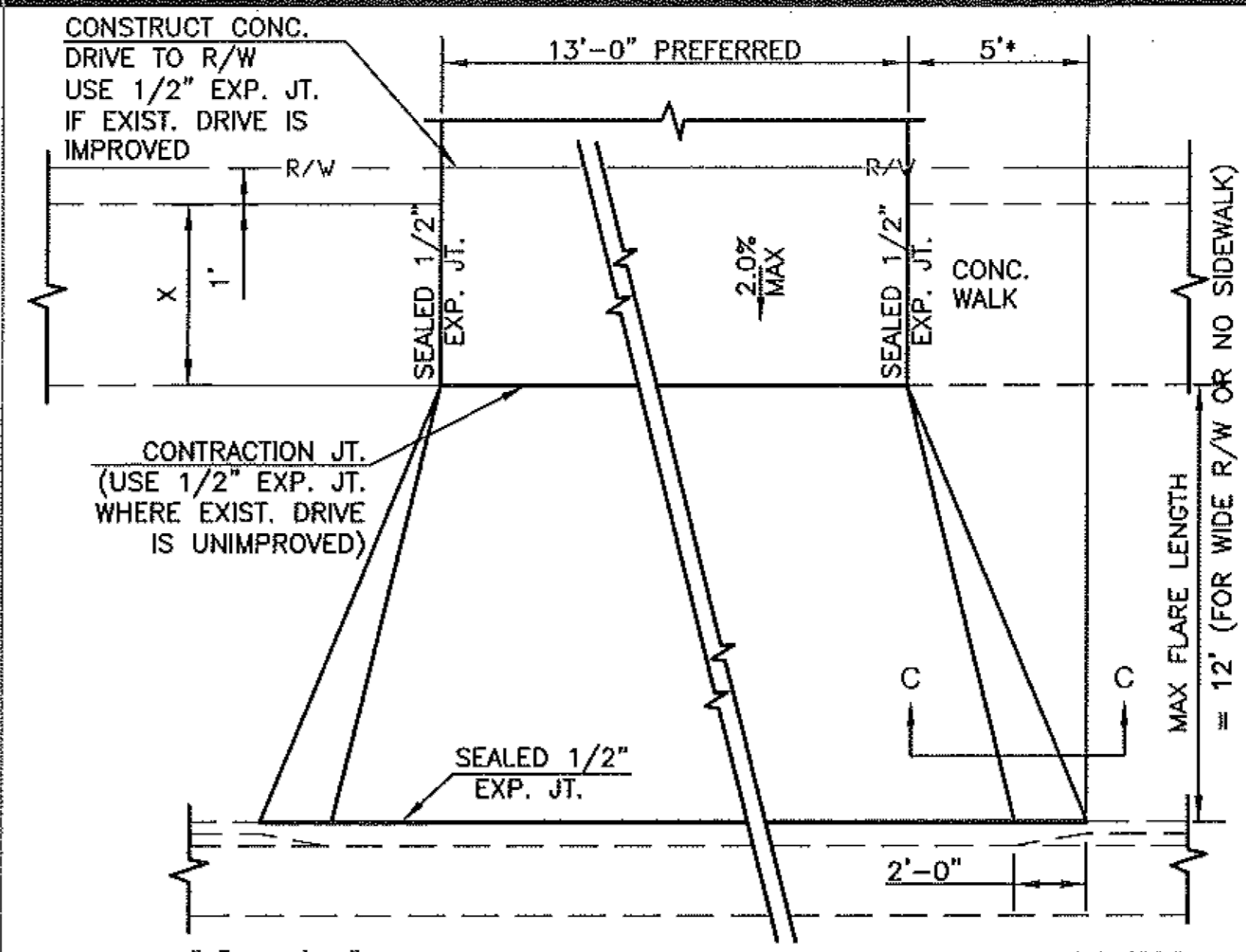
| | | | | | | | | | | |
|-----|------------|---|-----|-------|----------------------------------|---|--|-------------------------|--|--|
| 6 | June 2018 | Eliminated sealing butt joint at curb toe | DHS | JVH | DRAWN BY: <i>rm/mc</i> |  SHAWNEE COUNTY, KANSAS PUBLIC WORKS DEPARTMENT 1515 NW SALINE TOPEKA, KS 66618 (785) 233-7702 |  TOPEKA Public Works ENGINEERING 620 SE MADISON St. • 2nd Floor • TOPEKA, KS 66607 Phone: (785) 368-3842 • Fax: (785) 368-3881 | STANDARD DETAILS | CONCRETE PAVEMENT DETAILS (DT-002) | DATE: 3/13/2024 SHEET: 15 OF 36 PROJ.: S-841013.00 |
| 5 | March 2013 | Made bar size " & added ref. to DT-017 | DHS | SB | APP'D BY: <i>R. Clumley, Jr.</i> | | | | | |
| 4 | Dec. 2012 | Changed to tie bars at Detail D | DHS | SB | | | | | | |
| 3 | March 2010 | Eliminated keyed joint at Typical Section | DHS | SB | | | | | | |
| 2 | Dec. 2009 | Eliminated keyed joints | DHS | SB | | | | | | |
| 1 | Feb. 2008 | Mod. Det.'s B,C&D and Sect.'s A-A&D-D | DHS | SB | | | | | | |
| NO. | DATE: | REVISION | BY: | APP'D | | | | | | |



COMMERCIAL DRIVE APPROACH



SECTION A - A
T=8" NON-REINFORCED FOR COMMERCIAL DRIVE, ALLEY APPROACH, AND SIDEWALK IN DRIVE ENTRANCE.

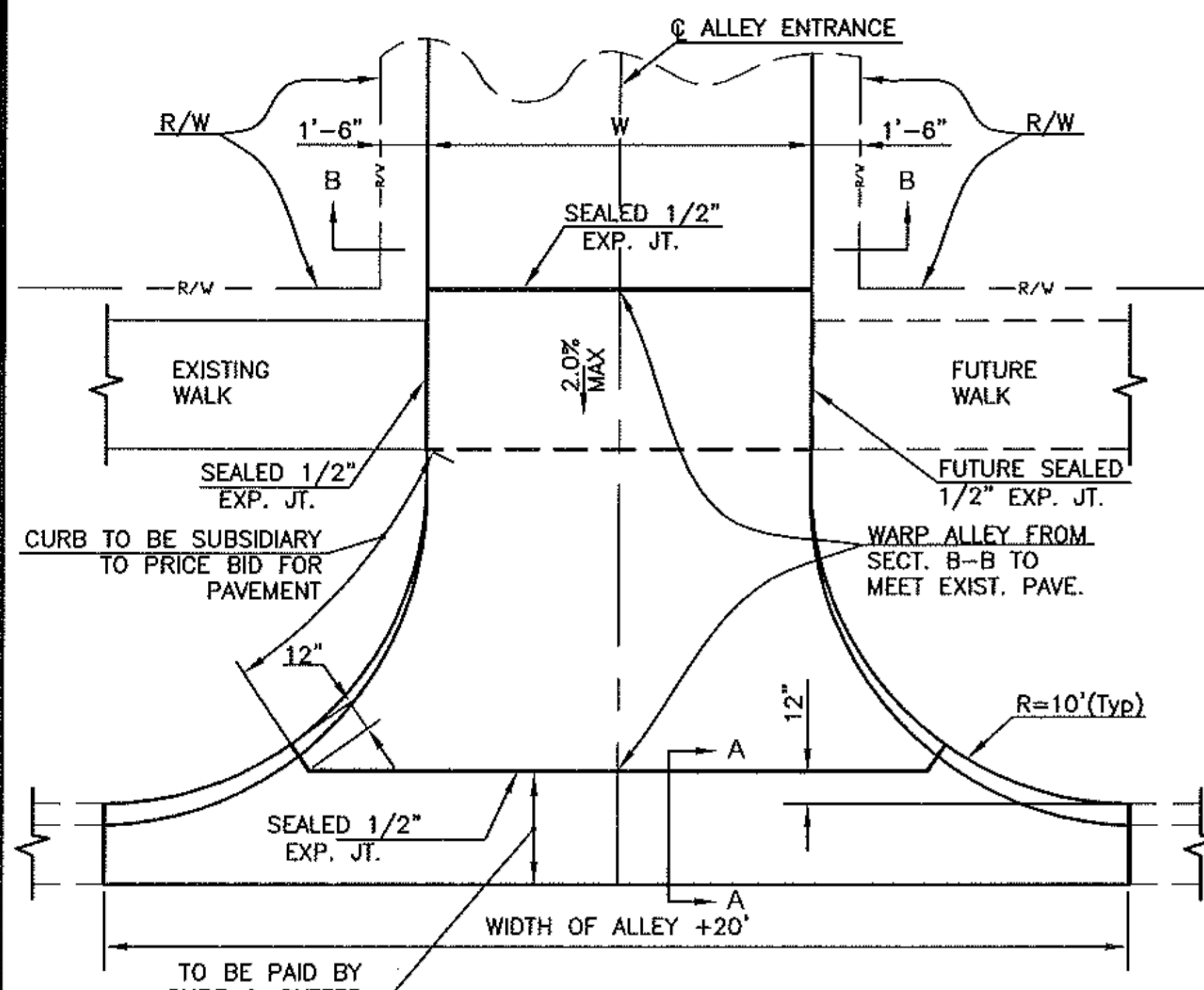


TYPICAL PRIVATE DRIVE APPROACH

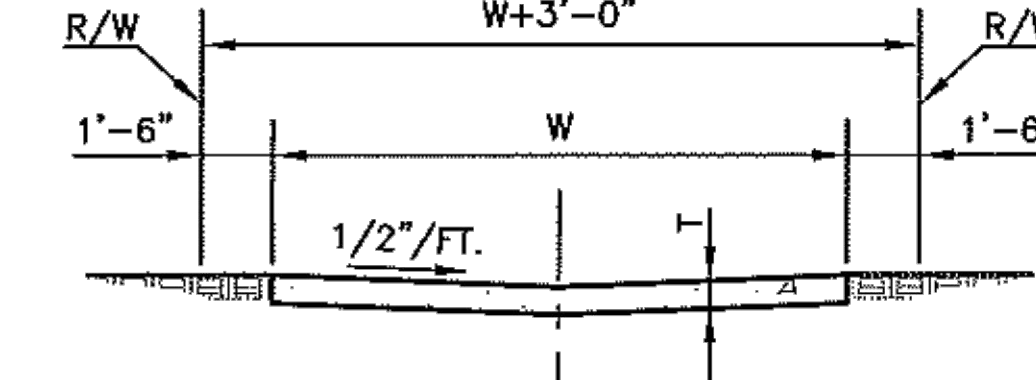
- NOTES:
1. A SPECIAL DETAIL WILL BE PROVIDED WHEN SIDEWALK IS CLOSER THAN 6'-0" FROM BACK OF CURB.
2. THEORETICAL CURB HEIGHT OF 6" ABOVE \bar{I} SHALL BE OBTAINED IN ENTRANCE PAVEMENT.
* FLARE SHALL BE 5 FEET WIDE IN NEW CONSTRUCTION. VARIANCES MAY BE MADE WITH APPROVAL OF THE CITY ENGINEER IN SPECIAL CIRCUMSTANCES FOR THE REPLACEMENT OF EXISTING DRIVEWAYS.



SECTION C - C
T₁=6" FOR RESIDENTIAL DRIVE APPROACH AND SIDEWALK IN DRIVE ENTRANCE

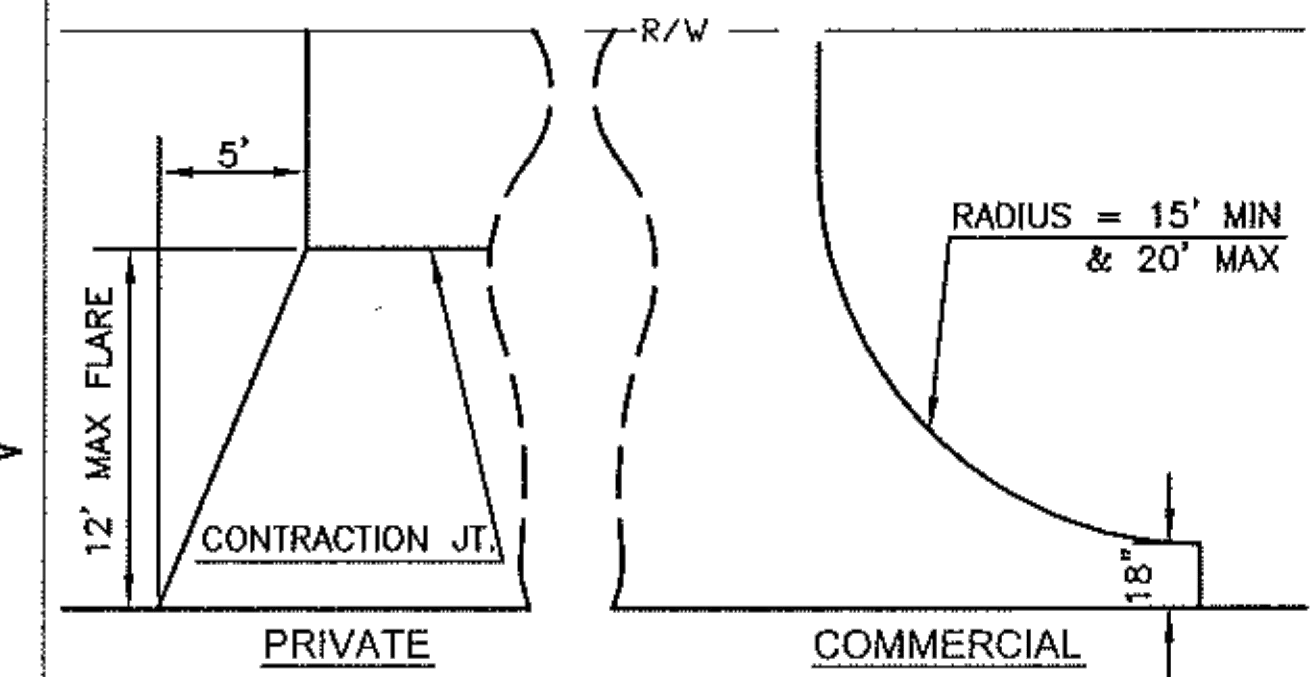


ALLEY APPROACH

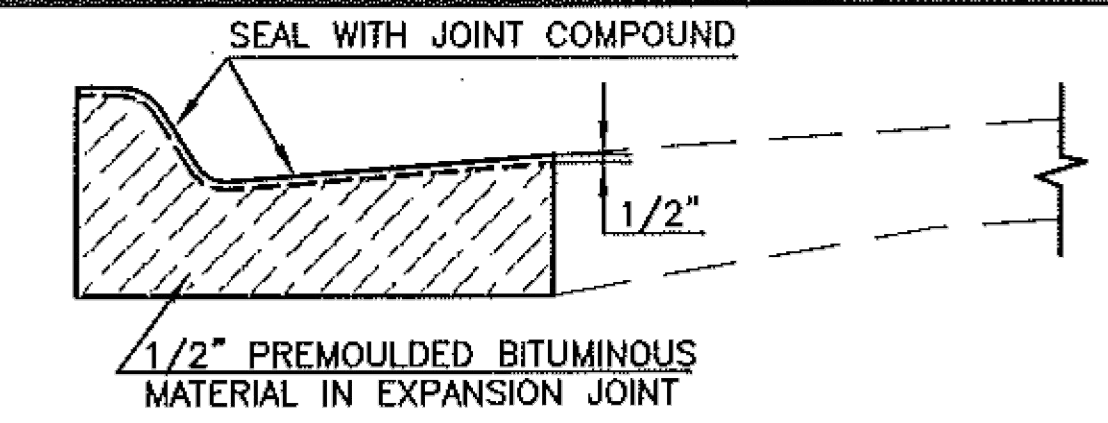


SECTION B - B

- NOTES:
1. T=7" REINFORCED CONCRETE
2. WIDTH OF W WILL BE USED THROUGHOUT ON ALL ALLEY PAVING PROJECTS.
3. ALLEY RETURNS SHALL BE THE SAME THICKNESS AS THE ADJACENT STREET THICKNESS.
4. 1/2" EXP. JOINT AT EACH END OF ALLEY RETURN.

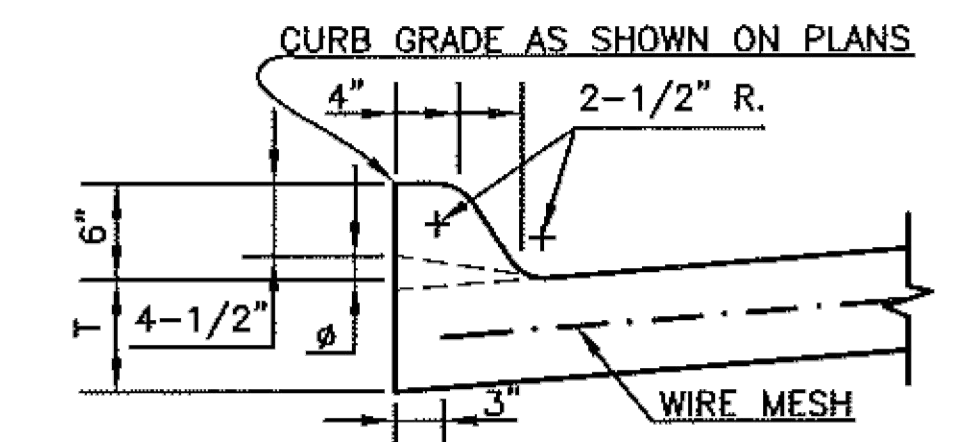


DRIVE APPROACHES ON AN UNIMPROVED ROADWAY

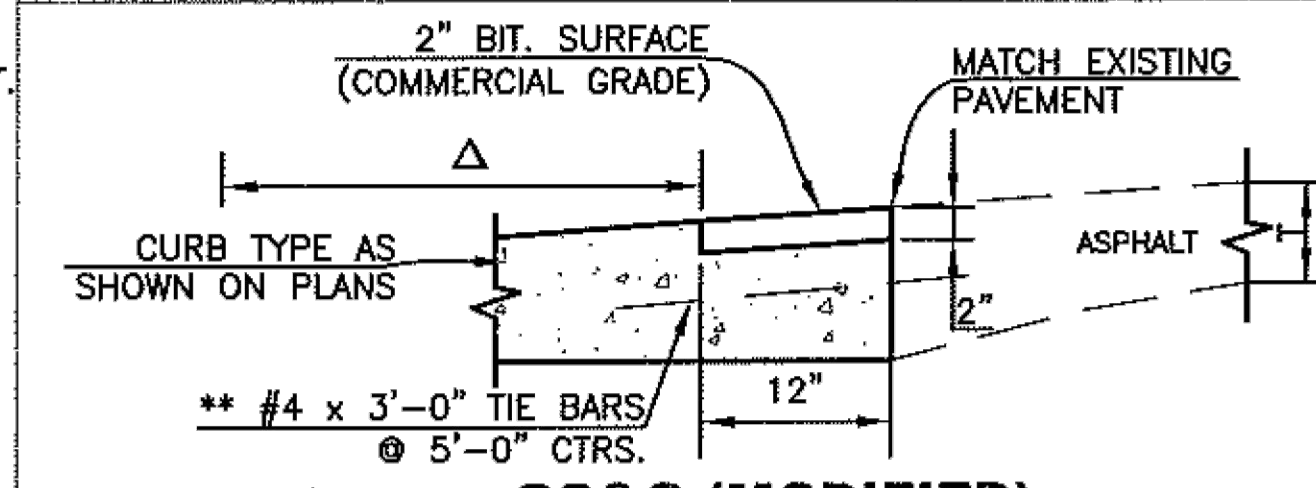


CURB AND GUTTER EXPANSION JOINT DETAILS

- NOTES:
1. 1/2" EXPANSION JOINTS TO BE PLACED AT THE END OF ALL INTERSECTION RETURNS.
2. SAND IS NOT AN APPROVED FILL OR SUBGRADE MATERIAL.
3. ALL EXPANSION JOINTS SHALL BE SEALED WITH APPROVED MATERIAL.

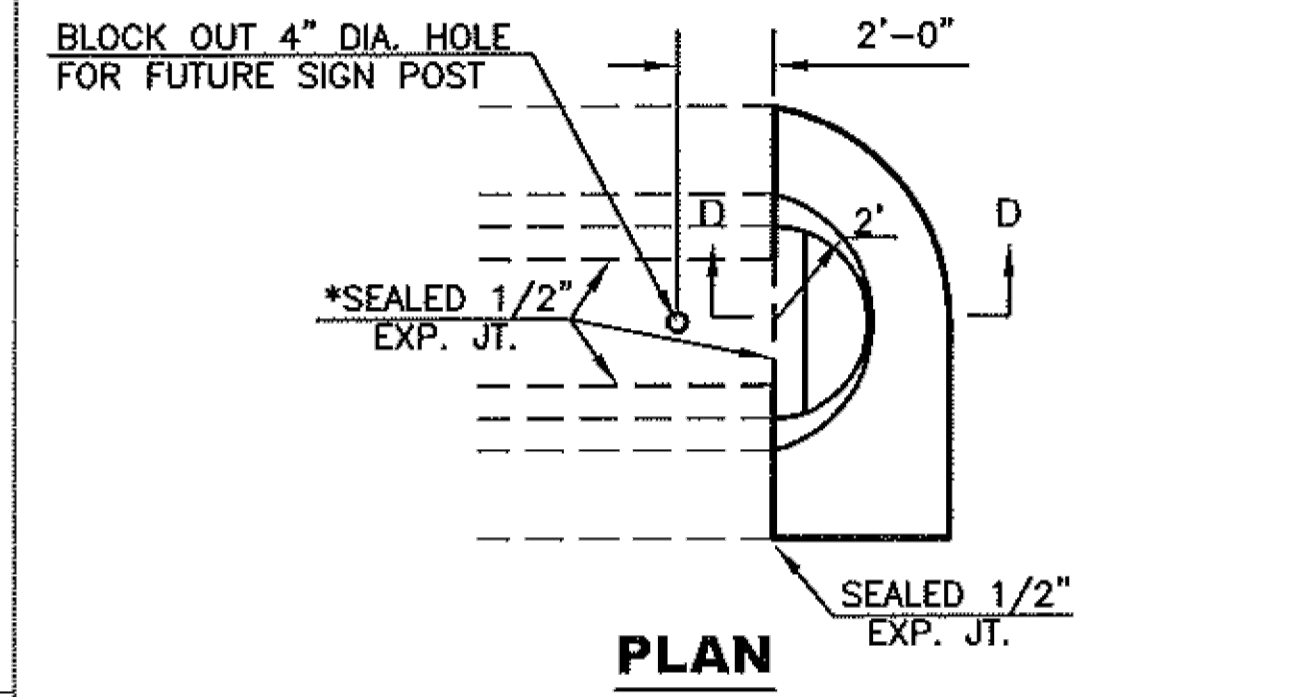


6" INTEGRAL CURB

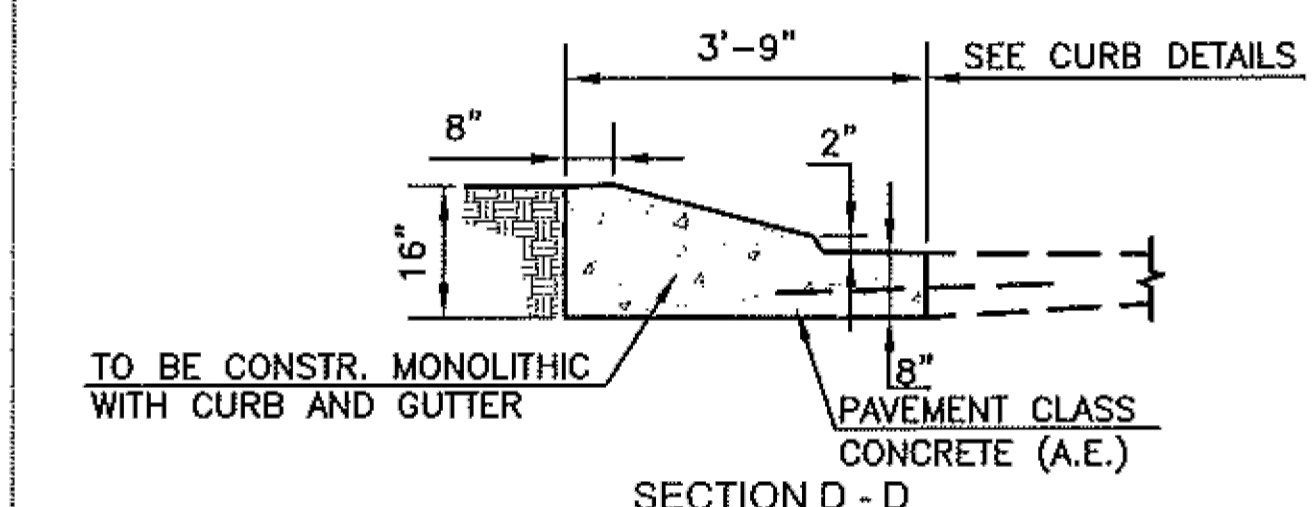


CC&G (MODIFIED)

- NOTE:
CURB AND GUTTER ABUTTING EXISTING ASPHALT
 Δ DIMENSION IS FROM BACK OF CURB TO TOE, SEE APPROPRIATE DETAIL FOR CURB TYPE AS SHOWN ON PLANS

