



**CONTRACT DOCUMENTS & SPECIFICATIONS**

**for**

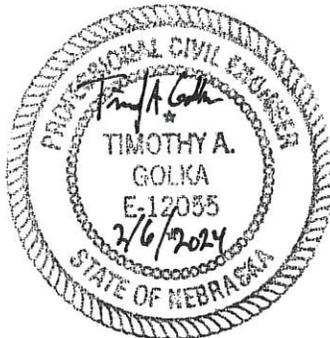
**Asphalt Maintenance Project No. 2024-AC-1**

**Bid Opening**

Thursday, February 29, 2024 @ 2:00 pm  
City of Grand Island, City Hall  
100 East 1<sup>st</sup> Street  
Grand Island, NE 68801

**ENGINEERING DIVISION  
DEPARTMENT OF PUBLIC WORKS  
GRAND ISLAND, NEBRASKA**

**FEBRUARY 2024**



**BIDDER CHECKLIST FOR  
ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1  
CITY OF GRAND ISLAND, NEBRASKA**

**Bids must be received by the City Clerk before 2:00 p.m., (local time) on Thursday, February 29, 2024.**

The following items must be completed for your bid to be considered.

- This completed bidder checklist form.
  - A signed **original and one copy** of the bidding documents.
  - Acknowledgment of Addendum(s), if any.
  - Firm unit pricing; or lump sum pricing as applicable. (See bid Form)
  - A certified check, cashiers check or bid bond in a separate envelope attached to the **outside of the envelope containing the bid**. Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened.
  - Acknowledgement of **PERFORMANCE BOND** requirement on award of the Contract. The successful Contractor shall furnish a Performance Bond which shall be in an amount equal to the full contract price, guaranteeing faithful compliance with all requirements of the contract documents and complete fulfillment of the contract, and payment of all labor, material and other bills incurred in carrying out this contract. According to Nebraska Law, the surety company executing the Performance Bond must be authorized to do business in the State of Nebraska.
  - Acknowledgement of **PAYMENT BOND** requirement on award of the contract. The successful contractor shall furnish a Payment Bond which shall be in an amount equal to the full contract price, guaranteeing protection of all persons supplying labor and materials to the contractor or its subcontractors for the performance of the work provided for in the contract. In accordance with Nebraska Law, the surety company executing the Payment Bond must be authorized to do business in the State of Nebraska.
- \* If checked you will be claiming the individual pricing as listed on the Bid Form is proprietary information and should not be released under a public records request. The total amount of the bid is not considered proprietary information and will be released pursuant to City Procurement Code.*

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

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print – Name of Person Completing Bid

\_\_\_\_\_  
Signature

**ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1**

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**CITY OF GRAND ISLAND, NEBRASKA**

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**ADVERTISEMENT TO BIDDERS**  
for

**ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1**

for  
CITY OF GRAND ISLAND, NEBRASKA

Sealed bids will be **received at the office of the City Clerk**, 100 E. First Street., Grand Island, NE 68801 or P.O. Box 1968, Grand Island, Nebraska 68802 until **2:00 p.m., (Local Time), Thursday, February 29, 2024** for the construction of **Asphalt Maintenance Project No. 2024-AC-1** for the City of Grand Island. Bids will be publicly opened at this time in the Conference Room #1 located on 1st floor of City Hall. Bids received after specified time will be returned unopened to sender.

Bids shall be submitted on forms which will be furnished by the City OR bidding documents, plans, and specifications for use in preparing bids may be downloaded from the Quest CDN website, [www.QuestCDN.com](http://www.QuestCDN.com) for a forty two dollar (\$42) fee. Bids must be uploaded to the Quest CDN website and received before the specified time to be considered. Each bidder shall submit with their bid a certified check, a cashiers check or bid bond payable to the City Treasurer in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fifteen (15) days, at the bid price, after acceptance by the City. **“Your certified check, cashiers check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.”** Each envelope must be clearly marked indicating its contents. **Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened or considered.** OR Bid bonds must be uploaded to Quest CDN, [www.QuestCDN.com](http://www.QuestCDN.com). Bid bonds must be issued by surety companies authorized to do business in the State of Nebraska. **Please return one original and one copy of each bid sheet.**

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S. 73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska.

Successful bidder shall comply with the City's insurance requirements, and supply performance and payment bonds. Successful bidder shall maintain a Drug Free Workplace Policy.

Bids will be evaluated by the Purchaser based on price, quality, adherence to schedule, plan and specification, economy and efficiency of operation, experience and reputation of bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The Purchaser reserves the right to reject any or all bids and to waive irregularities therein and to accept whichever bid that may be in the best interest of the City, at its sole discretion.

**GRATUITIES AND KICKBACKS:** City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract to order.

No bidder may withdraw their bid for a period of forty-five (45) days after date of opening bids.

**TITLE VI:** The City of Grand Island, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notified all bidden that it will affirmatively insure that in any contact entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin, sex, age and disability/handicap in consideration for an award.

**SECTION 504/ADA NOTICE TO THE PUBLIC:** The City of Grand Island does not discriminate on the basis of disability in admission of its programs, services, or activities, in access to them, in treatment of individuals with disabilities, or in any aspect of their operations. The City of Grand Island also does not discriminate on the basis of disability in its hiring or employment practices.

This notice is provided as required by Title II of the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. Questions, complaints, or requests for additional information or accommodation regarding the ADA and Section 504 may be forwarded to the designated ADA and Section 504 compliance coordinator.

City Administrator  
308-389-0140  
100 East First Street, Grand Island, NE 68801  
Monday through Friday; 8:00 a.m. to 5:00 p.m.

Plans and specifications for use in preparing bids may be obtained from the office of the City Engineer, Second Floor, City Hall, 100 East First Street, Grand Island, NE.

RaNae Edwards  
City Clerk

# **CONTRACTOR'S BID**

**ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1  
CITY OF GRAND ISLAND, NEBRASKA**

**CONTRACTOR'S BID**

TO THE MEMBERS OF THE COUNCIL  
CITY OF GRAND ISLAND  
GRAND ISLAND, NEBRASKA

THE UNDERSIGNED BIDDER, having examined the plans, specifications, general and special conditions, and other proposed contract documents, and all addenda thereto and being acquainted with and fully understanding (a) the extent and character of the work covered by this Bid, (b) the location, arrangement, and specified requirements for the proposed work, (c) the location, character, and condition of existing streets, roads, highways, railroad, pavements, surfacing, walks, driveways, curbs, gutters, trees, sewers, utilities, drainage courses and structures, and other installations, both surface and underground which may affect or be affected by the proposed work, (d) the nature and extent of the excavations to be made and the handling and re-handling of excavated materials, (e) the location and extent of necessary or probable dewatering requirements, (f) the difficulties and hazards to the work which might be caused by storm and flood water, (g) local conditions relative to labor, transportation, hauling and rail delivery facilities, and (h) all other factors and conditions affecting or which may be affected by the work.

HEREBY PROPOSES to furnish all required materials, supplies, equipment, tools and plans, to perform all necessary labor and supervision, and to construct, install, erect, equip and complete all work stipulated in, required by and in accordance with the contract documents and the plans, specifications and other documents referred to therein (as altered, amended or modified by all addenda thereto) for and in consideration of the following prices:

**BID SECTIONS**

**BID SECTION 1- 9<sup>TH</sup> STREET; EDDY STREET TO SYCAMORE STREET**

Item No.	Item	Est. Quantity	Unit	Unit Price	Total Price
1	MOBILIZATION	1.00	LS	\$	\$
2	COLD MILLING, CLASS 3 (DEPTH 2")	10,359.00	SY	\$	\$
3	ASPHALTIC CONCRETE, TYPE SPR (2")	1,150.00	TON	\$	\$
4	ASPHALTIC CONCRETE FOR INTERSECTIONS AND DRIVEWAYS, TYPE SPR	75.00	TON	\$	\$
5	ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR	30.00	TON	\$	\$
6	TACK COAT	1,554.00	GAL	\$	\$
7	TEMPORARY SIGN DAY	304.00	DAY	\$	\$
8	BARRICADE, TYPE II	104.00	BDAY	\$	\$
9	BARRICADE, TYPE III	288.00	BDAY	\$	\$
10	FLAGGING	2.00	DAY	\$	\$
11	ADJUST WATER VALVE TO GRADE	2.00	EACH	\$	\$
12	ADJUST MANHOLE TO GRADE	4	EA	\$	\$

**SubTotal - Bid Section 1 -**

**BID SECTION 2- 10<sup>TH</sup> STREET; EDDY STREET TO SYCAMORE STREET**

Item No.	Item	Est. Quantity	Unit	Unit Price	Total Price
1	MOBILIZATION	1.00	LS	\$	\$
2	COLD MILLING, CLASS 3 (DEPTH 2")	9,715.00	SY	\$	\$
3	ASPHALTIC CONCRETE, TYPE SPR (2")	1,078.00	TON	\$	\$
4	ASPHALTIC CONCRETE FOR INTERSECTIONS AND DRIVEWAYS, TYPE SPR	20.00	TON	\$	\$
5	ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR	30.00	TON	\$	\$
6	TACK COAT	1,457.00	GAL	\$	\$
7	RAISED LANE MARKERS	80.00	EACH	\$	\$
8	TEMPORARY SIGN DAY	266.00	DAY	\$	\$
9	BARRICADE, TYPE II	161.00	BDAY	\$	\$
10	BARRICADE, TYPE III	252.00	BDAY	\$	\$
11	FLAGGING	2.00	DAY	\$	\$

**SubTotal - Bid Section 2 -** \_\_\_\_\_

**BID SECTION 3- BROADWELL AVENUE; WAUGH STREET TO COLLEGE STREET**

Item No.	Item	Est. Quantity	Unit	Unit Price	Total Price
1	MOBILIZATION	1.00	LS	\$	\$
2	COLD MILLING, CLASS 3 (DEPTH 2")	3,111.00	SY	\$	\$
3	ASPHALTIC CONCRETE, TYPE SPR (2")	345.00	TON	\$	\$
4	ASPHALTIC CONCRETE FOR INTERSECTIONS AND DRIVEWAYS, TYPE SPR	18.00	TON	\$	\$
5	ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR	5.00	TON	\$	\$
6	TACK COAT	467.00	GAL	\$	\$
7	TEMPORARY SIGN DAY	44.00	DAY	\$	\$
8	BARRICADE, TYPE II	96.00	BDAY	\$	\$
9	BARRICADE, TYPE III	36.00	BDAY	\$	\$

10	FLAGGING	2.00	DAY	\$	\$
11	ADJUST MANHOLE TO GRADE	3.00	EACH	\$	\$
12	ADJUST WATER VALVE TO GRADE	3.00	EACH	\$	\$

**SubTotal - Bid Section 3 -** \_\_\_\_\_

**BID SECTION 4- EDDY STREET; 4<sup>TH</sup> STREET TO 10<sup>TH</sup> STREET**

Item No.	Item	Est. Quantity	Unit	Unit Price	Total Price
1	MOBILIZATION	1.00	LS	\$	\$
2	COLD MILLING, CLASS 3 (DEPTH 2")	8,835.00	SY	\$	\$
3	ASPHALTIC CONCRETE, TYPE SPR (2")	981.00	TON	\$	\$
4	ASPHALTIC CONCRETE FOR INTERSECTIONS AND DRIVEWAYS, TYPE SPR	85.00	TON	\$	\$
5	ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR	20.00	TON	\$	\$
6	TACK COAT	1,325.00	GAL	\$	\$
7	RAISED LANE MARKERS	128.00	EACH	\$	\$
8	TEMPORARY SIGN DAY	256.00	DAY	\$	\$
9	BARRICADE, TYPE II	240.00	BDAY	\$	\$
10	BARRICADE, TYPE III	240.00	BDAY	\$	\$
11	FLAGGING	2.00	DAY	\$	\$
12	ADJUST MANHOLE TO GRADE	4.00	EACH	\$	\$

**SubTotal - Bid Section 4 -** \_\_\_\_\_

**BID SECTION 5- EDDY STREET; 10<sup>TH</sup> STREET TO 18<sup>TH</sup> STREET**

Item No.	Item	Est. Quantity	Unit	Unit Price	Total Price
1	MOBILIZATION	1.00	LS	\$	\$
2	COLD MILLING, CLASS 3 (DEPTH 2")	12,317.00	SY	\$	\$
3	ASPHALTIC CONCRETE, TYPE SPR (2")	1,367.00	TON	\$	\$
4	ASPHALTIC CONCRETE FOR INTERSECTIONS AND DRIVEWAYS, TYPE SPR	146.00	TON	\$	\$
5	ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR	30.00	TON	\$	\$
6	TACK COAT	1,848.00	GAL	\$	\$
7	RAISED LANE MARKERS	175.00	EACH	\$	\$
8	TEMPORARY SIGN DAY	400.00	DAY	\$	\$
9	BARRICADE, TYPE II	240.00	BDAY	\$	\$
10	BARRICADE, TYPE III	380.00	BDAY	\$	\$
11	FLAGGING	5.00	DAY	\$	\$
12	ADJUST MANHOLE TO GRADE	18.00	EACH	\$	\$

**SubTotal - Bid Section 5 -** \_\_\_\_\_

**BID SECTION 6- SYCAMORE STREET; 4<sup>TH</sup> STREET TO 10<sup>TH</sup> STREET**

Item No.	Item	Est. Quantity	Unit	Unit Price	Total Price
1	MOBILIZATION	1.00	LS	\$	\$
2	COLD MILLING, CLASS 3 (DEPTH 2")	8,866.00	SY	\$	\$
3	ASPHALTIC CONCRETE, TYPE SPR (2")	984.00	TON	\$	\$
4	ASPHALTIC CONCRETE FOR INTERSECTIONS AND DRIVEWAYS, TYPE SPR	35.00	TON	\$	\$
5	ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR	20.00	TON	\$	\$
6	TACK COAT	1,330.00	GAL	\$	\$
7	RAISED LANE MARKERS	63.00	EACH	\$	\$
8	TEMPORARY SIGN DAY	256.00	DAY	\$	\$

9	BARRICADE, TYPE II	160.00	BDAY	\$	\$
10	BARRICADE, TYPE III	240.00	BDAY	\$	\$
11	FLAGGING	2.00	DAY	\$	\$
12	ADJUST MANHOLE TO GRADE	3.00	EACH	\$	\$

**SubTotal - Bid Section 6 -** \_\_\_\_\_

**GRAND TOTAL BID=** \_\_\_\_\_

The City reserves the right to reject any bid section(s) submitted by the successful bidder. Bid sections will be completed as budgeted funds allow.

**EXPERIENCE DATA:**

Each bidder shall supply the following data on their experience:

Name of Bidder: \_\_\_\_\_

Project Owner/Contact/Phone No.                      Project Location                      Completion Date

\_\_\_\_\_

\_\_\_\_\_

Additional Data: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**INSURANCE:** Bidder acknowledges that bid includes compliance with the attached insurance requirements.

**ADDENDA:**

Bidder acknowledges that the following Addendums were received and considered in Bid preparation.

<u>ADDENDUM NO.</u>	<u>DATE</u>	<u>SIGNATURE</u>
_____	_____	_____
_____	_____	_____

Exceptions shall be listed in the following blanks. If additional space is required for exception explanation, please reference and attach a letter to bid. Reference shall not be made to other attachments for exceptions and supplementary terms. Failure to outline such exceptions as specifically stated herein will require the successful bidder to comply with these specifications. In case of conflict between the bid and these specifications, these specifications shall govern unless specific exceptions are listed by the bidder.

Exceptions to specifications, pages \_\_\_\_\_

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The undersigned bidder agrees to furnish the required performance and payment bond and to enter into a contract within fifteen (15) days after acceptance of this Bid, and further agrees to complete all work covered by the foregoing bid in accordance with specified requirements. **No work shall commence until the Certificate of Insurance and bonds (when required) are approved by the City and the contract is executed.** The proposed work can commence after the contract is signed and the required bond is approved. All sections shall be complete before **September 6, 2024**.

The Contractor shall perform the work within the period of time stipulated in the Contract Agreement, unless an extension of time is granted by the City Council. Liquidated damages shall be assessed \$500.00 per calendar day.

Enclosed herewith is the required bid guarantee in the amount of \_\_\_\_\_ Dollars (\$\_\_\_\_\_)

which the undersigned bidder agrees is to be forfeited to and become the property of the City of Grand Island, Nebraska, as liquidated damages should this Bid be accepted and a contract be awarded to them and they fail to enter into a contract in the form prescribed and to furnish the required bond within fifteen (15) days, but otherwise the aforesaid bid guarantee will be returned upon signing the contract and delivering the approved bond.

In submitting the bid it is understood that the right is reserved by the City to reject any and all bids; to waive irregularities therein and to accept whichever bid that may be in the best interest of the City. It is understood that this bid may not be withdrawn by the bidder until after forty-five (45) days from bid opening.

In submitting the bid, the bidder states that bidder fully complies with, and will continue to comply with, applicable State fair labor standards as required by section 73-102 RRS, 1943 and also complies with, and will continue to comply with, section 48-657 RRS, 1943 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska.

The undersigned bidder hereby certifies (a) that this bid is genuine and is not made in the interest of or in the 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, (b) that they have not directly or indirectly induced or solicited any person, firm or corporation to refrain from bidding, (c) that they have not sought, by collusion or otherwise, to obtain for themselves an advantage over any other bidder or over the City of Grand Island, and (d) that they have not directly or indirectly induced or solicited any other bidder to put in a false or sham bid.

DATED \_\_\_\_\_

SIGNATURE OF BIDDER:

If an Individual: \_\_\_\_\_ doing business

as \_\_\_\_\_

If a Partnership: \_\_\_\_\_

by \_\_\_\_\_, member of firm.

If a Corporation: \_\_\_\_\_

by \_\_\_\_\_ (Seal)  
Title

BUSINESS ADDRESS OF BIDDER

\_\_\_\_\_

TELEPHONE NUMBER OF BIDDER

FAX NUMBER OF BIDDER

\_\_\_\_\_

**NAMED EQUIPMENT / SUBCONTRACTORS**

Bidders shall enter the names of manufacturers for items of equipment proposed to be furnished. Substitutions will not be permitted unless the proposed equipment does not meet the specifications or the manufacturer of the proposed equipment is unable to meet delivery requirements of the construction schedule.

Acceptance of the named equipment as part of the bid shall not constitute a waiver of specifications covering such equipment. Final acceptance shall be based upon review of shop drawings of the proposed equipment.

<i>Equipment</i>	<i>Manufacturer</i>

**LIST OF SUBCONTRACTORS**

Bidders shall enter the names of subcontractors to be used in performing the work. If any of the following work is to be self-performed, fill in the name of the Bidder. Bidder certifies that all subcontractors listed are eligible to perform the work. The City reserves the right to reject any listed subcontractor(s).

<i>Subcontractor's Work</i>	<i>Subcontractor's Name</i>

Failure to furnish the information requested on this form may be cause for rejection of the bid.

Bidder: \_\_\_\_\_

# **INSTRUCTIONS TO BIDDERS**

**INSTRUCTIONS TO BIDDERS**  
**ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1**  
**CITY OF GRAND ISLAND, NEBRASKA**

**EXCEPTIONS TO SPECIFICATIONS:** Each bidder shall carefully check all requirements herein set forth and shall offer items which fully comply with these requirements or shall plainly set forth all points, features, conditions, specifications of items that are non-compliant. Bidder must comply with all applicable Federal, State and Local rules and regulations.

**SUBMISSION OF BIDS:** All bids shall be submitted using the City's bid form. Bids shall **be addressed to the City Clerk** and plainly marked, "**BID FOR ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1**".

**INSURANCE COVERAGE:** The Contractor shall purchase and maintain at their expense as a minimum insurance coverage of such types and in such amounts as are specified herein to protect Contractor and the interest of Owner and others from claims which may arise out of or result from Contractor's operations under the Contract Documents, whether such operations be by Contractor or by any subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be legally liable. Failure of Contractor to maintain proper insurance coverage shall not relieve them of any contractual responsibility or obligation.

**BASE BID:** The bidder is expected to base their bids on materials and items complying fully with these specifications, and in the event the contractor names in the bid materials items which do not conform, they will be responsible for furnishing materials and items which fully conform at no change in the bid price.

**BIDDER QUALIFICATION:** Bids will be received only from qualified bidders. A bidder will be considered qualified if they are a recognized manufacturer or supplier of materials and items similar to that specified herein with complete factory facilities in the United States and has had experience in the design and manufacture of items of equal or greater size than that specified herein. If requested, the Bidder shall supply experience data. Such data will be used to assist in determining the qualifications of the Bidder. Bidder must comply with all applicable Federal, State and Local rules and regulations.

**GRATUITIES AND KICKBACKS:** City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract to order.

**CHECKS OR BID BONDS:** Checks or bid bonds of the unsuccessful bidders will be returned when their bids have been rejected and not to exceed forty-five (45) days from the date bids are opened. All bids shall remain in force for this forty-five (45) day Period. The check or bid bond of the successful bidder will be returned when the Contracts are signed by both parties and necessary bonds supplied. Should the Purchaser make an award to a Contractor who refuses to enter into a Contract and furnish the required bonds within fifteen (15) days after notification of acceptance, then the bid security which has been deposited with the Purchaser will be forfeited to the Purchaser as liquidated damages.

**PERFORMANCE BOND:** When required, on award of the Contract, the successful Contractor shall furnish a Performance Bond which shall be in an amount equal to the full Contract price, guaranteeing faithful compliance with all requirements of the Contract Documents and complete fulfillment of the Contract, and payment of all labor, material and other bills incurred in carrying out this Contract. According to Nebraska Law, the surety company executing the Performance Bond must be authorized to do business in the State of Nebraska.

**PAYMENT BOND:** When required, on award of the Contract, the successful Contractor shall furnish a Payment Bond which shall be in an amount equal to the full Contract price, guaranteeing protection of all persons supplying labor and materials to the Contractor or its subcontractors for the performance of the work provided for in the Contract. In accordance with Nebraska Law, the surety company executing the Payment Bond must be authorized to do business in the State of Nebraska.

**TAXES:** The City of Grand Island is exempt from paying local City and State Sales Tax for materials incorporated into the work. Refer to Exempt Sale Certificate enclosed for your information. Contractor must pay any other tax which might be applicable.

**REQUESTS FOR PAYMENT:** The City of Grand Island will make payments only after approval at regularly scheduled City Council meetings. These meetings typically occur the second and fourth Tuesday each month. Requests for payment must be received no less than ten (10) working days prior to the designated meeting to allow proper review and consideration. Progress Payments will be permitted during the project, so long as work is being done to the City's satisfaction unless otherwise stated in bidding documents.

**REQUEST FOR INTERPRETATION:** If any person, contemplating submitting a bid for this Contract is in doubt as to the true meaning of any part of the specifications or other proposed Contract documents, they may submit to the Purchasing Department a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made by addendum only issued and/or delivered to each person receiving a set of such documents. The addenda upon closing shall become a part of the Contract. The Purchasing Department will not be responsible for any other explanation or interpretation of the proposed documents.

**TIME OF COMPLETION:** All Sections shall be completed before **September 6, 2024**.

**LIQUIDATED DAMAGES:** The Contractor shall perform the work within the period of time stipulated in the Contract Agreement, unless an extension of time is granted by the City Council. Liquidated damages shall be assessed \$500.00 per calendar day.

**CLEANING UP:** Contractor shall maintain a clean and safe work area while on site.

**ADDENDA:** Any addendum to the specifications issued during the time allowed for preparation of bids shall be covered in the bid and shall become a part of the specifications. Addendums issued before the date of the letting will be sent to all bidders. One signed copy is to be returned immediately to the Purchasing Department (or other department if so designated in the Addendum) as acknowledgment of receipt.

**MODIFICATION OF BIDS:** 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 final time set for receiving bids. Bidders may modify or withdraw bids by Fax communication at any time prior to the time set for receiving bids provided this instruction is positively identified. Any Fax modification should not reveal the amended bid price but should provide only the addition, subtraction or other modifications. A duly-executed document confirming the Fax modification shall be submitted within three days after bids are opened.

BID DATA: Bidders shall submit bid data, if required, on items offered in the Bid by **furnishing one original and one copy of the completed Contractor's Bid form**. The bid sheets shall be filled out legibly in ink to permit reproduction.

BIDDER SECURITY: Bidder security, when required, shall be enclosed in a separate envelope marked, "**BIDDER SECURITY/BID FOR ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1**". The envelope shall contain only a cashier's check, certified check or bidder's bond payable to the City of Grand Island Treasurer in an amount no less than five (5) percent of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fifteen (15) days, at the bid price, after acceptance by the City. **Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened or considered.** OR Bid bonds must be uploaded to Quest CDN, [www.QuestCDN.com](http://www.QuestCDN.com). Bid bonds must be issued by surety companies authorized to do business in the State of Nebraska.

**This separate envelope shall be attached to a sealed envelope containing the bid and any other bid materials. This second envelope shall be labeled "BID FOR ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1" and be addressed to the City Clerk.** Bids of an incomplete nature or subject to multiple interpretation may, at the option of the Purchaser, be rejected as being irregular.

FINANCIAL STATEMENT: The bidder shall furnish, upon request, a complete financial statement signed by the bidder, if an individual, by all partners if the bidder is a partnership and, by the President or Secretary, if the bidder is a corporation.

DRUG FREE WORKPLACE POLICY: Bidders shall furnish, upon request, a copy of their Drug Free workplace Policy.

EQUAL EMPLOYMENT OPPORTUNITY: The Contractor agrees that during the performance of this Contract not to discriminate in hiring or any other employment practice on the basis of race, color, religion, sex, disability, age or national origin, and to comply with Executive Order 11,246 of September 24, 1965, and the rules, regulations and relevant orders of the Secretary of Labor, and Chapter 20 of the Reissue Revised Statutes of the State of Nebraska.

LOCAL CONDITIONS: Each bidder shall have an authorized representative visit the site of the work and thoroughly inform them of all conditions and factors which would affect the work and the cost thereof, including the arrangement and conditions of existing or proposed structures affecting or affected by the proposed work; the procedure necessary for maintenance of uninterrupted operation; the availability and cost of labor and facilities for transportation, handling, and storage of materials and equipment.

TILE VI: The City of Grand Island, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notified all bidden that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin, sex, age and disability/handicap in consideration for an award.

SECTION 504/ADA NOTICE TO THE PUBLIC: The City of Grand Island does not discriminate on the basis of disability in admission of its programs, services, or activities, in access to them, in treatment of individuals with disabilities, or in any aspect of their operations. The City of Grand Island also does not discriminate on the basis of disability in its hiring or employment practices. This notice is provided as required by Title II of the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation

Act of 1973. Questions, complaints, or requests for additional information or accommodation regarding the ADA and Section 504 may be forwarded to the designated ADA and Section 504 compliance coordinator.

City Administrator  
308-389-0140  
100 East First Street, Grand Island, NE 68801  
Monday through Friday; 8:00 a.m. to 5:00 p.m.

It must be understood and agreed that all such factors have been investigated and considered in the preparation of every bid submitted. No claims for financial adjustment to any Contract awarded for the work under these Specifications and documents will be permitted by the City, which are based on lack of such prior information, or its effect on the cost of the work.

**CORRESPONDENCE:** Correspondence regarding drawings, instruction manuals, and other engineering data shall be clearly marked "FOR ENGINEERING DEPARTMENT" and sent through:

City of Grand Island  
Public Works Department/Engineering Division  
P.O. Box 1968  
Grand Island, NE 68802-1968  
(308) 385-5455  
Attn: Tim Golka

**LOCAL BIDDER PREFERENCE:** In case of tied low bids, all other things being equal, preference shall be given in the following order:

1. To those bidders who manufacture their products within the limits of the City of Grand Island.
2. To those bidders who manufacture their products within the limits of the County of Hall.
3. To those bidders who package, process, or through some other substantial operation have employees and facilities for these purposes in the City of Grand Island.
4. To those bidders who package, process, or through some other substantial operation have employees and facilities for these purposes in the County of Hall.
5. To those bidders who maintain a bona fide business office in the City of Grand Island, whose products may be made outside the confines of the City of Grand Island.
6. To those bidders who maintain a bona fide business office in the County of Hall, whose products may be made outside the confines of the County of Hall.
7. To those bidders whose commodities are manufactured, mined, produced, or grown within the State of Nebraska, and to all firms, corporations, or individuals doing business as Nebraska firms, corporations or individuals, when quality is equal or better, and delivered price is the same or less than the other bids received.
8. To those bidders whose commodities are manufactured, mined, produced, or grown within the United States of America, and to all firms, corporations, or individuals doing business as firms registered in states other than Nebraska, when quality is equal or better, and delivered price is the same or less than the other bids received.

# **INSURANCE REQUIREMENTS**

**MINIMUM INSURANCE REQUIREMENTS**

**ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1**

CITY OF GRAND ISLAND, NEBRASKA

*You are urged to include in your bid compliance with the City's minimum insurance requirements; however, any non-compliance must be detailed in the Exceptions Section of the bid. Compliance with the specified OCP coverage is mandatory.*

The successful bidder shall obtain insurance from companies authorized to do business in Nebraska of such types and in such amounts as may be necessary to protect the bidder and the interests of the City against hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Bidder's operations and completed operations. Failure to maintain adequate coverage shall not relieve bidder of any contractual responsibility or obligation. Minimum insurance coverage shall be the amounts stated herein or the amounts required by applicable law, whichever are greater.

**1. WORKERS COMPENSATION AND EMPLOYER'S LIABILITY**

This insurance shall protect the Bidder against all claims under applicable State workers compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The liability limits shall not be less than the following:

Workers Compensation	Statutory Limits
Employers Liability	\$100,000 each accident
	\$100,000 each employee
	\$500,000 policy limit

**2. BUSINESS AUTOMOBILE LIABILITY**

This insurance shall be written in comprehensive form and shall protect the Bidder, Bidder's employees, or subcontractors from claims due to the ownership, maintenance, or use of a motor vehicle. The liability limits shall be not less than the following:

Bodily Injury & Property Damage	\$ 500,000 Combined Single Limit
---------------------------------	----------------------------------

**3. COMPREHENSIVE GENERAL LIABILITY**

The comprehensive general liability coverage shall contain no exclusion relative to explosion, collapse, or underground property. The liability limits shall be not less than the following:

Bodily Injury & Property Damage	\$ 500,000 each occurrence
	\$1,000,000 aggregate

**4. UMBRELLA LIABILITY INSURANCE**

This insurance shall protect the Bidder against claims in excess of the limits provided under employer's liability, comprehensive automobile liability, and commercial general liability policies. The umbrella policy shall follow the form of the primary insurance, including the application of the primary limits. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$1,000,000 each occurrence
	\$1,000,000 general aggregate

## **5. ADDITIONAL REQUIREMENTS**

The City may require insurance covering a Bidder or subcontractor more or less than the standard requirements set forth herein depending upon the character and extent of the work to be performed by such Bidder or subcontractor.

Insurance as herein required shall be maintained in force until the City releases the Bidder of all obligations under the Contract.

The Bidder shall provide and carry any additional insurance as may be required by special provisions of these specifications.

## **6. CERTIFICATE OF INSURANCE**

Satisfactory certificates of insurance shall be filed with the City prior to starting any work on this Contract. **The certificates shall show the City as an additional insured on all coverage except Workers Compensation. The certificate shall state that thirty (30) days written notice shall be given to the City before any policy is cancelled (strike the "endeavor to" wording often shown on certificate forms). If the bidder cannot have the "endeavor to" language stricken, the bidder may elect to provide a new certificate of insurance every 30 days during the contract. Bidder shall immediately notify the City if there is any reduction of coverage because of revised limits or claims paid which affect the aggregate of any policy.**

# Nebraska Resale or Exempt Sale Certificate for Sales Tax Exemption

Name and Mailing Address of Purchaser			Name and Mailing Address of Seller		
Name			Name		
Legal Name					
Street or Other Mailing Address			Street or Other Mailing Address		
City	State	Zip Code	City	State	Zip Code

**Check Type of Certificate**

- Single Purchase    If single purchase is checked, enter the related invoice or purchase order number \_\_\_\_\_.
- Blanket                If blanket is checked, this certificate is valid until revoked in writing by the purchaser.

I hereby certify that the purchase, lease, or rental by the above purchaser is exempt from the Nebraska sales tax for the following reason:

**Check One**    Purchase for Resale (Complete Section A.)    Exempt Purchase (Complete Section B.)    Contractor (Complete Section C.)

**Section A—Nebraska Resale Certificate**

Description of Property or Service Purchased

I hereby certify that the purchase, lease, or rental of \_\_\_\_\_ from the seller listed above is exempt from the Nebraska sales tax as a purchase for resale, rental, or lease in the normal course of our business. The property or service will be resold either in the form or condition in which it was purchased, or as an ingredient or component part of other property or service to be resold.

I further certify that we are engaged in business as a:     Wholesaler     Retailer     Manufacturer     Lessor

Description of Product Sold, Leased, or Rented

of \_\_\_\_\_

My Nebraska Sales Tax ID Number is 01-\_\_\_\_\_.

If none, state the reason \_\_\_\_\_,

or Foreign State Sales Tax Number \_\_\_\_\_ State \_\_\_\_\_.

**Section B—Nebraska Exempt Sale Certificate**

The basis for this exemption is exemption category \_\_\_\_\_ (See the list of Exemption Categories and corresponding numbers on reverse side).

If exemption category 2 or 5 is claimed, enter the following information:

Description of Property or Service Purchased	Intended Use of Property or Service Purchased
_____	_____

If exemption category 3 or 4 is claimed, enter your Nebraska Certificate of Exemption State ID number. 05-\_\_\_\_\_ Do **not** enter your Federal Employer ID Number.

If exemption category 6 is claimed, the seller must enter the following information and sign this form below:

Description of Items Sold	Date of Seller's Original Purchase	Was tax paid when purchased by seller? <input type="checkbox"/> Yes <input type="checkbox"/> No	Was item depreciable? <input type="checkbox"/> Yes <input type="checkbox"/> No
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**Section C—For Contractors Only**

**1. Purchase of building materials or fixtures.**

As an Option 1 or Option 3 contractor, I hereby certify that the purchase of building materials and fixtures from the seller listed above are exempt from Nebraska sales tax. My Nebraska Sales or Use Tax ID Number is: \_\_\_\_\_.

**2. Purchases made by an Option 2 contractor under a Purchasing Agent Appointment on behalf of \_\_\_\_\_**  
(exempt entity)

As an Option 2 contractor, I hereby certify that the purchase of building materials and fixtures from the seller listed above is exempt from Nebraska sales tax pursuant to the **attached** Purchasing Agent Appointment and Delegation of Authority for Sales and Use Tax, Form 17.

Any purchaser, agent, or other person who completes this certificate for any purchase which is not for resale, lease, or rental in the regular course of the purchaser's business, or is not otherwise exempted from sales and use taxes is subject to a penalty of \$100 or ten times the tax, whichever amount is larger, for each instance of presentation and misuse. With regard to a blanket certificate, this penalty applies to each purchase made during the period the blanket certificate is in effect. Under penalties of law, I declare that I am authorized to sign this certificate, and to the best of my knowledge and belief, it is correct and complete.

**sign  
here** ▶

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Authorized Signature Name (please print)

**Do not send this certificate to the Nebraska Department of Revenue. Keep it as part of your records.  
Sellers cannot accept incomplete certificates.**

**The Department is committed to the fair administration of the Nebraska tax laws. It is unlawful to claim an exemption for purchases of property or services that are subject to tax. Sellers are encouraged to notify the Department of any unlawful use of this form.  
revenue.nebraska.gov, 800-742-7474 (NE and IA), 402-471-5729**

## Instructions

**Who May Issue a Resale Certificate.** Purchasers are to give the seller a properly completed Form 13, Section A, when making purchases of property or taxable services that will subsequently be resold in the purchaser's normal course of business. The property or services must be resold in the same form or condition as when purchased, or as an ingredient or component part of other property that will be resold.

**Who May Issue an Exempt Sale Certificate.** Form 13, Section B, may be completed and issued by governmental units or organizations that are exempt from paying Nebraska sales and use taxes. See this list in the [Nebraska Sales Tax Exemptions Chart](#). Most nonprofit organizations are **not** exempt from paying sales and use tax. Enter the appropriate number from "Exemption Categories" (listed below) that properly reflects the basis for your exemption.

For additional information about proper issuance and use of this certificate, please review [Reg-1-013, Sale for Resale – Resale Certificate](#), and [Reg-1-014, Exempt Sale Certificate](#).

**Contractors.** Contractors complete Form 13, Section C, part 1 or part 2 based on the option elected on the [Contractor Registration Database](#).

To make tax-exempt purchases of building materials and fixtures, Option 1 or Option 3 contractors must complete Form 13, Section C, Part 1. To make tax-exempt purchases of building materials and fixtures pursuant to a construction project for an exempt governmental unit or an exempt nonprofit organization, Option 2 contractors must complete Form 13, Section C, Part 2. The contractor must also attach a copy of a properly completed [Purchasing Agent Appointment and Delegation of Authority for Sales and Use Tax, Form 17](#), to the Form 13, and both documents must be given to the supplier when purchasing building materials. See the [contractor information guides](#) and [Reg-1-017, Contractors](#), for additional information. Also, see the Important Note under "Exemption Categories" number 3.

**When and Where to Issue.** The Form 13 must be given to the seller at the time of the purchase to document why sales tax does not apply to the purchase. The Form 13 must be kept with the seller's records for audit purposes.

**Sales Tax Number.** A purchaser who is engaged in business as a wholesaler or manufacturer is not required to provide an ID number when completing Section A. Out-of-state purchasers may provide their home state sales tax number. Section B does not require a Nebraska ID number when exemption category 1, 2, or 5 is indicated.

**Fully Completed Resale or Exempt Sale Certificate.** A fully completed resale or exempt sale certificate is proof for the retailer that the sale was for resale or is exempt. For a resale certificate to be fully completed, it must include: (1) identification of the purchaser and seller, type of business engaged in by the purchaser; (2) sales tax permit number; (3) signature of an authorized person; and (4) the date of issuance.

For an exempt sale certificate to be fully completed, it must include: (1) identification of purchaser and seller; (2) a statement that the certificate is for a single purchase or is a blanket certificate covering future sales; (3) a statement of the basis for exemption, including the type of activity engaged in by the purchaser; (4) signature of an authorized person; and (5) the date of issuance.

**Penalties.** Any purchaser who gives a Form 13 to a seller for any purchase which is other than for resale, lease, or rental in the **normal** course of the purchaser's business, or is not otherwise exempted from sales and use tax under the Nebraska Revenue Act, is subject to a penalty of \$100 or ten times the tax, whichever is greater, for each instance of presentation and misuse. In addition, any purchaser, or their agent, who fraudulently signs a Form 13 may be found guilty of a Class IV misdemeanor.