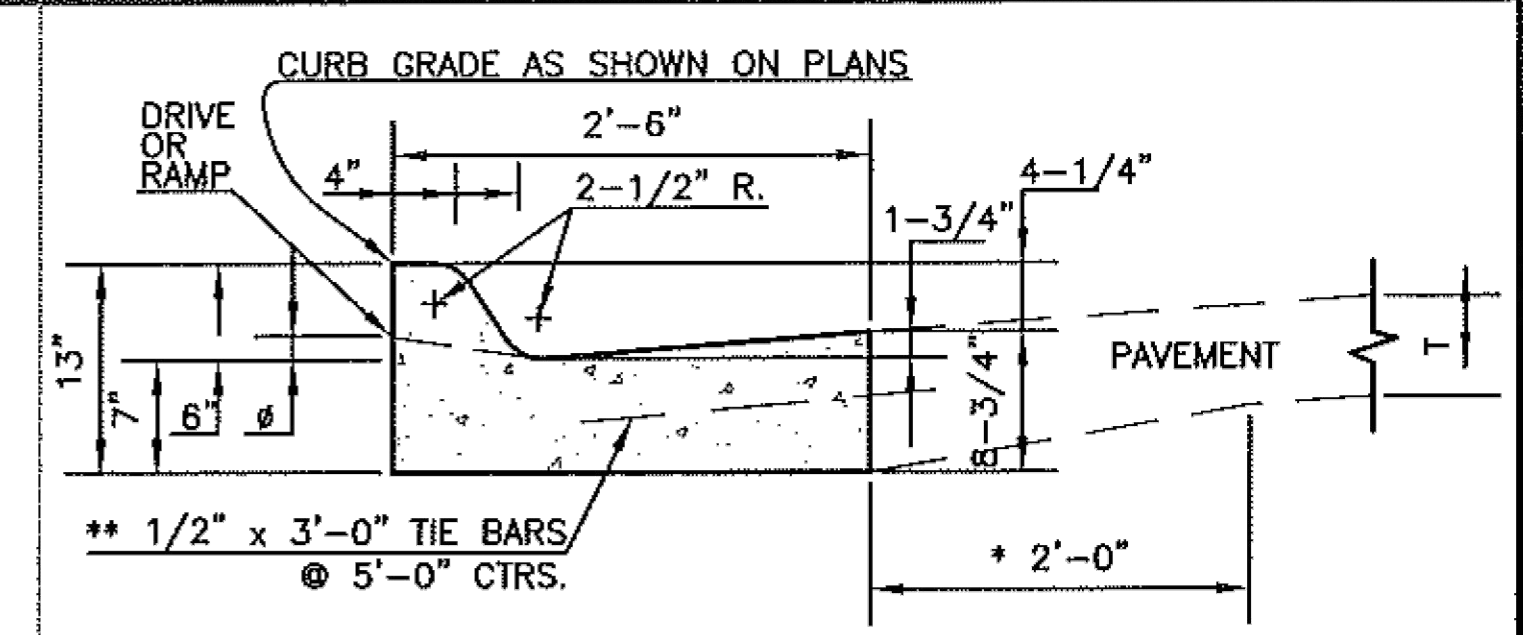


PLAN

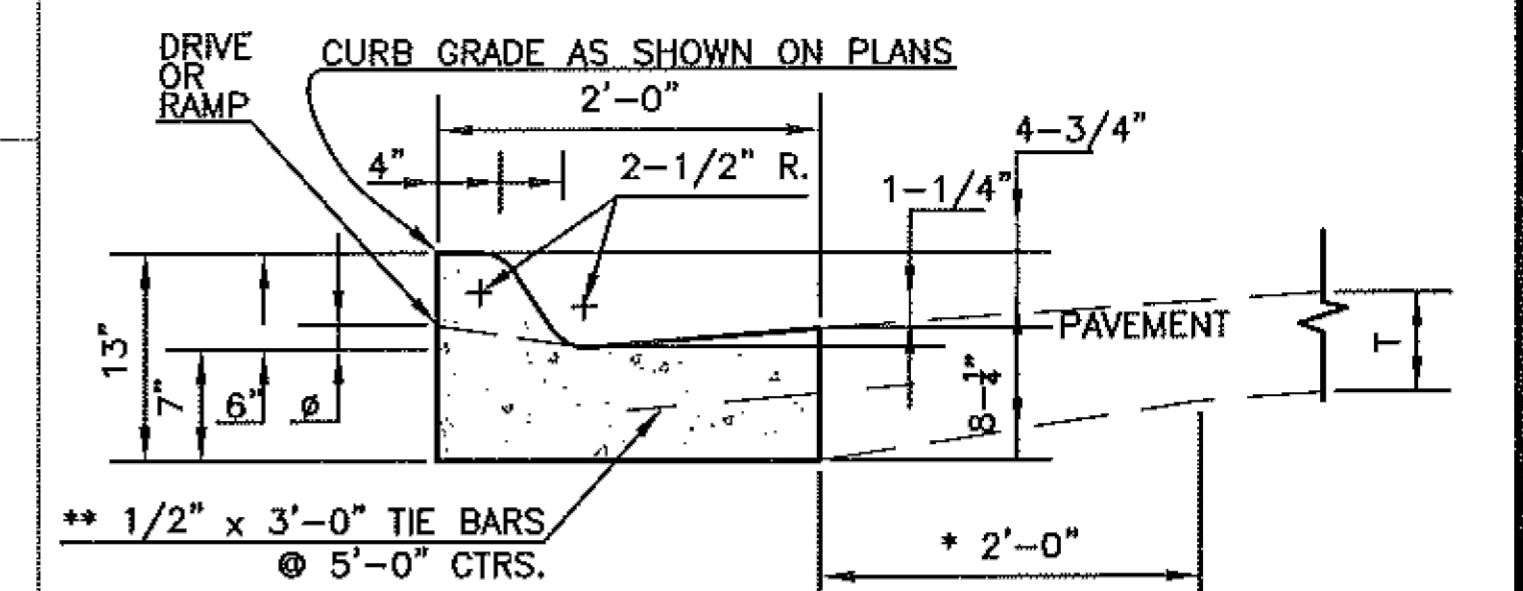


SECTION D - D
SOLID NOSE DETAILS

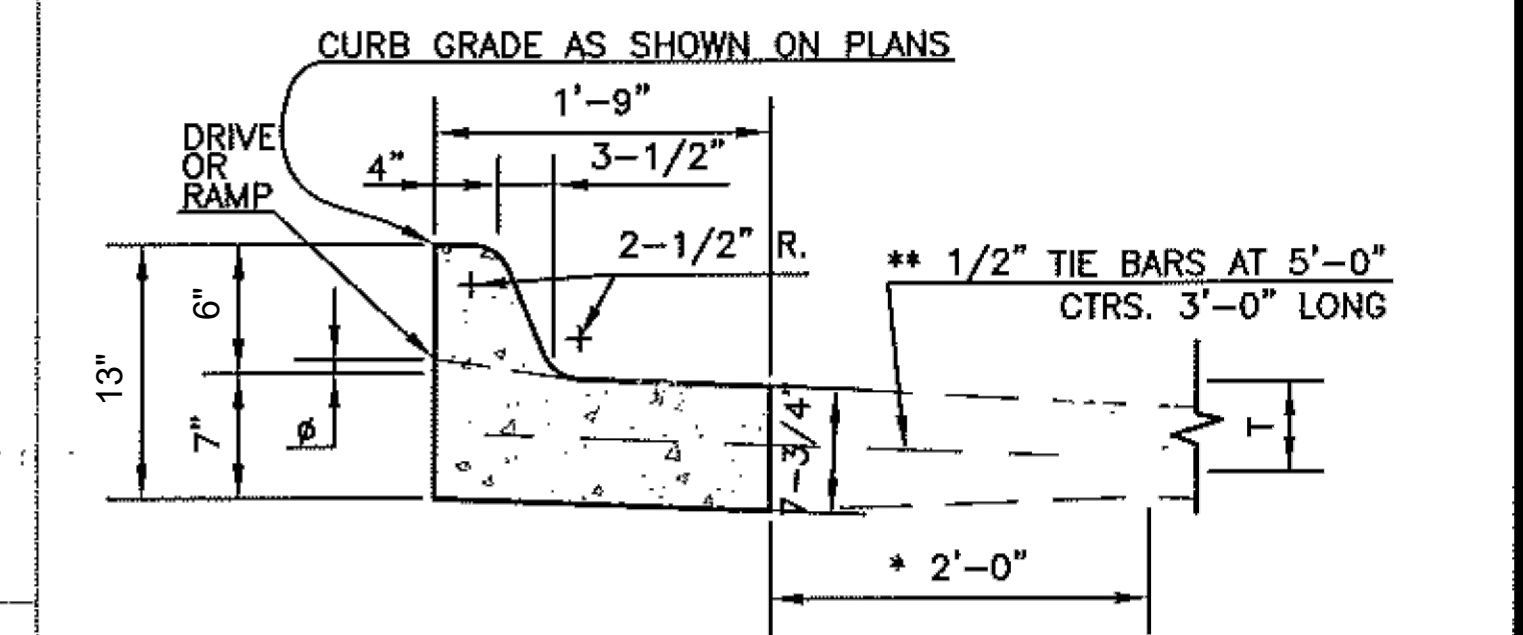
- NOTE:
PAVEMENT CLASS CONCRETE (AE) NEEDED TO COMPLETE THE MEDIAN NOSE SHALL BE SUBSIDIARY TO THE BID ITEM FOR COMBINED CURB AND GUTTER TYPE III.
* OMIT SEALED 1/2" EXPANSION JOINT WHEN SURFACE MATERIAL USED IN MEDIAN IS OTHER THAN CONCRETE.



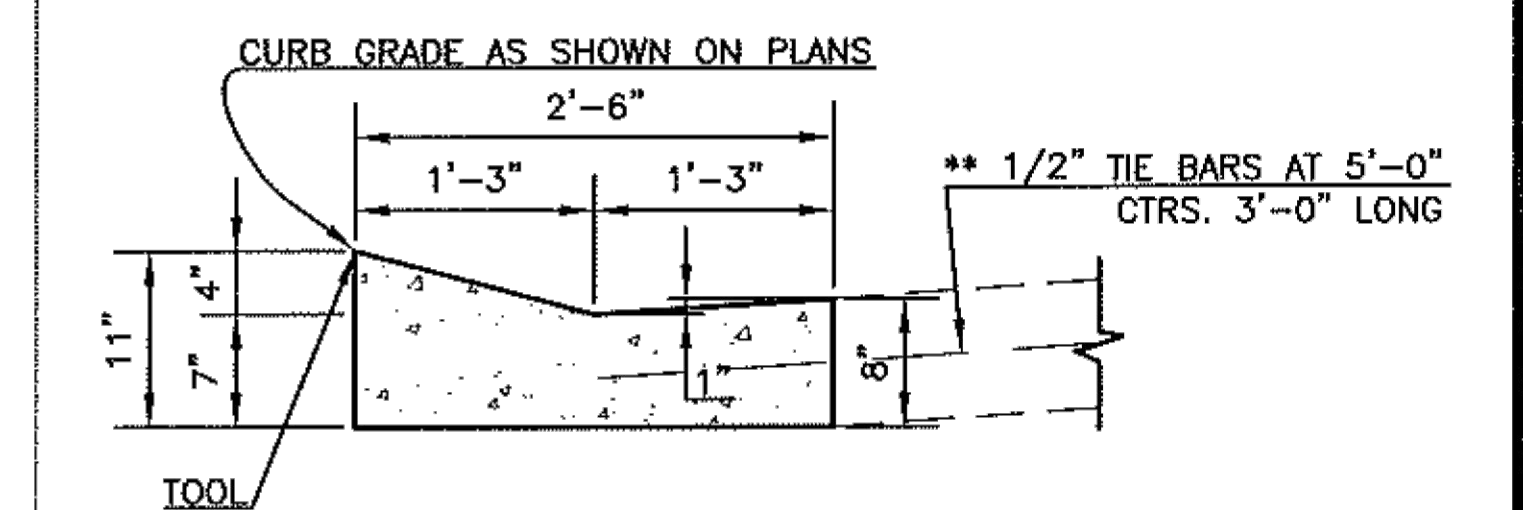
COMBINED CURB & GUTTER-TYPE I



COMBINED CURB & GUTTER-TYPE II



COMBINED CURB & GUTTER-TYPE III (6")



LAYBACK CURB & GUTTER-TYPE IV

- NOTES:
1. USE OF LAYBACK CURB AND GUTTER IS RESTRICTED TO STREET CLASSIFICATION OF SUB-COLLECTOR AND LOCAL. LAYBACK CURB AND GUTTER SHALL NOT BE USED IN INTERSECTION CURB RETURNS.
2. FOR CURB AND GUTTER ABUTTING EXISTING ASPHALT, REFER TO CC&G MODIFIED DETAIL.

* THE CONTRACTOR HAS THE OPTION OF MAINTAINING OR TRANSITIONING AS SHOWN AT NO ADDITIONAL COST.

**THE TIE BARS MAY BE ELIMINATED WITH ASPHALTIC CONCRETE PAVEMENT CONSTRUCTION.

Ø 1-1/2" FOR DRIVE ENTRANCES AND 3/4" FOR SIDEWALK RAMP

| | | | | |
|-----|------------|--|-----|-------|
| 5 | March 2013 | C&G payment @ alley appr. & bars to | DHS | SB |
| 4 | Dec. 2012 | Changed to tie bar from rebar | DHS | SB |
| 3 | March 2010 | Eliminated keyed jt. at Corn. Drive Appr. | DHS | SB |
| 2 | Dec. 2009 | Added Dr. Appr. on Unimpr. Rdwy., added flare verpage, mod. S/W x-slope & remv. keyed joints from C & G. | DHS | SB |
| 1 | Feb. 2008 | Mod. Corn. Or. & Alley Appr. | DHS | SB |
| NO. | DATE | REVISION | BY | APP'D |

DRAWN BY: *rm/mc*
APP'D BY: *R. Cloutier*



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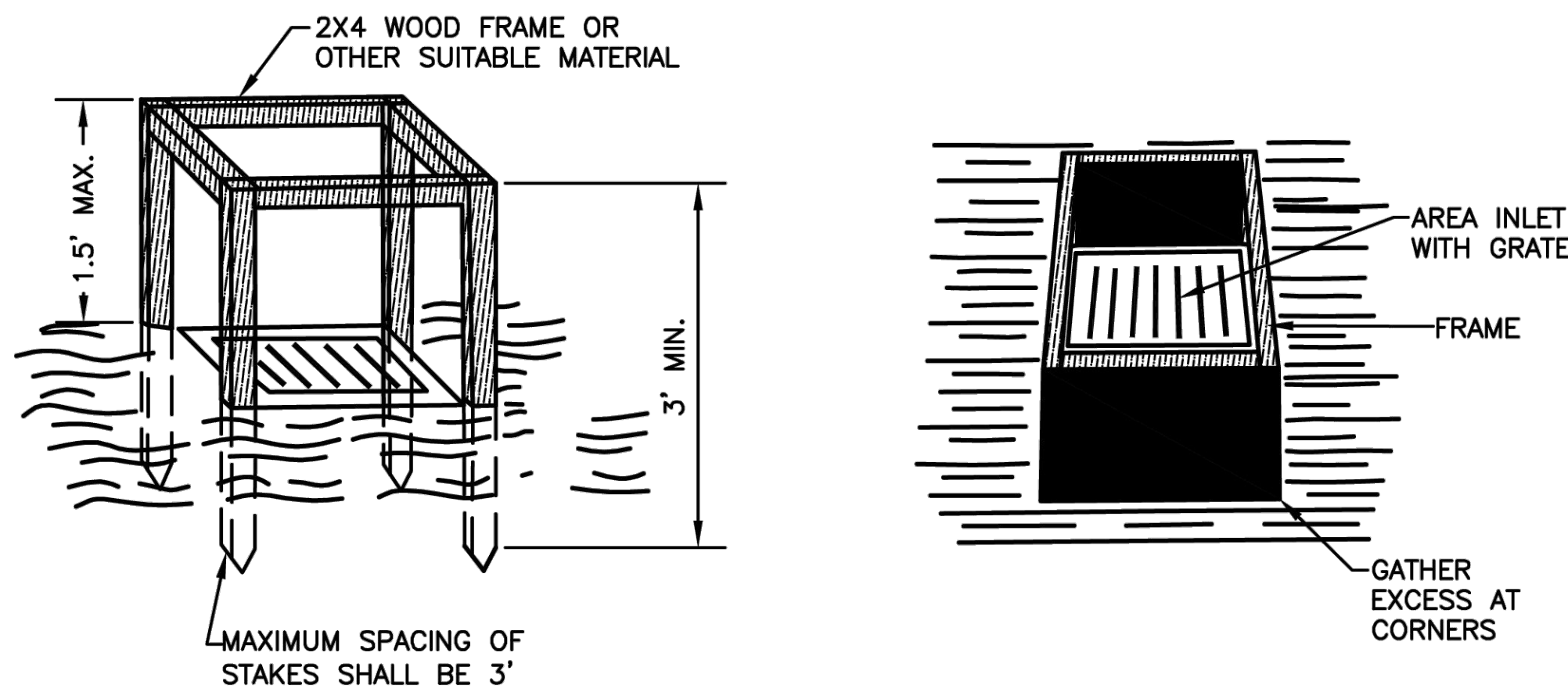


STANDARD DETAILS

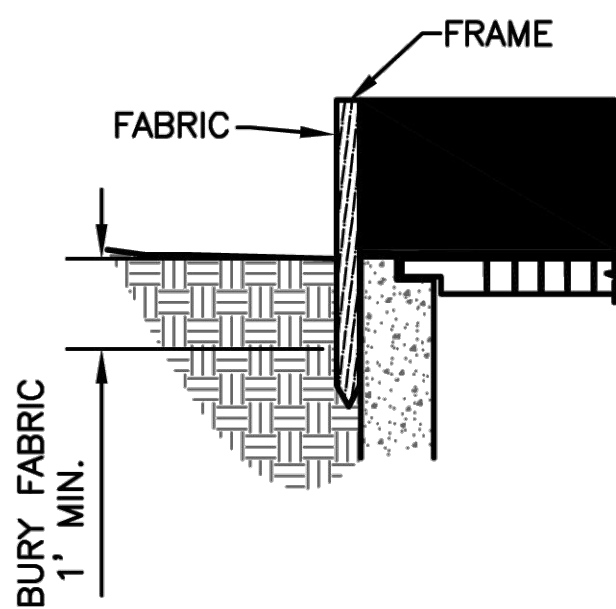
CURB & GUTTER AND APPROACH DETAILS
(BT-003)

DATE: 3/13/2024
SHEET 16 OF 36
PROJ.: S-841013.00

DATE: 3/13/2024
SHEET: 17 OF 36
PROJ.: S-841013.00



TOP VIEWS



PROFILE VIEW

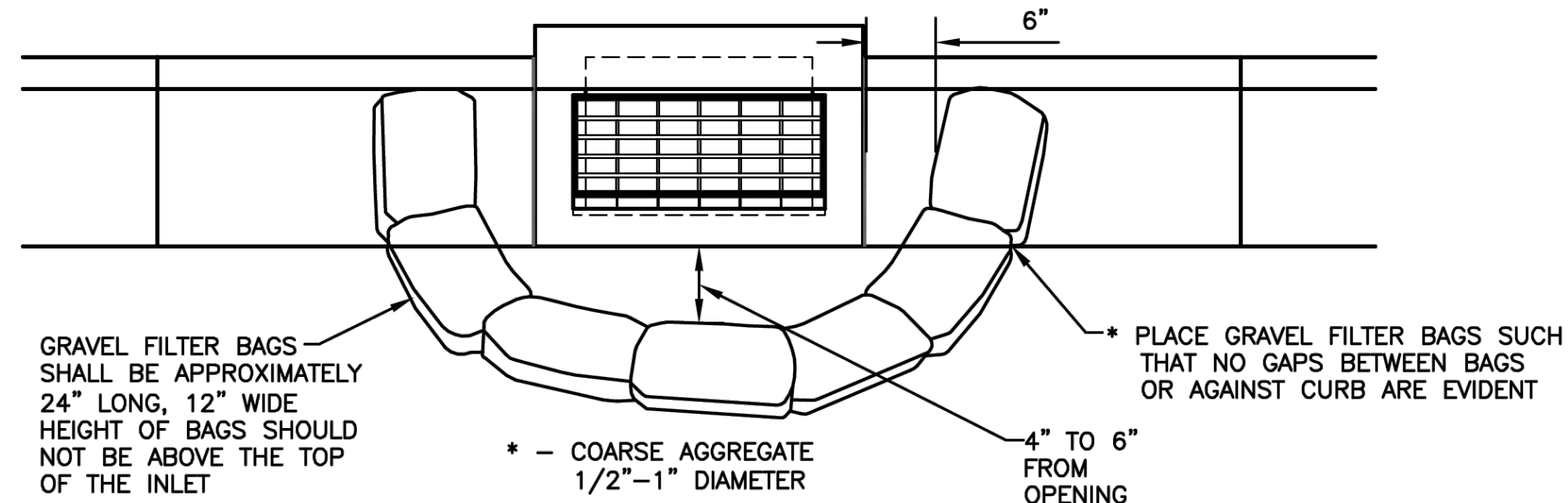
- NOTES:
1. BASE OF FABRIC SHALL BE BURIED AT LEAST 1' BELOW GROUND SURFACE AND BACKFILLED WITH CRUSHED STONE OR COMPACTED MATERIAL.
 2. WIRE MESH FENCE MAY BE USED TO SUPPORT FABRIC. TOP OF FENCE SHOULD BE LEVEL WITH FRAME AND BOTTOM BURIED 6" BELOW GROUND.
 3. MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON DOWN-SLOPE SIDE OF STRUCTURE TO PREVENT BYPASS FLOW.
 4. STRAW BALES OR GRAVEL FILLED FILTER BAGS MAY BE USED IN LIEU OF FABRIC. IF STRAW BALES ARE USED, TWO 4' (MINIMUM) LONG, 2" X 2" HARDWOOD STAKES SHALL BE DRIVEN THROUGH EACH BALE AND SET BACK 12" TO 24" FROM INLET. IF FILTER BAGS ARE USED, PLACE BAGS SUCH THAT NO GAPS ARE EVIDENT.