### Exemption Categories

(Insert appropriate number from the list below in Section B)

1. Governmental units, identified in [Reg-1-072, United States Government and Federal Corporations](#); and [Reg-1-093, Governmental Units](#). Governmental units are not assigned exemption numbers.

Sales to the U.S. government, its agencies, instrumentalities, and corporations wholly owned by the U.S. government are exempt from sales tax. However, sales to institutions chartered or created under federal authority, but which are not directly operated and controlled by the U.S. government for the benefit of the public, generally are taxable.

Purchases by governmental units that are **not** exempt from Nebraska sales and use taxes include, but are not limited to: governmental units of other states; sanitary and improvement districts; rural water districts; railroad transportation safety districts; and county historical societies.

2. Purchases when the intended use renders it exempt. See [Nebraska Sales Tax Exemption Chart](#).
3. Purchases made by organizations that have been issued a [Nebraska Exempt Organization Certificate of Exemption](#) (Certificate of Exemption). [Reg-1-090, Nonprofit Organizations](#); [Reg-1-091, Religious Organizations](#); and [Reg-1-092, Educational Institutions](#), identify these organizations. These organizations are issued a Certificate of Exemption with a state ID number which must be entered in Section B of Form 13.

**Important Note:** Nonprofit educational institutions must be accredited regionally or nationally and have their primary campus in Nebraska to be exempt from sales and use tax. Also nonprofit organizations providing any of the types of health care or services that qualify to be exempt must be licensed or certified by the Nebraska Department of Health and Human Services (DHHS) to be exempt from sales and use taxes. There is no sales and use tax exemption prior to these entities being accredited, licensed, or certified. They CANNOT issue either a [Resale or Exempt Sale Certificate, Form 13](#), or a [Purchasing Agent Appointment, Form 17](#), to any retailer or contractor relating to purchases of building materials for construction or repair projects performed prior to being accredited, licensed, or certified. After an entity becomes accredited, licensed, or certified upon completion of the construction project, it may submit a [Form 4](#).

Nonprofit **health care organizations** that hold a Certificate of Exemption are exempt for purchases for use at their facility, or portion of the facility, covered by the license issued under the Nebraska Health Care Facility Licensure Act. Only specific types of health care facilities and activities are exempt. Purchases of items for use at facilities that are not covered under the license, or for any other activities that are not specifically exempt, are taxable. The exemption is not for the entire organization that offers different levels of health care or other activities, but is limited to the specific type of health care that is exempt. Purchases for non-exempt types of health care are taxable.

4. Purchases of motor vehicles, trailers, semitrailers watercraft, and aircraft used predominately as common or contract carrier vehicles; accessories that physically become part of the common or contract carrier vehicle; and repair and replacement parts for these vehicles. The exemption ID number must be entered in Section B of the Form 13. An individual or business that has been issued a common or contract carrier certificate of exemption may only use it to purchase those items described above prior to the expiration date on the certificate. The certificate of exemption expires every 5 years. (See [Nebraska Common or Contract Carrier Information Guide](#)).
5. Purchases of manufacturing machinery and equipment made by a person engaged in the business of manufacturing, including repair and replacement parts or accessories, for use in manufacturing. (See [Reg-1-107, Manufacturing Machinery and Equipment Exemption](#)).
6. Occasional sales of used business or farm machinery or equipment productively used by the seller as a depreciable capital asset for more than one year in his or her business. The seller must have previously paid tax on the item being sold. The seller must complete, sign, and give the Exempt Sale Certificate to the purchaser. (See [Reg-1-022, Occasional Sales](#)). The Form 13 must be kept with the purchaser's records for audit purposes.

# Purchasing Agent Appointment and Delegation of Authority for Sales and Use Tax

## Section A – Purchasing Agent Appointment

Name and Address of Contractor			Name and Address of Exempt Governmental Unit or Exempt Organization		
Name			Name		
Street or Other Mailing Address			Street or Other Mailing Address		
City	State	Zip Code	City	State	Zip Code
Name and Location of Project			Appointment Information		
Name			Effective Date (See instructions)		
Street Address			Expiration Date		
City	State	Zip Code	Nebraska Exemption Number (Exempt Organizations Only)		

Provide the contract name, number, and a description of the project.

The undersigned governmental unit or exempt organization appoints the above-named contractor and the contractor's delegated subcontractors as its agent to purchase and pay for building materials that will be annexed to real estate by them into the tax exempt construction project identified above.

**sign  
here** ▶

Authorized Signature of Exempt Governmental Unit or Exempt Organization

Title

Date

## Section B — Delegation of Contractor's Authority A contractor can delegate its authority to its subcontractor.

Name and Address of Subcontractor			Delegation Information for the Project Identified in Section A		
Name			Effective Date		
Street or Other Mailing Address			Expiration Date		
City	State	Zip Code	Portion of Project		

The undersigned contractor hereby delegates authority to the above-named subcontractor to act as the purchasing agent of the named governmental unit or exempt nonprofit organization.

**sign  
here** ▶

Signature of Contractor or Authorized Representative

Title

Date

Name and Address of Subcontractor			Delegation Information for the Project Identified in Section A		
Name			Effective Date		
Street or Other Mailing Address			Expiration Date		
City	State	Zip Code	Portion of Project		

The undersigned contractor hereby delegates authority to the above-named subcontractor to act as the purchasing agent of the named governmental unit or exempt nonprofit organization.

**sign  
here** ▶

Signature of Subcontractor or Authorized Representative

Title

Date

Name and Address of Subcontractor			Delegation Information for the Project Identified in Section A		
Name			Effective Date		
Street or Other Mailing Address			Expiration Date		
City	State	Zip Code	Portion of Project		

The undersigned contractor hereby delegates authority to the above-named subcontractor to act as the purchasing agent of the named governmental unit or exempt nonprofit organization.

**sign  
here** ▶

Signature of Subcontractor or Authorized Representative

Title

Date

# Instructions

## Section A

**Who Can Issue.** Any governmental unit or nonprofit organization that is exempt from sales and use tax may appoint a contractor as its purchasing agent for building materials and fixtures that will be annexed to property that belongs to or will belong to the exempt governmental unit or exempt nonprofit organization pursuant to a construction contract or covered under an on-call, repair, or maintenance service agreement. Exempt governmental units and exempt nonprofit organizations are identified in [Sales and Use Tax Regulations 1-072, 1-090, 1-091, 1-092, and 1-093](#).

**Important Note:** A nonprofit organization that has not received its sales and use tax Exempt Organization Certificate of Exemption, cannot issue either a Purchasing Agent Appointment and Delegation of Authority for Sales and Use Tax, Form 17, or a [Nebraska Resale or Exempt Sale Certificate for Sales Tax Exemption, Form 13](#).

**Appointment Information.** To appoint a contractor as its purchasing agent, the exempt governmental unit or exempt nonprofit organization must complete Section A. The phrase “upon completion” or similar phrase is not an acceptable expiration date. If the project is not completed before the expiration date, a new purchasing agent appointment must be issued with the new effective and expiration dates. The purchasing agent authority for the contractor becomes effective on the later of the “effective date” or the signature date of the individual authorized to sign the Form 17 on behalf of the exempt governmental unit or exempt nonprofit organization.

**When To Issue.** The qualified exempt nonprofit organization or exempt governmental unit should issue the completed and signed Form 17 to the contractor BEFORE the contractor annexes any building materials. If the Form 17 is not timely issued, the Option 2 or Option 3 general contractor must pay the sales and use taxes on all building materials annexed to real estate before the effective date or signature date on the appointment.

**Important Note:** A copy of the completed Form 17 should be retained by the exempt governmental unit or exempt nonprofit organization. The original is to be retained by the contractor.

**On-Call, Repair, or Maintenance Agreements.** Exempt governmental units and exempt nonprofit organizations, in lieu of issuing a separate purchasing agent appointment to the same Option 2 or Option 3 contractor for each service call, may issue to the Option 2 or Option 3 contractor a written on-call, repair, or maintenance agreement and purchasing agent appointment that covers a calendar year or part of a calendar year. A new written agreement and purchasing agent appointment must be issued at least each calendar year.

## Section B

**Delegation of Contractor’s Authority.** The contractor or subcontractor who has previously been delegated to be a purchasing agent for a portion of the project may delegate his or her authority as the purchasing agent to other subcontractors for all or a portion of the project. Contractors who are delegating their authority as the purchasing agent are only required to complete Section B. Contractors and subcontractors must issue a separate Form 17 to each subcontractor to whom they are delegating their purchasing agent authority. The purchasing agent authority for the subcontractor becomes effective on the later of the “effective date” or the signature date of the contractor’s or subcontractor’s authorized individual.

If Section B is full and additional delegations are required, it is necessary for the contractor who is delegating his or her authority to complete a new Form 17, Section B and provide a copy of the Form 17 between the exempt governmental unit or exempt nonprofit organization and the contractor. Reproductions of this delegation must be provided to the contractor, who must retain a copy for his or her records, and to the governmental unit or exempt nonprofit organization.

**When To Issue.** The delegation must be issued to the subcontractor BEFORE the subcontractor annexes any building materials. If the Form 17, Section B, Delegation of Contractor’s Authority is not issued, the Option 2 or Option 3 subcontractor must pay the sales and use taxes on all building materials annexed to real estate before the effective date or signature date on the appointment.

## Other Contractor Information

**Purchasing Tax Exempt Building Materials and Fixtures.** Option 1 and Option 3 contractors who perform construction work for an exempt governmental unit or exempt nonprofit organization can purchase the building materials and fixtures tax exempt by issuing a properly and fully completed Form 13, Section C, Block 1, to its suppliers. It is not necessary for the Option 1 or Option 3 subcontractor to attach a copy of the Form 17 to its Form 13.

Option 2 contractors who perform construction work for an exempt governmental unit or exempt nonprofit organization can purchase the building materials and fixtures tax exempt by issuing a properly and fully completed Form 13, Section C, Block 2, and a copy of the Form 17 to its supplier. This delegation will not allow purchases of building materials and fixtures without payment of the tax by the contractor or subcontractor before the later of the effective date of the appointment or the signature date of the individual authorized to delegate them as a purchasing agent. In addition, the appointment cannot be made after the expiration date of the original appointment.

Form 13 and Form 17 must be retained with the supplier’s and contractor’s records for audit purposes. A contractor may reproduce copies of these documents which can be furnished to the suppliers for each invoice or order made by them.

Invoices from suppliers for the purchase of building materials by a contractor as purchasing agent, or an authorized subcontractor, must clearly identify that the purchase is for the specific Form 17 project.

Option 2 and Option 3 contractors who bill another contractor for work performed for an exempt governmental unit or exempt nonprofit organization are not required to collect sales tax on the amount charged for their contractor labor charges since their labor charges are not subject to tax. They do not need to obtain a Form 13 or Form 17 from the contractor.

**Credit/Refund of Sales and Use Tax.** Option 2 contractors who have been appointed as a purchasing agent before any materials are annexed, may withdraw tax-paid building materials from inventory that will be annexed to real estate or used to repair property annexed to real estate and receive a credit for the sales or use tax amount previously paid on those materials.

The Option 2 contractor or subcontractor may take a credit either against its current tax liability, or file a [Claim for Overpayment of Sales and Use Tax, Form 7](#), and receive a refund of the sales or use tax paid on those materials.

**Tools, Equipment, Supplies, and Taxable Services.** The purchase, rental, or lease of tools, supplies, equipment, or taxable services (for example, scaffolding, barricades, machinery, building cleaning services etc.) by a contractor for use to complete an exempt project CANNOT be purchased tax exempt, even if the contractor has been issued a Form 17 for the project.

**Penalty.** Any person who signs this document with the intent to evade payment of tax is liable for the sales and use tax, interest, and penalty, and may be found guilty of a misdemeanor.

**Authorized Signature.** The purchasing agent appointment, Section A, must be signed by the proper government official or by an officer of the exempt nonprofit organization or another individual authorized by an attached power of attorney. The delegation of the prime or subcontractor's authority, Section B, must be signed by an owner, partner, corporate officer, or other individual authorized to sign the Delegation of Contractor's Authority.

# **CONTRACT AGREEMENT**

## CONTRACT AGREEMENT

THIS AGREEMENT made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2024, by and between \_\_\_\_\_, hereinafter called the Contractor, and the City of Grand Island, Nebraska, hereinafter called the City.

WITNESSETH:

THAT, WHEREAS, in accordance with law, the City has caused contract documents to be prepared and an advertisement calling for bids to be published, for construction of **Asphalt Maintenance Project No. 2024-AC-1**; and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the proposals submitted, and has determined the aforesaid Contractor to be the lowest responsive bidder, and has duly awarded to the said Contractor a contract therefore, for the sum or sums named in the Contractor's bid, a copy thereof being attached to and made a part of this contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements herein contained, the parties have agreed and hereby agree, the City for itself and its successors, and the Contractor for itself or themselves, and its or their successors, as follows:

ARTICLE I. That the Contractor shall (a) furnish all tools, equipment, superintendence, transportation, and other construction materials, services and facilities; (b) furnish, as agent for the City, all materials, supplies and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good substantial and workmanlike manner and in accordance with the requirements, stipulations, provisions, and conditions of the contract documents as listed in the attached General Specifications and Special Provisions, said documents forming the contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct and complete all work included in and covered by the City's official award of this contract to the said Contractor, such award being based on the acceptance by the City of the Contractor's bid;

ARTICLE II. That the City shall pay to the contractor for the performance of the work embraced in this contract and the contractor will accept as full compensation therefore the sum (subject to adjustment as provided by the contract) of \_\_\_\_\_ **AND XX/100 DOLLARS (\$\_\_\_\_\_)** for all services, materials, and work covered by and included in the contract award and designated in the foregoing Article I; payments thereof to be made in cash or its equivalent in the manner provided in the General Specifications.

ARTICLE III. The contractor hereby agrees to act as agent for the City in purchasing materials and supplies for the City for incorporation into the work of this project. The City shall be obligated to the vendor of the materials and supplies for the purchase price, but the contractor shall handle all payments hereunder on behalf of the City. The vendor shall make demand or claim for payment of the purchase price from the City by submitting an invoice to the contractor. Title to all materials and supplies purchased hereunder shall vest in the City directly from the vendor. Regardless of the method of payment, title shall vest immediately in the City. The contractor shall not acquire title to any materials and supplies incorporated into the project. All invoices shall bear the contractor's name as agent for the City. This paragraph will apply only to these materials and supplies actually incorporated into and becoming a part of the finished product of **Asphalt Maintenance Project No. 2024-AC-1**.

ARTICLE IV. All sections shall be completed before **September 6, 2024**.

ARTICLE V. The Contractor shall perform the work within the period of time stipulated in the Contract Agreement, unless an extension of time is granted by the City Council. Liquidated damages shall be assessed \$500.00 per calendar day.

ARTICLE VI. The Contractor agrees to comply with all applicable State fair labor standards in the execution of this contract as required by Section 73-102, R.R.S. 1943. The Contractor further agrees to comply with the provisions of Section 48-657, R.R.S. 1943, pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. During the performance of this contract, the contractor and all subcontractors agree not to discriminate in hiring or any other employment practice on the basis of race, color, religion, sex, national origin, age or disability. The Contractor agrees to comply with all applicable Local, State and Federal rules and regulations.

ARTICLE VII. GRATUITIES AND KICKBACKS: City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract to order.

ARTICLE VIII. The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

ARTICLE IX. FAIR EMPLOYMENT PRACTICES: Each proposer agrees that they will not discriminate against any employee or applicant for employment because of age, race, color, religious creed, ancestry, handicap, sex or political affiliation.

ARTICLE X. LB 403: Every public contractor and his, her or its subcontractors who are awarded an agreement by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

IN WITNESS WHEREOF, the parties hereto have executed this Contract Agreement as of the date and year first above written.

**CONTRACTOR**

By \_\_\_\_\_

Date \_\_\_\_\_

Title \_\_\_\_\_

**CITY OF GRAND ISLAND, NEBRASKA,**

By \_\_\_\_\_  
Mayor

Date \_\_\_\_\_

Attest: \_\_\_\_\_  
City Clerk

The contract and bond are in due form according to law and are hereby approved.

\_\_\_\_\_  
Attorney for the City

Date \_\_\_\_\_

## **APPENDIX A – TITLE VI NON-DISCRIMINATION -**

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

- (1) **Compliance with Regulations:** The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.
- (4) **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the City of Grand Island or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the City of Grand Island, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the City of Grand Island shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
  - (a.) withholding of payments to the contractor under the contract until the contractor complies, and/or
  - (b.) cancellation, termination or suspension of the contract, in whole or in part.
- (6) **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as the City of Grand Island or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the City of Grand Island to enter into such litigation to protect the interests of the City of Grand Island, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

# **DIVISION I**

## **GENERAL SPECIFICATIONS**

**APPLICABLE TO ALL  
CONSTRUCTION CONTRACTS**

**DIVISION I  
GENERAL SPECIFICATIONS**

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**DIVISION I  
GENERAL SPECIFICATIONS**

**SECTION 1 - DEFINITIONS OF WORDS AND TERMS**

Wherever in these specifications or in other contract documents the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

1.01        Abbreviations.

AASHTO	American Association of State Highway And Transportation Officials
ASTM	American Society for Testing and Materials
ANSI	American National Standards Institute
AWWA	American Water Works Association
AREA	American Railway Engineering Association
AWS	American Welding Society
AAN	American Association of Nurserymen

1.02        Advertisement. The advertisement for work or materials on which bids are to be received.

1.03        Award. The decision of the City to accept the bid of the lowest responsible bidder for the work, subject to the execution and approval of a satisfactory contract therefor and bond to secure the performance thereof and to such other conditions as may be specified or otherwise required by law.

1.04        Backslope. The sloping surface of a cut, the downward inclination of which is toward the roadbed.

1.05        Bidder. Any individual, firm, or corporation formally submitting a bid for the work contemplated, acting directly or through a duly authorized representative.

1.06        Calendar Day. Every day shown on the calendar, Sundays and holidays included.

1.07        Change Order. A written order to the Contractor, signed by the Engineer, ordering a change in the work from that originally shown in the plans and specifications.

1.08        City. The word "City" as used in these specifications refers to the City of Grand Island, Nebraska, acting through its City Council.

1.09        Contract. The written agreement executed between the City and the Contractor, covering the performance of the work and the furnishing of labor and materials, by which the Contractor is bound to perform the work and furnish the labor and materials, and by which the City is obligated to compensate Contractor therefor at the mutually established and accepted rate or price.

The contract shall include the "Notice to Bidders", these specifications, the Contractor's bond, the general and detailed plans, the bid, special provisions, and supplemental agreements.

1.10 Contract or Performance Bond. The approved form of security, executed by the Contractor and their surety or sureties, guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the project.

1.11 Contract Item. An item of work specifically described and for which a price, either unit or lump sum, is provided. It includes the performance of all work and the furnishing of all labor, equipment, and materials described in the text of a specification item included in the contract or described in any subdivision of the text of the supplemental specification or special provision of the contract.

1.12 Contract Period. The period from the date specified in the contract for the commencement of the work to the date specified for its completion, both dates inclusive.

1.13 Contractor. The party of the second part to the contract; the individual, firm, or corporation undertaking the execution of the work under the terms of the contract and acting directly or through Contractor's agents or authorized employees.

1.14 Cul-de-sac Street. A local street open at one end only and with special provision for turning around.

1.15 Culvert. Any structure not classified as a bridge which provides an opening under any street.

1.16 Easement (Right-of-way). A right acquired by public authority to use or control property for a designated purpose.

1.17 Employee. Any person working on the project mentioned in the contract of which these specifications are a part, and who is under the direction or control or receives compensation from the Contractor or Contractor's subcontractor.

1.18 Engineer. The City Engineer, acting either directly or through an assistant or other representative duly authorized by the City Engineer, such assistant or representative acting within the scope of the particular duties assigned or with the authority given.

1.19 Extra Work. Work performed by the Contractor in order to complete the contract in an acceptable manner but for which there is no basis of payment provided in the contract.

1.20 Holidays. In the State of Nebraska, holidays occur on: January 1, Martin Luther King, Jr. Day in January, Presidents' Day in February, Arbor Day in April, Memorial Day in May, July 4, Labor Day in September, Columbus Day in October, Veterans Day and Thanksgiving Day in November, and December 25. If any of said dates fall on Sunday, the following Monday shall be a holiday. If any of said dates fall on Saturday, the previous Friday shall be a holiday.

1.21 Inspector. An authorized representative of the Engineer assigned to make detailed inspection of any or all portions of the work performed and materials furnished by the Contractor.

1.22 Laboratory. The testing laboratory of the City or any other testing laboratory which may be designated by the Engineer.

1.23 Notice to Bidders. The provisions, requirements, and instructions pertaining to the work to be awarded, manner and time of submitting bids , quantities of the major items or work required, as prepared for the information of bidders.

1.24 Plans. The official plans, profiles, typical cross sections, general cross sections, working drawings, and supplemental drawings, or exact reproductions thereof, approved by the Engineer, which show the location, character, dimensions, and details of the work to be done, and which are to be considered as a part of the contract supplementary to these specifications.

1.25 Project. All work necessary to be performed under the contract.

1.26 Bid. The offer of the bidder, submitted on the prescribed bid form, to perform the work and to furnish the labor and materials at the prices quoted by the bidder.

1.27 Bid Form. The approved form on which the City requires formal bids be prepared and submitted.

1.28 Bid Guarantee. The security furnished by the Bidder with Bidder's bid for a project as a guarantee that Bidder will enter into a contract for the work if said bid is accepted.

1.29 Right-of-way. The land area which is reserved or secured by the City for constructing the work or for obtaining material therefor.

1.30 Special Provisions. Special directions, provisions, or requirements peculiar to the project under consideration and not otherwise thoroughly or satisfactorily detailed or set forth in the specifications.

1.31 Specifications. The general term comprising all the directions, provisions, and requirements contained herein, together with such as may be added or adopted as supplemental specifications or special provisions, all of which are necessary for the proper performance of the contract.

1.32 Subcontractor. Any individual, firm, or corporation to whom the Contractor, with the written consent of the City, sublets any part of the contract.

1.33 Superintendent. The representative of the Contractor, present on the work at all times during progress, authorized to receive and fulfill instructions from the Engineer and capable of superintending the work efficiently.

1.34 Supplemental Agreements. Written agreements executed by the Contractor and the City subsequent to having entered into the contract, covering alterations in the plans or unforeseen items of construction.

1.35 Supplemental Specifications. Specifications adopted subsequent to the publication of this book. They generally involve new construction items or substantial changes in the approved specifications. Supplemental specifications shall prevail over those published in this book whenever in conflict therewith.

1.36 Surety. The corporate body bound with and for the Contractor for the acceptable performance of the contract, the completion of the work, and for payment of all just claims arising therefrom.

1.37 Work. Work shall be understood to mean the furnishing of all labor, materials, equipment, and other incidentals necessary or convenient to the successful completion of the project by the Contractor and the carrying out of all the duties and obligations imposed by the contract.

1.38 Working Day. Any day, except Saturdays, Sundays, and Nebraska holidays, on which the Contractor is not prevented by weather, soil conditions, or other conditions beyond the Contractor's control, adverse to the current controlling operation or operations, as determined by the Engineer, from proceeding with at least 80 percent of the labor and equipment force normally engaged in such operation or operations for at least 50 percent of the full number of hours in Contractor's normal daily schedule. Also, a Saturday, Sunday, or Nebraska holiday on which any work is performed on the current controlling operation or operations unless the Contractor is prevented by weather, soil conditions, or other conditions beyond the Contractor's control as determined by the Engineer, from proceeding for at least 50 percent of the full number of hours in their normal schedule with 80 percent of the normal working force.

1.39 Working Drawings. Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans for similar data which the Contractor is required to submit to the Engineer for approval.

1.40 Work Order. A written order signed by the Engineer, of a contractual status requiring performance by the Contractor without negotiation of any sort and may involve starting, resuming, or the suspension of work. (Not to be confused with extra work order).

1.41 Completion of the Work and Formal Acceptance by the City. Whenever the term "completion of the work and formal acceptance by the City" is used, it refers to and means the formal acceptance of the work by the Engineer and the City at the time the Contractor has all work under the contract completed and in place.

1.42 Final Acceptance of the Work. Whenever the term "final acceptance of the work" is used, it refers to and means the time when the Engineer and the City finally accept the work. The contractor guarantee shall remain in force from the City's final acceptance for a period of one year.

**Revised 1-25-2011**

## **SECTION 2 – BID REQUIREMENTS AND CONDITIONS**

2.01 Contents of Bid Forms. Bidders will be furnished with bid forms which will state the location and description of the contemplated work and will show the estimate of the various quantities and kinds of work to be performed or materials to be furnished, with a schedule of items for which unit bid prices are asked, the time in which the work must be completed and the date, time, and place of opening bids. All special provisions and required provisions will be grouped together and bound with or included through reference in the bid form.

2.02 Interpretation of Quantities in Bid Forms. The quantities listed in the bid forms are to be considered as approximate, unless otherwise provided by special provision. It is understood that the quantities of work to be done and materials to be furnished may each be increased, diminished, or omitted as hereinafter provided without in any way invalidating the unit bid prices, except as provided in the section in these specifications entitled Increased or Decreased Quantities of Work.

2.03 Examination of Plans, Specifications, Special Provisions, and Site of Work. The bidder is required to examine carefully the site, the bid, plans, specifications, special provisions, and contract form for the work contemplated, and it will be assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished and as to the requirements of these specifications, the special provisions, and contract. It is mutually agreed that the submission of a bid shall be considered prima facie evidence that the bidder has made such examination.

2.04 Preparation of Bid. Bidders shall submit their bids on blank forms furnished by the Engineer with the full name and address and the place of business or residence of the bidder. If the bidder is co-partnership, the signature shall be by a member of the firm with the names and addresses of each member. If the bidder is a corporation, the signature shall be by an officer of the corporation in the corporate name and with the corporate name and the corporate seal attached thereto.

All blank spaces in the form shall be fully filled; numbers shall be stated in legible figures and writing when required; the signature shall be longhand; and the complete form shall be without interlineation, alteration, or erasure.

No oral, telegraphic, or telephonic bids or modifications will be considered.

When certain alternative prices, for both increasing and decreasing the cost, are required, as called for in the bid sheet, it must be understood that all materials and workmanship required shall be the best of their respective kinds and in all cases shall correspond with similar work herein specified and, if accepted, the work shall be done under the general terms of the specifications.

2.05 Statement of Bidder's Plant and Financial Conditions. Each bidder may submit with bid and, in any event, the City may, after bids are opened and prior to award of contract, require any bidder to submit the following data:

1. A statement that the bidder maintains a permanent place of business and address thereof;
2. A statement of equipment which the bidder proposes to use on the project, together with a statement noting that equipment previously mentioned which the bidder owns and that which bidder does not own but is certain bidder will be able to rent or otherwise procure for use on the project;
3. A financial statement, duly sworn to in a form approved by the City, listing assets and liabilities;
4. Statement listing projects of similar nature which the bidder has constructed or in the construction of which the bidder was actively engaged in a responsible capacity. Any bidder may be required by the City to submit additional data to satisfy the City that such bidder is prepared to fulfill the contract if it is awarded to them.

2.06 Certified Check, Cashier's Check, or Bid Bond. Each bidder must submit with the bid a certified check, cashier's check, or bid bond in the amount of not less than five percent (5%) of the amount bid, drawn to the order of the City Treasurer, Grand Island, Nebraska, guaranteeing the execution of the contract and bond required within ten (10) days of the notification of award. Any certified check must be issued by a bank in the State of Nebraska.

2.07 Filing of Bid. Bidders shall submit bid data on items offered in the Bid by filling in one set of data sheets supplied by the Engineering Department. The bid sheets shall be filled out legibly in black ink to permit reproduction.

Bidder security, when required, shall be enclosed in a special envelope marked, "BIDDER SECURITY/BID FOR \_\_\_\_\_." The envelope shall contain only a cashier's check or bidder's bond. This special envelope shall be attached to a sealed envelope containing the bid, filled out specifications, descriptive information drawings, qualification list and any other bid materials. This second envelope shall be marked "BID FOR \_\_\_\_\_." Bids of an incomplete nature or subject to multiple interpretations may, at the option of the Purchaser, be rejected as being irregular.

All bids shall be filed with the City at the place designated in the Notice to Bidders, prior to the time advertised for the opening of bids.

2.08 Withdrawal of Bid. A bidder will be permitted to withdraw said bid unopened after it has been submitted, if bidder's request for withdrawal is made in writing and delivered personally by the bidder or bidders' authorized representative prior to the time specified for opening of bids.

2.09 Public Opening of Bids. Bids will be publicly opened and read at the time and place stipulated in the Notice to Bidders.

2.10 Material Guarantee. Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition, and manufacture of any or all materials to be used in the construction of the work together with samples, which samples may be subjected to the test provided for in these specifications to determine their quality and fitness for the work.

### **SECTION 3 - AWARD AND EXECUTION OF THE CONTRACT**

3.01 Consideration of Bids. After the bids are opened and read, they will be compared on the basis of the summation of the products and the quantities shown in the bid schedule by the unit bid prices. The results of such comparisons will be immediately available to the public.

The right is reserved to reject any and all bids and to waive technical errors as may be deemed best for the interest of the City.

3.02 Award of Contract. In the award of contract, consideration will be given not only to the prices bid but also the mechanical and other equipment available to the bidder, the financial responsibility of the bidder, and bidder's ability and experience in the performance of like or similar contracts.

Award of contracts will be made as promptly as practical after bids have been opened and read. The City reserves the right to delay the award for such time as is needed for the consideration of the bids and for the receipt of concurrence in recommended contract awards from other governmental agencies whose concurrence may be required.

3.03 Cancellation of Award. The City reserves the right to cancel the award of any contract at any time before execution of the said contract by all parties without any liability against the City.

3.04 Return of Bid Guarantee. Bid guaranties will be returned to the unsuccessful bidders by mail promptly after the signing of the contract has been made. Return to the successful bidder will be made after the signing of the contract and filing of the contract bond.

3.05 Performance Bond. The Contractor shall furnish a performance bond with a company having the approval of the City in an amount of 100 percent of the contract price guaranteeing complete and faithful performance of the contract, payment of all bills of whatever nature which could become a lien against the property, and guaranteeing replacement of defective materials and workmanship for a period of one year after completion of the contract.

3.06 Contract Documents. Three (3) copies of Contract Documents shall be made, executed, and distributed as follows:

One copy to City Clerk  
One copy to Contractor                      One copy to Engineer

The following documents are a part of the contract:

*Notice to Bidders	*General Specifications
*Instructions to Bidders	*Special Provisions
*Bid	*Supplemental Specifications
*Detailed Specifications	*Performance Bond
*Contract	*Additional Drawings as required to make clear the intent of the contract

**Revised 1-25-2011**

3.07 Failure to Execute Contract. Failure to execute a contract and file an acceptable performance bond as provided herein within ten (10) days from date of award shall be just cause for the annulment of the award and the forfeiture of the certified check or cashier's check to the City, not as a penalty but in liquidation of damages sustained.

#### **SECTION 4 - SCOPE OF WORK**

4.01 Intent of Plans and Specifications. The intent of the plans and specifications is to provide for the construction and completion of every detail of the work described therein. It shall be understood by the Contractor that Contractor will furnish all labor, materials, tools, transportation, and supplies required for all or any part of the work to make each item complete in accordance with the spirit of the contract. It is understood that the apparent silence of the specifications as to any detail or the apparent omission of a detailed description concerning any point shall be regarded as meaning that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used.

For the purpose of design and the preparation of the Engineer's Estimate, the City may perform a reasonable amount of exploratory work to gain information relative to surface and subsurface conditions relating to type of soil, moisture content, and types and extent of rock strata.

This information when shown on the plan represents to the best of the City's knowledge conditions as of the date the survey was made. The appearance of this information on the plan will not constitute a guarantee that conditions other than those indicated will not be encountered at the time of construction.

The bidder may utilize this information as they see fit. Any bidder interested in the work is authorized to make whatever investigation they considers advisable.

In making such additional investigation, the bidder is directed to the Engineer for information relating to available right-of-way. If there are, at that time, any parcels of land over which the City does not have jurisdiction, right of entry must be secured by the prospective bidder from those authorized to grant such permission. Investigational work, performed by a prospective bidder on existing streets open to traffic, shall be performed in compliance with the

requirements of the current Manual on Uniform Control Devices for Street and Highways. All such additional investigational work shall be performed without costing or obligating the City in any way.

4.02 Special Work. Any conditions not covered by these standard specifications are stated in the special provisions.

4.03 Increased or Decreased Quantities of Work. The Engineer reserves the right to alter the quantities of contract items for which there are bid prices. Such increases or decreases in quantities shall be made as the City considers necessary or desirable without waiving or invalidating any of the provisions of the contract. All such alterations must be ordered in writing and a supplemental agreement must be executed with the Contractor for the item or items involved when such alterations involve an increase or decrease of more than 20 percent of the total cost of the work of any group of the contract calculated from the original bid quantities and the contract unit prices. The Contractor shall not start work on any alteration requiring a supplemental agreement until the agreement setting forth an equitable adjustment of compensation, satisfactory to both parties, shall have been executed by the Engineer and the Contractor and approved by City Council.

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4.04 Extra Work. The City reserves the right to order the performance of work of a class not contemplated in the bid but which may be considered necessary to complete satisfactorily the work included in the contract. Such extra work will be paid for as provided in these specifications under section entitled Payment for Extra Work.

4.05 Maintenance of Detours. Unless so required by the plans or the special provisions, the Contractor will not be required to assume any responsibility in connection with the maintenance or marking of suitable detours.

4.06 Temporary Traffic Control. Part VI of the Manual of Uniform Traffic Control Devices (MUTCD) is the national standard for work zone traffic control. The current version that has been adopted by the Nebraska Department of Roads is also applicable to the City of Grand Island and shall be followed.

Any City crews, contractors, utility company, or any other person, firm or corporation performing work within the right-of-way of any public street, public way, or alley in the City of Grand Island shall install and maintain Temporary Traffic Control (TTC) in accordance with the standards of the MUTCD.

The Public Works Director or their representative shall have the authority to direct corrective actions for any TTC not in compliance with the MUTCD and these provisions. These actions may include suspending operations and requiring removal of all equipment or materials from the right-of-way.

If the TTC is left in place longer than four (4) hours and no personnel are on the site, the individual responsible for installing the TTC shall provide telephone numbers of personnel who will be available on a 24 hours per day, seven days per week basis to the Public Works Director. These individuals shall be responsible for repair, correction, replacement and maintenance of the traffic control devices. These individuals shall perform inspections of the TTC at the site a minimum of twice during the day and once during the night every day until the work is completed and the right-of-way is cleared.

Subsidiary: Unless contract pay items are included with the bid specifications, direct payment for providing, installing, maintaining, and performing site inspections of TTC devices will not be made but are considered subsidiary to other items for which direct payment is

provided. When the contract contains a pay item for TTC, the NDOR standard items, specifications, etc. will be used.

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4.07 Maintenance of Traffic. The Contractor shall conduct the work so as to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways, and walks, whether public or private, the Contractor shall, at Contractor's expense, provide and maintain suitable and safe bridges, detours, or other temporary expedients for the accommodation of public and private travel, and shall give reasonable notice to owners of private drives before interfering with them. Such maintenance of travel will not be required when the Contractor has obtained permission from the owner or tenant of private property or from the authority having jurisdiction over public property involved to obstruct traffic at the designated area.

4.08 Street Closing. In the event it is deemed necessary for the Contractor to close any streets during the execution of said work, the Contractor shall notify the owner of such street closing 72 hours in advance, prior to any street closing due to open cut street crossing.

4.09 Miscellaneous Removal Items. The Contractor shall inform the Engineer sufficiently ahead of construction so landowners can be notified to remove small trees, shrubs, and fences from the construction limits if the landowners desire to save them.

4.10 Removal and Replacement of Property Stakes. If it is necessary to remove any property corners or markers during construction operations, the Contractor shall notify the Engineer so the Engineer can establish reference ties. Any markers removed without notice to the Engineer shall be replaced at the Contractor's expense in accordance with the proper land surveying techniques.

4.11 Removal and Disposal of Structures and Obstructions. The Contractor for bridge and culvert work shall remove any existing structure or part of structure that in any way interferes with the new construction. If specific payment for such work has not been provided in the contract, it will be paid for as extra work.

The Contractor shall remove any materials or structures found on the right-of-way which are not to remain in place or which have not been designated for use in the new construction. The removal and disposal of pipe culverts will not be paid for directly but shall be considered as incidental work, and the cost of such removal and disposal shall be considered to be included in the contract price for other items. Pipe culverts shall be removed by methods that will cause a minimum of damage to the pipe culverts. The removal and disposal of bridges or other masonry or monolithic concrete construction will be paid for. If the contract does not contain an item for such work, it will be paid for as extra work.

4.12 Rights In and Use of Materials Found on the Right-of-way. Unless stated to the contrary in the contract documents, all materials, such as stone, gravel, sand, timber, and structures or parts of structures, found on the right-of-way of the street or on land acquired for the work, are the property of the City or the owner of the fee title to the land, and shall not be used or destroyed by the Contractor without special permission from the Engineer. When the Contractor is permitted to use materials found on the right-of-way, any excavations that they make below the grade elevation shall be backfilled with other suitable materials so the finished street will conform to the grade shown on the plans. No extra compensation will be allowed for such backfilling.

When rock excavation is encountered, any portion of rock excavation which would otherwise be deposited in waste areas and not be incorporated in the embankments may be processed and used, royalty free, by the Contractor in any other portion of the construction in which material of that quality would be acceptable. No deduction will be made from excavation quantities for rock so used.

4.13 Construction and Demolition Debris. Debris from any City awarded project, as well as Municipal Solid Waste (that is not recycled), shall be disposed of at the City's Solid Waste facilities.

4.14 Final Cleaning Up. Upon completion of the work and before acceptance and final payment, the Contractor shall clean the street, borrow pits, and all ground occupied by Contractor in connection with the work of all rubbish, excess materials, falsework, temporary structures, and equipment, and all parts of the work, shall be left in a neat and presentable condition.

When required in the plans, the Contractor shall, at Contractor's expense, replace waste material or stripping back into borrow and material pits as directed by the Engineer. Trees, tree stumps and material placed on property adjacent to the street during the execution of the work shall be disposed of by the Contractor.

4.15 Right-of-way. Right-of-way for the work will be provided without cost to the Contractor. Right-of-way will be made available to the Contractor on or before the date specified for the commencement of the work unless a later date for the right-of-way to be made available to the Contractor is designated in the contract documents.

4.16 Railroad Crossings. Whenever the work involves construction with which railroad companies are concerned, the performance of the work is contingent upon arrangements with the railroad companies for the proposed construction. No claims will be allowed for loss or damage caused by failure to complete such arrangements.

4.17 Safety and Health Regulations for Construction. Occupational Safety and Health Standards for the Construction Industry (29 CFR Part 1926) with amendments as of February 1, 1999 promulgated by the Occupational Safety and Health Administration, United States Department of Labor, Washington, D.C. are incorporated herein as a part of the contract documents.

## **SECTION 5 - CONTROL OF WORK**

5.01 Authority of Engineer. The Engineer will have general supervision of the work and will decide any questions that arise with reference to the intent of the contract documents and compliance therewith. Said Engineer will relay all questions relating to materials, work, progress, disputes and mutual rights between contractors, fulfillment of contract, and compensation, in accordance with the provisions of these specifications.

5.02 Plans and Working Drawings. The approved plans will be supplemented by such working drawings as are necessary to adequately control the work. It is mutually agreed that all authorized alterations affecting the requirements and information given in the approved plans shall be in writing.

Working drawings for any structure shall consist of such detailed plans as may be required of the Contractor for the prosecution of the work. These are not included in the plans

furnished by the Engineer. They shall include shop details, erection plans, masonry, and form work. The Engineer's prior approval of the shop details must be obtained before any fabrication work involving these plans is performed. Erection plans, masonry layout diagrams, and plans for cribs, cofferdams, falsework, centering, and form work, as well as any other working drawings not previously mentioned, may be required of the Contractor and shall be subject to the Engineer's approval.

No changes shall be made in any plan or drawing after it has been approved except by consent or direction of the Engineer in writing. It is expressly understood that the approval by the Engineer of the Contractor's working drawings will not relieve the Contractor from any responsibility.

The contract price shall include the cost of furnishing all working drawings, and the Contractor will be allowed no extra compensation for such drawings.

Shop plans shall be made on 22"x36" sheet with ½" margin on all sides except the left which shall be 2". The margin lines shall measure 21"x33 ½". The marking shall be in accordance with the special plans or as may be required by the Engineer. All blueprint plans which are furnished to the Engineer shall be clear and distinct and acceptable to the Engineer and shall be neatly trimmed. The Contractor shall furnish the Engineer as many extra copies of working drawings as the Engineer may direct.

The Engineer may require reproducible prints of all approved shop plans, which shall be furnished by the Contractor without cost to the Engineer. Such reproducible prints shall not be folded but shall be mailed in tubes sized to accommodate these plans without injuring them. No preliminary working drawings will be accepted by the Engineer unless they have been carefully checked by the Contractor. Drawings showing gross errors will be returned for recheck before examination by the Engineer. The name of the shop or company furnishing the drawings shall be on the tracing.

5.03 Alteration of Plans or of Character of Work. The Engineer shall have the right to make alterations in plans or character of work as may be considered necessary or desirable during the progress of the work to satisfactorily complete the proposed construction. Such alterations shall not be considered as a waiver of any conditions of the contract or invalidate any of the provisions thereof.

5.04 Coordination of Plans, Specifications, Special Provisions, and Supplemental Specifications. These specifications, the supplemental specifications, the plans, special provisions, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, figured dimensions shall govern over scaled dimensions, plans shall govern over specifications, special plans shall govern over standard plans, supplemental specifications shall govern over standard specifications, and special provisions shall govern over specifications, supplemental specifications, and the plans.

5.05 Cooperation of Contractor. The Contractor will be supplied with a minimum of two sets of approved plans and contract assemblies, including special provisions, one set of which the Contractor shall keep available on the work at all times.

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Engineer and other contractors in every way possible.

The Contractor shall at all times have at the work site, as Contractor's agent, a competent superintendent capable of reading and thoroughly understanding the plans and specifications, thoroughly experienced in the type of work being performed, who shall receive

instructions from the Engineer or Engineer's authorized representatives. The superintendent shall have full authority to execute the orders or directions of the Engineer without delay, and to promptly supply materials, equipment, tools, labor, and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet.

5.06 Surveys. Lines and elevations shall be established by the Engineer before the work commences and the Contractor shall obtain lines and elevations from the points so set by the Engineer. The Contractor shall furnish all stakes necessary for lines and elevations and cooperate with the Engineer in setting same.

5.07 Authority and Duties of Inspector. The City may appoint inspectors to represent the Engineer in the inspection of all materials used in and all work done under the contract. Such inspection may extend to any part of the work and to the preparation or manufacture of the materials to be used. The inspector will not be permitted to modify in any way the provisions of the contract documents, nor to delay the work by failing to inspect materials and work with reasonable promptness. An inspector is placed at the work site to keep the Engineer informed as to its progress and the manner in which it is being done and to call the Contractor's attention to any infringements of the contract documents. The inspector will not act as foreman or perform other duties for the Contractor nor improperly interfere with the management of the work. They will not be authorized to approve or accept any portion of the work. In case of dispute between the Contractor and the inspector as to quality of materials or the manner of performing the work, the inspector shall have the authority to reject materials or suspend the work until the question at issue can be decided by the Engineer. Written notice of the suspension of work will be given to the Engineer and the Contractor.

5.08 Inspection of Work. The Contractor shall furnish the Engineer with every reasonable facility for ascertaining whether the work is being performed in conformance with the contract documents. At any time before acceptance of the work, upon request of the Engineer, the Contractor shall remove or uncover such portions of the finished work as the Engineer may direct. After examination has been made, the Contractor shall restore such portions of the work to the standard required by the contract documents.

If the work thus exposed or examined proves acceptable, the uncovering or removing and replacing of the covering or the restoring of the parts removed shall be paid for as extra work, except that no payment will be made for the work involved in checking the smoothness of pavement surfaces. If the work thus exposed and examined proves unacceptable, the Contractor shall replace the defective work in accordance with the specifications and will be paid only the contract price for the work as finally accepted. Work done or materials used without the Engineer having been afforded ample opportunity to provide suitable inspection may be ordered removed and replaced at the Contractor's expense or may be excluded from the quantities measured for payment.

5.09 Removal of Defective Work. Any defective work shall be removed and replaced at the Contractor's expense. Should the Contractor fail or refuse to remove defective work when so ordered by the Engineer, the Engineer shall have authority to order the Contractor to suspend further operations and may withhold payment on estimates until such defective work has been removed and replaced in accordance with the plans and specifications. Continued failure or refusal on the part of the Contractor to correct defective work promptly shall be sufficient cause for the City to declare the contract in default and to proceed to have the work completed in accordance with these specifications under section entitled Abrogation.

5.10 Final Inspection. Upon notification by the Contractor or Contractor's authorized representative that the work is completed, the Engineer shall make prompt final inspection of each item of work included in the contract. If the work is found to not be in accordance with the contract documents, the Contractor will be advised as to the particular defects to be remedied.

## **SECTION 6 - CONTROL OF MATERIALS**

6.01 Source of Supply and Quality Requirements. The materials used on the work shall meet all quality requirements of the contract. In order to expedite the inspection and testing of materials, the Contractor shall notify the Engineer of Contractor's proposed sources of materials prior to delivery. At the option of the Engineer, approval of the source or approval of materials at the source prior to delivery may be required. If it is found after trial that sources of supply for previously approved materials do not produce specified products or when conditions are such that the use of unfit materials cannot be prevented except by extraordinary inspection methods, the Contractor shall

furnish materials from other sources. Before delivery is started and at any time during the process of preparation and use, the materials shall be subject to the approval of the Engineer.

6.02 Methods of Sampling and Testing, and Cited Specifications. Sampling and testing of all materials and the laboratory methods and testing equipment required under these specifications shall be in accordance with the latest published standard method of the AASHTO, except as otherwise provided.

The sampling and testing of all materials not covered by the AASHTO, but not otherwise provided for, shall conform to the latest published standard or tentative methods of the ASTM.

6.03 Storage of Materials. The Contractor shall be responsible for the care and storage of materials delivered at the work site or purchased for use thereon. Any material that has been delivered to the work site and has become damaged before actual incorporation in the work may be rejected by the Engineer even though it may previously have been accepted. Stored materials shall be so located as to facilitate thorough inspection.

6.04 Unacceptable Materials. All materials not conforming to the requirements of the specifications at the time they are to be used shall be considered as unacceptable, and all such materials will be rejected and shall be removed immediately from the site of the work unless otherwise instructed by the Engineer. No rejected materials, the defects of which have been corrected, shall be used until approval has been given.

6.05 Guarantee. The Contractor shall be responsible for any and all defects which may develop in any part of the entire installation furnished by said Contractor and, upon receipt of written notice from the Engineer, shall immediately replace and make good without expense to the City any such faulty part or parts and damage done by reason of same during a period of one (1) year from the date of formal acceptance of the installation (except when specific guarantee for another length of time is elsewhere specified).

The acceptance of the installation, or any part of it, shall not act to waive this liability on the part of the Contractor.

Upon completion and formal acceptance of the work, the Contractor may furnish a satisfactory bond in an amount of fifteen percent (15%) of contract price to insure the provisions of this guarantee. Otherwise, the original bond shall remain in full force and effect until final acceptance of the work, which acceptance shall be made one (1) year after the formal acceptance of the work as provided herein.

6.06 "Or Equal" Clause. Whenever, in any section of the contract documents, plans, or specifications, any article, material, or equipment is defined by describing a proprietary product or by using the name of a manufacturer or vendor, the term "or approved equal", if not inserted, shall be implied. The specific article, material, or equipment mentioned shall be understood as indicating the type, function, minimum standard or design, efficiency, and quality desired and shall not be construed in such a manner as to exclude manufacturer's products of comparable quality, design, and efficiency. The Engineer shall determine the acceptability of articles, materials, or equipment proposed as equals.

## **SECTION 7 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

7.01 Laws to be Observed. The Contractor shall keep fully informed of and, at all times, shall observe and comply with all Federal and State laws, all local bylaws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority which in any manner affect those engaged or employed on the project, or which in any way affect the project. The Contractor shall protect and indemnify the City and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by said Contractor or Contractor's employees. It shall be the responsibility of the Contractor to provide all safeguards, safety devices, and protective equipment and to take any other needed actions as are reasonably necessary to protect the life and health of employees on the project.

7.02 State and City Fair Labor Standards. The Contractor agrees to comply with all applicable State and City fair labor standards in the execution of the contract, including compliance with Section 73-102, R.R.S. 1943. The Contractor further agrees to comply with the provisions of Section 48-657, R.R.S. 1943, pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. In addition, the Contractor agrees to comply with the provisions of Section 52-118, R.R.S. 1948, pertaining to payment of all labor performed and for payment for materials and equipment rental which is actually used in performing this contract.

7.03 Anti-discrimination. During the performance of the work, the Contractor agrees not to discriminate against any employee or application for employment because of race, color, age, religion, sex, or national origin.

7.04 Permits. The Contractor shall procure and pay for all permits, licenses, and bonds necessary for the prosecution of Contractor's work and/or required for municipal, State, and Federal regulations and laws.

7.05 Patents. The Contractor and the surety in all cases shall indemnify and save harmless the City for any costs, expenses, and damages which it may be obligated to pay by reason of any such infringement at any time during the prosecution of or after the completion of the project.

7.06 Restoration of Surfaces Opened by Permit. Upon the presentation of a duly authorized and satisfactory permit from the City which provides that all necessary repair work will be paid for by the party to whom such permit is issued, the Engineer may authorize the Contractor to allow parties bearing such permits to make openings in the street. The Contractor shall, when ordered by the Engineer in writing, make in an acceptable manner all necessary repairs due to such openings, and such necessary work ordered by the Engineer shall be paid for on the basis of "Extra Work" as provided for in these specifications and shall be subject to the same conditions as original work performed.

7.07 Safety, Health, and Sanitation. In the performance of the contract, the Contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation. The Contractor shall furnish such additional safeguards, safety devices, and protective equipment and shall take actions as the Engineer may determine as being reasonably necessary to protect the life and health of Contractor's employees and the public.

7.08 Barricades and Warning Signs. Except as otherwise provided specifically in this section, the Contractor shall provide and maintain barricades, danger and warning signs, and suitable and efficient lights, and shall take every reasonable precaution to prevent accidents. The name of the Contractor shall be clearly visible on the barricades. The Contractor shall provide, at their own expense, such watchmen as are necessary to protect their equipment and to maintain proper lights.

Watchmen who may be necessary to direct traffic or prevent travel on any portion of the street shall be provided by the Contractor on written order from the Engineer. Unless the contract specifically provides that such watchmen are to be furnished by the Contractor, this expense shall be paid for as provided in "Extra Work."

7.09 Use of Explosives. When the use of explosives is necessary for the prosecution of the work, the Contractor shall use the utmost care not to endanger life or property. All explosives shall be stored in a secure manner, and storage places shall be clearly marked "DANGER--EXPLOSIVES."

7.10 Claims for Labor and Materials. The Contractor shall indemnify and save harmless the City from all claims for labor and materials furnished under this contract. When requested by the City, the Contractor shall submit satisfactory evidence that all persons, firms, or corporations who have done work or furnished materials under this contract, for which the City may become liable under the laws of the State, have been fully paid or satisfactorily secured. In case such evidence is not furnished or is not satisfactory, an amount will be retained from money due the Contractor which, in addition to any other sums that may be retained, will be sufficient, in the opinion of the City, to meet all claims of the persons, firms, and corporations as aforesaid. Such sum shall be retained until the liabilities as aforesaid are fully discharged or satisfactorily secured.

7.11 Contractor's Insurance. The Contractor shall secure and maintain throughout the duration of this contract insurance, from companies authorized to do business in Nebraska, of such types and in such amounts as may be necessary to protect themselves and the interests of the City against all hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Contractor's operations and completed operations. The form and limits of such insurance, together with the underwriter thereof in each case, shall be approved by the City, but regardless of such approval it shall be the responsibility of the Contractor to maintain adequate insurance coverage at all times. Failure of the Contractor to maintain adequate coverage shall not relieve them of any contractual responsibility or obligation. Minimum insurance coverage shall be the amounts stated herein or the amounts required by applicable law, whichever are greater.

1. "Worker's Compensation and Employer's Liability." This insurance shall protect the Contractor against all claims under applicable State worker's compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The Contractor shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a worker's compensation

law. This policy shall include an "all states" endorsement. The liability limits shall be not less than the following:

Worker's Compensation	Statutory Limits
Employer's Liability	\$100,000 each accident
	\$100,000 each employee
	\$500,000 policy limit

2. "Business Automobile Liability." This insurance shall be written in comprehensive form and shall protect the Contractor, Contractor's employees, or subcontractors from claims due to the ownership, maintenance, or use of a motor vehicle. The liability limits shall be not less than the following:

Bodily Injury & Property Damage	\$500,000 Combined Single Limit
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3. "Comprehensive General Liability." The comprehensive general liability coverage shall contain no exclusion relative to explosion, collapse, or underground property. The liability limits shall be not less than the following:

Bodily Injury & Property Damage	\$ 500,000 each occurrence
	\$1,000,000 aggregate

4. "Umbrella Liability Insurance." This insurance shall protect the Contractor against claims in excess of the limits provided under employer's liability, comprehensive automobile liability, and commercial general liability policies. The umbrella policy shall follow the form of the primary insurance, including the application of the primary limits. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$1,000,000 each occurrence
	\$1,000,000 general aggregate

5. Additional Requirements. The City may require insurance covering a Contractor or Subcontractor more or less than the standard requirements set forth herein depending upon the character and extent of the work to be performed by such Contractor or Subcontractor.

Insurance as herein required shall be maintained in force until the City releases the Contractor of all obligations under the contract.

The Contractor shall provide and carry any additional insurance as may be required by special provisions of these specifications.

6. Certificate of Insurance. Satisfactory certificates of insurance shall be filed with the City prior to starting any work on this contract. The certificates shall show the City as an additional insured on all coverage except Workers Compensation. The certificate shall state that thirty (30) days written notice shall be given to the City before any policy is cancelled (strike the "endeavor to" wording often shown on certificate forms). If the Contractor cannot have the "endeavor to" language stricken, the Contractor may elect to provide a new certificate of insurance every thirty (30) days during the contract. The Contractor shall immediately notify the City if there is any reduction of coverage because of revised limits or claims paid which affect the aggregate of any policy.

7.12 Proof of Carriage of Insurance. Satisfactory certificates of insurance shall be filed with the City prior to starting any construction work on this contract. The certificates shall show the City as "Additionally Insured." The certificates shall state that thirty (30) days written notice shall be given to the City before any policy covered thereby is changed or canceled (strike the "endeavor to" wording often shown on certificate forms).

7.13 Contractor's Responsibility for Utility Property and Services. At points where the Contractor's operations are adjacent to properties of railway, telegraph, telephone, and power companies or adjacent to other property to which damage might result, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

In the event of interruption to water or utility services as a result of accidental breakage or as result of being exposed or unsupported, the Contractor shall promptly notify the proper authority. Contractor shall cooperate with said authority in the restoration of service as promptly as possible. In no case shall interruption to water service be allowed to exist outside of working hours. Fire hydrants shall be kept accessible to the Fire Department at all times and no materials shall be kept or stockpiled within fifteen (15) feet of any fire hydrant.

The Contractor must cooperate with the utility companies and schedule work in such a manner as to protect the existing utility facilities until the facilities are abandoned or replacement facilities are completed. In instances where partial grading is necessary before a utility can install its facilities, the Contractor shall consult with the utility and plan the work so reasonable time can be allowed the utility for completing its work.

7.14 No Waiver of Legal Rights. The City shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work and payment therefor from showing the true amount and character of the work performed and materials furnished by the Contractor, nor from showing that such measurement, estimate, or certificate is untrue or is incorrectly made, nor that the work or materials do not in fact conform to the contract. The City shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor or Contractor's sureties, or both, such damage as it may sustain by reason of Contractor's failure to comply with the terms of the contract. Neither the acceptance by the City or any representative of the City, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the City shall operate as a waiver of any portion of the contract or of any power herein reserved or of any right to damages. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

7.15 Exposure of Pipe or Manholes. The Contractor shall conduct the work at all times in such a manner as will insure no disruption to the normal function of the sanitary sewer collection system. Particular attention shall be paid to the threat of introduction of storm water or other waters to the piping and manholes of the collection system. The Contractor shall take whatever precautions are necessary, such as, but not limited to installation of plugs in exposed pipes and manholes when work is not in progress or when leaving the work site. The Contractor will be held responsible for damages which may occur to either the collection system or to private property through introduction of storm water or other waters to exposed piping or manholes relating to the construction work.

## **SECTION 8 - PROSECUTION AND PROGRESS**

8.01 Subletting or Assigning of Contract. The Contractor will not be permitted to sublet, assign, sell, transfer, or otherwise dispose of the contract or any portion thereof or Contractor's right, title, or interest therein or to either legally or equitably assign any of the money payable under Contractor's contract or claim thereto without the written consent of Contractor's surety and the Engineer. The Contractor will not be relieved of any responsibility through any of the above actions.

8.02 Prosecution of Work. The bid for each project will show the contract period. The progress of the work shall be at a rate sufficient to complete the contract within the contract period. If it appears that the rate of progress is such that the contract will not be completed within the contract period or if the work is not being executed in a satisfactory and workmanlike manner, the City may order the Contractor to take such steps as it considers necessary to complete the contract within the period of time specified or to prosecute the work in a satisfactory manner. If the Contractor fails to comply with such order within two (2) weeks after receipt of the order, Contractor shall automatically be disqualified from receiving any additional contract awards, and the City shall have the right to declare the contract in default and to complete the work in accordance with these specifications under section entitled Abrogation.

The Contractor's sequence of operations shall be such as to cause as little inconvenience to the general public as possible.

The Contractor will be granted additional and suitable time for the prosecution of the work, as was lost by reason of a delay or delays attributable to other parties authorized to do work on the project over which the Contractor had no control or jurisdiction, as provided in these specifications under section entitled Extension of Contract Period.

8.03 Limitations of Operations. The Contractor shall conduct the work at all times in such a manner and in such sequence as will insure the least interference with traffic. Contractor shall have due regard to the location of detours and to the provisions of handling traffic. Contractor shall not open up work to the prejudice of work already started, and the Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional section. The Contractor shall so conduct operations and maintain the work in such condition that adequate drainage shall be in effect at all times.

8.04 Methods and Equipment. The methods, equipment, and appliances used shall produce a satisfactory quality of work and shall be adequate to maintain the schedule of progress specified. Equipment used on any portion of the project shall be such that no injury to the roadway, adjacent property, or other streets will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract, the Contractor is free to use any methods or equipment that is demonstrated to accomplish the contract work in conformity with the requirements of the contract to the satisfaction of the Engineer.

When the contract specifies that the construction be performed by the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than those specified in the contract, a request may be made to the Engineer for authority to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed to be used and an explanation of the reasons for desiring to make the change. If approval is given, it will be on the condition that the contractor will be fully responsible for producing construction work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not

meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining construction with the specified methods and equipment. The Contractor shall remove the deficient work and replace it with work of specified quality or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the construction items involved nor in contract time as result of authorizing a change in methods or equipment under these provisions.

8.05 Temporary Suspension of Work. Work shall be suspended wholly or in part when, in the opinion of the Engineer, weather or other conditions are unfavorable to its satisfactory prosecution. Work shall also be suspended at the direction of the Engineer pending settlement of disputes arising out of failure of the Contractor to comply with the provisions of the contract. Written notice of suspension of work shall be given by the Engineer. When the conditions causing suspension no longer exist, such written notice shall be given to the Contractor by the Engineer. Promptly after such written notice, the Contractor shall resume prosecution of the work as provided in these specifications under section entitled Prosecution of Work.

8.06 Liquidated Damages. Time is an essential element of the contract, and it is important that the work be pressed vigorously to completion.

For each calendar day that any work shall remain uncompleted after the end of the contract period, the amount per calendar day specified in the bid form will be assessed, not as a penalty but as predetermined and agreed liquidated damages. The City will prepare and forward to the Contractor an invoice for such liquidated damages. The final payment will be withheld until payment shall have been made of this invoice.

Due account shall be taken of any adjustment of the contract period granted under the section of these specifications entitled Extension of Contract Period.

The assessment of liquidated damages for failure to complete the work within the contract period shall not constitute a waiver of the City's right to collect any additional damages which the City may sustain by failure of the Contractor to carry out the terms of the contract.

8.07 Extension of Contract Period. An extension of the contract period may be granted by the City for any of the following reasons:

1. Additional work resulting from a modification of the plans for the project
2. Delays caused by the City
3. Other reasons beyond the control of the Contractor which, in the City's judgment, would justify such extension.

No extension of contract period will be allowed for variations between contract quantities and actual quantities which cannot be predetermined and which amount to less than twenty percent (20%) of the contract quantities.

8.08 Abrogation. If the Contractor abandons, sublets, or assigns the work under this contract without the consent of the City, or if Contractor fails to give - personal attention to it, or if it is the Engineer's opinion, and is so certified in writing to the Contractor and the City, that the Contractor is violating any of the provisions of this contract or that Contractor is not prosecuting the work in good faith or at the rate of progress specified, or that Contractor has unnecessarily or unreasonably delayed or neglected the work or any part of it, written notice to that effect is to be given to the Contractor by the Engineer. After such notice, no materials or equipment shall be removed from the work. If, within five (5) days thereafter, the Contractor does not take steps, which in the judgment of the Engineer will insure the satisfactory completion of the work, then the City may declare this contract null and void and the security forfeited and may notify the Contractor in writing to discontinue the work or any part of it; thereupon ceasing the Contractor's right of possession of the ground and of all materials and equipment thereon. The City then, at

their option, may enter upon and take possession of the work with all materials, supplies, and equipment remaining thereon and by contract or otherwise, as the City may determine, may complete the work or the part of it designated and charge the expense thereof to the Contractor using any materials or equipment found on the site. The expense so charged, together with all damages incurred, will be deducted from any funds due or to become due under this contract and, should the unexpended balance of these funds be insufficient, the excess shall be at the cost of the Contractor and sureties on the Contractor's bond. Neither completion of a part of the work nor the extension for any reason of the time of the completion of the work is to be considered a waiver of this right to abrogate the contract for abandonment, delay, or unsatisfactory work.

8.09 Termination of Contractor's Responsibility. The contract shall be considered completed when the work has been accepted in writing by the City. Such acceptance shall release the Contractor from all further obligation with respect thereto, except as to conditions and requirement set forth in Contractor's bond.

## **SECTION 9 - MEASUREMENT AND PAYMENT**

9.01 Payments. Payments for estimated work completed will be made only on certificates of the Engineer at a regular City Council meeting.

The City, at its discretion, may include in such estimates payments for materials that will eventually be incorporated in the project, provided that such materials are suitably stored on the site of the project at the time of preparing estimates for payment. Such payment is to be based upon the estimated value thereof as ascertained by the Engineer. Such material when so paid for by the City shall not be removed from the project without consent of the City and, in case of default on the part of the Contractor; the City may use or cause to be used by others these materials in construction of the project.

The City will retain five percent (5%) of the estimated amount of work executed in an approved manner and of the approved materials and apparatus suitably stored on the site.

Payment of the retained five percent (5%) will be made within sixty (60) days after the formal approval and acceptance by the Engineer of all apparatus, materials, and work embraced in the contract.

9.02 Payments Withheld. The City may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary to protect itself from loss on account of:

1. Defective work not remedied
2. Claims filed or reasonable evidence indicating probable filing of claims
3. Failure of the Contractor to make payments properly to subcontractors or for materials or labor
4. A reasonable doubt that the contract can be completed for the balance then unpaid
5. Damage to another contractor.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

9.03 Acceptance and Final Payment. If final inspection reveals that all details of the work have been completed satisfactorily, the Engineer shall tentatively accept the work, in writing, relieving the Contractor of further responsibility for the care and maintenance of the completed work and, provided that all equipment and materials have been removed from the right-of-way, shall also relieve the Contractor of further public liability. As soon as possible after tentative

acceptance of the work, the Engineer shall measure the completed work and compute the quantities of work for which payment is to be made. Before final settlement is made, the City shall be satisfied with the completed work. When the Engineer is satisfied that all items of the work have been found to be consistent with the terms of the contract and specifications, a final estimate including the retained percentage due the Contractor shall be released for payment. Release of the final estimate shall constitute final acceptance of the work.

All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

Extra work - See these specifications under section entitled Extra Work.

9.04 Payment for Extra Work. The Contractor will receive and accept payment for work performed under the contract as follows:

1. Items of work performed which are covered by definite prices stipulated in the contract. For all items of work performed which are covered by definite unit prices or lump sum amounts specified in the contract, the Contractor shall receive and accept compensation at the rate specified in the contract.

2. Extra work ordered by the Engineer, of a quality or class not covered by the contract, will be paid for at an agreed price. For extra work ordered by the Engineer and performed on an agreed price basis, the Engineer and the Contractor shall enter into a written agreement, and have City Council approval, before such work is undertaken. This written agreement shall describe the extra work that is to be done and shall specify the agreed price or prices therefore.

**Revised 1-25-2011**

**DIVISION IA -  
SPECIAL PROVISIONS**

## ASPHALT MAINTENANCE PROJECT NO. 2024-AC-1

### DIVISION IA - SPECIAL PROVISIONS

#### SECTION 200 - GENERAL

**200.01 General Description of Work.** The work to be performed under the terms of this contract consists of furnishing all materials, equipment, tools, labor and plant necessary to perform the re-surfacing and other related work as shown on the program plans.

The bid shall reflect a grand total for the entire program. The City may add or delete up to 25% of the contract dollar value based upon estimated quantities and bid unit prices without adjustment of unit prices.

#### **200.02 Location of Work.**

##### **Section 1. 9<sup>th</sup> Street: Eddy Street to Sycamore Street.**

The entire section shall be milled 2" then a 2" Type "SPR" surface course shall be placed on this section in one (1) lift. Millings shall become property of the contractor. Traffic may be placed on the milled surface upon completion of the milling operation and subsequent cleanup. The milled areas shall be covered within two (2) weeks after milling is completed.

The Contractor shall not sweep millings onto adjacent shoulders. The City Street Department may provide street sweeping to aide with final clean up of the millings.

Six (6) manholes are located on this section. Two (2) manholes have existing concrete diamonds and four (4) shall be adjusted to grade per the plan details. Two (2) water valve is located on this section and shall be adjusted to grade per the plan details. Grand Island Streets Department will provide milling assistance around manholes.

Beveled edge not required on this segment.

Phasing – 9<sup>th</sup> Street from Eddy Street to Sycamore Street shall be closed to through traffic. Local access to adjacent properties shall be maintained at all times. 10<sup>th</sup> Street (Section 2) shall not be closed at the same time as 9<sup>th</sup> Street closure. Eddy Street and Sycamore Street intersections shall be open to north/south traffic at all times (flagging may be required). The Contractor shall remove the roadway closure, if no work is anticipated for 5 or more working days between mill and overlay operations. Contractor will be required to provide notification to residents and businesses two weeks before any construction activity.

Traffic Control - The contractor shall be responsible for placement and maintenance of all traffic control devices and flagging during the performance of their work. Refer to the traffic control sheet (s) in the plans and the Manual on Uniform Traffic Control Devices for their placement.

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##### **Section 2. 10<sup>th</sup> Street: Eddy Street to Sycamore Street.**

The entire section shall be milled 2" then a 2" Type "SPR" surface course shall be placed on the entire section in one (1) lift. Millings shall become property of the contractor. Traffic may be placed on the milled surface upon completion of the milling operation and subsequent cleanup. The milled areas shall be covered within two (2) weeks after milling is completed.

The Contractor shall not sweep millings onto adjacent shoulders and sidewalks. The City Street Department may provide street sweeping to aide with final clean up of the millings.

No manholes are located on this section. No water valves are located on this section.

Beveled edge will not be required on this segment.

Phasing – 10<sup>th</sup> Street from Eddy Street to Sycamore Street shall be closed to through traffic. Local access to adjacent properties shall be maintained at all times. 9<sup>th</sup> Street (Section 1) shall not be closed at the same time as 10<sup>th</sup> Street closure. Eddy Street and Sycamore Street intersections shall be open to north/south traffic at all times (flagging may be required). The Contractor shall remove the roadway closure, if no work is anticipated for 5 or more working days between mill and overlay operations. Contractor will be required to provide notification to residents and businesses two weeks before any construction activity.

Traffic Control - The contractor shall be responsible for placement and maintenance of all traffic control devices and flagging during the performance of their work. Refer to the traffic control sheet (s) in the plans and the Manual on Uniform Traffic Control Devices for their placement.

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**Section 3. Broadwell Avenue: Waugh Street to College Street.**

The entire section shall be milled 2" then a 2" Type "SPR" surface course shall be placed on this section in one (1) lift. Millings shall become property of the contractor. Traffic may be placed on the milled surface upon completion of the milling operation and subsequent cleanup. The milled areas shall be covered within two (2) weeks after milling is completed.

The Contractor shall not sweep millings onto adjacent shoulders. The City Street Department may provide street sweeping to aide with final clean up of the millings.

Three (3) manholes are located on this section and shall be adjusted to grade per the plan details. Three (3) water valves are located on this section and shall be adjusted to grade per this plan details. Grand Island Streets Department will provide milling assistance around manholes.

Beveled edge not required on this segment.

Phasing – Broadwell Avenue from Waugh Street to Prospect Street shall be closed to through traffic. Local access to adjacent properties shall be maintained at all times. Waugh Street and Broadwell Avenue intersection shall be open to traffic at all times (flagging will be required). The Contractor shall remove the roadway closure, if no work is anticipated for 5 or more working days between mill and overlay operations. Contractor will be required to provide notification to residents and businesses two weeks before any construction activity.

Traffic Control - The contractor shall be responsible for placement and maintenance of all traffic control devices and flagging during the performance of their work. Refer to the traffic control sheet (s) in the plans and the Manual on Uniform Traffic Control Devices for their placement.

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**Section 4. Eddy Street: 4<sup>th</sup> Street to 10<sup>th</sup> Street.**

The entire section shall be milled 2" then a 2" Type "SPR" surface course shall be placed on the entire section in one (1) lift. Millings shall become property of the contractor. Traffic may be placed on the milled surface upon completion of the milling operation and subsequent cleanup. The milled areas shall be covered within two (2) weeks after milling is completed.

The Contractor shall not sweep millings onto adjacent shoulders and sidewalks. The City Street Department may provide street sweeping to aide with final clean up of the millings.

Eleven (11) manholes are located on this section. Seven (7) manholes have existing concrete diamonds and four (4) shall be adjusted to grade per the plan details. No water valves are located on this section. Grand Island Streets Department will provide milling assistance around manholes.

Beveled edge will not be required on this segment.

Phasing – Eddy Street from 4<sup>th</sup> Street to 10<sup>th</sup> Street shall be closed to through traffic. Local access to adjacent properties shall be maintained at all times. Sycamore Street (Section 6) shall not be closed at the same time as Eddy Street closure. 4<sup>th</sup> Street and 10<sup>th</sup> Street intersections shall be open to east/west traffic at all times (flagging will be required). The Contractor shall remove the roadway closure, if no work is anticipated for 5 or more working days between mill and overlay

operations. Contractor will be required to provide notification to residents and businesses two weeks before any construction activity.

Traffic Control - The contractor shall be responsible for placement and maintenance of all traffic control devices and flagging during the performance of their work. Refer to the traffic control sheet (s) in the plans and the Manual on Uniform Traffic Control Devices for their placement.

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**Section 5. Eddy Street: 10<sup>th</sup> Street to 18<sup>th</sup> Street.**

The entire section shall be milled 2" then a 2" Type "SPR" surface course shall be placed on the entire section in one (1) lift. Millings shall become property of the contractor. Traffic may be placed on the milled surface upon completion of the milling operation and subsequent cleanup. The milled areas shall be covered within two (2) weeks after milling is completed.

The Contractor will not be allowed to sweep millings onto adjacent properties. The City Street Department may provide street sweeping to aide with final clean up of the millings.

Eighteen (18) manhole is located on this section and shall be adjusted to grade per the plan details. No water valves are located on this section. Grand Island Streets Department will provide milling assistance around manholes.

Beveled edge will not be required on this segment.

Phasing – Eddy Street from 10<sup>th</sup> Street to 18<sup>th</sup> Street shall be closed to through traffic. Local access to adjacent properties shall be maintained at all times. Sycamore Street (Section 6) shall not be closed at the same time as Eddy Street closure. 10<sup>th</sup> Street and 18<sup>th</sup> Street intersections shall be open to east/west traffic at all times (flagging will be required). The Contractor shall remove the roadway closure, if no work is anticipated for 5 or more working days between mill and overlay operations. Contractor will be required to provide notification to residents and businesses two weeks before any construction activity.

Traffic Control - The contractor shall be responsible for placement and maintenance of all traffic control devices and flagging during the performance of their work. Refer to the traffic control sheet (s) in the plans and the Manual on Uniform Traffic Control Devices for their placement.

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**Section 6. Sycamore Street: 4<sup>th</sup> Street to 10<sup>th</sup> Street.**

The entire section shall be milled 2" then a 2" Type "SPR" surface course shall be placed on the entire section in one (1) lift. Millings shall become property of the contractor. Traffic may be placed on the milled surface upon completion of the milling operation and subsequent cleanup. The milled areas shall be covered within two (2) weeks after milling is completed.

The Contractor will not be allowed to sweep millings onto adjacent properties. The City Street Department may provide street sweeping to aide with final clean up of the millings.

Four (4) manholes are located on this section and three (3) shall be adjusted to grade per the plan details. No water valves are located on this section. Grand Island Streets Department will provide milling assistance around manholes.

Beveled edge will not be required on this segment.

Phasing – Sycamore Street from 4<sup>th</sup> Street to 10<sup>th</sup> Street shall be closed to through traffic. Local access to adjacent properties shall be maintained at all times. Eddy Street (Section 4 & 5) shall not be closed at the same time as Sycamore Street closure. 4<sup>th</sup> Street and 10<sup>th</sup> Street intersections shall be open to east/west traffic at all times (flagging may be required). The Contractor shall remove the roadway closure, if no work is anticipated for 5 or more working days between mill and overlay operations. Contractor will be required to provide notification to residents and businesses two weeks before any construction activity.

Traffic Control - The contractor shall be responsible for placement and maintenance of all traffic control devices and flagging during the performance of their work. Refer to the traffic control sheet (s) in the plans and the Manual on Uniform Traffic Control Devices for their placement.

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**200.03 Specifications.** The specifications which govern the materials and equipment to be furnished and the work to be performed under this contract are listed herein and in Division 1 – General Provisions, Division IA – Special Provisions and Division IV – Asphalt Concrete Surface Course. If there is information described in any of the divisions that is in conflict with information in Division IA – Special Provisions, the information in the Special Provisions shall govern the contract.

Any reference to the NDOT (Nebraska Department of Transportation) in the 2017 Standard Specifications, Supplemental Specifications or Special Provisions shall be considered reference to the City of Grand Island, its employees, or representatives hired by the City of Grand Island as a consultant for design or construction project management.

**200.04 Liquidated Damages.** The Contractor shall perform the work within the period of time stipulated in the Contract Agreement, unless an extension of time is granted by the City Council. Liquidated damages shall be assessed \$500.00 per calendar day.

**200.05 Contractor’s Insurance.** In addition to the insurance required under Division I, Section 7.11, Contractor’s Insurance, the insurance policy shall include completed operations coverage.

**200.06 Schedule.** (Schedule of Operations) The Contractor shall present a detailed schedule at the Pre-Construction meeting.

**200.07 Special Prosecution and Progress and Completion.** All sections shall be completed before September 6, 2024.

**200.08 Mobilization.** This work shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; and for all other work and operations which must be performed or costs incurred before beginning work at the project site.

The Contractor must include all costs that he/she expects to incur for all movements of his/her equipment and personnel. Additional payments will not be made should the Contractor elect to move his/her equipment and/or crew to another project site before the contracted work is complete or if the Contractor fails to adequately assess the actual cost of Mobilization for the contracted work.

## **SECTION 201 – RESURFACING**

**201.01 Asphalt Overlay.** The asphalt thickness shall be as indicated on the details in the construction plans. All base preparation including cleaning shall be done by the Contractor. No separate payment shall be made for cleaning.

**201.02 Performance Graded Binder.** The Performance Graded Binder to be used on this project shall be PG Binder 58V-34.

Performance Graded Binder shall conform to Nebraska Department of Transportation Supplemental Specification Section 1029 – Performance Graded Binder (J-6-0117), as altered by the City of Grand Island. **NOTE: SPR minimum binder content has been adjusted from 5.0 to 5.2 for this contract.**

**201.02.a Method of Measurement.** PG Binder shall not be measured as a separate pay item. Laboratory test results shall be used to determine the PG Binder content.