AREA INLET PROTECTION

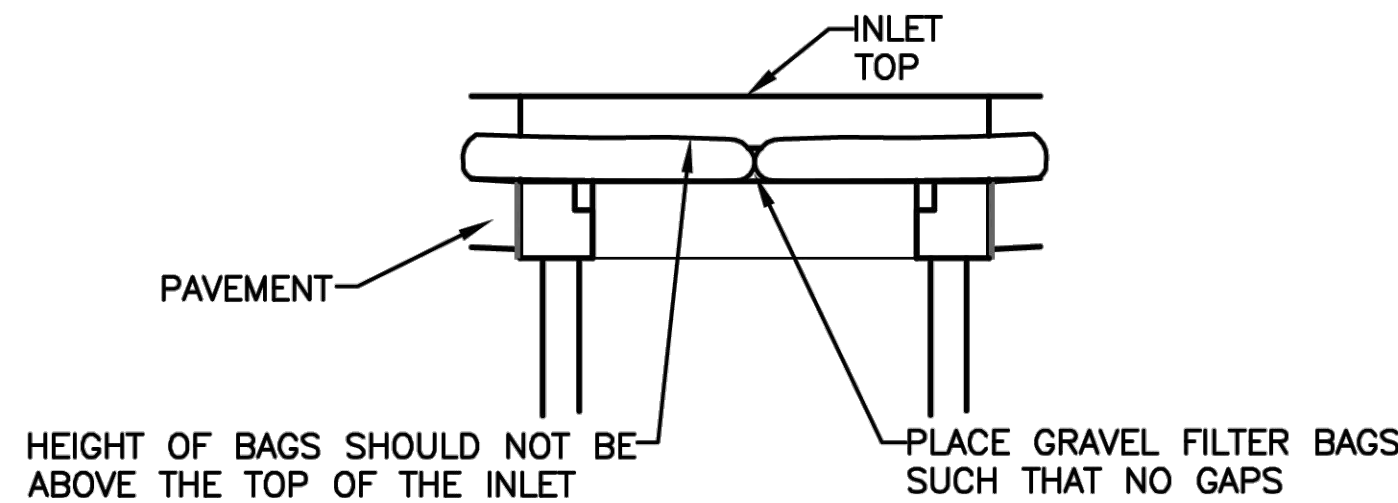
- GENERAL NOTES:
1. ANY EROSION AND SEDIMENT CONTROL MEASURES INTENDED TO CONTROL EROSION OF AN EARTH DISTURBANCE OPERATION SHALL BE INSTALLED BEFORE ANY EARTH DISTURBANCE OPERATIONS TAKE PLACE.
 2. THE CONTRACTOR SHALL INSPECT THE LAND DISTURBANCE SITE AFTER EACH SIGNIFICANT RAINFALL EVENT WITHIN A 24-HOUR PERIOD AND ASSURE THAT ALL EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING CONDITION PRIOR TO ANY FORECASTED RAINFALL. SEDIMENT REMOVAL AND ALL NECESSARY REPAIRS SHALL BE MADE TO MAINTAIN THE INTEGRITY OF THE EROSION AND SEDIMENT CONTROL MEASURES. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF OF THE INSTALLED HEIGHT OF MEASURE.
 3. THE CONTRACTOR SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING ALL PHASES OF CONSTRUCTION UNTIL OWNER ACCEPTS WORK AS COMPLETE. THE CONTRACTOR SHALL PROVIDE TEMPORARY SEEDING, BERMS, SILT FENCE, SEDIMENT TRAPS OR OTHER MEANS TO PREVENT SEDIMENT FROM REACHING STREAMS, PUBLIC RIGHT-OF-WAY OR ADJACENT PROPERTY.
 4. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED ONCE 70 PERCENT OF THE PERMANENT COVER IS ESTABLISHED.
 5. THE CONTRACTOR SHALL TEMPORARILY SEED AND MULCH ALL DISTURBED AREAS IF THERE HAS BEEN NO CONSTRUCTION ACTIVITY ON THEM FOR A PERIOD OF 14 CALENDAR DAYS. IF THE ENGINEER DETERMINES THAT A SITE HAS A POTENTIAL FOR EROSION, STABILIZATION OF SOIL MAY BE REQUIRED. TEMPORARY SEED MIXTURE SHALL BE APPROVED BY THE ENGINEER OR AS FOLLOWS:

| | | | |
|-------|--|-------------------|------------------|
| TYPE: | | APPLICATION RATE: | |
| | | WINTER WHEAT | 120 LBS PER ACRE |
| | | RYEGRASS | 75 LBS PER ACRE |

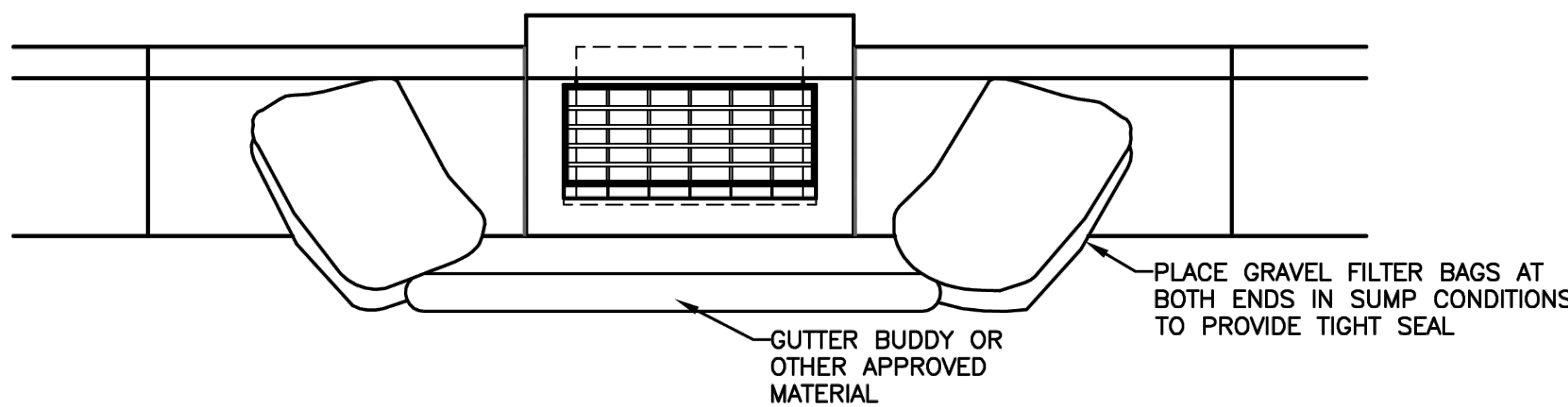
REPAIRS AND RESEEDING SHALL BE PERFORMED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER. IF VEGETATIVE MEASURES ARE NOT EFFECTIVE, NON-VEGETATIVE OPTION MAY BE REQUIRED.



PLAN



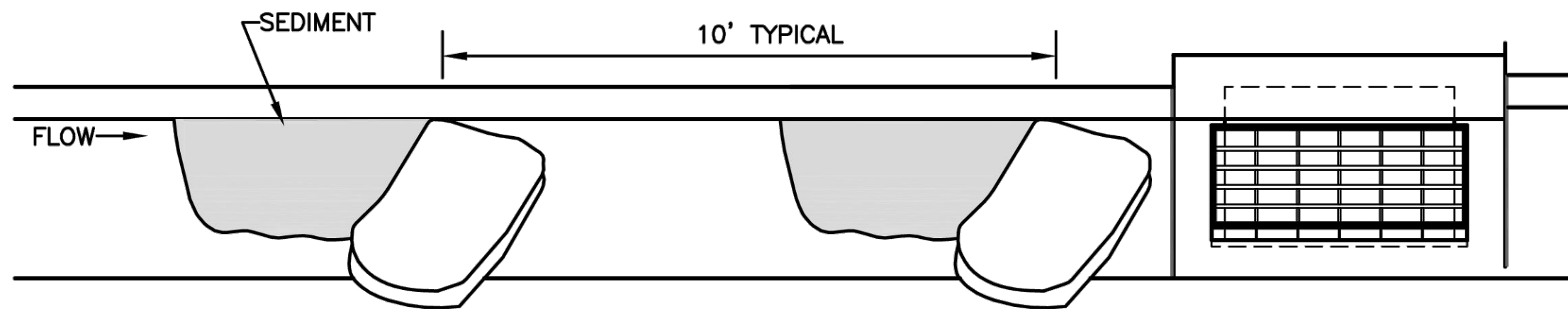
PROFILE



PLAN

SUMP CONDITIONS

NOTE:
DO NOT BLOCK INLET OPENING - STORMWATER MUST BE ALLOWED TO FLOW TO DRAIN AND NOT BYPASS TO DOWNSTREAM.



PLAN

IN GRADE CONDITIONS

- NOTES:
1. OTHER APPROVED CURB INLET SEDIMENT FILTERS MAY BE USED.
 2. IMMEDIATELY FOLLOWING INLET CONSTRUCTION AND PRIOR TO CONSTRUCTION OF CURB AND INLET THROAT, PROTECT INLET OPENING AROUND PERIMETER. SEE AREA INLET DETAIL THIS PAGE.
 3. CONTRACTOR TO CLEAN OUT SEDIMENT AFTER EACH SIGNIFICANT RAINFALL EVENT.
 4. DURING CONSTRUCTION GRAVEL FILTER BAGS SHALL BE REPLACED PRIOR TO DEGRADATION.
 5. ANY SEDIMENT OR GRAVEL DEPOSITED IN INLET SHALL BE REMOVED PROMPTLY.

CURB INLET SEDIMENT PROTECTION

| | | | | | |
|-----|------------|-----------------------|-----|-------|--|
| | | | | | |
| | | | | | |
| | | | | | |
| 2 | May 2015 | Added & Updated Notes | DHS | JDH | |
| 1 | March 2013 | Revised Notes | DHS | JDH | |
| NO. | DATE: | REVISION | BY: | APP'D | |

DRAWN BY: DHS
APP'D BY: JDH



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COUNTY ENGINEER
1515 NW SALINE
TOPEKA, KS 66618
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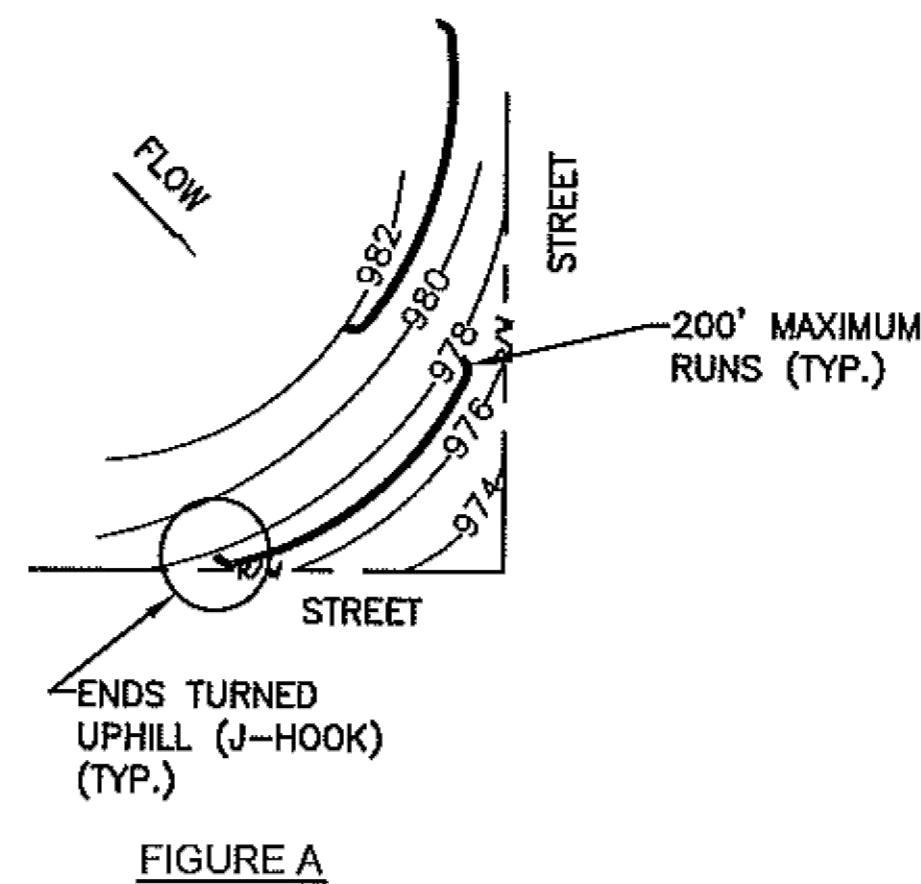
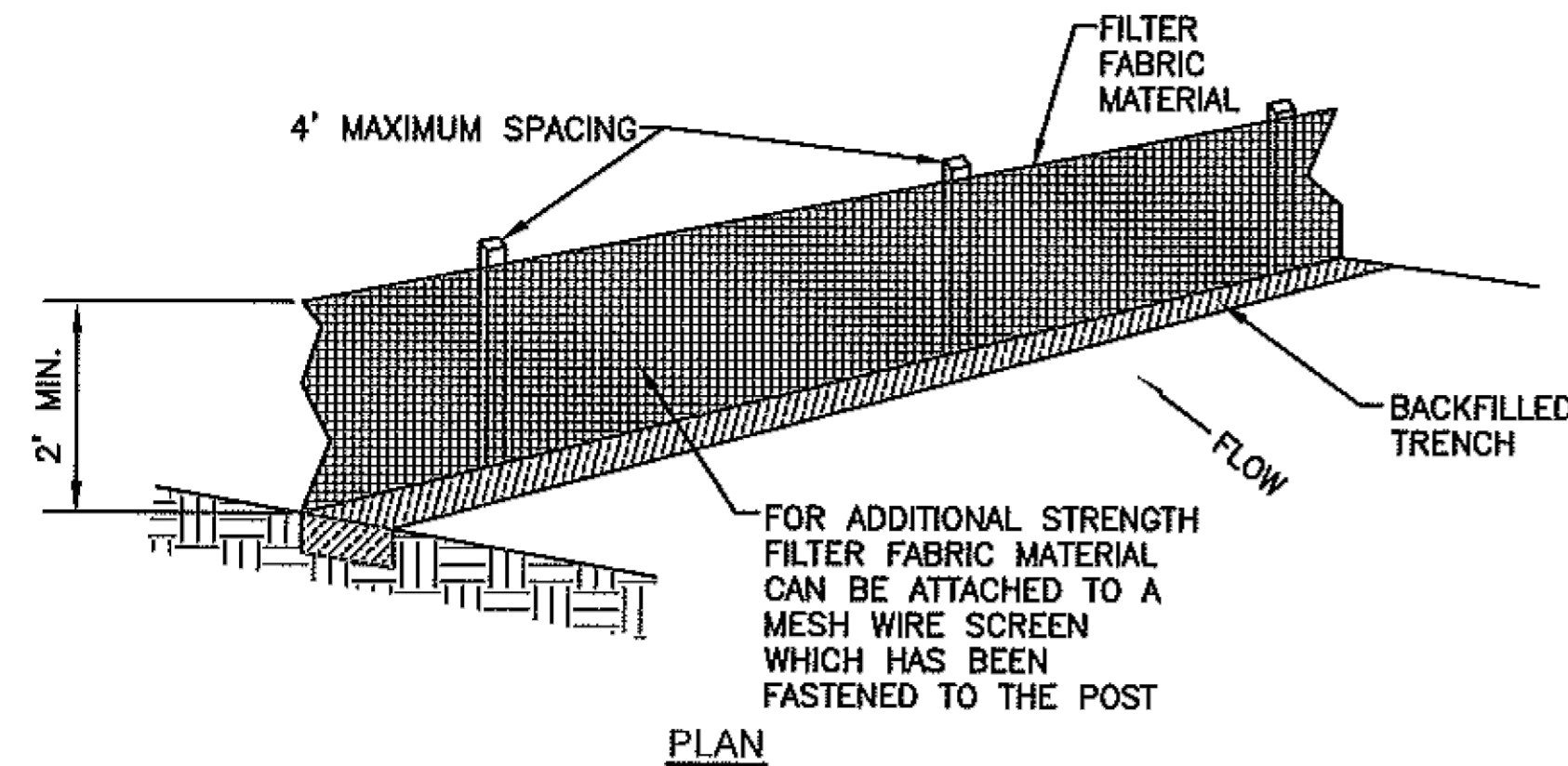


STANDARD DETAILS

EROSION & POLLUTION CONTROL

INLET PROTECTION AND GENERAL NOTES
(DT-020)

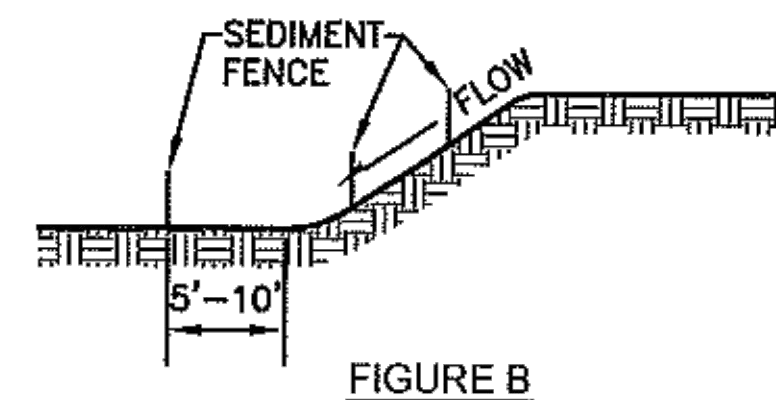
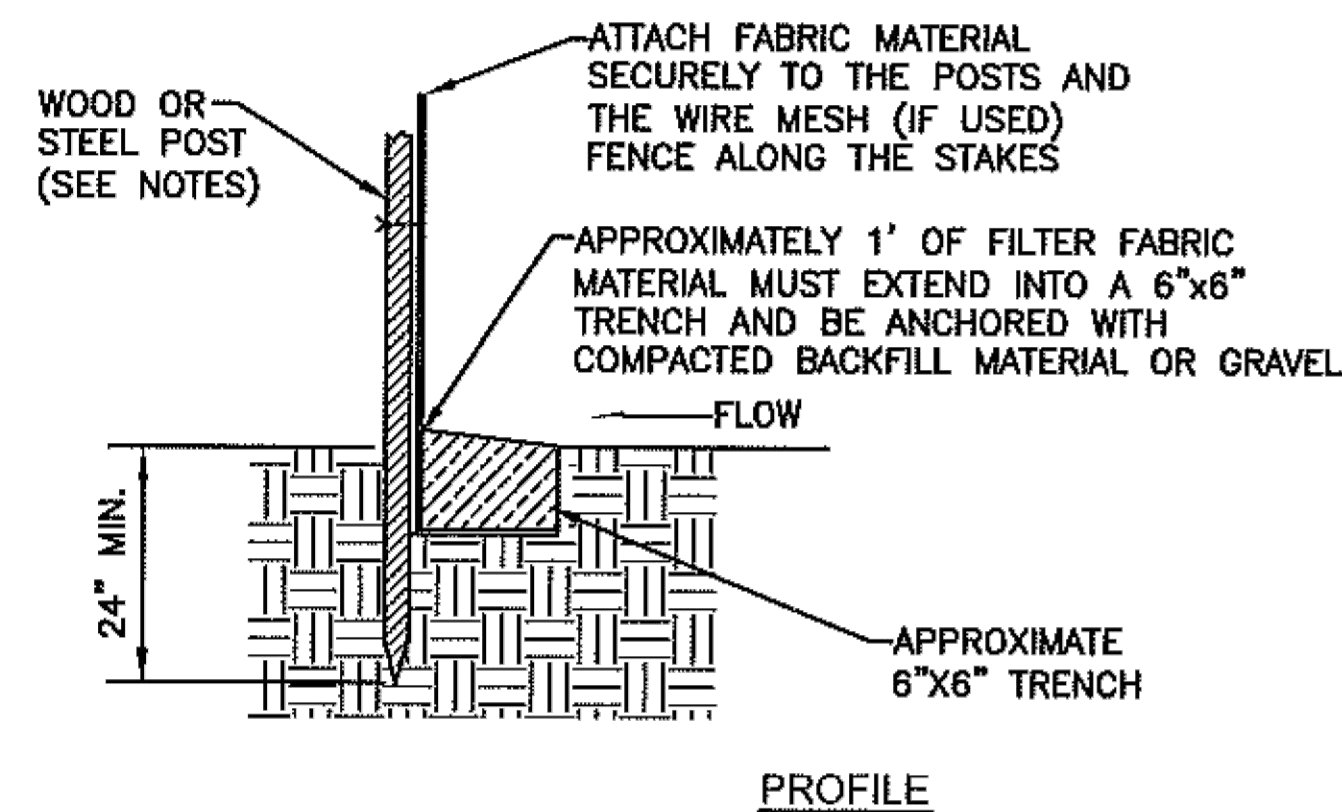
DATE: 3/13/2024
SHEET: 18 OF 36
PROJ.: S-841013.00



Land Slope and Distance for Sediment Fence

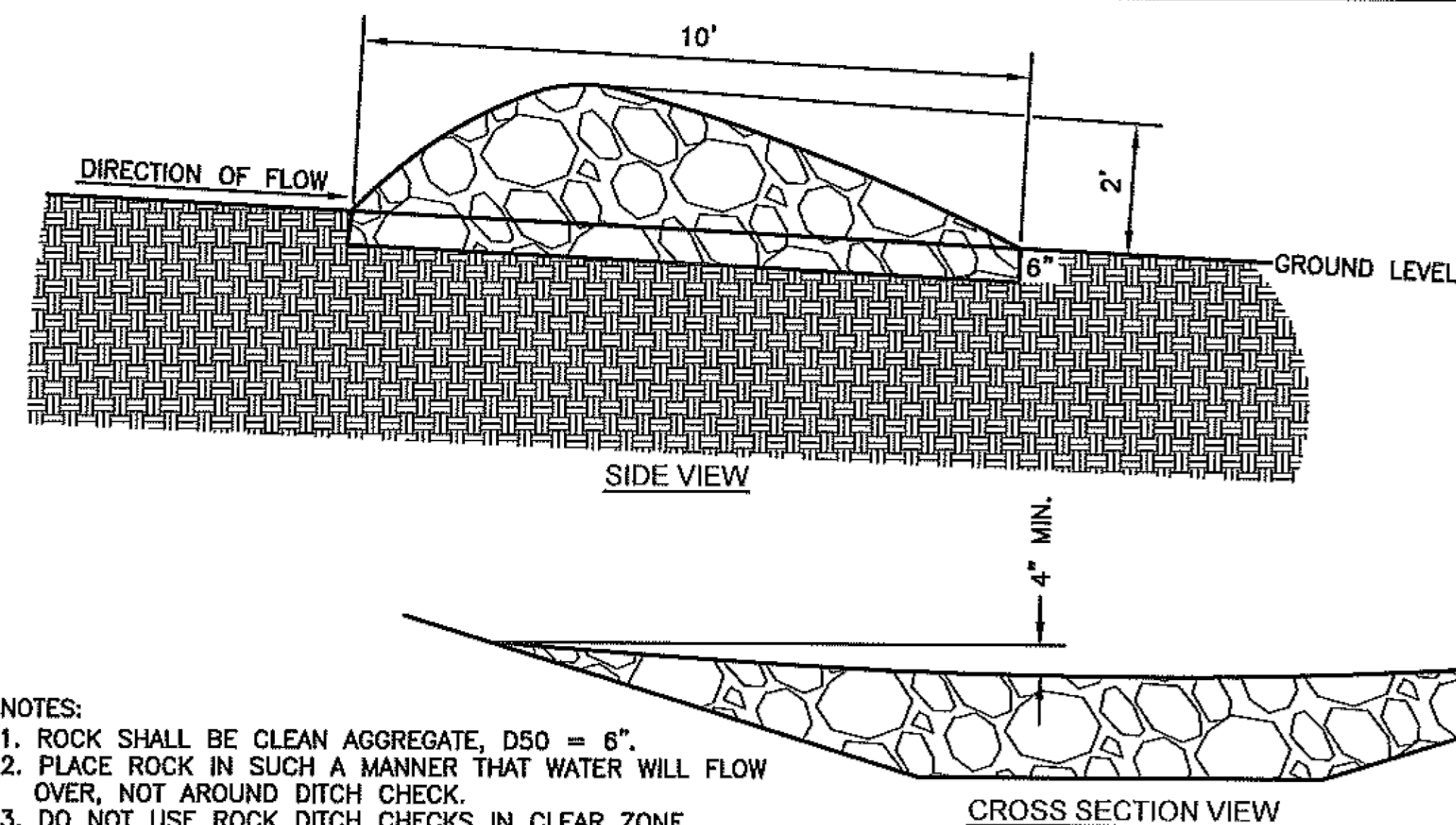
| Land Slope (percent) | Maximum Slope Distance* above Fence (feet) |
|--------------------------|--|
| Less than 2 | 100 |
| 2 to 5 | 75 |
| 5 to 10, greater than 10 | 50* |

*Follow manufacturers' recommendations for proper spacing.



- NOTES:
1. THE USE OF HAY/STRAW BALES IS THE CONTRACTOR'S OPTION. IF HAY BALES ARE USED PLACE TIGHTLY TOGETHER WITH 2"x2"x4' (MIN.) LENGTH WOOD STAKES IN OUTER 1/3 SECTIONS OF BALES. BALES SHOULD BE EMBEDDED INTO THE SOIL A MINIMUM OF 6" WITHIN A MAXIMUM DRAINAGE AREA OF 1 ACRE OR LESS.
 2. THE SEDIMENT FENCES SHALL BE PLACED ALONG CONTOUR LINES, WITH A SHORT SECTION TURNED UPGRADE (J-HOOK) AT EACH END OF THE BARRIERS TO HOLD WATER AND SEDIMENT (SEE FIGURE A).
 3. AREAS THAT CONTAIN LARGER CONCENTRATIONS OF WATER SHALL BE LIMITED TO LENGTHS OF SILT FENCES TO NO LONGER THAN 200' (SEE FIGURE A). LIMIT TO 1/4 ACRE PER 100' OF FENCE. FURTHER RESTRICT AREA BY LAND SLOPE TABLE ABOVE.
 4. AREAS SHOULD BE BROKEN UP WITH INTERIOR SEDIMENT FENCE TO MINIMIZE WATER CONCENTRATIONS AND LONG SLOPES (SEE FIGURE B).
 5. SEDIMENT FENCES INSTALLED AT TOE OF SLOPE SHALL BE PLACED 5' TO 10' AWAY (DOWNSTREAM) TO CREATE SEDIMENT STORAGE (SEE FIGURE B).
 6. DEPTH OF WATER CONCENTRATIONS SHOULD NOT EXCEED 1.5' AT ANY POINT ALONG THE FENCE.
 7. PLACE SILT FENCE ONLY WHERE OVERLAND OR SHEET FLOW DISCHARGES OCCUR.
 8. SILT FENCES SHOULD NOT BE USED IN CONCENTRATED FLOW CHANNELS, OR AS INLET PROTECTION DEVICES IF FLOODING CONDITIONS COULD OCCUR.
 9. DO NOT USE HAY OR STRAW BALES WITH WIRE TIES.
 10. WHEN SEDIMENT REACHES 1/2 HEIGHT OF SILT FENCE OR SIMILAR CONTROL MEASURE, THE CONTRACTOR SHALL REMOVE THE SEDIMENT.