**201.02.b Basis of Payment.** PG Binder is not measured for direct payment and shall be used as a pay factor for the pay item “Asphaltic Concrete” according to the following table:

<b>Contractor's Design Performance Grade Binder Content: PG%</b>	
<b>PG Binder Content</b>	<b>Pay Factor</b>
Less than PG% - 0.6%	40.00% or Reject
PG% - 0.6%	92.00%
PG% - 0.5%	94.00%
PG% - 0.4%	96.00%
PG% - 0.3%	98.00%
PG% - 0.2%	100.00%
PG%	100.00%
PG% + 0.2%	100.00%
PG% + 0.3%	100.00%
PG% + 0.4%	100.00%
PG% + 0.5%	100.00%
PG% + 0.6%	92.00%
Greater than PG% + 0.6%	40.00% or Reject

**201.03 Cool Weather Re-Surfacing.** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 503.04; Paragraph 3.

**201.04 Grades.** The Contractor shall use the most practical methods available for maintaining drainage to the shoulder area and inlets. The Contractor shall use whatever method necessary to ensure proper drainage along the curb that might include stringlines or surveying. The Contractor shall be responsible for remedying any areas where standing water remains after a rainfall event that is caused by this resurfacing project. There shall be no additional payment for this work.

**201.05 Preparation of Existing Surface.** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 503.04; Paragraph 1.

**201.06 Hauling and Spreading Asphalt Concrete Mixtures.** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 503.04; Paragraphs 4 and 5.

**201.07 Compacting and Finishing Asphalt Concrete Mixtures.** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 503.04; Paragraphs 6 and 7. When a break in the cross slope of the pavement is specified in the plans, the Contractor shall provide compacting equipment of appropriate width to compact and finish the surface as specified.

**201.08 Smoothness.** The City of Grand Island reserves the right to test pavement smoothness. The Engineer may evaluate any surface irregularities caused by workmanship with a 10-foot straight edge. The maximum allowable deviation will be 1/8 inch in 10 feet measured longitudinally. If the deviation exceeds 1/8 inch in 10 feet, then the area shall be corrected by

grinding with a machine equipped with diamond blades with spacers until the deviation is less than 1/8 inch in 10 feet or the Engineer may authorized a \$500.00 deduction for each irregularity. Exception: the maximum deviation allowable shall be 1/4 inch in 10 feet for roadways with a posted speed limit 30 MPH or less. Matching irregular surfacing next to removal areas may not be cause for non-acceptance.

If after straight edge testing, the engineer still believes that the finished surface of the road is rough, the engineer may make arrangements for additional smoothness testing and may also enforce the NDOR Standard Specification Section 502 – Asphaltic Concrete Pavement Smoothness. Pavement surface correction work will be performed by the contractor, if needed. There will be no incentive payment for smoothness.

If the engineer makes arrangements for pavement smoothness testing and the tested smoothness of over 10% of the tenth mile long section have a profile index greater than 15 inches per lane mile, the contractor shall be required to reimburse the City for the cost of performing the smoothness testing and evaluation on any roads tested and resurfaced under this contract.

**201.09 Tack Coat.** Diluted emulsified asphalt shall be used for Tack Coat for this project and shall conform to the requirements of Section 504 of the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction. Tack Coat shall be SS-1-H or CSS-1-H applied at the rate of 0.10 to 0.20 gallon per square yard when applied to existing or freshly milled surfaces and from 0.05 to 0.10 gallon per square yard when applied to freshly laid Asphaltic Concrete.

Documentation from the supplier certifying that the materials used for tack coat meet these requirements shall be provided to the Engineer. Addition of potable water to dilute emulsified asphalt must be performed under observation from the Engineer or their representative.

**201.10 Asphaltic Pavement.** The asphaltic concrete shall be Type SPR and Type SLX.

**201.11 Tapering of Sharp Drop Off.** Sharp drop offs at intersections and driveways shall be corrected immediately after the section of work has been completed. Contractor shall not proceed to another section of work if tapering of sharp drop offs has not been completed. Transverse drop offs on City streets at the limits of the milling operation that are left upon completion of milling shall be filled in with a material that is approved by the engineer and placed as approved by the engineer. The material shall be removed prior to placing the hot mix asphalt unless approved by the engineer.

**201.12 Compacting At Driveways.** Areas where rollers cannot be properly operated shall be compacted with appropriate equipment.

**201.13 Manholes & Valve Boxes.** Manholes & valve boxes to be 'Adjusted to Grade' shall be identified on the plans. Manhole and valve boxes to remain in place shall be protected during milling and overlay operations. Manholes & valve boxes that are left below finish grade to be adjusted at a later time shall be clearly marked. Appropriate temporary surfacing shall be placed over the manhole and/or valve box cover to the level of the finished pavement. Manhole rings and covers and valve boxes shall be protected in such manner that no asphaltic materials will adhere and prevent covers to be easily removed. All labor, equipment, material and concrete to adjust manhole and valve box to grade shall be measured and paid at the contract unit price, 'Each.'

**201.14 Control Strip.** Control Strip will not be required for this project.

~~**201.15 Beveled Edge.** Beveled edge shall be required as shown in the plans. All labor, material, equipment and grading associated with the beveled edge construction shall be considered subsidiary to the pay items for "Asphaltic Concrete, Type \_\_\_".~~

**SECTION 202 DESIGN OF ASPHALTIC CONCRETE MIXTURES – SPR and SLX**

Asphaltic Concrete, Type SPR and SLX shall conform Nebraska Department of Road supplemental specification Section 1028 – Superpave Asphaltic Concrete (J-7-1116) and Asphaltic Concrete Type SLX (J-29-0414), as altered by the City of Grand Island.

Asphaltic Concrete, Scratch Course shall conform Nebraska Department of Transportation supplemental specification Section 1028 – Superpave Asphaltic Concrete (J-7-1116), as altered by the City of Grand Island. The Scratch Course blended aggregate shall conform to the SPR (Fine) gradation requirements according to Table 1028.07. The Engineer may evaluate Contractor substitution for Asphaltic Concrete, Scratch Course; however the substitution must be a NDOT Superpave Asphaltic Concrete Mix.

**SECTION 203 – QUALITY CONTROL – SPR and SLX**

Quality Control testing for Asphaltic Concrete, Type SPR and SLX shall conform Nebraska Department of Road supplemental specification Section 1028 – Superpave Asphaltic Concrete and Asphaltic Concrete Type SLX (J-29-0414), as altered by the City of Grand Island.

The Contractor shall be required to supply all Quality Control test results to the City of Grand Island. The City of Grand Island will test one sub-lot of each lot for additional Quality Control.

**SECTION 204 – DENSITY TESTS**

Density tests for Asphaltic Concrete, Type SPR and SLX shall conform Nebraska Department of Road supplemental specification Section 1028 – Superpave Asphaltic Concrete and Asphaltic Concrete Type SLX (J-29-0414), as altered by the City of Grand Island.

Nuclear density gauges will be allowed for in place density testing.

The City of Grand Island will not test or observe the pay factors for Longitudinal Joint Density.

**SECTION 205 – MEASUREMENT AND PAYMENT**

The method of measurement shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 503.05. For each lot of “Asphaltic Concrete, Type \_\_,” the Asphaltic Concrete unit price is multiplied by the product of the lot pay factor.

The City of Grand Island will utilize the pay factors for PG Binder Content and Asphalt Density only. No other pay factors will be observed.

The final pay factor for total project tonnage for any one type of Asphaltic Concrete, expressed as a percentage, shall be computed as follows:

$$\frac{P1(T1) + P2(T2) + P3(T3)...}{T1 + T2 + T3...}$$

Where P1, P2, P3 = % pay factor for each lot  
T1, T2, T3 = tons at respective pay factor

Deductions shall be made for materials which have been damaged by overheating, which have been allowed to cool excessively before laying, which are required to be removed because of defective work, which have been wasted, or which have not been used as directed by the Engineer.

If the temperature exceeds 350°F but does not exceed 400°F immediately after discharge from the mixer, the pay factor shall be 0.90. If the temperature of the mixture exceeds 400°F (204°C), the material may be rejected or, if used on the project, the pay factor for the material may be 0.40.

## **SECTION 206 – MILLING AND INLAYS**

**206.01 Milling - General** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 510.01.

**206.02 Milling - Equipment** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 510.03.

**206.03 Milling – Construction Methods** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 510.04.

The contractor shall provide and operate the mechanical broom(s) to perform the sweeping and cleaning immediately following the milling operation. Following the last pass of the milling and sweeping operation, the City will provide and operate a street sweeper to remove the remaining small windrow of millings that cannot be picked up by the milling machine, for locations identified in Special Provision Section 200.02. The contractor shall be responsible for sweeping the remaining millings into the small windrow prior to the pass made by the City's street sweeper. The contractor shall provide a dump truck on site to unload millings from the street sweeper.

Any millings that were not effectively removed during milling and cleaning operations and were compacted onto the milled surface shall be removed by additional passes of the milling equipment.

Care shall be taken to prevent any debris or construction materials from entering any inlets on the project. Inlets shall not be blocked or otherwise restricted in such a way to cause water to collect within an active traffic lane.

The contractor shall effectively clean the pavement surface of all dirt, foreign materials, loose surfacing material, and any residue before placement of tack coat. Milled surfaces must be completely dry before placement of tack coat on these areas.

Hauling of all milled materials shall be performed by the Contractor. Salvaged bituminous material produced from the cold milling operation shall become the property of the Contractor.

**206.04 Milling – Method of Measurement** Milling will be measured and paid by the Square Yard of milled surface. Milling of PC concrete pavement patches will not be paid for separately and shall be measured and paid for as 'Cold Milling, Type \_\_\_'.

**206.05 Milling for Inlay** Milling for inlays will not be measured and shall be considered subsidiary to the item "Asphaltic Concrete, Type SPR."

## **SECTION 207 – BITUMINOUS PAVEMENT PATCHING**

**207.01 General** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 516.01.

**207.02 Equipment** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 516.03.

**207.03 Construction Methods** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 516.04.

**207.04 Method of Measurement** Asphalt cement, asphaltic concrete, emulsified asphalt for tack, milling, pavement removal and roadway preparation for Asphaltic Concrete for Patching shall be

subsidiary to the pay item “Asphaltic Concrete for Patching.” Removal of disposal of existing pavement and compaction of the existing subgrade are considered subsidiary to the item “Asphaltic Concrete for Patching.” Asphaltic Concrete for Patching shall be measured and paid for at the contract unit price per Ton. Correction of faulty subgrade material shall be considered extra work.

## **SECTION 208 – TRAFFIC CONTROL**

**208.01 Quantities** Traffic Control Quantities are based on the following.

1. Section 1– 9<sup>th</sup> Street: Eddy Street to Sycamore Street.
  - a. Duration of work: 8 Days
  - b. Temporary Traffic Control: See TTC Plan
2. Section 2 – 10<sup>th</sup> Street: Eddy Street to Sycamore Street.
  - a. Duration: 7 Days
  - b. Temporary Traffic Control: See TCC Plan
3. Section 3 – Broadwell Avenue: Waugh Street to College Street.
  - a. Duration: 4 Days
  - b. Temporary Traffic Control: See TCC Plan
4. Section 4 – Eddy Street: 4<sup>th</sup> Street to 10<sup>th</sup> Street.
  - a. Duration: 8 Days
  - b. Temporary Traffic Control: See TCC Plan
5. Section 5 – Eddy Street: 10<sup>th</sup> Street to 18<sup>th</sup> Street.
  - a. Duration: 10 Days
  - b. Temporary Traffic Control: See TCC Plan
6. Section 6 – Sycamore Street: 4<sup>th</sup> Street to 10<sup>th</sup> Street.
  - a. Duration: 8 Days
  - b. Temporary Traffic Control: See TCC Plan

**208.02 Temporary Sign Day** This work consists of furnishing, installing at locations as directed, operating, maintaining, and when signs are not required, removing temporary signs. General requirements shall be as specified in the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 422.01; Paragraphs 1, 3 & 4.

Material shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 422.02; Paragraph 2, 3, 4, 5 & 6.

Temporary Signs shall be installed and maintained in accordance with the Manual on Uniform Traffic Control Devices and with Grand Island City Code Section 32-31. Prior to placement of any temporary signs, the Contractor shall acquire approval from the Engineer for each situation.

“Temporary Sign Day” is the pay item for temporary signs and “Temporary Sign Day” shall be paid by the each.

**208.03 Type II and Type III Barricades** This work consists of furnishing, installing at locations as directed, operating, maintaining, and removing Type II and Type III Barricades. Barricades shall meet the requirements prescribed in the current *Manual on Uniform Traffic Control Devices*.

Type II and Type III Barricades shall be provided, installed, maintained and removed in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 422.03; Paragraph 5., with the Manual on Uniform Traffic Control Devices and with Grand Island City Code Section 32-31. Prior to placement of any Barricades, the Contractor shall acquire approval from the Engineer for each situation.

Type II and Type III Barricades shall be measured for payment by the number of calendar days each is in place as per these specifications.

“Barricade, Type II” and “Barricade, Type III” are the pay items for temporary barricades. “Barricade, Type II” and “Barricade, Type III” shall be paid by the Barricade-Day (BDay).

**208.04 Flagging** “Flagging” shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 422.03; Paragraph 12. The method of measurement and basis of payment for “Flagging” shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 422.04; Paragraph 3.

~~**208.05 Pilot Vehicle** “Furnishing & Operating Pilot Vehicle” shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 422.03; Paragraph 13. The method of measurement and basis of payment for “Furnishing & Operating Pilot Vehicle” shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 422.04; Paragraph 9.~~

**208.06 Raised Lane Markers** “Raised Lane Markers” shall be 4” flexible temporary raised pavement markers, 2-way and color shall be yellow. Spacing shall be 50’ for centerline markings. The method of measurement and basis of payment for “Raised Lane Markers” shall be per ‘Each.’ Contractor may request the use of other temporary pavement markings, if desired. Other temporary pavement markings will be considered and negotiated on a case by case basis.

## **SECTION 209 – EARTH SHOULDER CONSTRUCTION**

~~**209.01 Earth Shoulder Construction General.** This work shall consist of blading, shaping and compacting embankment material to conform to the plan’s typical cross sections and compaction requirements. Soils shall meet the requirements prescribed in the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 205.~~

~~**209.02 Earth Shoulder Construction Methods.** Construction Methods shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 304.03; Paragraphs 1, 2, 3, 4, 5, 7, 8 and 9.~~

~~**209.03 Earth Shoulder Construction Method of Measurement and Basis of Payment.** The method of measurement shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 304.04, except that Water will not be measured. The basis of payment shall be in accordance with Section 304.05, except that Water will not be measured and shall be considered subsidiary to the item “Earth Shoulder Construction.”~~

## **SECTION 210 – SEEDING**

~~**210.01 Hydro Seeding - General.** This work shall consist of placing seed at locations disturbed by grading and shouldering operations and as directed by the Engineer. The seed mixture shall comply with the following.~~

Seed type:	Pure Live	Minimum %	Application
	Seed	Germination Rate	Rate/1,000sf

~~“1/3 Duster, 1/3 Plantation~~

1/3 Rebel II" Turf Type Fescue	95%	90%	8 lbs.
Perennial Rye Grass	90%	90%	2 lbs.
Kentucky Bluegrass	90%	90%	2 lbs.

No seed shall be mixed until the Engineer provides the Contractor a seed order list. The Engineer will determine the total seed requirement, usually near the end of the construction period. Where practicable, a single seed order will be provided.

The Contractor shall obtain from the seed dealer and furnish to the City a laboratory analysis of the lot of seed proposed for use. The analysis shall provide complete information on the seed as required by State and Federal laws. The City may approve use of the seed if the information on the analysis is satisfactory. If the seed is approved by the City, the seed shall be mixed, bagged, and tagged at the seed company after the City gives the seed company authorization.

~~**210.02 Hydro Seeding – Construction Methods.** Shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 801.03; Paragraphs 1, 4, 5 and 7.c.~~

~~**210.03 Hydro Seeding – Method of Measurement and Basis of Payment.** The method of measurement shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 801.04. The basis of payment shall be in accordance with Section 801.05.~~

**SECTION 211 – CRUSHED CONCRETE SURFACE COURSE**

~~**211.01 Crushed Concrete Surface Course.** General requirements shall prescribe to the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 310.01.~~

~~**211.02 Crushed Concrete Surface Course Material Description.** Material requirements shall prescribe to the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 1033.02, Paragraph 2 & 8. Crushed Concrete Surface Course shall meet the requirements of Table 1033.10.~~

~~**211.03 Crushed Concrete Surface Course Construction Methods.** Construction Methods shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 310.03; Paragraphs 1 & 2.~~

~~**211.04 Crushed Concrete Surface Course Method of Measurement and Basis of Payment.** The method of measurement shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 310.04. The basis of payment shall be by the unit price "Tons" for the contract pay item "Crushed Concrete Surface Course."~~

**SECTION 212 – GRAVEL SURFACE COURSE**

~~**212.01 Gravel Surface Course.** General requirements shall prescribe to the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 310.01.~~

~~**212.02 Gravel Surface Course Material Description.** Material requirements shall prescribe to the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for~~

~~Highway Construction, Section 310.02. Gravel Surface Course shall meet the requirements of Table 1033.6.~~

~~**212.03 Gravel Surface Course Construction Methods.** Construction Methods shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 310.03; Paragraphs 1 & 2.~~

~~**212.04 Gravel Surface Course Method of Measurement and Basis of Payment.** The method of measurement shall be in accordance with the 2017 Edition of the Nebraska Department of Transportation Standard Specifications for Highway Construction, Section 310.04. The basis of payment shall be by the unit price "Tons" for the contract pay item "Gravel Surface Course."~~

## **DIVISION III**

### **CURB AND GUTTER SIDEWALKS, AND DRIVEWAYS**

**DIVISION III  
CURB AND GUTTER,  
SIDEWALKS AND DRIVEWAYS**

**C O N T E N T S**

Section	Description
<b>15</b>	<b>SCOPE OF WORK</b>
<b>16</b>	<b>MATERIALS</b>
16.01	Cement
16.02	Sand-Gravel
16.03	Fine Sand and Coarse Aggregate
16.04	Water
16.05	Joint Filter
16.06	Joint Sealing Material
<b>17</b>	<b>CONSTRUCTION METHODS</b>
17.01	Subgrade Preparation
17.02	Forms and Form Setting
17.03	Concrete
17.04	Expansion Joints
17.05	Clean Up
<b>18</b>	<b>CURB AND GUTTER</b>
<b>19</b>	<b>SIDEWALKS</b>
<b>20</b>	<b>DRIVEWAYS</b>
<b>21</b>	<b>METHOD OF MEASUREMENT AND BASIS OF PAYMENT</b>
21.01	Curb and Gutter
21.02	Sidewalks
21.03	Driveways
21.04	Expansion and Miscellaneous Joints
21.05	Acceptance

**DIVISION III  
CURB AND GUTTER,  
SIDEWALKS AND DRIVEWAYS**

This division is written so that ordinarily the type of construction described is complete, but, where applicable, other divisions are considered a part of these specifications.

**SECTION 15 - SCOPE OF WORK**

This work shall consist of constructing curb and gutter, sidewalks, and driveways of Portland cement concrete on an approved, prepared subgrade in strict accordance with these specifications and in conformity with the lines, grades, and applicable drawings. All curb and gutter districts constructed shall conform to Division II, Portland Cement Concrete, as well as these specifications.

**SECTION 16 - MATERIALS**

16.01 Cement - Portland cement shall conform to all requirements of ASTM C-150, Type I, "Specifications for Portland Cement", with subsequent additions and amendments thereto, and also the following general requirements.

Cement shall be stored to provide adequate protection against dampness, and no cement shall be used that has become caked or lumpy. No reclaimed cement shall be used. No cement which has been left in storage more than ninety (90) days after shipment from the mill shall be used unless retested and, if failing to meet the requirements specified, shall be rejected. Normally, cement purchased from local dealers shall be considered satisfactory.

16.02 Sand-Gravel - Sand-gravel for concrete shall be a mixture of sand and gravel composed of clean, hard, durable, uncoated pebbles free from injurious amounts of soft or flaky particles, shale, alkali, organic matter, or other deleterious materials. The following materials shall be considered objectionable and percentage by weight shall not be greater than:

Clay lumps	0.5
Coal and carbonaceous shale	0.5
Unsound chert particles retained on 3/8" sieve	3.0

Gradation requirements for sand-gravel aggregates for concrete are as follows:

	<u>Minimum</u>	<u>Maximum</u>
Total % retained on 1" sieve	--	0
Total % retained on #4 sieve	10	35
Total % retained on #10 sieve	45	65
Total % retained on #20 sieve	65	85
Total % retained on #30 sieve	75	85
Total % retained on #100 sieve	95	100
Total % retained on #200 sieve	97	100

Platte River sand-gravel meeting the above gradation is considered satisfactory.

16.03 Fine Sand and Coarse Aggregate. When 47-B concrete is required, see Division II, Portland Cement Concrete Pavement, for specifications.

16.04 Water. Water used for mixing concrete shall be free from oil, acid, alkali, organic matter, or other deleterious materials. Water from wells or City mains shall be considered satisfactory.

16.05 Joint Filter. Joint filter shall consist of premolded bituminous fiber uniformly impregnated with between 35% and 50% durable asphalt by weight and being furnished in strips of the dimensions specified in the plans. A one (1) inch thick sample when compressed to 50% of original thickness at a rate of 1/10 inch per minute and released shall show at least 70T recovery within one hour after compression and shall not have required more than 500 pounds per square inch compression load and extrusion of not more than 1/8 inch.

Expansion joint material shall be 3/4 inch or more in thickness and shall conform to AASHTO M33-48 (Pre-formed Expansion Joint Filler for Concrete).

16.06 Joint Sealing Material. The hot pour paving joint materials shall be of the rubber-asphalt type and shall be melted in a double jacket kettle equipped with an agitator for stirring the material during melting and pouring. The rubber-asphalt shall meet Federal Specifications SS-S-164 or subsequent revisions.

## **SECTION 17 - CONSTRUCTION METHODS**

17.01 Subgrade Preparation. The subgrade shall be prepared by excavating or filling to the required elevation for bottom of concrete. The subgrade shall be thoroughly tamped or otherwise compacted to insure stability. In fills, the subgrade shall be made at least one foot wider on each side than required by the curb and gutter, sidewalk, or driveway.

Stakes will be set by the City Engineering Division of the Public Works Department for line and grade after a sidewalk permit has been issued by the Public Works Department. The subgrade shall slope toward the street curb on a grade of not less than one-fourth inch per foot.

Where fill is required, it will be laid in six (6) inch layers and thoroughly tamped to the satisfaction of the Engineer. Mushy or spongy material will not be used for fill material. Soft and spongy material will be removed and replaced with suitable backfill material.

Trees that are in the way of the sidewalk will be removed including the stump. Roots of trees that are located outside the sidewalk but extend under the sidewalk shall be cut off at least six (6) inches below the sidewalk.

17.02 Forms and Form Setting. The forms shall be of wood or metal, straight and free from warp, and of sufficient strength to resist springing during the process of depositing concrete against them. All forms shall be securely staked, braced, and held firmly to the required line and grade. All forms shall be thoroughly cleaned and oiled before concrete is placed against them.

Wood forms shall be not less than 1-5/8 inches in thickness except for curvilinear sections where properly braced forms of lesser thickness may be used.

Tolerances of 1/8 to 1/4 inch shall be maintained for form alignment and vertical elevation.

17.03 Concrete. Concrete shall conform to Division II, Portland Cement Concrete Pavement.

Concrete shall be mixed in an approved mixer with sufficient water added to produce a workable mix. In no case shall so much water be used as to cause the collection of a surplus on the surface or to cause segregation during transportation to place of deposit. All materials shall be accurately weighed or measured, and mixing shall continue for a full minute after all materials are in the drum of the mixer. Any concrete which is not in place within thirty (30) minutes after the water has been added shall not be used.

The operation of depositing and compacting concrete shall be conducted so as to form a compact, dense, artificial stone of uniform texture which shall show smooth faces on all exposed surfaces.

Transit-mixed or ready-mixed concrete may be used provided the concrete is placed in the forms before it has developed initial set and shall comply with ASTM C95-58 and the requirements of these specifications. Such concrete must be transported in such a way as to prevent segregation between the aggregates and the cement. Concrete shall develop an ultimate compressive strength of not less than figures shown in Section 11.01 when tested in standard 6" x 12" cylinders at an age of twenty-eight (28) days in accordance with ASTM C39-56T.

Hand mixing of concrete will not be permitted except with specific permission of the City Engineer on very small jobs or in case of emergency.

The concrete surface shall be treated with a liquid treatment for curing such as Tri-Kote or approved equal or burlap cure or plastic covering may be used in the concrete cure. The plastic film used for curing concrete or subgrade insulating material shall be tough, pliable, moisture-proof, and sufficiently durable to retain its moisture-proof properties. The plastic film can be a polyethylene film not less than 0.001 inch thick. Reinforcement materials where required or as shown on the plans and wire mesh shall comply with ASTM A-185 and reinforcing bars where required shall conform to ASTM A-15 or A305.

Air entrained concrete shall be obtained by using air-entrained Portland cement or air-entraining admixtures. Air content of fresh concrete shall measure six (6) to nine (9) percent. Air entrained concrete shall be used for all sidewalks, driveways, and curb and gutter.

The use of high-early strength Portland cement concrete will not be required unless stipulated in the plans and in the Special Provisions on certain contracts.

Concrete shall not be placed when inclement weather prevents good workmanship. Concrete shall not be placed when temperature is below 40 degrees F without specific permission of the Engineer.

The surface shall be wood floated to give a proper roughness to prevent foot slippage for normal foot traffic.

The cross slope shall be 1/4 inch per foot of width of sidewalk.

The sidewalk after pouring shall be protected from foot traffic for twenty-four (24) hours and vehicle traffic for seven (7) days.

17.04 Expansion Joints. Expansion joints shall be placed as indicated on the drawings or at each location where new construction connects with existing construction. Specifically, joints shall be placed where new curb and gutter joins existing curb and gutter, where sidewalks connect to curb and gutter, and at such other locations as the Engineer may direct. On long runs of new construction, joints shall be placed as directed. In no case shall the spacing between expansion joints exceed one hundred (100) feet.

## **SECTION 18 - CURB AND GUTTER**

Concrete curb and gutter shall be constructed to the lines, grades, dimensions and design as called for in the drawings.

There shall be installed every six (6) feet a separator true to the dimensions and cross-section of the combined curb and gutter. This separator shall be removed after the concrete has taken its initial set and the joint properly edged to provide a neat joint. In finishing joints prior to and after removal of separators, extreme care shall be exercised to avoid raising the edge of the joint causing water pockets in the gutter flow line. Separators shall not exceed 1/8 inch in thickness. Immediately following finished operations and before the concrete has taken its final set, the gutter flow line shall be checked with a straightedge not less than ten (10) feet in length and approved by the Engineer.

The maximum deviation from true grade shall not exceed 1/4 inch and any irregularities shall be corrected immediately.

## **SECTION 19 - SIDEWALKS**

Concrete sidewalks shall be constructed to the lines and grades determined by the Engineer. Sidewalks shall have a minimum width of four (4) feet and a depth of four (4) inches and shall be constructed with a side slope of 1/4 inch per foot unless otherwise approved by the Engineer or Engineer's representative. Surfaces shall be marked off in square blocks having an area of not less than sixteen (16) nor more than thirty-six (36) feet. On these lines, the concrete shall be cut through not less than 1/4 inch thickness with a pointed trowel or suitable spading tool and the concrete edged on both sides.

Sidewalks that are being constructed across driveway openings shall have a minimum depth of five (5) inches.

The surface shall be floated with a steel float just enough to produce a smooth surface, free from irregularities. All edges and joints shall be rounded to a radius of 1/4 inch with an approved finishing tool. The surface shall then be brushed with a fine bristle broom or wood float to slightly roughen the surface and remove the finishing tool marks.

## **SECTION 20 - DRIVEWAYS**

Driveway approaches connecting private driveways to City streets shall be constructed with Portland cement concrete except where the private driveway connects to a full depth asphalt street. Where the driveway connects to a full depth asphalt street, asphaltic concrete may be used in construction of the driveway approach.

Driveway approaches shall be constructed to the lines and grade set by the Engineer. The minimum depth of both Portland cement concrete and asphaltic concrete for driveway approaches shall be five (5) inches and, in the event heavy loads are anticipated, the depth shall be increased to handle the expected loads.

## **SECTION 21 - METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

21.01 Curb and Gutter. Combination curb and gutter will be measured for payment by length in linear feet. Measurements will be made along the flow line of the gutter.

21.02 Sidewalks. Sidewalks will be measured for payment by area in square feet.

21.03 Driveways. Driveways as referred to in this paragraph are that portion of existing driveway approaches having to be removed behind the construction lines of pavement due to the driveway approach lying partly within the area between construction lines. Driveways will be measured for payment in area in square yards.

21.04 Expansion and Miscellaneous Joints. Expansion joints and all miscellaneous joints using pre-molded bituminous fiber will be considered incidental to the construction and not as a separate pay item.

21.05 Acceptance. Upon completion of a job, the Engineer shall be notified, and they shall make an inspection of the work. The Contractor will be notified in writing as to the acceptability of the work.

# **DIVISION IV**

## **ASPHALT CONCRETE SURFACE COURSE**

**DIVISION IV  
ASPHALT CONCRETE SURFACE COURSE**

C O N T E N T S

<u>Section</u>	<u>Description</u>
<b>22</b>	<b>SCOPE OF WORK</b>
<b>23</b>	<b>SPECIFICATIONS</b>
23.01	State Specifications
23.02	Smoothness
<b>24</b>	<b>CONSTRUCTION METHODS</b>
24.01	Compaction Requirements
24.02	Asphaltic Cement
24.03	Prime Coat
24.04	Tack Coat
24.05	Armor Coat
24.06	Bituminous Base Course and Surface Course for Asphaltic Concrete Pavements
24.07	Seal Coat
24.08	Heater-Planing
24.09	Surface and Base Reconditioning
24.10	Emulsified Asphalt Slurry Coat
24.11	Asphalt Carpet Coat
24.12	Asphaltic Concrete Surface Course and Base Course
24.13	Pavement Removal
24.14	Miscellaneous Removals
24.15	Special Provisions

**DIVISION IV**  
**ASPHALT CONCRETE SURFACE COURSE**

This division is written so that ordinarily the type of construction described is complete, but, where applicable, other divisions are considered a part of this specification.

**SECTION 22 - SCOPE OF WORK**

The work covered by this division of the specifications consists of furnishing all labor, plant, equipment, appliances, and materials and performing all operations necessary to construct and complete the prime coat and asphaltic concrete pavement and appurtenances in strict accordance with the specifications and applicable drawings and subject to the terms and conditions of the contract.

**SECTION 23 - SPECIFICATIONS**

23.01 State Specifications. The most current State of Nebraska Standard Specifications for Highway Construction along with any drawings or additional addenda shall apply to any and all asphaltic concrete materials and construction methods.

23.02 Smoothness. Except as specified in NDOR 502, acceptance requirements for smoothness shall be as specified in Section 3.17 "ACCEPTANCE REQUIREMENTS" of the Asphalt Institute's latest edition of "MODEL CONSTRUCTION SPECIFICATIONS FOR ASPHALT CONCRETE AND OTHER PLANT-MIX TYPES."

**SECTION 24 - CONSTRUCTION METHODS**

24.01 Compaction Requirements. The top six (6) inches of the final subgrade shall be scarified and rolled with a sheep's foot roller, with water added, if necessary, to obtain compaction to a density of not less than 95% of maximum dry density at optimum moisture content as determined by AASHTO Method T-99. A minimum of one successful density test per block will be required before the placement of any asphaltic concrete surfacing.

Final preparation of the subgrade shall include minor compaction and scarifying up to a depth of two (2) inches, furnishing and applying water, removing loose material, and minor shaping and smoothing of the surface.

Direct payment will not be made for earthwork, subgrade preparation, final preparation, and maintenance of the subgrade. This work shall be subsidiary to asphaltic concrete surface course.

24.02 Asphaltic Cement. Asphaltic cement shall be paid for separately by the gallon. Total pay gallons will be based on actual AC content when the actual AC content is within 0.2% points of the AC content specified by the Engineer. If the actual AC content is more than 0.2% points below that specified by the Engineer, an additional 0.1% point will be deducted from the payment for each 0.1% point below the 0.2% point variance allowed. No payment will be made for asphaltic cement beyond 0.2% points above the specification. The Engineer may reject areas where the AC content is more than 0.5% points above or below specifications based on individual extractions. Areas where the AC content is more than 1% point above or below specifications based on individual extractions must be rejected. Following are examples to illustrate:

AC Content	Specified Extraction	Payment Based On
5.0%	5.2%	5.2%
5.0%	4.8%	4.8%
5.0%	5.5%	5.2%
5.0%	4.5%	4.2%
5.0%	5.6%	May be rejected
5.0%	4.4%	May be rejected
5.0%	6.1%	Will be rejected
5.0%	3.9%	Will be rejected

Where more than one extraction is taken, an average will be computed for payment. In computing the average, AC contents more than 0.2% above the specified content will be changed to the specified content plus 0.2% points. Following is an example based on a specified AC content of 5.0%.

Actual Extractions	Use for Payment Computations
5.1%	5.1%
4.8%	4.8%
4.5%	4.5%
6.0%	5.2% (if accepted by Engineer)
Avg = 5.1%	Avg = 4.9%

Payment would be made based on the 4.9% average.

24.03 Prime Coat. The prime coat shall conform to the most current State of Nebraska, Standard Specifications for Highway Construction.

24.04 Tack Coat. The tack coat shall conform to the most current State of Nebraska, Department of Roads, Standard Specifications for Highway Construction.

24.05 Armor Coat. The armor coat shall conform to the most current State of Nebraska, Department of Roads, Standard Specifications for Highway Construction.

24.06 Bituminous Base Course and Surface Course for Asphaltic Concrete Pavements. The bituminous base course and/or surface course for asphaltic concrete pavements shall conform to the most current State of Nebraska, Department of Roads, Standard Specifications for Highway Construction.

24.07 Seal Coat. The seal coat shall conform to the most current State of Nebraska, Department of Roads, Specifications for Highway Construction.

24.08 Heater-Planing. The work covered by this section consists of furnishing all plant, labor, and equipment and performing all operations in connection with the heating and planing of existing pavements to true up existing surfaces within the limits and in accordance with the methods, procedures, type, and area as outlined and described in this section and the applicable drawings, and to the depth designated by the Engineer.

The amount of work indicated in the bid form may be increased or decreased by whatever amount is deemed advisable by the Engineer. For any such increase or decrease in work there shall be no consequent change from the unit prices as bid in this contract.

A. Equipment - The planing machine shall be designed and built for the heater planing of heavy traffic type asphaltic concrete pavements and shall be self-propelled. The heating and cutting width of the machine shall be the same and shall not be less than three and one-half (3-1/2) feet. The total weight shall not be less than 17,000 pounds of which seventy percent (70%) plus or minus ten percent (10%) shall be on the rear wheels. The machine shall be capable of traveling at a speed as low as forty (40) feet per minute and be able to cut against all curbs, catch basins, inlets, and other similar obstructions within the paved area. The machine shall have, in combination, a means for heating and cutting the surface and blading the displaced material into one or two windrows in one continuous operation. The overall width or spread of the rear wheels of the machine shall not be greater than the lateral width of the cutting edges and the effective wheelbase of the machine shall not be less than eighteen (18) feet. The make and design of the machine shall be one that has operated successfully on a considerable mileage of work comparable with that proposed to be done under this contract.

B. Public Convenience and Safety - The Contractor shall plan the work so that there will be the least possible interruption to the usual flow of traffic and shall conform to the specific requirements. The Contractor shall be governed by the current regulations of the City. The Contractor shall use all proper precautions to protect persons from injury. Proper guards shall be placed in the vicinity of the work and a sufficient number of colored warning lights placed to protect the public from damage and injury. The Contractor shall be held responsible for all such damage and injuries.

C. Protection of Utilities - Contractors shall use care not to disturb, break, or otherwise damage any visible existing manhole covers, gate valves, etc. in the planing operation. Covers, valves, etc. visible prior to the Contractor's operation shall be replaced by Contractor at Contractor's expense. The adjustment of manholes to the finished grade produced by the heater planer operation is not to be included as work to be done under this item.

D. Construction Methods - Areas to be planed shall be definitely marked out in advance of the work by the Engineer. They shall be rectilinear in shape except where existing facilities do not permit. Payment for completed work shall be made only on the basis of areas as marked out by the Engineer in advance of the work.

Planing operations shall accomplish the cutting of the bituminous surface of the pavement, not to exceed one-half (1/2) inch depth per pass, to a smooth surface without gouging, shoving, or tearing the pavement. The Contractor shall make as many trips with the machine as are necessary to cut to the depth indicated in the plans, specifications, Special Provisions, or as directed by the Engineer and to bring the surface to a tolerance of one-fourth

(1/4) inch when checked with a ten (10) foot straightedge. The Contractor is not to remove more surface than required or directed. Should the bituminous material not permit planing to this tolerance, the condition of the pavement must be called to the attention of the Engineer whose decision will be final.

Immediately after completion of the planing operation, the Contractor shall roll the planed areas with a smooth wheel roller weighing not more than ten (10) tons. Not less than three (3) passes of the roller will be required over the entire area planed.

The Contractor shall remove all pavement cuttings, debris, etc. which resulted from the performance of the work on the street.

E. Coordination with Other Contractors - Some of the projects, which will be properly identified on the plans or in the Special Provisions, are to be overlaid with an asphaltic material after the surface has been heater-planed. The application of the asphaltic material will be accomplished under a separate contract; therefore, close coordination shall be maintained to assure that the surface is heater-planed in advance of the asphaltic material application. The heater-planing contractor shall cooperate with the resurfacing contractor to assure orderly progression of the work to be accomplished.

F. Inspection and Acceptance - Planing operations will be under the direct supervision of the Engineer or Engineer's authorized representative on the work, and the depth and extent to which the planing will be carried out shall be decided by the Engineer as the work progresses. The Engineer shall have authority to reject any work, materials, and parts thereof which do not, in the Engineer's opinion, conform to the plans, specifications, and contract.

G. Measurement and Payment - Heater-planing shall be measured for payment in square yards of pavement actually heated and planed and accepted by the Engineer and shall be paid for at the contract unit price per square yard for the item "Heater-Planing." This price shall be full compensation for furnishing all equipment, plant, tools, labor, flagmen, operators, fuel, hauling, rolling, disposing of planed material, and incidentals necessary to complete the work.

24.09 Surface and Base Reconditioning. This work shall consist of filling cracks, removing and replacing undesirable areas, and patching holes and depressions in existing pavements and bases preparatory to subsequent surfacing or surface treatment.

A. Methods - Except as otherwise provided in this section, all materials used for this work shall conform to the material requirements of these specifications.

B. Crack Filling - On surfaces to be seal coated or armor coated the surface cracks one-fourth (1/4) inch or larger shall be hand raked for a depth of not less than one-half (1/2) inch and then blown clean with compressed air.

Cleaned out cracks shall be filled with MC-800 or Emulsified Asphalt RS-1, and cover coat aggregate poured or broomed into the crack in sufficient quantity to fill the crack.

All cracks one-half (1/2) inch or larger in width in the existing base shall be opened in a wedge shape with air hammers, cleaned with compressed air, painted with Emulsified Asphalt RS-1, and then filled with Asphaltic Concrete Wedge material and thoroughly compacted so as to be even with the adjacent surface.

C. Surface and Base Removal - Surfaces and bases as shown in the plans or as designated by the Engineer shall be removed in accordance with the applicable requirements of the section of these specifications entitled Pavement Removal.

In general, the surfaces requiring removal shall consist of the following types:

1. Asphalt or other surfaces considered unsuitable for use as a base.
2. Asphalt patches containing an excess of bitumen.
3. Loose, excessively cracked or disintegrated asphalt areas.
4. Brick and cobblestone surfaces excessively off grade.
5. Brick, cobblestone, and asphalt surfaces requiring removal to provide for a butt joint.

Except as otherwise shown in the plans or directed by the Engineer, removal of concrete pavements and bases will generally be limited to those areas evidencing disintegration and/or sinking or humping.

Crushed rock bases, when shown in the plans or directed by the Engineer, shall be reworked in accordance with the requirements of the Special Provisions.

D. Surface and Base Repair - Concrete base repair shall be constructed in accordance with the applicable requirements of State of Nebraska specifications which shall be construed to include the following:

1. Repaving areas of concrete bases or pavements previously removed.
2. Resurfacing areas from which brick or cobblestone surface was previously removed, to the level of the existing surface or to such grade as the Engineer may direct.
3. Filling of holes and depressions in the existing base or pavement as the Engineer may direct.
4. Any other work of similar nature or properly inferable from the plans or Special Provisions or directed by the Engineer.

When the contract provides for the placing of asphaltic concrete wedge, base, binder, or surface courses, this material shall be used for patching all holes and depressions in accordance with the requirements of State of Nebraska specifications, except as otherwise provided in this article.

When the contract does not provide for the placing of asphaltic concrete wedge, base, binder, or surface courses, the material used for patching asphalt surfaces shall be one of the following:

1. Asphaltic Surface Course, Type I
2. Material obtained from asphalt plant operated by the City.

This mixture shall be placed in all holes and depressions previously tack coated in accordance with the requirements of the section of these specifications entitled Tack Coat as directed by the Engineer, leveled to the required thickness, and compacted by tamping, ironing, or rolling as may be required to obtain the required density and stability.

E. Measurement and Payment -

1. Crack Filling - Cracks filled under the conditions related in Section 24.09-B shall be measured for payment by length in lineal feet in five (5) chords and shall be paid for at the contract unit price per lineal foot for the item "Crack Filling." This price shall be considered full compensation for all materials, labor, equipment, tools, and incidentals necessary to complete the work required for this item.
2. Removals - Removal of pavements, surfaces, and bases shall be measured and paid for in accordance with the applicable requirements of the section of these specifications entitled Pavement Removal.
3. Reworking Rock Base - Reworking crushed rock base shall be measured and paid for in accordance with the requirements of the Special Provisions.
4. Concrete Base Repair - Concrete used for base repair as related in Item D of this article shall be measured and paid for in accordance with the requirements of the Special Provisions.
5. Asphaltic Concrete Wedge, Binder, or Surface Material - Asphaltic concrete wedge, binder, or surface material used in patching and leveling as provided in Item D of this article shall not be measured separately for payment but shall be included in the quantity for which the contract provides that payment shall be made.
6. Asphalt Patching - Asphaltic mixtures used for patching under the conditions related in Item D of this article shall be measured for payment by weight in tons and shall be paid for at the contract unit price per ton for the item "Asphalt Patching." This price shall be considered full compensation for furnishing and applying all materials including tack coat; for all tamping, ironing, and rolling; and for all labor, tools, equipment, and incidentals necessary to complete the work required for this item.

24.10 Emulsified Asphalt Slurry Coat. The work covered by these specifications consists of furnishing all plant, labor, equipment, and materials and performing all operations in connection with the application of a following described slurry seal coat

upon the so designated surface, complete in strict accordance with these specifications, applicable plans, the Special Provisions, and as directed by the Engineer.

A. Description - The slurry seal coat shall consist of a mixture of emulsified asphalt, mineral aggregate and water, properly proportioned, mixed, and spread on the surface as specified herein and as directed by the Engineer.

B. Materials -

1. Aggregates - Aggregate shall consist of natural or manufactured sand, slag, crusher fines, or other materials approved by the Engineer, blended with mineral filler, if necessary to meet the gradation requirements. Portland Cement, limestone dust, fly ash, or hydrated lime may be used as a filler, provided the blended gradation is within the requirements. The aggregate shall be clean and free of deleterious substances and shall have a plasticity index of not more than five (5) when tested in accordance with ASTM D424. Smooth-textured sand, whose water absorption is less than 1.25% when tested by ASTM C128, shall not exceed 50% of the total combined aggregate. The aggregate, when tested for soundness with Sodium Sulfate in accordance with ASTM C88, shall show a loss of not more than ten (10) percent.

The gradation of the combined aggregate, when tested by ASTM C136, shall meet the following requirements:

Sieve Size	Percent Passing		
	Type 1	Type 2	Type 3
3/8"		100	100
#4	100	80 - 100	70 - 90
#8	80 - 100	65 - 85	45 - 70
#16	60 - 85	45 - 70	35 - 50
#30	45 - 70	30 - 50	20 - 35
#50	30 - 50	20 - 35	12 - 25
#100	15 - 30	12 - 25	10 - 20
#200	10 - 20	10 - 20	8 - 15

2. Water - Water shall be potable and free from harmful soluble salts and in accordance with Grand Island City water quality.
3. Emulsified Asphalt - The emulsified asphalt shall meet the requirements of ASTM D977 (anionic) or ASTM D2397 (cationic). The type and grade, including the penetration of the residual asphalt, will be as listed in the bid or as designated by the Engineer.

C. Slurry Mixture -

1. Mixture Proportions - The mixture shall contain from 14% to 22% asphalt emulsion for Type 1, 10% to 16% for Type 2, and 8% to 14% for Type 3, based on the weight of dry aggregate.

Only the amount of water will be used that is necessary to produce a fluid, creamy texture which will flow smoothly. The actual proportions to be used shall be determined by the Engineer.

2. Mixture Requirements - A free flowing creamy consistency, obtained by varying the quantity of water only, is required for proper application of the mix. The quantity of emulsified asphalt required shall not be altered unless directed by the Engineer. The Contractor shall make trial batches at his expense to determine the final blend of mineral aggregate, mineral filler, and asphaltic binder to be used for most adequate results and approval of the Engineer. Mixture shall be of such consistency as to flow in a wave of approximately two (2) feet ahead of strike-off squeegee.
3. Wearability - The mixture, when tested by the Standard Wet Track Abrasion Test, shall show a loss of not more than 1.5 pounds/square yard (75 gm./square foot).

D. Equipment -

1. Mixing Machine - The slurry seal coat mixing machine shall be a continuous flow mixing unit and be capable to accurately deliver and proportion aggregate, asphalt emulsion, and water to an approved mixer tank and discharge the thoroughly mixed product on a continuous basis from a minimum of two (2) minutes to a maximum of four (4) minutes mixing time.

The mixer shall be washed clean with water immediately after discharging the slurry. Any mixer which becomes clogged or caked with hardened material will be rejected by the Engineer until properly cleaned.

2. Spreader Box - The spreader box may incorporate numerous features but shall consist of at least a rectangular frame of traffic lane width with a squeegee across the box about three-fourths of the way back from the front. The squeegee shall be fastened to the bottom of the cross member which shall be sectional and adjustable for thickness of application and adjustable to the crown of the pavement in segments not over three (3) feet long. The squeegee shall be neoprene rubber belting one (1) inch thick and six (6) to eight (8) inches wide across the width of the box, bolted to the adjustable frame with at least four (4) inches of free face to provide sufficient flexibility in order to maintain contact with the pavement surface in depressions and compress sufficiently to pass over high spots. The front and sides of the spreader box shall be lined on the inside with heavy rubber belting secured by bolts and a heavy metal strip. The belting material shall be slotted at the holes so it can be raised or lowered to make contact with the pavement surface to prevent the slurry from escaping

from the bottom of the sides and front members. The spreader also shall be equipped with a guide wheel mounted on the side to force the box to follow the tow truck in a straight line. The spreader box shall also contain longitudinal or diagonal baffles to distribute the slurry the full length of the squeegee.

3. Miscellaneous Equipment - Long-handled, rubber-faced squeegees shall be constructed and have flexibility to permit uniform spreading of the slurry mixture. Power sweepers, air compressors, sprinkler trucks, distributor, weighing and measuring equipment shall be provided to accurately weigh and measure the ingredients of the mix. Where traffic is not sufficient to properly knead the mix into the cracks, a pneumatic tire roller shall be required to obtain the desired results.
- E. Preparation of Surface - The existing surface shall be thoroughly cleaned of all loose material, dirt, oil drippings, and other matter which may adversely affect proper bond of the slurry seal. Depressions and bumps shall be brought to proper grade and distressed areas shall be patched or otherwise repaired, as directed by the Engineer. When deemed necessary by the Engineer, the surfacing of the existing pavement and all crack faces shall be sprayed with diluted asphalt emulsion at a rate of 0.05 to 0.1 gallons per square yard and all surfaces shall be in a uniformly damp condition.
- F. Application and Spreading Slurry Mixture -
1. Application Rates - The slurry mixture shall be applied at the rate of seven (7) to thirteen (13) pounds/square yard for Type 2 and seventeen (17) to twenty-three (23) pounds/square yard for Type 3. The type to be used will be as listed in the bid or as designated by the Engineer.
  2. Spreading Requirements - The slurry mixture shall be chuted into the moving spreader box at a rate so that there is sufficient slurry in the box to cover the full width of the squeegee blade at all times. In restricted areas when hand spreading is necessary, the mixture shall be poured in a small windrow along one edge of the surface to be covered. The mix shall then be spread by means of a squeegee so as to permit the operator to drag it over the surface along the windrow with the edge of the squeegee at an angle to the direction of travel. Weighted sacks or burlap shall trail behind the spreader box to smooth joints between lanes. When hand spread, the surface shall be given this drag treatment if ridges are developed.
- G. Curing - The slurry seal coat shall be allowed to cure until firm and to a condition that no pick up of the mix will occur before permitting access to traffic or as directed by the Engineer.

- H. Weather Conditions - The slurry mixture shall not be applied if either the pavement surface or the local ambient temperature is 55 degrees Fahrenheit or below and falling, but may be applied when both the pavement and air temperature is 45 degrees Fahrenheit or above and rising. The mixture shall not be applied if high relative humidity prolongs the curing beyond a reasonable time, as determined by the Engineer.
- I. Basis of Payment - The emulsified asphalt slurry coat will be measured by the square yard and paid for at the contract unit price per square yard for the item "Slurry Coat." This price shall be considered full compensation for furnishing, mixing, hauling, and placing all materials, including all labor, equipment, tools, barricades, and other incidentals necessary to complete the work in full compliance with these specifications and in a workmanlike manner.

24.11 Asphalt Carpet Coat. This mixture is designed for the filling of small holes and depressions and for the provision of a wearing surface on asphaltic concrete pavements. The work shall consist of furnishing all plant, labor, equipment, placing of material, and performing all operations in connection with the application of asphalt carpet coat on existing asphaltic concrete pavement and in strict accordance with applicable sections of State of Nebraska specifications.

A. Composition of Mixture - This mineral aggregate shall conform to State of Nebraska specifications, within the following recommended limits:

<u>Material</u>	<u>Percent of Mineral Aggregate</u>	<u>Percent of Total Mix</u>
Limestone Screenings	40 - 45	
Crushed Gravel	40 - 45	
Fine Sand	10 - 20	
Asphalt Cement (80-100 pen.)		6 - 6.8

B. Properties and Tests - The mixtures shall have test properties conforming to State of Nebraska specifications.

C. Basis of Payment - The asphalt carpet coat shall be measured by weight in tons actually constructed and accepted by the Engineer and shall be paid for at the contract unit price per ton for the item "Asphalt Carpet Coat." The asphaltic mixture shall be weighed, after mixing, on scales accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, including necessary tack coat and asphaltic cement. All equipment, scales, cleaning, sweeping, handling, mixing, placing, shaping, compacting, rolling, finishing, and incidentals necessary to complete the work required by these specifications.

24.12 Asphaltic Concrete Surface Course and Base Course. The asphaltic concrete surface course and base course shall conform to the most current State of Nebraska, Department of Roads, Standard Specifications for Highway Construction.

24.13 Pavement Removal. This work shall consist of the removal of existing pavement, surface courses, cushion courses, if any, driveways, sidewalks, curb or combination curb and gutter, and concrete headers. The work shall also include disposal of the resultant materials as provided in these specifications.

A. Removal and Disposal -

1. Breaking Concrete - The Contractor shall exercise due care in breaking concrete to be removed and shall be responsible for any damage caused by such breaking and removal.
2. Removal Limits - In removing existing pavement, sidewalks, driveways, and similar items where a portion of such item is to be left in place, the removal shall be extended to the limits shown on the plans or to an existing joint as directed by the Engineer. In the event the Engineer does not consider it practical to extend the limit of removal to an existing joint, the line of removal shall be scored with a concrete saw to a depth of at least two (2) inches prior to breaking out the concrete. Connecting edges shall be cut and chipped to true vertical faces.
3. Backfilling - All trenches, holes, and pits resulting from the removal of any of the items listed herein shall be backfilled if and as required with suitable material in accordance with the requirements of sections in these specifications in Division VI entitled Backfilling and Backfilling Under Pavement.
4. Disposal - Except as otherwise provided or noted on the plans, all materials obtained in the removal of items listed herein shall become the property of the Contractor and shall be disposed of by him in any manner acceptable to the Engineer.

B. Classification -

1. Remove Existing Pavement - This item shall consist of the removal and disposal of plain or reinforced concrete, brick, stone, block, or asphalt surfaced pavements and shall include base, surface, and cushion courses, if any, regardless of the material or materials encountered.
2. Remove Surface Course - This item shall consist of removing and disposing of asphaltic surfacing from concrete or crushed rock bases or from previously resurfaced brick or cobblestone surfaces, except asphaltic surfacing as defined in the following paragraph and the removal of brick or cobblestone surfacing, including cushion courses, if any.
4. Remove Asphalt Mat - This item shall consist of the removal and disposal of roadway surfacing of any one or any combination of the following:

- a. Gravel, crushed rock, cinder, or earth surfaced roadways which have acquired an asphaltic character through repeated dust palliative treatments with bituminous materials.
- b. Armor coated gravel or rock bases.
- c. Asphalt pavements of a temporary nature which may be similar to plant mix, hot or cold laid, or road mix asphaltic surfacing applied to previously existing gravel or rock surfacings.

The work involved herein shall be considered incidental to grading as set forth in the Standard Specifications, unless there is a contract unit price for this work.

4. Remove Driveway - This item shall consist of the removal and disposal of plain or reinforced concrete, brick, stone, block, or asphalt paved driveways. Removal of crushed rock, gravel, rubble, or cinder surfaced driveways will be considered incidental and will not be paid for separately.
5. Remove Curb - This item shall consist of the removal and disposal of stone or concrete separate curb or combination curb and gutter. Combination curb and gutter is defined as any integral concrete curb and gutter section whose combined total width is less than three (3) feet and which was not constructed integrally with an adjoining base or pavement. If the combined total width is three (3) feet or more, it shall be classified as pavement with integral curb. Integral curb will not be measured separately for payment but shall be included in the number of square yards of pavement or driveway, whichever is applicable, and no additional compensation shall be allowed except as provided in the following paragraph.
6. Remove Integral Curb - This item shall consist of removing and disposing of integral curb when it is desired to widen or provide new connections to an existing pavement or driveway with integral curb. It shall also include scoring the pavement or driveway to a depth of two (2) inches with a concrete saw parallel to and not less than one (1) foot nor more than three (3) feet from the back of curb as shown on the plans or directed by the Engineer. Connecting edges shall be cut and chipped to true vertical faces.
7. Remove Concrete Headers - This item shall consist of removing and disposing of concrete headers previously placed at the open ends of existing pavement.

C. Measurement and Payment -

1. General - When the contract does not include a separate item and unit price for removing any of the removal items listed herein, the Contractor will be paid for such items on the basis of the Engineer's Estimate of unit prices. Otherwise, such item or items shall be measured and paid for as follows:

- a. Removal of Surface Course - Will be measured for payment in square yards of material of whatever thickness actually removed and disposed of and shall be paid for at the contract unit price per square yard for the item "Remove Surface Course, Small Areas" or for the item "Remove Surface Course, Large Areas." Small areas shall consist of individual areas of sixty (60) square yards or less or areas having a lateral dimension of six (6) feet or less. Large areas shall consist of all individual areas which do not conform to the definition of small areas.
  - b. Removal of Existing Pavement - Will be measured in square yards of pavement or base actually removed of whatever thickness encountered and shall be paid for at the contract unit price for the item "Remove Existing Pavement, Small Areas" or for the item "Remove Existing Pavement, Large Areas." Small areas shall consist of individual areas of sixty (60) square yards or less or areas having a lateral dimension of six (6) feet or less. Large areas shall consist of all individual areas which do not conform to the definition of small areas.
  - c. Removal of Driveways - Shall be measured in square yards of driveway actually removed of whatever thickness encountered and shall be paid for at the contract unit price for the item "Remove Driveway."
  - d. Removal of Sidewalks - Shall be measured in square feet of sidewalk actually removed of whatever thickness encountered and shall be paid for at the contract unit price per square foot for the item "Remove Sidewalks."
  - e. Removal of Curbs, Integral Curbs, and Concrete Headers - Shall be measured for payment by length in lineal feet and shall be paid for at the contract unit price per lineal foot for the item "Remove Curb", for the item "Remove Integral Curb", or for the item "Remove Concrete Headers."
2. Compensation Requirement - Payment for the work at the contract unit price in each instance shall be full compensation for removing and disposing of the surplus material; the necessary excavation and backfilling; sawing, cutting, and chipping concrete as required; and for all labor, equipment, tools, materials, and incidentals which may be necessary to complete the work.

24.14 Miscellaneous Removals. This work shall include the removing of existing concrete or masonry steps and retaining walls, culverts, inlet or sewer pipe, manholes, other concrete and masonry structures, and other items of removal called for on the plans or bid forms and the salvaging and disposing of the resulting materials, together with the necessary excavation and backfilling.

A. Removal -

1. Concrete Structure - Concrete or masonry retaining walls and steps and other concrete and masonry structures shall be entirely removed to a depth of at least six (6) inches below subgrade, surface of cuts and slopes, or existing ground surface, whichever is the lower, and to the horizontal limits shown on the plans or as directed by the Engineer. When a portion of an existing retaining wall is to be left in place, the discontinued end of such wall shall be refaced in a manner which will match the original construction as nearly as possible and which, in the opinion of the Engineer, will present a neat and workmanlike appearance.
2. Culverts and Sewer Pipe - Driveway and roadway culverts and inlet and sewer pipe shall be completely removed at each location indicated in the plans or as directed by the Engineer and shall include all sizes up to and including 24 inch diameter regardless of the material or materials of which they are made. For any culvert or sewer pipe over 24 inches in diameter, the size will be indicated in the bid for that particular item of removal.
3. Manholes and Inlets - In removing manholes or inlets, any sewer pipes connecting to them shall be preserved or rebuilt as required when the plans call for extensions to these pipes. When the existing pipe connections are to be abandoned, they shall be plugged with concrete or by any other device satisfactory to the Engineer. Manholes and inlets need not be completely removed, providing they are broken down to at least six (6) inches below subgrade, surface of cuts and slopes or existing ground surface, whichever is the lower. The remainder of the manhole or inlet structure shall then be cleaned of all rubble and debris and backfilled with suitable earth as provided in City Code Section 32.32.

- B. Disposal - All materials resulting from the removal of the items listed herein or indicated in the bid to be removed shall be hauled from the project site and disposed of by the Contractor in a manner satisfactory to the Engineer, except that items deemed salvable by the Engineer shall remain the property of the City, such as culverts in good condition or inlet and manhole castings, and shall be stored on the project site for subsequent removal by the City.

C. Measurement and Payment -

1. Concrete Structures - Removal of concrete and masonry retaining walls and other concrete and masonry structures shall be measured by the cubic yard actually removed and disposed of and shall be paid for at the contract unit price per cubic yard for the item "Remove Concrete and Masonry."

2. Culvert and Sewer Pipe - Removal of culverts and inlet and sewer pipes shall be measured by length in lineal feet actually removed and disposed of and shall be paid for at the contract unit price per lineal foot for the item "Remove Culvert" or for the item "Remove Sewer Pipe" whichever is applicable. For any culvert or pipe over 24 inch diameter, the size of the removal item will be indicated in the bid for that particular item to be removed.
  3. Manholes and Inlets - Removal of manholes and inlets shall be measured by the number of units actually removed and shall be paid for at the contract unit price per each for the item "Abandon Inlet" or for the item "Abandon Manhole" whichever is applicable.
  4. Other items - All other items of removal called for on the plans and in the bid forms will be measured in units as indicated thereon and shall be paid for at the contract price for such items.
  5. Compensation Requirement - In each instance, measurement shall include the total quantity actually removed and accepted by the Engineer and the contract unit price shall be full compensation for removing; disposing of surplus material; all necessary excavation and backfilling; sawing, cutting, and chipping edges; refacing retaining walls; and for all labor, equipment, tools, materials, and all other incidentals necessary to complete the work as shown in the plans and specifications.
- D. Remove and Replace Mail Boxes and Posts - This item shall consist of removing and resetting mail boxes and posts in the locations directed by the Engineer. Any elements of the mail boxes or posts damaged by the Contractor shall be repaired or replaced as directed by the Engineer at the Contractor's expense.
1. Furnishing Posts - When a mail box post is unsuitable for reuse, not due to the Contractor's negligence, the Contractor will furnish and install new posts satisfactory to the Engineer and payment will be made as per contract documents.
  2. Measurement and Payment - Removal and resetting of mail boxes and posts shall be measured as single units actually removed and replaced and shall be paid for at the contract unit price per each for item "Remove and Replace Mail Boxes." This price shall be full compensation for removing and resetting and for all labor, equipment, tools, and incidentals necessary to complete the work required for this item. Single unit shall mean a single post, regardless of the number of mail boxes on that particular post.

24.15 Special Provisions. See Special Provisions for asphaltic construction.

## **SUPERPAVE ASPHALTIC CONCRETE**

Section 1028 in the Standard Specifications is amended to provide that Asphaltic Concrete, Type SPR shall use the 0.5 gradation band.

### **SECTION 1028 - SUPERPAVE ASPHALTIC CONCRETE (J-7-1116)**

Section 1028 in the Standard Specifications is void and superseded by the following:

#### **1028.01 -- Description**

1. a. Superpave Asphaltic Concrete is a Contractor-designed mix.
- b. The Contractor shall be required to define properties using a gyratory compactor that has met the Superpave evaluation test procedures, during mix design and production.
2. Job Mix Formula
  - a. Before production of asphaltic concrete, the Contractor shall submit, in writing, a tentative Job Mix Formula (JMF) on the NDOR Mix Design Submittal Form for verification to the Department.
  - b. The JMF shall be determined from a mix design for each mixture. A volumetric mixture design in accordance with AASHTO R 35 as modified within this specification will be required. However, the mixture for the Superpave specimens and maximum specific gravity mixture shall be aged for two hours at compaction temperature. The mixture shall be prepared using the following:
    - (1) Mixture Conditioning of Hot Mix Asphalt (HMA), AASHTO R 30.
    - (2) Method for Preparing and Determining the Density of Hot Mix Asphalt Specimens by Means of the SHRP Gyratory Compactor, AASHTO T 312.
  - c. The JMF shall identify:
    - (1) The virgin mineral aggregates and pit locations
    - (2) Recycled Asphalt Pavement (RAP) and source locations
    - ~~(3) Hydrated lime~~
    - (4) Mineral filler
    - (5) The percent passing value for each specified sieve for the individual and blended materials

- d. ~~(1) The Contractor shall submit one uncoated, proportioned 22 lb. (10,000 gram) sample of the blended mineral aggregates for consensus properties and specific gravity testing, for all mix types except SPS. Once verified, the Contractor may begin plant production and QC testing with the QA/QC program.~~
- ~~(2) The Contractor has the option of submitting the following; 2 proportioned 22 lb. (10,000 gram) samples of the blended mineral aggregates (which are precoated with hydrated lime, if lime is used) and two one quart (liter) samples of the proposed PG Binder to be used in the mixture to the Department Materials and Research Central Laboratory at least 15 NDR working days before production of asphaltic concrete. If submitted these samples will be used to verify the Contractor's Superpave mix design test results and mix properties.~~
- ~~(3) Submitted with these samples shall be a copy of the Contractor's results for all Superpave mix design tests.~~
- (4) Mix design shall include at a minimum:
- (i) The bulk specific gravity (Gsb), which shall be 2.585, for data purposes and as information only, for all mixes.
  - (ii) The target binder content. The binder content will be determined by ignition oven results. A correction factor of 0.3% will be added to the ignition oven results for mixes containing hydrated lime, and an adjustment factor of 0.1% will be added to the ignition oven results for mixes containing WMA.
  - (iii) The supplier and grade of PG Binder.
  - (iv) The maximum specific gravity of the combined mixture (Rice).
  - (v) The bulk specific gravity (Gmb) and air voids at N initial (Nini), N design (Ndes) and N maximum (Nmax) of the gyratory compacted specimens.
  - (vi) Voids in the Mineral Aggregate (VMA) and Voids Filled with Asphalt (VFA) at Ndes.
  - (vii) Fine Aggregate Angularity (FAA) and specific gravity, Coarse Aggregate Angularity (CAA), Flat and Elongated Particles and Sand Equivalent of the aggregate blend.
  - (viii) Location description and/or legal descriptions and producers of materials used in the mix.

- (ix) Dust to Binder Ratio.
- (x) JMF compaction temperatures from NDOR Gyratory Temperature Table (See Table 1028.11).
- ~~(xi) The hydrated lime content.~~

3. Quality Control Program:

- a. The Contractor shall establish, provide, and maintain an effective Quality Control (QC) Program. The QC Program shall detail the methods and procedures that will be taken to assure that all materials and completed construction conforms to all contract requirements.
- b. Although guidelines are established and certain minimum requirements are specified herein and elsewhere in the contract, the Contractor shall assume full responsibility for placing a pavement course that meets the target field values.
- c. The Contractor shall establish a necessary level of control that will:
  - (1) Adequately provide for the production of acceptable quality materials.
  - (2) Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.
- ~~d. (1) The Contractor shall develop and submit a copy of their QC Program to the Department. A copy of the QC Program shall be kept on file in the QC lab trailer. This Program shall be updated as needed and submitted annually for review.~~
  - ~~(2) The Contractor shall not begin any construction or production of materials without an approved QC Program.~~
- ~~e. The QC Program shall address, as a minimum, the following items:~~
  - ~~(1) QC organization chart.~~
  - ~~(2) Inspection requirements.~~
    - ~~(i) Equipment.~~
    - ~~(ii) Asphalt concrete production.~~
    - ~~(iii) Asphalt concrete placement.~~
  - ~~(3) QC testing plan.~~
  - ~~(4) Documentation of QC activities.~~

- ~~(5) Requirements for corrective action when QC or acceptance criteria are not met.~~
- ~~(6) Any additional elements deemed necessary.~~
- ~~(7) A list, with the name and manufacturers model number, for all test equipment used during laboratory testing.~~
- ~~(8) A description of maintenance and calibration procedures, including the frequency that the procedures are performed.~~

f. The QC organization chart shall consist of the following personnel:

~~(1) A Program Administrator:~~

- ~~(i) The Program Administrator shall be a full-time employee of the Contractor or a Subcontractor (Consultant) hired by the Contractor.~~
- ~~(ii) The Program Administrator shall have a minimum of 5 years' experience in highway construction.~~
- ~~(iii) The Program Administrator need not be on the job site at all times but shall have full authority to institute any and all actions necessary for the successful implementation of the QC Program.~~
- ~~(iv) The Program Administrator's qualifications and training shall be described in the QC Program.~~

~~(2) Quality Control Technicians:~~

- ~~(i) The quality control technicians shall report directly to the Program Administrator and shall perform all sampling and quality control tests as required by the contract.~~
- ~~(ii) The QC technicians shall be certified every 5 years by the Department Materials and Research Division.~~
- ~~(iii) Certification at an equivalent level by a state or nationally recognized organization may be acceptable.~~
- ~~(iv) The QC technician's credentials and training records shall be submitted to the Department.~~
- ~~(v) The Contractor may have a non-certified technician working under the direct supervision of a certified technician for no more than one construction season.~~

- g. (1) Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the work.
- (2) QC test results and periodic inspections shall be used to ensure the mix quality and to adjust and control mix proportioning.

4. Contractor's Lab Equipment:

- a. The Contractor shall calibrate and correlate the testing equipment according to the procedures prescribed for the individual tests and conduct tests in conformance with specified testing procedures.
- b. The Contractor shall have the following equipment (or approved equal) ~~at or near the project location:~~

~~(1) A gyratory compactor and molds meeting AASHTO criteria.~~

(2) An Asphalt Content Ignition Oven meeting AASHTO criteria.

(3) Rice equipment specified in AASHTO T 209, procedure 9.5.1, Weighing in Water. The thermometer being used to measure water temperature will be as specified in T 209.

(4) FAA equipment specified in AASHTO T 304.

(5) To test density of compacted asphaltic concrete, a minimum 6000 gm balance, 0.1 gm resolution, with under body connect and water container large enough to conveniently place specimen in the basket and completely submerge the basket and specimen without touching the sides or bottom is required.

~~(6) QC Laboratory which contain the following:~~

~~Air conditioner.~~

~~Dedicated phone.~~

~~FAX machine or email.~~

~~Photocopy machine.~~

~~Sample storage.~~

~~Work table.~~

~~Bulletin board.~~

~~Running water.~~

~~Desk and chair.~~

~~Separate power supply.~~

~~Incidental spoons, trowels, pans, pails.~~

(7) Diamond saw for cutting cores.

- (8) Diamond core drill minimum 3 inch (75 mm).
- (9) Oven, 347°F (175°C) minimum, sensitive plus 5°F (plus 2°C).
- (10) USA Standard Series Sieves for coarse and fine aggregate with appropriate shakers [12 inch (300 mm) recommended].
- ~~(11) Personal Computer capable of running the latest version of Department Superpave software, creating an electronic copy of the data, and printing to a Color Printer.~~

5. QC Testing Plan:

- a. ~~The testing plan shall provide that the samples will be collected in accordance with the Department statistically based procedure of random sampling.~~
- b. The Contractor may add any tests necessary to adequately control production.
- ~~c. All QC test results shall be reported on the latest version of the Department's provided Superpave software by the Contractor with a copy provided to the Engineer within 1 week after the tests are complete. Daily review by the Engineer shall be allowed. At the completion of the asphalt production, the Contractor shall submit to the Department a final copy of the Superpave test results on electronic recording media (CD, e-mail, flash drive, etc.).~~
- ~~d. Corrective Action Requirements:~~
  - ~~(1) The Contractor shall establish and utilize QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.~~
  - ~~(2) The Contractor's QC Program shall detail how the results of QC inspections and tests will be used to determine the need for corrective action.~~
  - ~~(3) (i) A clear set of rules to determine when a process is out of control and the type of correction to be taken to regain process control will be provided.~~
    - ~~(ii) As a minimum, the plan shall address the corrective actions that will be taken when measurements of the following items or conditions relating to the mixture approach the specification limits:~~
      - ~~(I) Plant produced mix gradations at laydown (See gradation tolerances).~~
      - ~~(II) Binder content.~~

~~(III) — Air voids.~~

~~(IV) — VMA (mix design only).~~

~~(V) — VFA (mix design only).~~

~~(VI) — FAA — AASHTO T 304.  
— CAA — ASTM D 5821.~~

~~(VII) — Dust to Binder Ratio.~~

~~(VIII) — Density.~~

~~(IX) — Contaminates.~~

~~(iii) — Corrective actions that will be taken when the following conditions occur:~~

~~(I) — Rutting.~~

~~(II) — Segregation.~~

~~(III) — Surface voids.~~

~~(IV) — Tearing.~~

~~(V) — Irregular surface.~~

~~(VI) — Low Density.~~

## **1028.02 -- Material Characteristics**

1. The type of PG Binder will be shown in the contract.
2. Recycled Asphalt Pavement:
  - a. The Contractor may submit to the State a proposal to supplement the virgin aggregates of the asphaltic concrete mix with a Contractor's specified percentage of Recycled Asphalt Pavement (RAP). The Contractor is responsible for investigating and maintaining the quality and verifying the quantity of the RAP material.
  - b. In recycled asphaltic concrete mixtures, the allowable percent of RAP will be as shown in Table 1028.01.

**Table 1028.01**

Asphaltic Concrete Type	Percent, RAP	
	Minimum	Maximum
SPS	0	65
SPR	0	55
SPH	0	35

3. Aggregates:
  - a. Aggregates for use in superpave asphaltic concrete shall be tested on an individual basis.
  - b. With the exception of Asphaltic Concrete Type SPS the blended mineral aggregate shall not contain more than 80% limestone on the final surface lift of asphaltic concrete.
  - c. Asphaltic Concrete Type SPR may contain a total maximum of 10% of the virgin material that is composed of natural, uncrushed aggregate by manmade methods commonly known as but not limited to: 47B gravel, 2A gravel, gravel surfacing, sluice sand, blow sand, waste sand, fill sand, road gravel, roofing gravel, hot mix sand or gravel, coarse sand, fine sand, plaster sand, masonry sand, pit run sand or gravel. For clarification on any proposed gravel, contact the Department Flexible Pavements Engineer.
  - d. Chat or coal sand will not be allowed in any mix.
  - e. Crushed rock material for use in asphaltic concrete, 1/4 inch (6.35 mm) and smaller, screenings and manufactured sand shall have a Sodium Sulfate loss of not more than 12% by mass at the end of 5 cycles. Sampling size and frequency shall adhere to the current Department Materials Sampling Guide.
  - f. Quartzite and granite shall conform to the requirements of Subsection 1033.02, Paragraph 4, a.(8). Sampling size and frequency shall adhere to the current Department Materials Sampling Guide.
  - g. Crushed rock (Limestone) and Dolomite shall conform to the requirements of Paragraph 4.a. (4), (5) and (6). of Subsection 1033.02 of the Standard Specifications. Sampling size and frequency shall adhere to the current Department Materials Sampling Guide.
  - h. Soundness tests shall not be required for fine sand.
  - i. Once the satisfactory quality of aggregates from a source has been established, sufficient additional soundness tests will be performed to insure the continued satisfactory quality of the material, as determined by the Materials Sampling Guide

- j. Aggregate consensus properties may be performed on material prior to the application of hydrated lime.
- k. The coarse aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type as shown in Table 1028.02. If the coarse portion of the blend is all ledge rock the CAA tests may be waived.

**Table 1028.02  
Coarse Aggregate Angularity  
(ASTM D 5821)**

<b>Asphaltic Concrete Type</b>	<b>CAA (minimum)</b>
SPS	--
SPR	83
SPH	95/90*

\* Denotes two faced crushed requirements

- l. The fine aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type as shown in Table 1028.03.
- m. The specific gravity for calculation of the Fine Aggregate Angularity (FAA) shall be determined on a washed combined aggregate sample of the material passing the No. 8 (2.36 mm) sieve and retained on the No. 100 (150 µm) sieve. The Contractor will determine the specific gravity to be used in the calculation of FAA mixture design value(s) and, if verified by the Department Aggregate Laboratory, this same value can be used throughout production. The verification value determined by the Department Aggregate Laboratory will be on a combined aggregate sample supplied by the Contractor that is representative of the material proposed or being used during production. The specific gravity to be used throughout production to calculate FAA values will be the Contractor's verified value or the Department determined value (whenever verification is not made) and will be noted on the Mix Design. Changes in aggregate percentages during production may require determination of a revised specific gravity for FAA.

**Table 1028.03  
 Fine Aggregate Angularity  
 (AASHTO T304 Method A)**

<b>Asphaltic Concrete Type</b>	<b>FAA (minimum)</b>
SPS	--
SPR	43.0
SPH	45.0

- n. The coarse aggregate shall not contain flat and elongated particles exceeding the maximum value for the appropriate asphaltic concrete type category shown in these provisions according to Table 1028.04.

**Table 1028.04  
 Flat and Elongated Particles\*  
 (ASTM D 4791)**

<b>Asphaltic Concrete Type</b>	<b>Percent, Maximum</b>
SPS	25
SPR	10
SPH	10

\*Criterion based on a 5:1 maximum to minimum ratio.

- o. The sand equivalent of the blended aggregate material from the fine and coarse aggregates shall meet or exceed the minimum values for the appropriate asphaltic concrete type shown in these provisions according to Table 1028.05.

**Table 1028.05  
 Sand Equivalent Criteria  
 (AASHTO T 176)**

<b>Asphaltic Concrete Type</b>	<b>Sand Equivalent, Minimum</b>
SPS	30
SPR	45
SPH	45

- p. Dust to binder ratio is the ratio of the percentage by weight of aggregate finer than the No. 200 (75 µm) sieve to the asphalt content expressed as a percent by weight of total mix. The dust to binder ratio shall be within 0.70 and 1.70.
- q. The blended aggregate shall conform to the gradation requirements specified in Table 1028.06 and Table 1028.07 for the appropriate nominal size.

**Table 1028.06**  
**Gradation Control Points for 0.75 Inch (19 mm) and 0.5 Inch (12.5 mm) Nominal Size**

English Sieve (Metric)	0.75 Inch (19 mm) Control Points (percent passing)		0.5 Inch (12.5 mm) Control Points (percent passing)	
	Minimum	Maximum	Minimum	Maximum
1 inch (25 mm)	100.0			
3/4 inch (19 mm)	90.0	100.0	100.0	
1/2 inch (12.5 mm)		90.0	90.0	100.0
3/8 inch (9.5 mm)				90.0
No. 8 (2.36 mm)	23.0	49.0	28.0	58.0
No. 16 (1.18 mm)				
No. 30 (600 μm)				
No. 50 (300 μm)				
No. 200 (75 μm)	2.0	8.0	2.0	10.0

**Table 1028.07**  
**Gradation Control Points for 0.375 Inch (9.5 mm) Nominal Size and SPR**

English Sieve (Metric)	0.375 Inch (9.5 mm) Control Points (percent passing)		SPR Control Points (percent passing)		SPR (Fine) Control Points (percent passing)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
3/4 inch (19 mm)			98.0	100.0		
1/2 inch (12.5 mm)	100.0					
3/8 inch (9.5 mm)	90.0	100.0	81.0	89.0	81.0	96.0
No. 4 (4.75 mm)		90.0				
No. 8 (2.36 mm)	32.0	67.0	46.0	56.0	46.0	56.0
No. 16 (1.18 mm)						
No. 30 (600 μm)						
No. 50 (300 μm)			12.0	21.0	12.0	21.0
No. 200 (75 μm)	2.0	10.0	4.0	9.0	4.0	9.0

- r. The combined mineral aggregate for Asphaltic Concrete, Type SPS, shall be an aggregate or a combination of aggregates, and mineral filler if needed, that conforms to the gradation requirements specified in Table 1028.08.