SILT FENCE



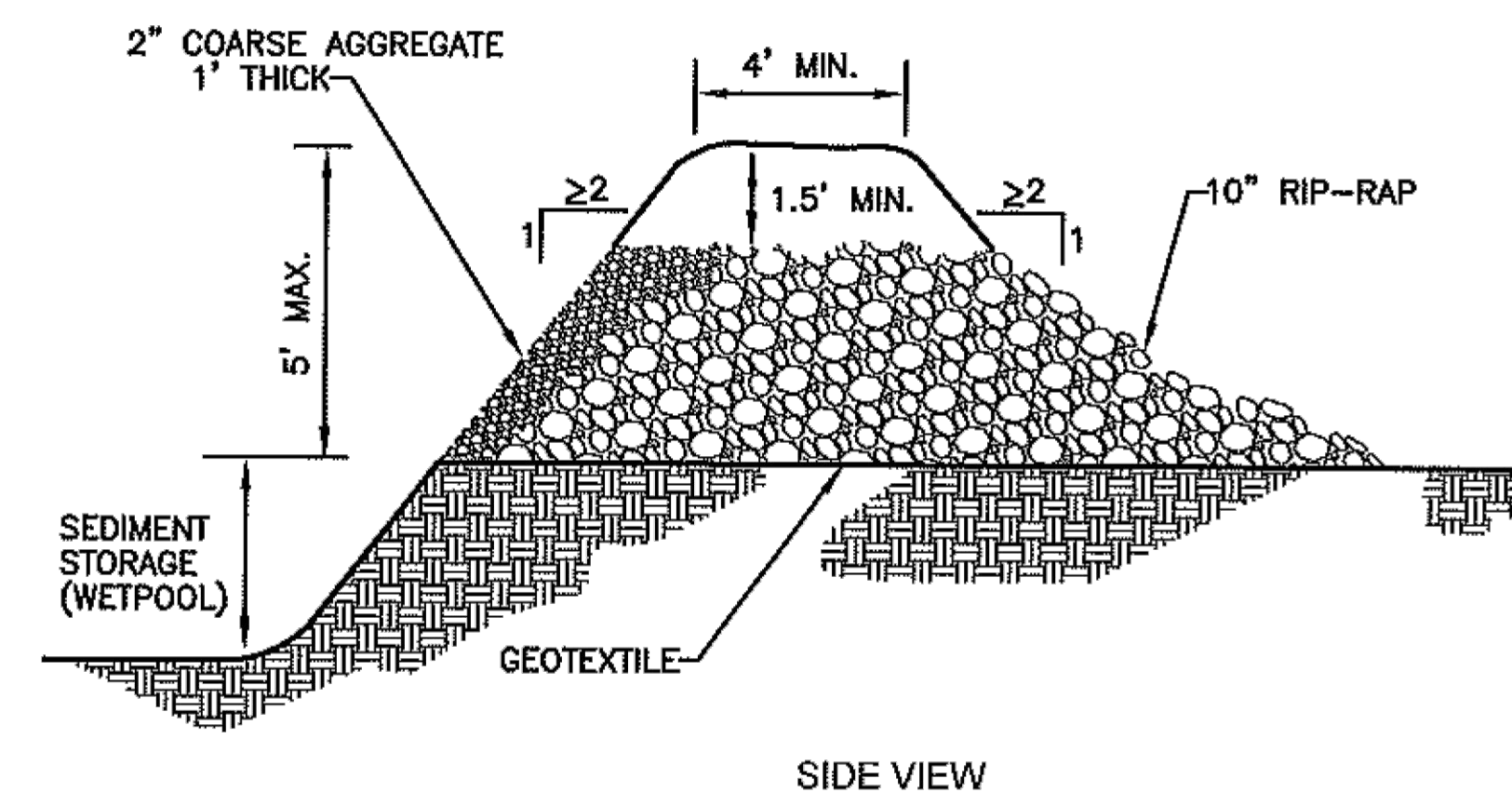
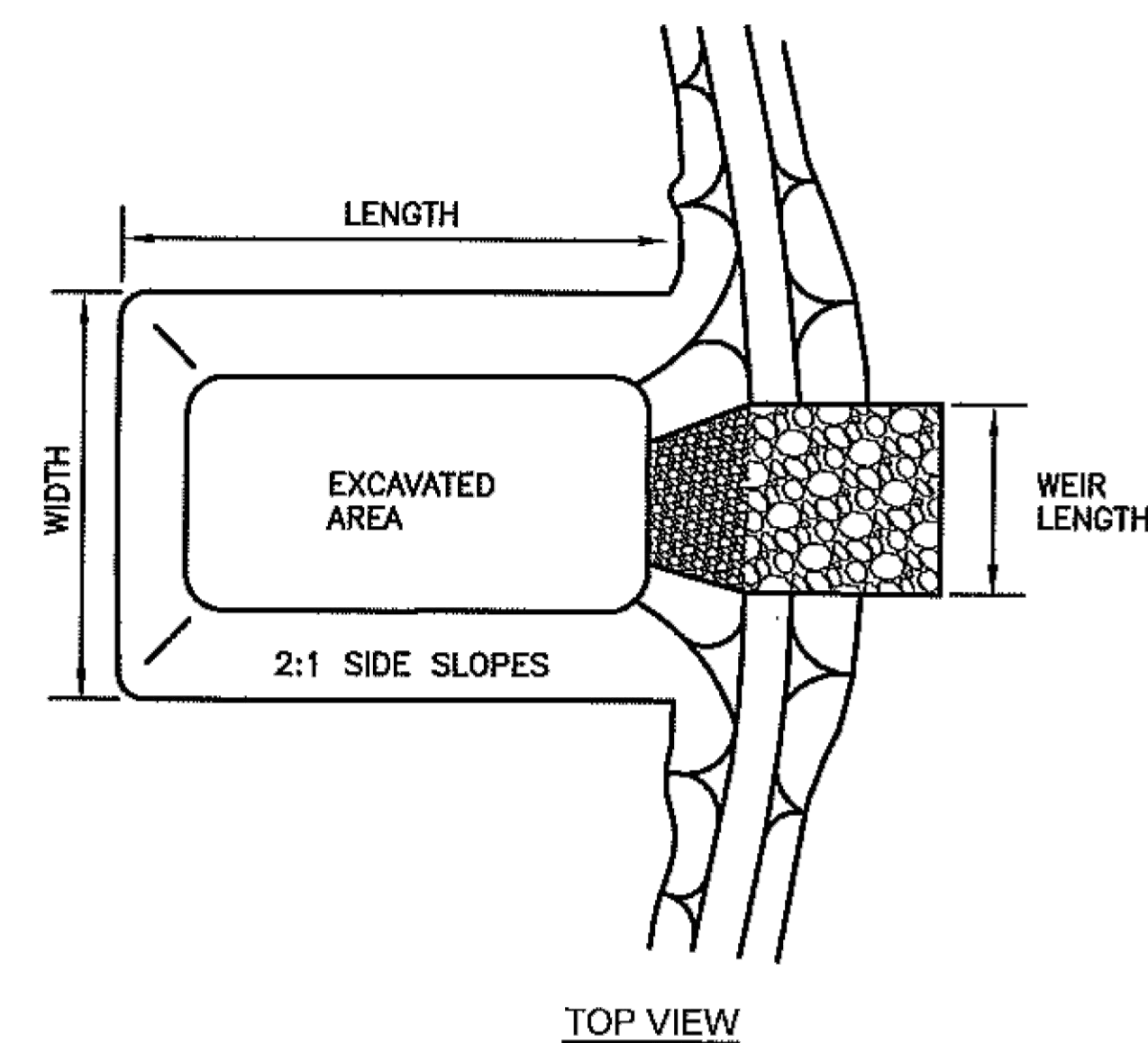
TEMPORARY ROCK DITCH CHECK SPACING

| DITCH & SLOPE (%) | SPACING INTERVAL (FEET) |
|-------------------|-------------------------|
| 5.0 | 60 |
| 6.0 | 50 |
| 7.0 | 43 |
| 8.0 | 36 |
| 9.0 | 33 |
| 10.0 | 29 |

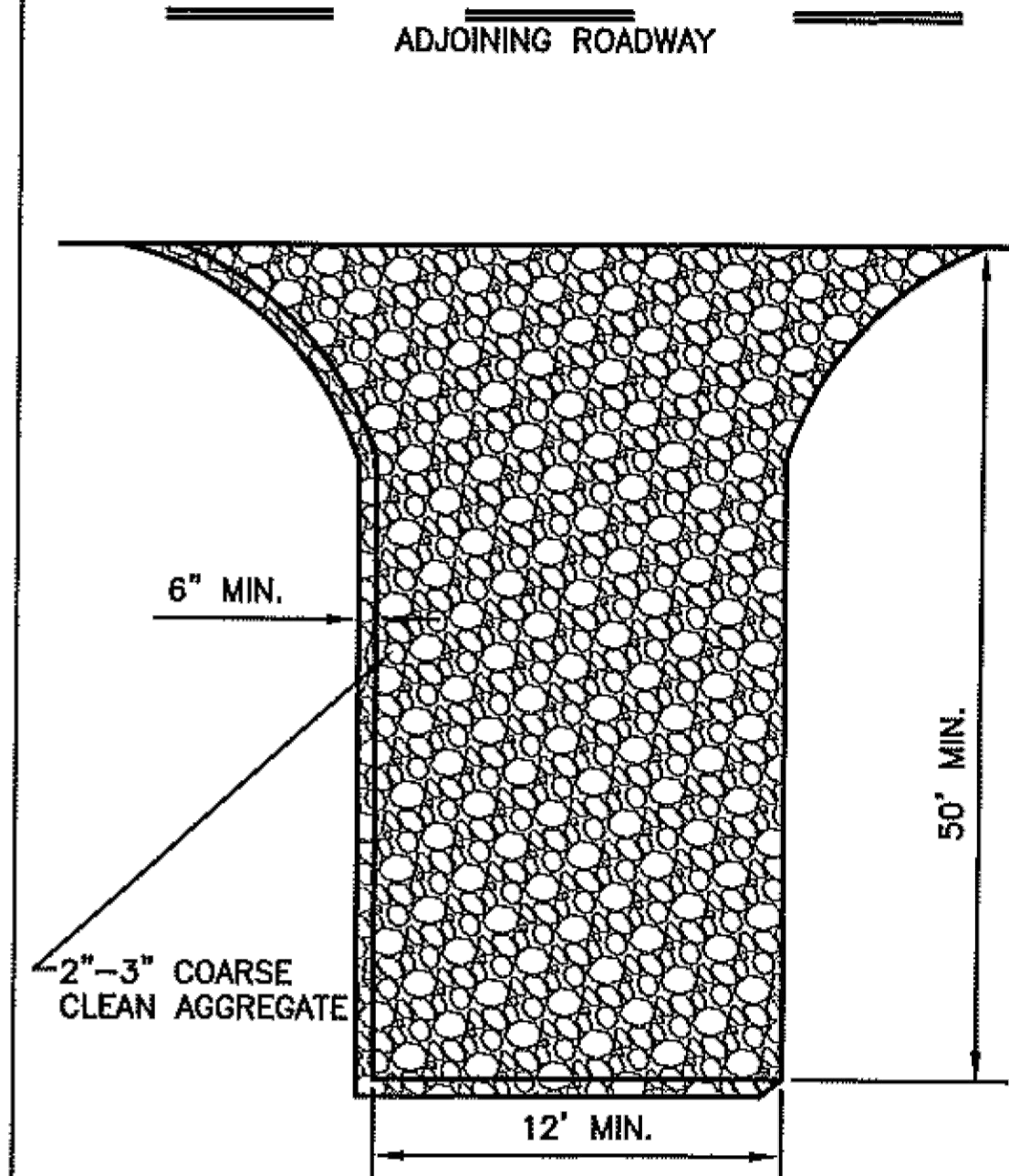
THIS SPACING IS TO BE USED FOR ROCK DITCH CHECKS ONLY.

- NOTES:
1. ROCK SHALL BE CLEAN AGGREGATE, D50 = 6".
 2. PLACE ROCK IN SUCH A MANNER THAT WATER WILL FLOW OVER, NOT AROUND DITCH CHECK.
 3. DO NOT USE ROCK DITCH CHECKS IN CLEAR ZONE.
 4. AGGREGATE EXCAVATED ON SITE MAY BE USED AS AN ALTERNATE TO THE 6" ROCK, IF APPROVED BY THE ENGINEER.

ROCK DITCH CHECK



SEDIMENT BASIN



- NOTES:
1. GEOTEXTILE FABRIC MAY BE USED AS AN UNDERLINER IN WET CONDITIONS TO PROVIDE STABILITY.
 2. PROVIDE SUFFICIENT WIDTH, LENGTH & TURNING RADIUS FOR CONSTRUCTION VEHICLES ENTERING & EXITING SITE.
 3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF SEDIMENT ON TO STREETS AND KEEP THE ENTRANCE EFFECTIVE.
 4. PROPERLY GRADE TO PREVENT RUNOFF FROM LEAVING CONSTRUCTION SITE THROUGH ENTRANCE/EXIT.
 5. DO NOT ALLOW ROCK SPACES TO BE FILLED IN WITH DIRT - ROCKS MUST BE KEPT LOOSE.

CONSTRUCTION ENTRANCE

| NO. | DATE | REVISION | BY | APP'D |
|-----|------------|--|-----|-------|
| 3 | May 2015 | Updated Notes & Added Rock Ditch Check | DHS | JDH |
| 2 | March 2013 | Repl. Sed. Trap & Added Land Slope Table | DHS | JDH |
| 1 | Dec. 2009 | Modified Stoke Depth & Spacing | DHS | JDH |

DRAWN BY: DHS
APP'D BY: JDH



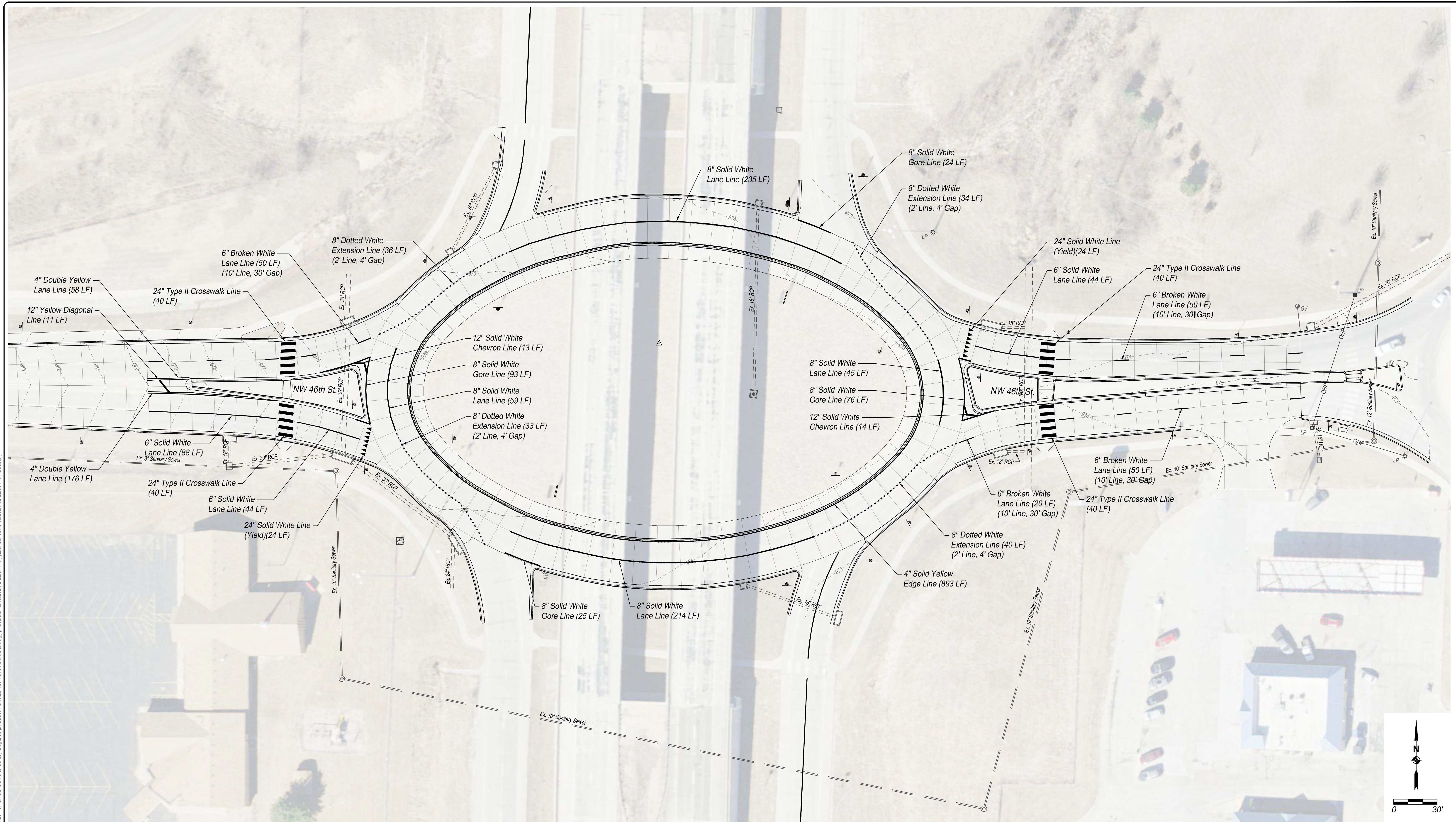
SHAWNEE COUNTY, KANSAS
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1515 NW SALINE
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TOPEKA
Public Works
ENGINEERING
620 SE MADISON ST. • 2nd Floor • TOPEKA, KS 66607
Phone: (785) 368-3842 • Fax: (785) 368-3851

STANDARD DETAILS

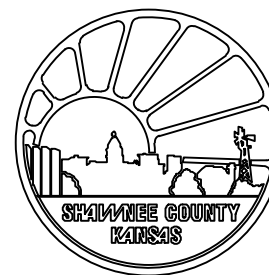
EROSION & POLLUTION CONTROL
SILT FENCE, SEDIMENT BASIN,
CONSTRUCTION ENTRANCE,
AND ROCK DITCH CHECK
(DT-021)

DATE: 3/13/2024
SHEET: 19 OF 36
PROJ.: S-841013.00



SBB PROJ. NO. 23-187

| | | | | | DRAWN BY: | L. O'CONNOR |
|-----|-------|----------|-----|-------|--------------|-------------|
| | | | | | APP'D BY: | B. AUSTIN |
| | | | | | FIELD BOOKS: | - |
| | | | | | SURVEYED BY: | SBB ENG. |
| NO. | DATE: | REVISION | BY: | APP'D | | |

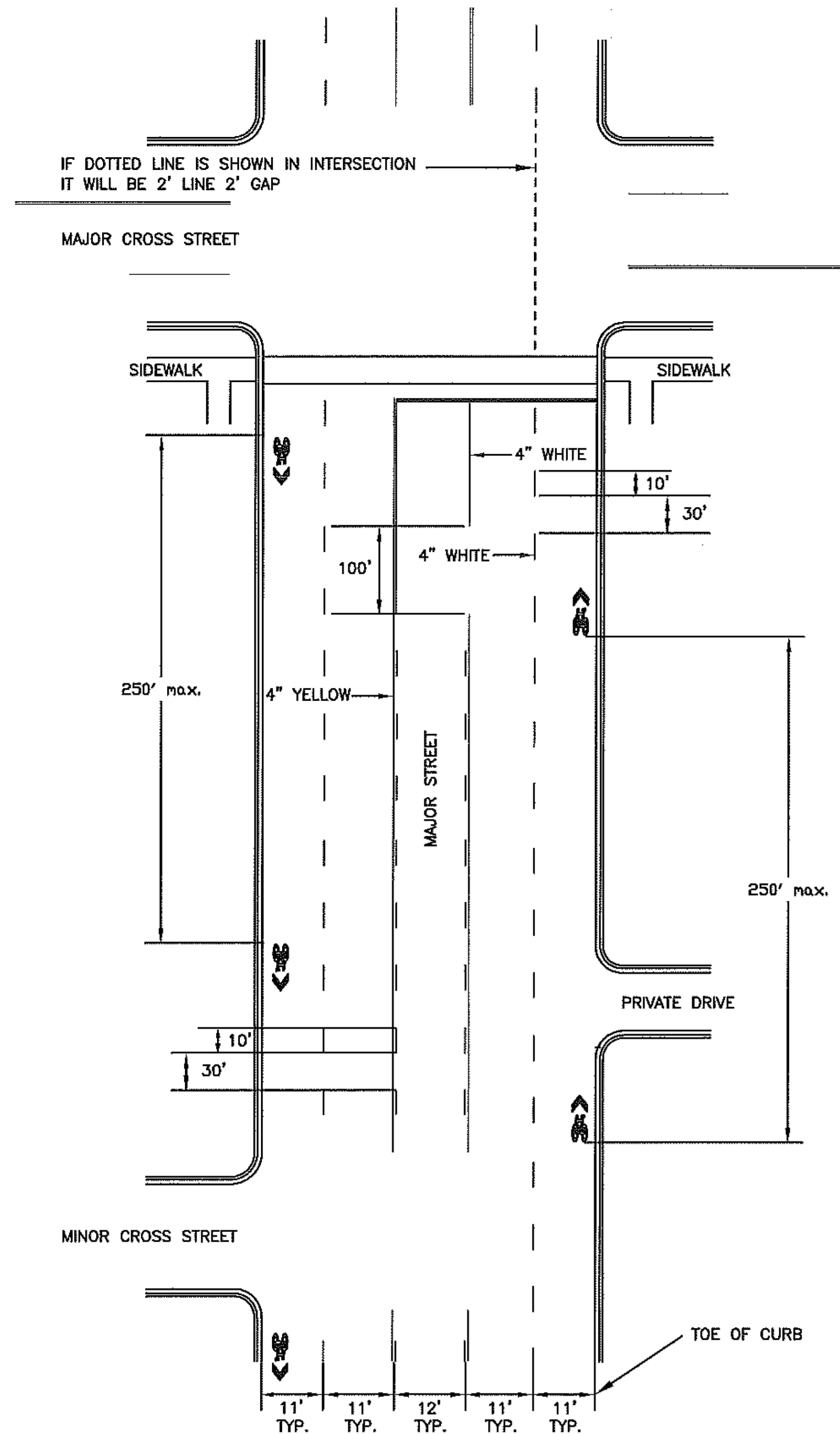


*S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)*

DATE: 3/13/2024

SHEET: 20 OF 36

PROJ.: S-841013.00



TYPICAL PAVEMENT MARKING DETAIL

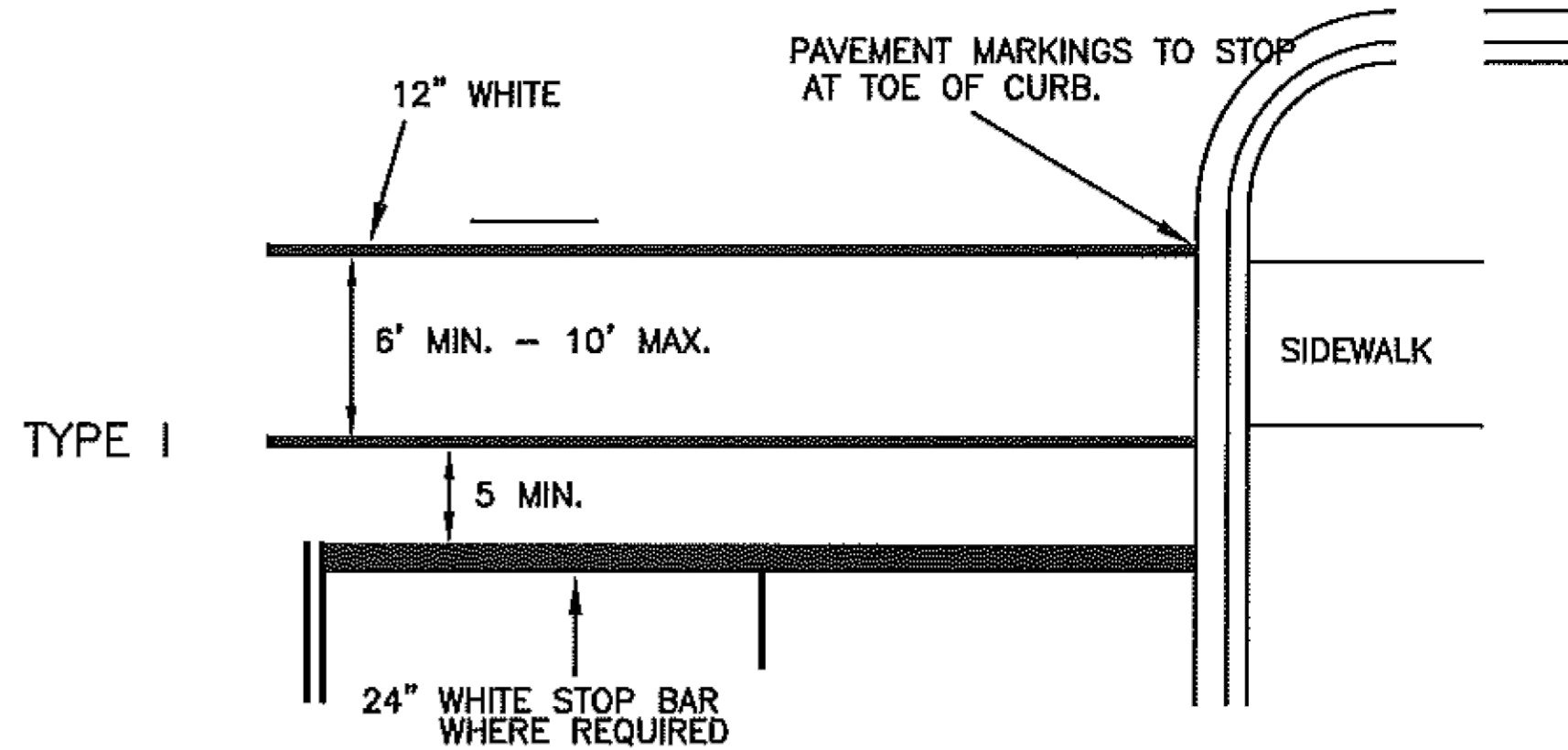
SHARROW — WHEN THERE IS NO PARKING, DISTANCE FROM FACE OF CURB TO CENTER OF SHARROW IS 5 FEET. WHEN PARKING IS PRESENT DISTANCE FROM FACE OF CURB TO CENTER OF SHARROW IS 11'.

NOTE: CROSSWALK PAVEMENT MARKINGS SHALL NOT BE INSTALLED AT LOCATIONS WHERE CROSSWALK PAVEMENT MARKINGS HAVE NOT ALREADY BEEN USED UNLESS SPECIFICALLY APPROVED BY THE TRAFFIC ENGINEER.