**Table 1028.08  
 Gradation Control Points for Type SPS**

English Sieve (Metric)	Control Points (percent passing)	
	Minimum	Maximum
1 inch (25 mm)	100.0	
¾ inch (19 mm)	94.0	100.0
½ inch (12.5 mm)	81.0	100.0
No. 4 (4.75 mm)	70.0	90.0
No. 8 (2.36 mm)	42.0	70.0
No. 16 (1.18 mm)	29.0	43.0
No. 30 (600 µm)	19.0	34.0
No. 50 (300 µm)	11.0	20.0
No. 200 (75 µm)	2.0	10.0

- s. Mineral filler shall consist of pulverized soil, pulverized crushed rock, broken stone, gravel, sand-gravel, sand or a mixture of these materials that conforms to the requirements in Table 1028.09.

**Table 1028.09  
 Mineral Filler for Type SPS**

	Min.	Max.
Total Percent Passing the No. 50 (300 µm) Sieve	95	100
Total Percent Passing the No. 200 (75 µm) Sieve	80	100
Plasticity Index (material passing the No. 200 (75 µm) Sieve, except soil)	0	3
Plasticity Index for Soil	0	6

**1028.03 -- Acceptance Requirements**

1. Mix Criteria:
  - a. The target value for the air voids of the SPH Asphaltic Concrete shall be 4% (±1%) at the Ndes number of gyrations. For Type SPS Asphaltic Concrete the air voids at Ndes shall be a minimum of 1.5% with a maximum of 5.0%. For Type SPR Asphaltic Concrete the air voids shall be 3% (±1%) at the Ndes number of gyrations.
  - b. The design criteria for each mixture shall be determined from Tables 1028.10, 1028.11, and 1028.12.

**Table 1028.10**  
**Gyratory Compaction Effort**  
**(Average Design High Air Temperature <39 degrees C)**

Asphaltic Concrete Type	Nini	Ndes	Nmax
SPS	6	40	62
SPR	7	65	100
SPH	8	95	150

**Table 1028.11**  
**Gyratory Compaction Temperatures**

Mix Type	% RAP	Compaction Temp °F
SPS	0-25	270 ± 5
	26-65	280 ± 5
SPR	0-35	280 ± 5
	36-55	290 ± 5
SPH	0-35	300 ± 5

**Table 1028.12**  
**Minimum Binder Content**

Mix Type (Metric)	Minimum Binder Content, Percent
SPS	4.8
<b>SPR</b>	<b>5.0 5.2</b>
3/8 inch (9.5 mm)	5.5
1/2 inch (12.5 mm)	5.1
3/4 inch (19 mm)	5.0

- c. ~~During production of Lot #1 and randomly selected lots thereafter, the Contractor shall provide to the Department 6 properly prepared gyratory samples for AASHTO T 283 testing for all mixtures except Asphaltic Concrete Type SPS. Superpave mixtures shall contain 1.25% hydrated lime as specified in the Special Provision "Hydrated Lime for Asphaltic Mixtures". Each Superpave mixture shall be tested for moisture sensitivity in accordance with AASHTO T 283. The 6 inch (150 mm) specimens shall be compacted in accordance with AASHTO T 312 to 7% (± 0.5%) air voids at 95 mm in height and evaluated to determine the Tensile Strength Ratio (TSR).~~
- d. ~~During production of Lot #1, the Contractor shall provide to the Department two 75mm gyratory puck samples at 4.0% voids (± 0.5%) for APA testing for all mixtures except Asphaltic Concrete Type SPS.~~

2. The Contractor shall make Mix adjustments when:
  - a. The mix does not meet the current approved JMF or any other requirements of the contract.
  - b. Surface voids create a surface or texture that does not meet the criteria of Sections 502 and 503 in these Standard Specifications.
  - c. Rutting occurs.
  
3. The Contractor shall inform the Engineer when changes in mixture properties or materials used occur for any reason. Changes such as, but not limited to, types or sources of aggregates or changes in grades, sources, properties or modification procedures (if modified) of PG Binders. The Department may require a new job mix formula, mix design and moisture sensitivity test. The new proposed job mix formula shall be in accordance with the requirements as stated above.
  
4. Mix adjustments at the plant are authorized within the limits shown in Table 1028.13 as follows:
  - a. The adjustment must produce a mix with the percent air voids and all other properties as stated in these specifications.
  - b. All adjustments must be reported to the Engineer.
  - c. The adjustment values in Table 1028.13 will be the tolerances allowed for adjustments from the Department verified mix design "Combined Gradation" target values which resulted from production or mix design adjustments, but cannot deviate from Superpave gradation criteria. Mix adjustments for individual aggregates, including RAP, greater than 25% of the original verified mix design proportion or greater than 5% change in the original verified mix design percentage, whichever is greater, may require the Contractor to submit a new mix design, as determined by the Engineer. The Contractor is responsible for requesting new mix design targets as they approach these tolerances, failure to do so may result in a suspension of operations until a new mix design is approved.

**Table 1028.13**

<b>Aggregate Adjustments</b>	
<b>Sieve Size</b>	<b>Adjustments</b>
1 inch (25 mm), 3/4 inch (19 mm), 1/2 inch (12.5 mm), 3/8 inch (9.5 mm), No. 4 (4.75 mm)	± 6%
No. 8 (2.36 mm), No. 16 (1.18 mm), No. 30 (600 µm), No. 50 (300 µm)	± 5%
No. 200 (75 µm)	± 2%

5. Sampling and Testing:

- a. The Contractor shall take samples at frequencies identified by the Engineer, according to the Department statistically based procedure. The samples shall be approximately 75 lbs. (34 kg) and split according to AASHTO T-248 to create a companion sample. This sample splitting can be either at: 1) the sampling location, with the Department taking custody of their sample at that time or 2) after being transported to the test facility in an insulated container, with the Department taking custody of their sample at that time as determined by the Engineer. The details of sampling, location, splitting etc. shall be determined at the pre-construction conference.
- b. ~~All samples transported to the test facility and companion samples within the Lot shall be identified by attaching or faxing the lab calculation sheet from the latest version of the superpave software, stored, and retained by the Contractor until the Department has completed the verification testing process. Transporting of all samples will be under the observation of Department.~~
- c. ~~(1) The sample shall be taken from the roadway, behind the paver before compaction or from the windrow. For SPS mixes, the Contractor has the option to obtain the samples directly at the plant.~~
  - (2) At least one QC sample shall be tested for every 400 tons of plant produced mix.
    - (i) If, at the completion of the project, the final lot consists of less than 2,000 tons of asphaltic concrete, 1 sample for each 400 tons or fraction thereof, shall be taken and tested.
  - (3) Additional sampling and testing for the Contractor's information and quality control may be performed at the Contractor's discretion. Any additional testing will not be used in pay factor determination.
  - (4) (i) When cold feed samples are being taken, the acquisition shall be timed such that the material in the sample represents, as close as possible, the same material in the sample taken behind the paver. ~~If cold feeds are sampled and tested by Contractor, a split of that sample must be submitted with the hot mix subplot sample. The Contractor will be notified what subplot (a minimum of 1 subplot per lot) sample must be tested for FAA and CAA from the blended cold feed material according to the Department random sampling schedule.~~ All other FAA and CAA subplot samples may be taken from the randomly selected portion of the blended cold feed material or obtained from the random samples taken behind the paver. Samples shall be taken under the observation of

Department and split according to AASHTO T-248, with the Department taking custody of their sample at that time.

- (ii) For projects using RAP material the FAA shall be established as follows: a RAP sample will be processed through an ignition oven and then combined with the proportioned amount of virgin aggregate defined by the mix design and then proceeding with FAA and CAA testing.
- d. The sample shall be compacted immediately while still hot (additional heating may be required to raise the temperature of the sample to compaction temperature).
- e. Each production sample shall be tested as follows:
  - (1) Bulk Specific Gravity (Gmb) shall be determined for each specimen in accordance with AASHTO T 166 Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Specimens. One specimen shall be compacted for each production sample.
  - (2) One Theoretical Maximum Specific Gravity (Gmm) test for each production sample of uncompacted mixture shall be determined in accordance with AASTHO T 209 procedure 9.5.1. Weight in water - Maximum Specific Gravity of Bituminous Paving Mixtures.
  - (3)
    - (i) The Blended Aggregate Bulk Specific Gravity (Gsb) shall be 2.585 for information only for all mixes.
    - (ii) FAA - AASHTO T 304 Method A. The pour time of the test sample into the funnel shall be completed in 5±1 seconds.
    - (iii) CAA - ASTM 5821. For SPR mixes, CAA testing and results are only required on the cold feed verification test for the lot.
  - (4) The laboratory air voids shall be determined in accordance with the following:

**Table 1028.14**

$Gmb(corr)@Nany = Gmb(meas)@Nmax \times (height@Nmax \div height@Nany)$ $\%Gmm(corr)@Nany = 100 \times (Gmb(corr)@Nany \div Gmm(meas))$ $\% Air Voids@Nany = 100 - \%Gmm(corr)@Nany$ $VMA@Ndes = 100 - (Gmb(corr)@Ndes \times Ps \div Gsb)$ $VFA@Ndes = 100 \times ((VMA@Ndes - \% Air Voids@Ndes) \div VMA@Ndes)$ $Measured = (meas)$ $Corrected = (corr)$
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- (5)
  - (i) The percent of PG Binder shall be determined for each QC test. The percent of PG Binder will be computed by ignition oven results. A correction factor of 0.3% will be

added to the ignition oven results for mixes containing hydrated lime.

(ii) The gradations shall be determined for each QC test using AASHTO T 30.

(6) ~~Except as noted in this Subsection, all sampling and testing shall be done as prescribed in the Department Materials Sampling Guide and Standard Method of Tests.~~

f. Testing Documentation:

(1) ~~All test results and calculations shall be recorded and documented on data sheets using the latest version of Department provided "Superpave" software. A copy containing complete project documentation will be provided to the Department at the completion of asphalt production.~~

g. Superpave Software:

(1) ~~QC charts from the software shall be made available for review by the Engineer at any time.~~

(2) ~~As a minimum, the following values shall be reported on Department provided software:~~

(i) ~~Laboratory Gyratory density.~~

(ii) ~~Ignition oven or cold feed aggregate gradations for all Superpave sieves will be reported.~~

(iii) ~~PG Binder content shall be plotted to the nearest 0.01% by ignition oven results in accordance with AASHTO T 308.~~

(iv) ~~The theoretical maximum specific gravity (Rice) to the nearest 0.001% will be reported.~~

(v) ~~Laboratory Gyratory air voids at Ndes shall be plotted to nearest 0.1%. Laboratory Gyratory air voids, at Nini, Ndes and Nmax shall be reported to nearest 0.1%.~~

(vi) ~~FAA and CAA of the asphaltic concrete for both cold feed and ignition oven samples will be reported to the nearest 0.1% for FAA and 1% for CAA. A minimum of one subplot FAA and CAA cold feed sample per lot will be tested and recorded on Department provided software.~~

(vii) ~~VMA content shall be plotted to nearest 0.1% and VFA shall be reported to the nearest 0.1%.~~

(viii) ~~Dust to Binder ratio to the nearest 0.01 will be reported.~~

6. Verification Sampling and Testing:

- a. The Department will select and test at random one of the subplot samples within a Lot for verification and report results.
- b. The results of Contractor QC testing will be verified by the Department's verification tests. Any samples outside of the tolerances in Table 1028.15 and 1028.16 will result in an Independent Assurance (IA) review of testing and may result in the Department test results being applied.
  - (1) ~~On any given Lot, if the results of Air Void verification testing and its companion QC testing are within 1.0% air voids, the Air Void verification for the entire Lot is complete and the Contractor test results will be used to determine the pay factors. If the Air Void verification test results and the companion QC test results are outside the above tolerance, the results from the verification test will be used to determine the pay factor for that subplot. Any or all of the remaining four Department subplot samples may be tested and the Department subplot test results may be applied to the respective sublots and the resulting pay factors will apply.~~
  - (2) ~~On any given Lot, if the results of the FAA verification testing and its companion QC testing are within 0.5 percent, the FAA verification for the entire Lot is complete and the Contractor test results will be used to determine the pay factor. If the FAA verification test results and the companion QC test results are outside the above tolerance, the results from the verification test will be used to determine the pay factor for that subplot. Any or all of the remaining four Department subplot samples may be tested and the Department subplot test results may be applied to the respective sublots and the resulting pay factors will apply.~~
- c. When verification tests are within testing tolerance but results show a consistent pattern of deviation from the QC results, the Engineer may cease production and/or request additional verification testing or initiate a complete IA review.

**Table 1028.15  
 Asphaltic Concrete Testing Tolerances**

<b>Test</b>	<b>Tolerance</b>
Asphalt Content by Ignition Oven	0.5%
Gyratory Density	0.020
Maximum Specific Gravity	0.015
Bulk Dry Specific Gravity (Gsb)	0.020
FAA	0.5%
CAA	10%
Field Core Density	0.020
Air Voids	1.0%

**Table 1028.16  
Blended Aggregate Gradation  
Testing Tolerances**

<b>Sieve Size</b>	<b>Tolerance</b>
3/4 inch (19 mm), 1/2 inch (12.5 mm), 3/8 inch (9.5 mm), No. 4 (12.5 mm), No. 8 (2.36 mm)	5%
No. 16 (1.18 mm), No. 30 (600 µm), No. 50 (300 µm)	4%
No. 200 (75 µm)	2%

- d. Independent Assurance (IA) Review of Testing:
- (1) The Contractor shall allow the Department personnel access to their laboratory to conduct IA review of technician testing procedures and apparatus. Any deficiencies discovered in testing procedures will be reported by the department and corrected by the Contractor.
  - (2) During IA review, the Department personnel and the Contractor will split a sample for the purpose of IA testing. The samples selected will be tested in the Department Branch Laboratory. Any IA test results found to be outside of defined testing tolerances above will be reported. The Contractor shall verify the testing apparatus and make corrections if the apparatus is out of tolerance.
  - (3) See Section 28 of the Materials Sample Guide for more information on IA testing.
- e. If the project personnel and the Contractor cannot reach agreement on the accuracy of the test results, the Department will be asked to resolve the dispute, which will be final. It is the Contractor's responsibility to obtain a large enough sample size for any referee testing (a total sample size of 6000 grams, to be retained by the Department after splitting, is recommended for FAA testing). All dispute resolutions will be in accordance with the Quality Assurance Program requirements in the NDOR Materials Sampling Guide.

7. Production Tolerances, Acceptance, and Pay Factors

**Table 1028.17  
 Production Tolerances\***

<b>Test</b>	<b>Allowable Deviation from Specification</b>
<i>Dust to Asphalt Ratio</i>	None
<i>Coarse Aggregate Angularity</i>	- 5% below Min.
<i>Fine Aggregate Angularity for SPR Only</i>	- 0.2% below Min. for cold feed - 0.5% below Min. for ignition oven
<i>Fine Aggregate Angularity for all other mixes</i>	- 0.5% below Min. for cold feed - 1.0% below Min. for ignition oven
Minimum Binder Content	None

\* These tolerances are applied to the mix design specification values, not the submitted mix design targets.

- a. The Contractor shall notify the Engineer whenever a test result approaches the Specification limits.
- b. When any single test result for FAA testing falls outside the allowable production tolerances in Table 1028.17, the material represented by this test will be accepted with a 20% penalty or rejected, as determined by the Engineer. For all other tests, when any single test result, on the same mix property, from two consecutive QC samples fall outside the allowable production tolerances in Table 1028.17, the material represented by these tests will be accepted with a 20% penalty or rejected, as determined by the Engineer.
- c. The Contractor shall assume the responsibility to cease operations when specifications are not being met.
- d. Acceptance and pay factors for Asphaltic Concrete Type SPS will be based on compacted in place average density and joint density.
- e. For each subplot of Asphaltic Concrete Type SPS, SPR and SPH, the asphaltic concrete unit price is a product of all applicable pay factors for the item "Asphaltic Concrete, Type \_\_\_\_". Included in a subplot, following approval of the control strips, may be any roadway Asphaltic Concrete Type SPS, SPR or SPH which is produced and approved by the Engineer and including material used for Patching, State Maintenance Patching, and Asphalt for Intersections and Driveways on project shall be eligible for inclusion in subplot(s) tonnage pay factor determination using the roadway Asphaltic Concrete Type \_\_\_\_\_ unit price. When a control strip is not constructed, the pay factor for the running average of four air voids shall be fixed at 1.0 for the first three asphaltic concrete sublots.

- (1) When there is a production tolerance pay factor penalty as stated in Paragraph 7.b. subsection 1028.03 this penalty percentage will be entered in the Superpave Asphalt Pay Factor Summary under production specifications for each subplot affected. These individual pay factors will then be multiplied by each other to determine a total pay factor for each subplot.
- f. The pay factors for the single test air voids and moving average of four air voids pay factors will be determined in accordance with Table 1028.18.

**Table 1028.18**  
**Acceptance Schedule**  
**Air Voids –  $N_{des}$**

Air voids test results for Asphaltic Concrete Type SPR	Air voids test results for SPH Asphaltic Concrete	Pay Factor	
		Moving average of four	Single test
Less than 0.5%	Less than 1.5%	50% or Reject	50% or Reject
0.5% to 0.9%	1.5% to 1.9%	50% or Reject	50%
1.0% to 1.4%	2.0% to 2.4%	50% or Reject	95%
1.5% to 1.9%	2.5% to 2.9%	90%	95%
2.0% to 2.4%	3.0% to 3.4%	100%	100%
2.5% to 3.5%	3.5% to 4.5%	102%	104%
3.6% to 4.0%	4.6% to 5.0%	100%	100%
4.1% to 4.5%	5.1% to 5.5%	95%	95%
4.6% to 5.0%	5.6% to 6.0%	90%	95%
5.1% to 5.5%	6.1% to 6.5%	50% or Reject	90%
5.6% to 6.0%	6.6% to 7.0%	50% or Reject	50%
6.1% and over	7.1% and over	50% or Reject	50% or Reject

8. Asphalt Concrete Density Samples:
- a. The Contractor shall perform density tests under direct observation of Department personnel. The Contractor shall establish the method of testing in the preconstruction conference and shall test in accordance with the AASHTO T 166, NDR T 587, or as otherwise described in these Special Provisions. The Contractor shall insure that the proper adjustment bias and/or correction factors are used and accessible to Department personnel along with all other inputs when NDR T 587 is selected. All correlation factors and test results shall be generated and reported on the Department Density spreadsheet. When AASHTO T 166 is being used, the Department will observe the Contractor taking, transporting, and testing the cores. The Department will take immediate custody of the cores at the completion of the testing. All disputed values determined using NDR T 587 will be resolved using AASHTO T 166.

- b. The Contractor shall determine the density of samples by comparing the specific gravity of the core sample to the Maximum Specific Gravity (Rice) as follows:

$$\% \text{ Density} = \frac{\text{Specific Gravity of Core}}{\text{Maximum Mix Specific Gravity (Rice)}} \times 100$$

where:

$$\text{Sp. Gr. of Core} = \frac{\text{Wt. of Core in Air}}{\text{Wt. of SSD Core} - \text{Wt. of Core in Water}}$$

$$\text{Maximum Mix Specific Gravity (Rice)} = \frac{\text{Wt. of Mix in Air}}{\text{Wt. of Mix in Air} - \text{Wt. of Mix in Water}}$$

**Note:** The individual QC test value of the Maximum Mix Specific Gravity (Rice), determined by AASHTO T 209, will be used to calculate the density of each corresponding core.

- c. The Contractor shall cut cores the first day of work following placement of the mixture. The core samples shall be a minimum of a 3 inch (75mm) diameter.
- d. Normally, 1 sample for determination of density will be taken from each subplot at locations determined by the Engineer.
- e. The average density of the lot shall be used to compute the pay factor for density. Exceptions to the sampling and testing of core samples for the determination of density are as follows:
- (1) When the nominal layer thickness is 1 inch (25 mm) or less, the sampling and testing of density for this layer will be waived.
  - (2) When the average thickness of the 5 cores for a lot is 1 inch (25 mm) or less, the testing of density samples for this lot will be waived.
  - (3) When the nominal layer thickness and the average of the original 5 cores for a lot are both more than 1 inch (25 mm), but some of the cores are less than 1 inch (25 mm) thick, additional cores shall be cut at randomly selected locations to provide 5 samples of more than 1 inch (25 mm) thickness for the determination of the pay factor for density.
- f. (1) If, at the completion of the project, the final lot consists of less than one lot of asphaltic concrete, a minimum of 3 samples, or 1 sample for each subplot or fraction thereof, whichever is greater, shall be taken and tested for density.
- (2) The test results shall be averaged and the density pay factor based on the values shown in Table 1028.19.

- (3) Should the average of less than 5 density tests indicate a pay factor less than 1.00, additional density samples to complete the set of five shall be taken at randomly selected locations and the density pay factor based on the average of the 5 tests.

**Table 1028.19**

<b>Acceptance Schedule Density of Compacted Asphaltic Concrete</b>	
<b>Average Density (5 Samples, Percent of Voidless Density)</b>	<b>Pay Factor</b>
Greater than 92.4	1.00
Greater than 91.9 to 92.4	0.95
Greater than 91.4 to 91.9	0.90
Greater than 90.9 to 91.4	0.85
Greater than 90.4 to 90.9	0.80
Greater than 89.9 to 90.4	0.70
89.9 or Less	0.40 or Reject

- g. If requested by the Contractor, check tests for all density tests in the original set, taken no later than the working day following the receipt of all test results for the lot, will be allowed in lots with a density pay factor of less than 1.00. No re-rolling will be allowed in these lots. Locations for checks tests will be provided by the Engineer from the Random Sampling Schedule. The average density obtained by the check tests shall be used to establish the density pay factor for the lot.
- h. The location of density samples are identified by the Random Sampling Schedule. When the random location is noted as zero or the lane width (i.e., zero or 12 ft. on a 12-foot lane), the core shall be cut with the outer edge of the core barrel no greater than 4 inches away (laterally) from the edge of the top of the mat for an unconfined edge or from the edge of the top of the hot mat (joint) for a confined edge. If using a nuclear gauge, the 4 inches would be measured to the edge of the gauge base. The percent density value at these edge-of-lane locations shall be adjusted upward by 2.5%, but to a value of no greater than 92.5%, and the resultant value used in determining the density pay factor. No initial value of 92.5 or greater shall be adjusted.

**WARM MIX ASPHALT  
(J-7-1116)**

The Contractor has the option to use Warm Mix Asphalt (WMA) meeting the following requirements.

1. ~~Warm Mix Asphalt (WMA)~~

~~Warm Mix Asphalt mixtures shall follow the requirements of Superpave Asphaltic Concrete and all other applicable sections with the following exceptions:~~

~~a. The Contractor shall request the use of a WMA additive in writing when submitting the Job Mix Formula. The requested additive shall be an approved Level I or II production product or combination thereof. The manufacturer's recommended additive rates, specifications, and all other pertinent information shall be included in the requests. All requests must be approved by the Flexible Pavements Engineer prior to their use.~~

~~b. Level I Production~~

~~(1) Level I WMA additives are as follows: water injection devices.~~

~~(2) Hydrated Lime at 1.25% by weight of virgin aggregate is required for all mixtures.~~

~~(3) The allowable drop in temperature shall be a maximum of 40°F below the producer's recommended production temperature for Hot Mix Asphalt (HMA), or less as required during production to achieve proper laydown and compaction properties. Plant production temperatures shall not drop below 230°F.~~

~~c. Level II Production~~

~~(1) Level II WMA additives are as follows: Advera, Evotherm 3G (M1, U1), AkzoNobel Rediset LQ 1102C, Cecabase RT 945 w/AD here LOF 65 00, and Sasobit.~~

~~(2) For amine based WMA additives, 25% of the additive must be considered an amine based anti-stripping agent, unless Poly Phosphoric Acid (PPA) is used. If PPA is used in the binder, the WMA shall be a non-amine based WMA, specifically for use and compatible with binders containing PPA. WMA additives and anti-strips shall be terminal blended by the binder supplier. For all other warm mix technologies hydrated lime shall be added at a minimum rate of 1.25% by weight of virgin aggregate, including the weight of limestone. Hydrated Lime shall not be used on Level II WMA mixtures when the WMA additive is an Amine based additive or when the Amine WMA additives are used in combination with Level I water injection. The minimum rate for amine based WMA additives shall be 0.7%. The dosage rate of anti-strip shall not exceed manufacturer's recommendations.~~

- ~~(3) The drop in temperature shall be a maximum of 90°F from the producer's recommended production temperature for HMA. Plant production temperatures shall not drop below 215°F.~~
- ~~d. Other WMA additives shall not be used unless otherwise approved by the Flexible Pavements Engineer.~~
- ~~e. WMA additives may be used in combination by approval of the Flexible Pavements Engineer.~~
- ~~f. Asphalt mixes shall be tested for TSR on the first lot of production and then on randomly selected lots thereafter.~~
- ~~g. Field samples shall be heated and compacted using the following table unless otherwise approved by the Flexible Pavements Engineer.~~

**Gyratory Compaction Temperatures**

Mix Type	% Rap	Compaction Temp °F
SPS	0-25	270 $\pm$ 5
	26-65	280 $\pm$ 5
SPR	0-35	280 $\pm$ 5
	36-55	290 $\pm$ 5
SPH	0-35	300 $\pm$ 5

- ~~h. NDOR may suspend or eliminate the use of WMA on a project if any of the following conditions occur: rutting, segregation, surface voids, tearing, irregular surface, low density, raveling, stripping, or if pavement does not meet any other design criteria.~~
2. ~~Warm Mix Asphalt (WMA) additives will be measured and paid for directly by the unit of each for the item "Hydrated Lime/Warm Mix Asphalt" for each ton of hot mix asphalt produced.~~

**ASPHALT DENSITY GAUGE  
(J-7-1013)**

**Description**

An Asphalt Density Gauge may be used for Quality Control when determining the in-place density of asphaltic concrete.

**Material Requirements**

The device must be approved by the Flexible Pavements Engineer.

**Testing Method**

1. The Contractor shall establish the method of testing in the preconstruction conference. All testing shall be in accordance with AASHTO T-343 and as directed in this provision.

2. The first 3 density locations of the project shall be cored in accordance with AASHTO T166 to calibrate the asphalt density gauge. Prior to coring, the Contractor shall calibrate the device at each core location.
3. Calibration: A correction factor shall be established for the first 3 cores by calculating the difference between the average density measurement of the asphalt density gauge and the roadway core density. This correction factor shall be entered into the device and used for measuring subsequent densities. The correction factor shall be verified with another core for every 15 density readings that are to be recorded.
4. Density Reading Procedure: Place the asphalt density gauge on the asphalt mat over the area to be tested. Record the density reading, and repeat this process for a total of 5 readings, as detailed in Figure 1. An average of the 5 readings will be used as the density reading for each location. For densities taken less than 6 inches from the edge of the lift, density readings shall be taken as shown in Figure 2. The span between density reading locations in each direction shall be no greater than 12".

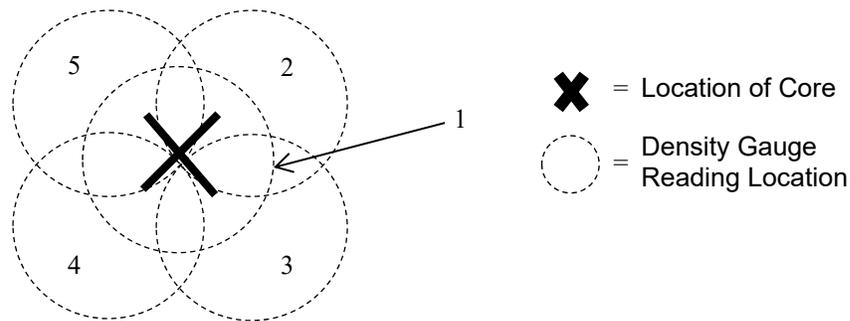


Figure 1: Asphalt density gauge reading pattern

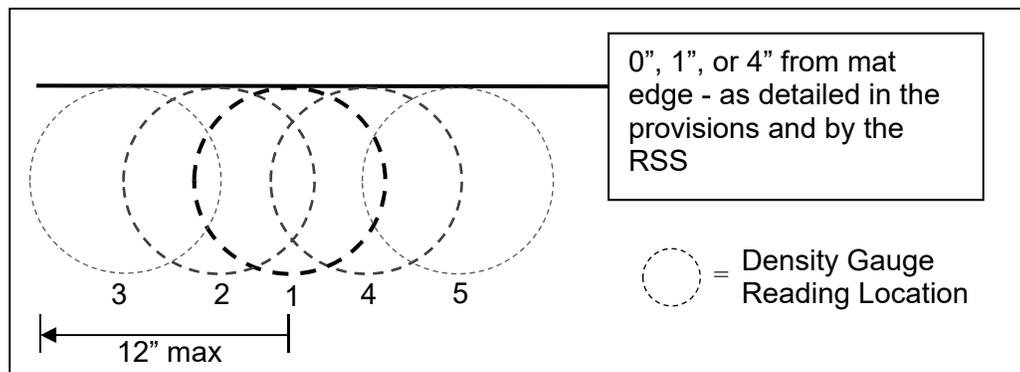


Figure 2: Asphalt density gauge reading pattern less than 6" from mat edge

5. If any density measured by the asphalt density gauge is below 90%, a density core shall be cut at that location and used for density measurement for that subplot. Density readings below 90% shall not be used to calculate a correction factor. All disputed values determined using the asphalt density gauge will be resolved using AASHTO T 166.

## **ASPHALTIC CONCRETE LONGITUDINAL JOINT DENSITY TESTING (J-7-1013)**

### **Description**

One sample for determination of joint density will be taken randomly from each lot. This joint density sample stands independent of the required standard density per subplot used for determining the average of 5 density pay factor.

### **Equipment**

Testing shall be conducted in accordance with the AASHTO T 166, NDR T 587, or an approved Asphalt Density Gauge. The Contractor shall insure that the proper adjustment bias and/or correction factors are used and accessible to Department personnel, along with all other inputs when NDR T 587 or the Asphalt Density Gauge is selected. All correlation factors and test results shall be generated and reported on the Department Density spreadsheets.

### **Testing**

1. ~~The Contractor shall establish the method of testing in the preconstruction conference.~~
2. ~~One sample for determination of joint density will be taken randomly from each lot, as determined by the Engineer. The location of the edge density samples are identified by the Random Sampling Schedule.~~
3. ~~The joint density core shall be cut 1 inch away (laterally) from the identified edge of the top of the mat.~~
4. ~~The Contractor shall cut cores the first day of work following placement of the mixture. The core samples shall be a minimum of a 3 inch (75mm) diameter.~~
5. ~~The Department will observe the Contractor taking, transporting, and testing the cores (as applicable). The Department will take immediate custody of the cores at the completion of the testing. All disputed values determined using NDR T 587 or the Asphalt Density Gauge will be resolved using AASHTO T166.~~

6. ~~The Contractor shall determine the density of samples by comparing the specific gravity of the core sample to the Maximum Specific Gravity (Rice) as follows:~~

$$\% \text{ Density} = \frac{\text{Specific Gravity of Core}}{\text{Maximum Mix Specific Gravity Rice}} \times 100$$

~~where:~~

$$\text{Sp. Gr. of Core} = \frac{\text{Wt. of Core in Air}}{\text{Wt. of SSD Core} - \text{Wt. of Core in Water}}$$

$$\text{Maximum Mix Specific Gravity} = (\text{Rice}) \frac{\text{Wt. of Mix in Air}}{\text{Wt. of Mix in Air} - \text{Wt. of Mix in Water}}$$

**Note:** ~~The individual QC test value of the Maximum Mix Specific Gravity (Rice), determined by AASHTO T 209, will be used to calculate the density of each corresponding core.~~

7. ~~Exceptions to the sampling and testing of joint density core samples for the determination of density are as follows:~~

a. ~~When the nominal layer thickness is 1 inch (25 mm) or less, the sampling and testing of density for this layer will be waived.~~

b. ~~When the average thickness for the standard lot is 1 inch (25 mm) or less, the testing of joint density samples for this lot will be waived.~~

8. ~~If requested by the Contractor, a re-test for the original joint density test, taken no later than the working day following the receipt of the test result, will be allowed. Locations of re-tests will be provided by the Engineer from the Random Sampling Schedule. The density obtained by the re-test shall be used to establish the density pay factor for the lot.~~

### Method of Measurement

All work related to the Asphaltic Concrete Longitudinal Joint Density Sample will not be measured and paid for but will be subsidiary to the associated asphaltic concrete.

### Basis of Payment

1. The pay factor shall be computed according to the following table:

Joint Density Test Lot Pay Factor			
Joint Density	SPS	SPR	SPH
93.0 or greater	102%	102%	102%
92.0 to 92.9	100%	102%	102%
91.0 to 91.9	98%	100%	102%
90.0 to 90.9	98%	98%	100%
89.0 to 89.9	98%	98%	98%
88.9 or Less	98%	98%	98%

2. ~~The pay factor will be incorporated in the production specs calculation in the Superpave Software. Any incentive or disincentive will be added or subtracted to the pay factor after any other applicable production tolerances pay factors have been incorporated. The pay factor will apply to the entire lot.~~

## PERFORMANCE GRADED BINDER

The Performance Graded Binder to be used on this project shall be PG Binder supplied by a Certified Supplier.

### SECTION 1029 - PERFORMANCE GRADED BINDER (J-6-0117)

Section 503 in the Standard Specifications is amended to include Performance Graded Binders.

Subsection 1029.01 in the Standard Specifications is void and superseded by the following:

#### 1029.01 -- Description

1. Performance Graded (PG) binder shall conform to the requirements of AASHTO M332 Table 1. PG binder shall also conform to the Department PG+ specifications (Table 1029.01) when classified as a modified binder.
  - a. The test of Direct Tension, AASHTO M332 Table 1, is omitted.
  - b. The test of  $J_{nr\text{diff}}$ , AASHTO M332 Table 1, is omitted.
2. The Performance Graded Binder shall be supplied by a supplier that is certified by the Department.
  - a. A supplier may request certification by contacting the Nebraska Department of Roads, Materials and Research Division, Flexible Pavement Engineer.
  - b. A certified supplier must furnish a quality control program to the Department Bituminous Laboratory for review and approval. The program shall follow, at a minimum, the guidelines of AASHTO R26 with references to AASHTO M320 to include AASHTO M332.
  - c. A certified supplier must be a participant in one or more of the following PG Binder Groups:
    - (1) AASHTO Materials Reference Laboratory (AMRL)
    - (2) Western Cooperative Testing Group (WCTG)
    - (3) Combined States Binder Group (CSBG)
    - (4) A PG Binder round robin Group approved by the Department.
  - d. A certified supplier must maintain, meet and follow the requirements of the group or groups in which they participate, to maintain certification by the Department. In addition, active participation is required to maintain certification by the Department. Active participation will include submitting of round robin sample results.

- (1) For suppliers that desire to provide product while approved PG Binder Group membership is pending, a temporary certification may be issued for a period of up to one year. Split sample testing will be required prior to receiving a temporary certification. Split sample testing will be done on all grades of binder that the supplier intends to supply during the temporary certification period. The supplier will have up to one year to become certified by participating in and following the requirements of one or more of the approved PG Binder Groups, and to meet all other conditions for certification.
- e. A certified supplier may be asked to supply to the Department: past round robin results, laboratory inspection reports, reasons for and investigative reports on outlying results, quality control testing results, technician training and/or proficiency testing reports.
- f. A certified supplier will agree to inspection of their plant or terminal without notice anytime during production or supplying of material to the Department. The inspection may also include the supplier's laboratory.
- g. If desired, a certified supplier can voluntarily submit samples of PG binder proposed for use to the Materials and Research Bituminous Laboratory for courtesy testing prior to Asphalt production. The test results will be for Information-Only.
- h. Certification will be withdrawn from a supplier when one or more of the following conditions exist:
  - (1) Inability to consistently supply material meeting specifications as outlined herein.
  - (2) Failure to maintain an acceptable quality control program.
  - (3) The failure to meet one or more of the conditions of being a certified supplier as outlined, but not limited to only these conditions.
- i. Notification of decertification of a supplier will be submitted in writing by the Department. The notification will include the reason(s) why decertification occurred. PG Binders from a decertified source will not be accepted for use on Department projects.
- j. If a supplier has lost certification and seeks to be recertified, the following steps are required:
  - (1) Supplier shall fulfill the requirements outlined above for gaining Certified Supplier status. This may include the submittal of material samples to ensure specifications compliance before recertification approval.
  - (2) Supplier shall submit documentation to the Flexible Pavement Engineer explaining the cause(s) of decertification outlined in the notification, and the actions that are being taken to correct the problem(s) identified by the Department.

Subsection 1029.02 in the Standard Specifications is void and superseded by the following:

**1029.02 -- Material Characteristics**

1. Modified Performance Grade binders shall meet the following specifications:
  - a. All specified binders with a grade temperature spread of 92°C or greater, shall be defined as modified.
  - b. The PG Binder shall meet the Multiple Stress Creep Recovery (MSCR) specifications of the following Table:

**Table 1029.01  
PG+ Specifications**

AASHTO T350 MSCR Average % Recovery @ 3.2 kPa for modified PG binders	
AASHTO M332 Performance Grade	Test Temperature of 58°C
58S - 34	---
58H - 34	30 Min.
58V - 34	55 Min.
58E - 34	75 Min.

- c. The binder shall incorporate a blend of base asphalt and the use of the elastomer modifiers styrene-butadiene (SB), styrene-butadiene-styrene (SBS), or styrene-butadiene-rubber (SBR).
  - (1) Polyphosphoric Acid (PPA) may be used as an additional modifier to elastomer modifiers and shall not exceed 0.50% maximum PPA addition (by weight of binder). The total phosphorous content of the PPA-modified PG Binder shall not exceed 1900 ppm. The total phosphorous content shall be determined as per ASTM D1091, ASTM D6443, or ASTM D6481.
    - (i) To determine specifications compliance, the Department requires a sample of the base asphalt binder, a sample of the PPA, and supplier-prepared varying PPA percentage modified binder samples. These samples shall be sent to the NDR Bituminous Laboratory prior to project Asphalt production.
  - (2) Crumb rubber may be used as an additional modifier to elastomer modifiers. If crumb rubber is used:
    - (i) Paragraph 5.4 (solubility) of AASHTO M332 is then void.