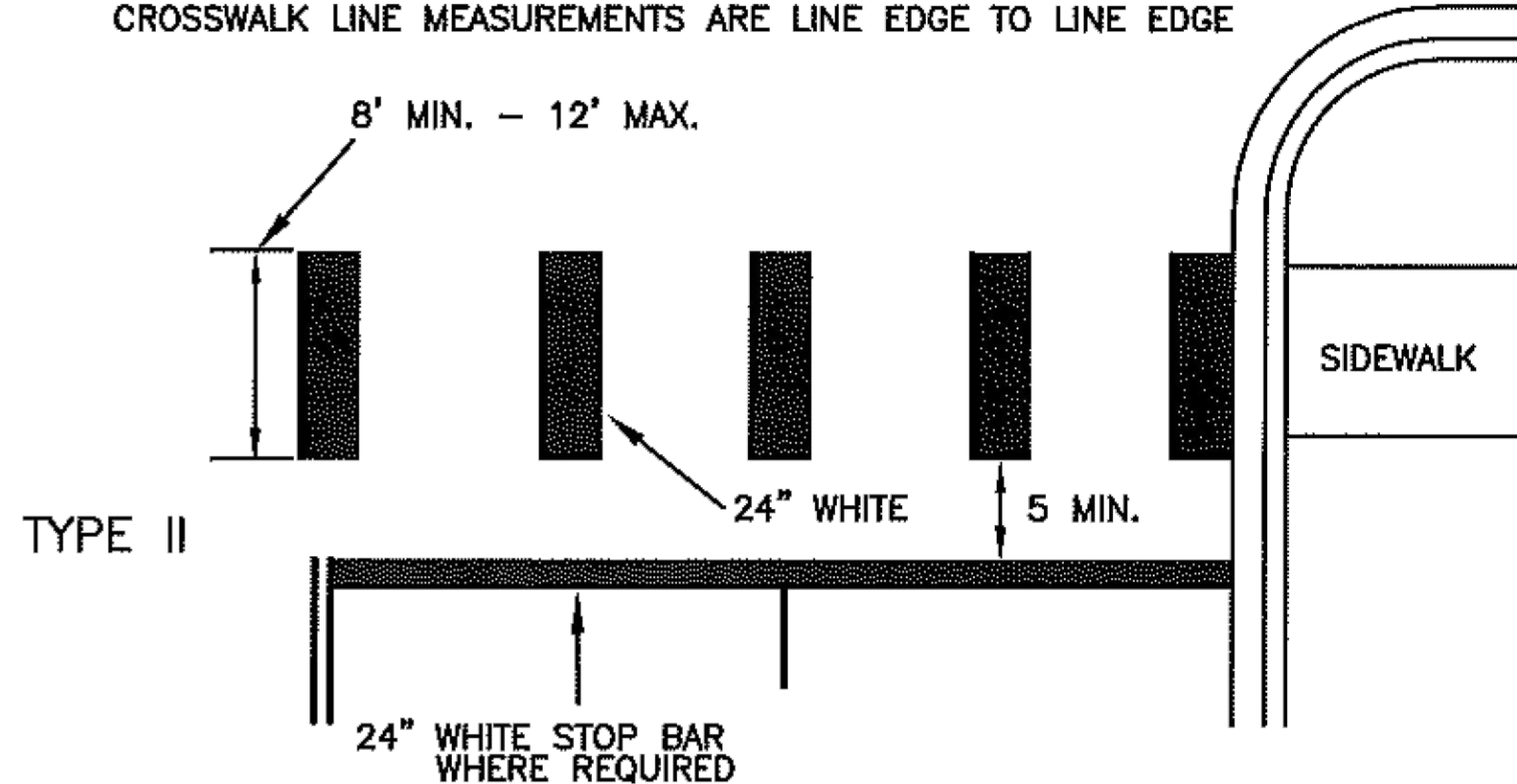
TYPE I CROSSWALK SHALL BE INSTALLED AT MARKED CROSSWALK LOCATIONS CONTROLLED BY A TRAFFIC SIGNAL OR STOP SIGN.

TYPE II CROSSWALKS SHALL BE INSTALLED AT MARKED CROSSWALK LOCATIONS THAT ARE NOT CONTROLLED BY A TRAFFIC SIGNAL OR STOP SIGN.

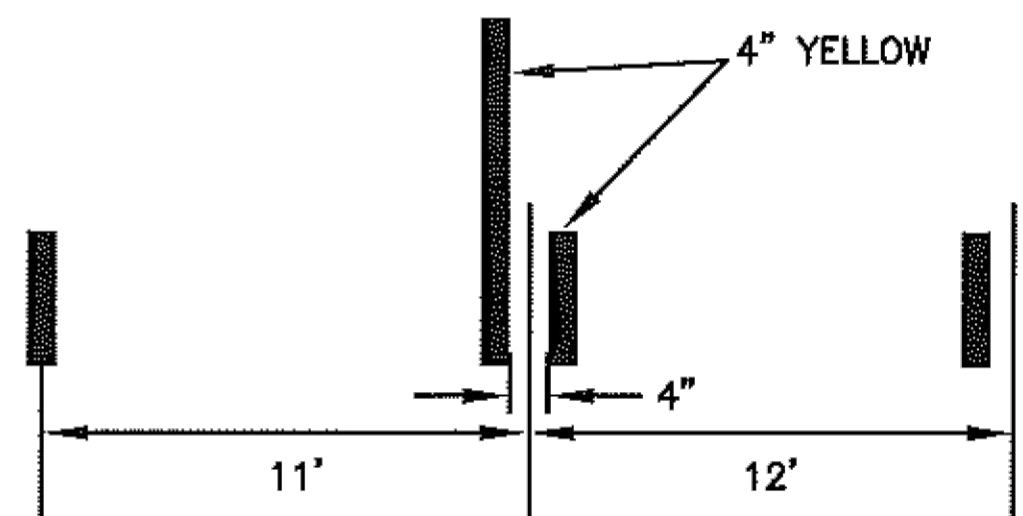
TYPE I — CROSSWALK LINES SHALL BE 12" SOLID WHITE LINES. THEY SHALL BE SPACED A MINIMUM OF 6' APART FROM INSIDE EDGE TO INSIDE EDGE. WHEN REQUIRED, STOP LINES SHALL BE INSTALLED A MINIMUM OF 5' FROM CROSSWALKS. CROSSWALK LINE MEASUREMENTS ARE LINE EDGE TO LINE EDGE



TYPE II — CROSSWALK LINES SHALL BE SOLID WHITE 24" WIDE PLACED PARALLEL TO THE DIRECTION OF TRAFFIC FLOW. THE LINE PLACEMENT IS DETERMINED BY LANE LINE, CENTER LINE, AND WHEEL PATH IN SUCH A MANNER AS TO MINIMIZE TRAFFIC WEAR. THE CROSSWALK WIDTH SHOULD BE NOT LESS THAN 8'. THE TRANSVERSE CROSSWALK LINES MAY BE ADDED. WHEN REQUIRED, STOP LINES SHALL BE INSTALLED A MINIMUM OF 5' FROM CROSSWALKS. CROSSWALK LINE MEASUREMENTS ARE LINE EDGE TO LINE EDGE



TYPICAL CROSSWALK MARKINGS



LANE LINE MEASUREMENT DETAIL

TYPICAL LANE WIDTH MEASUREMENTS ARE — CENTER OF SKIP LINE TO CENTER OF THE SOLID/SKIP LINES. TWO WAY CENTER TURN LANE LINES SHOULD BE CENTER OF SOLID/SKIP TO CENTER OF SOLID/SKIP LINES

GENERAL NOTES:

EXCEPT AS NOTED BELOW PAVEMENT MARKINGS ARE REQUIRED TO COMPLY WITH KDOT AND CITY SPECIFICATIONS.

EQUIPMENT — USE EQUIPMENT DESIGNED FOR THE PREPARATION OF THE APPROPRIATE TYPE OF PAVEMENT MARKING MATERIAL.

SURFACE PREPARATION — ON EXISTING PAVEMENTS, REMOVE THE EXISTING PAVEMENT MARKINGS ACCORDING TO RECOMMENDATIONS OF THE MANUFACTURER OF THE NEW MARKINGS.

ON AGED ASPHALT PAVEMENTS, THOROUGHLY REMOVE ALL DIRT, GRIT, GREASE, RESIDUE OF PRIOR PAVEMENT MARKINGS APPLICATION (INCLUDING ADHESIVES OR PRIMERS THAT MAY HAVE BEEN USED IN THEIR APPLICATION), AND ANY OTHER FOREIGN MATTER FROM THE ROADWAY SURFACE PRIOR TO THE APPLICATION OF THE NEW MARKINGS.

ON NEW PORTLAND CEMENT CONCRETE PAVEMENT AND NEW CONCRETE BRIDGE DECKS USE SHOT BLASTING TO REMOVE CURING COMPOUND AND LAITANCE FROM THE SURFACES TO WHICH THE PAVEMENT MARKINGS WILL BE APPLIED.

ALIGNMENT — LAYOUT THE PAVEMENT MARKINGS AS DETAILED IN THE PLANS. IF THE PLANS DO NOT PROVIDE DETAILS, SUBMIT TO THE ENGINEER FOR APPROVAL A LAYOUT PLAN FOR THE PAVEMENT MARKINGS THAT COMPLY WITH THE 2009 MUTCD.

PROVIDE ADEQUATE GUIDE MARKS — APPROXIMATELY 2" BY 12" AT APPROXIMATELY 30 TO 50 FOOT INTERVALS — FOR THE APPLICATION OF THE MARKINGS.

APPLY MARKINGS STRAIGHT AND CLOSE TO THE INTENDED ALIGNMENT WITHOUT ABRUPT CHANGES THAT RESULT IN AN UNACCEPTABLE APPEARANCE. LINES THAT DEVIATE Laterally FROM THE INTENDED ALIGNMENT MORE THAN 2' IN 200' MAY BE REJECTED.

APPLICATION — PROVIDE THE CITY INSPECTOR WITH A COPY OF THE MANUFACTURER'S APPLICATION INSTRUCTIONS. APPLY THE MARKINGS ACCORDING TO THE RECOMMENDATIONS. FOLLOW THE RECOMMENDATIONS REGARDING PAVEMENT AND AMBIENT TEMPERATURES. THE CITY INSPECTOR WILL VERIFY THE PAVEMENT AND AMBIENT TEMPERATURES BEFORE BEGINNING WORK AND WHEN DEEMED NECESSARY.

TAPES SHALL BE INLaid IN ASPHALT. OTHER PERMANENT MARKINGS SHALL BE INSTALLED IMMEDIATELY AFTER OVERLAYING UNLESS PRIOR APPROVAL IS RECEIVED BY THE ENGINEER OR THE CITY INSPECTOR. IF THE PAVEMENT MARKINGS CANNOT BE INSTALLED AND THUS THE ROADWAY WOULD BE UNMARKED OVERNIGHT, INTERIM REMOVABLE MARKINGS SHALL BE INSTALLED AND REMAIN UNTIL THE PERMANENT MARKINGS CAN BE INSTALLED. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE INTERIM MARKINGS AND INSTALL THE PERMANENT MARKINGS WITHIN 48 HOURS. UNDER NO CIRCUMSTANCE SHALL THE INTERIM PAVEMENT MARKINGS BE IN PLACE FOR MORE THAN 14 DAYS. THE INTERIM REMOVABLE MARKINGS SHALL BE REMOVED PRIOR TO THE INSTALLATION OF THE PERMANENT PAVEMENT MARKINGS.

REMOVE AND REPLACE NEWLY INSTALLED PAVEMENT MARKINGS THAT HAVE DRAG MARKS, GASHES, GOUGES, FOREIGN COVERING, DISCOLORED AREA OR AREAS THAT HAVE FAILED TO SOLIDIFY, HAVE IMPROPER ADHESION OR THICKNESS.

ON NEW PORTLAND CEMENT CONCRETE, LANES CANNOT BE OPEN UNTIL INTERIM OR PERMANENT MARKINGS ARE IN PLACE. INTERIM MARKINGS CANNOT BE LEFT IN PLACE MORE THAN 14 DAYS AND MUST BE REMOVED WHEN PERMANENT MARKINGS ARE INSTALLED.

PERFORMANCE MEASURES — LACK OF SPECIFIED LENGTH/CYCLE: LANE LINES ARE EXPECTED TO BE 10' LONG; GAPS ARE EXPECTED TO BE 30' IN LENGTH. PAYMENT SHALL BE MADE WITH PENALTY BEING EQUAL TO 25% OF THE UNIT PRICE BID PER FOOT FOR EACH 2" OF LENGTH LACKING OR EXCEEDING THE 10'/30' CRITERIA NOTED ABOVE. SHOULD LINE OR GAP BE LACKING OR EXCEEDING 12" THE CITY WILL EITHER NOT PAY FOR THE MARKINGS (100% PENALTY) OR REQUIRE THEY BE REMOVED AND REINSTALLED. TO CLARIFY, EXAMPLE, SHOULD A REQUIRED 10' LINE BE MEASURED AT 10'-3" THE CONTRACTOR WILL BE PAID FOR 75% FOR THE ENTIRE 10'. SHOULD A SPACE BE 30'-3", THE CONTRACTOR WILL BE PAID FOR 75% OF THE 10' LINE. PENALTIES WILL BE APPLIED UNTIL THE MARKINGS RESUME THE 10'/30' REQUIREMENT.

LACK OF SPECIFIED WIDTH: MARKINGS SHALL BE AT LEAST AS SPECIFIED ON THE PLANS. SHOULD MARKINGS BE 1/2" LESS THAN NOTED, THE CITY WILL DIRECT THE CONTRACTOR TO REDO OR 25% OF PAYMENT WILL BE WITHHELD.

WARRANTY — AT THE END OF ONE YEAR WARRANTY PERIOD, THE CONTRACTOR WILL BE REQUIRED TO REPLACE MISSING OR DEFECTIVE MARKINGS.

| NO. | DATE | REVISION | BY | APP'D |
|-----|----------|---------------------------------|-----|-------|
| 2 | 07/08/16 | UPDATE CROSSWALK SPECIFICATIONS | KAP | TC |
| 1 | 01/30/12 | UPDATE SPECIFICATIONS | KAP | LSV |

DRAWN BY: K. PELTON
APP'D BY: Pondash/Dos

TOPEKA
Public Works
ENGINEERING

620 SE MADISON STREET - 2nd FLR. • TOPEKA, KS 66607
Phone: (785) 368-3842 • Fax: (785) 368-3851

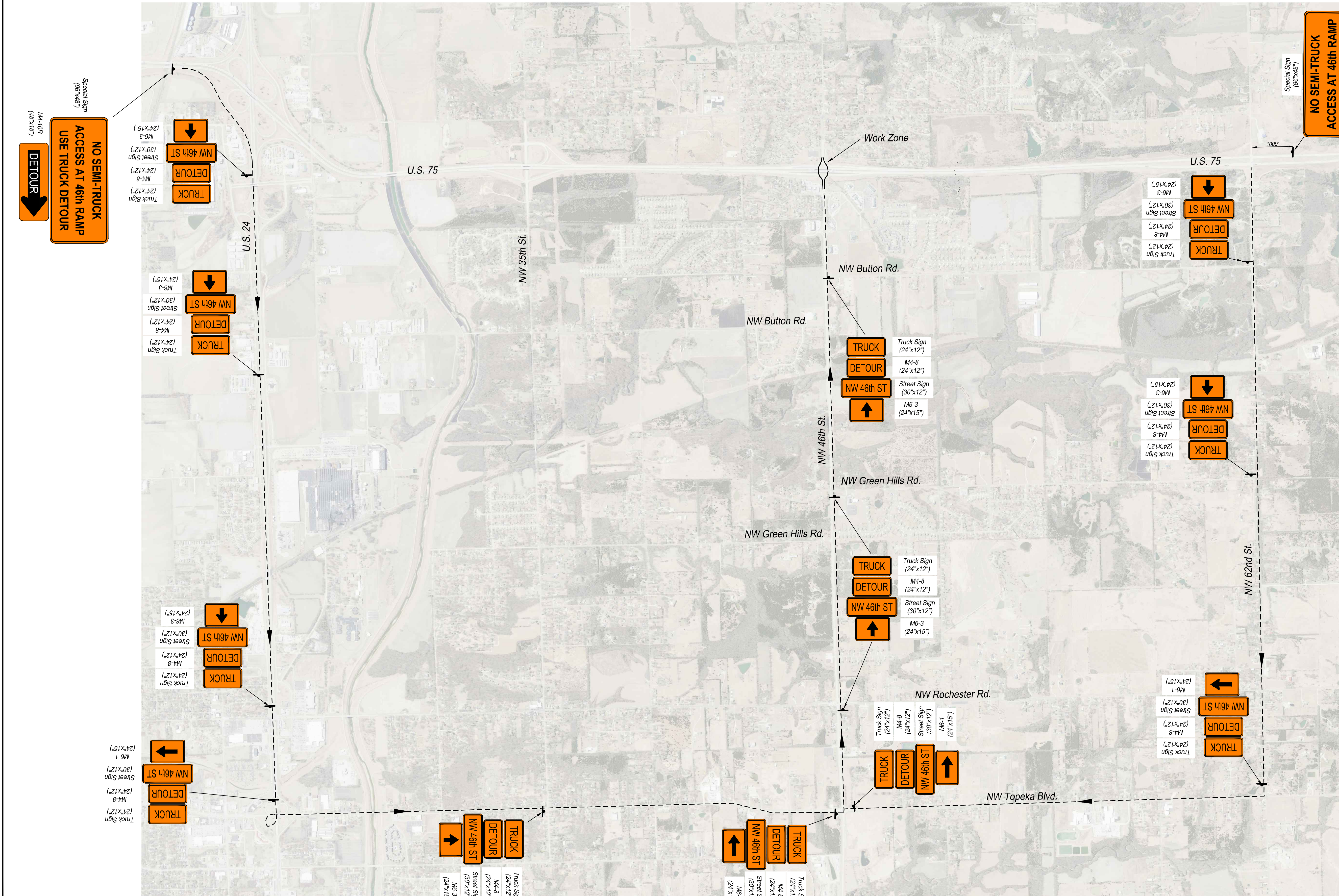
PAVEMENT MARKINGS

DATE: 3/13/2024

PAGE: 22 OF 36

DRAWING: DT-118

PROJ. S-841013.00



PROJ.: S-841013.00

SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702



101 S Kansas Ave., Topeka, KS 66603
Ph: (785) 215-8630 www.sbbeng.com

S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

Temporary Traffic Control Truck Detour

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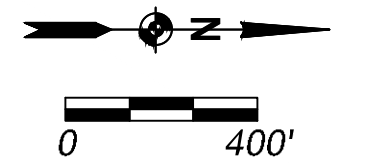
Contractor to apply for Traffic Control Permit through KDOT Utility Permit System (KUPS).

Portable Changeable Message Sign*
"No Semi Access at 46th /
Use Alt Route"

NW 35th St.

U.S. 75

NW 46th St.

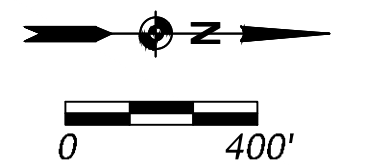
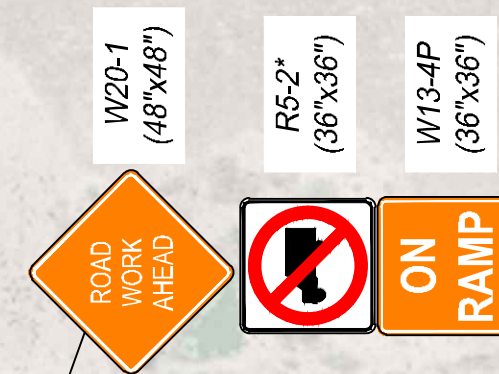


NW 46th St.

NW 61st St.

U.S. 75

Portable Changeable Message Sign*
"No Semi Access at 46th /
Use Alt Route"



DATE: 3/13/2024

SHEET: 24 OF 36

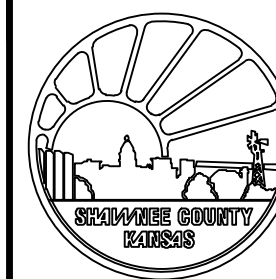
PROJ.: S-841013.00

DRAWN BY: L. O'CONNOR

APP'D BY: B. AUSTIN

FIELD BOOKS: -

SURVEYED BY: SBB ENG.



**SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT**

**1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702**



SBB Engineering, LLC

101 S Kansas Ave., Topeka, KS 66603
Ph: (785) 215-8630 www.sbbeng.com

S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

Temporary Traffic Control
US-75
Phase 1A

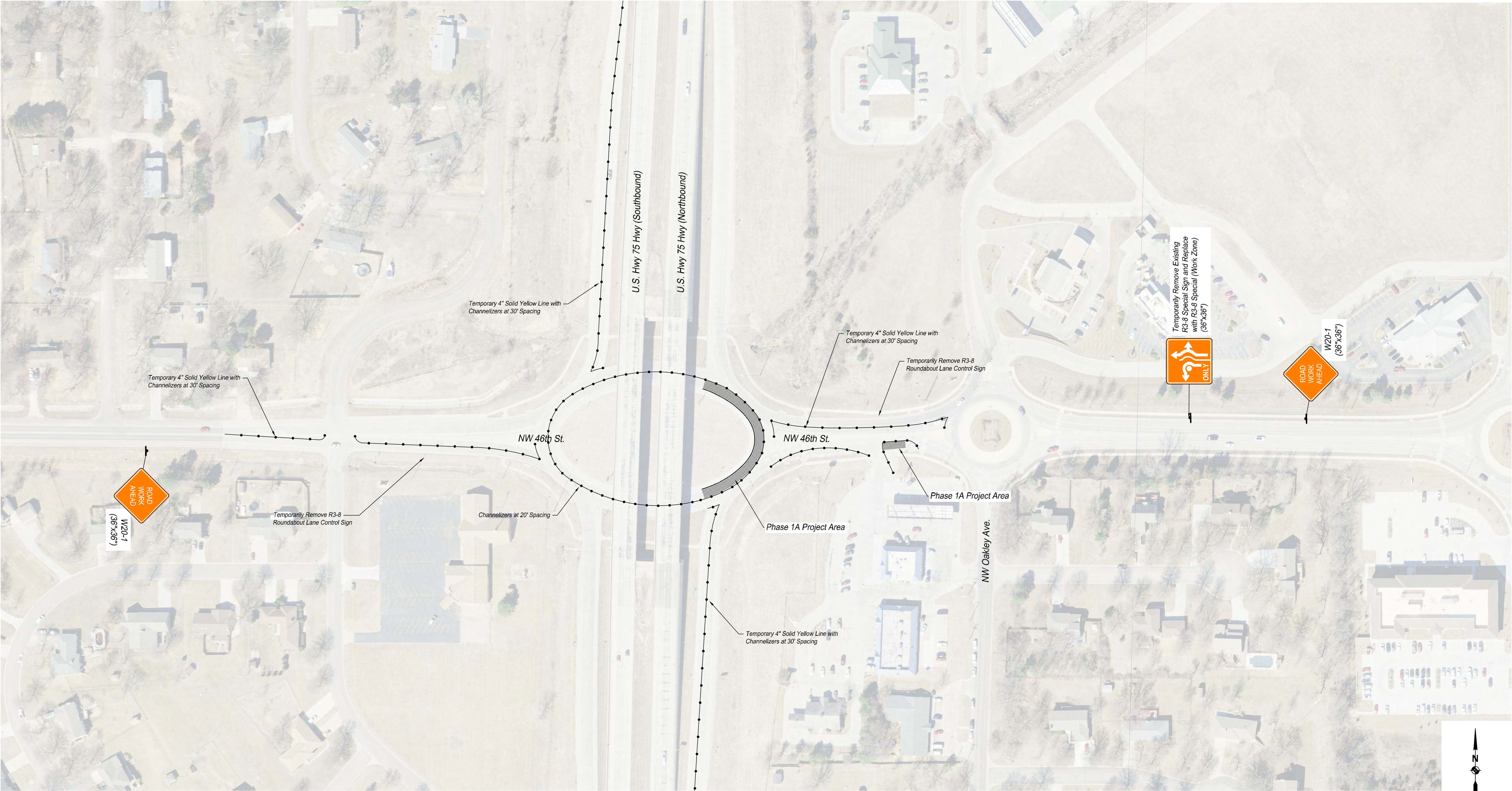
DATE: 3/13/2024

SHEET: 24 OF 36

PROJ.: S-841013.00

(File Location: X:\1 SBB Drawings\0-2023\23-187 SNCO-US 75 to Oakley.dwg | Design\Street Plans\23-187 Phase 1 TTC - Large.dwg | Plot Date: 3/13/2024 2:24:36 PM | Last Saved: 3/13/2024 8:26:36 AM; Baustlin)

[File Location: X:\11 SBE Drawings\10-2023\23-187 SNCU-US 75 to Oakley.dwg] [Sheet: Phase 1A TTC.dwg] [Plot Date: 3/13/2024 2:24:56 PM] [Last Saved: 3/13/2024 8:28:40 AM] [LO Corner]



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| NO. | DATE: | REVISION | BY: | APP'D | |

DRAWN BY: L. O'CONNOR
APP'D BY: B. AUSTIN
FIELD BOOKS: -
SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702



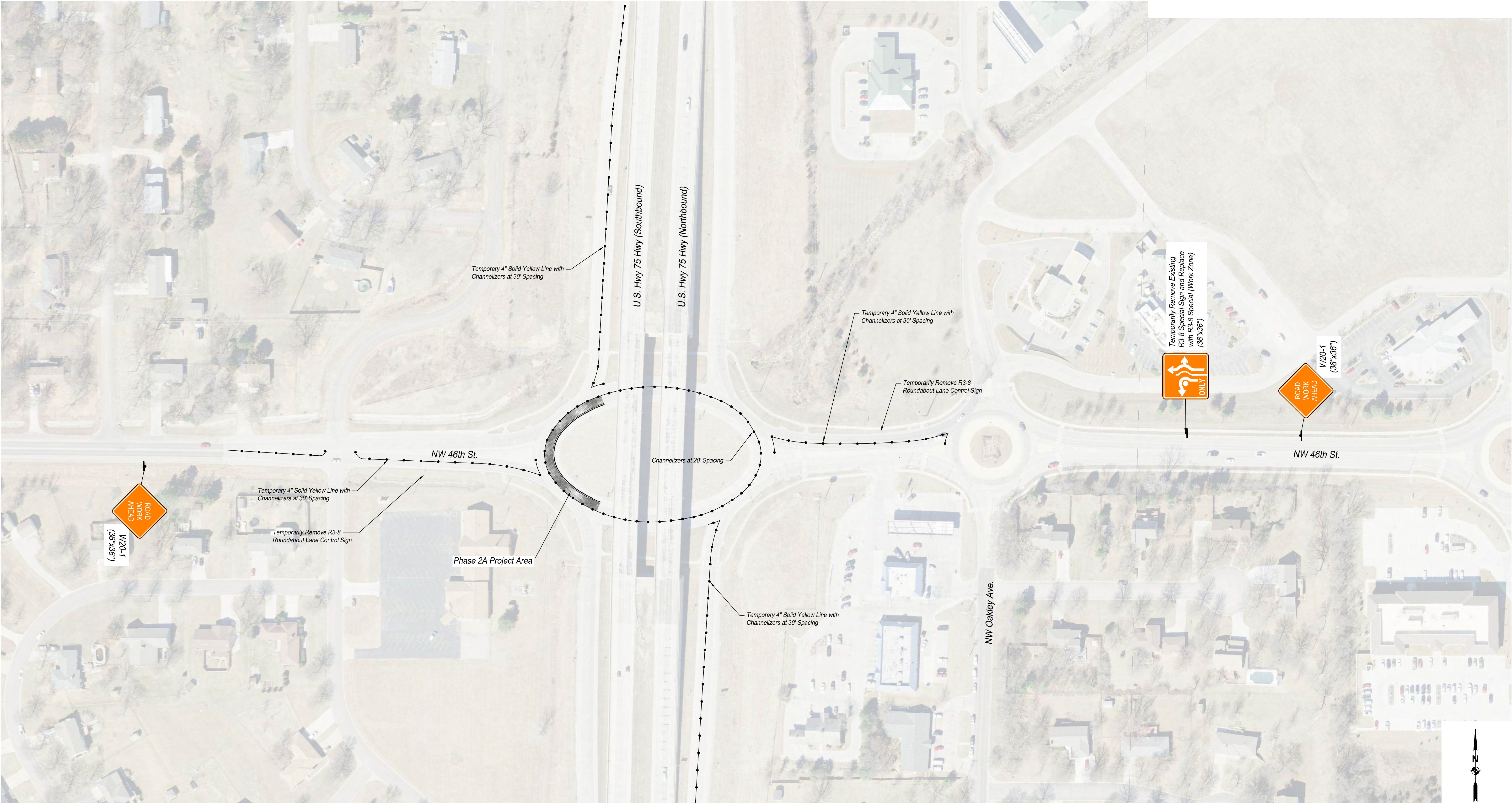
SBB Engineering, LLC
101 S Kansas Ave., Topeka, KS 66603
Ph: (785) 215-8630 www.sbbeng.com

S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

Temporary Traffic Control
Phase 1A

SBB PROJ. NO. 23-187
DATE: 3/13/2024
SHEET: 25 OF 36
PROJ.: S-841013.00

[File Location: X:\11 SBE Drawings\10-2023\23-187 SNCU-US 75 to Oakley.dwg] [Sheet: 28 of 36] [Phase 2A TTC.dwg] [Plot Date: 3/13/2024 2:25:54 PM] [Last Saved: 3/13/2024 8:26:53 AM] [Location:]



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DRAWN BY: L. O'CONNOR
APP'D BY: B. AUSTIN
FIELD BOOKS: -
SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702



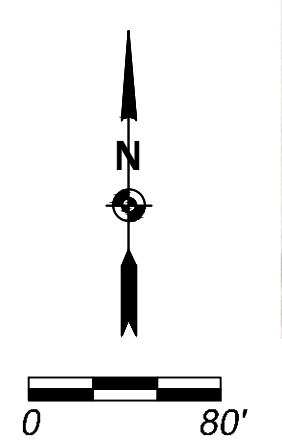
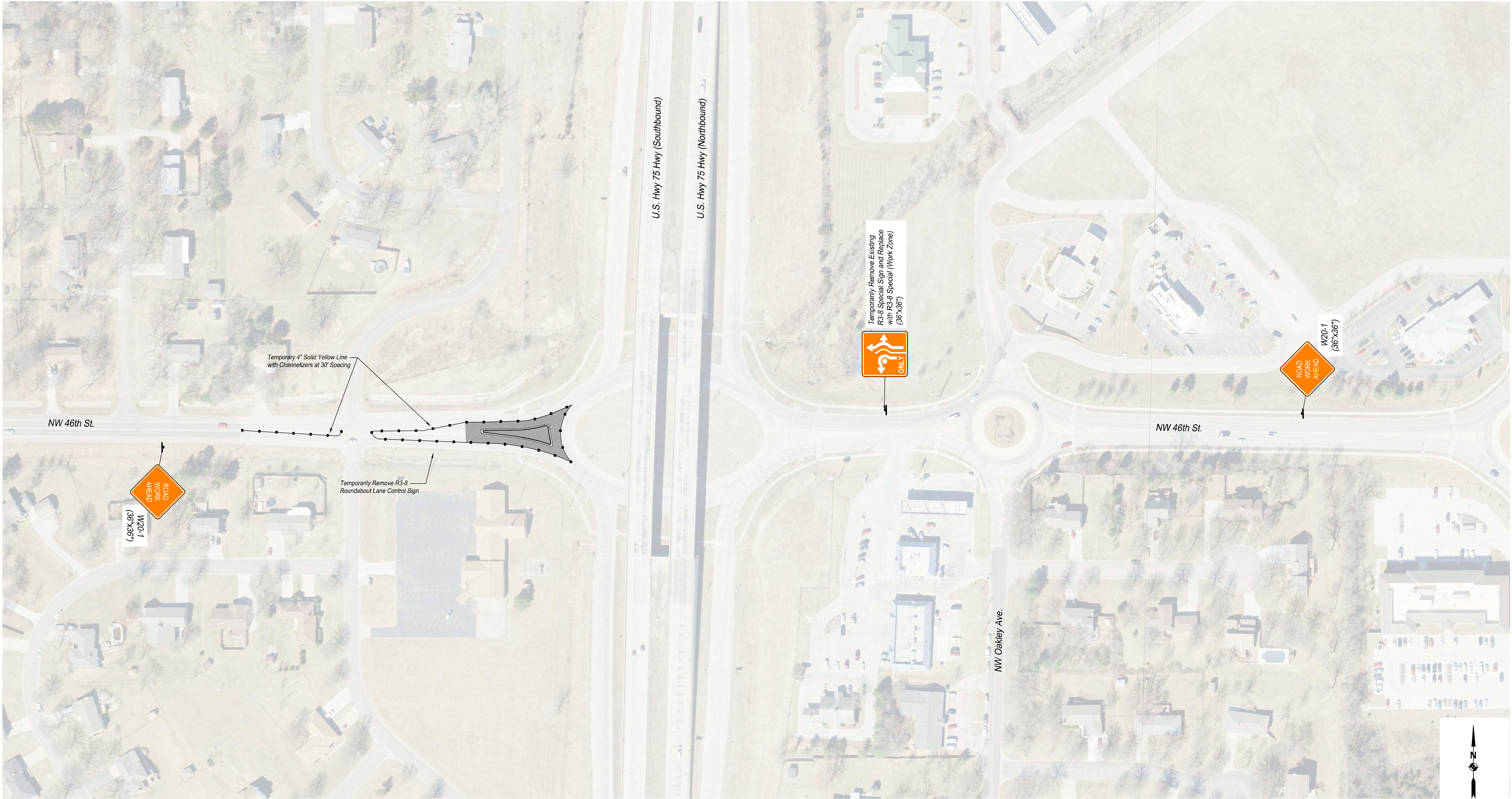
SBB Engineering, LLC
101 S Kansas Ave., Topeka, KS 66603
Ph: (785) 215-8630 www.sbbeng.com

S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

Temporary Traffic Control
Phase 2A

SBB PROJ. NO. 23-187
DATE: 3/13/2024
SHEET: 28 OF 36
PROJ.: S-841013.00

[File Location: X:\11 SBE Drawings\10-2023\23-187 SNCU-US 75 to Oakley.dwg] [Design Sheet Plans\23-187 Phase 2C TTC.dwg] [Plot Date: 3/13/2024 2:26:34 PM] [Last Saved: 3/13/2024 9:27:02 AM: L Oconnor]



SBB PROJ. NO. 23-187

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| NO. | DATE: | REVISION | BY: | APP'D | |

DRAWN BY: L. O'CONNOR
APP'D BY: B. AUSTIN
FIELD BOOKS: -
SURVEYED BY: SBB ENG.



SHAWNEE COUNTY, KANSAS
PUBLIC WORKS DEPARTMENT
1515 NW SALINE
TOPEKA, KS 66618
(785) 233-7702



SBB Engineering, LLC
101 S Kansas Ave., Topeka, KS 66603
Ph: (785) 215-8630 www.sbbeng.com

S-841013.00
NW 46th St. Pavement
Replacement Project
(NW Hiawatha Pl. to NW Oakley Ave.)

Temporary Traffic Control
Phase 2C

DATE: 3/13/2024
SHEET: 30 OF 36
PROJ.: S-841013.00

GENERAL NOTES:

ALL DEVICES SHALL COMPLY WITH THE 2009 EDITION OF
THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

72-HOUR NOTICE TO CITY IS REQUIRED BEFORE WORK IS
STARTED. CONTACT 785-368-3842 FOR TRAFFIC DISRUPTION
PERMIT.

72-HOUR NOTICE IS REQUIRED IF TRAFFIC SIGNALS ARE TO BE MODIFIED AS PART OF TRAFFIC CONTROL. CONTACT 785-368-3913.

UNLESS OTHERWISE NOTED, ALL TRAFFIC CONTROL DEVICES SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR.

SIGNS AND TRAFFIC CONTROL DEVICES NEED TO BE PROPERLY MAINTAINED FOR CLEANLINESS, VISIBILITY, AND CORRECT POSITIONING.

CONTRACTOR SHALL OBTAIN UTILITY LOCATES PRIOR TO
INSTALLING SIGNPOSTS.

SIGNS LEFT IN PLACE THREE OR FEWER DAYS CAN BE MOUNTED AT ONE FOOT. SIGNS LEFT IN PLACE GREATER THAN THREE DAYS NEED TO BE MOUNTED AT SEVEN FEET. IF THERE ARE NO SIDEWALKS, NO PEDESTRIANS, AND NO PARKING, MOUNTING MOUNTING HEIGHT CAN BE REDUCED TO FIVE FEET. IF SECONDARY SIGN IS NEEDED MINIMUM MOUNTING HEIGHT MAY BE ONE FOOT LOWER.

ALL SIGNS SHALL TO BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC WHEN NOT IN USE.

CONTRACTOR MAY BE REQUIRED TO ADD SNOW FENCE TO PROHIBIT PEDESTRIANS FROM ENTERING THE WORK AREA. FENCING SHOULD NOT CREATE A SIGHT DISTANCE RESTRICTION FOR ROAD USERS.

ALL WORKERS SHALL WEAR HIGH VISIBILITY APPAREL MEETING ANSI 107-2004 CLASS 2 OR 3.

TRAFFIC CONTROL DEVICES SHALL MEET NCHRP REPORT 350 (AND SUPPLEMENTS) OR MASH 2009. NCHRP TESTED DEVICES ARE GRANDFATHERED. NEW DEVICES WILL BE MASH 2009 TESTED.

WHEN ROAD WORK CREATES A DIFFERENCE IN ELEVATION BETWEEN ADJACENT LANES THAT ARE OPEN TO TRAVEL, UNEVEN LANE SIGNS, (W8-11) 36"x36" SHALL BE ADDED. THEY SHALL BE PLACED AT BEGINNING AND AT INTERVALS EQUAL TO APPROXIMATELY 1000', BOTH DIRECTIONS IF APPLICABLE.

A BUMP SIGN (W8-1) 36"X36" SHALL BE INSTALLED TO GIVE WARNING OF A 2" OR MORE RISE OR DEPRESSION IN THE PROFILE OF THE ROADWAY. USE AT BEGINNING AND END OF MILLING EVEN IF WEDGE IS IN PLACE.

FORMULAS FOR DETERMINING TAPER LENGTH

| <u>SPEED (S)</u> | <u>TAPER LENGTH (L) IN FEET</u> |
|------------------|---------------------------------|
| 40 MPH OR LESS | $L = \frac{WS^2}{60}$ |
| 45 MPH OR MORE | $L = WS$ |

WHERE: L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT PRIOR TO WORK STARTING

| <u>SPEED LIMIT</u> | <u>TAPER (L)</u> | <u>SIGN SPACING (X)</u> |
|---------------------------|-------------------------|--------------------------------|
| 20 | 80' | 100' |
| 25 | 125' | 100' |
| 30 | 180' | 100' |
| 35 | 245' | 100' |
| 40 | 320' | 100' |
| 45 | 540' | 350' |

BASED ON $W=12'$

EXCEPT AS NOTED (DOWNSTREAM TAPER, FLAGGER OPERATIONS, YIELD OPERATION), SPACE CHANNELIZER @ SPEED LIMIT. IF SPEED LIMIT IS 40mph SET DEVICES AT 40'.

DETOUR SIGNING-STREET **CONSTRUCTION IN A STREET GRID**

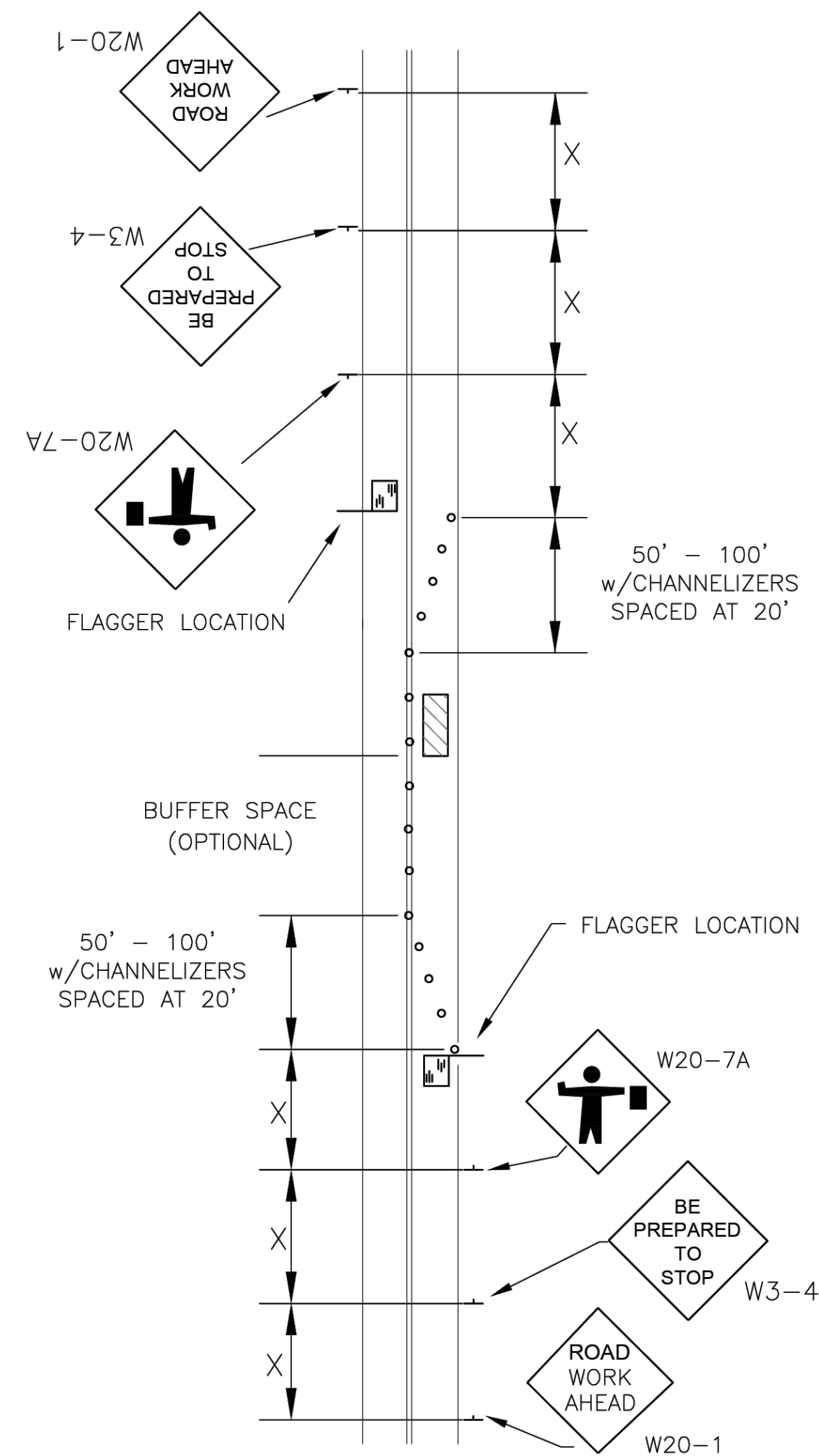
STREET NAME SIGN (D-3) TO BE PLACED ABOVE THE
DETOUR SIGN (M4-9) TO INDICATE THE NAME OF THE
ROADWAY FOR WHICH THE DETOUR WAS ESTABLISHED.

CORNER SIDEWALK CLOSURE WITH PEDESTRIAN DETOUR

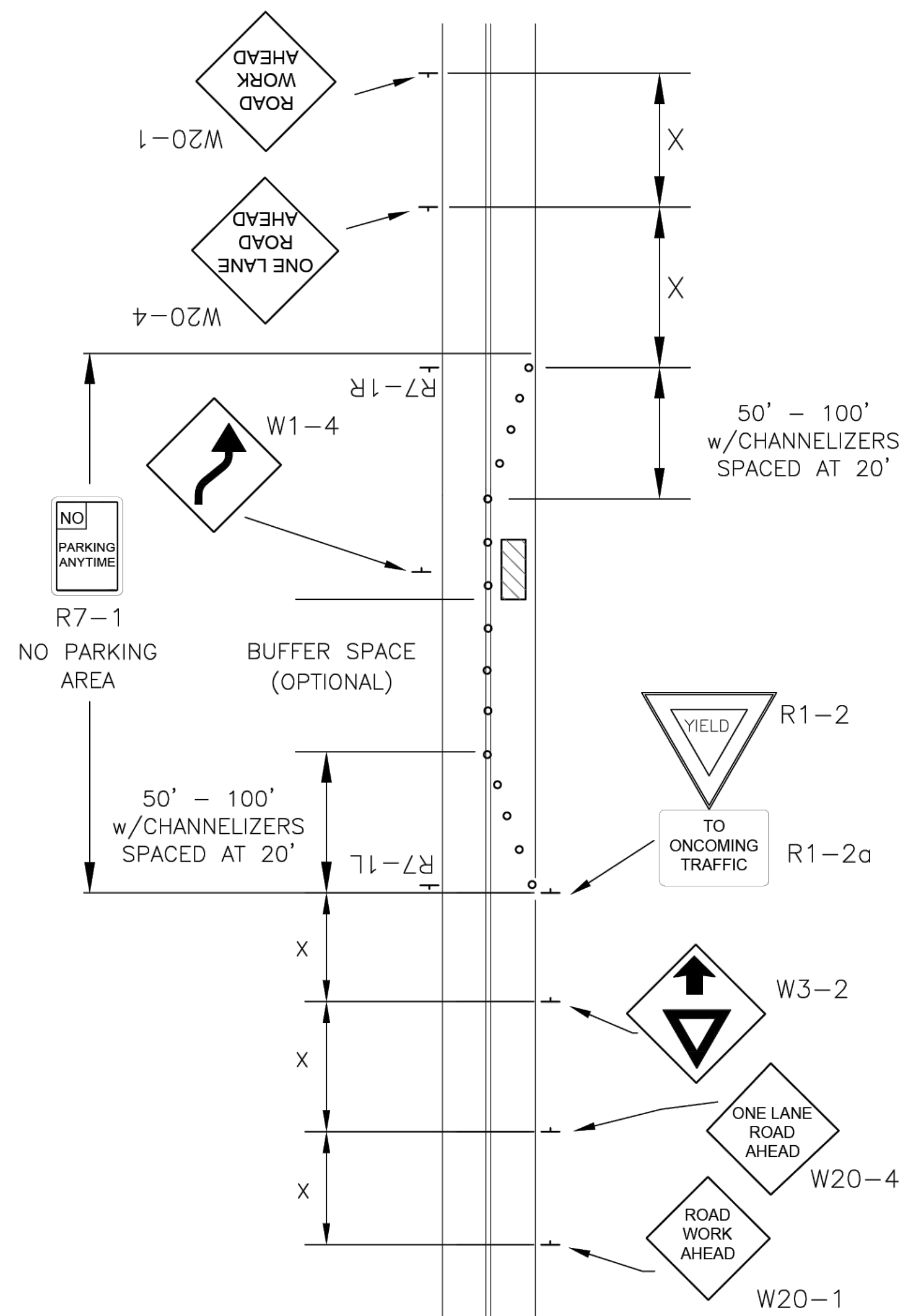
* ADVANCE SIGNS TO BE PLACED ON TYPE I OR TYPE II BARRICADES. PLACE SO THAT AT LEAST 48" OF SIDEWALK IS AVAILABLE FOR PEDESTRIAN USE.

SIGNS TO BE PLACED ON CONTINUOUS DETECTABLE DEVICES. DEVICE CAN BE TYPE I, TYPE II, TYPE III OR OTHER TYPE WALLS OR RAILS AS PER MUTCD. THEY WILL HAVE ORANGE AND WHITE STRIPES. THE BOTTOM EDGING WILL BE AT LEAST 6 INCHES IN WIDTH AND PLACED A MAXIMUM OF 2 1/2 INCHES ABOVE THE SIDEWALK, SO AS TO BE DETECTABLE BY PEDESTRIANS WITH LONG CANE.