- (ii) Paragraph 5.5 (micron requirement) of AASHTO M332 is then void.
- d. The composite material shall be thoroughly mixed at the asphalt refinery or terminal prior to (for tank storage) or as (in-line blending) being loaded into the transport vehicle.
  - (1) The modified binder shall be heat and storage stable and shall not separate when handled and stored as per the supplier's recommendations.
  - (2) The composite material shall be homogenous, and shall not demonstrate evidence of localized gelation or over-crosslinking of polymers. The composite material shall not otherwise contain any other non-homogenous conglomerations.
- 2. Unmodified Performance Grade Binders are defined as specified binders with a grade temperature spread of less than 92°C.

Subsection 1029.03 in the Standard Specifications is void and superseded by the following:

#### **1029.03 -- Procedures**

- 1. A Material Certification shall be submitted to the Engineer prior to construction or when switching suppliers, stating the type of any modifier(s) being used. The Material Certification must also state that the material has not been air blown or oxidized.
  - a. If the PG Grade modification process of the PG Binder includes the use of PPA (Polyphosphoric Acid) and/or crumb rubber, then the Material Certification must also state the type of all modifiers used in the formulation. If PPA is used, the Material Certification must state the % PPA in the binder, and also state and confirm the total phosphorous content of the PPA modified binder.
- 2. The Contractor shall receive from the supplier, instructions on the proper storage and handling of each grade and shipment of PG Binder.
- 3. Substitution of a PG Binder, which exceeds the upper and/or lower grade designations from what is specified, requires advance notification to, and approval by, the Engineer. The substitution of the PG Binder shall also be identified in the sample identification submittals.
- ~~4. PG Binder Lots and their respective samples are defined as follows:~~
  - ~~a. Each 200 tons of liquid PG Binder grade incorporated into the production of Asphalt, or final portion thereof, will be a binder lot.~~
  - ~~b. A binder lot will include only one PG Binder grade, or will include a blend of grades as defined in paragraph 5.~~

- ~~e. A binder lot will include only one supplier of the PG Binder.~~
  - ~~(1) If a Contractor needs to switch binder suppliers during the production of a binder lot, it is the Contractor's responsibility to ensure both the compatibility and the specifications compliance of the mixture of the respective binder products. The supplier designation of the lot will be listed as "mixed suppliers" if the binder lot sample was taken after this occurs.~~
- ~~d. The Engineer must be notified and approve of the intent to blend binder grades, or to switch binder suppliers, prior to either occurrence.~~
- ~~e. All binders shall be sampled at the rate of at least one sample per binder lot.~~
  - ~~(1) The sample shall consist of a two quart (half gallon) can and shall be taken by the Contractor's Certified Sampling Technician, with confirmation by Department personnel. The sample shall be taken at the plant from the line between the storage tank and the mixer, or from the tank supplying material to the line, at a location from which material sampled is representative of the material in the line to the mixer. The sampling process shall follow procedures of the NDR Materials Sampling Guide.~~
  - ~~(2) When the tested PG Binder is in compliance, the binder lot will be accepted and the sample will be discarded. If the tested PG Binder does not comply, then the pay factor of the PG Binder lot represented by the sample shall be adjusted according to Table 1029.02, and Table 1029.03 (if modified).~~
  - ~~(3) When a total PG Binder grade type on a project is less than 200 tons, a minimum of one PG Binder lot sample is required. If the PG Binder does not comply with test specifications, then the pay factor of the PG Binder lot shall be adjusted according to Table 1029.02, and Table 1029.03 (if modified).~~
- ~~5. Blending of differing PG Binder grades at the hot mix plant site will be allowed only with prior approval, and with the following restrictions:~~
  - ~~a. The resultant blend of grades will meet PG+ (if modified binder), and/or AASHTO M332 specifications when tested as  $\pm 3^{\circ}$  C of the specified PG Binder grade.~~
  - ~~b. The sample of the blended material will be considered as a lot sample, and it will be taken during initial production following the blending of the binders.~~
  - ~~c. The lot sample of the blended material shall have a pay factor applied as per Table 1029.02, and Table 1029.03 (if modified), when not meeting specifications.~~
  - ~~d. The blended sample's identification form shall note the blending conditions and provide a statement that the sample is a blend of grades.~~

- e. ~~The next lot sample, following the sample representing the blend, will be tested as the specified binder grade for the asphalt mixture being produced and shall meet AASHTO M332 and PG+ (if modified), specifications.~~
  - f. ~~For modified PG Binders, only blending of the same type of elastomer modifiers listed in 1029.02 Paragraph 1.c. will be allowed.~~
6. ~~The Nebraska Department of Roads, Materials and Research Bituminous Laboratory, will do selective testing on each Binder Lot. When any test result shows a lot sample not meeting specifications, that lot sample and any adjacent previous, and any adjacent following lot sample received will be tested for complete specifications compliance. Adjacent lot sample testing will then continue in this manner until tested samples meet all specifications, or there are no more lot samples remaining to be tested.~~
7. ~~All lot samples as tested are subject to the Pay Factors listed in Table 1029.02, and also Table 1029.03 if modified, below:~~

~~Table 1029.02~~  
~~Tests of AASHTO M332 Pay Factor Table <sup>1</sup>~~

<del>Test and Specification</del>	<del>Test Results</del>	<del>Pay Factor</del>
<del>Original Binder Dynamic Shear, <math>G^*/\sin \delta</math>, kPa Min. 1.00</del>	<del>&gt; 0.99</del>	<del>1.00</del>
	<del>0.97 - 0.99</del>	<del>0.95</del>
	<del>0.94 - 0.96</del>	<del>0.90</del>
	<del>0.91 - 0.93</del>	<del>0.85</del>
	<del>&lt; 0.91</del>	<del>0.70 or Reject</del>
<del>Rolling Thin Film Oven Residue, Standard Traffic "S", MSCR <math>J_{m3.2}</math> Max. 4.5 kPa<sup>-1</sup></del>	<del>&lt; 4.6</del>	<del>1.00</del>
	<del>4.6</del>	<del>.95</del>
	<del>4.7</del>	<del>.90</del>
	<del>4.8</del>	<del>.85</del>
	<del>&gt; 4.8</del>	<del>.70 or Reject</del>
<del>Rolling Thin Film Oven Residue, Heavy Traffic "H", MSCR <math>J_{m3.2}</math> Max. 2.0 kPa<sup>-1</sup></del>	<del>&lt; 2.1</del>	<del>1.00</del>
	<del>2.1</del>	<del>.95</del>
	<del>2.2</del>	<del>.90</del>
	<del>2.3</del>	<del>.85</del>
	<del>&gt; 2.3</del>	<del>.70 or Reject</del>
<del>Rolling Thin Film Oven Residue, Very Heavy Traffic "V", MSCR <math>J_{m3.2}</math> Max. 1.0 kPa<sup>-1</sup></del>	<del>&lt; 1.1</del>	<del>1.00</del>
	<del>1.1</del>	<del>.95</del>
	<del>1.2</del>	<del>.90</del>
	<del>1.3</del>	<del>.85</del>
	<del>&gt; 1.3</del>	<del>.70 or Reject</del>
<del>Rolling Thin Film Oven Residue, Very Heavy Traffic "E", MSCR <math>J_{m3.2}</math> Max. 0.5 kPa<sup>-1</sup></del>	<del>&lt; 0.6</del>	<del>1.00</del>
	<del>0.6</del>	<del>.95</del>
	<del>0.7</del>	<del>.90</del>
	<del>0.8</del>	<del>.85</del>
	<del>&gt; 0.8</del>	<del>.70 or Reject</del>
<del>Pressure Aging Vessel Residue Dynamic Shear, "S", <math>G^* \sin \delta</math>, kPa Max. 5000</del>	<del>&lt; 5001</del>	<del>1.00</del>
	<del>5001 - 5200</del>	<del>0.95</del>
	<del>5201 - 5400</del>	<del>0.90</del>
	<del>5401 - 5600</del>	<del>0.85</del>
	<del>&gt; 5600</del>	<del>0.70 or Reject</del>
<del>Pressure Aging Vessel Residue Dynamic Shear, "H", "V", "E", <math>G^* \sin \delta</math>, kPa Max. 6000</del>	<del>&lt; 6001</del>	<del>1.00</del>
	<del>6001 - 6050</del>	<del>.95</del>
	<del>6051 - 6100</del>	<del>.90</del>
	<del>6101 - 6150</del>	<del>.85</del>
	<del>&gt; 6150</del>	<del>.70 or Reject</del>

<del>Test and Specification (cont'd)</del>	<del>Test Results</del>	<del>Pay Factor</del>
<del>Pressure Aging Vessel Residue BBR m-Value Min. 0.300</del>	<del>&gt;0.350</del>	<del>1.05</del>
	<del>0.300</del>	<del>1.00</del>
	<del>0.350</del>	<del>1.00</del>
	<del>0.295</del>	<del>0.95</del>
	<del>0.290</del>	<del>0.95</del>
	<del>0.294</del>	<del>0.90</del>
<del>Pressure Aging Vessel Residue BBR Creep Stiffness, mPa Max. 300</del>	<del>0.285</del>	<del>0.85</del>
	<del>0.289</del>	<del>0.85</del>
	<del>&lt;0.285</del>	<del>0.70 or Reject</del>
	<del>&lt;200</del>	<del>1.05</del>
	<del>200-300</del>	<del>1.00</del>
	<del>301-310</del>	<del>0.95</del>
	<del>311-320</del>	<del>0.90</del>
	<del>321-330</del>	<del>0.85</del>
	<del>&gt;330</del>	<del>0.70 or Reject</del>

**Table 1029.03**  
**PG + Pay Factor Table <sup>4</sup>**

<del>AASHTO T350 Multiple Stress Creep Recovery (MSCR) @ 58°C Test and Specifications</del>	<del>Test Results</del>	<del>Pay Factor</del>
<del>AASHTO M332 Performance Grade 58H-34 Average % Recovery @ 3.2 kPa Min. 30%</del>	<del>&gt;29</del>	<del>1.00</del>
	<del>29</del>	<del>0.95</del>
	<del>28</del>	<del>0.90</del>
	<del>27</del>	<del>0.85</del>
	<del>&lt;27</del>	<del>0.70 or Reject</del>
<del>AASHTO M332 Performance Grade 58V-34 Average % Recovery @ 3.2 kPa Min. 55%</del>	<del>&gt;54</del>	<del>1.00</del>
	<del>54</del>	<del>0.95</del>
	<del>53</del>	<del>0.90</del>
	<del>52</del>	<del>0.85</del>
	<del>&lt;52</del>	<del>0.70 or Reject</del>
<del>AASHTO M332 Performance Grade 58E-34 Average % Recovery @ 3.2 kPa Min. 75%</del>	<del>&gt;74</del>	<del>1.00</del>
	<del>74</del>	<del>0.95</del>
	<del>73</del>	<del>0.90</del>
	<del>72</del>	<del>0.85</del>
	<del>&lt;72</del>	<del>0.70 or Reject</del>

<sup>4</sup> ~~If a lot sample has more than one test that results in a reduced pay factor (less than 1.00) from either or both of the above Pay Factor Tables, the single largest pay factor reduction will be the one used in determining the lot pay factor. If a lot sample passes all testing (1.00 or greater), and one or more test pay factors are 1.05, the pay factor of 1.05 will be the one used in determining the lot pay factor.~~

8. ~~When all lot samples have been received and tested, a final pay factor of all the PG Binder per Asphalt type will be calculated and applied as follows:~~

- a. ~~The final pay factor is the average of all lot sample pay factors. The final pay factor cannot exceed 1.000.~~

~~Example Calculations:~~

~~4 Binder Lots Asphalt:  $\frac{0.95 + 1.05 + 1.00 + 0.85}{4} = 0.962$  Final Pay Factor~~

~~3 Binder Lots Asphalt:  $\frac{0.95 + 1.05 + 1.05}{3} = 1.017$  = Final Pay Factor of 1.000~~

- b. ~~The final pay factor will be applied to the contract unit price of asphalt binder.~~

- c. ~~The Engineer will determine if lots that have a test pay factor of 0.70 or Reject will be removed. If 0.70 or Reject material is left in place, a price factor of 0.70 will be the determined lot pay factor. The final pay factor will be applied to the contract unit price of asphalt binder.~~

~~(1) Removal and replacement will be at no additional cost to the Department.~~

~~(2) If any lot was removed, a new lot pay factor will be determined by testing of the replacement material.~~

9. ~~When the testing of a PG binder lot sample shows test results that are outside of specification limits, the initial process of resolving the sample failure will include the following actions, as appropriate:~~

- a. ~~The Department Bituminous Laboratory may conduct retesting of the remaining portion of the sample as determined necessary to confirm the original test result(s).~~

- b. ~~The Department Bituminous Laboratory will notify the Department project personnel, who will in turn notify the Contractor. All parties will arrange to investigate all aspects of the testing, loading, handling and delivery of the material in question. The Contractor and Department project personnel shall report their findings to the Bituminous Laboratory.~~

- c. ~~The Department Bituminous Laboratory will collect and compile all information provided.~~

- d. ~~The Department Bituminous Laboratory will issue a standard report of tests for all samples tested, to include any resulting final pay factor deductions or removals. A copy of the report of tests will be distributed to the District and the Construction Division. The District will then provide a copy to the Contractor. PG Binder Supplier requests for a copy of this report will be directed to the Contractor.~~

- ~~10. If the Contractor wishes to dispute any results after testing and investigations have been completed on any failing lot sample(s) that subjected the final pay factor from paragraph 8 to less than 1.000, the Department will select an independent laboratory for referee testing to take place on the remaining portion of the sample(s).~~
- ~~a. Only the Contractor can initiate dispute resolution, and request referee testing. The request must be made, in writing, to the Department Construction Division within 30 days of awareness of final pay factor determination. Otherwise dispute resolution is forfeited.~~
  - ~~b. The identity of the independent laboratory will not be revealed until the selected laboratory has completed the referee testing, and the Department Bituminous Laboratory has submitted a final report of the results.~~
  - ~~c. If the independent lab's tests indicate failing results and pay deductions equal to or greater than the Department's, the Contractor will reimburse the Department for the cost of testing. If the independent lab's tests indicate that the material meets specification, or is at a pay deduction less than the Department's, the Department will assume the cost of testing. When the independent lab's tests indicate a pay deduction, the lesser of the Department's and the independent lab's deductions will be applied.~~

~~Subsection 503.05 in the Standard Specifications is amended to include the following:~~

**503.05 -- Method of Measurement** See Special Provision Section 201.02

~~PG Binder shall be measured in accordance with Subsection 503.05, Paragraph 3, in the Standard Specifications. References to the term asphalt cement are superseded with the term PG Binder.~~

~~Subsection 503.06 in the Standard Specifications is amended to include the following:~~

**503.06 -- Basis of Payment** See Special Provision Section 201.02

~~Subsection 503.06 in the Standard Specifications is amended to provide that PG Binder, accepted by the Engineer for use in asphaltic concrete, will be paid for at the contract unit price per ton (Megagram) for the item "Performance Graded Binder \_\_\_\_\_", less any deductions as prescribed in the pay factor tables.~~

**ASPHALTIC CONCRETE TYPE SLX  
(J-29-0414)**

Asphaltic Concrete, Type SLX shall meet all of the requirements of Asphaltic Concrete, Type SPR, listed in Section 1028 and these Special Provisions, with the following exceptions:

**1. Material Characteristics:**

- a. The type of PG Binder used shall be PG Binder 58V-34 with 0.7% of an approved amine-based WMA additive.
- b. Reclaimed Asphalt Pavement (RAP) will be added to the mix at a minimum of 20% and a maximum of 35%. The RAP must be fractionated/processed prior to use, to a sizing such that the combined hot mix meets the required gradation. The mat cannot exhibit any visual defects or cold spots from RAP conglomeration.
- c. The mix shall contain a minimum of 20% Crushed Rock Chips (with a minimum of 45% retained on the #4 sieve and a maximum of 5% passing the #200 sieve).
- d. The Asphaltic Concrete shall have a minimum Fine Aggregate Angularity (FAA) of 43.0 on the combined aggregate blend. There is no requirement for Coarse Aggregate Angularity (CAA).
- e. Asphaltic Concrete Type SLX shall use the gradation band listed below.

**Gradation Control Points for Type SLX**

English Sieve (Metric)	Control Points (percent passing)	
	Minimum	Maximum
1/2 inch (12.5 mm)	98.0	100.0
3/8 inch (9.5 mm)	93.0	100.0
No. 4 (4.75 mm)	70.0	87.0
No. 8 (2.36 mm)	45.0	65.0
No. 16 (1.18 mm)	25.0	41.0
No. 30 (600 µm)	15.0	31.0
No. 50 (300 µm)	10.0	21.0
No. 100 (150 µm)	---	---
*No. 200 (75 µm)	4.0	10.0

\* Dust to binder ratio is the ratio of the percentage by weight of aggregate finer than the No. 200 (75 µm) sieve to the asphalt content expressed as a percent by weight of total mix. The dust to binder ratio shall be between 0.70 and 1.70.

**2. Design Criteria:**

- a. The optimum binder content shall be the binder content that produces 2.0 to 4.0 percent air voids at 50 gyrations, with a minimum content of 5.3%.
- b. The Voids in the Mineral Aggregate (VMA) shall be a minimum of 16% ± 1% (mix design only).

**3. Placing and Finishing:**

- a. Asphaltic Concrete shall be placed only when the ambient temperature is at least 40°F (4°C) and rising.
- b. The asphaltic concrete temperature shall be 285° F (154°C) or above measured in the truck just prior to placement. Exceptions to this requirement are that the PG Binder Supplier recommended maximum temperature requirement shall not be exceeded.
- c. The Contractor will use steel wheel compactors only. Rubber tire rollers will not be allowed.

**4. Asphaltic Concrete Density:**

Regardless of layer thickness, Asphaltic Concrete Type SLX will be monitored for density.

An initial rolling pattern test strip shall be completed to determine the rolling pattern that will target a minimum of 92.5% density. The Contractor shall monitor the density through a combination of rolling pattern and field testing as deemed necessary by the Engineer.

**Method of Measurement:**

For each lot of Asphaltic Concrete Type SLX, the asphaltic concrete shall be paid by the contract unit price for the item "Asphaltic Concrete, Type SLX". The asphaltic concrete unit price is a product of all applicable pay factors excluding density and CAA.

**Basis of Payment:**

Paragraphs 2.a., 2.b.(1), 2.b.(2) and 2.b.(3) of Subsection 503.06 are void and superseded by the following:

Asphaltic Concrete Type SLX shall be paid per ton (Mg) for the item "Asphaltic Concrete Type SLX".

# 2024-AC-1

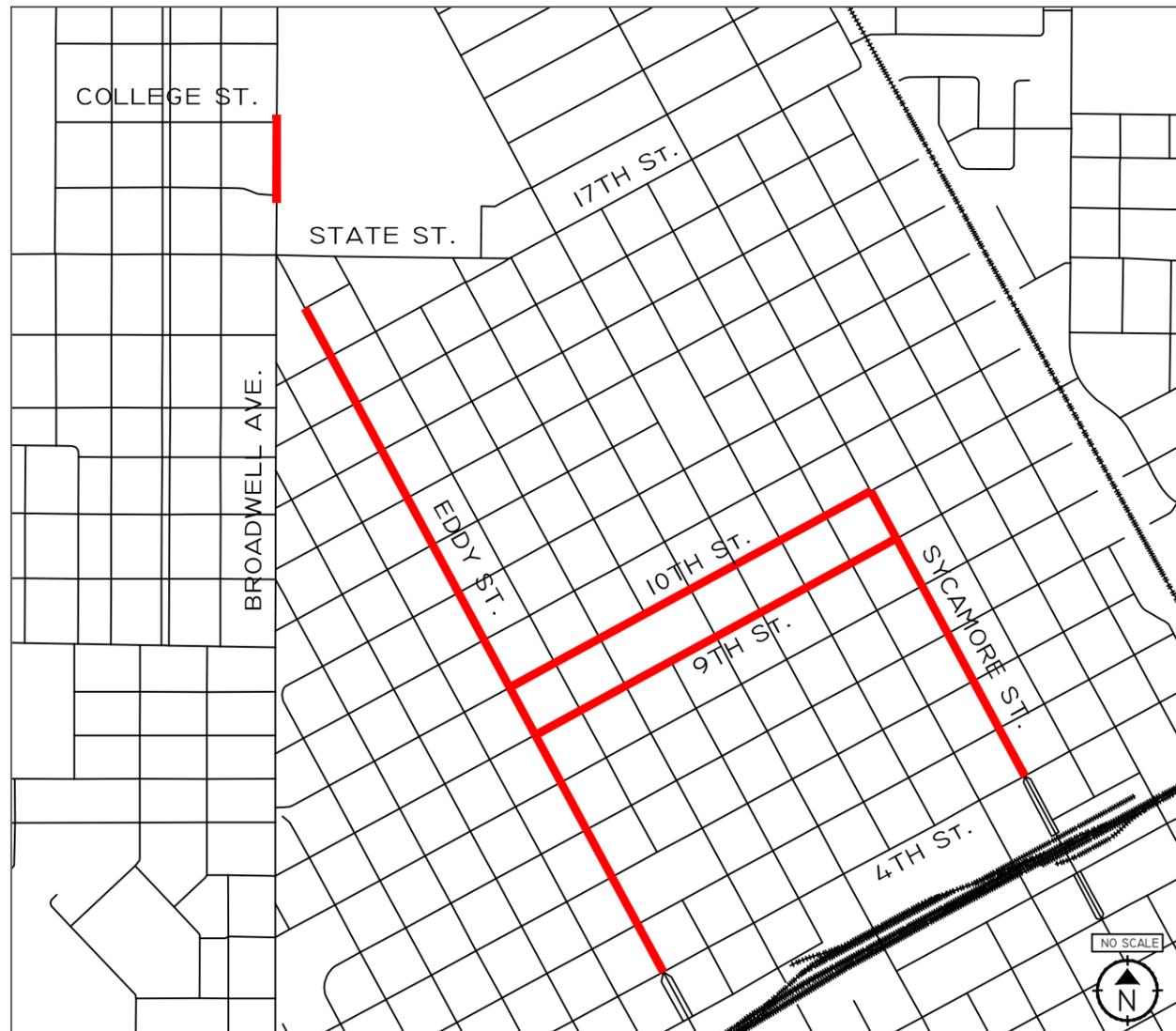
## PAVING SECTION LOCATIONS

- SECTION 1 -- 9th Street - Eddy Street to Sycamore Street
- SECTION 2 -- 10th Street - Eddy Street to Sycamore Street
- SECTION 3 -- Broadwell Avenue - Five Points to College Street
- SECTION 4 -- Eddy Street - 4th Street to 10th Street
- SECTION 5 -- Eddy Street - 10th Street to 18th Street
- SECTION 6 -- Sycamore Street - 4th Street to 10th Street

**\*NOTE -- Section Locations Shown in Red on Location Map**

## SHEET INDEX

- 1 Cover
- 2 Notes & Details
- 3-14 Plan Sheets
- T1 & T2 Temporary Traffic Control



# LOCATION MAP

2024-AC-1			
SUMMARY OF QUANTITIES			
ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY
1	MOBILIZATION	LS	1
2	COLD MILLING, CLASS 3 (DEPTH 2")	SY	53,203
3	ASPHALTIC CONCRETE, TYPE SPR (2")	TON	5,906
4	ASPHALTIC CONCRETE FOR INTERSECTIONS AND DRIVEWAYS, TYPE SPR	TON	379
5	ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR	TON	135
6	TACK COAT	GAL	7,980
7	RAISED LANE MARKERS	EACH	446
8	TEMPORARY SIGN DAY	DAY	1,526
9	BARRICADE, TYPE II	BDAY	1,001
10	BARRICADE, TYPE III	BDAY	1,436
11	FLAGGING	DAY	15
12	ADJUST MANHOLE TO GRADE	EACH	32
13	ADJUST WATER VALVE TO GRADE	EACH	5

SUMMARY OF QUANTITIES IS FOR INFORMATION ONLY.

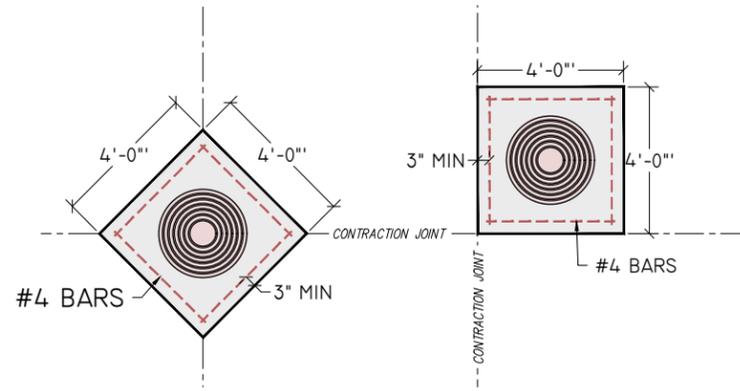


NOTES & REVISIONS			
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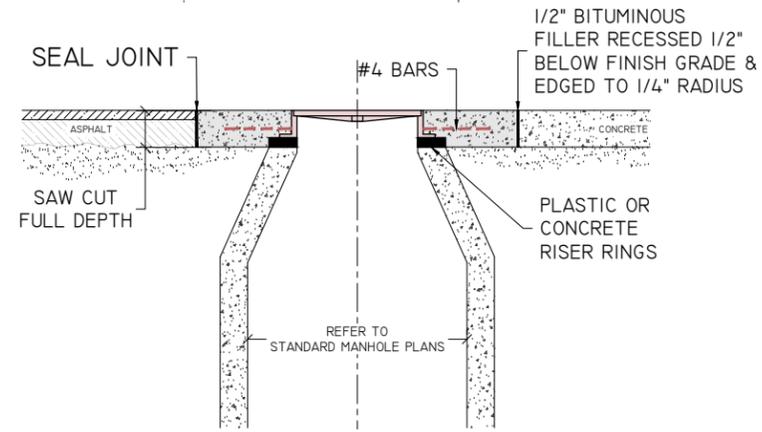
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# ADJUST VALVE BOX DETAIL (TYP.)

NOT TO SCALE



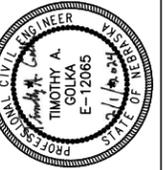
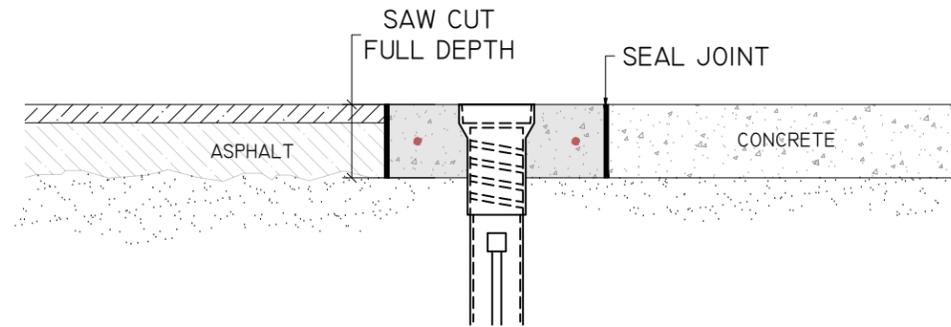
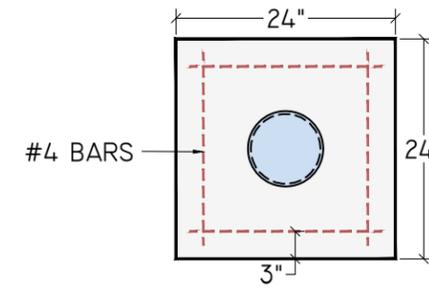
ALIGNMENT STYLE VARIES TO EXISTING  
CONTRACTION JOINT LOCATIONS



## NOTES:

- I. ALL MANHOLES ENCOUNTERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE PROPER GRADE BY REMOVING THE CASTINGS & ADJUSTING THE TOPS OF THE EXISTING MANHOLES.

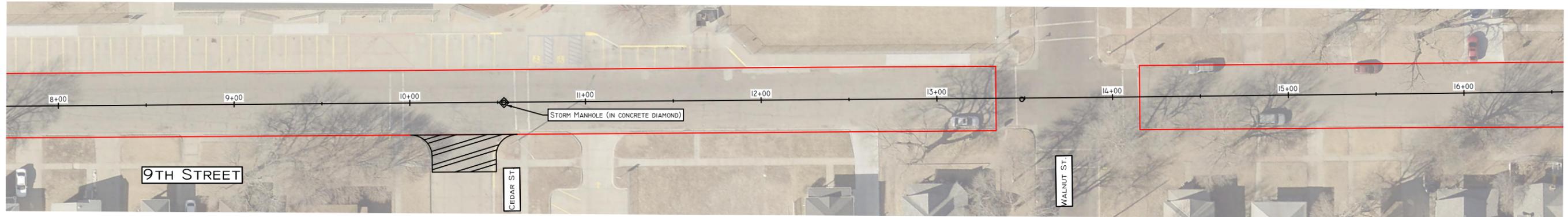
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01-31-2024	APPROVED BY: TAG

DETAILS  
2024-AC-1  
GRAND ISLAND, NEBRASKA

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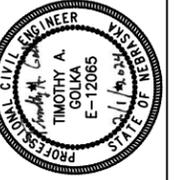
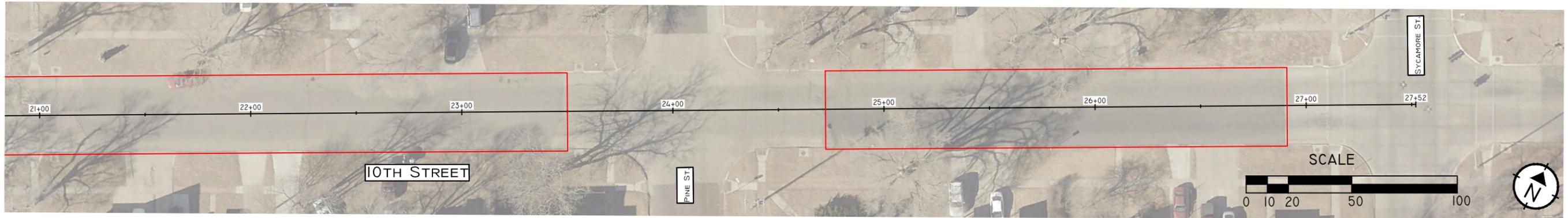
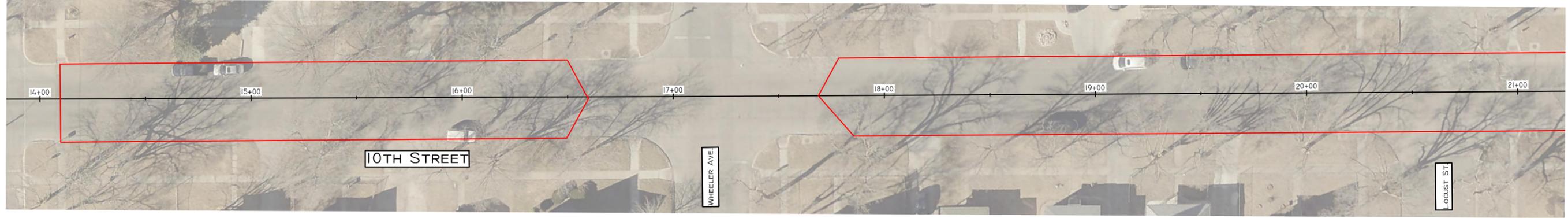
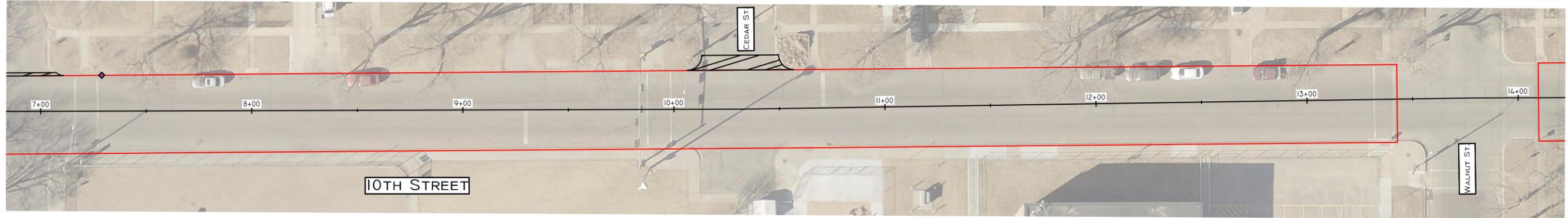
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4	02-01-2024	TAG	DATE

**9TH ST: EDDY ST. TO SYCAMORE ST.**

2024-AC-1  
GRAND ISLAND, NEBRASKA

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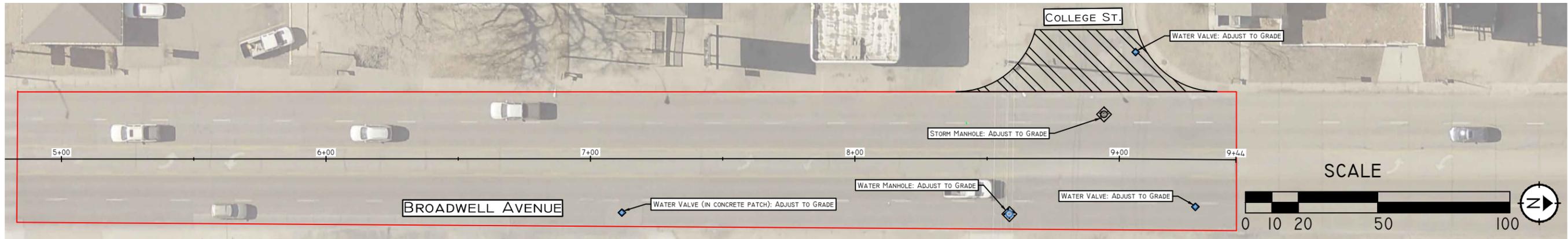
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**10TH ST: EDDY ST. TO SYCAMORE ST.**

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GRAND ISLAND, NEBRASKA

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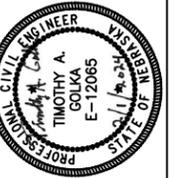
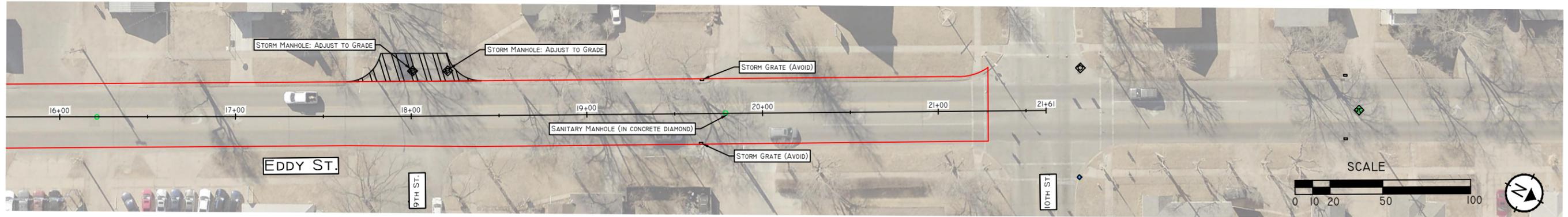
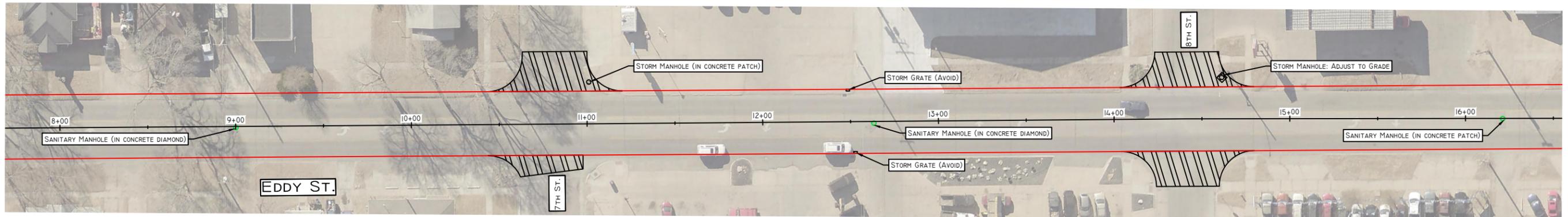
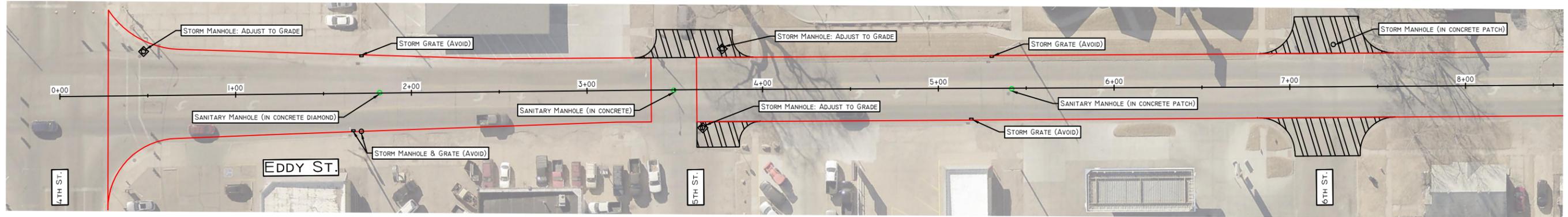
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BROADWELL AVE: 5 POINTS TO COLLEGE ST.

2024-AC-1  
GRAND ISLAND, NEBRASKA

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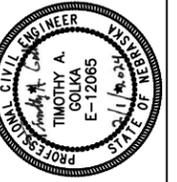
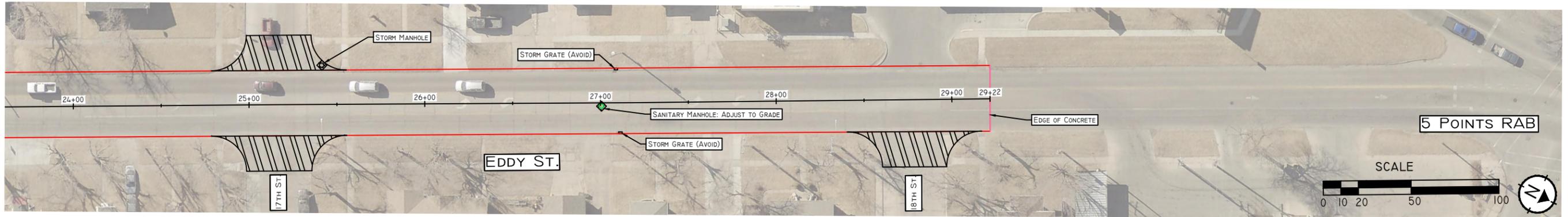
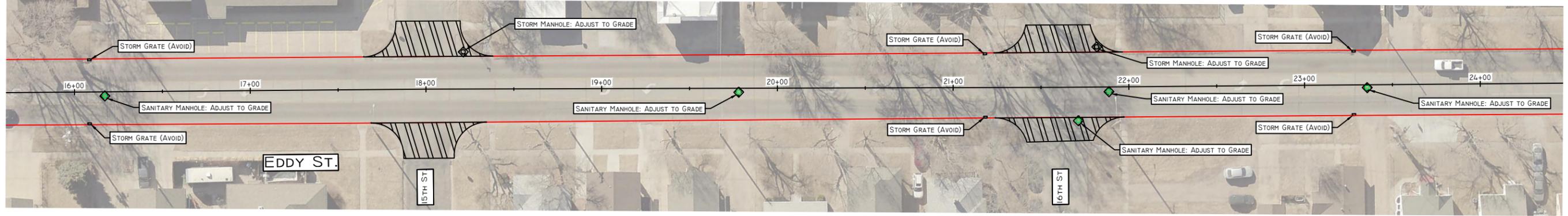
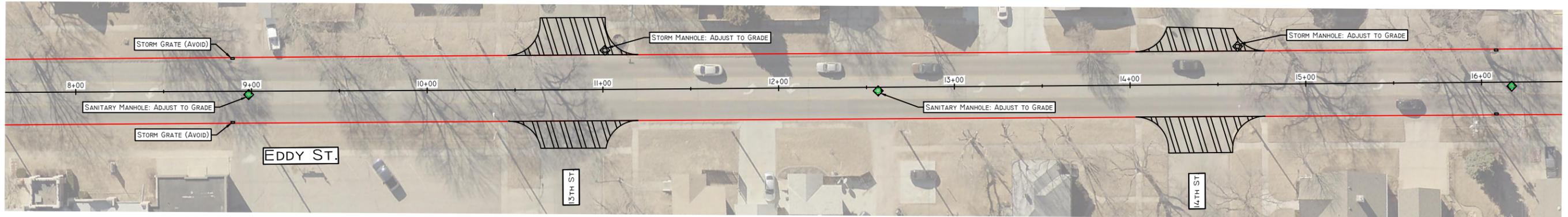
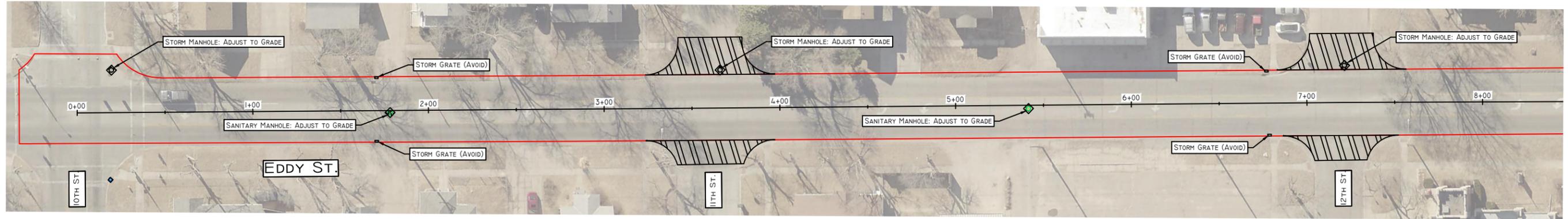
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**EDDY ST: 4TH ST. TO 10TH ST.**

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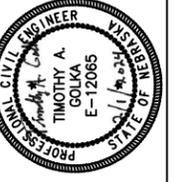
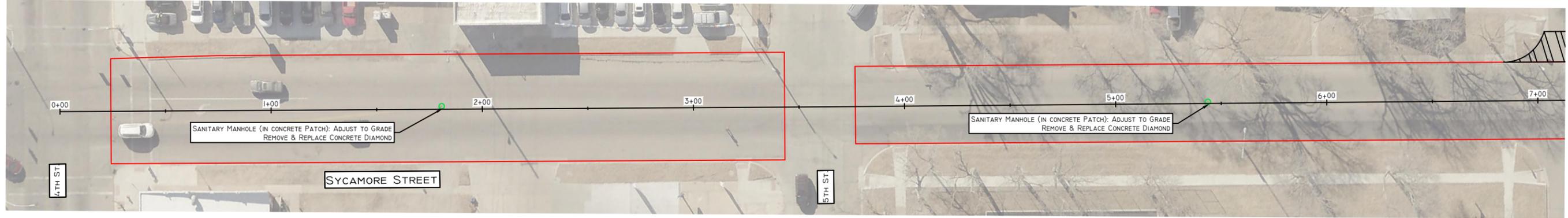
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GRAND ISLAND, NEBRASKA

SHEET

7 OF 14

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GRAND ISLAND, NEBRASKA

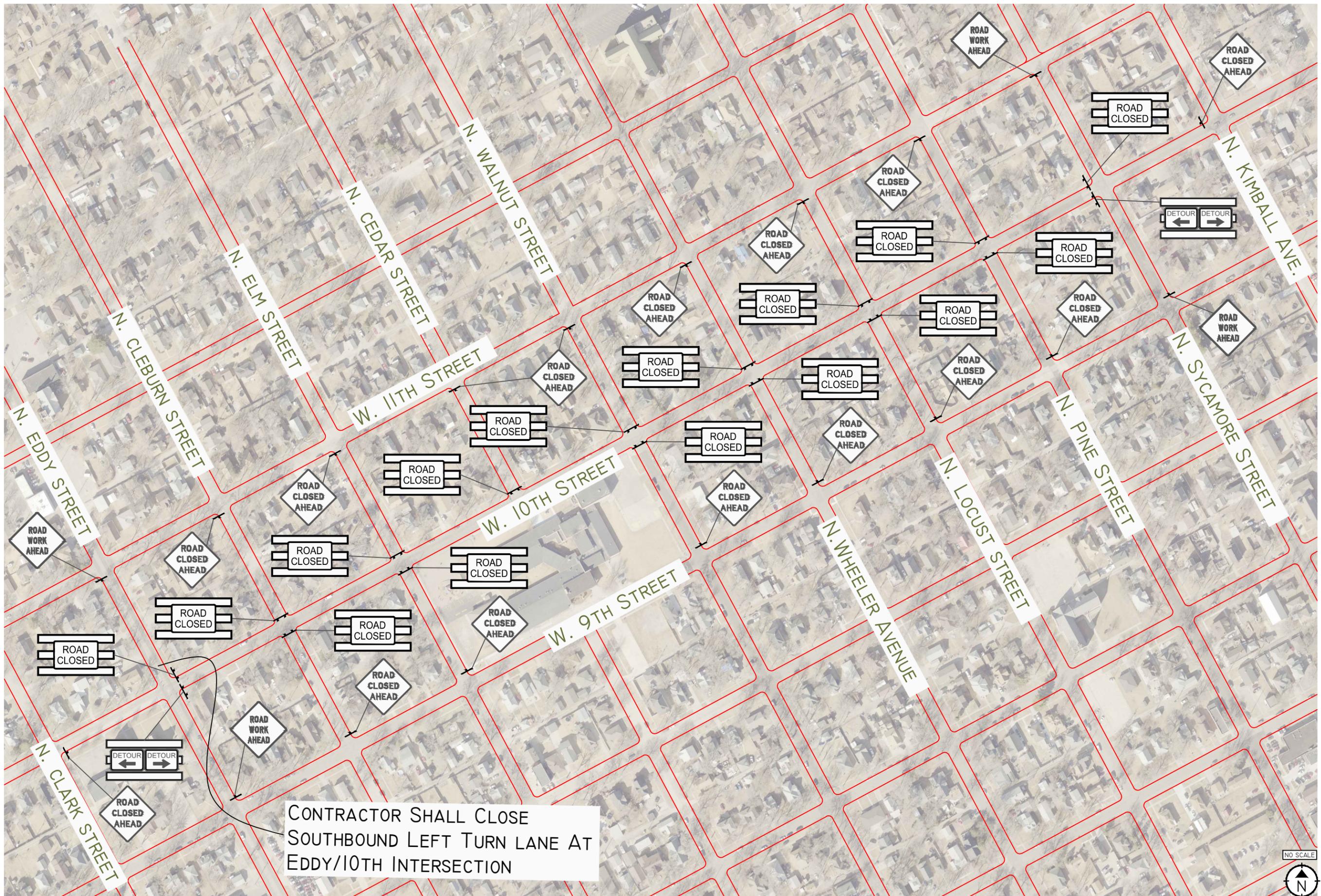
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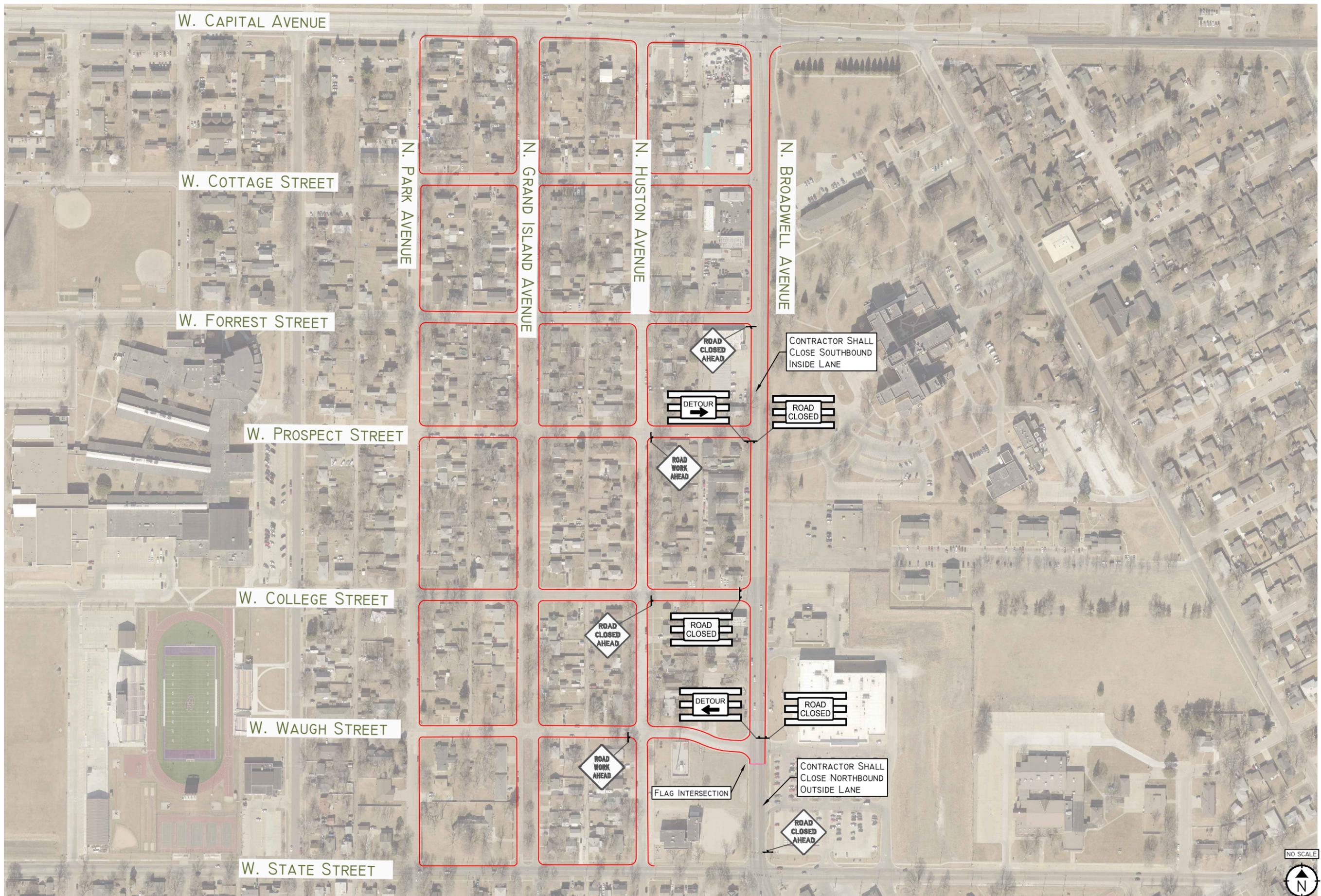
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10TH ST. CLOSURE

2024 AC-1

GRAND ISLAND, NEBRASKA

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NOTES & REVISIONS

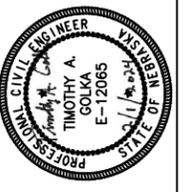
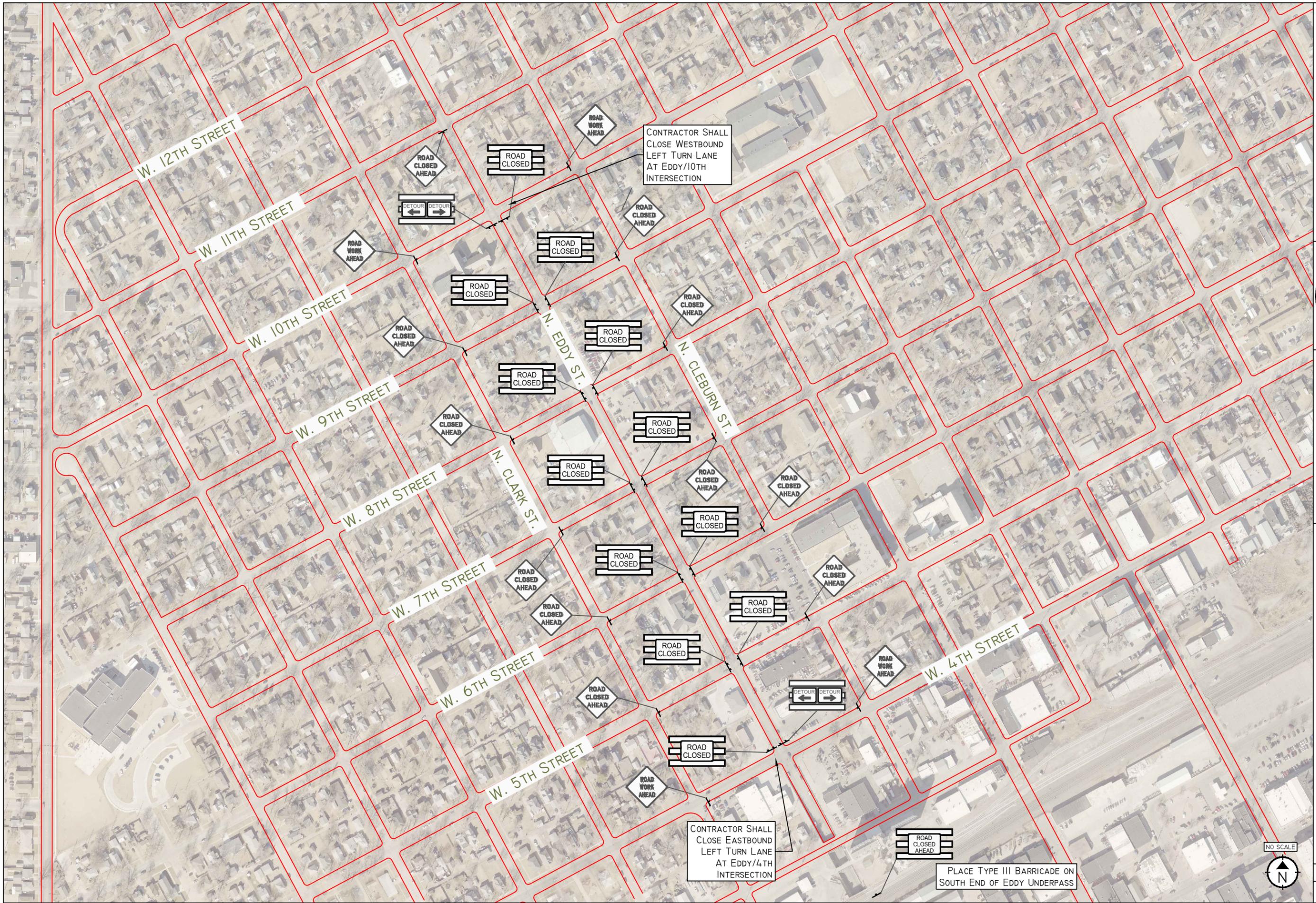
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2	01-31-2024	TAG	CHECKED BY
3	02-01-2024	TAG	APPROVED BY

BROADWELL AVE. CLOSURE

2024 AC-1

GRAND ISLAND, NEBRASKA

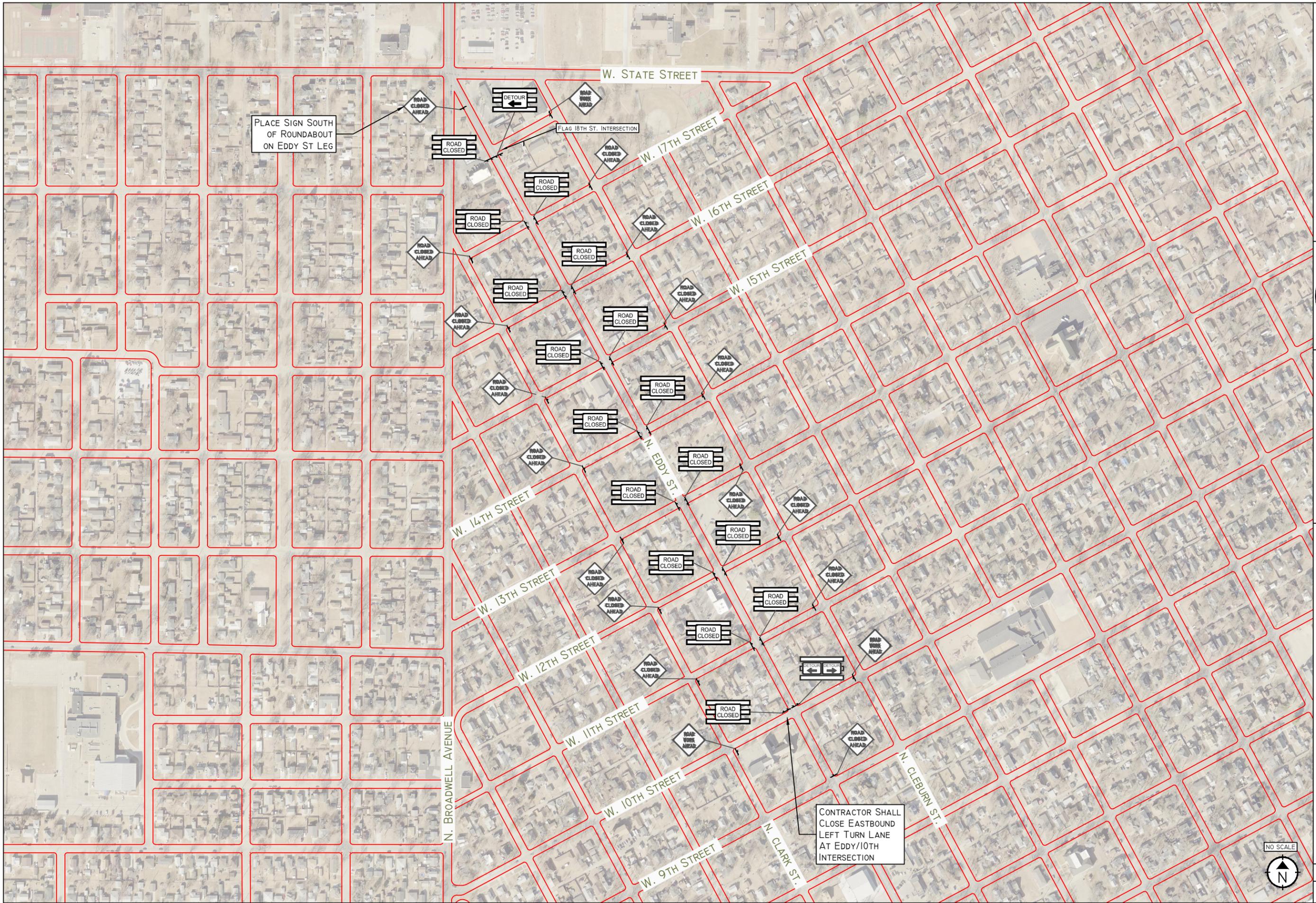
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NOTES & REVISIONS

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4	02-01-2024	JAG	DATE

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NOTES & REVISIONS

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2	01-31-2024	TAG	CHECKED BY
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4	02-01-2024	TAG	DATE

EDDY ST. CLOSURE - 10TH ST. TO 18TH ST.

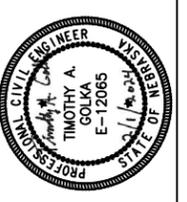
2024 AC-1

GRAND ISLAND, NEBRASKA

SHEET

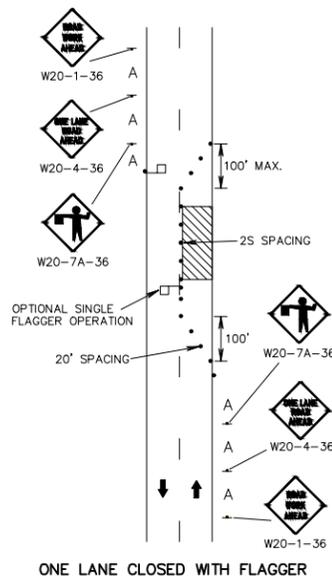
13 OF 14

DWG: J-PAVING PROJECT ASPHALT RESURFACING PROJECTS/2024 AC-1 RESURFACING PLAN DRAWINGS/MASTER WREFS/SPECIAL TC-SYCAMORE.DWG 2/12/2024 9:29:50 AM

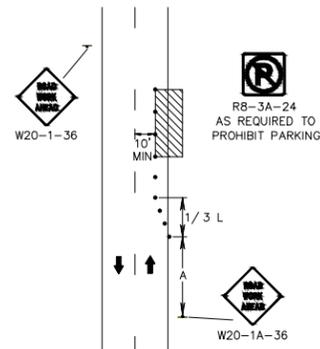


NOTES & REVISIONS

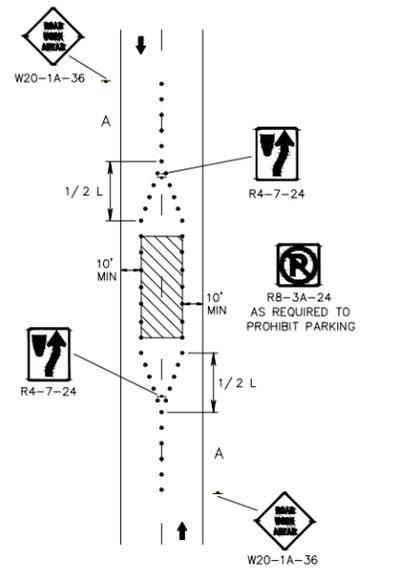
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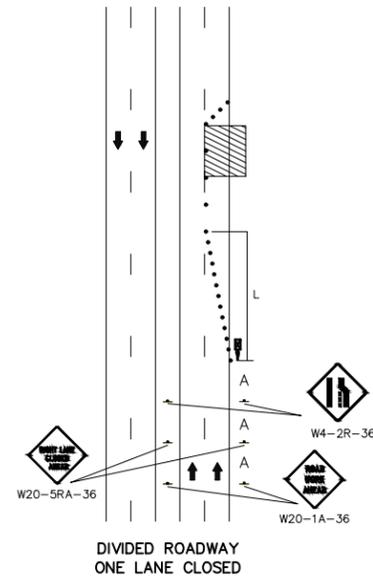
ONE LANE CLOSED WITH FLAGGER



SHOULDER OR PARKING LANE CLOSED



WORK IN CENTER OF ROAD WITH LOW TRAFFIC VOLUMES



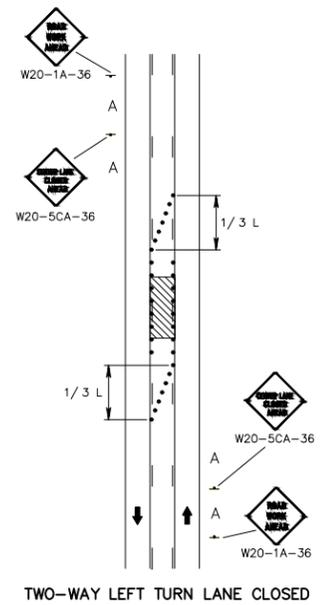
DIVIDED ROADWAY ONE LANE CLOSED

LEGEND

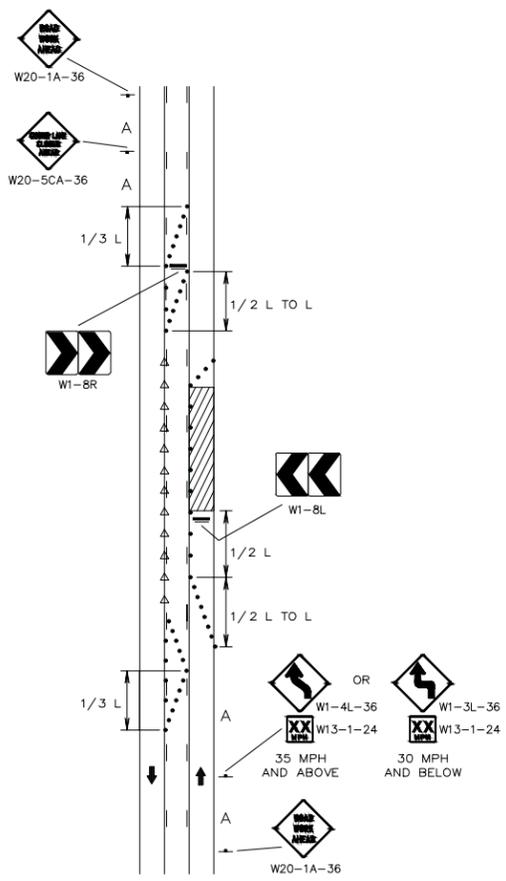
- ⬇️ FLASHING ARROW PANEL
- | TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM OR TYPE II BARRICADE (SEE NOTE 6)
- ⬇️ SIGN
- △ 28" CONES OR 28" TUBULAR POST

TAPER FORMULA

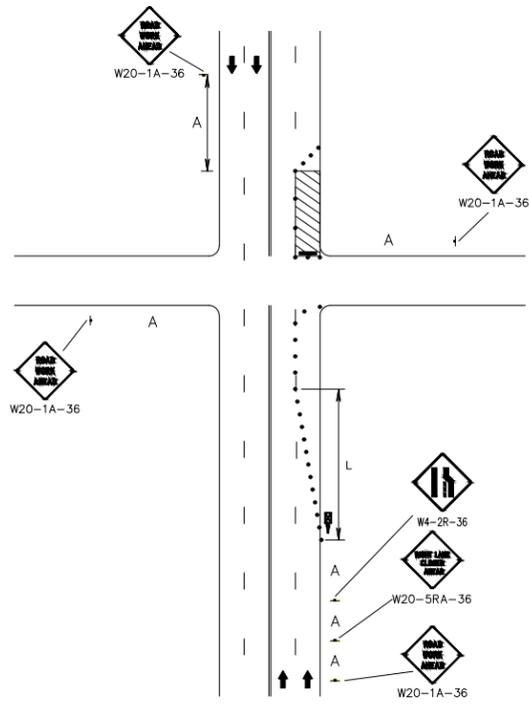
- L = MERGING TAPER
- L/2 = SHIFTING TAPER
- L/3 = SHOULDER TAPER
- L = W x S FOR SPEEDS OF 45 MPH OR HIGHER
- L =  $\frac{WS^2}{60}$  FOR SPEEDS OF 40 MPH OR LOWER
- L = MINIMUM LENGTH OF TAPER
- S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK
- W = WIDTH OF OFFSET



TWO-WAY LEFT TURN LANE CLOSED



3-LANE ROADWAY ONE LANE CLOSED

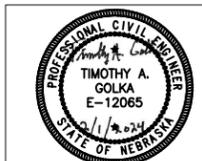


LANE CLOSED NEAR INTERSECTION (RIGHT LANE CLOSED)

GENERAL NOTES

1. ALL BARRICADE AND SIGN LOCATIONS ON THIS PLAN ARE APPROXIMATE, AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS. THE SIGNS SHALL BE INSTALLED SO AS NOT TO OBSCURE THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
2. MINIMUM WIDTH OF TRAVELLED LANE SHALL BE AS REQUIRED BY THE ENGINEER.
3. FLASHING ARROW PANEL REQUIRED ON ALL ROADWAYS WITH POSTED SPEED LIMIT 45 MPH OR HIGHER.
4. LONG TERM FLASHING ARROW PANELS IN URBAN RESIDENTIAL AREAS WHERE DIESEL ENGINE NOISE WILL BE DISRUPTIVE TO RESIDENTS, MAY BE REQUIRED TO OPERATE BY 120 VAC OR, IF SIGHT DISTANCE ALLOWS A SOLAR POWERED ARROW PANEL MAY BE USED.
5. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. WHERE USED ALONG THE WORK AREA, THE SPACING MAY BE INCREASED TO TWO S SPACING.
6. SUBSTITUTION OF CONES, IF IN ACCORDANCE WITH SECTION 6F.64 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, IS PERMITTED.

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	150
URBAN (HIGH SPEED - GREATER THAN 45 MPH)	350



**CITY OF GRAND ISLAND ENGINEERING DIVISION**

TYPICAL TRAFFIC CONTROL PLAN

DESIGNED 12/10 SG  
REVIEWED

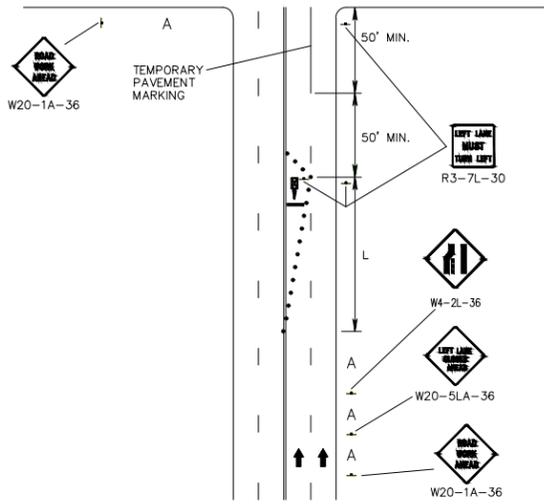
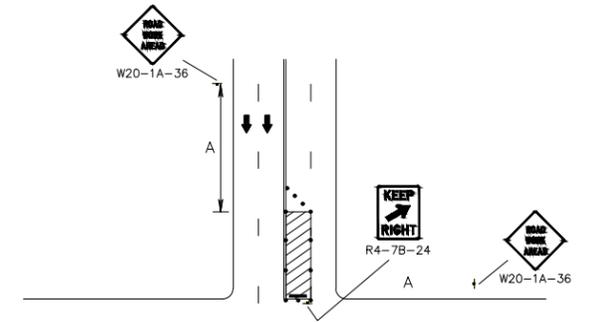
TYPICAL URBAN TRAFFIC CONTROL PLAN

(TTC-1)

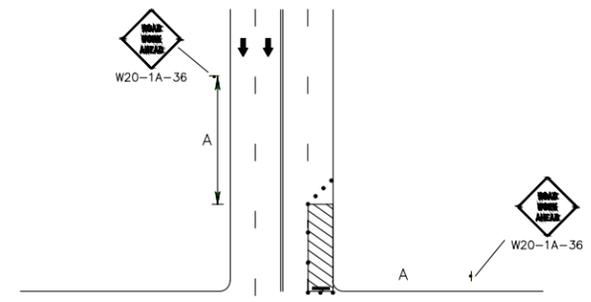
MERGING TAPER (L) 12' WIDTH

SPEED	DESCRIPTION
25	8 CONES AT 20' SPACES
30	10 CONES AT 20' SPACES
35	11 CONES AT 25' SPACES
40	11 CONES AT 35' SPACES
45	13 CONES AT 45' SPACES

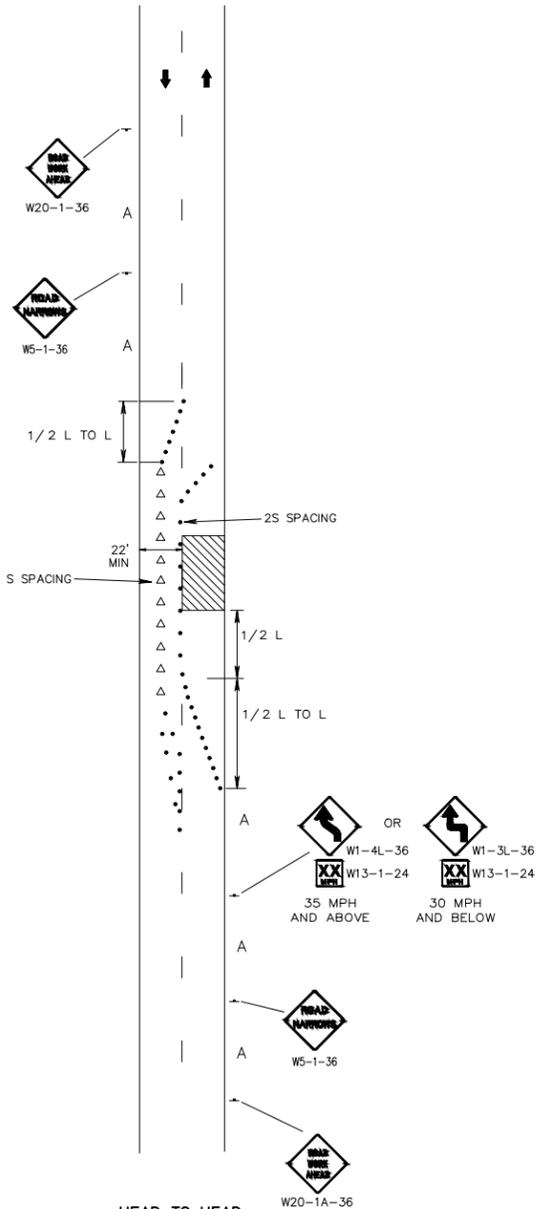
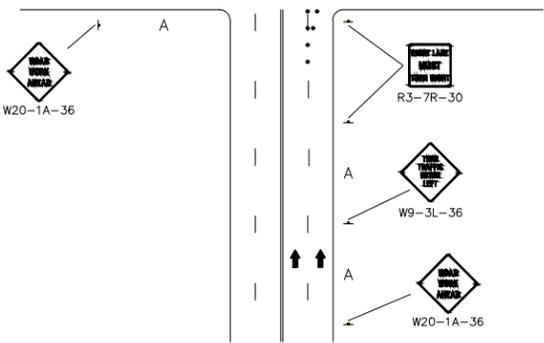
S = POSTED SPEED LIMIT



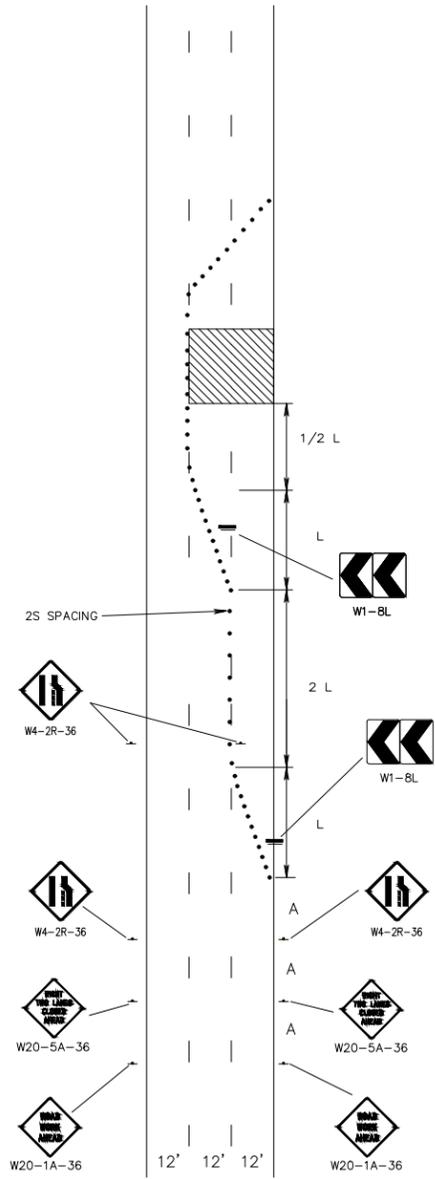
LANE CLOSED NEAR INTERSECTION  
(LEFT LANE CLOSURE FORMING A TURNBAY)



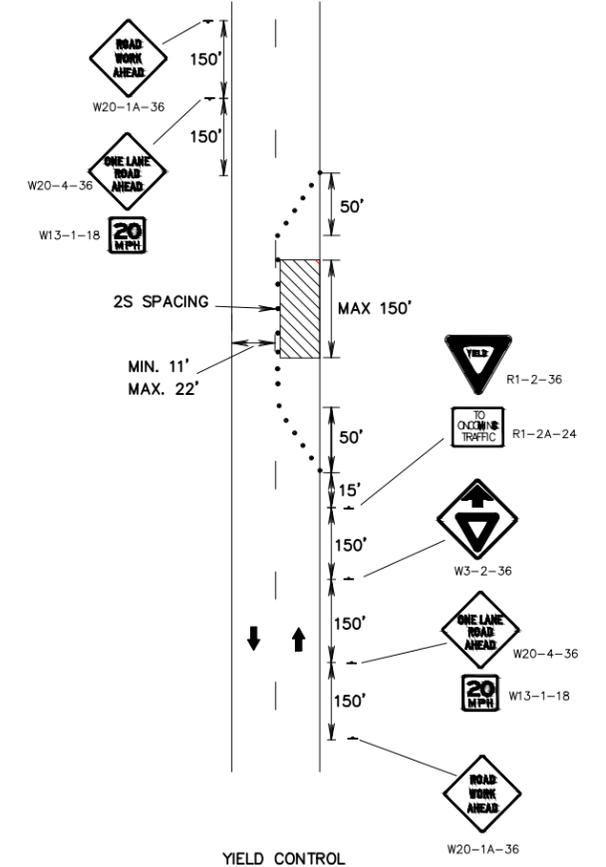
LANE CLOSED NEAR INTERSECTION  
(RIGHT LANE REMAINS OPEN)



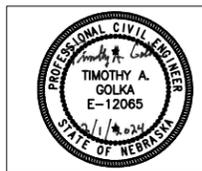
HEAD TO HEAD  
SPEEDS BELOW 40 MPH



MULTIPLE LANE CLOSURE



YIELD CONTROL  
USE FOR SPEED LIMITS OF 40 OR BELOW  
USE ON CITY STREETS ONLY



**CITY OF GRAND ISLAND  
ENGINEERING DIVISION**

**TYPICAL TRAFFIC CONTROL PLAN**

DESIGNED 12/10 SG  
REVIEWED

TYPICAL URBAN  
TRAFFIC CONTROL PLAN

(TTC-2)