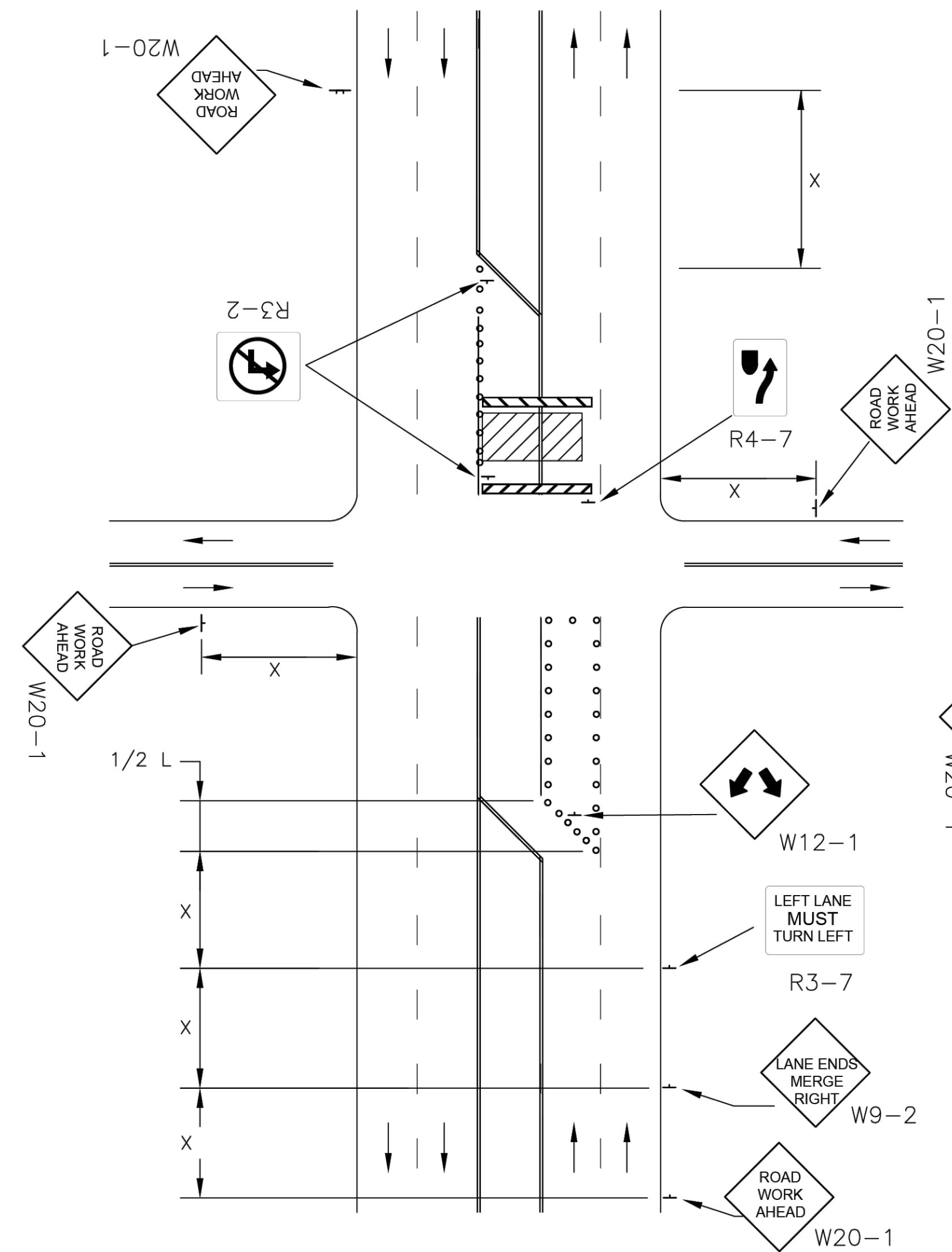
| | | | | | | | | | | |
|-----|----------|----------------------------------|-----|-------|--|--------------------------------|---|--|------------------------|------------------------------|
| | | | | | | DRAWN BY: _____ K.PELTON _____ | 630 SE MADISON STREET - 2nd FLR • TOPEKA, KS 66607 Phone: (785) 369-3842 • Fax: (785) 369-3281 | | TRAFFIC CONTROL | DATE: <u>3/13/2024</u> |
| | | | | | | APP'D BY: <u>Linda Pelton</u> | | | | PAGE: <u>33</u> OF <u>36</u> |
| | | | | | | | | | | DRAWING: <u>DT-118</u> |
| 2 | 02/27/12 | ADD ADA DETECTABLE WARNING NOTES | KAP | LGV | | | | | | PROJ. <u>S-841013.00</u> |
| 1 | 01/30/12 | UPDATE SPECIFICATIONS | KAP | LGV | | | | | | |
| NO. | DATE: | REVISION | BY: | APP'D | | | | | | |



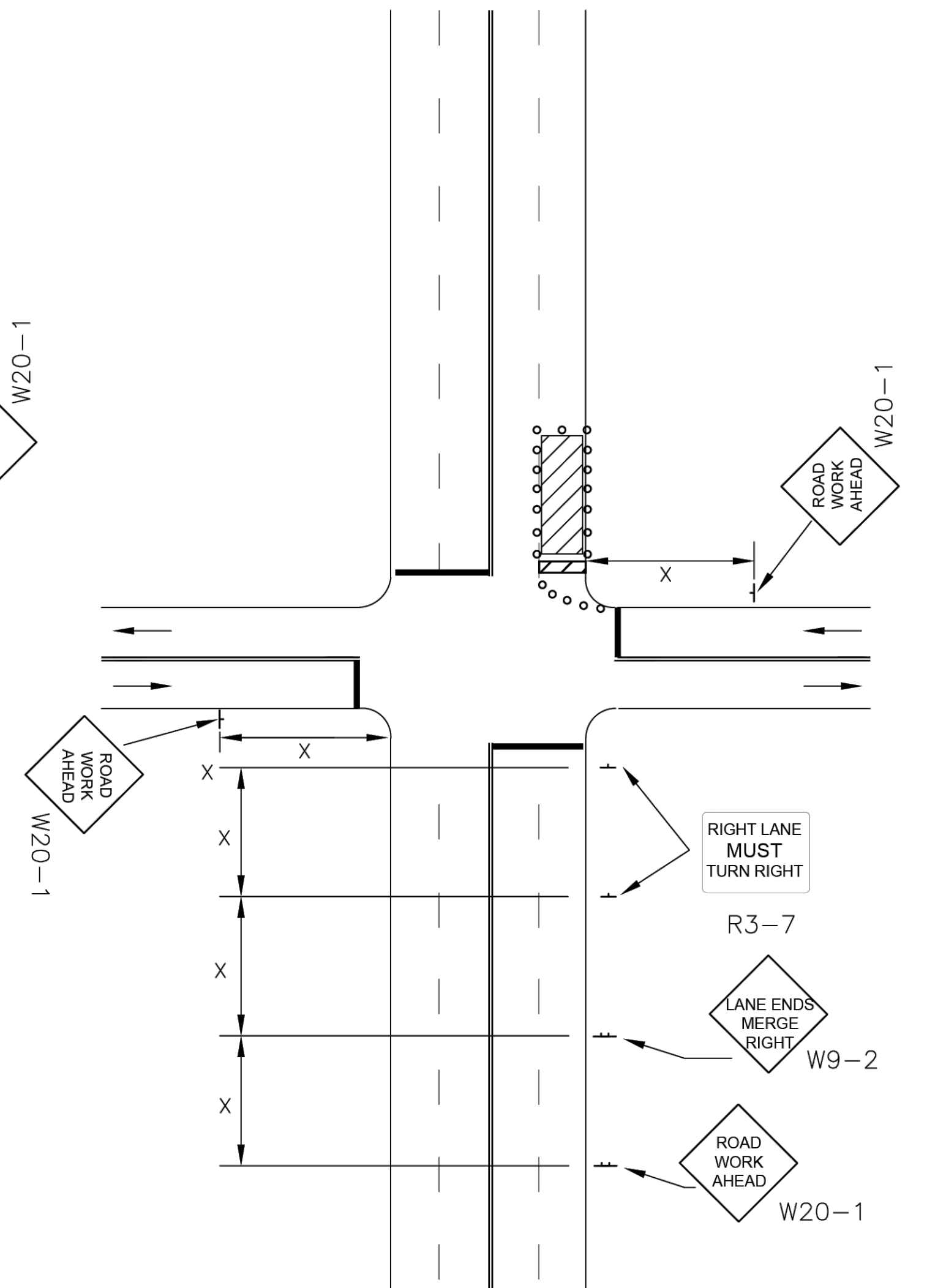
**LANE CLOSURE ON TWO-LANE ROAD
W/ FLAGGER, DAYTIME ONLY**



**LANE CLOSURE ON TWO-LANE ROAD
WITH LOW TRAFFIC VOLUMES
(PRIOR APPROVAL REQUIRED)**



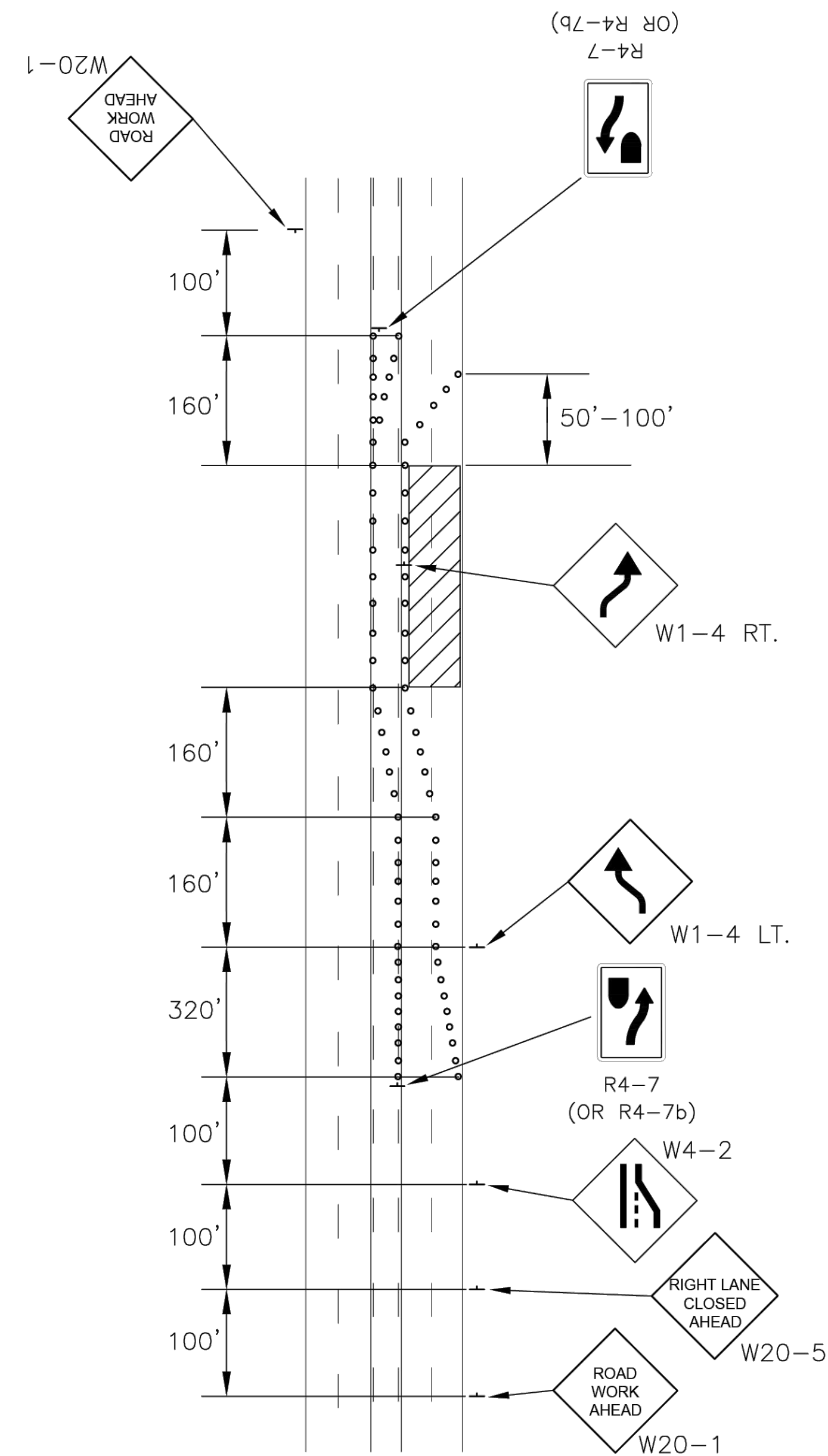
**MULTIPLE LANE CLOSURE AT AN
INTERSECTION**



**RIGHT -HAND LANE CLOSURE ON THE
FAR SIDE OF AN INTERSECTION**

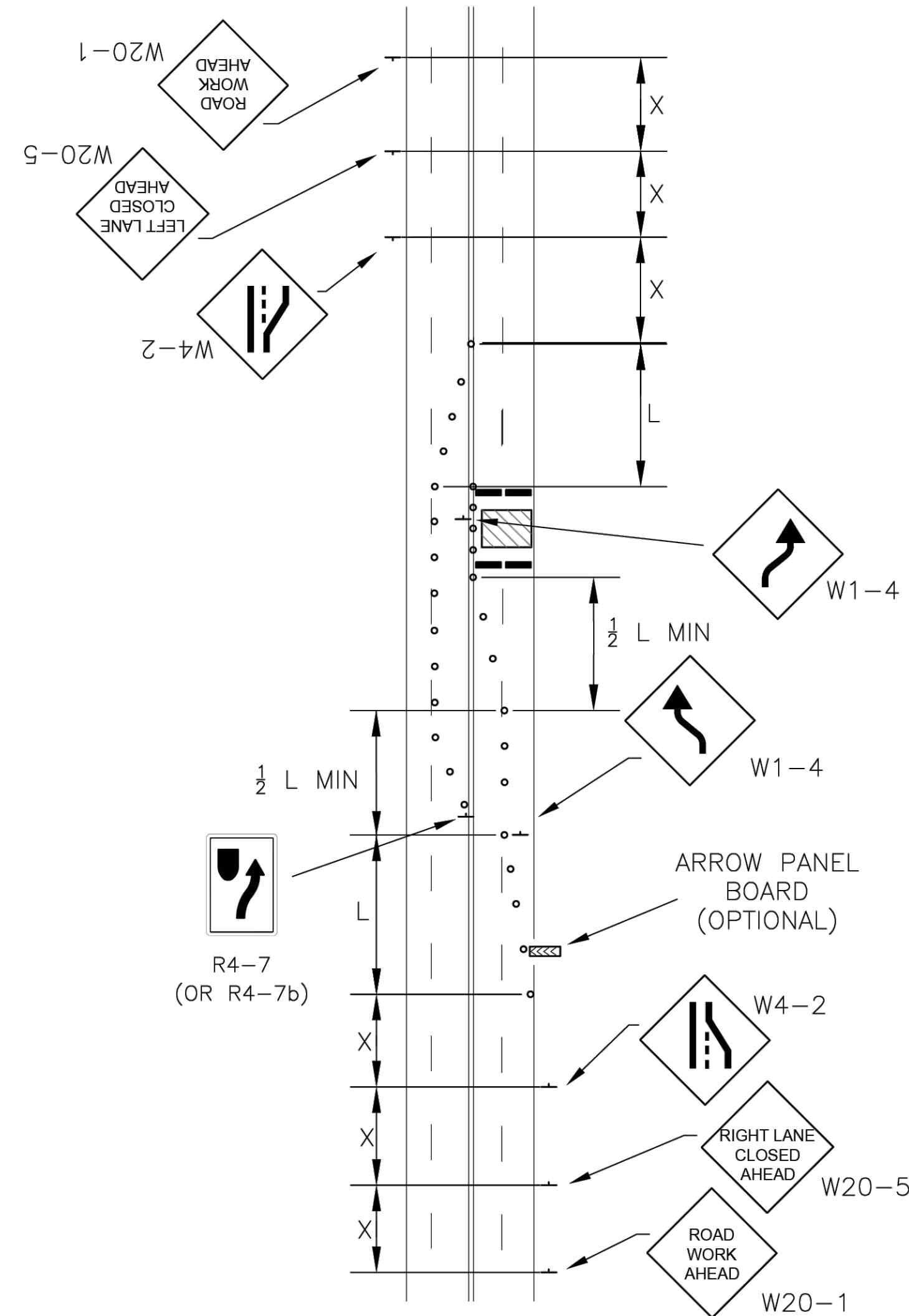
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| NO. | DATE: | REVISION | BY: | APP'D |
| 2 | 08/06/15 | REMOVE W4-7 & REPLACE WITH W9-2 | KAP | TLC |
| 1 | 01/30/12 | UPDATE SPECIFICATIONS | KAP | LGV |

DRAWN BY: K.PELTON
APP'D BY: T. CODER

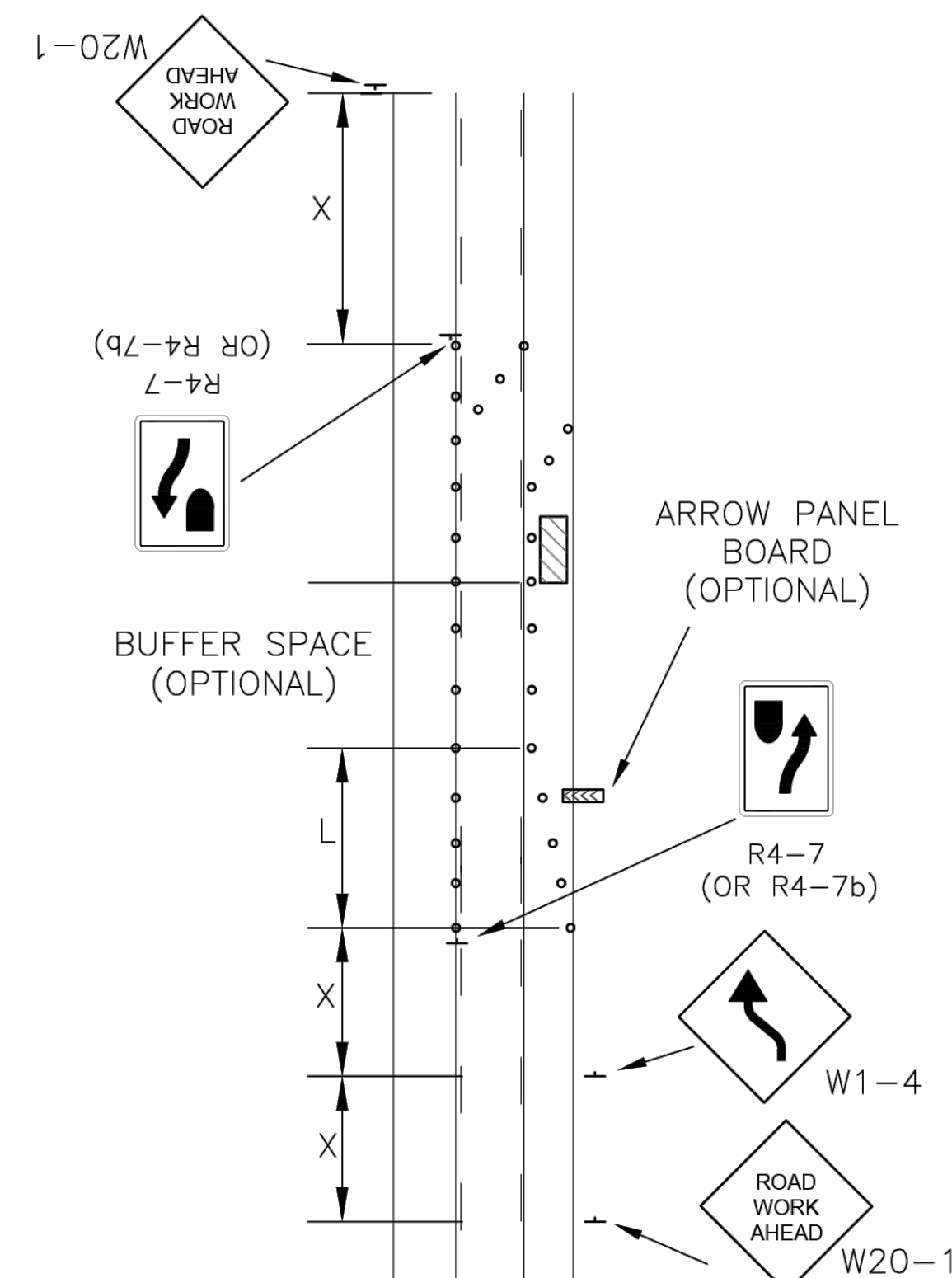


**FIVE LANE ROADWAY
w/ TWO LANES CLOSED**

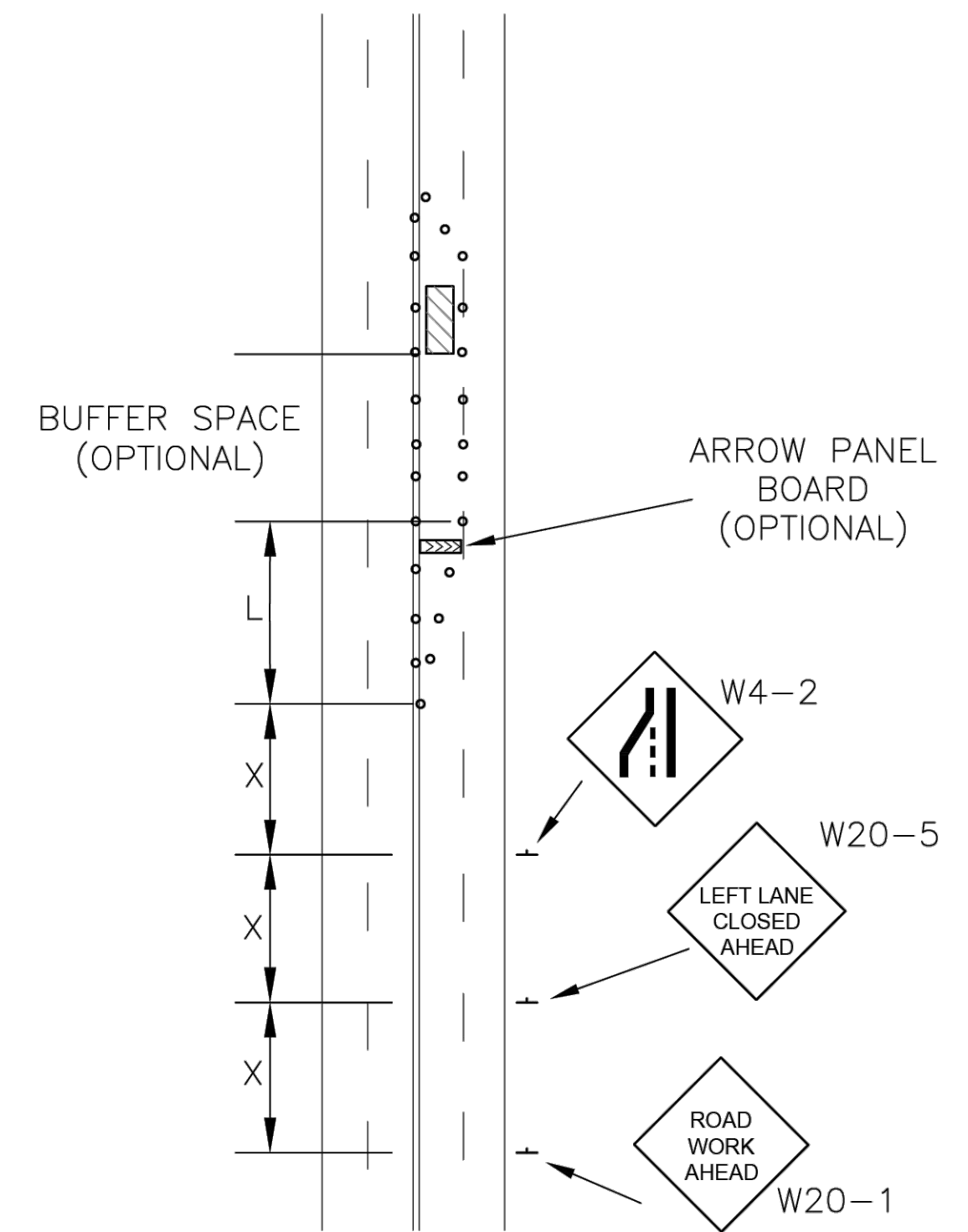
(BASED ON SPEED LIMIT OF 40mph
AND LANE WIDTH OF 12')



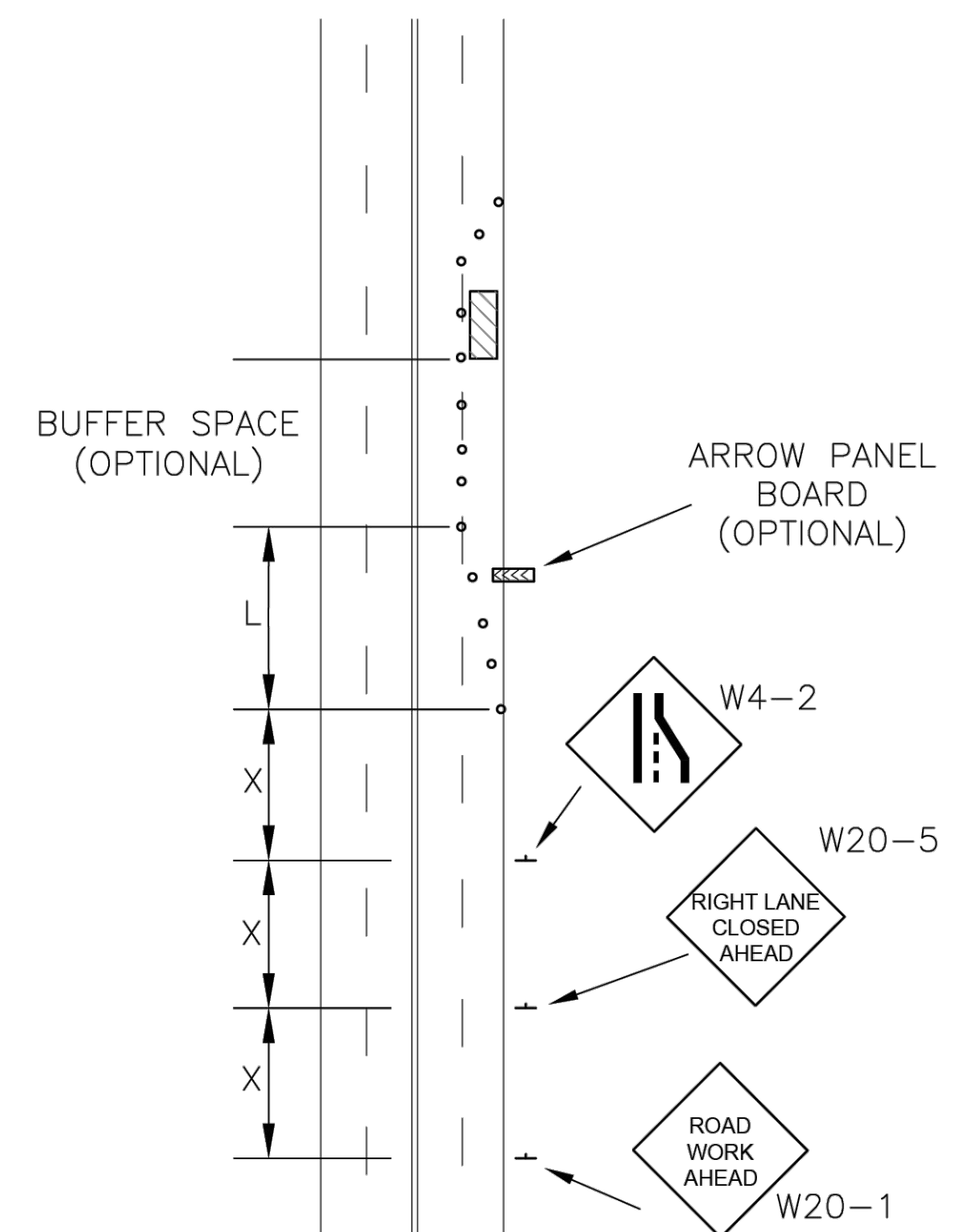
**4-LANE UNDIVIDED ROADWAY-HALF
ROADWAY IS CLOSED**



**LANE CLOSURE WITH
TWO-WAY
LEFT TURN LANE**



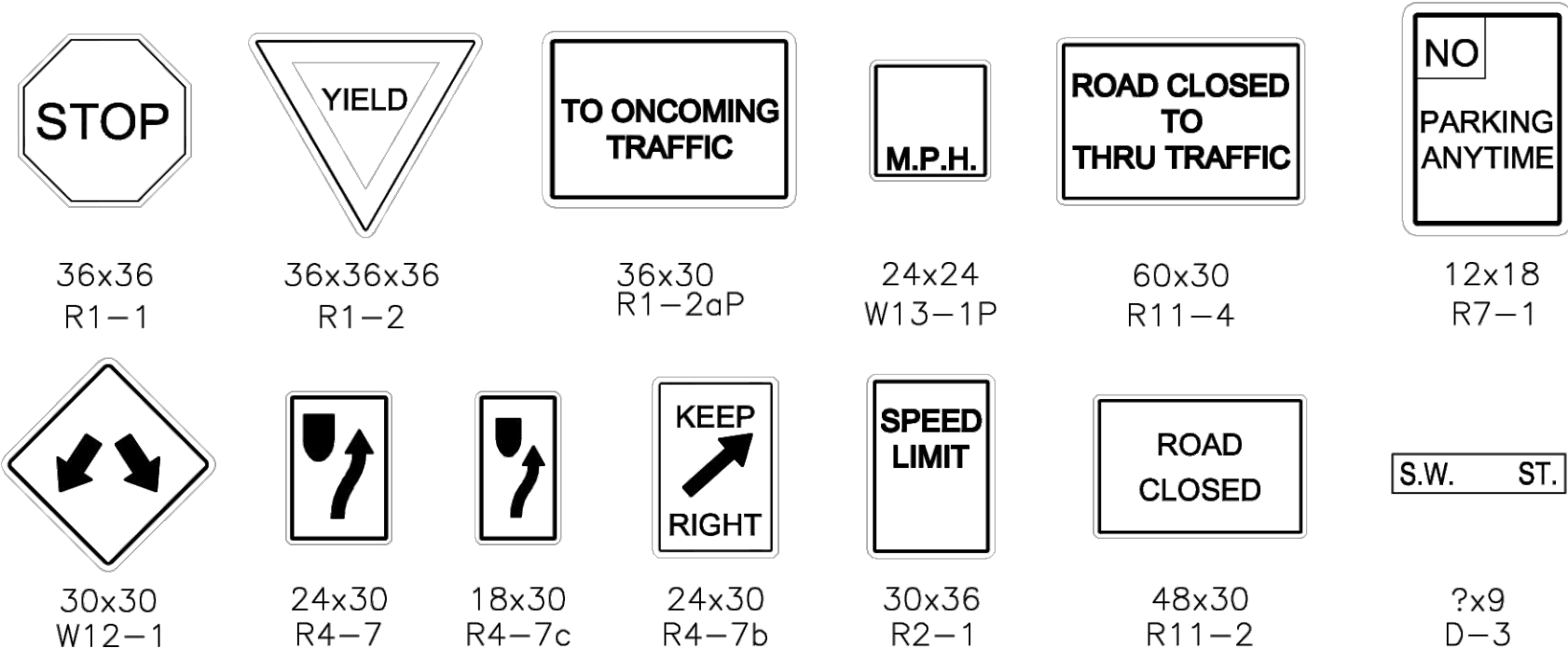
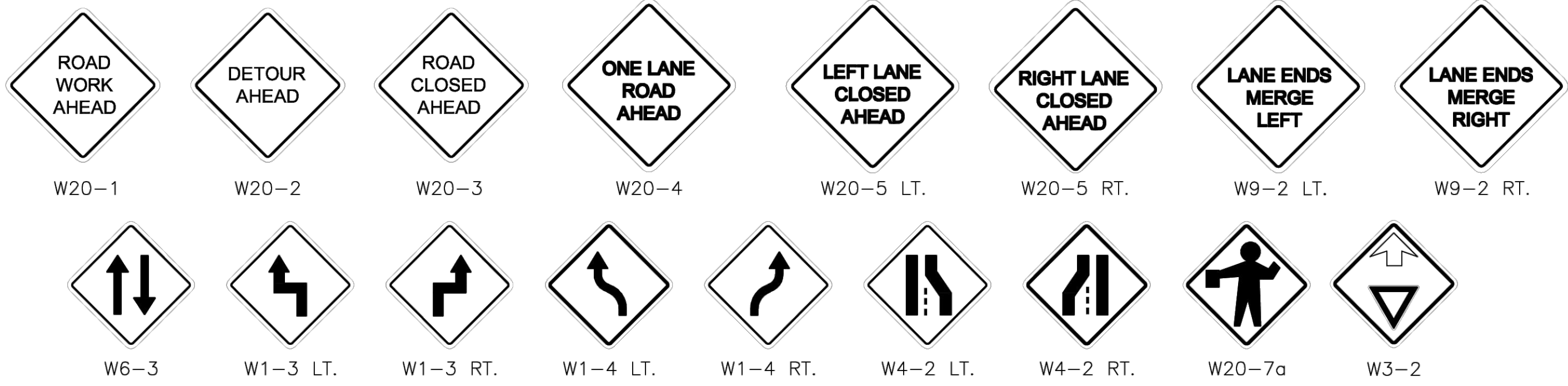
**LEFT LANE CLOSURE
ON 4-LANE ROADWAY**



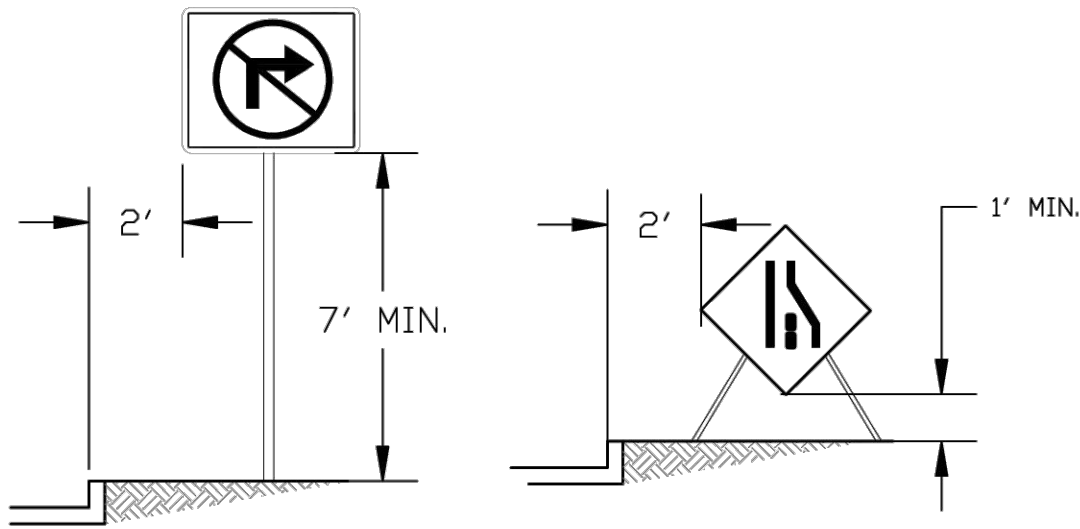
**RIGHT LANE CLOSURE
ON 4-LANE ROADWAY**

REFER TO SHEET DT-118 FOR TAPER LENGTH(L) AND SIGN SPACING(X) VALUES

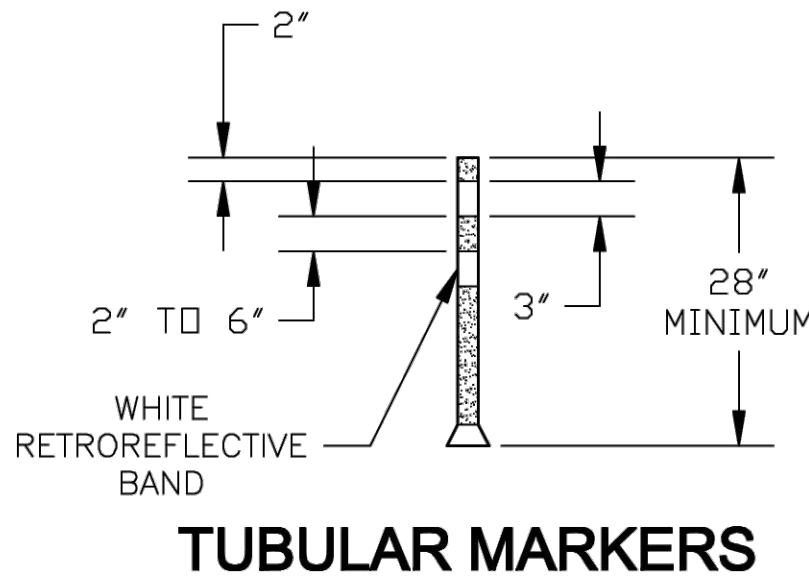
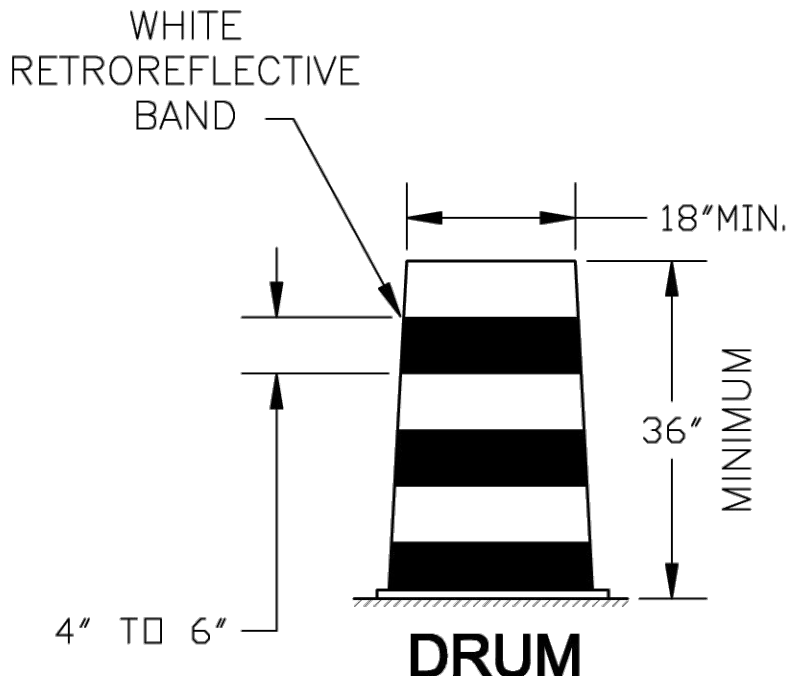
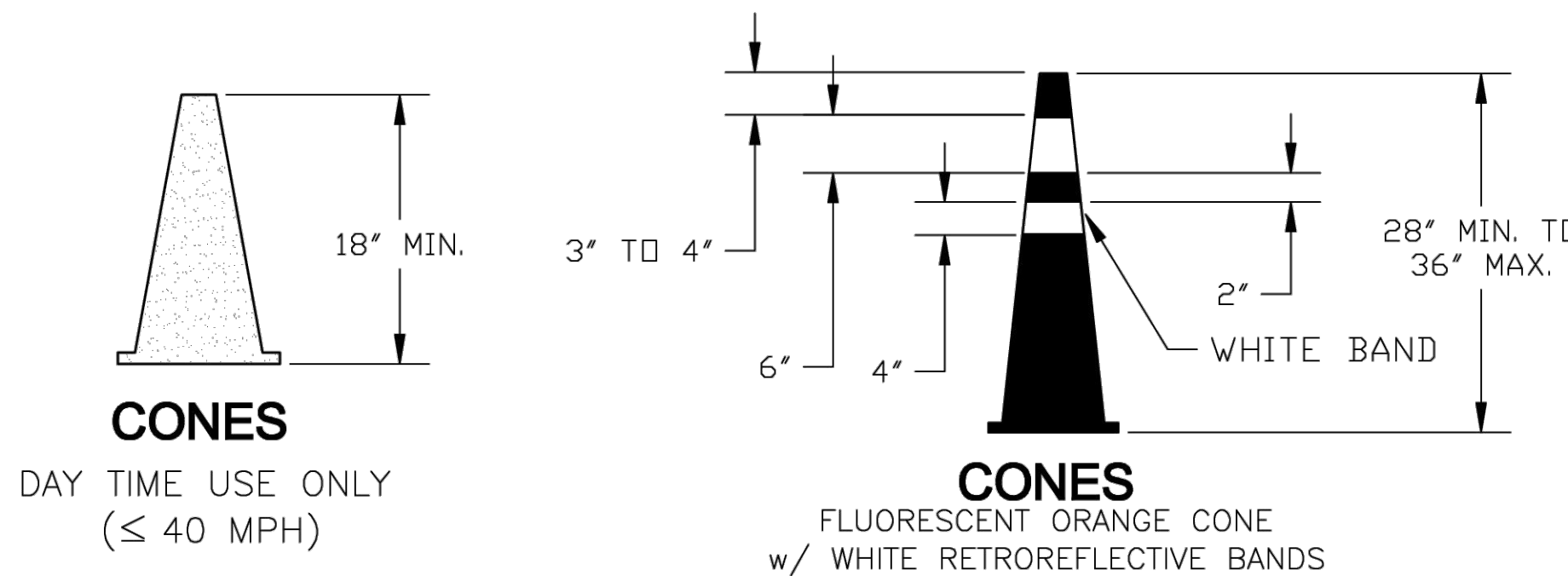
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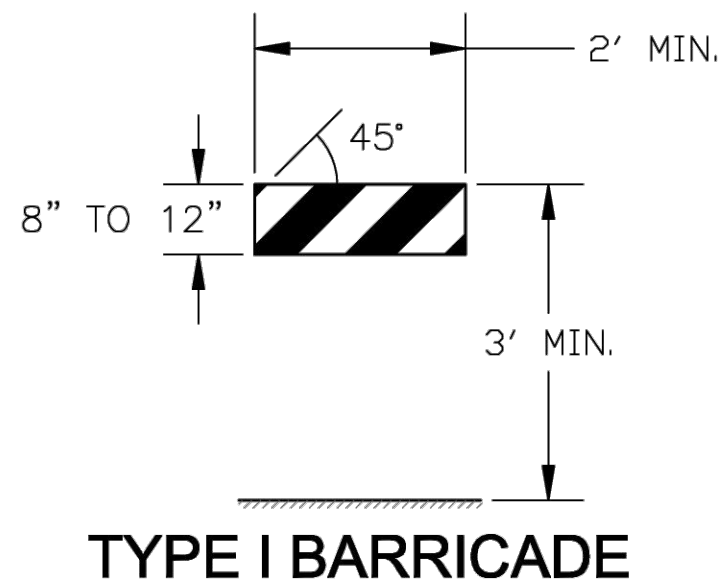
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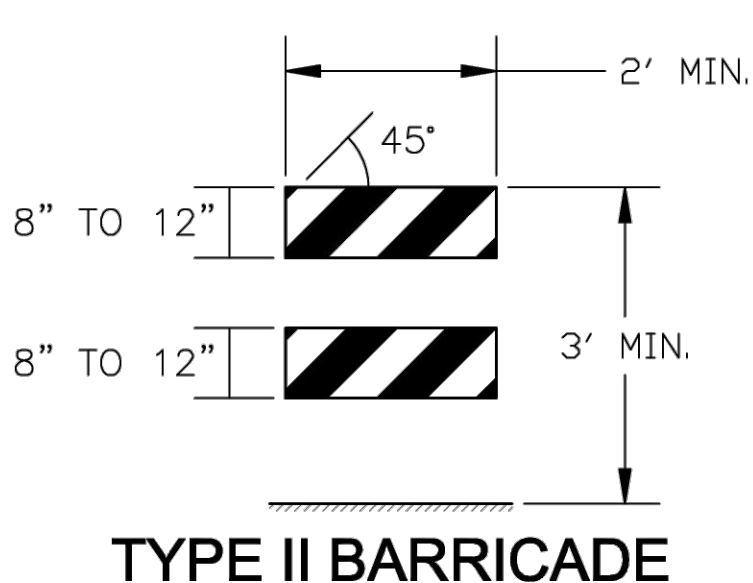
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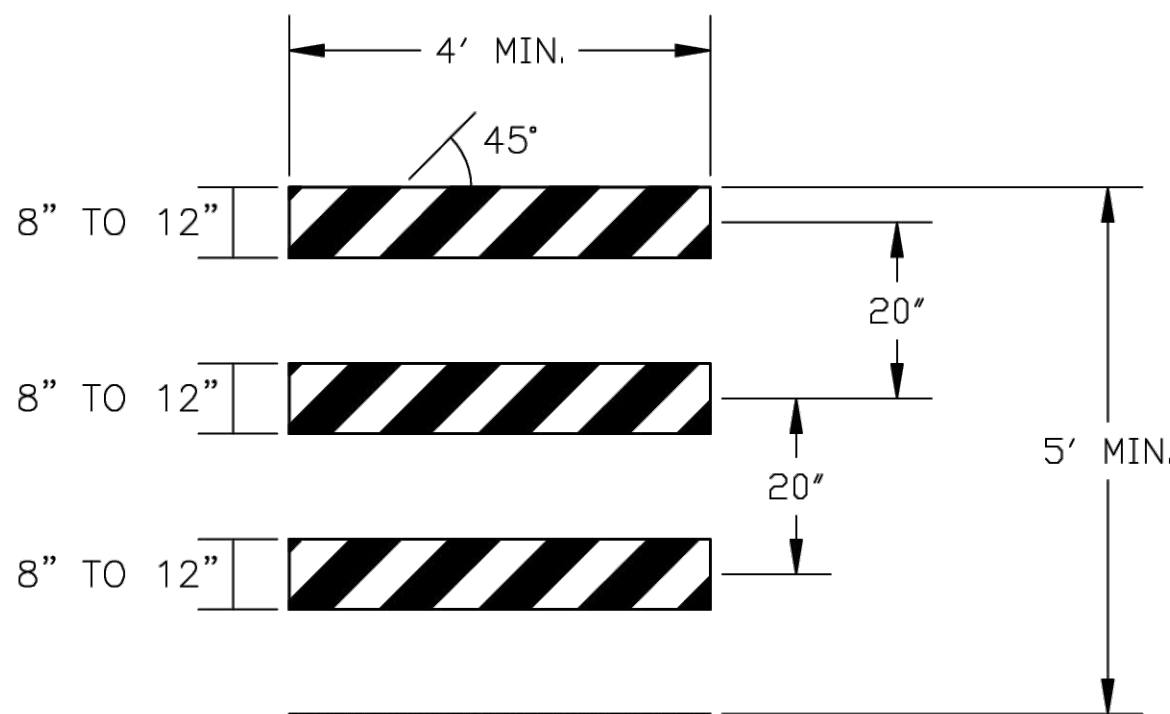
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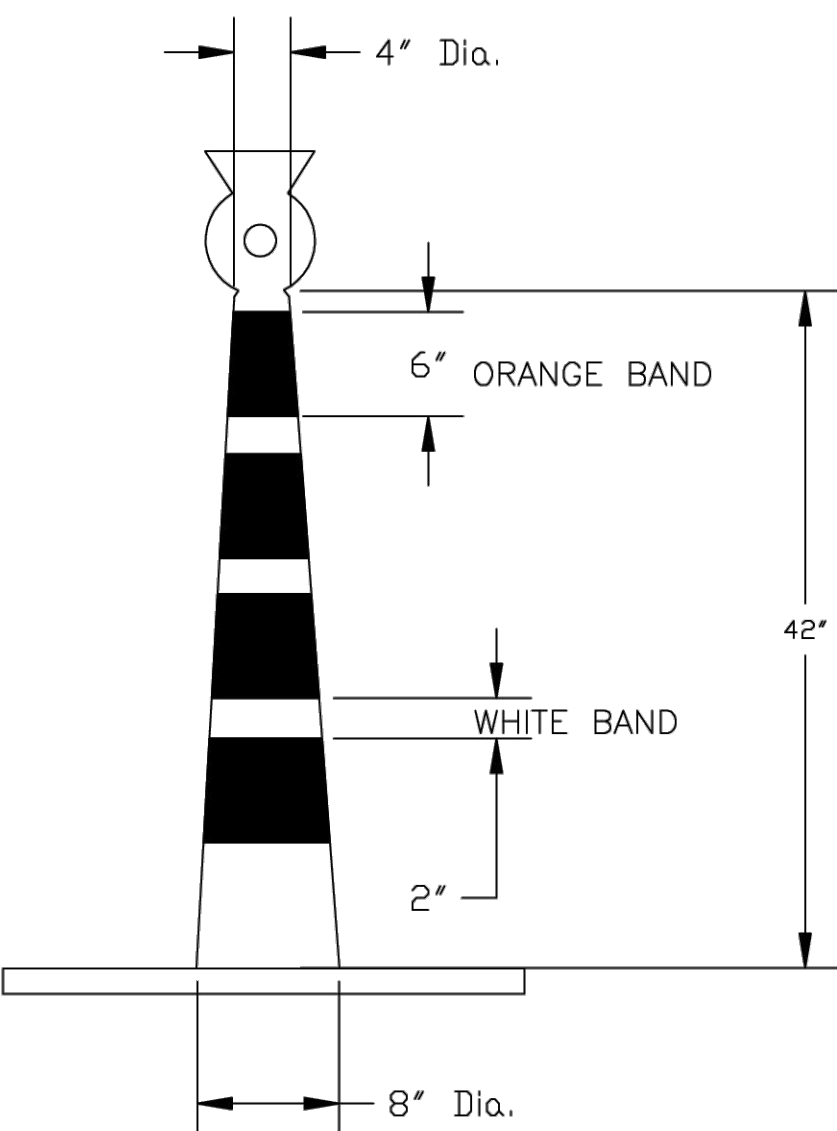
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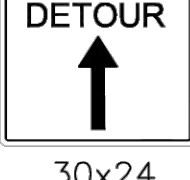
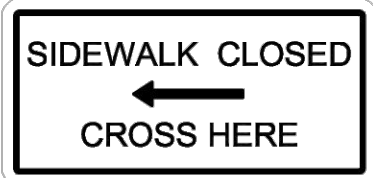
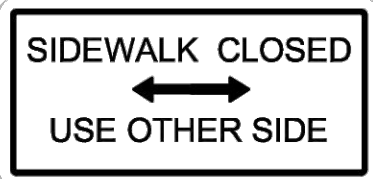
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TYPE III BARRICADE



SLIMLINE CHANNELIZER



| RECAPITULATION OF SIGNS, MARKINGS, BARRICADES. | | | | |
|--|-----------|---------|------|-------|
| SIGN NO. | SIZE | SQ. FT. | UNIT | TOTAL |
| W20-1 | 36x36 | | EACH | |
| W20-2 | 36x36 | | EACH | |
| W20-3 | 36x36 | | EACH | |
| W20-4 | 36x36 | | EACH | |
| W20-5 | 36x36 | | EACH | |
| W9-2 | 36x36 | | EACH | |
| W3-1a | 36x36 | | EACH | |
| W12-1 | 30x30 | | EACH | |
| W1-3 | 36x36 | | EACH | |
| W1-4 | 36x36 | | EACH | |
| W4-2 | 36x36 | | EACH | |
| W20-7a | 36x36 | | EACH | |
| R1-1 | 30x36 | | EACH | |
| R1-2 | 36x36x36 | | EACH | |
| R1-2aP | 36x30 | | EACH | |
| W13-1P | 24x24 | | EACH | |
| R11-4 | 60x30 | | EACH | |
| R7-1 | 12x18 | | EACH | |
| G20-2 | 36x18 | | EACH | |
| D-3 | ?x9 | | EACH | |
| DIRECTIONAL | 30x9 | | EACH | |
| INFORMATIONAL | AS NEEDED | | EACH | |
| R4-7 | 24x30 | | EACH | |
| R4-7b | 24x30 | | EACH | |
| R4-7c | 18x30 | | EACH | |
| R2-1 | 30x36 | | EACH | |
| R11-2 | 48x30 | | EACH | |
| R3-1 | 36x36 | | EACH | |
| R3-2 | 36x36 | | EACH | |
| R3-7 | 36x36 | | EACH | |
| R8-3 | 30x30 | | EACH | |
| R9-8 | 36x18 | | EACH | |
| R9-9 | 24x12 | | EACH | |
| R9-10 | 24x12 | | EACH | |
| R9-11 | 24x12 | | EACH | |
| R9-11a | 24x12 | | EACH | |
| M4-8a | 30x24 | | EACH | |
| M4-9 ADV. | 30x24 | | EACH | |
| M4-9 | 30x24 | | EACH | |
| M4-10 | 48x18 | | EACH | |
| CONSTRUCTION BARRICADES TYPE I OR II | | | EACH | |
| CONSTRUCTION BARRICADES TYPE III | | | EACH | |
| REFLECTIVE DRUMS | | | EACH | |
| REFLECTIVE VERTICAL PANELS | | | EACH | |
| SEQUENCING ARROW PANEL BOARD | | | EACH | |
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| 1 | 01-30-12 | UPDATE SPECIFICATIONS | KAP | LGV |
| NO. | DATE: | REVISION | BY: | APP'D |

DRAWN BY: K.PELTON
APP'D BY: Linda Pelton

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